



Guide for IT Pros for Project Server 2010

Microsoft Corporation

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Abstract

The content in this book is designed to lead a team through the steps of planning, deploying, and maintaining a solution based on Microsoft Project Server 2010. The audiences for this guide are business application specialists, line-of-business specialists, IT generalists, program managers, and infrastructure specialists who are planning a solution based on Project Server 2010.

The content in this book is a copy of selected content in the [Project Server 2010 technical library](http://go.microsoft.com/fwlink/?LinkId=195433) (<http://go.microsoft.com/fwlink/?LinkId=195433>) as of the publication date. For the most current content, see the technical library on the Web.

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Getting help

Every effort has been made to ensure the accuracy of this book. This content is also available online in the Office System TechNet Library, so if you run into problems you can check for updates at:

<http://technet.microsoft.com/office>

If you do not find your answer in our online content, you can send an e-mail message to the Microsoft Office System and Servers content team at:

projdocs@microsoft.com

If your question is about Microsoft Office products, and not about the content of this book, please search the Microsoft Help and Support Center or the Microsoft Knowledge Base at:

<http://support.microsoft.com>

Project Server 2010

In this section:

- [Downloadable content for Project Server 2010](#)
- [Product evaluation for Project Server 2010](#)
- [Planning and architecture for Project Server 2010](#)
- [Project Developer Center](#)
- [Deployment for Project Server 2010](#)
- [Operations for Project Server 2010](#)
- [Security and protection for Project Server 2010](#)
- [Troubleshooting for Project Server 2010](#)
- [Technical reference for Project Server 2010](#)

Downloadable content for Project Server 2010

Some of the content in the Microsoft Project Server 2010 technical library is available in downloadable and printable file formats (.doc, .pdf, or .xps). To download this content, see [Guide for IT Pros for Microsoft Project Server 2010](http://go.microsoft.com/fwlink/?LinkId=196217) (<http://go.microsoft.com/fwlink/?LinkId=196217>). The most current content is in this technical library on the Web.

Planning

Type	Title	Description	Updated date	URL	Size (MB)
	Project 2010 Ignite training slide presentation	This set of Microsoft PowerPoint slide presentations is used in conjunction with Microsoft Project 2010 "Ignite" training.	2/1/2010	http://go.microsoft.com/fwlink/?LinkId=182373	31
	Time and task progress workflow diagrams	These diagrams illustrate the workflow for entering, submitting, and approving time and task progress. These operations can be done by using a single view or separate views, through a delegate, after a time reporting period has closed, or after a task has been locked from updating.	12/9/2010	http://go.microsoft.com/fwlink/?LinkId=207021	.4

Project 2010 Ignite training slide presentation

This set of Microsoft PowerPoint slide presentations is used in conjunction with Microsoft Project 2010 "Ignite" training.

[Download the Project 2010 "Ignite" training slide presentation file](http://go.microsoft.com/fwlink/?LinkId=182373)

(<http://go.microsoft.com/fwlink/?LinkId=182373>).

The downloadable file contains the following eleven presentations that are used in the three-day training course:

- Project 2010 Ignite Introduction
- Project 2010 Overview
- Project 2010 Planning, Design, and Deployment
- Project 2010 Upgrade and Migration
- Project 2010 Demand Management
- Project 2010 Portfolio Strategy
- Project 2010 Timesheets and Statusing
- Project 2010 Reporting
- Project 2010 Administration
- Project 2010 Operations
- Project 2010 Developer

Project 2010 Ignite training series presentations and demos are available for you to view on-demand. See [Project 2010 Ignite on-demand training videos](#) for more information.

What is the Project 2010 "Ignite" program?

The Project 2010 "Ignite" program is a three-day, instructor-led training course for Enterprise Project Management 2007 partners and the Microsoft field staff in technical roles. The goal for the Project 2010 "Ignite" program is to prepare EPM professionals for deployment, operations, and customization of Project Server 2010, hence to build skilled EPM partners by RTM.

The "Ignite" curriculum is targeted towards EPM consultants, IT professionals, admin professionals, and developers that have experience deploying, operating, and customizing Microsoft Office Project Server 2007. Content is technical and ranges from 300 to 400 levels (Experienced to Advanced/Expert). With this in mind, the "Ignite" content is not designed to cover all Project Server functionality. Only the new functionality of Project Server 2010 is presented. In other words, the goal is to help better understand the differences and new features. The content is a combination of instructor-led training, product demonstrations, and hands-on labs. The Project 2010 "Ignite" training is delivered in English by EPM experts from Microsoft.

Time and task progress workflow diagrams (Project Server 2010)

Microsoft Project Web App enables you to easily track the time you spend on a project's tasks, and the progress of those tasks toward completion. In the version of Project Web App that is included with Microsoft Project Server 2010, you can enter time and task progress using the same view, or using separate views. You can also assign someone else to enter and submit your time and task progress information on your behalf. This person is called a "delegate."

The following set of diagrams illustrates the workflow for entering, submitting, and approving time and task progress using a single view, separate views, through a delegate, after a time reporting period has closed, or after a task has been locked from updating.

These diagrams are available in three formats. Click a link to download the file:

- [Time and task progress workflow diagrams in a Visio file](http://go.microsoft.com/fwlink/?LinkId=207021) (345 KB)
(http://go.microsoft.com/fwlink/?LinkId=207021)
- [Time and task progress workflow diagrams in an XPS file](http://go.microsoft.com/fwlink/?LinkId=207022) (232 KB)
(http://go.microsoft.com/fwlink/?LinkId=207022)
- [Time and task progress workflow diagrams in a PDF file](http://go.microsoft.com/fwlink/?LinkId=207020) (211 KB)
(http://go.microsoft.com/fwlink/?LinkId=207020)

Product evaluation for Project Server 2010

This article provides links to articles about product evaluation.

In this section:

- [What's new for IT pros in Project Server 2010](#)
This article provides a brief overview of the new main features and capabilities that are included in Microsoft Project Server 2010.
- [Overview: Project Server 2010 with SharePoint Server 2010 architecture](#)
This article discusses planning considerations that a SharePoint farm administrator should make when planning to deploy Microsoft Project Server 2010.
- [Project 2010 Ignite on-demand training videos](#)
The Microsoft Project 2010 Ignite Online Recordings let you view eight-and-a-half hours of presentations and product demonstrations from the Project 2010 Ignite Training Series.
- [Project Server 2010 IT-Professional TechNet Webcasts](#)
The Microsoft Project Server 2010 IT-Professional TechNet Webcast series is composed of seven downloadable Webcasts that are meant to provide Project Server 2010 deployment guidance and best practices for IT professionals.
- [Project 2010 MVP Webcast Series](#)
The Microsoft Project Server 2010 MVP TechNet Webcast Series is composed of ten downloadable Webcasts that provide guidance and best practices to end users, IT professionals, and developers.
- [Project Server 2010 Demand Management Webcast series](#)
The Microsoft Project Server 2010 Demand Management Webcast Series is composed of four on-demand webcasts targeted at end users. These webcasts introduce the concepts of Demand Management.
- [TechNet Webcast: Overview of Microsoft Project Server 2010 for IT professionals](#)
This Webcast discusses Microsoft Project Server 2010 features, requirements, and deployment considerations that IT professionals need to know about the product.

What's new for IT pros in Project Server 2010

This article provides a brief overview of the new main features and capabilities that are included in Microsoft Project Server 2010. These include the following:

- [Performance enhancements with 64-bit architecture](#)
- [Integration with SharePoint Server](#)
- [Unified project and portfolio management](#)
- [Demand management](#)
- [Project Detail Pages \(PDPs\)](#)
- [Workflow integration](#)
- [Business intelligence](#)
- [Departmental custom fields](#)
- [User delegation](#)
- [Support for multiple OLAP cubes](#)
- [New grid control in PWA](#)
- [Ribbon user interface in Project Web App](#)
- [Timesheet single entry mode](#)
- [Integration with Exchange Server](#)
- [Claims-based authentication](#)
- [Backwards Compatibility Mode \(BCM\) for upgrade](#)
- [Virtual Migration Environment \(VME\) for migrating Project Server 2003 data](#)
- [Windows PowerShell](#)

Performance enhancements with 64-bit architecture

Project Server 2010 is available in a 64-bit version, similar to Microsoft SharePoint Server 2010 (which is an installation requirement). Project Server 2010's move towards 64-bit architecture requires the following:

- Project Server 2010 must be installed on either 64-bit Windows Server 2008 SP2 or Windows Server 2008 R2.
- Your database servers for a Project Server 2010 farm deployment must be the 64-bit version of either SQL Server 2005 or SQL Server 2008.

Having 64-bit architecture on both the server and the database server provides for increased performance and scalability. Also, 64-bit architecture provides for increased memory addressability because it is not limited to the 4-GB address space limitation that 32-bit architecture is limited to.

**Note:**

For more information about requirements, see [Hardware and software requirements \(Project Server 2010\)](#).

**Note:**

Microsoft Project Professional 2010 and Microsoft Project Standard 2010 are available in both 32-bit and 64-bit versions.

Integration with SharePoint Server

Project Server 2010 is built on Microsoft SharePoint Server 2010, the successor to Microsoft Office SharePoint Server 2007. New features in Microsoft Project Web App require SharePoint Server 2010, such as pages that use the SharePoint Server Report Center for storing and viewing reports, workflows required for demand management, and business intelligence features for reporting. Portfolio analysis also extensively integrates with the SharePoint Server workflow architecture. Before you can install Project Server 2010, you must install SharePoint Server 2010 Enterprise edition. For information about Project Server 2010 architecture, see [Project Server 2010 architecture](#).

For more information about SharePoint Server 2010 features, see the [What's New in Microsoft SharePoint Server 2010 Resource Center](#) (<http://go.microsoft.com/fwlink/?LinkID=189569>) on TechNet.

Unified project and portfolio management

The essential functionality of Microsoft Office Project Portfolio Server 2007 is now integrated and extended within Project Server 2010. The PSI Web services are extended to include portfolio analysis, workflows, and business drivers. The benefits of having portfolio analysis capabilities in Project Server 2010 include the following:

- Project Web App provides both project and portfolio management capabilities in one application, with a consistent and extensible SharePoint Server user interface.
- A common data store eliminates the need for the Project Server Gateway.
- Administration is centralized.
- Duplicate functionality, such as a module for capturing project requests, is eliminated.
- The common object model enables much better extensibility and integration with other applications.
- Reporting and OLAP cubes can easily provide integrated views.

The core feature of Office Project Portfolio Server 2007 is the Optimizer. Integration with Project Server 2010 does the following:

- Analyzes a set of project proposals based on business driver priorities.
- Improves Optimizer usability and provides integrated security with Project Server permissions, international reach, and ease of deployment.

- Eliminates the duplication of functionality and data in the separate Project Server and Portfolio Server products.
- Provides access to business driver libraries, cost constraints, and related project entities through Web Parts and SharePoint Server 2010 lists.

Demand management

Demand management is about capturing all work proposals in one single place, taking these proposals through a multi-stage governance process, making decisions on which proposals to approve, and tracking progress on their execution until the work is completed. A key component within demand management is the Workflow governance model we have now implemented within Project Server.

The Proposals feature in Office Project Server 2007 helps capture demand in one place, but it is not flexible enough and does not have a full-fledged governance workflow behind it. The "Builder" module in Office Project Portfolio Server 2007 is a flexible demand management paradigm, but it does not have the familiar look and feel of Office Project Server and Office SharePoint Server, and it also has some usability and scalability problems. The demand management functionality in Project Server 2010 is designed to be both flexible and usable.

For more information about demand management, see [Workflow and Demand Management](#).

Project Detail Pages (PDPs)

Demand management for project proposals and the portfolio planning processes in Project Web App use project detail pages (PDPs) that can be integrated with workflows. PDPs are Web Part pages; they are built with the SharePoint Server infrastructure to show or edit details of entities for project planning such as project information, resources, schedule, or strategic impact. Additional infrastructure for PDPs in Project Server 2010 incorporates the business case capability of the Builder component in Office Project Portfolio Server 2007.

PDPs can be used in many different ways in Project Web App and other applications in the SharePoint Server farm where Project Server resides. You can create three kinds of PDPs in the Project Detail Pages page of Project Web App

(<http://ServerName/ProjectServerName/Project%20Detail%20Pages/Forms/AllItems.aspx>). Use the **Documents** tab of the page to create a PDP.

- **Project** Used for editing project details in a non-workflow enterprise project template, or in other applications.
- **New Project** Used for creating a project. This type of PDP is required with an enterprise project template that has a workflow for portfolio analysis.
- **Workflow Status** Shows the current stage and status for a project proposal.

You can customize PDPs by using Web Parts and a ribbon interface. Project Server 2010 includes the following new Web Parts for PDPs:

- **Buttons Web Part** Enables users to edit, save, publish, or close a project detail page, or to move to the next stage in a workflow. A long page can include multiple Buttons Web Parts.
- **Workflow Status Web Part** Enables users to check the status of Project Server workflows.
- **Project Fields Web Part** Enables users to select or edit project custom fields for the PDP. Project summary task fields such as cost and actual work are read-only. Custom fields such as the project name, department, workflow management, start date, and owner are read/write.
- **Strategic Impact Web Part** Includes all business driver definitions filtered by one or more departments. This Web Part enables users to rate the project impact on each driver.
- **Dependencies Web Part** Enables users to define dependencies between projects.

PDPs offer a project management experience that is improved from the project proposal feature in Office Project Server 2007. Office Project Web Access in Office Project Server 2007 has only two pages for project proposals that cannot be customized: a page for an alphabetical list of all project custom fields and a page for tasks in the proposed project. Project Server 2010 enables users to create an unlimited number of pages and to control exactly what project data is available on each page.

For example, users can create workflow-controlled pages by using the Project Fields Web Part to capture detailed project and business case information. The pages can include rich text and can access the Project Timeline Web Part and Schedule Web Part by using the PDP infrastructure. PDPs can include simple Web Parts, such as the Content Editor Web Part that displays rich text and images, or custom Web Parts that capture or display data from an external line-of-business (LOB) system.

PDPs provide a highly customizable project-creation experience. They can integrate with the Ribbon user interface in Project Web App, provide Quick Launch navigation elements specific to individual pieces of project data, and dynamically filter custom fields by departmental association.

PDPs can integrate Project Web App with many different project management scenarios, such as the following:

- Assessing the project impact of strategic objectives.
- Providing workflow-driven capture of details in project proposals.
- Providing workflow-driven strategic alignment; for example, getting executive buy-in before proceeding to a certain stage.
- Performing portfolio analyses based on cost and resource-capacity constraints.
- Performing project cost budgeting.
- Performing customized resource planning.
- Providing step-by-step detailed task scheduling.

Many of these scenarios are involved with demand management. For more information, see [Workflow and Demand Management](http://go.microsoft.com/fwlink/?LinkId=189587) (<http://go.microsoft.com/fwlink/?LinkId=189587>) in the MSDN Library online.

Workflow integration

Workflows are a core feature of project portfolio management. A project life cycle can include long-running processes that span many phases. Governance phases include project proposals, analysis of business impact, selection, creation, planning, managing, and tracking.

Although Office Project Portfolio Server 2007 includes workflows, Project Portfolio Server itself is not extensible and the workflows are difficult to build. The integration in Project Server 2010 of portfolio and project management provides a rich and extensible platform for building workflows that are based on the SharePoint Server 2010 workflow platform.

Project Server 2010 workflows extend the SharePoint Server workflow security model to allow installation across a SharePoint Server farm and access by multiple users who have the appropriate Project Server permissions. Workflows are run by impersonation of a special Project Server user. Impersonation and the use of proxy assemblies enable users of Project Server workflows to call the Project Server Interface (PSI) on the application server, instead of calling the PSI through the front-end Web server (Project Web App).

In addition to portfolio management, Project Server 2010 also enables the creation of workflows for resource, task, and timesheet management. For more information, see [Workflow and Demand Management](http://go.microsoft.com/fwlink/?LinkId=189587) (http://go.microsoft.com/fwlink/?LinkId=189587). For a series of how-to articles, see [Developing Project Server workflows](http://go.microsoft.com/fwlink/?LinkId=189598) (http://go.microsoft.com/fwlink/?LinkId=189598).

Business intelligence

Business intelligence features enable you to visualize the amalgamated data as answers to customer questions. In Project Server 2010, Excel Services is integrated with Project Server to make it easier to create custom reports. As part of this integration, blank data-connected spreadsheets and predefined reports are provided. Additionally, the data available for reporting has been expanded to include timesheet custom fields, project properties, and portfolio planner and optimizer data. The predefined cubes can now be customized by using PWA to only include data for a given department.

For more information about Business Intelligence in Office Project Server 2007, see the blog post [Project 2010: Business Intelligence Overview](http://go.microsoft.com/fwlink/?LinkId=189600) (http://go.microsoft.com/fwlink/?LinkId=189600). For additional resources, see the [Business Intelligence in Project Server 2010 Resource Center](#) on TechNet.

Departmental custom fields

Many enterprise customers manage projects for multiple departments on one instance of Project Web App. An important issue is how to deal with different requirements for enterprise custom fields in different departments. In Office Project Server 2007, all users can see all enterprise custom fields, even though a subset of the custom fields might apply to only one of the departments. Some customers have created workarounds to the problem by using local custom fields with additional custom programming, but that is a poor long-term solution.

Project Server 2010 introduces departmental custom fields. Each department can use its own set of enterprise project, task, and resource custom fields, and departments can also share specified custom fields. Project Server can filter out custom fields that are not assigned to a department, so users see only relevant custom fields.

Project Server 2010 can restrict users who have permission to edit custom fields in one department from using Project Web App to edit the custom fields of another department where they do not have permission. Project Professional enables access to all custom fields, although it can filter lists based on the department for a project. If you are not a member of a department, then you only have to fill in the global required fields, not other departmental fields.

The PSI is extended to specify departments and includes setting custom fields and permissions by department. The PSI can also create departmental collections; associate projects, resources, lookup tables, and custom fields within a collection; and define which custom fields are required in a departmental collection. Collections are defined in the default Collections lookup table. The Collections lookup table can be modified, but it cannot be deleted. The PSI enables users to edit custom fields in collections owned by other departments.

User delegation

In Office Project Server 2007, the timesheet surrogate feature allows one timesheet user to give the management of the timesheet to another user (for example, to send updates). However, there are many other parts of Project Web App where you may want to delegate your duties to another user, if possible. In Project Server 2010, the delegation feature was introduced as a response to this need. The delegation feature allows one user to act as another user, no matter the permission-level difference between the two. As an example, a team member can be a delegate for an administrator, which means that when the team member becomes the delegate, that person has all privileges that the administrator has.

Support for multiple OLAP cubes

The Cube Building Service (CBS) in Project Server 2010 supports building departmental and multiple data-sliced cubes. Site collection administrators for Enterprise Project Management (EPM) can build multiple customized cubes, such as the following:

- Cubes that contain only data for project and resources that they administer.
- Cubes that contain only the facts and dimensions that they select.

"Multicubes" enable you to slice the data in cubes by picking groups of data and adding fields from each group. Administrators can constrain access to cubes by department. Project Server 2010 also supports localized data in cubes, with the use of translators. All data can have localized field name aliases, so you can build PDPs that show field names in the language of the locale where they are deployed. Cubes support "manually scheduled task" data, with tasks shown as properties instead of in a task dimension. Manually scheduled tasks are a new feature in Microsoft Project Professional 2010. Project Professional allows you to choose the task mode — either automatically scheduled (the

traditional mode) or manually scheduled. Cubes exclude inactive tasks by default, but they can include a dimension for task assignments and show active or inactive tasks.

The CBS in Project Server 2010 also reduces blocking of RDB updates when a cube build begins. One of the problems with OLAP cubes for large deployments of Office Project Server 2007 has to do with delays caused by rebuilds: project reports that use the RDB can be delayed by waiting for the central cube to be rebuilt before new data can be seen. Project Server users who have the relevant administrative permissions can build smaller custom cubes at a time they select. Project Server administrators can push the administrative load of building new custom fields and cubes down to departmental teams, thereby helping to reduce the conflicts about data in the cubes and timing of reports.

OLAP multicubes do not support Microsoft SQL Server Analysis Services 2000 or Decision Support Objects (DSO). The minimum requirement is 64-bit Microsoft SQL Server 2005 SP2 and the Analysis Management Objects (AMO) managed code API. AMO is also a 64-bit implementation in the 64-bit versions of SQL Server and reduces version configuration issues for upgrades.

New grid control in PWA

Project Web App users will now use the new Project Server 2010 AJAX Grid control to view their pages. It is a JavaScript grid control that supports both read and write operations. It is faster than the previous control, has cell validation, a rich color palette, and an interactive field chooser. Unlike the ActiveX controls previously used in Office Project Server 2007, the AJAX Grid does not require local installation and avoids security concerns about downloading unsigned controls.

To access Project Server 2010, Project Web App users are required to use Internet Explorer 7 or Internet Explorer 8. For more information about browsers, see [Plan browser support \(Project Server 2010\)](#).

Ribbon user interface in Project Web App

SharePoint Foundation 2010, SharePoint Server 2010, and Project Web App in Project Server 2010 are adopting the ribbon user interface component. The Project Web App experience will be more consistent with the Project Professional 2010 user experience, so project managers can work in similar ways within both client applications. The ribbon interface also makes it easier for users familiar with other SharePoint Server applications to move to Project Web App.

Pages in Project Web App that are frequently used by the Project Management Office (PMO), project managers, resource managers, and team members use the Server Ribbon interface. Other pages that are infrequently used, such as administrative pages in **Server Settings** and some pages in **Personal Settings**, do not need the Ribbon.

The ribbon is customizable and extensible. In Office Project Server 2007, it was difficult or impossible for third-party developers to customize many pages in Project Web App. Project Server 2010 makes it easier to customize and extend the non-administrative pages. For more information, see the

"Customize the Project Web App Ribbon" section in [Scenarios for Project Server development](http://go.microsoft.com/fwlink/?LinkId=189618) (<http://go.microsoft.com/fwlink/?LinkId=189618>).

Timesheet single entry mode

Project Server 2010 introduces a new time-tracking mode that unifies the data entered by using the timesheet and status pages in Project Web App. The timesheet single entry mode is implemented through the Timesheet methods in the PSI to provide integrated access to Administrative time. The single entry mode is augmented with additional data that is required to transfer items not previously available in the Timesheet schema.

Integration with Exchange Server

Office Project Server 2007 integrates with the Microsoft Office Outlook 2007 client application, which enables team members to see and report time on assignments via an Outlook add-in. In contrast, Project Server 2010 integrates directly with Exchange Server 2007 SP1 (or later), not with Outlook, so team members anywhere with access to Exchange Server can interact with assignment data in Outlook or Microsoft Outlook Web App.

Project Server sends updated task and assignment information to Exchange Server, which handles all client interaction with Outlook and Outlook Web App. Exchange Server notifies Project Server when an Outlook client changes the assignment data. Project Server spawns a queue job that gets the data from Exchange Server, and then uses the public Statusing API to update the information in Project Web App.

Claims-based authentication

Claims based authentication is a new authentication method available to Project Server 2010 through SharePoint Foundation 2010 and SharePoint Server 2010.

Claims-based authentication systems provide for federated authentication services such as Active Directory Federation Services (ADSF), single sign-on mechanisms and so forth. In a claims-based authentication system a security token exists and is made up of a set of identity assertions about an authenticated user. Assertions are attributes that are associated with a user's identity. Assertions can include a user name, a role, an employee ID, and a variety of other attributes that can be used to determine authorization. A Security Token Service (STS) responds to authentication requests and creates the token based on account information in various attribute stores. The token is then used to authenticate actions. In essence, claims-based authentication provides flexibility beyond the traditional Windows NTLM/Kerberos authentication method.

For more information about claims based authentication as well as STS, see the following articles:

[Plan authentication methods \(SharePoint Foundation 2010\)](#)

[Plan for authentication in Project Server 2010](#)

[Brokered authentication: Security Token Service \(STS\)](#) (<http://go.microsoft.com/fwlink/?LinkId=189619>)

Backwards Compatibility Mode (BCM) for upgrade

After upgrading to Project Server 2010, the Backwards Compatibility Mode (BCM) feature allows Microsoft Office Project Professional 2007 with Service Pack 2 users to connect to the server. This feature provides network administrators some flexibility in planning to upgrade their Office Project Professional 2007 clients to Project Professional 2010, because it does not need to happen immediately. When BCM is enabled, Project Professional 2010 users are able to connect to Project Server 2010, although some of the new features are not enabled. After you have upgraded all your Project Professional clients to Project Professional 2010, BCM can be disabled. This allows for full feature use by your Project Professional 2010 users. For more information about BCM, see [Project Server 2010 upgrade overview](#).



Important:

When BCM is disabled, it cannot be re-enabled again. Verify that you are truly ready to disable BCM prior to doing it.



Important:

Office Project Professional 2003 users cannot connect to Project Server 2010, even when BCM is enabled.

Virtual Migration Environment (VME) for migrating Project Server 2003 data

If you are in a Project Server 2003 environment, you must migrate your data to Office Project Server 2007 prior to upgrading to Project Server 2010. The Virtual Migration Environment (VME) is a Office Project Server 2007 environment in a Hyper-V image that serves as a temporary pass through environment to migrate your data to Office Project Server 2007. It can be installed as a stand-alone environment and does not need to be connected to your network, and Project Server 2003 data can be made accessible to it from an external hard drive. It does not require any additional licensing, as long as you only use it for the intended purpose of migrating your data. For more information about the VME, see [Project Server 2010 upgrade overview](#).

Windows PowerShell

Windows PowerShell support is available in Project Server 2010 to make deploying and managing much easier. Windows PowerShell is a relatively new interactive command-line shell and scripting language for Windows. Windows PowerShell provides Information Technology (IT) administrators powerful task automation and scripting capabilities for managing Windows operating systems and applications. It was released in 2006 and is currently available for Windows XP SP2/SP3, Windows Server 2003, Windows Vista, and is included in Windows Server 2008 as an optional feature. Windows PowerShell is included in Windows 7.

SharePoint Server 2010 is the first version of SharePoint Server to integrate with Windows PowerShell as an administrative and management interface. IT administrators can use Windows PowerShell to create batch files (scripts) that automate routine tasks and solve complex problems. Scripts offer increased functionality and ensure consistency, especially when distributed to other administrators in the organization.

One of the prerequisites for installing SharePoint Server 2010 is that Windows PowerShell be installed either as a feature or part of the operating system. SharePoint cmdlets are written for Windows PowerShell 1.0 but should run in Windows PowerShell 2.0 by default. SharePoint Server does not create its own shell, rather it builds upon the functionality provided by Windows PowerShell. It does this by registering a SharePoint-specific snap-in and providers. This extended shell is referred to as the SharePoint Management Console (SMC).



Note:

For more information about Windows PowerShell, see [Windows PowerShell for Project Server 2010](http://go.microsoft.com/fwlink/?LinkId=189568). You can also find more information in the following guide: [Running Windows PowerShell Scripts](http://go.microsoft.com/fwlink/?LinkId=189628) (<http://go.microsoft.com/fwlink/?LinkId=189628>).

See Also

[Microsoft Project Server 2010 Product Overview \(http://go.microsoft.com/fwlink/?LinkId=189568\)](http://go.microsoft.com/fwlink/?LinkId=189568)

[What's New in Microsoft SharePoint Server 2010 Resource Center \(http://go.microsoft.com/fwlink/?LinkId=189569\)](http://go.microsoft.com/fwlink/?LinkId=189569)

[What's New for Developers in Project 2010 \(http://go.microsoft.com/fwlink/?LinkId=189570\)](http://go.microsoft.com/fwlink/?LinkId=189570)

Overview: Project Server 2010 with SharePoint Server 2010 architecture

This article discusses planning considerations that a SharePoint farm administrator should make when planning to deploy Microsoft Project Server 2010. Project Server 2010 is built on Microsoft SharePoint Server 2010 architecture and has a big dependency on SharePoint Server 2010 features and services. This article describes the following considerations:

- Microsoft Enterprise Project Management 2010 overview
- Project Server 2010 compatibility with SharePoint Server versions
- Installation considerations
- Service Application requirements for Project Server 2010
- Database considerations
- Microsoft SQL Server Analysis Services (SSAS) considerations
- Project Server 2010 language packs
- Web browser considerations

Microsoft EPM overview

The Microsoft Enterprise Project Management (EPM) 2010 Solution is a flexible, end-to-end Project Portfolio Management platform, used by organizations across many industries to automate primary PPM processes. The EPM Solution helps organizations achieve the following business imperatives:

- Intuitively capture all requests in a central repository, and manage them using governance workflow: *Demand Management*
- Objectively prioritize, optimize, and select project portfolios that best align with the organization's business strategy: *Portfolio Selection and Analytics*
- Proactively and reactively manage resources throughout the project life cycle: *Resource Management*
- Easily create and communicate both simple and complex project schedules: *Schedule Management*
- Control and measure project and portfolio financial performance: *Financial Management*
- Simplify the collection of time and task status updates from team members: *Time and Task Management*
- Better connect different teams to share information and drive collaboration: *Team Collaboration*
- Identify, reduce, and communicate issues and risks that could adversely affect project success: *Issues and Risk Management*

Overview: Project Server 2010 with SharePoint Server 2010 architecture

- Effectively measure project performance and gain visibility and control across all portfolios: *Business Intelligence and Reporting*
- Initiate, plan, and deliver strategic programs: *Program Management*

The Microsoft EPM Solution includes the following products from the Microsoft Project 2010 family, to provide a comprehensive computer- and Web-based PPM solution

- **Microsoft Project Server 2010:** Project Server 2010 brings together the business collaboration platform services of SharePoint Server 2010 with structured execution capabilities to provide flexible work management solutions. Project Server 2010 unifies project and portfolio management to help organizations align resources and investments with business priorities, gain control across all kinds of work, and visualize performance using powerful dashboards. Project Server 2010 incorporates the best-in-class portfolio management techniques of Microsoft Office Project Portfolio Server 2007. This eliminates the need for Project Server Gateway (which was required to push data between Office Project Portfolio Server 2007 and Microsoft Office Project Server 2007), and providing a consistent SharePoint Server user interface across the solution.
- **Microsoft Project Professional 2010:** Microsoft Project Professional 2010 delivers powerful, visually improved ways to simplify planning, collaboration, and resource management so managers can successfully tackle all kinds of projects. Connecting Project Professional 2010 with Project Server 2010 ensures that organizations can achieve the added business benefits of unified Project Portfolio Management.



Note:

For more information about new features in Project Server 2010, see [What's new for IT pros in Project Server 2010](#).

Project Server 2010 is built on SharePoint Server 2010 to provide true multi-tier architecture by using the new Service Application model. The Project Server architecture includes Project Professional 2010 and Microsoft Project Web App clients in the front-end tier. The front-end applications communicate with the middle tier only through the Project Server Interface (PSI) Web Services, which in turn communicate with the business object layer. Business objects use the databases through the data access layer. Client applications do not directly access the primary databases; Project Server hides business objects and the DAL from clients. For more information about Project Server 2010 architecture, see [Project Server 2010 architecture](#).

Project Server 2010 compatibility with SharePoint Server versions

SharePoint Server 2010 Enterprise version is an installation requirement for Project Server 2010. See the following table for Project Server /SharePoint Server compatibility.

Overview: Project Server 2010 with SharePoint Server 2010 architecture

	Installation Requirement	Will coexist on the same farm with	Will not work with
Project Server 2010:	SharePoint Server 2010 Enterprise	SharePoint Server 2010 Enterprise	Office SharePoint Server 2007
Project Server 2007:	Windows SharePoint Services 3.0	Office SharePoint Server 2007	SharePoint Server 2010

For more information about Project Server 2010 requirements, see [Hardware and software requirements \(Project Server 2010\)](#).

Deployment

Similar to SharePoint Server, a Project Server farm deployment can vary in complexity and size, depending on your business requirements. As a three-tier application, Project Server 2010 supports all farm topologies (small, medium and large). Similar to Office Project Server 2007, Project Server 2010 can be deployed on physical servers or virtual servers (Hyper-V) depending on IT requirements. In addition, Project Server 2010 can be configured for extranet access if resources outside your organization have to collaborate on projects. Similar to SharePoint Server, Project Server 2010 supports Windows PowerShell. For more information, see [Windows PowerShell for Project Server 2010](#). For more information about Project Server 2010 capacity planning, see [Plan for performance and capacity \(Project Server 2010\)](#).

Upgrade from Project Server 2007

Microsoft is aware that its customers have made significant investments in deploying Office Project Server 2007 across their organizations. Microsoft has invested in upgrade processes and strategies to ensure customers can smoothly migrate from Office Project Server 2007 to Project Server 2010. For more information about Project Server 2010 upgrade and migration, see the [Upgrade and Migration Resource Center for Project Server 2010](#) (<http://go.microsoft.com/fwlink/?LinkId=191607>).

Installation considerations

Project Server 2010 installed to all servers in the farm: When you install Project Server 2010 to a farm, Project Server 2010 has to be installed to every application server and Web server in the farm. Therefore Project Server 2010 licenses are required for each server in the farm. When you apply updates to Project Server 2010, it is important to apply the same update to every application server and Web server in the farm to ensure that all servers in the farm are in a consistent state.

For more information about how to install Project Server 2010, see [Deploy Project Server 2010 to a server farm environment](#).

For more information about licensing and pricing, see [Microsoft Volume Licensing](http://go.microsoft.com/fwlink/?LinkID=155897) (<http://go.microsoft.com/fwlink/?LinkID=155897>).

Application server fault tolerance: Project Server 2010 application servers in a farm have fault tolerance through round-robin load balancing. A non-functioning server will be skipped and the request will be serviced by the remaining application servers in the farm. This feature may negate the need for applying a hardware-based fault tolerance solution.

Cross-farm services not supported: Sharing services across farms (cross-farm services) is not supported with Project Server 2010. Therefore careful planning must be done if Project Server 2010 is installed in a separate farm from the main content management farm. Additionally, Project Server 2010 does not have a mechanism to synchronize data between multiple instances of Project Web App.

Service Application requirements for Project Server 2010

In Project Server 2010/SharePoint Server 2010, services are no longer contained in a Shared Services Provider (SSP) like they were in Office Project Server 2007/Office SharePoint Server 2007. You can deploy only the services that are needed to a farm (known as service applications). Web applications can then be configured to use only the services that are needed, instead of the complete set of services that are deployed.



Note:

For more information about the SharePoint Server 2010 services architecture, see [Logical architecture components \(SharePoint Server 2010\)](#). Also see the [Service in SharePoint 2010 Products Technical Diagram \(in Microsoft Visio\)](#).

The following five services must be enabled to operate a Project Server 2010 server farm:

- Project Service Application (used to host Project Web App instances)
- Excel Services (used for Reporting)
- PerformancePoint Service (used for Reporting)
- Secure Store Service (used for Reporting)
- State Service (used for Charting)



Note:

For performance considerations, it is a best practice to only enable the services necessary to fulfill requirements.

Database considerations

Installing and configuring Project Server 2010 creates the following databases:

Overview: Project Server 2010 with SharePoint Server 2010 architecture

1. **Draft database:** Contains tables for saving unpublished projects from Microsoft Project Professional 2010. Project data in the Draft database cannot be accessed by using Microsoft Project Web App.
2. **Published database:** Contains all of the published projects. Published projects are visible in Project Web App. The Published database also contains tables that are specific to Project Web App (timesheets, models, views, and so on), and global data tables (outline codes, security, and metadata).
3. **Archive database:** Saves backed-up and older versions of projects.
4. **Reporting database:** Serves as the staging area for generating reports and online analytical processing (OLAP) cubes. Data in the Reporting database is updated almost in real-time, is comprehensive, and is optimized for read-only report generation. For more information, see [Plan reporting and business intelligence \(Project Server 2010\)](#).
5. **Content database:** We recommend a dedicated content database to store the Project Web App content and all project workspace data (such as Issues/Risks/Deliverables and project documents).

For more information about Project Server 2010 databases, see [Plan the database tier \(Project Server 2010\)](#).

Additionally, if the State Service (required by Project Server 2010) is started for the first time on the application server, a database will be created for the server.

For more information about the installation process, see [Deploy Project Server 2010 to a server farm environment](#).

SQL Server Analysis Services considerations

Similar to Office Project Server 2007, Project Server 2010 uses SQL Server Analysis Services to generate online analytical processing (OLAP) cubes that are used to build reports on projects, timesheets, and resources.

In this version, Project Server is integrated with Excel Services in Microsoft SharePoint Server 2010 to make it easier to create custom reports. As part of this integration, blank data-connected worksheets and sample reports are provided. For more information about reporting, see the [Business Intelligence in Project Server 2010 TechNet Resource Center](#) (<http://go.microsoft.com/fwlink/?LinkId=191609>).

Using reports in Project Server 2010 requires you to install [SQL Server 2008 Analysis Management Objects \(AMO\)](#) to each application server in your farm.



Note:

Use the Microsoft SQL Server 2008 version of AMO regardless of which version of SQL Server you are using to host your databases.

Additionally, after you install the AMO objects, you have to restart the **Project Application Service** on each application server in the farm where it is running. This service is configured in the SharePoint Central Administration Web site on the **System Settings** page in the **Manage services on server** page.

For more information about SQL Server Analysis Services requirements for Project Server 2010, see [Configure reporting for Project Server 2010](#).

Project Server 2010 language packs

Project Server 2010 language packs enable your Project Web App users to view the site in multiple languages. SharePoint Server 2010 also has language packs, although their purpose differs from that of Project Server 2010 language packs because they enable you to create sites in different languages. Note the following about Project Server 2010 language packs:

- When you install a Project Server 2010 language pack, the installation files for the language pack should be installed to all application and Web servers in the farm before you run the SharePoint Products Configuration Wizard.
- If you are installing multiple language packs, the installation files for all language packs should be installed to all application and Web servers in the farm before you run the SharePoint Products Configuration Wizard.
- Project Server 2010 language packs are available for the following languages:
 - Arabic
 - Brazilian
 - Chinese (SC)
 - Chinese (TC)
 - Czech
 - Danish
 - Dutch
 - English
 - Finnish
 - French
 - German
 - Greek
 - Hebrew
 - Hungarian
 - Italian
 - Japanese
 - Korean
 - Norwegian (Bokmal)
 - Polish
 - Portuguese
 - Russian

Overview: Project Server 2010 with SharePoint Server 2010 architecture

- Slovak
- Slovenian
- Spanish
- Swedish
- Turkish
- Ukrainian
- SharePoint Server 2010 has additional language packs for languages that are not supported by Project Server 2010.



Important:

Currently, installing a SharePoint Server 2010 language pack that is not supported in Project Server 2010 may potentially cause issues if you then have to upgrade Office Project Server 2007 data to your Project Server 2010 farm. This will be addressed in a future cumulative update.

The following languages are supported by SharePoint Server 2010, but are not available in Project Server 2010 language packs.

- Bulgarian
- Croatian
- Estonian
- Hindi
- Kazakh
- Latvian
- Lithuanian
- Romanian
- Serbian (Latin)
- Thai

Web browser considerations

Project Server 2010 access through Project Web App requires Microsoft Internet Explorer 7 or Microsoft Internet Explorer 8 as your Web browser. It is important to note because SharePoint Server 2010 supports not only these Web browsers, but also Web browsers that are not supported for Project Web App (and in some cases, explicitly blocked). It can also be an issue if your organization is currently using applications that are explicitly used for Internet Explorer 6. For more information about workarounds and other planning topics, see [Plan browser support \(Project Server 2010\)](#).

For more information about Web browsers supported for use with SharePoint Server 2010, see [Plan browser support \(SharePoint Server 2010\)](#).

Project 2010 Ignite on-demand training videos

The Microsoft Project 2010 Ignite Online Recordings let you view eight-and-a-half hours of presentations and product demonstrations from the Project 2010 Ignite Training Series. Each module is delivered by using a Microsoft Silverlight player, which enables you to view the presenter and the slides at the same time. It also gives you a chapter outline and a full transcript of the presentation.

The Project 2010 Ignite Training Series focuses primarily on new features and functionality with Microsoft Project Server 2010 and Project 2010 with regard to Office Project 2007. It was delivered to 900 attendees in 9 different cities just before product release. The online recordings are delivered by these people:

- Christophe Fiessinger: Senior Technical Product Manager, Microsoft Corporation
- Jan Kalis: Senior Technical Product Manager, Microsoft Corporation

The Microsoft Project 2010 Ignite Online Recordings are divided into the following modules with their corresponding run times. Click the module name to view the module. You can also see a complete list of the Microsoft Project 2010 Ignite Online Recording modules on the [Project 2010 Train and Learn page](http://go.microsoft.com/fwlink/?LinkId=193940) (<http://go.microsoft.com/fwlink/?LinkId=193940>).



Note:

You may be prompted to install the Microsoft Silverlight Plug-in for Microsoft Internet Explorer in order to view the videos if it is not already installed on your computer. Note that Microsoft Silverlight cannot be used in Microsoft Internet Explorer browsers running in 64-bit mode.

Module	Description	Presentation run-time	Demo run-time
Introduction (http://go.microsoft.com/fwlink/?LinkId=193941)	In this introductory module we discuss the Project 2010 Ignite training delivered worldwide between September 2009 and March 2010; introduce the four key investments of Microsoft Project 2010 (Unified Project and Portfolio Management, Simple and Intuitive User Experience, Enhanced Collaboration and Reporting, Scalable and Connected Platform), and conclude with a summary of key Microsoft Project resources that will help you deploy this new release.	12:51	00:00
Planning, Design, and	In this module we introduce Project Server	40:01	05:14

Project 2010 Ignite on-demand training videos

Module	Description	Presentation run-time	Demo run-time
Deployment (http://go.microsoft.com/fwlink/?LinkId=193942)	2010 architectural changes and typical farm topologies. We discuss scenarios and best practices to deploy in a SharePoint farm, and we present hardware and software requirements and deployment procedures.		
Upgrade and Migration (http://go.microsoft.com/fwlink/?LinkId=193943)	We have significantly improved the upgrade process to Project 2010. It's now easier and more reliable. Upgrading from Office Project 2007 is as easy as backing up the databases and attaching them to the newly installed instance of Project Server 2010. Being well prepared is a key requirement. This session discusses the process and outlines key resources and tools.	30:31	11:04
Demand Management (http://go.microsoft.com/fwlink/?LinkId=193944)	The Demand Management module introduces the new capability of Project Server 2010 around Demand Management, also known as Project Lifecycle Management. We discuss the key components that enable the Demand Management functionality: Enterprise Project Types, Project workflows (Stages and Phases), Project Detail Pages, Approvals, and steps to implement your own governance process.	35:22	24:29
Portfolio Strategy (http://go.microsoft.com/fwlink/?LinkId=193945)	Nearly every organization has to justify its investments and make sure its decisions are aligned with strategic goals. Project Server 2010 offers integrated tools for rich Demand Management and first class portfolio selection functionality that assists executives in their decisions. In this module we cover the process of setting up Business Drivers, aligning projects to Business Drivers, Project Prioritization, and the selection process. We also point to other resources relevant to portfolio strategy.	34:30	25:55
Timesheet and Stating	In this module we discuss some new features	30:02	19:39

Project 2010 Ignite on-demand training videos

Module	Description	Presentation run-time	Demo run-time
(http://go.microsoft.com/fwlink/?LinkId=193946)	that enable customers to provide task status and do time entry. We present the new user experience, the new single-entry mode to unify timesheet entry and task statusing. We also discuss reporting improvements for timesheet and statusing and the ability to integrate Project Server with Microsoft Exchange Server.		
Reporting Part I (http://go.microsoft.com/fwlink/?LinkId=193947)	Every organization from small to large requires insight into business data, including project and portfolio information. Project Server 2010, benefiting from the rich Business Intelligence platform of SharePoint Server 2010, offers powerful dashboarding capabilities. This module discusses reporting capabilities and infrastructure improvements.	27:25	26:21
Reporting Part II (http://go.microsoft.com/fwlink/?LinkId=193948)	This module shows other powerful services available with every deployment of Project Server 2010, Visio Services, and PerformancePoint Services.	09:50	29:58
Administration (http://go.microsoft.com/fwlink/?LinkId=193949)	The Administration module discusses key improvements that will make the life of project managers, and administrators easier and more flexible. Specifically we present Departments, Delegation, Project Manager Provisioned Permissions, Active Directory Synchronization and Bulk Update Project Sites.	26:12	14:21
Operations (http://go.microsoft.com/fwlink/?LinkId=193950)	This module discusses key investments that all administrators can benefit from because Project Server 2010 is built on SharePoint Server 2010. This module provides deep operational insights into farm performance, health and usage, and the rich set of tools to increase administrator productivity. Topics discussed include Unified Logging Service (ULS), Usage Logging, Health Reports,	22:51	20:27

Project 2010 Ignite on-demand training videos

Module	Description	Presentation run-time	Demo run-time
	SharePoint Health Analyzer, Developer Dashboard, Password Management, Windows PowerShell.		
Development/Extensibility (http://go.microsoft.com/fwlink/?LinkId=193952)	Each organization has different business processes and requirements. Project 2010 is built with extensibility and rich customization options in mind. Because Project Server 2010 is built on the SharePoint Server 2010 platform, you can build processes that seamlessly integrate collaboration, document management, reporting, project management, line of the business integration and much more. Both Project 2010 and Project Server 2010 may be extended by using Object Model API to extent the core functionality. This session does not go very deep into the code, but helps you get started at the right point.	21:59	06:12
Conclusion (http://go.microsoft.com/fwlink/?LinkId=193954)	In this module we answer frequently asked questions (FAQ) on each of the four key improvements of Project 2010 (Unified Project and Portfolio Management, Simple and Intuitive User Experience, Enhanced Collaboration and Reporting, Scalable and Connected Platform). We also answer frequently asked questions for IT Professionals and Developers based on feedback we heard while delivering the Project 2010 Ignite training sessions worldwide. We conclude with a very thorough Project 2010 resource slide.	35:31	00:00

Project Server 2010 IT-Professional TechNet Webcasts

The Microsoft Project Server 2010 IT-Professional TechNet Webcast series is composed of seven downloadable Webcasts that are meant to provide Project Server 2010 deployment guidance and best practices for IT professionals. You can also download the Microsoft PowerPoint slide presentations for the Webcasts from the [Project Server 2010 IT-Professional Webcast Series slide presentations page](#) on the Microsoft Download Center.

You can view these Webcasts by clicking the following links to the Microsoft Events and Webcasts site:

- [TechNet Webcast: Project Server 2010 - Performance Part 1: Setup, Execution, and Results](#) (<http://go.microsoft.com/fwlink/?LinkId=190243>) This Microsoft TechNet Webcast discusses Project Server 2010 performance characteristics and farm architecture planning. It shares the results of Project Server 2010 performance lab tests conducted on targeted reference hardware architecture in the Microsoft Technology Center (MTC) by Microsoft Consulting Services (MCS) in partnership with the Microsoft Product Group. The test results were used to discover performance bottlenecks and determine better design and implementation practices for Project Server 2010 infrastructures. This Webcast shows you how the testing lab was set up, how the tests were executed, and which test tools were used.
- [TechNet Webcast: Project Server 2010 - Performance Part 2: Architecture, Sizing, and Capacity](#) (<http://go.microsoft.com/fwlink/?LinkId=190244>) This Microsoft TechNet Webcast also discusses Project Server 2010 performance characteristics and farm architecture planning. It shares the results of Project Server 2010 performance lab tests conducted on targeted reference hardware architecture in the Microsoft Technology Center (MTC) by Microsoft Consulting Services (MCS) in partnership with the Microsoft Product Group. The test results were used to discover performance bottlenecks and determine better design and implementation practices for Project Server 2010 infrastructures. This Webcast shows you the test results, architecture, data flow, and sizing guidelines and best practices for your Project Server 2010 implementation.
- [TechNet Webcast: Project Server 2010 Upgrade and Migration](#) (<http://go.microsoft.com/fwlink/?LinkId=190247>) This Microsoft TechNet Webcast discusses Project Server 2010 features, requirements, and deployment considerations that IT professionals have to know about. Topics discussed include upgrade options from both Microsoft Office Project Server 2003 and Microsoft Office Project Server 2007 to Microsoft Project Server 2010. Topics also include tools, processes, scenarios, best practices for upgrade and migration, the effect on Project Server of coexisting with SharePoint 2010 Products, and full-farm versus split-farm upgrades.
- [TechNet Webcast: Project Server 2010 - Backwards Compatibility Mode](#) (<http://go.microsoft.com/fwlink/?LinkId=191560>) This Microsoft TechNet Webcast discusses the Microsoft Project Server 2010 Backwards Compatibility Mode (BCM) feature, which helps you speed up deployment of Microsoft Project 2010. With BCM, various desktop and server versions of

Project Server 2010 IT-Professional TechNet Webcasts

Microsoft Project can seamlessly coexist and exchange data. BCM exists on Project 2010 desktop applications and Microsoft Project Server 2010, and in certain scenarios BCM makes it possible for Microsoft Office Project Professional 2007 to access Project Server 2010.

- [TechNet Webcast: Project Server 2010 - Coexisting with SharePoint Server 2010](#)
(<http://go.microsoft.com/fwlink/?LinkId=191559>) This Microsoft TechNet Webcast discusses Microsoft Project Server 2010 coexistence with Microsoft SharePoint Server 2010. SharePoint Server 2010 is required for running Project Server 2010. It discusses two scenarios: (1) Deploying a new EPM-focused farm, and (2) Deploying Project Server 2010 into an existing SharePoint Server 2010 farm.
- [TechNet Webcast: Project Server 2010 - Backup and Restore](#)
(<http://go.microsoft.com/fwlink/?LinkId=193957>) This Microsoft TechNet Webcast explains the process for performing backup and recovery in Project Server 2010. The supported scenarios covered include mirroring (with and without witness), restoring over an existing farm, and restoring into a new farm. For farm-level, instance-level (there are five database-attach scenarios), and site-level collections, this Webcast demonstrates tools available at the command-line, in the SharePoint Central Administration Web site, in Windows PowerShell, and in Microsoft SQL Server. It also discusses Playbooks, the metadata backup and restore tool in Project Server 2010.
- [TechNet Webcast: Project Server 2010 - Operations](#)
(<http://go.microsoft.com/fwlink/?LinkId=193958>) This Microsoft TechNet Webcast discusses managing and maintaining a Project Server 2010 implementation. It also demonstrates Project Server 2010 diagnostics and monitoring, provides troubleshooting tips, and shares health check best practices.

See Also

[Project 2010 MVP Webcast Series](#)

[Project Server 2010 Demand Management Webcast series](#)

[Project 2010 Ignite on-demand training videos](#)

TechNet Webcast: Overview of Microsoft Project Server 2010 for IT professionals

This Microsoft TechNet Webcast discusses Microsoft Project Server 2010 features, requirements, and deployment considerations that IT professionals need to know about the product. Topics discussed include system requirements, deployment scenarios, installation procedures, upgrade options, and administration and operations improvements that help IT professionals.

The presenter is Christophe Fiessinger, Senior Technical Product Manager, Microsoft Corporation

[TechNet Webcast: Overview of Microsoft Project Server 2010 for IT Professionals \(Level 200\)](http://go.microsoft.com/fwlink/?LinkId=188099)

(<http://go.microsoft.com/fwlink/?LinkId=188099>)

TechNet Webcast: Managing the project life cycle with demand management

This Microsoft TechNet Webcast discusses *demand management*, a new feature in Microsoft Project Server 2010 that captures work proposals in one place and takes them through a multi-stage governance process using a Microsoft SharePoint Server 2010 workflow model. This presentation provides an overview of demand management and its importance in managing project life cycles, and we explain how to configure demand management and the required components.

The presenter in this Webcast is Rolly Perreux, Senior EPM Consultant / Instructor, PMO Logistics Inc.

[TechNet Webcast: Managing the Project Life Cycle with Demand Management](http://go.microsoft.com/fwlink/?LinkId=190241)

(<http://go.microsoft.com/fwlink/?LinkId=190241>)



Note:

This Webcast is one of seven available in a Series. For a complete list of all available Webcasts from this series, see [Project Server 2010 IT-Professional TechNet Webcasts](#).

TechNet Webcast: Project Server 2010 -- Coexisting with SharePoint Server 2010

This Microsoft TechNet Webcast discusses Microsoft Project Server 2010 coexistence with Microsoft SharePoint Server 2010. SharePoint Server 2010 is required for running Project Server 2010. This Webcast discusses the following two scenarios:

1. Deploying a new Enterprise Project Management (EPM)-focused farm with Project Server 2010 and SharePoint Server 2010
2. Deploying Project Server 2010 into an existing SharePoint Server 2010 farm. In this scenario, the original capacity planning and design assumptions should be reviewed to determine whether changes to the existing SharePoint Server 2010 farm architecture are needed before adding Project Server 2010 to the farm.

The presenter in this Webcast is Jean-Francois Lesaux (EPM Senior Consultant, Microsoft Corporation).

[TechNet Webcast: Project Server 2010 – Coexisting with SharePoint Server 2010](#)



Note:

This Webcast is one of seven in a series. For a complete list of all available Webcasts from this series, see [Project Server 2010 IT-Professional TechNet Webcasts](#).

Project 2010 MVP Webcast Series

The Microsoft Project 2010 MVP TechNet Webcast Series is composed of ten downloadable Webcasts that provide guidance and best practices to end users, IT professionals, and developers. You can also download and view the corresponding Microsoft PowerPoint slide presentations for each Webcast by downloading them from [Project the 2010 MVP Webcast Series slide presentations page](http://go.microsoft.com/fwlink/?LinkId=193407) (<http://go.microsoft.com/fwlink/?LinkId=193407>) in the Microsoft Download Center.

You can view these Webcasts by clicking the following links to the Microsoft Events and Webcasts site:

- [TechNet Webcast: Managing the Project Life Cycle with Demand Management \(Level 200\)](http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=13041) (<http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=13041>) : Demand Management, a new feature in Microsoft Project Server 2010, captures work proposals in one place and takes them through a multi-stage governance process using a SharePoint workflow model. In this presentation, we discuss Demand Management and its importance in managing project life cycles, and we explain how to configure Demand Management and the required components.
- [TechNet Webcast: Microsoft Project 2010 Portfolio Analysis \(Level 200\)](http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=7458) (<http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=7458>): In this webcast, we discuss the purpose of portfolio management, detail the portfolio management process according to Project Management Institute (PMI) standards, and explain the benefits of portfolio management and the challenges for the senior management. We describe portfolio management–related concepts and techniques, such as pair-wise comparison, prioritization matrix, and efficient frontier, and understand the benefits of these techniques in project prioritization, portfolio balancing, and optimization. Using Microsoft Project 2010 and applying the portfolio management techniques, we demonstrate typical portfolio management process scenarios.
- [TechNet Webcast: Resource Management in Microsoft Project 2010 \(Level 200\)](#): In this webcast, we examine resource management from the perspective of the new and improved features in Project 2010. Topics we discuss include Team Planner, use of Status Indicator for overallocation, Team Builder, Issue Log, and Status using Task Updates. Join us to learn more.
- [TechNet Webcast: Project Professional 2010 and SharePoint Server 2010 Better Together \(Level 100\)](#): Your organization may not use Microsoft Project Server but instead use the Microsoft Project Professional desktop application. If your organization also uses SharePoint Server, there is good news: Microsoft Project Professional 2010 has the ability to integrate with Microsoft SharePoint Server 2010. Attend this webcast to discover how you can connect project teams using the free Microsoft SharePoint Foundation 2010 software development kit (SDK). Learn how SharePoint Foundation 2010 makes it possible for team members to easily update task status and collaborate more efficiently using a SharePoint Server task library in a Web browser.
- [TechNet Webcast: Microsoft Project 2010 Enhanced Project Management \(Level 200\)](#): Discover how you can do more, better, faster, and cost effectively, by taking advantage of the new features

in Microsoft Project 2010. In this webcast, we discuss how advanced new features in Project 2010 help you better manage, control, and progress dynamic project schedules with amazing ease and simplicity. Learn how confusion between buttons and toolbars is eliminated in Project 2010 thanks to the Ribbon feature, which adds value and simplicity while greatly expanding customizability.

Other Project 2010 topics we cover include the following:

- Core time-saving functional changes
- Converting Microsoft Office Excel super users with top-down and open-ended planning
- Modeling custom lists while maintaining planning history with inactive tasks
- New methods for forecasting with additional scheduling engine features
- [TechNet Webcast: User-Controlled Scheduling in Microsoft Project 2010 \(Level 200\)](http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=7456)
(<http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=7456>): There are situations when user-controlled scheduling offers an advantage, and sometimes you should turn off user-controlled scheduling. In this webcast, we demonstrate user-controlled scheduling in Project 2010 to show the benefits and drawbacks of user-controlled scheduling.
- [TechNet Webcast: Microsoft Project 2010 Desktop: Tips and Tricks \(Level 200\)](http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=12426)
(<http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=12426>): In this webcast, we focus on how to use some new features in Project 2010 that help you build effective schedules quickly. Topics we cover include outlining, building schedules, and making resource assignments.
- [TechNet Webcast: Project Server 2010 Project and Portfolio Management Reporting \(Level 200\)](http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=7442)
(<http://www.microsoft.com/events/series/epm.aspx?tab=Webcasts&seriesid=51&webcastid=7442>): In this webcast, we provide insight on how you can take advantage of the great reporting features in Project Server 2010 and SharePoint Server 2010. By using Excel Services in SharePoint, Project Server delivers a suite of pre-defined reports out of the box. During the presentation we do the following:
 - Outline how users are able to generate their own reports and report templates
 - Give an overview on how to manage projects and portfolio dashboards by creating key performance indicator (KPI) reports using PerformancePoint Services in SharePoint
 - Show how organizations can visualize their project and portfolio management process by generating and integrating a dynamic visual report using Visio Services
 - Provide an overview of all new reporting features that Project Server 2010 has to offer
- [TechNet Webcast: Microsoft Office Project 2010 Overview \(Level 200\)](#): In this webcast, we discuss the capabilities of Microsoft Project 2010 and Microsoft Project Server 2010, and we discuss the key investment areas of unified project and portfolio management: simple and intuitive user experience, improved collaboration and reporting, and a scalable and connected platform. We also emphasize the end-to-end capabilities of the 2010 Microsoft Office Enterprise Project Management (EPM) solution.
- [TechNet Webcast: Overview of Microsoft Project Server 2010 for IT Professionals \(Level 200\)](#): In this webcast, we discuss Project Server 2010 features, requirements, and deployment

considerations that IT professionals have to know about the product. Topics we discuss include the following: system requirements, deployment scenarios, installation procedures, upgrade options, and administration and operations improvements that help IT professionals.

See Also

[Project Server 2010 IT-Professional TechNet Webcasts](#)

[Project 2010 Ignite on-demand training videos](#)

[Project Server 2010 Demand Management Webcast series](#)

Project Server 2010 Demand Management Webcast series

The Microsoft Project Server 2010 Demand Management Webcast Series is composed of four on-demand webcasts targeted at end users. These webcasts introduce the concepts of Demand Management by doing the following:

- Explaining the framework for the project/program phases of Create, Select, Plan, Manage, and Close
- Explaining how to integrate information paths and strategic objectives
- Providing use-case examples that showcase the enterprise-wide benefits of the Demand Management feature in Project Server 2010



Note:

For additional information about Demand Management, see the white paper [Microsoft Project Server 2010 - A look at Demand Management, A whitepaper for stakeholders in a program ecosystem](http://go.microsoft.com/fwlink/?LinkId=191854) (<http://go.microsoft.com/fwlink/?LinkId=191854>).

The Project Server 2010 Demand Management Webcast Series includes the following four on-demand video presentations:

- [TechNet Webcast: Project Server 2010 Demand Management \(Part 1 of 4\): Overview \(Level 200\)](#) This Webcast highlights the new Demand Management feature in Project Server 2010. The topics covered in this Webcast include how Demand Management in Project Server 2010 does the following things:
 - Offers positive business impacts for multiple departments
 - Enhances strategic visibility into portfolios, programs, and projects across the enterprise
 - Benefits governance control processes by allowing for multiple lifecycle styles, creation of a central repository for project/program documents and data, and more streamlined capabilities for collecting project data
- [Project Server 2010 Demand Management \(Part 2 of 4\): Create and Select Phases](#) This Webcast outlines the framework for the project/program phases of "Create" and "Select". It explains how to integrate information paths and strategic objectives within the Demand Management feature in Project Server 2010. The topics covered in this Webcast include:
 - Costs
 - Corporate benefit and strategic impact
 - Organizational approach
 - Utilization of necessary resources
 - Risk assessment

Project Server 2010 Demand Management Webcast series

- Defining conditions leading to project/program selection by outlining the business drivers
- Strategic priorities
- Scenarios
- Risk assessment
- Impact standards
- Assumption/constraint analysis
- [Project Server 2010 Demand Management \(Part 3 of 4\): Plan, Manage, and Close Phases](#) This Webcast outlines the framework for the project/program phases of Plan, Manage, and Close. It also explains how to integrate information paths and strategic objectives within the Demand Management feature in Project Server 2010. The topics covered in this Webcast include:
 - Defining project structure of phases
 - Identifying milestones and dependencies
 - Developing resource management policies
 - Monitoring actual values in comparison with planned values and forecasts
 - Integrated change control processes
 - Status reporting
 - Issue/risk management progress
 - Obtaining appropriate sign-offs
 - Completing and archiving of project documents forming organization assets
- [Project Server 2010 Demand Management \(Part 4 of 4\): Test the Theory and Review](#) This Webcast provides use-case examples that showcase the enterprise-wide benefits of the Demand Management feature in Project Server 2010. It also covers best practices for integration, implementation, and execution of demand management.



Note:

You can download the Microsoft PowerPoint slide presentations used for each of the Webcasts in the Project Server 2010 Demand Management Webcast Series from the [Microsoft Project Server 2010 Demand Management Webcast Series slide presentations page](#) (<http://go.microsoft.com/fwlink/?LinkId=193409>) in the Microsoft Download Center.

See Also

[Project 2010 MVP Webcast Series](#)

[Project 2010 Ignite on-demand training videos](#)

[Project Server 2010 IT-Professional TechNet Webcasts](#)

Planning and architecture for Project Server 2010

The content in this planning and architecture section guides IT professionals in the development of conceptual, logical, and physical designs for configuring Microsoft Project Server 2010 features, servers, and topologies. This section also provides recommendations for system designs based on customer scenarios and includes information to help IT Pros design a highly reliable, consistently available, and scalable system.

In this section:

- [Plan for deployment \(Project Server 2010\)](#)

This article provides links to articles about deployment planning. Before installing Microsoft Project Server 2010, be sure you have reviewed this information.
- [Plan for authentication in Project Server 2010](#)

This article describes planning for security in a Microsoft Project Server 2010 Enterprise Project Management (EPM) Solution. This material is useful for Project Management Organizations (PMOs) and system administrators who are responsible for planning the deployment of a Project Server 2010EPM Solution.
- [Project Server and SharePoint Server security](#)

Microsoft Project Server 2010 is completely dependent on Microsoft SharePoint Server 2010 to support its user interface and farm topology. Security at the authentication level is tightly integrated between Project Server 2010 and SharePoint Server 2010, whereas user and group authorization is handled separately by Project Server 2010.
- [Plan for performance and capacity \(Project Server 2010\)](#)

This set of articles covers capacity planning for Microsoft Project Server 2010.
- [Plan groups, categories, and RBS in Project Server 2010](#)

Microsoft Project Server 2010 security is based on users, groups, and categories. This article addresses planning for groups and categories in a Project Server deployment.
- [Project Server 2010 upgrade overview](#)

This article provides an overview of how to upgrade to Microsoft Project Server 2010 from a previous version of Project Server.
- [Plan for upgrade to Project Server 2010](#)

This section contains articles that help you plan and prepare for upgrading from to Microsoft Project Server 2010.
- [Hardware and software requirements \(Project Server 2010\)](#)

Microsoft Project Server 2010 provides for a number of installation scenarios. Currently, these installations include single server with built-in database installations and single server or multiple server farm installations.

- [Project Server 2010 architecture](#)
This article describes the multi-tiered system in Microsoft Project Server 2010.
- [Plan browser support \(Project Server 2010\)](#)
This article describes supported Web browsers for connecting to Microsoft Project Server 2010 and other considerations that have to be made in planning for them.
- [Plan for Project Server 2010 Web Parts](#)
This article describes the 18 Web Parts that are installed with Project Server 2010 that provide Project Server 2010 functionality.
- [TechNet Webcast: Project Server 2010: Performance, part 1: setup, test, execution, and results](#)
This Microsoft TechNet Webcast is one of two parts that discuss Microsoft Project Server 2010 performance characteristics and farm architecture planning. This Webcast shows how the testing lab was set up, how the tests were executed, and which test tools were used.
- [TechNet Webcast: Project Server 2010: Performance, part 2: architecture, sizing, and capacity](#)
This Microsoft TechNet Webcast is one of two parts that discuss Microsoft Project Server 2010 performance characteristics and farm architecture planning. This Webcast shows the test results, architecture, data flow, and sizing guidelines and best practices for a Project Server 2010 implementation.
- [Technical diagrams \(Project Server 2010\)](#)
This article contains models (posters) that detail a specific technical area, such as upgrade paths for Project Server 2010 or the various methods available for migrating from Microsoft Office Project Portfolio Server 2007 to Project Server 2010.

Plan for deployment (Project Server 2010)

This article provides links to articles about deployment planning. Before installing Microsoft Project Server 2010, be sure you have reviewed the information in these articles.

In this section:

- [Determine project management requirements \(Project Server 2010\)](#)
It is important to determine the project management needs and requirements for your organization. Your configuration will vary according to the kind of work that your organization performs and whether you use Project Server 2010 for time tracking, collaboration, or portfolio management.
- [Determine the number and types of users \(Project Server 2010\)](#)
The number and types of users in your organization who use Project Server features have a direct effect on the scalability and performance needs of your organization.
- [Plan EPM Solution architecture \(Project Server 2010\)](#)
This chapter describes the components of a Microsoft Enterprise Project Management (EPM) Solution. This material is written for executives, managers, and system administrators who are responsible for planning the deployment of an EPM Solution.
- [Plan the project life cycle \(Project Server 2010\)](#)
This article alerts those who are responsible for planning the deployment and configuration of Project Server 2010 that some choices will have to be made that relate to the features described in this chapter.
- [Plan reporting and business intelligence \(Project Server 2010\)](#)
In Project Server 2010, Project Server has been integrated with Excel Services in Microsoft SharePoint Server 2010 to make it easier to create custom reports.
- [Plan for administrative and service accounts \(Project Server 2010\)](#)
Use this article to plan for the account requirements and recommendations for accounts that are required to install, configure, and use Microsoft Project Server 2010.
- [Podcast: Project Server planning \(Project Server 2010\)](#)
In this podcast, Microsoft Program Manager Treb Gatte and consultant, author, and Microsoft MVP Gary Chefetz discuss planning considerations for Microsoft Project Server 2010.
- [Plan for Exchange integration \(Project Server 2010\)](#)
This article discusses integration with Microsoft Exchange Server 2007 SP2, which enables Microsoft Project Server 2010 users to view Project Server tasks in Microsoft Exchange client software.
- [Demand Management in Project Server 2010 \(white paper\)](#)
This white paper is written from an end user's perspective to discuss the *Demand Management* capability in Microsoft Project Server 2010.

Plan for deployment (Project Server 2010)

- [Portfolio Server migration guide \(white paper\)](#)

This document is intended for both IT Professionals and business users who use Microsoft Office Project Portfolio Server 2007 today and are considering an upgrade to Project Server 2010. This document outlines the various approaches and points out the useful resources in this area.

- [Portfolio strategy with Project Server 2010 \(white paper\)](#)

This white paper is written from an end user's perspective to discuss the extensive Project Portfolio Management (PPM) capability in Microsoft Project Server 2010.

- [Microsoft Project and SharePoint Server 2010 — Better Together \(white paper\)](#)

This white paper is written for end users. It highlights the new features in Project Server 2010.

- [Hitchhiker's Guide to Demand Management \(white paper\)](#)

This white paper is written from a Project Management Office perspective to discuss implementing the *Demand Management* capability in Microsoft Project Server 2010.

See Also

[Project Server 2010 Ignite Training: Planning, Design, and Deployment](#)

[Project Server 2010 Ignite Training: Upgrade and Migration](#)

Determine project management requirements (Project Server 2010)

It is important to determine the project management needs and requirements for your organization. Your configuration will vary according to the kind of work that your organization performs and whether you use Project Server 2010 for time tracking, collaboration, or portfolio management. After you characterize the typical projects for your organization, determine which Project Server scenarios that you need to support.

Characterize your projects

Understanding the characteristics of the projects in your organization enables you to plan your Project Server 2010 configuration. The following characteristics have a significant effect on your configuration:

- The number of projects that your organization is working on at a particular time.
- The size of your projects, which varies with the number of tasks and assignments that your projects include.
- The length of time that is required to complete a project.
- The number of team members that are assigned tasks in projects.

Most organizations manage projects that vary in size and duration, but the degree to which they vary is a function of the size of the organization and the kind of work that it performs. For example, a large consulting company might manage several thousand projects that range from small, 10-task projects that last two weeks to large projects that include 1,500 tasks and last for over a year.

Organizations typically have many projects that range in size from small to medium to large. For planning, make sure that you can adequately support the kind of project that your organization works on most frequently.

Determine your Project Server 2010 scenario

Your project management needs and requirements vary according to the kind of work that your organization performs. As part of your configuration planning process, determine which scenario that you need to support. For example, you can use Project Server 2010 to support the following kinds of scenarios:

- Enterprise Project Management
- Time tracking
- Demand management

Using Project Server 2010 for Enterprise Project Management

The Project Server 2010 scenario for EPM applies to a large organization whose area of focus is top-down planning driven through the Project Management Office (PMO). This scenario is more frequently seen in the product development and manufacturing markets. It has the following characteristics:

- A small number of large projects that are often related
- Focus on the PMO
- Extensive use of Microsoft Project Professional 2010
- Work Tracker usage

Critical considerations for this kind of deployment include the following:

- The level of detail to track
- Using leveling as a process
- How to prioritize capacity
- How to use skill tracking

In this scenario, client usage is as follows:

Client application	Rate of usage
Project Professional 2010	High
Project Web App	High

In this scenario, server usage is as follows:

Project Web App feature	Rate of usage
Work Tracker	High
Programs	High
Timesheets	Medium
Portfolio management	Medium
Master projects	High
Project workspaces	Low
Risk management	Medium
Issues management	High
Document management	Medium

Determine project management requirements (Project Server 2010)

Project Web App feature	Rate of usage
Resource management	Medium
Task management	Medium

Using Project Server 2010 for time tracking

The Project Server 2010 scenario for professional services/timesheet deployment can apply to a large organization that wants to use Project Server 2010 mainly to capture and report time. In this scenario, employees and contractors use Project Server 2010 timesheet functionality to submit hours worked on tasks during specific time periods. This scenario has the following characteristics:

- Minimal use of Project Professional 2010
- Time and material billing
- A large number of projects that have fairly few tasks
- A predictable peak period of usage that corresponds to scheduled timesheet entry in Project Web App

Organizations that support this scenario typically use a limited set of Project Professional 2010 features to track time and costs by using timesheets to capture information. This scenario presents scalability issues, because, when many timesheets are submitted in a short period of time, system resources can become severely strained.

Critical considerations for this kind of deployment include the following:

- What time classifications to use
- What time periods to use
- Calendars and overtime setup
- What fiscal periods to use
- Source of cost data
- Custom field configuration — process control custom fields vs. reporting custom fields
- Currency configuration
- Auditing

There are additional factors that can be affected by the processes that are used within your organization, including the following:

- Types of usage
- What the project update cycle is
- What the reporting cycle is

In this scenario, client usage is as follows:

Determine project management requirements (Project Server 2010)

Client application	Rate of usage
Project Professional 2010	Medium
Project Web App	High

In this scenario, server usage is as follows:

Project Web App feature	Rate of usage
Work Tracker	High
Programs	Low
Timesheets	High
Portfolio management	Low
Master projects	Low
Project workspaces	Low
Risk management	Low
Issues management	Low
Document management	Low
Resource management	High
Task management	Medium

Using Project Server 2010 for Demand Management

The Project Server 2010 scenario for Demand Management deployment can apply to any medium-to-large organization that wants to use Project Server 2010 to manage project portfolios. These organizations typically have the following characteristics:

- A large number of projects that have many assignments
- A high percentage of project managers
- Frequent use of Project Professional 2010

Organizations that support this scenario typically use the breadth of Project Server 2010 features that include timesheets, document libraries, issues, risks, the Enterprise Global Template, and the Enterprise Resource Pool.

Determine project management requirements (Project Server 2010)

The organization to which this scenario can apply can be as small as a medium-size organization (or a department in a larger organization) whose users all share the same physical location on the same LAN, or it can be a large organization whose users work in several different physical locations.

These organizations use Project Professional 2010 and Project Web App daily to publish or update projects to the Project Server 2010 database, and they use Project Web App to view assignments; report actuals; and access documents, issues, and risks. Additionally, these organizations generate online analytical processing (OLAP) cubes weekly.

Critical considerations for this kind of deployment include the following:

- Level of resource data to track
- What project nomination process to use
- What kind of review process to use
- What the report cycle will be
- Workflow requirements
- What kind of work to track
- Who manages the process
- What demand is captured

In this scenario, client usage is as follows:

Client application	Rate of usage
Project Professional 2010	Medium
Project Web App	High

In this scenario, server usage is as follows:

Project Web App feature	Rate of usage
Work Tracker	Low
Timesheets	Medium
Portfolio management	High
Programs	Low
Administrative projects	Low
Collaboration	Medium
Document management	Medium

Determine project management requirements (Project Server 2010)

Project Web App feature	Rate of usage
Risk management	Medium
Issues management	Medium
Resource management	Medium
Project workspace sites	Medium

Determine the number and types of users (Project Server 2010)

The number and types of users in your organization who use Project Server features have a direct effect on the scalability and performance needs of your organization.

Number of users

When you determine the number of Project Server users that your organization needs to support, also consider the maximum number of concurrent users. This is especially critical if your organization plans to support the time tracking scenario.

It is helpful to categorize users to determine the different types of them that you need to support, as well as how many of each type. For example, project managers who use Project Professional create the greatest load on the system; viewers create the smallest amount of load.

Types of users

The types of users that you need to support, and the percentage of each compared to the total number, affects the configuration decisions that you make during your planning process. Each user type places a load on the system. The most common user types are as follows:

- Project managers
- Resource managers
- Team members
- Executives
- Administrators

Project managers

Project managers are responsible for overseeing and completing projects, sometimes coordinating with other project managers and resource managers in the organization. Project managers use Microsoft Project Professional 2010 to do the following:

- Create and publish projects to the Project Server database
- Modify projects based on feedback
- Assign team members to project tasks
- Track progress by incorporating task updates from team members
- Determine target and actual project timelines and costs

Resource managers

Resource managers are responsible for managing resources and defining skills based on capabilities. They work with project managers and other resource managers to ensure that qualified resources are assigned to tasks in projects. Resource managers use Microsoft Project Web App (PWA) to do the following:

- View workload and availability by project over time
- View workload and availability by resource over time
- Add team members to project teams
- Post issues and upload documents
- Use Portfolio Modeler to determine resource availability
- Modify resource skills and other codes

Team members

Team members are resources who are assigned to tasks in projects. A team member typically works on multiple projects at any given time and is responsible for completing tasks according to a schedule. Team members can use both Project Web App and Microsoft Outlook 2007 or 2010. (Exchange Server integration with Project Server enables team members to integrate Project Server data with Outlook.) Team members use PWA to do the following:

- Meet deadlines by identifying current and upcoming tasks to prioritize daily work
- Report time spent working on tasks by entering progress in timesheets
- Delegate and add tasks
- Record and respond to project-related issues and risks
- Link issues to tasks
- Submit status reports
- Work collaboratively with other team members on project-related documents

Team members use Outlook to do the following:

- View assigned tasks
- Report on assigned tasks

Executives

An executive is a user who uses PWA to view status or reporting on a project or multiple projects. For example, an executive can oversee several different projects that are managed by different project managers to gain an overall perspective on schedule and budget. Executives use PWA to do the following:

- View project and resource reports in Portfolio Analyzer
- Submit issues to project and resource managers

Administrators

Administrators deploy and manage Project Server 2010 and related applications. These users manage access to the server and the server database. PWA provides access to the Project Server administrative tools. Administrative tools are also provided with Microsoft Windows Server and SQL Server. Administrators use PWA to do the following:

- Define timesheet views
- Lock reporting periods and actuals in timesheets
- Create standardized reports for Portfolio Analyzer views
- Add team members to, and delete team members from, the Enterprise Resource Pool

Plan EPM Solution architecture (Project Server 2010)

This chapter describes the components of a Microsoft Enterprise Project Management (EPM) Solution. This material is written for executives, managers, and system administrators who are responsible for planning the deployment of an EPM Solution.

An EPM Solution that is based on Microsoft Project Server 2010 is deployed across multiple tiers: a client tier, a Web tier, an application tier, and a database tier. Applications and services in each tier provide for availability and scalability, which enables any size organizations to manage projects of a range of sizes and levels of complexity. You can configure the application and database tiers of your EPM Solution to best meet the needs and requirements of your organization.

Microsoft SharePoint Server 2010 is a necessary part of the EPM Solution for Project Server 2010. It is important that you include planning for SharePoint Server 2010 as part of your EPM Solution deployment plans. For more information, see [Planning and architecture for SharePoint Server 2010](#).

In this chapter:

- [Plan the client tier \(Project Server 2010\)](#)
This article identifies the key components of the client tier and helps you distinguish from the parts of the other tiers in the Microsoft Enterprise Project Management (EPM) Solution.
- [Plan the application tier \(Project Server 2010\)](#)
This article discusses the components included in the application tier in an EPM Solution.
- [Plan the database tier \(Project Server 2010\)](#)
This article identifies the key components of the database tier and helps you to distinguish from the parts of the other tiers in the EPM Solution.

See Also

[Project Server 2010 architecture](#)

Plan the client tier (Project Server 2010)

This article identifies the key components of the client tier and helps you distinguish from the parts of the other tiers in the Microsoft Enterprise Project Management (EPM) Solution.

The client tier of the EPM Solution includes Microsoft-based applications and any custom applications that are specific to your organization.

Microsoft Project Professional 2010

Microsoft Project Professional 2010 is a desktop application that enables project managers to create, publish, and manage projects. In addition to scheduling and tracking tools, Project Professional 2010 provides project managers with enterprise resource and portfolio management capabilities.

For information about deploying Project Professional 2010 in an enterprise environment, see [Office 2010 Resource Kit](#).

Microsoft Outlook

Microsoft Project Server 2010 provides integration with Microsoft Exchange, which lets users access Project Server tasks from within Outlook. Users can also receive e-mail reminder notifications for tasks that they are assigned in projects that are stored in the Project Server 2010 database.

Internet Explorer

Microsoft Project Web App is a rich Web-based client that is designed for users who are not project managers, such as resource managers, viewers, and team members. These users access project information in Project Web App by using Windows Internet Explorer. Project Web App provides access to timesheets, project views, status reports, document libraries, and risks.

Project Web App requires Internet Explorer 7.0 or 8.0. If your organization is still using previous versions of Internet Explorer, you can consider using Windows Terminal Services to provide users access to Internet Explorer 7.0 or 8.0 without deploying it to the desktop. For more information about Terminal Services, see the following references:

Windows Server 2003:

1. [Terminal Server](http://go.microsoft.com/fwlink/?LinkId=187190) (http://go.microsoft.com/fwlink/?LinkId=187190)
2. [Terminal Server Licensing](http://go.microsoft.com/fwlink/?LinkId=187192) (http://go.microsoft.com/fwlink/?LinkId=187192)

Windows Server 2008:

1. [Terminal Services Overview](http://go.microsoft.com/fwlink/?LinkId=187191) (http://go.microsoft.com/fwlink/?LinkId=187191)
2. [Terminal Services RemoteApp](http://go.microsoft.com/fwlink/?LinkId=187194) (http://go.microsoft.com/fwlink/?LinkId=187194)
3. [Terminal Services Licensing](http://go.microsoft.com/fwlink/?LinkId=187193) (http://go.microsoft.com/fwlink/?LinkId=187193)

4. [Plan for Remote Desktop Services \(Terminal Services\)](#)

Third-party and line of business applications

Many organizations use line-of-business client applications or develop business-specific applications. These applications call Project Server 2010 by using the Project Server Interface — an extensible set of Web services — and must also be integrated with a Microsoft Windows–based platform.

Project Server 2010 provides a complete Software Development Kit (SDK). For more information, see [Project 2010 SDK Documentation](http://go.microsoft.com/fwlink/?LinkId=187195) (<http://go.microsoft.com/fwlink/?LinkId=187195>).

See Also

[Plan for volume activation of Office 2010](#)

Plan the application tier (Project Server 2010)

The application tier in a Microsoft Enterprise Project Management (EPM) Solution includes the following components:

- [SharePoint Server 2010](#)
- [Project Server 2010](#)
- [Project Server Interface](#)
- [Project Server 2010 Events service](#)
- [Project Server 2010 Queue service](#)
- [Exchange Server](#)
- [Other applications](#) (described in this article)

SharePoint Server 2010

The Enterprise edition of Microsoft SharePoint Server 2010 is required for Microsoft Project Server 2010. SharePoint Server 2010 has many features in its own right, and deployment of SharePoint Server 2010 should be carefully planned. For information about how to plan your SharePoint Server 2010 deployment, see [Planning and architecture for SharePoint Server 2010](#).

Project Server 2010

Microsoft Project Server 2010 is the central component of a Microsoft Enterprise Project Management (EPM) Solution. Project Server 2010 is a robust and highly scalable Web-based server application that is integrated with several client applications, the Microsoft Windows Server platform, and Microsoft SQL Server 2005 or 2008.

You can run the Project Server 2010 service on one or more application servers in a SharePoint Server 2010 farm. Project Server 2010 is supported on a computer that is running Windows Server 2008 or Windows Server 2008 R2 with the Enterprise edition of SharePoint Server 2010 installed.

Project Server Interface

The Project Server Interface is the application programming interface (API) of Project Server 2010. The Project Server Interface object model exposes Project Server 2010 functionality to all external applications. Microsoft Project Professional 2010, Microsoft Project Web App, and line-of-business and other third-party applications use the Project Server Interface (PSI) to access Project Server 2010 data that is stored in the Draft, Published, and Archive databases. The PSI is available through Web service calls by back-end line-of-business applications, or through a Project Server Interface proxy for client applications having a user interface.

Project Server 2010 Events service

The system-level Project Server 2010 Events service manages the Project Server 2010 events. Other applications can subscribe to Project Server 2010 pre-events and post-events, and register event handler methods through Project Web App. Event handlers can check business rules and cancel an operation through a pre-event, or extend Project Server 2010 with additional processing such as workflow by using a post-event (for example, ProjectPublished).

Project Server 2010 Queue service

There are two Project Server 2010 queues that operate in the system-level Microsoft Project Server 2010 Queue service:

- To manage heavy peak loads, the Timesheet queue handles submission and updates of timesheet and status reports.
- The Save and Publish queue manages new and incremental saves of working projects to the Draft database and also manages publishing a project — that is, moving the project from the Draft to the Published database.

Exchange Server

Exchange Server integration allows for Project Server 2010 users to view Project Server tasks in Microsoft Office Outlook. This functionality replaces the Outlook Add-in task statusing functionality for non-time-phased tasks that was available in previous versions of Project Server.

To configure Exchange integration, the Project Server administrator must grant access to the instance of Exchange Server and the Exchange administrator must grant Exchange access to the Project Server farm administrator account.

Other applications

Third-party and line-of-business applications can be used with Project Server 2010. By using the Project Server Interface, you can address many project management needs with these applications. The following are some sample scenarios:

- **Project proposals** Create placeholder projects during project initiation and use project custom fields to tag the project with information needed for the initiation and approval process. Add tasks to identify project phases for key milestones or deliverables. When approved, project proposals can evolve into full-scale projects that are managed by using Project Professional 2010.
- **Maintenance projects** Create placeholder projects to use with resource plans. Reserve or book time against resources for maintenance work or base business. Maintenance projects generally do not have tasks.

Plan the application tier (Project Server 2010)

- **Financial projects** Create projects for time capture through the timesheet for integration with a financial system. Create tasks for a hierarchy of financial codes that reflect the cost breakdown structure of the financial system. These projects do not require scheduling or status updates.
- **Integration with project accounting systems** Capture the resource costs and expenses associated with projects to feed financial and billing systems and for budget comparison purposes. Synchronize tasks, resources, and assignments between the systems. Capture timesheet data in one system to feed the other (which timesheet is used depends on the needs of the organization or of individual projects).
- **Integration with work or task management systems** Synchronize tasks and assignments between Project Server 2010 and systems such as Microsoft Visual Studio Team System. Microsoft Visual Studio Team System is integrated with Microsoft Project Standard 2010 and Project Professional 2010, but integration with Project Server 2010 requires developing components by using the PSI.
- **Process updates from team members** For projects that are not actively managed, automatically update them on the server by using information from team members about progress and other changes. Projects can be updated and republished without a project manager reviewing the results or making adjustments to the plan.

Plan the database tier (Project Server 2010)

This article identifies the key components of the database tier and helps you to distinguish from the parts of the other tiers in the Microsoft Enterprise Project Management (EPM) Solution.

The data access layer is internal to Project Server 2010 and is not exposed to external applications. The data access layer translates between the logical business entity representation of the data and the physical database tables. Each logical entity is stored in a number of different tables. The data access layer encapsulates the work required to manage connections, execute queries, and begin, commit, and roll back transactions. Project Server 2010 data is partitioned into four databases in Microsoft SQL Server:

- The Draft database contains tables for saving unpublished projects from Microsoft Project Professional 2010. Project data in the Draft database is not accessible by using Microsoft Project Web App.
- The Published database contains all of the published projects. Published projects are visible in Project Web App. The Published database also contains tables that are specific to Project Web App (timesheets, models, views, and so on), and global data tables (outline codes, security, and metadata).
- The Archive database saves backed-up and older versions of projects.
- The Reporting database is the staging area for generating reports and online analytical processing (OLAP) cubes. Data in the Reporting database is updated nearly in real-time, is comprehensive, and is optimized for read-only report generation.

Only the Reporting database schema is documented. You should access the Drafts, Published, and Archive databases only through the Project Server Interface. You can add data tables, fields (properties), and entities that are not defined in the Project Server 2010 database schema. If you do, you must also provide the full stack of a custom assembly, Web service, business objects, and data access.

Plan for virtual environments for Project Server 2010

This chapter discusses planning for using Microsoft Project Server 2010 in a virtual environment. A virtual server running Project Server 2010 has the same minimum, and fundamental, requirements as a physical server running Project Server 2010. Virtualization provides many benefits; however, it does not eliminate or circumvent the existing requirements and best practices that relate to deploying, configuring, and maintaining a Project Server 2010 environment.

In this section:

- [Plan for using Project Server 2010 in a Hyper-V virtual environment](#)

This article provides basic guidance for using Microsoft Project Server 2010 with the Windows Server 2008 Hyper-V virtualization technology. The scope of this guidance covers Project Server 2010 and Microsoft SharePoint Server 2010.

Plan for using Project Server 2010 in a Hyper-V virtual environment

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Support statement

Microsoft Project Server 2010 is supported in a Hyper-V environment. An official support statement for virtualization can be found listed at [Microsoft server software and supported virtualization environments](http://go.microsoft.com/fwlink/?LinkID=126635) (<http://go.microsoft.com/fwlink/?LinkID=126635>).

Hardware and software requirements

In order to run Project Server 2010 in a Hyper-V environment, you must meet the Hyper-V prerequisites and follow the recommendations documented here and in [Other resources](#) later in this article.

Project Server 2010 recommendations for Hyper-V

The following are recommendations for setting up Project Server 2010 in a Hyper-V environment.

- Review the documents described in [Other resources](#), later in this article, as a prerequisite to deploying Project Server 2010 and SharePoint Server 2010 in a virtual environment.
- Any Hyper-V virtual server must meet the requirements of the physical server (for example, CPUs, memory, and disk I/O) that you will run as a Hyper-V guest. As with all virtual technologies, there is an overhead cost on the host computer for each virtual machine.
- Do not use the Hyper-V snapshot feature on virtual servers that are connected to Project Server 2010. This is because the timer services and the search applications might become unsynchronized during the snapshot process, and after the snapshot is finished, errors or inconsistencies can occur.
- Do not use more virtual CPUs than there are physical CPUs on the Hyper-V host computer. Although Hyper-V lets you allocate more virtual CPUs than the number of physical CPUs, this causes performance issues because the hypervisor software has to swap out CPU contexts.
- Leverage virtual networks. Hyper-V enables you to configure the following kinds of virtual networks:
 - **Private:** The virtual machines on the private network can communicate with one another.
 - **Internal:** The virtual machines can communicate with one another and with the host computer.
 - **External:** The virtual machines can communicate with one another, the host computer, and computers on the physical network.

Plan for using Project Server 2010 in a Hyper-V virtual environment

Private networks and internal networks do not use the physical network adapter or cable. Therefore, communications are faster and network congestion is minimized. You can take advantage of this network performance gain by creating an external network for the front-end Web servers and by creating a private or internal network for the application and SQL Server database servers.

Other resources

The following table provides important information about resources for Hyper-V, Project Server 2010, SharePoint Server 2010, and SQL Server 2008.

Title	Description	URL
SharePoint 2010 Virtualization Resource Center	Provides information about Hyper-V for learning about virtualization, plus articles and models for planning and deploying Microsoft SharePoint Server 2010 in a virtual environment.	http://technet.microsoft.com/en-us/sharepoint/ff602849.aspx
SharePoint 2010 Virtual Machine Guidance	Guidance designed to help you plan and implement a server virtualization solution for Microsoft SharePoint Server 2010 server.	http://technet.microsoft.com/en-us/library/ff621103.aspx
Microsoft Assessment and Planning Toolkit (MAP)	Used to determine whether your servers can be virtualized.	http://go.microsoft.com/fwlink/?LinkId=117991
Hyper-V Planning and Deployment Guide	Includes information about hardware requirements and limits, supported guest operating systems, and instructions for installing the role and management tools.	http://go.microsoft.com/fwlink/?LinkId=124368
Step-by-Step Guide to Getting Started with Hyper-V	Provides a full walk-through of how to create and configure virtual machines in a Hyper-V environment.	http://go.microsoft.com/fwlink/?LinkId=122588
Hyper-V Step-by-Step Guide: Testing Hyper-V and Failover Clustering	Shows you how to make a virtual machine highly available by creating a simple two-node cluster.	http://go.microsoft.com/fwlink/?LinkId=120666
Performance Tuning	Provides details on tuning Windows	http://go.microsoft.com/fwlink/?LinkId=

Plan for using Project Server 2010 in a Hyper-V virtual environment

Title	Description	URL
Guidelines for Windows Server 2008 R2	Server 2008 R2 and includes a section specifically focused on Hyper-V.	121171
All Topics Performance Blog	Written by Tony Voellm and dedicated to performance topics. Tony is currently the lead of the Hyper-V Performance Team. Of particular interest is the four-part series that Tony wrote about Hyper-V performance counters.	<ul style="list-style-type: none"> • Hyper-V Performance Counters – Part one of many - The overview (http://go.microsoft.com/fwlink/?LinkId=125651) • Hyper-V Performance Counters – Part two of many – “Hyper-V Hypervisor” counter set (http://go.microsoft.com/fwlink/?LinkId=125652) • Hyper-V Performance Counters – Part three of many – “Hyper-V Hypervisor Logical Processors” counter set (http://go.microsoft.com/fwlink/?LinkId=125653) • Hyper-V Performance Counters – Part four of many – “Hyper-V Hypervisor Virtual Processor” and “Hyper-V Hypervisor Root Virtual Processor” counter set (http://go.microsoft.com/fwlink/?LinkId=125655)
Windows Server 2008 R2 TechCenter	Information on Windows Server 2008 R2, including documentation, downloads, and community resources	http://go.microsoft.com/fwlink/?LinkId=126642
Virtualization Solution Center	Information on Hyper-V, Application Virtualization, Virtual Machine Manager, and Virtualization on Windows Server.	http://go.microsoft.com/fwlink/?LinkId=126643
TechNet Hyper-V landing page	Direct link to Hyper-V documentation on TechNet.	http://go.microsoft.com/fwlink/?LinkId=126647
Planning and architecture for Project	Provides information and guidance for planning the architecture of a	http://go.microsoft.com/fwlink/?LinkID=92795

Plan for using Project Server 2010 in a Hyper-V virtual environment

Title	Description	URL
Server 2010	Project Server 2010 installation.	

Conclusion

In any scenario, a virtual server that is running Project Server 2010 has the same minimum, and fundamental, requirements as a physical server that is running Project Server 2010. Virtualization provides many benefits. However, it does not eliminate or circumvent the existing requirements and best practices that relate to deploying, configuring, and maintaining a Project Server 2010 environment.

Plan the project life cycle (Project Server 2010)

There are many methodologies and systems that effectively manage a project life cycle. This chapter does not advocate for any one of these over another. The chapter is written for Project Server administrators, and it provides a list of project creation, maintenance, and archival activities. These tasks are general and will be the same, or at least similar, regardless of the methodology being used by your organization. Planning these activities can help ensure that projects are being managed in a way that is consistent with the purpose of your organization and can foster a satisfactory experience for the end user. The various options and processes available with the features described in this chapter are discussed in greater detail in [Operations for Project Server 2010](#). This article alerts those who are responsible for planning the deployment and configuration of Project Server 2010 that some choices will have to be made that relate to these features.

Create projects

Projects have many ways of moving from concept to reality. Sometimes the process is informal and may be the result of a brainstorm on a whiteboard that happened in under an hour. Other times a project is created after years of study and careful analysis. If it is not planned and managed, this creation process can become chaotic. This chaos can cost your organization in many ways: reduced efficiency, misallocated resources, misaligned priorities, duplication of effort, conflicting approaches, and missed opportunities, to name a few. What follows are some key things to consider when you are using Microsoft Project 2010 to create projects for your organization.

Plan proposals

The project proposal feature provides a mechanism for controlling the entry of projects into Project Server. It provides added value for business decision makers by storing proposal data together with project data. This feature provides better reporting, modeling, and pipeline analysis and helps automate proposal management business processes.

Proposals are limited projects. They are limited because all of the features that are available when you are using Microsoft Project Professional 2010 are not available when you are using proposals. Project proposals are not enterprise projects. This limited or lighter kind of project is helpful and useful to many users. The proposal lets users submit project proposals (aided with simple project and resource planning features) — and provides a simple gating mechanism for projects to be added to Project Server. Project proposals are subject to a review before they can be transformed into enterprise projects. Project proposals contain basic information that allows a business decision-maker to approve or reject the proposal. The proposal may contain information such as the following:

- Project name
- Project description

- Proposed start date and end date
- Proposed cost
- Resource requirements

Proposals are created in Microsoft Project Web App (PWA). Anyone who has access to PWA can view proposals. To create project proposals, you must be assigned the Create New Maintenance Project permission.

Proposals can be configured to work with workflows that are available in Microsoft SharePoint Server 2010.

When the proposal feature is configured for a workflow, the workflow automatically does much of the work. When a proposal is created, the workflow generates task assignments for proposal reviewers and the proposal creator as the proposal makes its way through the proposal process. These tasks are shown to their owners through the Web Part for Proposal Workflow Tasks.

Plan resources

Enterprise resources are the people, equipment, and materials that are used to complete tasks in an enterprise project. Enterprise resources are part of your organization's pool of resources and are stored centrally in the Project Server 2010 databases. You can create the Enterprise Resource Pool that project managers will use when assigning resources to tasks in projects by adding resources to the Enterprise Resource Pool or by importing resources. You should define the contents of the Enterprise Global Template before you add resources to the Enterprise Resource Pool.

Before you can properly create and maintain the Enterprise Resource Pool for your organization, you must carefully define and document your Enterprise Resource custom fields and create them. In addition, for large organizations, initially populating the Enterprise Resource Pool is just as important as the process of keeping the Enterprise Resource Pool accurate and up-to-date. Tracking significant changes to the resource information that is stored and managed in the Enterprise Resource Pool can be a full-time activity

Before you create your Enterprise Resource Pool for Project Server 2010, you must determine your starting point. The process of adding resources to the Enterprise Resource Pool varies according to whether you are:

- **Starting with new projects** — Minimal preparation is necessary for this scenario. The process is simplified if you can gather all required resource information in a single document. You could make a list on paper. Then you would import your identified resources from Active Directory, or from a membership store if you were using forms authentication. Alternatively, you can gather this information by using Microsoft Excel. Then you would import the resulting spreadsheet into Project Professional 2010 and save it to the Project Server database.
- **Creating the enterprise resource pool** — In this scenario, you are creating the Enterprise Resource Pool in Project Professional 2010. Using Project Professional 2010, connect to Project Server 2010 and check out the Enterprise Resource Pool. Enter the resources and save the Enterprise Resource Pool.

Plan custom fields

Project Server 2010 includes lookup tables and fields that you can customize. A custom field can contain information about a task, resource, or assignment. In Project Server 2010, fields that can contain customized data are text, flags, numbers, dates, cost, start and finish dates, and durations. You can customize these fields to obtain the information you want using formulas, specific value calculations, or graphical indicators.

You can write your own formulas, including references to other fields, to be calculated in a custom field. You can create a list of values for a custom field to ensure fast and accurate data entry. You can display a graphical indicator in a custom field instead of the actual data. That way, you can quickly see when the data in that field meets certain criteria, such as when the data exceeds a specified range or when resources are over-allocated. You can also create a hierarchical structure of custom fields for information in your project. For instance, you might want to associate your company's cost codes with your project data. After you create this structure and apply these custom fields to your data, you can easily use them to filter, sort, and group project data.

In Project Server 2010 there are two types of custom fields — local and enterprise. Local custom fields are used by the project manager within the scope of a particular project. Enterprise custom fields are used by the Project Management Office (PMO) to collect data for rollup reporting across the organization. For enterprise task and project custom fields, Project Server 2010 supports the notion of scoping to a specific program (collection of projects). In this way, an enterprise custom field can be defined that applies to a subset of projects.

Retire projects

There are certain activities that you should consider when retiring projects. Doing some basic clean-up when a project is retired can help to improve Project Server performance. Also, you can secure projects to ensure that only those who need the information — for example, for historical purposes — can see the projects. Deleting other enterprise objects that are not being used, such as resources and assignments, can help to prevent degradation of server performance.

Plan archiving

A number of enterprise objects can be backed up in PWA:

- Projects
- Enterprise Resource Pool and Calendars
- Enterprise Custom Fields
- Enterprise Global
- View Definitions
- System Settings
- Category and Group Settings

Backing up these objects allows you to selectively restore specific items, and you can retain multiple versions of these items.

Backups are done on the Server Settings page under **Database Administration**. There are two methods available:

- Schedule Backup
- Administrative Backup

Administrative Backup allows you to back up enterprise objects at any time. Schedule Backup, as the name implies, allows you to back up enterprise objects daily at a scheduled time. We recommend that you back up your enterprise objects regularly and, if scheduled, at a time when server utilization is low. You should also have a plan for backing up your databases.

When an object is backed up, it is saved to the Project Server 2010 Archive database.

When a project is complete, there are a few options available for retiring the project.

- Delete the enterprise objects from the Project Server 2010 Published and Draft databases, and retain copies in the Archive database.
- Delete enterprise objects from all Project Server 2010 databases and rely upon database backups for archival.
- Place the project in a special Project Server category that denies access to all but a few users.

Placing projects in a special Project Server category

To allow only certain users to view a retired project, you can create a special Project Server category for that purpose. Add the project and all users whom you do not want to have access to the project and set all of their permissions to deny. For more information about Users, Groups, and Categories, see [Plan groups, categories, and RBS in Project Server 2010](#).

Plan cleanup

Deleting unused enterprise objects when a project is completed can help to prevent degradation of server performance. It is particularly beneficial for long term server performance to delete assignments. It is also a good idea to delete resources if they are no longer being used in the enterprise. Deleting unused enterprise objects when a project is completed also saves disk space on your database server.

Plan reporting and business intelligence (Project Server 2010)

In Microsoft Project Server 2010, Project Server has been integrated with Excel Services in Microsoft SharePoint Server 2010 to make it easier to create custom reports. As part of this integration, blank data-connected spreadsheets and sample reports are provided. The data available for reporting includes timesheet custom fields, project properties, and portfolio planner and optimizer data. The default online analytical processing (OLAP) cubes can now be customized to only include data for a given department.

Reports using Office Excel 2007 or Excel 2010

Excel Reports are data-connected spreadsheets that you use to visualize the data retrieved from the Reporting Database or the OLAP databases. In Microsoft Excel 2010, you can present data in Tables, Pivot Tables, or Pivot Charts, and have access to additional visualization features. In Microsoft Office Excel 2007, you can only use Pivot Tables or Pivot Charts. Excel Reports use Office Data Connections to access and retrieve data from the Reporting database and OLAP databases.

Dashboards

Dashboards are enabled by using the SharePoint Server 2010 infrastructure and Excel Services integration.

Business Intelligence Center Dashboard pages are pages that can host Web Parts. Together with Web Parts, you can present Project Server data by using several different options:

- Excel Services
- Microsoft PowerPivot
- Microsoft SQL Server Reporting Services (SSRS) 2005 or 2008
- PerformancePoint Services in Microsoft SharePoint Server 2010
- SharePoint Server 2010 Business Connectivity Services functionality
- Microsoft Search Server 2010

Each of the six methods listed can be added to a dashboard page by using the relevant Web Part for the reporting function. For example, in order to put an Excel Report on a dashboard page, you would add an Excel Web Access Web Part to the dashboard page and link the Web Part to the specific Excel .xlsx file to show in the Web Part.

Dashboard pages have built in page filters which can be linked to Report Web Parts to filter the contents by user other information. Reporting Web Parts can also be linked to one another so that when you select a value in one report, the other connected reports are filtered by the current selection.

Security and access

The only user that has access to the Business Intelligence Center after you install Project Server is the account that was used for installation. You must grant access to other users before they can use reporting content.

Business Intelligence Center does not use Project Server 2010 security mechanisms. It uses SharePoint Server 2010 security for site access and the Secure Store Service for data access. This enables you to delegate Business Intelligence Center administrative duties to a non-Project Server user.

The Business Intelligence Center is a subsite of the Microsoft Project Web App (PWA) site. Although a subsite usually inherits its security permissions from the parent site, security inheritance can be disconnected to enable separate site security management. This allows the Business Intelligence Center to include Project Server 2010 users and other information users in the enterprise who need Project Server 2010 data but do not need access to the Project Server transaction system.

Three SharePoint Server 2010 site permission levels are required for enabling basic usage of the site:

- **Web Administrators Group** — for Business Intelligence Center site administrators
- **Team members** — for report viewers
- **Project managers** — for report authors

These roles give the user access permissions to a set of items within the site. These items can be Reports, Report Templates, and Office Data Connections. For items that are Office Data Connections, the Secure Store credentials that are used for a given ODC provide access to data within the Reporting and OLAP databases.

If you must secure access to specific items within the site, such as restricting access to report folders, specific reports or Office Data Connections, you can customize security permissions on an exception basis by either creating a specific security group that helps secure these items or by editing the security permissions for each item. All of this is accomplished by using SharePoint Server 2010 security.

If you have implemented the Business Intelligence Center, we recommend that you do not rename or delete the default content or its containing folders. When patches and service packs are released in the future, the default content may be recreated.

Office Data Connections

Office Data Connections are external files that can be used by multiple Excel Reports. These files contain:

1. The connection information that is needed to connect and access the correct target database.
2. The security credentials needed to read data from the target database.
3. The specific description of what data will be retrieved from the target database. This can include a Structured Query Language (SQL) select query.

Access to these files can be secured by using SharePoint Server 2010 security. You can also secure access to reporting data by creating separate Secure Store application definitions for each account.

Data Analysis with Microsoft SQL Server

Data Analysis requires Analysis Services, which is part of SQL Server 2005 and SQL Server 2008.

Data Analysis users

Users can use PWA to create and work with Data Analysis views and can use Microsoft Project Professional 2010 to work with Data Analysis views. In order for users to create and work with Data Analysis views, the following must be true:

- Users must be assigned permission to access the Data Analysis pages in PWA that allow for interaction with Data Analysis, and they must have permissions to access the data that will be part of the Data Analysis view.
- Users must be assigned permission to view Data Analysis from the Business Intelligence site in PWA or from Project Professional 2010.

In order to use the Data Analysis feature, users must be assigned the following permissions:

- **View Data Analysis** This is a global permission that allows a user to view the Data Analysis by using PWA or Project Professional 2010.
- **Manage Project Web App Views** This is a global permission that allows a user to create new views in PWA.

Enterprise Settings

Settings in the Project Server 2010 Enterprise Global Template and Enterprise Resource Pool can have a significant effect on the way that data is handled when users are using Data Analysis. Before you use Data Analysis, consider the following questions:

- Has your organization defined Enterprise Project custom fields and Enterprise Resource custom fields?
- Have you added all required resources to the Enterprise Resource Pool?
- Have values been assigned to any of the Enterprise custom fields?
- Have you assigned resources in the Enterprise Resource Pool to the correct Project Server security categories to allow for access to Data Analysis views? (If you import resources or synchronize the Enterprise Resource Pool with the Active Directory directory service, all resources are added to the Team Members security category.)

See Also

[Excel Services overview \(SharePoint Server 2010\)](#)

Plan for administrative and service accounts (Project Server 2010)

Use this article to plan for the account requirements and recommendations for accounts that are required to install, configure, and use Microsoft Project Server 2010.

You must provide credentials for these accounts during Setup and configuration. This article does not discuss accounts that you do not have to configure or provide credentials for.

Administrative and service accounts

This section lists and describes the accounts that are required by Project Server 2010. The accounts are grouped according to scope. If an account has a limited scope, you might have to plan multiple accounts for this category.



Note:

All Project Server 2010 and Microsoft SharePoint Server 2010 service accounts must be granted interactive logon permissions for the computer where the service is running. By default, such permissions are normally granted when a new account is set up. However, you may have to make manual adjustments if your organization normally denies interactive logon permissions for service accounts.

The following table describes the standard account requirements for Project Server 2010.

Account	Purpose	Required permissions
Farm Administrator	<p>This account is also known as:</p> <ul style="list-style-type: none"> • Database access account <p>This account servers as the following:</p> <ul style="list-style-type: none"> • The application pool account for the SharePoint Central Administration Web site • The process account for the SharePoint 2010 Timer (SPTimerV4) service <p>Log in with this account when you install SharePoint Server 2010 and Project Server 2010.</p> <p>(This account may already exist if you are</p>	<p>This account must be a member of the local Administrators group on each application server in the farm.</p> <p>Additional permissions are automatically granted for this account when Project Server 2010 is installed and when additional application servers are added to the farm.</p> <p>A logon is automatically created for this account in SQL Server, and that logon is automatically added to the following SQL Server Server Roles:</p> <ul style="list-style-type: none"> • dbcreator • public

Plan for administrative and service accounts (Project Server 2010)

Account	Purpose	Required permissions
	deploying Project Server 2010 to an existing SharePoint Server 2010 farm.)	<ul style="list-style-type: none"> • securityadmin • sysadmin
Application Pool	Runs the application pools associated with each SharePoint Server 2010 service application. (This account may already exist if you are deploying Project Server 2010 to an existing SharePoint Server 2010 farm.)	<p>The following SQL Server roles and permissions are automatically assigned to this account:</p> <ul style="list-style-type: none"> • Database owner role for content databases associated with the Web application • Read/write access to the associated Service Application database • Read from the configuration database <p>Additional permissions for this account on front-end Web servers and application servers are automatically granted by Project Server 2010.</p>
Workflow Proxy	Runs Project Server workflow activities. This account makes the Project Server Interface (PSI) calls associated with each workflow.	<p>This domain account must also be configured as a Project Server user account that has the following permissions:</p> <p>Global permissions:</p> <ol style="list-style-type: none"> 1. Log On 2. Manage Users and Groups 3. Manage Workflow and Project Detail Pages <p>Category permissions:</p> <ul style="list-style-type: none"> • Open Project • Save Project to Project Server

Accounts and groups for business intelligence

In addition to the accounts listed earlier in this article, the following accounts and Active Directory directory service groups are required when you configure reporting for Project Server 2010.

Plan for administrative and service accounts (Project Server 2010)

Account	Purpose	Required permissions
Report Authors Group	Active Directory security group to which you add users who will create reports.	This group requires db_datareader permissions on the Project Server 2010 Reporting database.
Report Viewers Group	Active Directory security group to which you add users who will view reports.	None. (This group is used as part of Secure Store configuration.)
External Report Viewers Group	(Optional.) Active Directory security group for users who do not have a PWA user account but require access to the Project Server 2010 Business Intelligence Center to view reports.	This group requires read permissions to the Business Intelligence Center site.
Secure Store Target Application account	This account provides the credentials necessary for report viewers to view reports generated from data in the Project Server 2010 reporting database. This account is used as part of Secure Store configuration.	This account must have db_datareader permissions on the Project Server 2010 reporting database. We recommend that you add this account to the Report Authors Active Directory group described earlier in this section to give it the necessary permissions.

Podcast: Project Server planning (Project Server 2010)

In this podcast, Microsoft Program Manager Treb Gatte and consultant, author, and Microsoft MVP Gary Chefetz discuss planning considerations for Microsoft Project Server 2010. This is a high-level discussion that includes the following subjects:

- Organizational readiness
- Management commitment
- Managing organizational culture shift
- Defining business goals
- Identifying and working with stakeholders
- User training considerations

Download the podcast from the [Microsoft Download Center](http://go.microsoft.com/fwlink/?LinkId=190420) (<http://go.microsoft.com/fwlink/?LinkId=190420>).

This podcast is 45 minutes long.

The presenters

Treb Gatte, MBA

Treb Gatte is a Program Manager on the Microsoft Project Server product team. He is responsible for the Setup, Upgrade, and Business Intelligence features for Microsoft Project Server 2010. Previously, he was the Project Manager for Wachovia Bank's Information Technology implementation of Microsoft Office Project Server 2003. Treb has over 19 years of experience in project management, business process development, and software development management. He has a Bachelor of Science in Management from Louisiana State University and a Masters of Business Administration from Wake Forest University.

Gary L. Chefetz , MCTIP, MCT, MCTS

Gary Chefetz is the founder of MSProjectExperts, a Microsoft EPM Solution consultancy. He is co-author of the popular MSProjectExperts series covering Microsoft Office Project and Microsoft Office Project Server 2007 and author of *Implementing Enterprise Portfolio Management with Microsoft Project Server 2002*. He is co-author of the EPM Learning Series books *Managing Enterprise Projects with Microsoft Office Project Server 2003* and *Administering an Enterprise PMO using Microsoft Office Project Server 2003*. Gary is active in the Project Server groups in the Microsoft communities.

Plan for Exchange integration (Project Server 2010)

This article discusses integration with Microsoft Exchange Server 2007 SP2, which enables Microsoft Project Server 2010 users to view Project Server tasks in Microsoft Exchange client software. This functionality replaces the Outlook add-in task status reporting functionality for non-time-phased tasks that is available in previous versions of Project Server.

Important:

Only assignment information is available in the Exchange client (Outlook, OWA, and so on). The only actions that a user can take in the Exchange client are viewing, updating, and deleting Project tasks. Creating or reassigning a new project task has to be done in Microsoft Project Web App (PWA).

Planning Exchange integration with Project Server

Here is how Exchange integration with Project Server 2010 is achieved: Project Server uses the SSL protocol to communicate with a computer that is running Exchange Server. Project Server uses Exchange Impersonation on behalf of specific users to make calls between computers that are running Exchange and Project Server.

Tip:

For more information about Exchange Impersonation, see [Configuring Exchange Impersonation \(Exchange Web Services\)](http://go.microsoft.com/fwlink/?LinkId=191025) (<http://go.microsoft.com/fwlink/?LinkId=191025>).

Exchange integration does not support viewing or updating of tasks that are tracked by time-phased time periods. However, users can still update their status by updating the **% Work complete** or **Actual Work/Total Work**. The [Statusing class](#) in the Project Server Interface (PSI) handles the distribution of work.

When PWA is in Single Entry Mode (SEM), the application continues to sync tasks to Exchange and accept updates on task changes from Exchange by using the Tasks page in PWA. The information is immediately available on the timesheet when in SEM. This is one reason why, when in Single Entry Mode, it appears that you can still update assignment on the Tasks page. It is due to the way Outlook functionality is implemented.

For **Actual Work/Total Work** and **% Work complete**, the following rules should apply:

Columns modified	Processing logic
% Work complete only	Apply % Work complete

Columns modified	Processing logic
Actual Work only	Apply Actual Work
Total Work only	Apply Total Work
% Work complete and Actual Work	Apply % Work complete
% Work complete and Total Work	Apply Total Work and then % Work complete
Actual Work and Total Work	Apply Total Work and then Actual Work
% Work complete , Actual Work , and Total Work	Apply Total Work and then % Work complete . Drop Actual Work .
Start Date and Finish Date alone	Update Total Work and let Project Server calculate % Work complete and Actual Work
Start Date and Finish Date together with the work and % Work complete columns	Update Total Work and then % Work complete

A mapping of Exchange client and Exchange Server Task fields to Project Task fields

The following table maps Exchange Task fields to Project Task fields. This will allow the default Outlook form to display these fields without installing the Project Task form:

Outlook task	Exchange Server	Project Server
Subject	itemSubject	PROJ_UID to PROJ_NAME: TASK_NAME
Actual Work	taskActualWork	ASSN_ACT_WORK
Due Date	taskDueDate	ASSN_FINISH_DATE
	taskOwner Read Only in Exchange	
% Work complete	taskPercentComplete	MSP_ASSIGNMENTS to ASSN_PCT_WORK_COMPLETE
Start Date	taskStartDate	ASSN_START_DATE
Total Work	taskTotalWork	ASSN_WORK

Synchronizing Project Server data to Exchange Server

When project task information is updated through Project Publish or through a status update, a low priority queue job, "Syncing Tasks to Exchange," is created. This job updates or creates a task for the assigned resource's mailbox if the resource has been set up to synchronize their Project Tasks with the Exchange mailboxes. This job has lower priority than Project Publish jobs and Status Update jobs to allow all changes in the queue for a given task to be processed before Exchange Server is updated. When the job executes, it retrieves the latest changes to the task and the log and puts them into the mailbox for each resource that is assigned to the task. It also updates the task details. The Tasks will appear in folders that are named for the project that the task belongs to.



Note

- There are two queue jobs, one for **Publish** and one for **Statusing**:

See Also

[Deployment for Project Server 2010](#)

[Configure Project Server 2010 to work with Exchange Server 2007 SP2](#)

[Configure Project Server 2010 to work with Exchange Server 2010](#)

Demand Management in Project Server 2010 (white paper)

This white paper is written from an end user's perspective to discuss the *Demand Management* capability in Microsoft Project Server 2010. Demand Management is also known as Project Lifecycle Management (PLM). Demand Management represents a deliberate attempt to reconcile and combine multiple lifecycle management tasks within a single, unified approach. The specifications, assumptions, delivery, and costs dictate the project demand curves. The project demand curves will take a variety of shapes depending on the traceability path of related projects within any given portfolio.

The intended audience of this white paper is Department Managers, Division Directors, Program/Portfolio Directors and all who are responsible for overseeing multiple initiatives that involve diverse stakeholders and are tied to cost or corporate measurements. It is for Project Management Offices (PMOs), Project Managers (PMs), Product Managers and Domain Experts, Auditors, Line Managers, Project Sponsors, and Functional Managers who would like to do the following:

1. Build, prioritize, and complete new projects for their business
2. Align project selection with business objectives
3. Operate with existing resources and use them effectively, efficiently, and in a secure environment
4. Ensure timely completion for projects by passing them through stringent phase-wise approvals

[Download as a .pdf file](http://go.microsoft.com/fwlink/?LinkId=191854) (<http://go.microsoft.com/fwlink/?LinkId=191854>)

Portfolio Server migration guide (white paper)

The Microsoft Enterprise Project Management (EPM) Solution 2007 solution consisted of two server products: Microsoft Office Project Server 2007 and Microsoft Office Project Portfolio Server 2007.

The primary goal of Office Project Server 2007 is to enable day-to-day project management, and therefore most Office Project Server 2007 users are project managers and their project resources (Team Members, etc.). Microsoft Office Project Portfolio Server 2007 allows for Portfolio Strategy, Prioritization, and Optimization, and therefore the typical Portfolio Server users are project-management officers and company executives. Office Project Server 2007 and Office Project Portfolio Server 2007 are able to exchange data by using the Project Server Gateway.

In Microsoft Project 2010, the best-in-class portfolio management techniques from Microsoft Office Project Portfolio Server 2007 are incorporated into Project Server 2010. Together, they provide a single-server platform with end-to-end Project Portfolio Management capabilities to support strategic planning and project execution. The unified solution helps organizations achieve the following business goals:

- **Simplify Project Initiation and Business Case Development** Project Server 2010 streamlines and centralizes project capture and initiation with a new Demand Management module, and it provides customizable governance workflows to ensure that projects are guided by the appropriate controls throughout their life cycles.
- **Select Project Portfolios That Align with Strategic Priorities** Project Server 2010 helps organizations select projects that align with their business priorities by providing techniques to objectively prioritize business strategy, score competing projects, and run what-if analyses under diverse budgetary constraints.
- **Maximize Resource Utilization and Control** The new capacity-planning module in Project Server 2010 helps analysts effectively manage resources by proactively identifying surpluses and deficits and rescheduling proposed projects to maximize available resources.

This document is intended for both IT Professionals and business users who use Microsoft Office Project Portfolio Server 2007 today and are considering an upgrade to Project Server 2010. This document outlines the various approaches and points out the useful resources in this area.

[Download as a PDF file \(.pdf\) file](http://go.microsoft.com/fwlink/?LinkId=197180) (http://go.microsoft.com/fwlink/?LinkId=197180) (1.5 MB)

Portfolio strategy with Project Server 2010 (white paper)

This white paper is written from an end user's perspective to discuss the extensive Project Portfolio Management (PPM) capability in Microsoft Project Server 2010. It is not enough to complete individual projects, or even related programs on time, within scope, and on budget. Today's business environment requires that the work executed by an organization supports the organization's strategic business objectives and goals. This paper explores the topic of PPM from the top down in identifying the importance of pertinent business drivers and how those form vision, goals, objectives, and the eventual roadmap to project selection. And from the bottom-up perspective, the white paper shows the powerful features now within Project Server 2010 that are indispensable in matching these drivers to the appropriate projects and programs.

Microsoft Project 2010 was built for the business user. It uses advanced technology that lets end users and project stakeholders do the following:

1. Identify and map key business drivers that encourage the concise definition of strategic goals and objectives for an organization
2. Ensure that project and program selection is an objective, data-driven process
3. Select, execute, and manage the appropriate initiatives
4. Illustrate the value of PPM regardless of what type or size of organization

[Download as a .pdf file](http://go.microsoft.com/fwlink/?LinkId=194203) (http://go.microsoft.com/fwlink/?LinkId=194203)

See Also

[Demand Management in Project Server 2010 \(white paper\)](#)

Microsoft Project and SharePoint Server 2010 — Better Together (white paper)

Managing projects is more than merely checking task status, schedules, and the critical path. It is a multi-faceted discipline. Projects succeed and thrive with effective collaboration and control over knowledge assets to deliver top and bottom-line business results. Keeping the Project Team and stakeholders up to date on all aspects of a project's status is important to managing stakeholders and completing a project successfully. Microsoft Project Server 2010 brings together robust project, program, and portfolio management together with extensive collaboration features.

Microsoft SharePoint Server is a collaboration platform with a powerful set of capabilities and features. Enterprise Project Management (EPM) helps organizations select and deliver projects, reduce costs, and drive efficiencies. In most organizations, , these activities contribute to a shared overall objective but will exist separate from one another.

The new feature set in Project Server 2010 creates a tool that provides multiple capabilities to include successful project management, program management and portfolio management. Now, Project Server 2010 can help guide an organization in selecting, planning, executing and managing its initiatives with the specific goals of meeting project success metrics, aligning with strategic objectives, and driving the organization toward its goals.

This white paper is written for end users. It highlights the new features in Project Server 2010.

[Download as a Microsoft Word \(.doc\) file](http://go.microsoft.com/fwlink/?LinkID=197213) http://go.microsoft.com/fwlink/?LinkID=197213 (5.3 MB)

Hitchhiker's Guide to Demand Management (white paper)

This white paper is written from a Project Management Office perspective to discuss implementing the *Demand Management* capability in Microsoft Project Server 2010. It contains all the required technical information to get started implementing a full Demand Management solution with a Microsoft Enterprise Project Management deployment.

The intended audience of this white paper is IT professionals, Developers, the Project Management Office (PMO), and business users such as Project Managers (PMs), Product Managers and Domain Experts, Auditors, Line Managers, Project Sponsors, and Functional Managers that engage in the following:

1. Build, prioritize, and complete new projects for their business
2. Align project selection with business objectives
3. Operate with existing resources and use them effectively, efficiently, and in a secure environment
4. Ensure timely completion for projects by passing them through strict phase-wise approvals

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Plan for authentication in Project Server 2010

In this article:

- [Claims authentication and token issuance](#)
- [Forms-based authentication](#)

This article describes planning for security in a Microsoft Project Server 2010 Enterprise Project Management (EPM) Solution. This material is useful for Project Management Organizations (PMOs) and system administrators who are responsible for planning the deployment of a Project Server 2010EPM Solution.

The Project Server 2010 security model is largely inherited from the Microsoft SharePoint Server security model, by which users and groups (security principals) are granted permission to access security objects. The Project Server 2010 security model allows you to control and manage access to projects, resources, and reports stored in the Project Server 2010 content database; Project Web App pages; and features that are available in Project Server 2010 and Project Web App. In addition, the security architecture enables you to manage many users and projects easily by assigning permissions to groups of users and unique categories. This reduces the number of times that you need to update permissions in Project Web App.

Users can connect to Project Server in several ways:

- Project Web App client
- Microsoft Project Professional 2010 client
- Third-party applications
- Microsoft Outlook 2010 through Exchange Server integration

When accessing Project Server 2010 by any one of these methods, a user can be authenticated to Project Server 2010 through either Windows authentication, Claims authentication, or forms-based authentication.

Claims authentication and token issuance

Claims authentication is an authentication mechanism provided in Project Server 2010 by SharePoint Server 2010 that uses a security token that contains a set of identity assertions about an authenticated user. These assertions are attributes that are associated with a user's identity and can include a user name, a role, an employee ID, and various other custom attributes that can be used to determine authorization and permission levels for access to Project Server 2010 resources and data. Assertions are made up of a list of types and values. A type can be an employee name, for example, and a value can be a text string. Security tokens are issued and managed by a Security Token Service (STS). An STS encapsulates a collection of assertions, based on attributes specified by a policy, into a security token that can be used to authenticate and authorize a user.

The Security Token Service (STS) is a Web service that responds to authentication requests by issuing security tokens made up of identity claims that are based on user account information in attribute stores. An attribute store can be contained within Active Directory Domain Services, a SQL Server database, or an LDAP store. The content of each security token is determined by the attribute type requirements of the authentication requests that are agreed upon for an STS and the Project Server farm. An agreed-upon collection of claims and claim rules is known as a *policy*. Policies are available in a policy store and are accessed by an STS, based on the requirements of the calling Web application.

Forms-based authentication

Forms-based authentication is a term that is used to encapsulate any authentication model whereby a user enters a user name and password on a form that is then posted to an authentication server to process and verify the information. Project Server 2010 uses SharePoint Server 2010 for the extensions necessary to take advantage of ASP.NET in forms-based authentication. One important difference in Project Server 2010 from Microsoft Office Project Server 2007 is that forms-based authentication in Project Server 2010 uses the claims authentication infrastructure and requires that a claims mode Web application be set up in the SharePoint Central Administration Web site. There are two authentication store options available when using forms-based authentication with Project Server 2010:

- SQL Server-based forms authentication requires creating an authentication store in SQL Server.
- AD-LDAP-based forms authentication uses the Active Directory directory service as an authentication store and requires no additional configuration.

See Also

[Configure forms-based authentication in Project Server 2010](#)

[Plan authentication methods \(SharePoint Server 2010\)](#)

Configure forms-based authentication in Project Server 2010

In this chapter:

- [Configure AD-LDAP-based forms authentication in Project Server 2010](#)

This article describes how to configure Microsoft Project Server 2010 forms-based authentication using Active Directory – Lightweight Directory Access Protocol (AD-LDAP). This procedure uses Claims authentication and an Active Directory server on the domain in which your Microsoft Project Server 2010 deployment is installed.

- [Configure SQL Server-based forms authentication in Project Server 2010](#)

This article describes how to configure Microsoft Project Server 2010 forms-based authentication using SQL-based forms authentication. This procedure uses Claims authentication and SQL Server on the domain in which your Microsoft Project Server 2010 deployment is installed.

Configure AD-LDAP-based forms authentication in Project Server 2010

This article describes how to configure Microsoft Project Server 2010 forms-based authentication using Active Directory – Lightweight Directory Access Protocol (AD-LDAP). This procedure uses Claims authentication and an Active Directory server on the domain in which your Microsoft Project Server 2010 deployment is installed.

In order to perform these procedures, you must be member of the Project Server and SharePoint Server administrator groups on the local computer.

Configure AD-LDAP–based forms authentication in Project Server 2010

▶ To configure SharePoint Server for forms-based authentication

1. Create a new Web application in Claims mode.



Note:

A Web application that already exists in Windows Classic mode cannot be used.

2. Go to the SharePoint Central Administration Web site.
3. Click **Application Management**.
4. On the ribbon, click **New**. A pop-up window appears.
5. In the pop-up window, select the **Claims Based Authentication** option.
6. In the pop-up window, in the **IIS Web Site** section, select a unique name and port number.
7. In the pop-up window, in the **Security Configuration** section, set **Allow Anonymous** = **No** and set **User SSL** to **Yes** or **No**, depending on whether the site you are extending will be SSL-enabled.
8. In the pop-up window, in the **Identity Providers** section, select the **Enable Windows Authentication** option and specify **NTLM** if Integrated Windows authentication will be used. Also select **Enable ASP.NET Membership and Role Provider** and specify a provider name and role manager.
9. In the pop-up window, keep the default setting for **Public URL**.



Note:

This setting can be changed later if necessary.

10. In the pop-up window, in the **Application Pool** section, choose to create a new pool with a pool name and the account that will be used.

Configure AD-LDAP-based forms authentication in Project Server 2010

11. In the pop-up window, in the **Database Name** section, set the value for the SQL Server and database names for the content database.
12. Click **OK** to close the window. A new IIS Web site will be created.
13. Once you have received confirmation that the IIS Web application is created, you must create a new site collection at the root: Click **Application Management** in Central Administration, click **Create Site Collections**, and in the Web Application drop-down list, select the newly created claims-mode Web application.
14. In the **URL** section, enter the root **"/**".
15. Select the **Blank Site** template and specify a Windows user account in the **Site Admin** box.
16. Click **OK**.

To configure the provider for forms-based authentication

- Edit the connection strings to the AD-LDAP membership store. This data is provided in the .config files that are used by the application at every request.



Note:

The three Web configuration files to modify to connect to the AD-LDAP membership store are the .config files for: Central Admin, Security Token Service, and the content Web application.

See Also

[Plan for authentication in Project Server 2010](#)

[Back up and restore the Project Server 2010 farm](#)

Configure SQL Server-based forms authentication in Project Server 2010

This article describes how to configure Microsoft Project Server 2010 forms-based authentication using SQL-based forms authentication. This procedure uses Claims authentication and SQL Server on the domain in which your Microsoft Project Server 2010 deployment is installed.

In order to perform these procedures, you must be member of the Project Server, Microsoft SQL Server, and Microsoft SharePoint Server administrator groups on the local computer.

Configure SQL Server-based forms authentication in Project Server 2010

▶ To create the SQL authentication store

1. Log on to any Windows Server on the farm running ASP.NET as a user with the **DBCreate** and **SecurityAdmin** permissions for the computer running SQL Server that will be used.
2. At a command prompt, run
`%WINDIR%\Microsoft.NET\Framework\v2.0.50727\aspnet_regsql.exe -S<InsertSQLServerName>-d<InsertDBName>-E -A mr` to create the authentication store database on the computer running SQL Server.
3. Add all farm accounts to the DBO role for this newly created database.

▶ To configure SharePoint Server for SQL authentication

1. Create a new Web application in Claims mode.



Note:

A Web application that is already in Windows Classic mode cannot be used.

2. Go to the SharePoint Central Administration Web site.
3. Click **Application Management**.
4. On the ribbon, click **New**. A pop-up window appears.
5. In the pop-up window, select the **Claims Based Authentication** option.
6. In the pop-up window, in the **IIS Web Site** section, select a unique name and port number.
7. In the pop-up window, in the **Security Configuration** section, set **Allow Anonymous** = **No** and set **User SSL** to **Yes** or **No**, depending on whether the site you are extending will be SSL-enabled.
8. In the pop-up window, in the **Identity Providers** section, check **Enable Windows**

Configure SQL Server-based forms authentication in Project Server 2010

Authentication and select **NTLM** if Integrated Windows authentication will be used. Also select **Enable ASP.NET Membership and Role Provider** and specify a provider name and role manager.

9. In the pop-up window, keep the default setting for **Public URL**.



Note:

This setting can be changed later if necessary.

10. In the pop-up window, in the **Application Pool** section, choose to create a new pool with a pool name and the account that will be used.
11. In the pop-up window, after **Database Name** set the value for the SQL server and database names for the content database.
12. Click **OK** to close the window. A new IIS Web site will be created.
13. Once you have received confirmation that the IIS Web application is created, you must create a new site collection at the root: Click **Application Management** in Central Administration, click **Create Site Collections**, and in the Web Application drop-down list, select the newly created claims-mode Web application.
14. In the **URL** section, enter the root **"/**.
15. Select the **Blank Site** template and specify a Windows user account in the **Site Admin** box.
16. Click **OK**.

▶ To configure the SQL authentication provider

1. Edit the connection strings to the SQL Server database membership store. This data is provided in the .config files that are used by the application at every request.



Note:

The three Web configuration files to modify to connect to the AD-LDAP membership store are the .config files for the following: Central Admin, Security Token Service, and the content Web Application.

See Also

[Plan for authentication in Project Server 2010](#)

[Back up and restore the Project Server 2010 farm](#)

Project Server and SharePoint Server security

Microsoft Project Server 2010 is completely dependent on Microsoft SharePoint Server 2010 to support its user interface and farm topology. Security at the authentication level is tightly integrated between Project Server 2010 and SharePoint Server 2010, whereas user and group authorization is handled separately by Project Server 2010. When a project is published, if the server was configured to enable it, a project workspace site is created. You can configure Project Server 2010 to automatically synchronize Microsoft Project Web App (PWA) users with Project sites when they are created, when projects are published, and when user permissions change in PWA.

When you do this, users who have been added to the project or who have been granted **Manage SharePoint Foundation** permission in Project Server 2010 are added to at least one of four SharePoint Server 2010 groups:

- **Web Administrator (Microsoft Project Server)** Users who have **Manage SharePoint Foundation** permission in Project Web App and are contributors to the project workspace site, meaning that they can create and edit documents, issues, and risks.
- **Project Managers (Microsoft Project Server)** Users who have published this project or who have **Save Project** permission in Project Web App and are contributors to the project workspace site, meaning that they can create and edit documents, issues, and risks.
- **Team members (Microsoft Project Server)** Users who have assignments in this project in Project Server 2010 and are contributors to the project workspace site, meaning that they can create and edit documents, issues, and risks.
- **Readers (Microsoft Project Server)** Users who have been added to this project in Project Server 2010, but not assigned to tasks.

Project Server 2010 groups and SharePoint Server 2010 are synchronized when a project is published (assuming that the auto synchronize option is enabled) or the administrator selects a project workspace site on the Project Workspaces page and then clicks **Synchronize**.

Additional Project Server permissions that govern SharePoint Server 2010 access are as follows:

- **Log on** Denies or allows user access to the Project Web App site and to project workspace sites.
- **View Project Workspaces** Category permission that denies or allows user access to projects in the category.
- **Create object links** Category permission that denies or allows user ability to create links between SharePoint Server 2010 objects and tasks.

There might be a circumstance where you want to grant people who are not members of the project access to the project workspace site. Anyone assigned to the Web Administrator group can create new users for a project workspace site. In addition to the four groups that were mentioned earlier, there are four default SharePoint Server 2010 groups. They are as follows:

- **Full Control** Has all personal, site, and list permissions.

Project Server and SharePoint Server security

- **Design** Can edit lists, document libraries, and pages in the Web site.
- **Contribute** Can view pages and edit list items and documents.
- **Read** Can view pages, list items, and documents.

Project workspace security groups are equal to the SharePoint Server 2010 security groups.

- **Web Administrator** equals **Full Control**
- **Project Managers** equals **Design**
- **Team members** equals **Contribute**
- **Readers** equals **Read**

Plan for performance and capacity (Project Server 2010)

This is a newly published article set. We would like your feedback so that we can provide you with the best possible technical documentation. Please send any comments, questions, or concerns about the documentation to epmdocfeedback@microsoft.com.

This section covers capacity planning for Microsoft Project Server 2010.

- [About performance and capacity planning](#)
This chapter is about how to determine the hardware requirements for a single Microsoft Project Server 2010 farm.
- [Capacity planning in Project Server 2010 \(white paper\)](#)
This document provides guidance on the footprint that usage of Project Server 2010 has on topologies running Microsoft SharePoint Server 2010.
- [Run a Project Server 2010 performance test lab](#)
This section is a general guide for creating and running a performance test lab.

About performance and capacity planning

This chapter is about how to determine the hardware requirements for a single Microsoft Project Server 2010 farm. It identifies the characteristics that will affect your capacity requirements and provides recommendations for the following:

- Number of server computers in the server farm
- Configuration of application server roles in the server farm
- Hardware requirements for specific server roles in the server farm

Planning for capacity vs. availability

This chapter assumes that you have already planned for availability requirements by using the [Plan for deployment \(Project Server 2010\)](#) articles. As a result of using those articles, you will start the capacity planning exercise with a topology that meets your organization's minimum availability requirements. Given the topology you have selected, this chapter helps you determine the following:

- Whether you have to add more servers to meet your goals for capacity and performance
- Whether you have to adjust the configuration of application server roles to optimize capacity and performance of the server farm
- Whether you have to plan for more than one server farm based on your capacity requirements

In some cases, an organization's requirements for availability can result in a server farm size that provides much larger capacity or performance than is otherwise required. If this is the case, capacity planning can focus on sizing the server hardware economically, instead of on adding additional server computers or scaling up with higher-performing hardware.

In many cases, the topology that meets an organization's minimum availability requirements is used as a starting point and server computers are added or scaled up to meet capacity and performance goals.

Capacity planning approach

There are many variables that affect capacity planning. For this reason, it can be difficult to receive a crisp answer to a straightforward question. Consequently, the most common answer to a capacity-related question is, "It depends ...".

The capacity planning exercise provided in this chapter is designed to reduce the number of variables in consideration so that straightforward answers can be provided based on common scenarios.

However, this chapter also includes the guidance for calculating your capacity and performance requirements based on your individual solution characteristics. This chapter includes two kinds of capacity planning guidance:

- Recommendations for estimating capacity requirements A series of articles is provided, based on targeted scenarios. Each article defines a typical usage profile and identifies the key characteristics

that will affect capacity and performance for the scenario. Based on the profile and key characteristics, predefined data lets you estimate capacity requirements for your solution.

- Formulas and guidance for calculating specific capacity requirements Using this guidance, you can develop your own usage profile (or modify one of the scenario profiles) and calculate all of the variables that affect the capacity and performance of your solution.

Capacity planning process

Capacity planning focuses on three aspects of sizing your solution:

- **Capacity boundaries of the software** Each of the features that can be implemented and the objects that can be created have scale limitations. Planning for capacity boundaries ensures that your solution design fits within the scale recommendations of the software.
- **Throughput targets** Each kind of action that is performed by a server farm introduces a performance load on the server hardware. Primary actions include user operations, indexing of content, and operations tasks (such as backing up the databases). The use of specific features, such as Excel Calculation Services, although necessary for cube building, also adds a performance load. Developing throughput targets involves estimating or calculating the number of operations per second that a server farm must process in order to support the expected throughput load.
- **Data capacity** Data capacity includes the expected volume of content databases and the configuration database. Each server role also has unique data requirements based on the solution, such as disk space for content indexes or for cached content.

See Also

[Plan for performance and capacity \(Project Server 2010\)](#)

[Capacity planning in Project Server 2010 \(white paper\)](#)

[Run a Project Server 2010 performance test lab](#)

Capacity planning in Project Server 2010 (white paper)

This performance and capacity planning document provides guidance on the footprint that usage of Microsoft Project Server 2010 has on topologies running Microsoft SharePoint Server 2010. For general information about how to plan and run your capacity planning for Microsoft SharePoint Server 2010, see [Performance and capacity management \(SharePoint Server 2010\)](#).

This document is intended as a starting point to help people who plan to deploy Project Server 2010. It helps you determine requirements and then design an appropriate hardware and software topology to match those requirements.

The document assumes that you have knowledge about the basic structure and functionality of a Project Server 2010 deployment. The [Project Server 2010 SDK](#) is an excellent starting point for learning more about the basic architecture of Project Server 2010.

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Run a Project Server 2010 performance test lab

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Running a performance test lab against a Microsoft Project Server 2010 solution can be a very complex task, due to the various user interactions and system behaviors involved. This section of articles is designed as a general guide for creating and running such a performance test lab.

Types of load

The following are the main types of load that we typically have to reproduce in a performance test environment.

1. User-initiated operations involving Microsoft Project Web App
2. User-initiated operations involving Microsoft Project Professional
3. Background operations

Testing strategies

Testing strategies can include independent loads or mixed loads composed of different operations. Measuring how the systems react to the load produced by a single specific operation by many simulated users at the same time can help determine a reference measure for peak periods of that specific operation. But mixed load strategies are more realistic and can be used to simulate how the systems react to several possible usage patterns. For example, if you are concerned about the timesheet submission load, which according to your specific scenario has a peak period on Friday afternoon for all users. You can then test the system by simulating timesheet submissions only, without any other simulated load. These results will provide a reference baseline as measured by maximum throughput (for example, how many timesheets can be submitted/processed per hour) of the system for the particular operation under investigation.

You may also want to test the system under a wider set of different operations at the same time. You could use usage profiles as similar as possible to your real scenario, ideally using historical logs coming from the production system, as a data source to determine the usage profiles to be tested.

Regardless of the overall testing strategies you want to adopt, the related articles listed in the "See Also" section describe in more detail how to plan and simulate the load types that belong to the three categories that were discussed earlier. Visual Studio Team System 2008 Test Edition provides the foundation for all the scenarios. By using Visual Studio Team System 2008 Test Edition, you can easily balance multiple load types in one single load test to run for a given period of time.

See Also

[Plan a Project Server 2010 performance test lab](#)

[Key performance metrics for Project Server 2010](#)

[Set up the test environment Project Server 2010](#)

[Test user-initiated write operations involving Project Web App \(Project Server 2010\)](#)

[Test user-initiated operations involving Project Professional \(Project Server 2010\)](#)

[Test background operations \(Project Server 2010\)](#)

[Extract and analyze test data \(Project Server 2010\)](#)

Plan a Project Server 2010 performance test lab

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Planning is the first and most important phase of every complex task, and performance testing is no exception to this rule. For specific information about how to plan your Microsoft Project Server 2010 installation, see [Planning and architecture for Project Server 2010](#).

Before setting up the environment and running tests, you should thoroughly plan for all the aspects of what you will do. The following table summarizes some key points that you have to plan for.

Area	Description
Hardware	Your lab configuration should be as close as possible to your existing or target production environment. For future reference, ensure that you keep track of the details of your hardware configuration before completing the lab.
Software	Plan for installing the latest fixes available for every software component in your lab. If you plan to run the lab for a long time (one month or more), you should also plan to update the systems when it is necessary with the latest security fixes. If you do not strictly have to change the software configuration of your systems, you should avoid changes during the lab timeframe, in order to maintain data comparability across different test runs performed at different times.
Storage	<p>Your lab should have enough storage space to store:</p> <ul style="list-style-type: none"> • Live data <ul style="list-style-type: none"> • Project Server databases • SharePoint Server databases • Backups <ul style="list-style-type: none"> • One backup set right after the lab setup • One backup set of Project Server and relevant SharePoint Server databases for every different data profile that you have to use • Test results <p>The storage size required for every test run depends on the set of data that you collect, the sampling rate, and the test length</p>
Network	Your lab environment should be put on an isolated network, in order to minimize the effect of extraneous network activities on your tests. One computer in the lab is usually configured as a bridge for remote access to the lab from the corporate network.

Plan a Project Server 2010 performance test lab

Area	Description
Directory Services	<p>Because you have to simulate users who are accessing your lab environment, and you have to know the passwords for each simulated user, you must plan for the Directory Services to be used. You should plan for a dedicated organizational unit (OU) in an existing Active Directory directory service domain for managing the test user accounts, or for a dedicated Active Directory domain for your lab environment.</p>
Test scenarios	<p>Based on your overall goals for the performance lab, your test scenarios must be planned carefully. Consider the following elements for every test scenario:</p> <ul style="list-style-type: none"> • Operations to be simulated (either a single operation or a mixed set of operations with different percentages) • Users and roles that have to be simulated for every operation (that is, how many users for every role involved, and so on) • Data profile to be created at the beginning of the test (that is, how many projects, tasks per project, assignments per resource, assignments per project, and so on) • Test duration and load pattern (that is, warm-up time, step load, and so on) • Data to be collected (that is, which counters from which servers, sampling rate, and so on) • Acceptance criteria and thresholds (that is, less than x% errors, average CPU usage < 60%, and so on)
Data profiles	<p>Putting together all the test scenarios that you will perform, plan for your overall data population strategy by identifying the minimum number of data profiles that you will need for your tests. Data profiles typically include the following elements:</p> <ul style="list-style-type: none"> • Users <ul style="list-style-type: none"> • User accounts • Resource Breakdown Structure (RBS) • Enterprise Resource Pool • Project managers and other roles • Security (authentication mode, groups, categories) • Enterprise Custom Fields • Projects <ul style="list-style-type: none"> • Tasks • Task dependencies • Team • Assignments <p>You should plan for an appropriate naming convention for all the test entities (users, projects, tasks, and so on).</p>

See Also

[Run a Project Server 2010 performance test lab](#)

[Key performance metrics for Project Server 2010](#)

[Set up the test environment Project Server 2010](#)

[Test user-initiated write operations involving Project Web App \(Project Server 2010\)](#)

[Test user-initiated operations involving Project Professional \(Project Server 2010\)](#)

[Test background operations \(Project Server 2010\)](#)

[Extract and analyze test data \(Project Server 2010\)](#)

Key performance metrics for Project Server 2010

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Throughput and response time are two common metrics for measuring required, expected, or actual performance of a system. This article defines these two metrics, because they are important factors for measuring performance in Microsoft Project Server 2010.

Throughput

Throughput is a measure of the number of operations that the system can handle in a unit of time. Throughput is typically expressed in *operations per second*. However, you have to clearly determine what an "operation" is in every specific context. For example, take a Web page: You can think of the serving of a whole page as one operation, or you can think of all the individual HTTP requests that the server receives to serve the page as separate operations. (A Web page can contain images and other resources that are requested independently). These two definitions should clarify why you have to be clear about what an "operation" is when you deal with a throughput measure.

Estimating the required throughput for a system is a challenge that requires a deep and thorough understanding of the usage patterns of the users. An industry average suggests that one operation per second maps to 1,000 users, based on the following calculation:

1. 1,000 users work on average at 10 percent concurrency.
2. Therefore, on average there are 100 concurrent users on a 1,000-user system.
3. For each of the 100 concurrent users, there are 100 seconds per operation per each user (the user "think time").
4. If an active user pauses 100 seconds between operations, the user will generate 36 operations per hour (3,600 seconds in an hour divided by 100 seconds between user requests equals 36 operations generated by the user).
5. If users average 36 operations per hour, and there are 100 concurrent users, the concurrent users will request on average a total of 3,600 operations per hour. Because there are 3,600 seconds in an hour, users will require a solution that can provide one operation per second (3,600 seconds per hour / 3,600 user operations per hour).

Of course, the assumptions of the previous calculation should be adapted to your specific scenario with regard to user concurrency, peak factors, and usage patterns. Be aware that a throughput of 10 operations per second does not mean that every operation is fully processed in 0.1 second, but only

that the system is handling 10 operations in that second. That's why the "response time" is a separate metric, as important as throughput with regard to performance.

Response time

Independent of how many operations the system can manage at the same time, another measure of performance that is even more important to users is absolute *response time*. Response-time degradation can be a good indicator of capacity issues. There are a range of potential response-time bottlenecks, such as disk access, network I/O, memory, and processor problems. Response times depend significantly on several factors such as operation types, data profiles, systems configuration, and so on. It is also important that you define in detail the acceptance thresholds in response times for all the different operations that you are considering.

See Also

[Run a Project Server 2010 performance test lab](#)

[Plan a Project Server 2010 performance test lab](#)

[Set up the test environment Project Server 2010](#)

[Test user-initiated write operations involving Project Web App \(Project Server 2010\)](#)

[Test user-initiated operations involving Project Professional \(Project Server 2010\)](#)

[Test background operations \(Project Server 2010\)](#)

[Extract and analyze test data \(Project Server 2010\)](#)

Set up the test environment Project Server 2010

This is a newly published article. We would like your feedback so that we can provide you with the best possible technical documentation. Please send any comments, questions, or concerns about the documentation to epmdocfeedback@microsoft.com.

This article describes the configuration and metrics involved in setting up a Microsoft Project Professional test environment.

Required software and configuration

In addition to the servers composing the Microsoft Project Server 2010 farm and the needed infrastructure services such as domain controllers, you should set up a Visual Studio Team System 2008 Test Edition controller agent topology. For more information about Visual Studio Team System 2008 Test Edition, see [Controllers, Agents, and Rigs](#) in the MSDN Library Online. We strongly recommend that you use dedicated hardware for the controller, the agent(s), and the database that stores test results in order to minimize the effect on systems being tested.

Similarly, in order to test operations involving Microsoft Project Professional, you should set up a test infrastructure that can automate client operations across multiple Terminal Services sessions and control test scenarios in a centralized manner. An example of such a test solution is the community-based project named Test Framework, which is available at [Project 2010 Thick Client Test Framework](http://go.microsoft.com/fwlink/?LinkId=190449) (<http://go.microsoft.com/fwlink/?LinkId=190449>).

Directly after the setup is finished in your test environment, we recommend that you perform a full backup. Save the backup set so that you will always be able to revert to the baseline state if it is necessary.

Data profiles

When your Project Server 2010 farm is up and running, you can start to generate the data profiles that you planned for. A tool that you can use to help in this process is the community-based solution called EPM 2007 Test Data Population Tool, which is available at [Project Server 2010 Test Data Population Tool](http://go.microsoft.com/fwlink/?LinkID=190449) (<http://go.microsoft.com/fwlink/?LinkID=190449>).

After you generate one specific data profile, perform a full backup of the Microsoft Project Server databases (and the Microsoft SharePoint Server content database if you include Project Workspaces in your test scenarios). Then save the backup set so that it will be available for recovery every time that you need to start a test run with that data profile. It's important that every time that you start a new test run you perform a recovery of the backup set that contains the appropriate data profile. By doing this you can ensure the same initial conditions of multiple test runs for the same scenario.

Data for simulating reality

Load tests must impersonate several different users in order to provide the most accurate simulation of reality. This can be achieved by using the data binding feature in Visual Studio Team System 2008 Test Edition so that every test instance will randomly select one user from the whole list. The same approach can be taken for binding other data to your coded tests, such as for example project names, resource UIDs, and so on.

The "Data Population Tool," "Thick Client Test Framework," and "PWA Web Tests" tools are part of the [Microsoft Project 2010: Project Server Stress Testing Toolkit](http://go.microsoft.com/fwlink/?LinkID=190449) (<http://go.microsoft.com/fwlink/?LinkID=190449>), which can be downloaded from the MSDN Code Gallery. This toolkit provides samples that can be used to enumerate all the resources from the Enterprise Resource Pool and to generate XML files that contain key information that will be made available to the tests.

See Also

[Run a Project Server 2010 performance test lab](#)

[Plan a Project Server 2010 performance test lab](#)

[Key performance metrics for Project Server 2010](#)

[Test user-initiated write operations involving Project Web App \(Project Server 2010\)](#)

[Test user-initiated operations involving Project Professional \(Project Server 2010\)](#)

[Test background operations \(Project Server 2010\)](#)

[Extract and analyze test data \(Project Server 2010\)](#)

Test user-initiated write operations involving Project Web App (Project Server 2010)

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This article is about write operations that users can initiate by using only Microsoft Project Web App (PWA), without the involvement of Microsoft Project Professional on the client computer. Some of the most frequent operations in this category that you may want to test include the following:

- Update status information on My Tasks
- Submit a timesheet
- Approve task updates
- Approve timesheets

While Web tests alone are enough for read-only operations, for write operations some custom code that takes advantage of the Project Server Interface (PSI) is required.

When defining the test mixes, you should always plan one read-only test corresponding to every write test. For example, in order to submit timesheets, a user will always need to access the My Timesheets page.

Submit task updates

The "EPM Stress Test" Visual Studio solution provides a sample test method ("SubmitTaskUpdates") to implement the Submit Task Updates test. This solution is part of the "Project Server 2010 Performance Lab Kit" (discussed previously in [Plan a Project Server 2010 performance test lab](#)). The sample code picks a random assignment from a list of all the assignments in the system (pre-generated in an XML file). Then it impersonates the resource assigned to that assignment and submits a change of the progress (percent complete).

In order to test task-update submission operations realistically, however, you also have to add a Web test to hit the My Tasks page. You can set such a test by using the Web Test Recorder in Visual Studio (discussed previously in [Set up the test environment Project Server 2010](#)). The test mix between the Web test (page hit) and the unit test (actual task update submission) should be two page hits for every test submission.

Submit timesheets

The "EPM Stress Test" Visual Studio solution provides a sample test method ("CreateAndSubmitTimeSheet") to implement the Submit Timesheets test. This solution is part of the

Test user-initiated write operations involving Project Web App (Project Server 2010)

"Project Server 2010 Performance Lab Kit" (discussed previously in [Plan a Project Server 2010 performance test lab](#)). The sample code picks a random resource and a random period, and then creates the timesheet.

In order to test timesheet-submission operations realistically, however, you have to add a Web test to hit the My Timesheets page. You can set up such a test by using the Web Test Recorder in Visual Studio, (discussed previously in [Set up the test environment Project Server 2010](#)). The test mix between the Web test (page hit) and the unit test (actual timesheet submission) should be two page hits for every test submission.

Approve task updates

The "EPM Stress Test" Visual Studio solution provides a sample test method ("ApproveTaskUpdates") to implement the Approve Task Updates test. This solution is part of the "Project Server 2010 Performance Lab Kit" (discussed previously in [Plan a Project Server 2010 performance test lab](#)). The sample code picks a random project manager, gets the first pending task update from the list of task updates pending approval, and approves it. Then it submits the approval and finally republishes the affected project.

In order to test task-update approval operations realistically, however, you also have to add a Web test to hit the approvals page. You can set up such a test by using the Web Test Recorder in Visual Studio, (discussed previously in [Set up the test environment Project Server 2010](#)). The test mix between the Web test (page hit) and the unit test (actual task update approval) should be two page hits for every test submission.

Approve timesheets

The "EPM Stress Test" Visual Studio solution provides a sample test method ("ApproveTimesheets") to implement the Approve Timesheets test. This solution is part of the "Project Server 2010 Performance Lab Kit" (discussed previously in [Plan a Project Server 2010 performance test lab](#)). The sample code picks a random timesheet approver, gets a random timesheet from the list of timesheets pending approval, and finally approves it.

In order to test timesheet approval operations realistically, however, you also have to add a Web test to hit the approvals page. You can set up such a test by using the Web Test Recorder in Visual Studio, (discussed previously in [Set up the test environment Project Server 2010](#)). The test mix between the Web test (page hit) and the unit test (actual timesheet approval) should be two page hits for every test submission.

See Also

[Run a Project Server 2010 performance test lab](#)

[Plan a Project Server 2010 performance test lab](#)

[Key performance metrics for Project Server 2010](#)

[Set up the test environment Project Server 2010](#)

Test user-initiated write operations involving Project Web App (Project Server 2010)

[Test user-initiated write operations involving Project Web App \(Project Server 2010\)](#)

[Test user-initiated operations involving Project Professional \(Project Server 2010\)](#)

[Test background operations \(Project Server 2010\)](#)

[Extract and analyze test data \(Project Server 2010\)](#)

Test user-initiated operations involving Project Professional (Project Server 2010)

This article is about operations involving Microsoft Project Professional as the main user interface. The most frequent operations belonging to this category include the following:

- Open a project
- Save a project
- Publish a project

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Microsoft Project Server 2010 does not support multiple instances executing in the same user session. Therefore, in order to test many concurrent users, the use of Terminal Services is required unless you have dozens of servers. On the other end, the Visual Studio 2008 Test Agent cannot be instantiated in multiple sessions on the same user session. This would make it quite difficult to integrate Project Professional tests in Visual Studio Team System 2008 Test Edition. However a community-based tool capable of automating Project Professional tests inside multiple Terminal Services sessions has been developed and is available at [Microsoft Project 2010: Project Server Stress Testing](http://go.microsoft.com/fwlink/?LinkId=190625) (<http://go.microsoft.com/fwlink/?LinkId=190625>) in the MSDN Code Gallery. The Thick Client Test Framework tool implements a controller-agent architecture that is conceptually similar to the Visual Studio 2008 Test Edition architecture. In all, the controller pushes information on a SQL Server database, while agents pull job information and update status information regarding their jobs from the same database. Every job is composed of one or more operations, implemented by using custom .NET components and taking advantage of the Project Professional client object model.

The three Project Professional tests described in the following paragraphs are implemented by using the Test Framework tool. Data collection is still performed with Visual Studio Team System 2008 Test Edition running at the same time.

Access the Project Web App home page

You can use the Web Test Recorder tool available with Visual Studio 2008 to record all the HTTP requests occurring when a user accesses the PWA home page. Once you have recorded the Web test, set up the credentials in order to simulate different users in the load scenario. Then let Visual Studio randomly select a user from a list for every test run. You can bind user credentials to a data source, which can read data from a database, an XML or CSV file, or any other data source that is convenient for you. As an example, you can use the Resources.xml file described above as the data source for user credentials. The same approach can be used for all the other tests as well.

Open projects

The sample code included in the "Thick Client Test Framework" in the "Project Server 2010 Stress Testing" solution shows how the opening of a project from Microsoft Project Professional can be automated. The code is dynamically loaded and run by the Test Framework agent. The Open function gets two parameters in input. The first parameter is the file name of the project to be opened. (Using '*' as the file name causes the function to automatically select a Project from the server-side list, in sequence order.) The second parameter is a Boolean to indicate whether the project should be open in read-only or in read-write mode. The function returns the number of milliseconds elapsed for the operation, or zero in case of error. The two parameters can be set through the controller UI.

Save projects

The Resource Center test is very similar to the Project Center test, because it also contains the JavaScript Grid control.

Access the My Tasks page

Microsoft Project Professional only sends the actual changes to the server when it saves. Therefore, in order to perform a meaningful save test you have to apply some changes to an opened project before you save it back. One's imagination is the only limit to what can be done for generating meaningful changes before you save. One simple example is to change the start date of the project, which typically affects all of the tasks in the project, thus generating a significant change set to be saved.

The sample code included in the Test Framework CodePlex solution shows several sample functions, which can be set to be run in sequence by defining a workflow in the controller application. Two examples are as follows:

1. A ChangeStartDate function, which picks a random date in the [today ± 30 days] range and changes the project start date to the randomly selected date
2. A Save function, which saves back the active project; the function gets one Boolean parameter as input that can be used to skip the save operation if the active project is opened in read-only mode.

Both of the functions return the number of milliseconds elapsed for the operation, or zero in case of error.

Publish projects

The sample code included in the "Thick Client Test Framework" in the "Project Server 2010 Stress Testing" solution shows how to automate the publishing of a project. The Publish function gets three parameters as input. The first parameter is a Boolean indicating whether the entire project (true) or only the changes (false) will be published. The second parameter indicates the URL for the optional URL for the project workspace to be provisioned. The third parameter is a Boolean indicating whether the

Test user-initiated operations involving Project Professional (Project Server 2010)

publish operation needs to be skipped in case the opened project is in read-only mode. The function returns the number of milliseconds elapsed for the operation, or zero in case of error.

See Also

[Run a Project Server 2010 performance test lab](#)

[Plan a Project Server 2010 performance test lab](#)

[Key performance metrics for Project Server 2010](#)

[Set up the test environment Project Server 2010](#)

[Test user-initiated write operations involving Project Web App \(Project Server 2010\)](#)

[Test user-initiated operations involving Project Professional \(Project Server 2010\)](#)

[Test background operations \(Project Server 2010\)](#)

[Extract and analyze test data \(Project Server 2010\)](#)

Test background operations (Project Server 2010)

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This article is about operations that are not the direct result of any user action, but instead are running in the background as scheduled jobs. Some of the most frequent operations that belong to this category include the following:

- Cube building
- Active Directory synchronization
- Project archiving

Normally, testing strategies for these operations only consist in the following things:

1. Controlling when the operation under test starts
2. Running a dummy test on Visual Studio Team System 2008 Test Edition at the same time in order to capture relevant data from the affected servers, and without any other load

A dummy test has to be run in order to start the collection of performance counter data and continue for the whole duration of the cube building process. An example of a dummy test that can be used for the purpose is included in the "EPM Stress Test" Visual Studio solution ("DoNothing" class), which is part of the "Project Server 2010 Performance Lab Kit."

The following sections provide more specific details for testing each of the above operations.

Cube building

In order to trigger a start of the cube building process, you can access the Cube Build Status page under **Server Settings** and use the **Build Now** button at the bottom of the page. This will cause activity on the computer that is running SQL Server, the Project Server application server and the SQL Server Analysis Services server.

Active Directory synchronization

The Active Directory synchronization feature in Microsoft Project Server 2010 can synchronize resource data in the Enterprise Resource Pool or user data in security groups. Management settings for the two types of synchronization targets are different.

To configure and start a synchronization targeted to the Enterprise Resource Pool, you can simply access the Active Directory Enterprise Resource Pool Synchronization page from **Server Settings**. Click the **Save and Synchronize now** button at the bottom of the page.

To configure and start a synchronization targeted to a security group, you must perform two steps. First, set the Active Directory group for every Project Server group that you want to synchronize. You begin this step by accessing the Manage Groups page from **Server Settings**. Then you click on a group name to enter the Add or Edit Group page, and then you click **Find Group** in the **Active Directory Group to Synchronize** section. The second step consists in configuring the synchronization parameters and scheduling. You can do this by clicking the **Active Directory Synch Options** button on the toolbar of the Manage Groups page; a dialog window opens. This allows you to set the options for group synchronization. You can use the **Save and Synchronize now** button at the bottom of this dialog window to start the synchronization task immediately.

Project archiving

Project archiving (or backup) can be triggered by accessing the Administrative Backup page from **Server Settings** (select **Projects** and then clicking **Backup**). Entities other than projects can also be archived and tested. The backup operation is en-queued and then processed by a Project Server application server. You can also expect significant activity on the computer that is running SQL Server. See the [Retire Projects](#) article for more information about Project archiving in Project Server.

Identify different queue behaviors

When performing background operation testing it is important to understand and be able to identify different queue behaviors during your tests. The two key performance counters that should be monitored for this objective are as follows:

1. QueueGeneral | Current Unprocessed Jobs (Current number of unprocessed jobs in the queue)
2. QueueJobs | Jobs Processed / Minute (Number of jobs processed per minute)

See Also

[Run a Project Server 2010 performance test lab](#)

[Plan a Project Server 2010 performance test lab](#)

[Key performance metrics for Project Server 2010](#)

[Set up the test environment Project Server 2010](#)

[Test user-initiated write operations involving Project Web App \(Project Server 2010\)](#)

[Test user-initiated operations involving Project Professional \(Project Server 2010\)](#)

[Test background operations \(Project Server 2010\)](#)

[Extract and analyze test data \(Project Server 2010\)](#)

Extract and analyze test data (Project Server 2010)

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In addition to using Visual Studio Team System 2008 Test Edition itself to open and analyze data from past test runs, you should also analyze test data with more powerful tools such as Microsoft Excel.

Moving data from the lab to the test analysis database

Deploying the lab environment in an isolated network is a best practice. This approach affects a Microsoft SQL Server database that contains test data that is collected through Visual Studio Team System 2008 Test Edition. It will typically be in a separate network from the one that you are connected to when you perform most of the data analysis work. For this reason, it is common to have a process to move test data from the lab environment to a test analysis environment. This can be done with a SQL Server backup and recovery operation of the LoadTest database from one environment to another.

Extracting relevant data from the test database

The first thing to know when you are dealing with the LoadTest database is the test run IDs for the test runs stored in the database. The GetTestRunIDs.sql file in the "Project Server 2010 Performance Lab Kit" contains a Transact-SQL query that can be used to get the list of test run IDs from the database, together with other information useful to identify the test runs.

Once you have the test run ID of a test that you want to analyze, you then have to extract relevant information from the database. The main table for that purpose is LoadTestComputedCounterSample, which contains all the data samples for performance-counter data and key performance indicators from all the test runs. A sample Transact-SQL query that can be used to extract relevant data is included in the ExtractData.sql file in the "Project Server 2010 Performance Lab Kit." This query returns several result sets that can be easily copied and then pasted into an Excel worksheet.

See Also

[Run a Project Server 2010 performance test lab](#)

[Plan a Project Server 2010 performance test lab](#)

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Plan groups, categories, and RBS in Project Server 2010

Microsoft Project Server 2010 security is based on users, groups, and categories. This article addresses planning for groups and categories in your Project Server deployment.

In this article:

- [Permissions](#)
- [Groups](#)
- [Categories](#)
- [Security templates](#)
- [Resource Breakdown Structure](#)

Included within this article is a series of video demonstrations illustrating and further describing the concepts associated with permissions, groups, categories, and RBS. Links to the videos are included in each section below. We recommend that you view the videos in the order of presentation in this article, as each video builds on the concepts discussed in previous videos.

**Note:**

These videos were created using Microsoft Office Project Server 2007. Though there have been some changes in Project Server 2010, the basic functionality around how Project Server security works remains the same.

Permissions

This video demonstrates how permissions work.

[Watch the video](http://go.microsoft.com/fwlink/?LinkID=168549) (http://go.microsoft.com/fwlink/?LinkID=168549). To download a copy of the file, right-click the link, and then click **Save Target As**.

A *permission* is the authority to perform a specific action within the context of Project Server. You can *Allow*, *Deny*, or not configure each permission in Project Server. For example, the **Change Password** permission can be allowed or denied for any given user or group. There are two types of permissions in Project Server:

- *Global Permissions* grant users and groups the ability to perform actions throughout an instance of Microsoft Project Web App (PWA). Global Permissions are assigned on a user or group level.
- *Category Permissions* grant users and groups the ability to perform actions on specific projects and resources. Category Permissions are assigned on a category level.

Permissions can be set in a number of different places within the Project Server 2010 administration menu. You can allow or deny permissions by selecting the check boxes in the **Allow** and **Deny** columns. If neither the **Allow** nor the **Deny** check boxes are selected, the default state is Not Allow.

The Not Allow state does not prevent users from accessing the feature associated with the permission if they are granted permission in some other way. For example, a user might belong to one group for which permission is not configured (Not Allowed), but might be granted permission by means of membership in a group for which the permission is allowed. However, if the permission is explicitly denied anywhere, permission is denied everywhere for a particular user or group.

You can configure all Project Server 2010 permissions from the Project Web App Server Settings page. Permissions can be configured in the following ways:

- **Allow** Enables users or group members to perform the actions associated with the permission.
- **Deny** Prevents a user or group from performing the actions associated with the permission. Use caution when denying permissions. Note that if a user is denied a specific permission, the deny setting supersedes any Allow settings that might apply to other groups to which the user belongs. No permissions are set to Deny by default.
- **Not Allow** If you select neither **Allow** nor **Deny** for a permission, the default state is Not Allow. If a user belongs to more than one group, and a permission is set to Not Allow for one group and is set to **Allow** (but not **Deny**) for another group, then the user is allowed to perform the actions associated with the permission.

It is important to consider when you are configuring a permission to **Deny** that the **Deny** setting supersedes any **Allow** settings that apply to the user for that permission by means of other group memberships. Limiting your use of the **Deny** setting can simplify permissions management for large groups of users.



Note:

The **Deny** setting enables you to deny access to functionality, because this setting overrides the **Allow** setting. Therefore, use caution when selecting the **Deny** check box. Select the **Deny** check box to prevent a user from outside the organization from accessing Project Server security objects or to deny functionality to a user or group).

For organizations that include a large number of users, assigning and administering permissions on an individual basis can be an overwhelming task. You can use groups to assign permissions to multiple users with a single action. Create the groups and define the set of permissions to associate with the groups as part of your initial Project Server 2010 deployment planning process, before you assign users to groups and groups to categories. After you define groups, the permissions associated with the groups, and group memberships, the day-to-day administration of users, groups, and categories involves adding users to or removing users from security groups. This helps to reduce the volume of day-to-day administrative tasks required, and can simplify troubleshooting permissions issues.



Note:

For a complete list of Project Web App global permissions, see [Project Server 2010 global permissions](#), and for category permissions, see [Project Server 2010 category permissions](#).

Groups

This video demonstrates how groups work.

[Watch the video](http://go.microsoft.com/fwlink/?LinkID=168587) (http://go.microsoft.com/fwlink/?LinkID=168587). To download a copy of the file, right-click the link, and then click **Save Target As**.

Groups contain sets of users who have similar functionality needs. For example, every project manager in a particular division within your organization may need the same set of Project Server permissions, while executives or resource managers might have different needs.

Define your groups by identifying common needs based on the areas of Project Server 2010 to which users in your organization need access. After you define your groups, you can add users to the groups and grant permissions to the groups; permissions assigned to groups apply to all of the users that the group contains. Using groups to control Project Server 2010 permissions simplifies security administration in Project Server. Group memberships can change frequently, but the access requirements for groups change infrequently.



Note:

Group membership consists of users only. Groups cannot contain other groups.

Users can belong to multiple groups according to their role in the organization and their access requirements. The following groups are created by default when Project Server 2010 is installed, each of which is assigned a set of predefined categories and permissions:

Group	Description
Administrators	Users have all global permissions as well as all category permissions via the My Organization category. This allows them complete access to everything on Project Server.
Executives	Users have permissions to view project and Project Server data. This group is intended for high-level users who need visibility into projects but are not themselves assigned project tasks.
Portfolio Managers	Users have assorted project-creation and team-building permissions. This group is intended for high-level managers of groups of projects.
Project Managers	Users have most global and category-level project permissions and limited resource permissions. This group is intended for users who maintain project schedules on a daily basis.
Resource Managers	Users have most global and category-level resource permissions. This group is intended for users who manage and assign resources and edit resource data.
Team Leads	Users have limited permissions around task creation and status reports. This group is intended for people in a lead capacity who do not have regular

Group	Description
	assignments on a project.
Team Members	Users have general permissions for using PWA, but limited project-level permissions. This group is intended to give everyone basic access to PWA. All new users are added to the Team Members group automatically.

Administrators usually assign permissions by adding a user account to one of the built-in groups or by creating a new group and assigning specific permissions to that group.



Note:

For a complete list of Project Web App global permissions, see [Project Server 2010 global permissions](#), and for category permissions, see [Project Server 2010 category permissions](#).

Categories

This video demonstrates of how categories work.

[Watch the video](http://go.microsoft.com/fwlink/?LinkID=168588) (http://go.microsoft.com/fwlink/?LinkID=168588). To download a copy of the file, right-click the link, and then click **Save Target As**.

Categories are collections of projects, resources, and views. Categories define the scope of the information accessible to a given user. A category is similar to a group in that it provides permissions to users. Unlike Global Permissions, Category Permissions are related to specific projects and resources. Additionally, categories include project and resource filters that can be used to determine which projects and resources the specified permissions apply to.

Groups and Categories are associated with each other to provide a complete set of permissions for each user. Each Group can be associated with one or more Categories and each Category can provide a different set of project- and resource-level permissions for the members of that group.

Each Project Web App instance includes the following default categories:

Category	Description
My Direct Reports	Allows users permission to approve timesheets for their direct descendants in RBS. This category is intended for managers who need the ability to approve timesheets.
My Organization	Contains all projects and resources and allows various levels of category permissions depending on associated group management. It also provides full access to all views. This category is intended to allow users to have visibility into everything on the Project Web App instance.
My Projects	Filtered to allow category permissions to users who own projects or are status

Category	Description
	managers on a project, are assigned as a resource to a project, or whose descendants in RBS are assigned to a project. This category is intended to allow users to have visibility into all project with which they or their descendants in RBS are associated.
My Resources	Allows most resource-level category permissions, filtered on resources who are descendants of the user in RBS. This category is intended to allow users to manage their resources as delineated in the RBS structure.
My Tasks	Allows users to see projects to which they are assigned. This category is associated with the Team Members group and is intended for everyone to have visibility into the projects to which they are assigned.

You can create custom categories to provide new ways to access data for projects, resources, and views. A large number of categories can be complex to administer. We recommend that you use categories sparingly.

Security templates

Security templates are predefined sets of permissions. Use security templates to simplify the process of granting permissions to groups of users who need access to the same data. Each Project Web App instance includes the following default security templates:

- Administrator
- Executive
- Portfolio manager
- Project manager
- Proposal reviewer
- Resource manager
- Team lead
- Team member

Security templates provide a means for you to quickly apply or reset predefined permission profiles to new or existing users, groups, and categories. By applying security templates, you can easily standardize the permissions that you assign according to users' role in the organization. Several predefined security templates are created by default when Project Server is installed. These align with the predefined groups. You can customize these security templates and create new security templates according to your needs.

 **Note:**

When you change the settings for a security template, the changes are not automatically applied to the users and groups that the template was applied to.

Creating custom security templates requires planning. You must first identify the common Project Server 2010 usage patterns in your organization that are not reflected in the default Project Server 2010 security templates. This helps you to identify your requirements for custom security templates. Then, determine the permissions that the users who share the common Project Server 2010 usage patterns require. This defines the security template. Next, determine the set of projects, resources, views, and so on, that the users and groups require access to; this defines the security category. Create the custom security template and apply it to the group of users that share common usage patterns.

Resource Breakdown Structure

This video demonstrates of how RBS works.

[Watch the video](http://go.microsoft.com/fwlink/?LinkID=168589) (http://go.microsoft.com/fwlink/?LinkID=168589). To download a copy of the file, right-click the link, and then click **Save Target As**.

The Resource Breakdown Structure (RBS) is a hierarchical security structure typically based on the management reporting structure of your organization, although it can also be structured in other ways. The RBS can be an important element in your Project Server security model when it is used to define the reporting relationships among users and projects in your organization. When you specify an RBS value for each Project Server user, you can take advantage of the dynamic security options that can be defined for each security category.

The RBS structure is defined by adding values to the RBS custom lookup table that is built in to Project Server 2010. Once you define the structure, you can assign RBS values to individual users by setting the RBS property in the user's account settings page.

Once the RBS is configured, Categories can use RBS codes to dynamically determine which projects and resources particular users can view or access. The following tables list the security options that use RBS that are available in each Category.

Project options

Option	Description
The user is the Project Owner or the User is the Status Manager on assignments within that project	Users with permissions in the category where this option is selected can see projects on which they are a Project Owner or a Status Manager
The user is on that project's Project Team	Users with permissions in the category where this option is selected can see projects on which they are a resource
The Project Owner is a descendant of the User via RBS	Users with permissions in the category where this option is selected can see projects owned by their descendants in the RBS

Option	Description
A resource on the project's Project Team is a descendant of the User via RBS	Users with permissions in the category where this option is selected can see projects on which their descendants in the RBS are a resource
The Project Owner has the same RBS value as the User	Users with permissions in the category where this option is selected can see projects owned by other users with the same RBS value



Note:

The first two options (**The user is the Project Owner or the User is the Status Manager on assignments within that project** and **The User is on that project's Project Team**) are not related to the RBS, but they do offer a similar method of filtering which projects are visible to a user.

Resource options

Option	Description
The User is the resource	Users with permissions in the category where this option is selected can see themselves as a resource
They are members of a Project Team on a project owned by the User	Users with permissions in the category where this option is selected can see resources assigned to projects that they own
They are descendants of the User via RBS	Users with permissions in the category where this option is selected can see their descendants in the RBS
They are direct descendants of the User via RBS	Users with permissions in the category where this option is selected can see their direct descendants in the RBS
They have the same RBS value as the user	Users with permissions in the category where this option is selected can see other users with the same RBS value



Note:

The first two options (**The User is the resource** and **They are members of a Project Team on a project owned by the User**) are not related to the RBS, but they do offer a similar method of filtering which resources are visible to a user.

The options in the tables above can be configured when you create or modify a Category. For more information, see [Manage categories in Project Server 2010](#).

See Also

[Using Project Server Security \(http://go.microsoft.com/fwlink/?LinkId=205398\)](http://go.microsoft.com/fwlink/?LinkId=205398)

Project Server 2010 upgrade overview

This article contains an overview of how to upgrade to Microsoft Project Server 2010 from an earlier version of Project Server.

**Important:**

Upgrading from the Project Server 2010 public Beta to the Project Server 2010 release version is explicitly blocked and not supported. This restriction applies to both the in-place and database-attach upgrade methods.

**Note:**

Migrating Microsoft Office Project Portfolio Server 2007 data to Project Server 2010 is not covered in this document. For more information, see the model titled "Project Portfolio Server to Project Server 2010 Paths and Considerations" (PPS to PS2010 Migration Model.vsd).

Upgrade methods

You can upgrade to Project Server 2010 through two basic methods:

- Database-attach upgrade
- In-place upgrade

Database-attach upgrade

A database attach upgrade lets you "attach" restored copies of your Office Project Server 2007 databases to a new Project Server 2010 installation. Office Project Server 2007 farm databases are backed up and restored on Microsoft SQL Server, and the new Project Server 2010 farm points to these restored databases when the Microsoft Project Web App instance is created. When you connect to the databases from the new Project Server 2010 instance, the databases are upgraded to Project Server 2010.

There are two variations of the database attach upgrade:

- Database attach full: Upgrades the four Office Project Server 2007 databases and the content database that contains the Project Web App site data.
- Database attach core: Upgrades the four Office Project Server 2007 databases only.

A database-attach upgrade is required in two scenarios:

- When you are migrating from a Office Project Server 2007 farm installed in a Windows Server 32-bit environment.
- When you are migrating from a Office Project Server 2007 farm installed on a Virtual Migration Environment (VME).

**Note:**

For more information about the VME, see [The Virtual Migration Environment \(VME\)](#) in this article.

The advantage of doing a database attach upgrade is minimal downtime, because your Office Project Server 2007 farm can remain functional during the upgrade.

The disadvantages of doing a database-attach upgrade are as follows:

- Server and farm settings are not upgraded and must be manually transferred if you want to preserve them from your old farm to your new one.
- Any customizations must also be transferred and upgraded manually. Any missing customizations may cause unintended loss of functionality or problems for users.
- You must budget for additional hardware on which to install Project Server 2010 and the required 64-bit Windows Server 2008 operating system.

For detailed instructions that describe how to use the database-attach methods to migrate from Office Project Server 2007 to Project Server 2010 see:

[Database-attach full upgrade to Project Server 2010](#)

[Database-attach core upgrade to Project Server 2010](#)

In-place upgrade

An in-place upgrade lets you install Project Server 2010 on the same hardware as your Office Project Server 2007 installation, and then migrate the content and settings in your server farm as part of a single process.

**Important:**

The Office Project Server 2007 installation that you are upgrading from must be running on a Windows Server 2008 64-bit operating system for you to do an in-place upgrade. Project Server 2010 is a 64-bit application, and it must be installed on a Windows Server 2008 64-bit operating system (Windows Server 2008 R2 or Windows Server 2008 with SP2).

The advantages of doing an in-place upgrade are as follows:

- The upgrade can occur on the same computer.
- Farm-wide settings are preserved and migrated.
- Customizations are available in the environment after the upgrade process, although manual steps may be necessary to upgrade or rework them.

The disadvantages of doing an in place upgrade are as follows:

- It can only be performed if Office Project Server 2007 is installed on a Windows Server 2008 64-bit operating system.
- Project Server will be inactive during the upgrade, unlike a database attach upgrade, in which Office Project Server 2007 will be active during the upgrade because you are upgrading a copy of the Office Project Server 2007 farm databases.

 **Important:**

An in place upgrade makes your Office Project Server 2007 installation permanently inoperative. You must make sure that you have a valid recovery plan in case the upgrade fails.

The scenario where an in-place upgrade would be most useful is one in which you are already running Office Project Server 2007 in a Windows Server 2008 64-bit environment.

For detailed instructions on how to use the in-place upgrade method to upgrade from Office Project Server 2007 to Project Server 2010 see [In-place upgrade to Project Server 2010](#).

Migrating from Project Server 2003 to Project Server 2010

An additional migration path to Project Server 2010 is available from Microsoft Office Project Server 2003. The migration process can migrate your project data and, if it is required, your Project Workspace data. Migrating your data from Project Server 2003 is a two-step process:

1. Migrate from Project Server 2003 to Office Project Server 2007
2. Migrate from Office Project Server 2007 to Project Server 2010

Note that when we refer to upgrading from Project Server 2003, it is known as a "migration" process. In the traditional sense, upgrading from an earlier version is often thought of as an "in-place" process in which the application's binaries and data are upgraded from the earlier version to a newer version. For example, upgrading from Office Project Server 2007 to Project Server 2010 can be done through an in-place process. In contrast, upgrading from Project Server 2003 is a data migration process. In this process, Office Project Server 2007 is installed first (on the same computer as the earlier version of Project Server or on a different one). Then the Project Server 2003 data is migrated. There is no actual upgrade of the binaries when you are "upgrading" from Project Server 2003.

For more information about how to migrate from Project Server 2003, see [Upgrade to Project Server 2010 from Project Server 2003](#).

Step 1: Migrating your data to Project Server 2007

When migrating from Project Server 2003 to Office Project Server 2007, there are two methods that you can use:

1. Standard migration: Install the Office Project Server 2007 environment manually and then migrate your data from Project Server 2003 to the new environment.
2. Virtual Migration Environment: Install the Virtual Migration Environment (VME) Hyper-V image (that contains your Office Project Server 2007 environment) to a Windows Server 2008 computer that is running Hyper-V, and migrate your data to the VME.

Both methods will produce the Office Project Server 2007 databases that contain your upgraded data, and optionally your project workspace data that is contained in a SharePoint Server content database. These will be required for the second step in the process: upgrading to Project Server 2010.

Step 2: Migrating your data from Project Server 2007 to Project Server 2010

The second half of this process requires you to migrate your data to Project Server 2010. There are three options, all mentioned previously:

- Database-attach full upgrade: This option migrates your project data and your project workspace data. We recommend this option when you have to upgrade both.
- Database-attach core upgrade: This option only migrates your project data. We recommend this option if you do not have to migrate your project workspace data.
- In-place upgrade to Project Server 2010: This option upgrades your data and Office Project Server 2007 settings on the existing server. This option is available only to you if you migrated your data to a Office Project Server 2007 deployment on a Windows Server 2008 64-bit platform. You cannot use an in-place upgrade when you are using the VME.

For more information about how to migrate from Project Server 2003 to Project Server 2010, see [Upgrade to Project Server 2010 from Project Server 2003](#).

The Virtual Migration Environment (VME)

The Virtual Migration Environment (VME) is a fully configured Office Project Server 2007 with SP2 environment packaged as a Hyper-V image. The VME can be run as a stand-alone environment for the sole purpose of migrating Microsoft Office Project Server 2003 data to the Office Project Server 2007 data format.

The VME was built to enable Project Server 2003 customers with a way to migrate to Project Server 2010 without having to set up an intermediate Office Project Server 2007 environment. The VME does not have to be added to your existing network, and the Project Server 2003 data can be added to the VME by using an external hard disk drive.

The VME image contains the following:

- Office Project Server 2007 with SP2
- Windows SharePoint Services 3.0 with Service Pack 2 (SP2)
- Microsoft Office Project Professional 2007 with Service Pack 2
- SQL scripts that have been developed to find potential upgrade issues.
- Windows Server 2003 Release 2
- Microsoft SQL Server 2005 Enterprise Edition
- Office Project Server 2007 with SP2

The VME will be available for download on the [Upgrade and Migration Resource Center for Microsoft Project Server 2010](#) around the product release date.

Backwards Compatibility Mode (BCM)

Backwards Compatibility Mode (BCM) is a feature in Project Server 2010 that assists in the upgrade of your Enterprise Project Management environment. Project Server 2010 accepts connections from the Microsoft Project Professional 2010 client, but it can also accept connections from Microsoft Office Project Professional 2007 with Service Pack 2 (SP2) if BCM is enabled in Project Server 2010. BCM is enabled automatically after you upgrade to Project Server 2010. By enabling BCM after you upgrade from Office Project Server 2007 to Project Server 2010, you avoid having to upgrade your Office Project Professional 2007 client computers at the same time. Because Project Server 2010 accepts connections from both Office Project Professional 2007 SP2 and Project Professional 2010 clients when BCM is enabled, you can decide to upgrade your clients later, and in batches (running in a mixed environment), if you want. When you have finished upgrading the clients to Project Professional 2010, you can turn off BCM in Project Server 2010 server settings, which will then allow for only Project Professional 2010 connections.

 **Important:**

Once BCM is disabled, it cannot be re-enabled. Verify that you want to disable BCM if you are going to make the change.

 **Important:**

Before you disable BCM, verify that all projects are checked in. If any projects are checked out when BCM is disabled, mismatched projects may exist (for example, the checked out projects will remain in compatibility mode). Projects in this condition can lead to problems with edits and data loss, and can cause Project Professional 2010 to stop responding.

 **Note:**

Microsoft Office Project Professional 2003 cannot connect to Project Server 2010, even if BCM is enabled.

 **To disable Backward Compatibility Mode**

1. On the Project Server 2010 home page, click **Server Settings**.
2. On the Server Settings page, in the **Operational Policies** section, click Additional Settings.
3. On the Additional Settings page, in the **Project 2007 Compatibility Mode** section, clear the **Enable Project 2007 Compatibility Mode** check box.
4. Click **OK**.
5. After making the change, you must check out and open the Enterprise Global file in Microsoft Project Professional 2010. In the Enterprise Global file, make a very minor change (for example, dragging the splitter bar on the screen), save the file, and then check it back in. This

is required to upgrade the Enterprise Global file to the newer version of the Microsoft Project Professional client.



Important:

The Enterprise Global file must be upgraded to the Project Professional 2010 client after BCM is disabled. This ensures that all new projects will be in native mode with all Project Professional 2010 features enabled. (All new projects are based on the Enterprise Global file). This also ensures that workflow will function correctly.

We recommend that BCM only be enabled as a temporary measure to help in the upgrade process. When Project Server 2010 is configured in Backwards Compatibility Mode, Project Professional 2010 clients that connect with Project Server 2010 have certain features that are disabled. These include the following:

- Manually scheduled tasks are not available on the server or client.
- Tasks cannot be set to inactive.
- Font strikethrough is not available.
- All departmental custom fields are enforced in Office Project Professional 2007.
- Workflow-controlled custom fields are available as read-only.

All new features that are available in Project Professional 2010 (for example, Timeline, Team Planner, 32-bit colors) are available to Project Professional 2010 users, but not to Office Project Professional 2007 SP2 users.

Office Project Professional 2007 SP2 connecting to Project Server 2010 in BCM mode is blocked from providing functionality that requires loading a Project Web App page in the client. This includes doing approvals and opening enterprise resources. As a workaround, you can use Project Web App on a Web browser to do these functions until you are ready to upgrade to Project Professional 2010.

Additionally, workflow-controlled custom fields are not available in Office Project Professional 2007 SP2.



Note:

Project Web App access to Project Server 2010 requires that you use either Windows Internet Explorer 7 or Windows Internet Explorer 8 as your Web browser. For more information, see [Plan browser support \(Project Server 2010\)](#).

Plan for upgrade to Project Server 2010

Now that you have learned how the upgrade process works by reading the article titled [Project Server 2010 upgrade overview](#), you can start to plan an upgrade. This section contains articles that help you plan and prepare for upgrading from to Microsoft Project Server 2010.

In this section:

- [Review system requirements for upgrade \(Project Server 2010\)](#)
Review the requirements to help ensure that your environment can be upgraded to Project Server 2010.
- [Create an upgrade communications plan \(Project Server 2010\)](#)
Create a plan to coordinate and communicate with the upgrade team, users, and stakeholders.

Review system requirements for upgrade (Project Server 2010)

Before you can upgrade your environment from Microsoft Office Project Server 2007 to Microsoft Project Server 2010, your servers must meet the following minimum requirements:

- The hardware and software must meet or exceed the minimum system requirements to run the new version.

This includes the requirement for 64-bit hardware and 64-bit versions of the operating system and Microsoft SQL Server. Before you start the upgrade process, make sure that the system meets or exceeds the minimum requirements in [Hardware and software requirements \(Project Server 2010\)](#). Before upgrading, determine how much production capacity that you must have in your upgraded environment and determine the hardware that you must have for an upgrade based on that information.

- Office Project Server 2007 must be updated to Service Pack 2 and the October 2009 cumulative update.

Your environment must be updated to at least Service Pack 2 of Office Project Server 2007 to run the upgrade process, either for an in-place or a database-attach upgrade. We recommend that you install the October 2009 Cumulative Update also. For more information about how to install service packs and updates, see [Deploy Project Server 2007 updates](#) (<http://go.microsoft.com/fwlink/?LinkId=189218>).



Note:

If you are also using Microsoft Office SharePoint Server 2007, you are also required to update it with Service Pack 2 and October 2009 Cumulative update.

- Internet Explorer 7.0 or 8.0 must be used for Microsoft Project Web App access to Project Server 2010.

In order to access Project Server 2010 through Project Web App, users must have Internet Explorer 7.0 or 8.0. If you attempt to use browsers such as Firefox and Safari to browse to Project Web App, the page will not load because these browsers are explicitly blocked. It is important to note this, especially if you are using other applications that are designed specifically to work with other browsers or versions of Internet Explorer.

If your company plans to implement Windows 7 on the desktop and you have internal applications that require Internet Explorer 6, you may want to consider the XP mode feature of Windows 7 for Internet Explorer 6 support. You can then keep Internet Explorer 7.0 or 8.0 on the native desktop for Project Web App access to Project Server 2010.

Another option is for users to access Project Server 2010 through a Terminal Server connection on which the host computer uses Internet Explorer 7.0 or 8.0.

Review system requirements for upgrade (Project Server 2010)

- Prepare to upgrade or update your Project Professional client users for the upgrade to Project Server 2010.

Project Server 2010 supports client connectivity from Microsoft Project Professional 2010. It also supports client connectivity from Microsoft Office Project Professional 2007 with Service Pack 2 (SP2), but only when Backwards Compatibility Mode (BCM) is enabled on Project Server 2010. If you have not upgraded your Office Project Professional 2007 users to Project Professional 2010, plan to give them the SP2 update so that they will be able to connect to Project Server 2010 after the upgrade from Office Project Server 2007. BCM is enabled by default after upgrade, and it allows you to conveniently plan to upgrade your Office Project Professional 2007 SP2 clients to Project Professional 2010 over time. Note that when Backwards Compatibility Mode is enabled, some new Project Professional 2010 features are unavailable to these users. For more information about BCM, see the "Backwards Compatibility Mode" section of [Project Server 2010 upgrade overview](#).



Note:

Project Server 2010 does not support client connectivity through Microsoft Office Project Professional 2003, even when BCM is enabled.

About these requirements

It is important that your hardware meet at least the minimum requirements that are listed in [Hardware and software requirements \(Project Server 2010\)](#); otherwise, you might encounter issues during the upgrade process. For example, if your database server has insufficient memory or processor power, it may be unable to keep up with the number of transactions that occur during the upgrade process, and the upgrade may fail.

We recommend that you use a trial upgrade in a test environment to determine exactly what hardware capacity you must have for an acceptable upgrade experience. If you experience capacity problems with your hardware during the trial upgrade, you can increase the capacity and repeat the upgrade until you are satisfied that you have found the optimal level of upgrade performance.



Important:

It is important to track the following three resource components for a server that is running SQL Server: CPU, memory, and I/O subsystem. When one or more of these components seems to have reached capacity, analyze the appropriate strategy based on the current and projected work load, and determine whether to add more resources or to scale out to a new server that is running SQL Server. In general, we recommend that you consider scaling out, in addition to adding more resources.

Create an upgrade communications plan (Project Server 2010)

It is important that you communicate with users during the upgrade process to Microsoft Project Server 2010. Microsoft Project Web App users need to know what to expect when they visit the site again after upgrade, and Project client (Project Web App and Microsoft Project Professional) users need to know how they can help prepare for upgrade and what they will have to do after upgrade. All users who access Project Server need to know when the upgrade will occur. As part of the planning process, determine the following:

- Who are the members of the upgrade team, what other stakeholders are involved, and who will be affected by the upgrade?
- What information must the upgrade team have, and when?
- What information must users and other stakeholders have, and when?

This article describes how to create your communication plan so that the upgrade team, the stakeholders, and the users know what to expect before, during, and after the upgrade.

In this article:

- [Who is on the upgrade team?](#)
- [When and what to communicate to the upgrade team](#)
- [When and what to communicate to site users](#)
- [Gold Certified Partners](#)

Who is on the upgrade team?

For small deployments, the upgrade team might consist of only one person. For larger deployments, on the other hand, several people with different roles can be required, as described in the following list:

- **Server administrators** The server administrator performs most of the upgrade tasks. There must be at least one server administrator on the upgrade team because running the Setup wizard requires someone who is a member of the local Administrators group on each front-end Web server.



Note:

Farm administrators might not be local administrators for the server.

- **Project Server administrators** Project Server administrators are trained to use the various Project Web App configuration and control features. They are responsible for modifying and maintaining general settings of the EPM application such as enterprise global codes, Project Web App views, Microsoft Project Professional global settings, and so on.

Create an upgrade communications plan (Project Server 2010)

- **Database administrators** If you have a separate database administration team, you must coordinate with it to schedule the upgrade and perform the upgrade, especially if you plan to use the database-attach upgrade method.
- **Server security teams** You must coordinate with your security teams, such as the Active Directory directory services team, to verify accounts and permissions or to take advantage of the new policy settings that you can apply for Project Server 2010.
- **Client deployment team** Communicate with client deployment teams to coordinate deployments of the new Project Professional 2010 client and server applications. The client deployment team also has to verify that all Project Web App users support the new browser requirements (Internet Explorer 7.0 or newer). Backwards compatibility mode (BCM) allows you some flexibility in scheduling your Project Professional 2010 client upgrade. This team should also contain a representative for the Project Management Office (PMO).
- **Developer staff** If you have custom templates, Web Parts, Web services, or other custom elements associated with your Project Web App sites, you must work with the people responsible for developing or customizing those elements to ensure that you can create new versions of these custom elements or verify that these elements have been upgraded correctly. You must also ensure that custom applications developed to work with Project Server are still functional. This is especially true when you are doing a database-attach upgrade where many of the customizations will have to be redeployed manually to the new environment..
- **Project Server users** This group can include general Project Web App users, team members, Project Managers, Timesheet managers, and all other people who access data in Project Server. You must communicate to both Microsoft Project Professional and Project Web App users about when the upgrade will occur and what they should expect with regard to changes. If you have existing Project Professional 2010 users, you must notify them about features that will be enabled when you disable backward compatibility mode in Project Server 2010. Prior to the upgrade process, you must inform users of tasks that they should do to ensure that the project data that they work with is in an upgradeable state. Communicating pre-upgrade tasks to end-users (for example, "ensure that all projects are checked in") helps prevent problems during the upgrade
- **Network engineers** Network engineers must work with server administrator to do tasks such as creating new DNS entries, and so on.
- **Sponsors and other stakeholders** You might have other people in your organization involved in the upgrade planning process. Make sure that you include them in your communication plan appropriately.



Note:

An upgrade team can include one or more members in each role, depending on your organization.

When and what to communicate to the upgrade team

In general, the server administrators and shared services administrators set the timeline for upgrade, and site owners are notified only when the process is about to begin. However, because team members have their own tasks to perform at particular points in the overall upgrade process, make sure that you have a solid plan to communicate the progress of the upgrade to all team members so that everyone knows when it is time to perform their particular tasks.

The whole upgrade team must work together to determine the following:

- **The upgrade approach to use** The "Determine upgrade approach (Project Server 2010)" article contains information to help you decide which kind of upgrade to perform. The report generated by the pre-upgrade checker is also important to consider when you make this decision.
- **Dates and times to perform the upgrade** We recommend (especially for an in-place upgrade) that you upgrade when site usage is low. For small single-server deployments, upgrade may be completed in less than a day. For larger deployments, such as server farms with large amounts of data, it can take much longer. There is no way to determine the precise length of time that will be required to upgrade. Because of this, it is very important to communicate with other team members involved in the upgrade process in addition to end-users. The day or days that you choose for upgrading should be far enough in the future that the upgrade team has enough time to complete all of the preliminary steps. When you plan the timeline, make sure that you schedule time to validate the upgraded Project Web App site and project data and also schedule time to implement any changes.

It is important to communicate with site owners, designers, and developers at the following points during the upgrade process:

- Before the process starts, so that they know the general timeline and what their roles in the process will be.
- After the upgrade, so that they can validate their upgraded data and the Project Web App site, and can make any changes that are needed.

When and what to communicate to site users

It is equally important to communicate with the Project Server users about the following issues:

- **When their sites will be upgraded** In the case of an in-place upgrade, users must be informed that they will be unable to access data during the upgrade. You must also inform users to leave the data in a state that is ready for migration. (For example, they should check in all projects before the upgrade.) This helps eliminate problems that might occur during the migration.
- **When to expect Project Server 2010 to be ready to access** "Ready to access" means that the upgrade team has not only upgraded but also verified the functionality after the upgrade. You must also prepare information that is required for users to connect to the upgraded version such as the new Project Web App URL for an upgrade performed by the database-attach method).

Create an upgrade communications plan (Project Server 2010)

- **How the upgrade might affect them and what they should know about the new environment** For example, the Project Web App site will look different and function slightly differently in the new user interface. You can prepare training materials, such as quick reference sheets, to prepare users for any changes that might have occurred in the processes they do in Project Server. You can also point them to available content, such as "What's New" articles, to learn about the new version.
- **How to get help** If users find an issue with the data after the upgrade, where can they go for information or help?

Gold Certified Partners

Microsoft has certified several partner companies as experts for EPM deployments and system migrations. You can find partners on the Microsoft Web site by searching for EPM solution providers at [Microsoft Solution Marketplace](http://go.microsoft.com/fwlink/?LinkId=187521) (<http://go.microsoft.com/fwlink/?LinkId=187521>).

Hardware and software requirements (Project Server 2010)

This article describes in detail hardware and software requirements for Project Server 2010.

At a high-level, the key requirements for Project Server 2010 are as follows:

- The 64-bit version of Windows Server 2008 Service Pack 2 or Windows Server 2008 R2
- Microsoft SharePoint Server 2010 Enterprise version
- For a farm deployment, database servers must be the 64-bit version of Microsoft SQL Server 2008 with Service Pack 1 (SP1) and Cumulative Update 2, Microsoft SQL Server 2008 R2, or Microsoft SQL Server 2005 with Service Pack 3 (SP3)
- Microsoft Internet Explorer 7 or Microsoft Internet Explorer 8 for Microsoft Project Web App user access

This article describes more information about these key requirements and all additional hardware and software requirements for installing Project Server 2010.

In this article:

- [Overview](#)
- [Hardware requirements—Web servers, application servers, and single server installations](#)
- [Hardware requirements—Database servers](#)
- [Software requirements](#)
- [Access to applicable software](#)

Overview

Microsoft Project Server 2010 provides for several installation scenarios. Currently, these installations include single server that uses built-in database installations and single server or multiple server farm installations.

Hardware requirements—Web servers, application servers, and single server installations

The requirements in the following table apply both to installations on a single server that has a built-in database and to servers that are running Project Server 2010 in a multiple server farm installation. For more information about recommended requirements for each Project Server 2010 server role (Web Front End Server, Application Server, Database Server) over different dataset scenarios, see [Capacity planning in Project Server 2010 \(white paper\)](#).



Important:

The minimum hardware requirements in the following table are recommended in which only the required services to run Project Server 2010 are enabled. Be aware that enabling additional SharePoint Server features (for example, search) in the farm may require more resources.

Component	Minimum requirement
Processor	64-bit, four cores
RAM	4 GB for developer or evaluation installation 8 GB for production use in a single server or multiple-server farm
Hard disk	80 GB for installation You must have sufficient space for the base installation and sufficient space for diagnostics such as logging, debugging, creating memory dumps, and so on. For production use, you also need additional free disk space for day-to-day operations. Maintain twice as much free space as you have RAM for production environments.
Hyper-V Virtualization	Supported
Other	DVD drive

Hardware requirements—Database servers

The requirements in the following table apply to database servers in production environments that have multiple servers in the farm.

For more information about database server recommendations over various Project Server 2010 dataset scenarios, see the "Hardware and Recommendations" section of [Capacity planning in Project Server 2010 \(white paper\)](#).



Note:

Our definitions of small and medium deployments are those that are described in the "Reference Architectures" section in [Capacity management and sizing for SharePoint Server 2010](#).

Component	Minimum requirement
Processor	<ul style="list-style-type: none"> 64-bit, four cores for small deployments 64-bit, eight cores for medium deployments

Hardware and software requirements (Project Server 2010)

Component	Minimum requirement
RAM	<ul style="list-style-type: none"> 8 GB for small deployments 16 GB for medium deployments <p>For large deployments, see the "Estimate memory requirements" section in Storage and SQL Server capacity planning and configuration (SharePoint Server 2010).</p> <p> Note: These values are higher than those recommended as the minimum values for SQL Server because of the distribution of data required for a Microsoft SharePoint 2010 Products environment. For more information about SQL Server system requirements, see Hardware and Software Requirements for Installing SQL Server 2008 (http://go.microsoft.com/fwlink/?LinkId=129377).</p>
Hard disk	<p>80 GB for system drive</p> <p>Hard disk space depends on the size of the SharePoint content. For information about how to estimate the size of content and other databases for your deployment, see Storage and SQL Server capacity planning and configuration (SharePoint Server 2010).</p>

Software requirements

The requirements in the following table apply to installations that have a single server that has a built-in database and to server farm installations that include a single server and multiple servers in the farm. This article also provides client connectivity requirements for Microsoft Project Web App and client/server compatibility with Microsoft Project Professional client versions.

Environment	Minimum requirement
Database server in a farm	<p>One of the following:</p> <ul style="list-style-type: none"> The 64-bit edition of Microsoft SQL Server 2008 with Service Pack 1 (SP1) and Cumulative Update 2. On the Cumulative update package 2 for SQL Server 2008 Service Pack 1 (http://go.microsoft.com/fwlink/?LinkId=165962) page, click the View and request hotfix downloads link and follow the instructions. On the Hotfix Request page, download the SQL_Server_2008_SP1_Cumulative_Update_2 file. When you install Microsoft SQL Server 2008 SP1 on Windows Server 2008 R2, you might receive a compatibility warning. You can ignore this warning and continue with your installation.

Hardware and software requirements (Project Server 2010)

Environment	Minimum requirement
	<p> Note: We do not recommend that you use CU3 or CU4, but instead CU2, CU5, or a later one than CU5.</p> <ul style="list-style-type: none"> The 64-bit edition of Microsoft SQL Server 2008 R2. This version includes updates in SQL Server 2008 Reporting Services (SSRS) and the PowerPivot for Excel feature. For more information about SQL Server 2008 R2, see Microsoft SQL Server 2008 (http://go.microsoft.com/fwlink/?LinkID=179611). The 64-bit edition of Microsoft SQL Server 2005 with Service Pack 3 (SP3). On the Cumulative update package 3 for SQL Server 2005 Service Pack 3 (http://go.microsoft.com/fwlink/?LinkID=165748) page, click the View and request hotfix downloads link and follow the instructions. On the Hotfix Request page, download the SQL_Server_2005_SP3_Cumulative_Update_3 file. <p> Note: For more information about choosing a version of SQL Server, see SQL Server 2008 R2 and SharePoint 2010 Products: Better Together (white paper) (SharePoint Server 2010).</p>
Single server that uses built-in database	<ul style="list-style-type: none"> The 64-bit edition of Windows Server 2008 Standard, Enterprise, Data Center, or Web Server with SP2; or the 64-bit edition of Windows Server 2008 R2 Standard, Enterprise, Data Center, or Web Server. If you are running Windows Server 2008 without SP2, the Microsoft SharePoint Products Preparation Tool installs Windows Server 2008 SP2 automatically. You must download an update for Windows Server 2008 and Windows Server 2008 R2 before you run Setup, or Setup will not run. The update is a hotfix for .NET Framework 3.5 SP1 that is installed by the Preparation tool. It provides a method to support token authentication without transport security or message encryption in WCF. For more information and links, see the "Access to Applicable Software" section later in this article. KB979917 - QFE for SharePoint issues - Perf Counter fix & User Impersonation (http://go.microsoft.com/fwlink/?LinkID=192577) <ul style="list-style-type: none"> For Windows Server 2008 SP2, download the Windows6.0-KB979917-x64.msu (Windows Vista) file. For Windows Server 2008 R2, download the Windows6.1-KB979917-x64.msu (Windows 7) file. <p>For information, see the related KB article Two issues occur when you deploy an ASP.NET 2.0-based application on a server that is running IIS 7.0 or IIS 7.5 in Integrated mode (http://go.microsoft.com/fwlink/?LinkID=192578).</p>

Hardware and software requirements (Project Server 2010)

Environment	Minimum requirement
	<ul style="list-style-type: none"><li>• Microsoft SharePoint Server 2010 Enterprise version <p> Note:</p> <p>SharePoint Server 2010 requires the following software installation components. These software prerequisites can be installed through the Microsoft SharePoint Products and Technologies 2010 Preparation Tool before the installation of SharePoint Server 2010 Enterprise version. The Microsoft SharePoint Products and Technologies 2010 Preparation Tool can be accessed from the SharePoint Server 2010 Start page.</p> <p>The preparation tool installs the following prerequisites:</p> <p>Web Server (IIS) role</p> <p>Application Server role</p> <p>Microsoft .NET Framework version 3.5 SP1</p> <p>Microsoft SQL Server 2008 Express with SP1</p> <p>Microsoft Sync Framework Runtime v1.0 (x64)</p> <p>Microsoft Filter Pack 2.0</p> <p>Microsoft Chart Controls for the Microsoft .NET Framework 3.5</p> <p>Windows PowerShell 2.0</p> <p>SQL Server 2008 Native Client</p> <p>Microsoft SQL Server 2008 Analysis Services ADOMD.NET</p> <p>ADO.NET Data Services Update for .NET Framework 3.5 SP1</p> <p>A hotfix for the .NET Framework 3.5 SP1 that provides a method to support token authentication without transport security or message encryption in WCF.</p> <p>Windows Identity Foundation (WIF)</p> <p> Note:</p> <p>If you have Microsoft "Geneva" Framework installed, you must uninstall it before you install the Windows Identity Foundation (WIF).</p> <p> Note:</p> <p>To install the prerequisites through the Microsoft SharePoint Products and Technologies 2010 Preparation Tool, ensure that you have an Internet connection, because some of these prerequisites are installed from the Internet. If the server does not have access to the Internet, see the Access to applicable software section for links to where you can download</p>

Hardware and software requirements (Project Server 2010)

Environment	Minimum requirement
	these updates to media.
Front-end Web servers and application servers in a farm	<ul style="list-style-type: none"> • The 64-bit edition of Windows Server 2008 Standard, Enterprise, Data Center, or Web Server with SP2; or the 64-bit edition of Windows Server 2008 R2 Standard, Enterprise, Data Center, or Web Server. If you are running Windows Server 2008 with SP1, the Microsoft SharePoint Products Preparation Tool installs Windows Server 2008 SP2 automatically. You must download an update for Windows Server 2008 and Windows Server 2008 R2 before you run Setup, or Setup will not run. The update is a hotfix for .NET Framework 3.5 SP1 that is installed by the Preparation tool. It provides a method to support token authentication without transport security or message encryption in WCF. For more information and links, see the Access to applicable software section later in this article. • KB979917 - QFE for SharePoint issues - Perf Counter fix & User Impersonation (http://go.microsoft.com/fwlink/?LinkId=192577) <ul style="list-style-type: none"> • For Windows Server 2008 SP2, download the Windows6.0-KB979917-x64.msu (Windows Vista) file. • For Windows Server 2008 R2, download the Windows6.1-KB979917-x64.msu (Windows 7) file. <p>For information, see the related KB article Two issues occur when you deploy an ASP.NET 2.0-based application on a server that is running IIS 7.0 or IIS 7.5 in Integrated mode (http://go.microsoft.com/fwlink/?LinkId=192578).</p> • Internet Information Services (IIS) 7.0 <ul style="list-style-type: none">  Note: IIS 6.0 Management Compatibility must be enabled. • Microsoft SharePoint Server 2010 Enterprise Version <ul style="list-style-type: none">  Note: SharePoint Server 2010 will require the following software installation requirements. These software prerequisites can be installed through the Microsoft SharePoint Products Preparation Tool before the installation of SharePoint Server 2010 Enterprise Version. The Microsoft SharePoint Products Preparation Tool can be accessed from the SharePoint Server 2010 Start page. <p>Web Server (IIS) role Application Server role Microsoft .NET Framework version 3.5 SP1 Microsoft Sync Framework Runtime v1.0 (x64)</p>

Hardware and software requirements (Project Server 2010)

Environment	Minimum requirement
	<p>Microsoft Filter Pack 2.0</p> <p>Microsoft Chart Controls for the Microsoft .NET Framework 3.5</p> <p>Windows PowerShell 2.0</p> <p>SQL Server 2008 Native Client</p> <p>Microsoft SQL Server 2008 Analysis Services ADOMD.NET</p> <p>ADO.NET Data Services Update for .NET Framework 3.5 SP1</p> <p>A hotfix for .NET Framework 3.5 SP1 that provides a method to support token authentication without transport security or message encryption in WCF.</p> <p>Windows Identity Foundation (WIF)</p> <p> Note: If you have Microsoft "Geneva" Framework installed, you must uninstall it before you install the Windows Identity Foundation (WIF).</p> <p> Note: To install the prerequisites through the Microsoft SharePoint Products Preparation Tool, ensure that you have an Internet connection, because some of these prerequisites are installed from the Internet. If the server does not have access to the Internet, see the Access to applicable software section for links to where you can download these updates to media.</p> <ul style="list-style-type: none"> • SQL Server 2005 Management Object Collection • Microsoft SQL Server 2008 Management Objects • Microsoft Exchange Server 2007 with SP 2 <p> Note: Optional: Only required with Exchange integration.</p>
Project Web App	<ul style="list-style-type: none"> • Microsoft Internet Explorer 7 or Microsoft Internet Explorer 8. <p> Note: Project Web App access to Project Server 2010 is only supported through the Internet Explorer Web browser versions listed earlier in this article. For more information, see Plan browser support (Project Server 2010).</p>
Project Professional client connectivity to	<ul style="list-style-type: none"> • Microsoft Office Project Professional 2007 with Service Pack 2 (SP2) <p> Note:</p>

Hardware and software requirements (Project Server 2010)

Environment	Minimum requirement
Project Server 2010	<p>Office Project Professional 2007 (SP2) will connect to Project Server 2010 only when Backwards Compatibility Mode (BCM) is enabled on the server. For more information about BCM, see Project Server 2010 upgrade overview.</p> <ul style="list-style-type: none"> Microsoft Project Professional 2010 <p> Important: Microsoft Office Project Professional 2003 connectivity to Project Server 2010 is not supported, even when BCM is enabled on the server.</p>
Microsoft Project Professional 2010 requirements	<ul style="list-style-type: none"> 700 megahertz (MHz) processor or higher 512 megabyte (MB) RAM or higher 1.5 gigabyte (GB) free disk space on hard disk <p> Note: A part of this disk space will be freed after installation if the original download package is removed from the hard disk.</p> <ul style="list-style-type: none"> CD-ROM or DVD drive Minimum 1024x768 or higher resolution monitor Microsoft Windows XP with Service Pack (SP) 3 or later version, or Windows Server 2003 with SP1 or a later version
Report authoring	<p>Microsoft Office Excel 2007 or Microsoft Excel 2010 is required for report authoring. Project Web App users do not require Microsoft Excel to view reports because the reports are rendered in HTML through Excel Services in Microsoft SharePoint Server 2010.</p> <p> Note: For more information about reporting in Project Server 2010, see Configure reporting for Project Server 2010. For more information about Excel Services, see Excel Services overview (SharePoint Server 2010).</p>

Access to applicable software

To install Windows Server 2008 or Microsoft SQL Server, you can go to the Web sites listed in this section. You can install all other software prerequisites through the SharePoint Server Start page when you install SharePoint Server 2010 (which is required for the Project Server 2010 installation). The software prerequisites are also available from Web sites listed in this section. The Web Server (IIS) role and the Application Server role can be enabled manually in Server Manager.

Hardware and software requirements (Project Server 2010)

In scenarios where installing prerequisites directly from the Internet is not possible or not feasible, you can install the prerequisites from a network share. For more information, see [Install prerequisites from a network share \(SharePoint Server 2010\)](#).

- [SharePoint Server 2010 Enterprise Trial](http://go.microsoft.com/fwlink/?LinkId=197414) (http://go.microsoft.com/fwlink/?LinkId=197414)
- [2010 Server Language Packs for SharePoint Server 2010, Project Server 2010, Search Server 2010, and Office Web Apps 2010](http://go.microsoft.com/fwlink/?LinkId=197415) (http://go.microsoft.com/fwlink/?LinkId=197415)
- [Windows Server 2008 R2 and SharePoint Server 2010: Better Together \(white paper\)](#)
- [Windows Server 2008](http://go.microsoft.com/fwlink/?LinkId=197426) (http://go.microsoft.com/fwlink/?LinkId=197426)
- [Windows Server 2008 R2](http://go.microsoft.com/fwlink/?LinkId=197428) (http://go.microsoft.com/fwlink/?LinkId=197428)
- [SQL Server 2008 R2](http://go.microsoft.com/fwlink/?LinkId=197429) (http://go.microsoft.com/fwlink/?LinkId=197429)
- [SQL Server 2008](http://go.microsoft.com/fwlink/?LinkId=179611) (http://go.microsoft.com/fwlink/?LinkId=179611)
- [SQL Server 2005](http://go.microsoft.com/fwlink/?LinkId=197431) (http://go.microsoft.com/fwlink/?LinkId=197431)
- [Microsoft SQL Server 2008 SP1](http://go.microsoft.com/fwlink/?LinkId=166490) (http://go.microsoft.com/fwlink/?LinkId=166490)
- [Cumulative update package 2 for SQL Server 2008 Service Pack 1](http://go.microsoft.com/fwlink/?LinkId=165962) (http://go.microsoft.com/fwlink/?LinkId=165962).
- [Cumulative update package 5 for SQL Server 2008](http://go.microsoft.com/fwlink/?LinkId=197434) (http://go.microsoft.com/fwlink/?LinkId=197434). Download the SQL_Server_2008_RTM_CU5_SNAC file.
- [Microsoft SQL Server 2005 SP3](http://go.microsoft.com/fwlink/?LinkId=166496) (http://go.microsoft.com/fwlink/?LinkId=166496)
- [Cumulative update package 3 for SQL Server 2005 Service Pack 3](http://go.microsoft.com/fwlink/?LinkId=165748) (http://go.microsoft.com/fwlink/?LinkId=165748).
- [Microsoft Windows Server 2008 Standard SP2](http://go.microsoft.com/fwlink/?LinkId=166500) (http://go.microsoft.com/fwlink/?LinkId=166500)
- [Windows Server 2008 with SP 2 FIX: A hotfix that provides a method to support the token authentication without transport security or message encryption in WCF is available for the .NET Framework 3.5 SP1](http://go.microsoft.com/fwlink/?LinkId=160770) (http://go.microsoft.com/fwlink/?LinkId=160770)
- [Windows Server 2008 R2 FIX: A hotfix that provides a method to support the token authentication without transport security or message encryption in WCF is available for the .NET Framework 3.5 SP1](http://go.microsoft.com/fwlink/?LinkId=166231) (http://go.microsoft.com/fwlink/?LinkId=166231).
- [Microsoft .NET Framework 3.5 Service Pack 1](http://go.microsoft.com/fwlink/?LinkId=131037) (http://go.microsoft.com/fwlink/?LinkId=131037)
- [Microsoft SQL Server 2008 Express Edition Service Pack 1](http://go.microsoft.com/fwlink/?LinkId=166503) (http://go.microsoft.com/fwlink/?LinkId=166503)
- [Windows Identity Framework for Windows Server 2008](http://go.microsoft.com/fwlink/?LinkId=160381) (http://go.microsoft.com/fwlink/?LinkId=160381)
- [Windows Identity Framework for Windows Server 2008 R2](http://go.microsoft.com/fwlink/?LinkId=166363) (http://go.microsoft.com/fwlink/?LinkId=166363)
- [Microsoft Sync Framework v1.0](http://go.microsoft.com/fwlink/?LinkId=141237&clid=0x409) (http://go.microsoft.com/fwlink/?LinkId=141237&clid=0x409)
- [Microsoft Filter Pack 2.0](http://go.microsoft.com/fwlink/?LinkId=166504) (http://go.microsoft.com/fwlink/?LinkId=166504)

Hardware and software requirements (Project Server 2010)

- [Microsoft Chart Controls for Microsoft .NET Framework 3.5](http://go.microsoft.com/fwlink/?LinkID=141512)
(http://go.microsoft.com/fwlink/?LinkID=141512)
- [Windows PowerShell 2.0](http://go.microsoft.com/fwlink/?LinkId=161023) (http://go.microsoft.com/fwlink/?LinkId=161023)
- [Microsoft SQL Server 2008 Native Client](http://go.microsoft.com/fwlink/?LinkId=166505) (http://go.microsoft.com/fwlink/?LinkId=166505)
- [Microsoft SQL Server 2008 Analysis Services ADOMD.NET](http://go.microsoft.com/fwlink/?linkid=160390)
(http://go.microsoft.com/fwlink/?linkid=160390)
- [KB979917 - QFE for SharePoint issues - Perf Counter fix & User Impersonation](http://go.microsoft.com/fwlink/?LinkId=192577)
(http://go.microsoft.com/fwlink/?LinkId=192577)
 - For Windows Server 2008 SP2, download the Windows6.0-KB979917-x64.msu (Windows Vista) file.
 - For Windows Server 2008 R2, download the Windows6.1-KB979917-x64.msu (Windows 7) file.
- [ADO.NET Data Services Update for .NET Framework 3.5 SP1](http://go.microsoft.com/fwlink/?LinkId=163519)
(http://go.microsoft.com/fwlink/?LinkId=163519) for Windows Server 2008 SP2
- [ADO.NET Data Services Update for .NET Framework 3.5 SP1](http://go.microsoft.com/fwlink/?LinkId=163524)
(http://go.microsoft.com/fwlink/?LinkId=163524) for Windows Server 2008 R2 or Windows 7
- [Microsoft Silverlight 3.0](http://go.microsoft.com/fwlink/?LinkId=166506) (http://go.microsoft.com/fwlink/?LinkId=166506)
- [SQL Server 2008 R2 Reporting Services Add-in for Microsoft SharePoint Technologies 2010](http://go.microsoft.com/fwlink/?LinkId=192588)
(http://go.microsoft.com/fwlink/?LinkId=192588)



Note:

For more information about SharePoint Server 2010 requirements, see [Hardware and software requirements \(SharePoint Server 2010\)](#).

Project Server 2010 architecture

Microsoft Project Server 2010 is a true multi-tiered system that extends the architecture introduced in Microsoft Office Project Server 2007. The Project Server architecture includes Microsoft Project Professional 2010 and Microsoft Project Web App clients in the front-end tier. The front-end applications communicate with the middle tier only through the Project Server Interface (PSI) Web services, which in turn communicate with the business object layer. Business objects use the databases through the data access layer (DAL). Client applications do not directly access the primary databases; Project Server hides business objects and the DAL from clients.

This article contains the following sections:

- [General architecture](#)
- [Web servers](#)
- [Project Server Interface \(PSI\)](#)
- [Business objects](#)
- [Data Access Layer and databases](#)
- [Publishing and server-side scheduling](#)

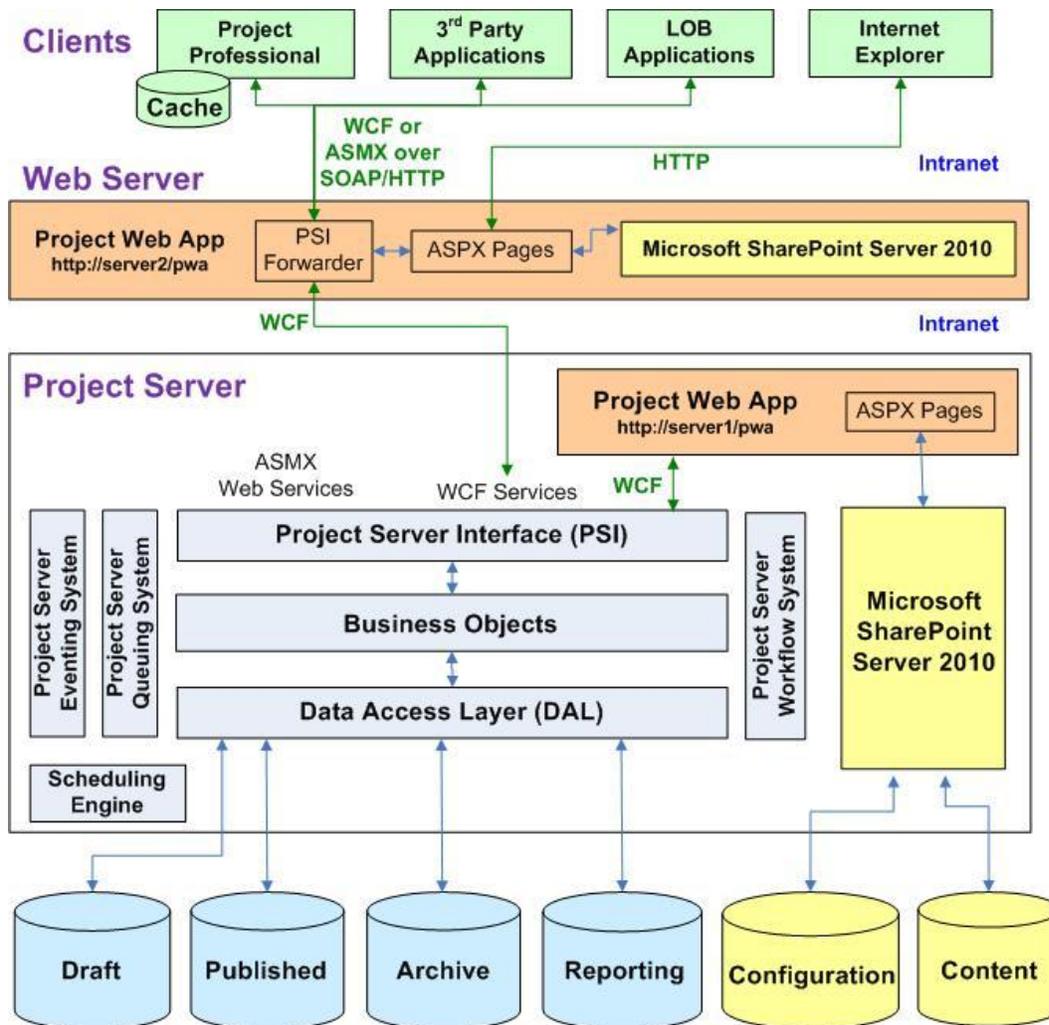
General architecture

The main differences in general architecture between Project Server 2010 and Office Project Server 2007 are as follows:

- Project Server 2010 requires Microsoft SharePoint Server 2010 Enterprise as an installation requirement. Similar to Microsoft Office Project Server 2007 farm deployment, when you are deploying Project Server 2010 to a farm, Project Server 2010 has to be installed on all application servers and all Web servers within the farm.
- The PSI includes both the Windows Communication Foundation (WCF) interface and the ASMX interface for Web services.
- The Project Server workflow platform is integrated in the PSI, business object layer, and DAL, and built on Windows Workflow Foundation (WF) in the SharePoint platform.
- Project Server task, assignment, and assignment status data is integrated with Microsoft Exchange Server, instead of with a Microsoft Outlook add-in.

The figure that follows shows a generalized view of the Project Server 2010 architecture. It includes a Web server and a Project Web App instance on Project Server. As in Office Project Server 2007, there can be multiple instances of Project Web App running on one server.

Project Server 2010 architecture



Notes

- In Project Server 2010, you can use the WCF or the ASMX interface of the PSI. The Project Web App and Project Professional 2010 clients both use the WCF interface.
- The PSI Forwarder in the architecture graphic consists of two components, a WCF Forwarder and a Web Service Forwarder. Clients that use the ASMX interface call the PSI through the Web Service Forwarder. Clients that use the WCF interface call the PSI through the WCF Forwarder.
- The architecture graphic does not show that the Web server can be isolated by an additional firewall in a perimeter network (also known as a "demilitarized zone" or DMZ).
- The SharePoint Web services site is part of SharePoint Server 2010 (not shown in the architecture graphic). The SharePoint Web services site includes the Project Service Application with the PSI virtual directory for the ASMX and WCF services. The Project Service Application in Project Server 2010 replaces the Shared Services Application in Office Project Server 2007.

The front-end tier includes third-party applications, Microsoft Project Professional, and Project Web App. Project Web App uses Internet Explorer to display Microsoft ASP.NET 3.5 pages. The Project Web App pages use Project Server Web Parts that communicate with the PSI and also use standard SharePoint Server 2010 Web Parts.

Client applications on separate computers call the PSI through service proxies. External clients that use the WCF interface access the PSI through

`http://ServerName/ProjectServerName/_vti_bin/psi/ProjectServer.svc`. Clients that use the ASMX Web service interface use one of the Project Web App URLs, such as

`http://server1/pwa/_vti_bin/psi/project.asmx`. If applications do not have intranet access to Project Server, they can use a Project Web App server in a perimeter network (not shown in the architecture graphic).

If they can directly access the Project Server computer, client applications and back-end components of line-of-business (LOB) Web applications can use PSI proxies that use the SharePoint shared service URL to the PSI Web services, such as `http://server1:32843/ProjectServiceApplication/project.asmx`. Port 32843 is the default port for the SharePoint Web services application in SharePoint Server 2010. Direct access to the Project Service Application virtual directory should be used only when an application has to use impersonation or run with elevated permissions.

The middle tier includes the PSI and the business logic layer, which consists of logical business objects that represent Project Server business entities. Business objects include Project, Task, Resource, Assignment, and so on. The PSI and the business logic tier are tightly coupled and are located on the same server. A client application calls the PSI Web services, and the PSI invokes business objects in the business logic tier.

The DAL provides communication between the middle tier and the database. All Project Server data is stored in Microsoft SQL Server databases. The Project Server databases are factored into the following stores: Draft, Published, Archive, and Reporting. Client applications can read the Reporting database for project data. Clients should use only the PSI to access the Draft, Published, or Archive databases. The Reporting Data Service (RDS, which is not shown in Figure 1) updates the Reporting database from published data in almost real time. In Project Server 2010, all of the Project Server databases can be located on separate servers.

The Project Web App components of Project Server also use the Microsoft SharePoint Foundation 2010 configuration database for project site setup and the content database for project site content such as custom pages, workflows, management settings, documents, and lists of issues, risks, and commitments. The SharePoint configuration and content databases support additional features for project management, such as project templates and workspaces, custom lists for team collaboration, and reports.

Web servers

You can install one or more Web servers within a corporate intranet to allow load distribution for intranet clients. When a client application uses a separate Web server, PSI calls are routed through a PSI

Forwarder to the PSI Web services on the Project Server computer. The PSI Forwarder (either the WCF Forwarder or the Web Service Forwarder) performs the following functions:

- Optimizes calls to the PSI from remote clients
- Includes a server-based cache that works with the client-side active cache in Microsoft Project Professional to reduce round-trip calls to Project Server

After a user receives an authentication cookie from Project Server, the PSI Forwarder transparently sends requests to the PSI Web services on the Project Server computer. The PSI Forwarder improves performance and reliability over both the LAN and a WAN.

Project Web App is developed with ASP.NET 3.5. The visual elements in .aspx files (HTML, server controls, and static text) are separate from the programming logic in code-behind classes that are in compiled assemblies (.dll files). Site pages in Project Web App, such as the top-level page, Project Center, and Report Center, can be customized by using Web Parts. Application pages that do not have an **Edit Page** option in the **Site Actions** menu cannot be edited, such as the Server Settings page and Review Timesheet page.

Project Server Interface (PSI)

The PSI is the API of Project Server. The PSI object model exposes Project Server functionality to all external applications. Project Professional 2010, Project Web App, LOB, and other third-party applications use the PSI to access Project Server data in the Draft, Published, and Archive databases. The PSI is available through WCF services and through ASMX Web service calls by back-end LOB applications, or through a PSI proxy.

Web methods in the PSI typically produce or consume typed DataSet objects as the way to exchange information with the business objects. The PSI reference includes DataSet documentation.

Business objects

The internal object model of Project Server includes the business objects. Client applications access business objects only through the PSI, and only business objects can call the DAL.

Business objects are logical entities that can be classified into three types:

- **Core entities** are objects such as projects, tasks, assignments, resources, and calendars. The core entities include basic business logic such as permissions and naming rules.
- **Business entities** are objects such as timesheets, portfolios, and models. Business entities include additional business logic and usually are built from a combination of the core entities.
- **Support entities** are objects such as security and validation.

The PSI handles mapping of the API to business objects.

Data Access Layer and databases

The DAL is internal to Project Server and is not exposed to external applications. The DAL translates between the logical business entity representation of the data and the physical database tables. Each logical entity is stored in several different tables. The DAL encapsulates the work that is required to manage connections, execute queries, and begin/commit/roll back transactions.

Project Server data is partitioned into four databases in SQL Server.

- The Draft database contains tables for saving unpublished projects from Microsoft Project Professional and other applications. Project Web App does not show project data in the Draft database.
- The Published database contains all of the published projects and enterprise resources, the enterprise global template, and other project templates. Published projects are visible in Project Web App. The Published database also contains tables that are specific to Project Web App (timesheets, models, views, and so on), and global data tables (custom fields, lookup tables, security, and metadata).
- The Archive database saves backup versions of projects and other data.
- The Reporting database (RDB) is the staging area for generating reports and OLAP cubes. Data in the Reporting database is comprehensive and is updated almost in real time. The tables and views are optimized for read-only report generation; for example, the RDB tables are de-normalized to provide redundant data and reduce the number of relational tables.

Entities such as Resource or Project can span multiple tables, and all tables for a particular entity have the same primary key. The primary key is a single column that uniquely identifies one instance of a particular entity. Unique identifiers are GUIDs.

Only the Reporting database schema is documented. You should access the Draft, Published, and Archive databases only through the PSI. You can add data tables, fields (properties), and entities that are not defined in the Project Server 2010 database schema to the Reporting database. If you add tables to the core databases, you must also provide the full stack of a custom assembly, Web service, business objects, and data access. You can easily modify the Reporting database; we recommend that you do not modify the core Project Server databases.

Publishing and server-side scheduling

Project Server 2010 supports both manual and automated project schedule updates. The default process is to update projects manually. That is, the project manager opens the project in Microsoft Project Professional, applies the changes, and then saves and publishes the project to make the changes available to everyone. The scheduling engine in Microsoft Project Professional calculates scheduling changes for manual updates.

The scheduling engine in Project Server enables automated project updates by using the PSI. Project Server allows the published version of a project to be updated while a project manager is using the draft version, by using the following steps:

1. Project Server applies updates and reschedules the published version automatically.
2. Project Server saves the update to apply to the draft version when either of the following events occurs:
 - a. Microsoft Project Professional opens the project.
 - b. Microsoft Project Professional tries to publish the project.
3. If there is a conflict, the project manager must resolve it before the draft version can be published.



Warning:

There are some limitations and differences between the Project Server scheduling engine and the Microsoft Project Professional scheduling engine. For example, Project Server does not schedule subprojects or links to other projects, and does not calculate earned value fields. For more information, see the Project Scheduling on the Server section in [Project Server Programmability](#) (<http://go.microsoft.com/fwlink/?LinkId=191606>) in the MSDN Library Online.

See Also

[Hardware and software requirements \(Project Server 2010\)](#)

[What's new for IT pros in Project Server 2010](#)

Plan browser support (Project Server 2010)

This article describes supported Web browsers for connecting to Microsoft Project Server 2010 and other considerations that have to be made in planning for them.

Supported browsers

Microsoft Project Web App access to Project Server 2010 is only supported for the following Web browsers:

- Windows Internet Explorer 7
- Microsoft Internet Explorer 8.0

In order to access Project Server 2010 through Project Web App, users must have Internet Explorer 7.0 or Internet Explorer 8.0. If you attempt to use other browsers such as Firefox and Safari for Project Web App access to Project Server 2010, the page will not load because these browsers are explicitly blocked. This is important to know, especially if you are using other applications that are designed specifically to work with other browsers or earlier versions of Internet Explorer.



Note:

For information about Web browsers supported for Microsoft SharePoint Server 2010, see [Plan browser support \(SharePoint Server 2010\)](#).

If your organization plans to implement Windows 7 on the desktop and you have internal applications that require Internet Explorer 6, you may want to consider the XP Mode feature of Windows 7 for Internet Explorer 6 support while keeping Internet Explorer 7 or Internet Explorer 8 on the native desktop for other applications, such as Project Server. For more information about the XP Mode feature of Windows 7, see [Configuring and using Windows XP Mode](#) (<http://go.microsoft.com/fwlink/?LinkId=189565>).

Another option is for your Project Web App users to access Project Server 2010 through a Terminal Server connection on which the host computer uses Internet Explorer 7.0 or Internet Explorer 8.0. For more information about Terminal Server connections, see [Terminal Services in Windows Server 2008](#) (<http://go.microsoft.com/fwlink/?LinkId=189566>).

If you are upgrading from an earlier version of Project Server, you may have to upgrade your Project Web App users to newer versions of Internet Explorer, because previous versions of Project Server had different Web browser requirements:

Project Server version	Supported Web browsers
Project Server 2010	Internet Explorer 7.0, Internet Explorer 8.0
Office Project Server 2007	Internet Explorer 6, Internet Explorer 7.0

Project Server version	Supported Web browsers
Project Server 2003	Internet Explorer 5.0, Internet Explorer 6

The AJAX grid controls

Project Web App users who access Project Server 2010 will now view their pages by using the new AJAX grid controls. These are JavaScript grid controls that supports both read and write operations. They are faster than the previous controls, have cell validation, a rich color palette, and an interactive field chooser. Unlike the ActiveX controls previously used in Microsoft Office Project Server 2007, the AJAX grid does not require local installation and avoids security concerns about downloading unsigned controls.

Plan for Project Server 2010 Web Parts

Microsoft Project Server 2010 is built on SharePoint Products architecture. Users who access Project Server 2010 through the Web interface (Microsoft Project Web App) are using pages that are composed of Web Parts, which are modular elements that present information on SharePoint pages.

A Web Parts page is an ASP.NET Web page that includes Web Parts controls that let users personalize the page, such as selecting the information to display. In SharePoint Products 2010, a Web Parts page can be used to combine data, such as lists and charts, and Web content, such as text and images, into a dynamic information portal. Web Parts are server-side controls that provide functionality to a site page. For example, the default Project Web App home page is a Web Parts page that contains the PWA Reminders Web Part and also contains room for additional Web Parts to be added.

Project Server 2010 includes a set of Web Parts that users can add to farm Web site pages after the product is installed. If an organization needs custom Web Parts, a developer can write custom ASP.NET Web Parts and ask you to install them to a deployment of Project Server 2010. This process should include testing and approval of code before the Web Parts are deployed.

For more information about how to develop Web Parts for Project Server 2010, see [Developing Project Server 2010 Web Parts](http://go.microsoft.com/fwlink/?LinkId=204589) (<http://go.microsoft.com/fwlink/?LinkId=204589>) in the Project 2010 SDK in the MSDN Library Online.

For more information about how to manage Web Parts pages in SharePoint Server 2010, see [Manage Web Parts \(SharePoint Server 2010\)](#).

This article contains the following sections:

- [Project Server 2010 pre-installed Web Parts](#)
- [Scenarios for integration of Project Web App Web Parts](#)
- [Using the SimpleUI parameter for viewing PWA pages using the Page Viewer Web Part](#)

For more information about Project Web App Web parts in Project Server 2010, see the following articles:

- [Add or remove Project Web App Web Parts for a site in the Project Web App site collection \(Project Server 2010\)](#)
- [Add Project Web App Web Parts to a site not within the Project Web App site collection \(Project Server 2010\)](#)
- [Upgrade considerations for Project Web App Web Parts](#)

Project Server 2010 pre-installed Web Parts

There are 18 Web Parts that are installed with Project Server 2010 that provide Project Server 2010 functionality. They are available in the Web Parts Gallery in the Project Web App category folder. The

following table describes the 18 predefined Web Parts that are available with your Project Server 2010 installation.

Web Part name	Description
Approval Center	Displays task updates for approval and rejection submitted to you by team members.
Issues	Displays active issues that are assigned to you.
My Queued Jobs	Displays queue status for jobs generated by you.
My Schedule	Displays a calendar view of tasks assigned to you.
My Tasks	Displays tasks assigned to you.
My Timesheet	Displays your timesheet information.
Project Center	Displays a list of projects on the server.
Project Details	Displays more information about specific projects on the server.
Project Fields	Displays a list that may consist of project custom fields, project summary fields, and project inherent fields such as project name, description, or owner. The list is editable. This Web Part can only be used within the Project Detail Pages infrastructure.
Project Fields (Backwards Compatible)	Displays all enterprise custom fields except fields whose behavior is controlled by workflow. Use this Web Part to emulate the "Edit Project Properties" page used in Microsoft Office Project Server 2007. This Web Part can only be used within the Project Detail Pages infrastructure.
Project Sites	Displays a list of project sites that are available to each user. This Web Part can only be used within the Project Detail Pages infrastructure.
Project Strategic Impact	Displays the business driver ratings information for a project. This Web Part can only be used within the Project Detail Pages infrastructure.
Reminders	Displays a list of user item reminders.
Resource Assignments	Displays assignment information where the resources have been assigned.
Resource Center	Displays a list of resources on the server.
Risks	Displays active risks that are assigned to you.
Team Tasks	Displays team assignments.
Workflow Status	Displays workflow status information for a project. This Web Part can

Web Part name	Description
	only be used within the Project Detail Pages infrastructure.



Note:

As noted in this table, some Project Web App Web Parts can only be used within Project Details Pages (PDPs). Project Detail Pages are Web Parts pages in Project Server 2010 that can be used to display or collect information from the user. They are used in different stages of the Demand Management feature in Project Server 2010. For more information about Demand Management, see the [Demand Management in Project Server 2010 Resource Center](http://go.microsoft.com/fwlink/?LinkId=204588) (<http://go.microsoft.com/fwlink/?LinkId=204588>).

Scenarios for integration of Project Web App Web Parts

Project Web App Web Parts can be integrated into Web Parts pages in several scenarios. The following table specifies which scenarios are supported and not supported for the integration of PWA Web Parts.



Note:

For the purposes of this example, <http://contoso/PWA> is considered the PWA root site.

Scenario	Supported	Not supported
Non-Project site in the Project Web App site collection. (For example, http://contoso/PWA/Proj1TeamBuilder .)	X	
Project site in the Project Web App site collection. (For example, http://contoso/PWA/Project1ProjectWorkSpace .)	X	
Site that is not in the Project Web App site collection. (For example, http://contoso/SharePointSite1 .)	X	
Site that is located on a different Project Web App instance. (For example, http://contoso/PWA1 using a PWA Web Part to view data in http://contoso/PWA .)	X	
Site on a different SharePoint farm. (For example, http://liteware/PWA trying to use a PWA Web Part to view PWA data in http://contoso/PWA .)		X

You cannot use Web Parts to view Project Server 2010 data from a different farm. For example, you cannot use a Project Center Web Part from Farm A on a Web site that is located on Farm B.

**Note:**

For information about resolving Project Web App Web Parts issues that can occur in Web Part integration scenarios after you upgrade to Project Server 2010, see [Upgrade considerations for Project Web App Web Parts](#).

Using the SimpleUI parameter for viewing PWA pages using the Page Viewer Web Part

The SimpleUI parameter is a URL option that can be used to hide or show parts of pages in Project Web App. URL options can reduce the amount of screen space that Project Web Access uses or simplify the page view for different user tasks. The SimpleUI parameter enables you to remove common elements in Project Web App pages so that the page display matches your user requirements. For example, changing the Project Web App home page URL from <http://contoso/pwa/default.aspx?> to <http://contoso/pwa/default.aspx?simpleUI=31> removes six common elements from the page and enables you to only view the Notifications Web Part and part of the server ribbon. Other SimpleUI= parameter values (ranging from 0-30) remove other common elements from the Project Web App page, although use of these values is unsupported.

**Important:**

The only SimpleUI parameter that is supported is SimpleUI=31. When you use SimpleUI=31 in the Page Viewer Web Part to view Project Web App sites, part of the server ribbon (the status bar) will appear within the display in the IFrame.

For more information about the SimpleUI parameter, see the MSDN article [URL Options: Modifying the Query String Parameters](http://go.microsoft.com/fwlink/?LinkId=204590) (<http://go.microsoft.com/fwlink/?LinkId=204590>).

See Also

[Upgrade considerations for Project Web App Web Parts](#)

[Add Project Web App Web Parts to a site not within the Project Web App site collection \(Project Server 2010\)](#)

[Add or remove Project Web App Web Parts for a site in the Project Web App site collection \(Project Server 2010\)](#)

[Manage Web Parts \(SharePoint Server 2010\)](#)

[Developing Project Server 2010 Web Parts \(http://go.microsoft.com/fwlink/?LinkID=204589\)](http://go.microsoft.com/fwlink/?LinkID=204589)

TechNet Webcast: Project Server 2010: Performance, part 1: setup, test, execution, and results

This Microsoft TechNet Webcast is one of two parts that discuss Microsoft Project Server 2010 performance characteristics and farm architecture planning. This Webcast, Part 1, shows you how the testing lab was set up, how the tests were executed, and which test tools were used. The two Webcasts together share the results of Microsoft Project Server 2010 performance lab tests conducted on targeted reference hardware architecture in the Microsoft Technology Center (MTC) by Microsoft Consulting Services (MCS) in partnership with the Microsoft Product Group. The test results were used to identify performance bottlenecks and identify better design and implementation practices for Project Server 2010 infrastructures.

The presenters for this Webcast are:

- Mike Shughrue, Principal Consultant, Microsoft Corporation
- Michael Jordan, Lead Architect (EPM), Microsoft Corporation

[TechNet Webcast: Project Server 2010 – Performance Part 1: Setup, Execution, and Results](http://go.microsoft.com/fwlink/?LinkId=190243)
(<http://go.microsoft.com/fwlink/?LinkId=190243>)



Note:

The results, architecture, data flow deep dive, and sizing guidelines to use for your Project Server implementation are shown in a second Webcast, [TechNet Webcast: Project Server 2010 - Performance Part 2: Architecture, Sizing, and Capacity](http://go.microsoft.com/fwlink/?LinkId=190244)
(<http://go.microsoft.com/fwlink/?LinkId=190244>).



Note:

This Webcast is one of seven available in a series. For a complete list of all available Webcasts from this series, see [Project Server 2010 IT-Professional TechNet Webcasts](#).

TechNet Webcast: Project Server 2010: Performance, part 2: architecture, sizing, and capacity

This Microsoft TechNet Webcast is one of two parts that discuss Microsoft Project Server 2010 performance characteristics and farm architecture planning. This Webcast, Part 2, shows you the test results, architecture, data flow, and sizing guidelines and best practices for your Project Server 2010 implementation. The two Webcasts together share the results of Project Server 2010 performance lab tests conducted on targeted reference hardware architecture in the Microsoft Technology Center (MTC) by Microsoft Consulting Services (MCS) in partnership with the Microsoft Product Group. The test results were used to identify performance bottlenecks and identify better design and implementation practices for Project Server 2010 infrastructures.

The presenters for this Webcast are:

- Mike Shughrue, Principal Consultant, Microsoft Corporation
- Michael Jordan, Lead Architect (EPM), Microsoft Corporation

[TechNet Webcast: Project Server 2010 - Performance Part 2: Architecture, Sizing, and Capacity](http://go.microsoft.com/fwlink/?LinkId=190244)
(<http://go.microsoft.com/fwlink/?LinkId=190244>)



Note:

Information about how the testing lab was set up, how the tests were executed, and which test tools were used is shown in previous Webcast: [TechNet Webcast: Project Server 2010 - Performance Part 1: Setup, Execution, and Results](http://go.microsoft.com/fwlink/?LinkId=190243)
(<http://go.microsoft.com/fwlink/?LinkId=190243>).



Note:

This Webcast is one of seven available in a series. For a complete list of all available Webcasts from this series, see [Project Server 2010 IT-Professional TechNet Webcasts](#).

Technical diagrams (Project Server 2010)

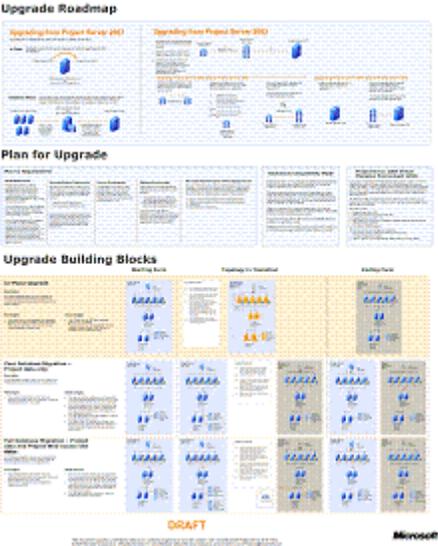
Many of these resources are visual representations of recommended solutions. They include poster-sized documents available in formats including Microsoft Office Visio 2007 files (.vsd), PDF files, and XPS files. You might need extra software to view these files. See the following table for information about opening these files.

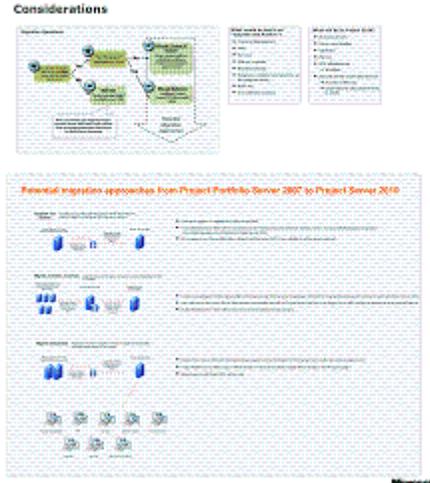
File type	Software
.vsd	Office Visio 2007, or the free Visio viewer (http://go.microsoft.com/fwlink/?LinkId=118761) If you use the Visio viewer, right-click the VSD link, click Save Target As , save the file to your computer, and then open the file from your computer.
.pdf	Any PDF viewer, such as Adobe Reader (http://go.microsoft.com/fwlink/?LinkId=134751)
.xps	Windows Vista, Windows XP with .NET Framework 3.0, or XPS Essentials Pack (http://go.microsoft.com/fwlink/?LinkId=134750)

Models

Models are 34-by-44-inch posters that detail a specific technical area. These models are intended to be used with corresponding articles on TechNet. These models are created by using Office Visio 2007. You can modify the Visio files to illustrate how you plan to incorporate Microsoft SharePoint 2010 Products in your own environment.

Title	Description
Project Server 2010 Upgrade Paths	This poster provides a graphical overview of the methods available for upgrading to Microsoft Project Server 2010. This includes information about both the database-attach and in-place methods for upgrading from Microsoft Office Project Server 2007, and an overview of the process for data migration from Microsoft Office Project Server 2003.

Title	Description
<p>Project Server 2010 Upgrade Paths</p>  <p>The diagram is a technical poster titled "Project Server 2010 Upgrade Paths". It is divided into three main sections: "Upgrade Roadmap", "Plan for Upgrade", and "Upgrade Building Blocks". The "Upgrade Roadmap" section shows two paths: "Upgrading from Project Server 2007" and "Upgrading from Project Server 2010". The "Plan for Upgrade" section contains several tables with columns for "Phase", "Requirements", "Dependencies", "Migration Path", and "Migration Tools". The "Upgrade Building Blocks" section is a large grid with columns for "Building Blocks", "Migration Path", and "Migration Tools". At the bottom, it says "DRAFT" and "Microsoft".</p> <p>Visio PDF XPS</p>	
<p>Project Portfolio Server 2007 to Project Server 2010 Paths and Considerations</p>	<p>This poster provides a graphical overview of the various methods available for migrating from Microsoft Office Project Portfolio Server 2007 to Project Server 2010.</p>

Title	Description
<p>Project Portfolio Server 2007 to Project Server 2010 Paths and Considerations</p>  <p>Visio (http://go.microsoft.com/fwlink/?LinkId=168787)</p> <p>PDF (http://go.microsoft.com/fwlink/?LinkId=168788)</p> <p>XPS (http://go.microsoft.com/fwlink/?LinkId=168790)</p>	

If you want to create posters that use the same symbols as these posters, you can download [Visio stencils for posters](http://www.microsoft.com/downloads/en/details.aspx?FamilyID=88e03d22-8f42-4c9d-94ef-d8e48322d677) (http://www.microsoft.com/downloads/en/details.aspx?FamilyID=88e03d22-8f42-4c9d-94ef-d8e48322d677).

Development for Project Server 2010

See the [Project Developer Center](http://go.microsoft.com/fwlink/?LinkId=186370) (http://go.microsoft.com/fwlink/?LinkId=186370).

Deployment for Project Server 2010

This article provides links to articles about deployment.

Before installing Microsoft Project Server 2010, be sure you have reviewed the information in [Planning and architecture for Project Server 2010](#). The Deployment section includes information about deployment scenarios, step-by-step installation instructions, and post-installation configuration steps. This section also covers information about upgrading to Project Server 2010.

In this section:

- [Deploy Project Server 2010 to a server farm environment](#)

This series of articles describes the steps necessary to install Microsoft Project Server 2010 in a server farm environment. This includes installing and configuring Project Server, creating a Microsoft Project Web App site, and configuring reporting.
- [Testing a Project Server 2010 deployment \(white paper\)](#)

This page links to a downloadable white paper about testing a newly deployed Project Server 2010 instance.
- [Deploy Project Server 2010 to a test environment](#)

This series of articles describes deploying a test installation of Microsoft Project Server 2010 in a virtual environment. The purpose of this series is as follows:
- [Install Project Server 2010 to a stand-alone computer](#)

Microsoft Project Server 2010 can be installed in a stand-alone configuration that uses Microsoft SQL Server 2008 Express. This configuration is useful for demonstration, but should not be used for a production environment.
- [Deploy language packs \(Project Server 2010\)](#)

Microsoft Project Server 2010 language packs enable Project Server 2010 users to view Microsoft Project Web App and project sites in multiple languages without requiring separate installations of Project Server 2010.
- [Deploy Project Server 2010 with Exchange Server](#)

These articles describe how to configure integration with Exchange Server, enabling Microsoft Project Server 2010 users to view Project Server tasks in Microsoft Outlook.
- [Upgrade to Project Server 2010](#)

This section of the Microsoft Project Server documentation covers the process of upgrading to Project Server 2010.

Deploy Project Server 2010 to a server farm environment

This series of articles describes the steps necessary to install Microsoft Project Server 2010 in a server farm environment. This includes installing and configuring Project Server, creating a Microsoft Project Web App site, and configuring reporting.

Before deploying Project Server 2010, we highly recommend that you review the articles under [Plan for deployment \(Project Server 2010\)](#).

In this section:

- [Overview of the deployment process \(Project Server 2010\)](#)
- [Prepare for deployment \(Project Server 2010\)](#)
- [Configure SQL Server and Analysis Services \(Project Server 2010\)](#)
- [Install SharePoint Server 2010 \(Project Server 2010\)](#)
- [Install and configure Project Server 2010](#)
- [Create a PWA site \(Project Server 2010\)](#)
- [Configure reporting for Project Server 2010](#)
- [Add an application server to a farm \(Project Server 2010\)](#)

See Also

[Recommended performance enhancements \(Project Server 2010\)](#)

Overview of the deployment process (Project Server 2010)

This series of articles describes the steps necessary to install Microsoft Project Server 2010 in a server farm environment. These steps include:

- Configuring Microsoft SQL Server and Analysis Services
- Installing Microsoft SharePoint Server 2010
- Installing Project Server 2010
- Creating a Microsoft Project Web App site

Configure SQL Server and Analysis Services

Configuring SQL Server and Analysis Services includes the following steps:

- Configure SQL Server network settings
- Add a login for the Farm Administrator account
- Enable the common language runtime
- Configure Analysis Services

Additionally, depending on your needs, you may want to implement some recommended performance enhancements by configuring `AUTO_CLOSE` and `AUTO_UPDATE_STATISTICS_ASYNC`. Additionally, you may want to create the Project Web App databases.

Install SharePoint Server 2010

Project Server 2010 requires SharePoint Server 2010 Enterprise Edition. Before you can install and configure Project Server 2010, you must install SharePoint Server 2010 and create a server farm. This article guides you to the proper SharePoint Server 2010 resources to configure your server farm.

Install and configure Project Server 2010

Once you have set up a SharePoint Server 2010 server farm, you can install Project Server 2010. The Project Server 2010 software must be installed on each application server and front-end Web in the farm. Once the Project Server 2010 software is installed and configured, you must configure several service applications in SharePoint Server 2010 before you can create a Project Web App site.

Create a Project Web App site

Once the initial Project Server 2010 configuration within SharePoint Server 2010 is completed, you can create a Project Web App site. When the Project Web App site has been completed, you can proceed with further configuration, including setting up reporting and configuring Exchange Server integration.

Getting started

The first step, prior to installation, is to make sure you have the needed permissions to accomplish the required tasks. For more information, see [Prepare for deployment \(Project Server 2010\)](#).

See Also

[Project Server 2010 Ignite Training: Planning, Design, and Deployment](#)
(<http://go.microsoft.com/fwlink/?LinkId=192093>)

Prepare for deployment (Project Server 2010)

To successfully complete a deployment of Microsoft Project Server 2010, the following permissions are required:

- **Domain Administrator** — Required to set up two domain groups for report authors and report viewers.
- **SQL Server Administrator** — Required for various Microsoft SQL Server and Microsoft SQL Server Analysis Services (SSAS) configuration tasks as denoted in [Configure SQL Server and Analysis Services \(Project Server 2010\)](#).
- **Exchange Administrator** — Required to configure Microsoft Exchange Server for Exchange integration.
- **Farm Administrator** — Required to install Microsoft Project Server 2010 and configure a Microsoft Project Web App site.

**Note:**

The Farm Administrator account is created when you install Microsoft SharePoint Server 2010.

Creating users and groups in the Active Directory directory service

Deploying Microsoft Project Server 2010 requires that you have certain Active Directory users and groups available. The deployment instructions assume that the necessary groups already exist. If you have not yet created the necessary users and groups, do so now before deploying Project Server. For detailed information about the users and groups required for Project Server deployment, see [Plan for administrative and service accounts \(Project Server 2010\)](#).

Configuring SQL Server and Analysis Services

Before deploying your farm, you must configure SQL Server and SQL Server Analysis Services.

If you are deploying Project Server to an existing SharePoint Server 2010 farm, some of these steps may already have been done when the server farm was deployed. We recommend that you confirm these settings before installing Project Server.

To configure SQL Server and Analysis Services, follow the procedures in [Configure SQL Server and Analysis Services \(Project Server 2010\)](#).

Configure SQL Server and Analysis Services (Project Server 2010)

Before installing Microsoft SharePoint Server 2010 and Microsoft Project Server 2010, you must first configure Microsoft SQL Server and Analysis Services.



Note:

If you are installing Project Server 2010 to an existing SharePoint Server farm, some of these steps may already be completed.

Complete the procedures in each section below:

- [Configure SQL Server network settings](#)
- [Add a login for the Farm Administrator account](#)
- [Enable the common language runtime](#)
- [Configure Analysis Services](#)

Additionally, depending on the needs of your organization, you may want to do the following:

- Create the Project Server databases
- Create additional TempDB files

We also recommend that you start the SQLSERVERAGENT service on the instance of SQL Server where your SharePoint Server databases are located. SharePoint Server and Project Server 2010 use the SQL Server Agent service to perform various database cleanup activities.

When you have finished configuring SQL Server and Analysis Services, go to the next article, [Install SharePoint Server 2010 \(Project Server 2010\)](#).

Configure SQL Server network settings

For Microsoft Project Server 2010 to work correctly, the associated instance of SQL Server must be configured to enable remote connections using TCP/IP. This is the default configuration for SQL Server, but we recommend confirming that the configuration is correct before you install Project Server 2010.

Use one of the next two procedures, depending on your version of SQL Server.

▶ To configure SQL Server 2005 network settings

1. Click **Start**, click **All Programs**, click **Microsoft SQL Server 2005**, click **Configuration Tools**, and then click **SQL Server Surface Area Configuration**.
2. In the **SQL Server 2005 Surface Area Configuration** dialog box, click **Surface Area Configuration for Services and Connections**.
3. In the tree view, expand the node for your instance of SQL Server, expand the **Database**

Engine node, and then click **Remote Connections**.

4. Select **Local and Remote Connections**, select **Using TCP/IP only**.



Note:

The **Using both TCP/IP and names pipes** option will also work. If your instance of SQL Server is already configured to use both TCP/IP and named pipes, you can keep that setting.

5. Click **OK**.

▶ To configure SQL Server 2008 network settings

1. Click **Start**, click **All Programs**, click **Microsoft SQL Server 2008**, click **Configuration Tools**, and then click **SQL Server Configuration Manager**.
2. In the left pane, expand **SQL Server Network Configuration**, and then select the instance of SQL Server where you will be installing Project Server 2010 databases.
3. In the right pane, ensure the Status for TCP/IP is Enabled.

Add a login for the Farm Administrator account

In order for Project Server 2010 setup and configuration to function, you must create a SQL Server login for the Farm Administrator domain account and give it the required server roles.

▶ To create a SQL Server login

1. Open SQL Server Management Studio.
2. Connect to the database engine of the instance of SQL Server that you will be using with Project Server 2010.
3. Expand the **Security** node.
4. Right-click **Logins** and then click **New Login**.
5. On the **New** page, in the **Login name** text box, type the domain account that you created for the Farm Administrator.
6. In the **Select a page** list, click **Server Roles**.
7. In the **Server roles** list, select the **dbcreator**, **public**, **securityadmin**, and **sysadmin** check boxes.
8. Click **OK**.

Enable the common language runtime

The common language runtime will improve the performance of your Project Server 2010 deployment. To enable the common language runtime, execute the following query:

```
sp_configure 'clr enabled', 1
go
reconfigure
go
```

Enabling the common language runtime provides a significant improvement in performance for custom field operations.

Configure Analysis Services

There are two configuration steps that you must follow for the instance of Analysis Services that you will be using with Project Server 2010:

- Add the Farm Administrator account to the OLAP users local group.
- Configure the Farm Administrators account to have administrative permissions in SQL Server Analysis Services.

▶ To add the Farm Administrator account to the OLAP users local group

1. Log on to the computer that is running Analysis Services.
2. Click **Start**, point to **All Programs**, point to **Administrative Tools**, and then click **Computer Management**.
3. On the Computer Management page, in the left pane under **System Tools**, expand **Local Users and Groups**. Click the **Groups** folder.
4. In the right pane, under the **Name** list, double-click **SQLServer2005MSOLAPUser\$<SERVERNAME>\$MSSQLSERVER (SQL Server 2005)** or **SQLServerMSASUser\$<SERVERNAME>\$MSSQLSERVER (SQL Server 2008)**.
5. On the properties page, click **Add**.
6. On the Select Users, Computers, or Groups page, type the name of the Farm Administrator account.
7. Click **OK**. The Farm Administrator account will appear in the Members list.
8. Click **OK**.

▶ To add the Farm Administrator as an Analysis Services server administrator

1. Open SQL Server Management Studio. In the **Connect to Server** window, connect to the instance of SQL Server 2005 Analysis Services that you are using with Project Server 2010.
2. In Microsoft SQL Server Management Studio, in Object Explorer, right-click your SQL Server 2005 Analysis Services instance name, and then click **Properties**.

Configure SQL Server and Analysis Services (Project Server 2010)

3. On the Analysis Services Properties page, in the **Select a page** pane, click **Security**.
4. Click **Add**.
5. On the Select Users, Computers, or Groups page, type the name of the Farm Administrator account.
6. Click **OK**. The Farm Administrator account appears in the Members list.
7. Click **OK**.

Creating the Project Server databases

When you create a Microsoft Project Web App (PWA) site, Project Server databases are created automatically. You can also create these databases manually before creating the PWA site. Doing so may be desirable if you want to place the databases in a particular location (for example, on a specific LUN) or if the Administrator creating the PWA site has insufficient permissions to create databases in SQL Server.

When creating Project Server databases in SQL Server, create an empty database for the Draft, Published, Archive, and Reporting databases using the SQL_Latin1_General_CP1_CI_AS collation. Create a full set of databases for each instance of PWA that will be created.

Create additional TempDB files

Both Project Server 2010 and Microsoft SharePoint Server 2010 make extensive use of TempDB during SQL transactions. To optimize performance, create additional TempDB files.

As a rule, create an additional TempDB file for each processor (core) in the computer that is running SQL Server. Create the files on a separate partition from other database files.

See Also

[Install SharePoint Server 2010 \(Project Server 2010\)](#)

Install SharePoint Server 2010 (Project Server 2010)

Before you can install Microsoft Project Server 2010, you must install Microsoft SharePoint Server 2010 and create a SharePoint Server 2010 farm.

 **Important:**

Project Server 2010 requires the Enterprise edition of SharePoint Server 2010. Prior versions of SharePoint Server and Microsoft SharePoint Foundation 2010 are not supported.

If you have a SharePoint Server 2010 farm configured and you are ready to install Project Server 2010, proceed to the next article, [Install and configure Project Server 2010](#).

If you have not yet installed SharePoint Server 2010, it is important to carefully plan your SharePoint Server 2010 farm before installing SharePoint Server 2010. For detailed information about planning your SharePoint Server 2010 farm, see [Plan for server farms and environments \(SharePoint Server 2010\)](#).

If you have completed the planning phase of your SharePoint Server 2010 deployment, see [Multiple servers for a three-tier farm \(SharePoint Server 2010\)](#) for detailed information about deploying SharePoint Server 2010.

When you have completed SharePoint Server 2010 deployment, proceed to [Install and configure Project Server 2010](#).

See Also

[Deployment overview \(SharePoint Server 2010\)](#)

[Install SharePoint Server 2010 by using Windows PowerShell](#)

[Hardware and software requirements \(SharePoint Server 2010\)](#)

[Hardware and software requirements \(Project Server 2010\)](#)

Install and configure Project Server 2010

Microsoft Project Server 2010 runs as a service application under Microsoft SharePoint Server 2010. The full functionality of Project Server 2010 is provided by several SharePoint Server 2010 service applications:

- Project Server Service Application
- Excel Services Application
- Secure Store Service

This article describes installing and configuring Project Server 2010, including provisioning the Project Server Service Application. Deploying and configuring the Excel Services Application and Secure Store Service are covered in [Configure reporting for Project Server 2010](#).

Use the procedures that follow to install Project Server 2010. The Project Server 2010 software must be installed on each application server in the farm before you can run the SharePoint Products Configuration Wizard to integrate Project Server with SharePoint Server 2010.

Before you install Project Server 2010, make sure that you have reviewed the articles under [Plan for deployment \(Project Server 2010\)](#) and have the necessary service accounts created as described in [Plan for administrative and service accounts \(Project Server 2010\)](#).



Important:

Upgrading from the Project Server 2010 Beta to the Project Server 2010 release version is explicitly blocked and not supported. This restriction applies to both in-place and db-attach upgrade methods.

Video demonstrations

To view a video demonstration of the installation and configuration process, click one of the following links:

For a single application server farm:

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=169126) (<http://go.microsoft.com/fwlink/?LinkId=169126>). To download a copy of the file, right-click the link, and then click **Save Target As**.

For a multi-application server farm:

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=169128) (<http://go.microsoft.com/fwlink/?LinkId=169128>). To download a copy of the file, right-click the link, and then click **Save Target As**.

Install and configure Project Server 2010

This section describes how to install Project Server 2010. The basic procedure is as follows:

- Install Project Server 2010 on each application server and Web server in the farm
- Run the SharePoint Products Configuration Wizard
- Refresh the installed products on the farm



Note:

If you encounter an error during the installation process, check the log files that are located at \Program Files\Common Files\Microsoft shared\Web server extensions\14\logs and consult the [Project Server 2010 forum](http://go.microsoft.com/fwlink/?LinkId=169001) (http://go.microsoft.com/fwlink/?LinkId=169001).

Complete the following procedure on each application server in the farm.

▶ To install Project Server 2010

1. On the Project Server 2010 DVD, run default.hta. The Setup menu opens.



Note:

Default.hta may run automatically when you insert the disk.

2. On the **Start** page, click **Install Project Server**.
3. On the Enter your Product Key page, type your product key, and then click **Continue**.
4. In the End User License Agreement page, review the terms of the agreement. To accept the agreement, select the **I accept the terms of this agreement** check box.
5. Click **Continue**.
6. On the Choose a file location page, click **Install Now**.
7. When the installation is complete, clear the **Run the SharePoint Products and Technologies Configuration Wizard now** check box.
8. Click **Close**.

Once the Project Server 2010 software has been installed on each application server in the farm, you must run the SharePoint Products Configuration Wizard to integrate Project Server with SharePoint Server 2010. You must run this wizard on each application server in the farm before you can start using Project Server.

Complete the following procedure on each application server in the farm.



Note:

Run the SharePoint Products Configuration Wizard on one application server at a time. Do not run it on multiple servers at the same time.

▶ To run the SharePoint Products and Technologies Configuration Wizard

1. Click **Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Products Configuration Wizard**.
2. At the Welcome to SharePoint Products and Technologies page, click **Next**.

3. A confirmation dialog message appears that displays a list of services that may have to be restarted. Click **Yes**.
4. On the Modify server farm Settings page, select the **Do not disconnect from this server farm option**, and then click **Next**.
5. If the server is hosting the Central Administration web site, the Modify SharePoint Central Administration Web Application Settings page will be displayed. Select the **No, this machine will continue to host the web site** option, and then click **Next**.
6. On the Completing the SharePoint Products Configuration Wizard page, click **Next**.
7. On the Configuration Successful page, click **Finish**.

Configure document library files

In order to be able to save documents to Project Server 2010 sites in SharePoint Server 2010, you must manually copy several files to the appropriate directory. Perform the following procedure on each application server in the farm.

▶ To copy document library files

1. Open Windows Explorer.
2. Navigate to the following folder:
`Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\Template\Features\DocumentLibrary\DocLib`
3. Copy FileDlg.htm and EditDlg.htm.
4. Navigate to the following folder:
`Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\Template\Features\pwsdoclibs\pwsdoclib`
5. Paste FileDlg.htm and EditDlg.htm.

Configure services

Once Project Server 2010 is installed, the following configuration steps are required before creating a Microsoft Project Web App site and using Project Server:

- Start the Project Application Service
- Create a Project Server service application
- Create a top level Web site
- Set Read permissions on the top-level Web site

Before you create a Project Server service application, confirm that the Project Application Service is running.

▶ To start the Project Application Service

1. On the SharePoint Central Administration home page, in the **System Settings** section, click **Manage services on server**.
2. On the Services on Server page, select the server where you want to run the Project Application Service from the **Server** drop-down list.
3. If the Project Application Service is not running, on the **Service** list, click **Start** next to **Project Application Service**.

Once you have started the Project Server service on the desired computers in the farm, you must create a Project Server service application.

▶ To create a Project Server service application

1. On the Central Administration home page, in the **Application Management** section, click **Manage service applications**.
2. On the Manage Service Applications page, on the ribbon, click **New**, and then click **Project Server Service Application**.
3. On the Create Project Web App service application page:
 - a. Type a name for the service application in the **Project Web App service application name** box.
 - b. In the **Application Pool** section, choose an existing application pool or type the name of the application pool you want to create in the **Application pool name** box.
 - c. Select the **Configurable** option, and choose the managed account that you want to use to run the application pool.
 - d. Click **OK**.

The next step is to create a top-level Web site if one does not yet exist, and give users read permission to that site. If there is not yet a top level Web site, create one using the following procedure.

▶ To create a top-level Web site

1. In Central Administration, in the **Application Management** section, click **Create site collections**.
2. Choose a Web application from the **Web Application** drop-down menu.



Note:

If no Web application is available, you must create one. For more information, see [Create a Web application \(SharePoint Server 2010\)](#).

3. Type a title for the site collection in the **Title** box.
4. In the **Template Selection** section, choose a template for the site.



Note:

Project Server 2010 does not require a specific template. You can choose one appropriate for your organization.

5. In the **Primary Site Collection Administrator** section, type the name of the account that you want to use for the site administrator.
6. Click **OK**.

▶ **To set Read permissions on the top-level Web site**

1. Navigate to the root site (that is, <http://<servername>>).
2. Click **Site Actions**.
3. Click **Site Permissions**.
4. Click **Grant Permissions**.
5. In the **Users/Groups** box, type **NT AUTHORITY\Authenticated Users**.
6. Under **Grant Permissions**, select the **Add users to a SharePoint group (recommended)** option, and then select **<SiteName> Visitors [Read]** from the dropdown list.
7. Click **OK**.

The next step is to create a Project Web App site. Go to the next article, [Create a PWA site \(Project Server 2010\)](#).

Create a PWA site (Project Server 2010)

Creating a Microsoft Project Web App (PWA) site creates the four Microsoft Project Server 2010 databases on the specified instance of Microsoft SQL Server.



Note:

If your organization requires databases to be created manually by a database administrator, have your database administrator see [Manually create Project Server databases](#) and create the four Project Server databases and the Microsoft SharePoint Server 2010 content database before you proceed with the procedures in this article.

Video demonstration

This video shows the sequence of events involved in creating a PWA site and configuring time reporting periods and the workflow proxy account.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=169130) (<http://go.microsoft.com/fwlink/?LinkId=169130>). To download a copy of the file, right-click the link, and then click **Save Target As**.

Create a PWA site

The Project Web App site requires a Web application to host it. You can use an existing Web application or create a new one for PWA. For more information about how to create a Web application, see [Create a Web application \(SharePoint Server 2010\)](#).



Important:

We highly recommend that you use a separate SharePoint Server 2010 content database for each PWA site and its associated project workspaces. To correctly isolate the PWA site in its own content database, you must deploy PWA at a time when other administrators are not creating new sites on the Web application where you are deploying PWA.

By putting PWA and its associated project workspaces in a separate content database, you greatly simplify site migration and backup and restore procedures.

Creating a PWA site takes five basic steps:

1. Create a content database to host the PWA site and its associated project workspaces.
2. Temporarily lock down existing content databases.
3. Create the PWA site itself.
4. Lock down the PWA content database to prevent additional site collections being added.
5. Unlock existing content databases.

SharePoint Server 2010 uses a round-robin algorithm to determine the distribution of site collections across content databases. In order to deploy the PWA site to a specific content database, you have to lock down any existing content databases in the farm. The process does not affect user access; it only affects the distribution of new site collections.

To lock down your content databases, follow these steps for each content database associated with the Web application where you plan to deploy your PWA site.

Important:

Ensure that no other administrators are adding site collections to the Web application where you plan to deploy PWA while you are performing the procedures in this section.

To lock down a content database

1. In SharePoint Central Administration, in the **Application Management** section, click **Manage content databases**.
2. In the **Current Number of Site Collections** column, note the number of site collections for the database that you plan to lock down.
3. In the **Database Name** column, click the link for the content database that you want to lock down.
4. In the **Database Capacity Settings** section:
 - a. In the **Maximum number of sites that can be created in this database** box, type the existing number of site collection for this database (as noted in the **Current Number of Site Collections** column, earlier in this procedure).



Note:

Take note of the current value for this parameter; you will have to change it back to this value after the PWA site has been created.

- b. In the **Number of sites before a Warning event is generated** box, type a lower number than the value that is used for **Maximum number of sites that can be created in this database**.



Note:

Take note of the current value for this parameter; you will have to change it back to this value after the PWA site has been created.

5. Click **OK**.

To create a content database

1. In SharePoint Central Administration, in the **Application Management** section, click **Manage content databases**.
2. Click **Add a content database**.
3. In the **Web Application** section, choose the Web application where you plan to deploy the

PWA site.

4. In the **Database Name and Authentication** section, type the database server name where you plan to deploy your PWA databases, and type a name for the database.
5. Click **OK**.

Once the content database has been created and configured, the next step is to create the PWA site itself.

 **To create a PWA site**

1. In SharePoint Central Administration, in the **Application Management** section, click **Manage service applications**.
2. On the Manage Service Applications page, click the Project Server Service Application.
3. On the Manage Project Web App Sites page, click **Create Project Web App Site**.
4. Complete the Create Project Web App Site page as designated in the following table:

Option	Description
SharePoint Web Application to Host Project Web App	The Web application for the PWA site.
Project Web App path	The path from the root site for this PWA site.
Select a language	The user interface language for this PWA site.
Use Project Web App path as host header	Use this option if you want to host PWA on a root URL (for example, https://www.contoso.com).
Administrator Account	The user account that will be added to the Project Server Administrators security group in this instance of PWA. You must use this account the first time that you access PWA.
Primary database server	The instance of SQL Server where you want to host the Project Server databases. If your database administrator has already created Project Web App databases, specify the names of those databases in the appropriate text boxes. If the databases were not previously created, they will be created automatically.
Published database name	The name of the Project Server Published database for this instance of PWA.
Draft database name	The name of the Project Server Draft database for this instance of PWA.

Create a PWA site (Project Server 2010)

Archive database name	The name of the Project Server Archive database for this instance of PWA.
Reporting database server	The instance of SQL Server where you want to deploy the Reporting database (if different from the primary database server).
Use primary database server	Select the check box to deploy the Reporting database to the primary database server specified earlier. Clear the check box to deploy the Reporting database to a different database server, and specify the instance of SQL Server that you want to use in the Reporting database server box.
Reporting database name	The name of the Project Server Reporting database for this instance of PWA.
Quota for SharePoint content in this site	The maximum site storage, in megabytes, for the PWA site.
Quota Warning for SharePoint content in this site	The site storage level, in megabytes, at which a warning e-mail message will be sent to the site administrator.

5. Click **OK**.

Project Server starts the PWA site creation process. This may take some time. When the site creation process is complete, the status shown on the PWA site list is **Provisioned**.

Once the PWA site has been provisioned, verify that it was created in the content database that you created. Use the `Get-SPSite` Windows PowerShell command, passing the new content database as a parameter:

► To verify the PWA site location

1. Verify that you meet the following minimum requirements: See [Add-SPShellAdmin](#).
2. On the **Start** menu, click **All Programs**.
3. Click **Microsoft SharePoint 2010 Products**.
4. Click **SharePoint 2010 Management Shell**.
5. From the Windows PowerShell command prompt (that is, PS C:\>), type the following command and then press ENTER:

```
Get-SPSite -ContentDatabase <ContentDatabaseName>
```

The command should return the URL for your PWA site and no other URLs.

Note:

If additional URLs beyond that of the PWA site are listed in the content database,

delete the PWA site and restart the procedure with a new content database.

Once the PWA site is in the desired content database, you must lock down the database to prevent SharePoint Server 2010 from adding additional site collections to the database. This is performed by configuring the maximum number of sites for the content database to one.



Note:

Configuring this setting does not prevent new project workspace sites from being created.

▶ **To lock down the content database**

1. In SharePoint Central Administration, in the **Application Management** section, click **Manage content databases**.
2. In the **Database Name** column, click the link for the content database that you created.
3. In the **Database Capacity Settings** section:
 - a. In the **Number of sites before a Warning event is generated** box, type **0**.
 - b. In the **Maximum number of sites that can be created in this database** box, type **1**.
4. Click **OK**.

Once you have locked down your PWA content database, you can return any other content databases to their original values for **Maximum number of sites that can be created in this database** and **Number of sites before a Warning event is generated**.

You can now access the new PWA site.



Note:

The first invocation of the Internet Information Services (IIS) application pool that contains the Project Web App application can be slow because the .NET Framework application is being compiled and loaded.

Configure time reporting periods

Configuring time reporting periods is required for Team Member use of Time Tracking and Task Statusing within Project Server 2010. We recommend that you create at least a year of time reporting periods. Use the following procedure to create time reporting periods.

▶ **To create time reporting periods**

1. In PWA, click **Server Settings**.
2. In the **Time and Task Management** section, click **Time Reporting Periods**.
3. On the Time Reporting Periods page:
 - a. Click the calendar button next to **Date the first period starts** and select a start date for the first time reporting period.

 **Important:**

If you choose a length of seven days for a standard reporting period, all periods will begin on the day of the week you select for the first period start date. Choose a day of the week that conforms with the needs of your organization.

 **Important:**

If you want to create variable-length periods, for example when you use a period per calendar month, you must do these individually on the Time Reporting Periods page or programmatically through custom code.

- b. Click **Create Bulk**.
- c. Click **Save**.

Configure the workflow proxy account

The final step before you start to use the PWA site is to set the workflow proxy user account. By default, this account is set to the account that you used to create the PWA site. Although you can keep the default, we recommend that you create an Active Directory account for this purpose.

 **Important:**

You must change the account before you start any workflows or else in-progress workflows will break.

There are two steps that you must follow to set up the workflow proxy account:

- Create a Project Server 2010 user account for the workflow proxy Active Directory account.
- Configure this account as the workflow proxy user.

Perform the following procedure to create a Project Server 2010 for the workflow proxy account.

 **To create a user**

1. In Project Web App, click **Server Settings**.
2. In the **Security** section, click **Manage Users**.
3. On the Manage Users page, click **New User**.
4. On the New User page:
 - a. Clear the **User can be assigned as a resource** check box.
 - b. In the **Display Name** box, type the name that you want to use for the user account (for example, **Workflow Proxy User**).
 - c. In the User **Authentication** section, type the Active Directory account that you created for the workflow proxy user in the **User logon account** box.
 - d. Select the **Prevent Active Directory synchronization for this user** check box.
 - e. In the **Security Categories** area, select **My Organization** in **Available Categories**, and

then click **Add**.

- f. Under **Permissions for My Organization**, select **Allow** for the following permissions:
 - **Open Project**
 - **Save Project to Project Server**
 - **View Enterprise Resource Data**
 - g. Under **Global Permissions**, select **Allow** for the following permissions:
 - **Log On**
 - **Manage Users and Groups**
 - **Manage Workflow and Project Detail Pages**
5. Click **Save**.

Once the user account is created, you can set the workflow proxy user account. Perform the following procedure to configure the workflow proxy user account.

To set the workflow proxy user account

1. In PWA, click **Server Settings**.
2. On the Server Settings page, in the **Workflow and Project Detail Pages** section, click **Project Workflow Settings**.
3. On the Project Workflow Settings page, in the **Workflow Proxy User account** box, type the Active Directory account that you created for the workflow proxy user, and then click **Save**.

You are now ready to start using the Project Web App site. The next step is to configure reporting to enable the Project Server reporting and business intelligence features. Proceed to the next article, [Configure reporting for Project Server 2010](#).

See Also

[Recommended performance enhancements \(Project Server 2010\)](#)

Manually create Project Server databases

When you create a Microsoft Project Web App (PWA) site, the required databases are created automatically on the instance of Microsoft SQL Server that you specify. However, some organizations require that databases be created manually by a database administrator. This article contains the information that is required to manually create databases for Microsoft Project Server 2010.

The table that follows describes the collations required for each database used by an instance of PWA.

Database	Collation
Project Server Archive	SQL_Latin1_General_CP1_CI_AS
Project Server Draft	SQL_Latin1_General_CP1_CI_AS
Project Server Published	SQL_Latin1_General_CP1_CI_AS
Project Server Reporting	SQL_Latin1_General_CP1_CI_AS
SharePoint Server Content	Latin1_General_CI_AS_KS_WS

Have your database administrator create a set of databases, as described in the table, for each PWA site that you plan to deploy. Once the databases have been created, specify the names of these databases when you create the PWA site or the content database.

For information about how to create a database in SQL Server, see [How to: Create a Database \(SQL Server Management Studio\)](http://go.microsoft.com/fwlink/?LinkId=195945) (<http://go.microsoft.com/fwlink/?LinkId=195945>).

See Also

[Create a PWA site \(Project Server 2010\)](#)

Recommended performance enhancements (Project Server 2010)

There are two Microsoft SQL Server settings that we recommend that you implement to help achieve optimal performance for your deployment:

- SET AUTO_CLOSE OFF
- SET AUTO_UPDATE_STATISTICS_ASYNC ON

We recommend that you configure these settings for the four Microsoft Project Server 2010 databases (Draft, Published, Archive, and Reporting) for each Microsoft Project Web App site that you create.

These are not required settings. You should evaluate them based on the needs of your organization and any other applications that might be using the same instance of SQL Server where the Microsoft Project Server 2010 databases reside.

When you have completed this section, go to the next article, [Configure reporting for Project Server 2010](#).

AUTO_CLOSE

By default, this option is set to ON for all databases when you are using SQL Server Desktop Engine (also known as MSDE 2000), and OFF for all other editions, regardless of operating system. The AUTO_CLOSE option should not be used for databases accessed by an application that repeatedly makes and breaks connections to SQL Server, such as Project Server. For this reason, we recommend that you set AUTO_CLOSE to OFF for the Project Server databases.

AUTO_UPDATE_STATISTICS_ASYNC

Statistics updates can be either synchronous (the default) or asynchronous. In synchronous statistics updates, queries always compile and execute with up-to-date statistics; when statistics are out-of-date, the query optimizer waits for updated statistics before it compiles and executes the query. For Project Server 2010, we recommend that you set AUTO_UPDATE_STATISTICS_ASYNC to ON for optimal query performance. This lets queries execute immediately without waiting for the statistics to update.

Configure reporting for Project Server 2010

Microsoft Project Server 2010 integrates the Microsoft SharePoint Server 2010 Business Intelligence Center Web application, which provides a central point for hosting the reports, dashboards, and report connections that can be auto-created or manually authored to provide access to reporting data in Project Server for your users. The Business Intelligence Center can be used to host content created with Excel Services in Microsoft SharePoint Server 2010, Visio Services in SharePoint, PerformancePoint Services in SharePoint, PowerPivot and SQL Server Reporting Services.

To configure reporting, you must do the following steps:

- [Add a login for the report authors group](#) in SQL Server
- [Install SQL Server 2008 Analysis Management Objects](#)
- [Start Excel Services](#)
- [Configure Excel Services settings](#)
- [Start the Secure Store Service](#)
- [Configure Secure Store Service settings](#)
- [Populate the Report Authors and Report Viewers Active Directory groups](#)
- [Configure Business Intelligence Center access](#)

Additionally, you will need two Active Directory groups, one for report authors and one for report viewers, as well as an Active Directory account for the Secure Store target application.

How it works

In this video, Microsoft Program Manager Treb Gatte provides an overview chalk talk about how Project Server 2010 reporting works, and how it makes use of SharePoint Server 2010 services.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=191600) (http://go.microsoft.com/fwlink/?LinkId=191600). Right-click the link, and then click **Save Target As** to download a copy.

This video provides a tour of a functional Project Server 2010 Business Intelligence Center, including a look which SharePoint Server 2010 services are used and how the various services interact with each other.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=191601) (http://go.microsoft.com/fwlink/?LinkId=191601). Right-click the link, and then click **Save Target As** to download a copy.

Video demonstration

This video shows the sequence of events for configuring reporting in Project Server 2010.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=169132) (http://go.microsoft.com/fwlink/?LinkId=169132). Right-click the link, and then click **Save Target As** to download a copy.

Accounts and security groups

The following table describes the accounts and security groups that you will need for the various procedures in this article.

Account	Description
Report Authors group	Active Directory security group to which you add users who will create reports. This group is given read permissions to the Project Server 2010 Reporting database. Have your domain administrator create this group before proceeding with the procedures below.
Report Viewers group	Active Directory security group to which you add users who will view reports. Have your domain administrator create this group before proceeding with the procedures below.
External Report Viewers group	Active Directory security group for users who do not have a PWA user account but require access to the Project Server 2010 Business Intelligence Center to view reports. If you have such users in your organization, have your domain administrator create this group and add it to the Report Viewers group described above.
Application Pool account	Active Directory account that is used to run the application pools for the Excel Services Application and the Secure Store Service. This account must be configured as a managed account in SharePoint Server 2010. (Required if you do not yet have Excel Services or the Secure Store Service deployed.)  Note: You can use the same account that you used for to run the application pool for the Project Server Service Application.
Secure Store Target Application account	This account provides the credentials necessary for report viewers to view reports generated from data in the Project Server reporting database. This account must have db_datareader permissions on the Project Server 2010 reporting database.  Tip: We recommend that you add this account to the Report Authors Active Directory group described above to give it the necessary permissions.

Add a login for the report authors group

In order for a report author to be able to access the Project Server 2010 Reporting database from Microsoft Excel, it is necessary to configure Microsoft SQL Server access and add a SQL Server login. The login must allow specific access to the Project Server 2010 Reporting database to get schema information and data. Use the domain group you created for report authors.

Perform the following procedure on the computer where your Project Server 2010 reporting database is located.

**Note:**

Alternatively, you can connect to the database engine remotely using SQL Server Management Studio.

**To add a login for the report authors group**

1. Click **Start, All Programs, Microsoft SQL Server 2008, SQL Server Management Studio**.
2. Select the instance of the SQL Server database engine where your Project Server 2010 reporting database resides, and then click **Connect**.
3. Expand **Security**, right-click **Logins**, and then click **New Login**.
4. On the **General** page, click **Search**.
5. Click **Object Types**, and select the **Groups** check box.
6. Click **OK**.
7. Type the name of the group you created for report authors.
8. Click **Check Names**.
9. Click **OK**.
10. Select the **User Mapping** page.
11. In the **Users mapped to this login** list box, select the row containing the Project Server 2010 Reporting database.
12. Select the **Map** check box for the Project Server 2010 Reporting database.
13. Select the **db_datareader** database role membership check box.
14. Click **OK**.

Install SQL Server 2008 Analysis Management Objects

If you do not already have the SQL Server 2008 Analysis Management Objects (AMO) installed, you must install them on each application server in the farm.

**Note:**

Use the SQL Server 2008 version of AMO regardless of which version of SQL Server you are using to host your databases.

Click to download the [SQL Server 2008 Analysis Management Objects](http://go.microsoft.com/fwlink/?LinkId=130655)
(<http://go.microsoft.com/fwlink/?LinkId=130655>)



Note:

After installing the AMO objects, restart the **Project Application Service** on each application server in the farm where it is running. This service is configured in SharePoint Central Administration under **System Settings, Manage services on server**.

Start Excel Services

If Excel Services is not running on the farm, you must first configure an Excel Services service application.



Important:

If you are planning to use Excel Services for purposes beyond reporting for Project Server 2010, we highly recommend that you review the planning and operations articles for Excel Services to assist with your deployment of Excel Services on your SharePoint Server farm. For more information, see [Excel Services overview \(SharePoint Server 2010\)](#) and [Excel Services administration \(SharePoint Server 2010\)](#).

If Excel Services is already running on your farm, proceed to [Configure Excel Services settings](#); otherwise, follow the procedures below to start Excel Services.



Important

- The account that is running the Excel Services application pool must have access to the content database where the PWA site resides. The account that is running the application pool for the Project Server Service application has the necessary access, so you can use that account if you want to. If you chose to use a different account for the Excel Services application pool, you can grant the required access by using the following Windows PowerShell script:
- `$w = Get-SPWebApplication -identity <PWA web application>`
- `$w.GrantAccessToProcessIdentity("<service account>")`
- Be aware that this action grants **db_owner** access to the content database.

Starting Excel Services involves two steps:

- Turning on the Excel Calculation Services service
- Creating an Excel Services service application



To start the Excel Calculation Services service

1. On the SharePoint Central Administration Web site, in the **System Settings** section, click **Manage services on server**.

2. If you have more than one application server on the farm, choose the application server where you want to run the Excel Calculation Services service from the **Server** list.
3. In the **Service** list, click **Start** next to **Excel Calculation Services**.

▶ To create an Excel Services service application

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. On the **Service Applications** tab, click **New**, and then click **Excel Services Application**.
3. In the **Name** box, type a name for the service application.
4. In the **Application pool name** box, type a name for the application pool.
5. Choose the managed account that you created for application pools from the **Configurable** list.
6. Click **OK**.

Configure Excel Services settings

When Excel Services has been started, you must configure trusted file locations for the Project Server 2010 Sample Reports and Templates libraries.

Follow this procedure twice: once for each library.

▶ To configure a trusted file location

1. In Central Administration, in the **Application Management** section, click **Manage service applications**.
2. Click the Excel Services service application.
3. On the Manage Excel Services page, click **Trusted File Locations**.
4. Click **Add Trusted File Location**.
5. In the **Address** box, type:
For the Templates library:
`http://<servername>/<projectsitename>/ProjectBICenter/Templates/`
or
For the Sample Reports library:
`http://<servername>/<projectsitename>/ProjectBICenter/Sample%20Reports/`
6. Under **Trust Children**, confirm that the **Children trusted** check box is selected.
7. In the **External Data** section:
 - a. Under **Allow External Data**, select the **Trusted data connection libraries and embedded** option.
 - b. Under **Warn on Refresh**, clear the **Refresh warning enabled** check box.

8. Leave the remaining options at their default value and click **OK**.

You must configure trusted data connection libraries in order to give users access to the connectors that link the report spreadsheets to the data in the Project Server Reporting database and OLAP databases. As part of this process, you will need the URL of the data connection library in Microsoft Project Web App (PWA).

Use the following procedure to determine the URL of the data connection library in PWA.

▶ To determine the URL for the data connection library

1. In PWA, in the left navigation pane, click **Business Intelligence**.
2. In the left pane, click **Data Connections**.
3. On the Data Connections page, select the **English (United States)** option (or the appropriate language for your locale).
4. On the toolbar, click **View Properties**.
5. On the Data Connections properties page, right-click the **English (United States)** (or the appropriate language for your locale) link, and then choose **Properties**.
6. On the **Properties** dialog box, select the **Address (URL)** value.
7. Right-click the selected text, and then click **Copy**.

This is the URL for the data connection library, which you will need when you set up a trusted data connection library in the next procedure.

8. Click **Cancel**.
9. On the **Data Connections** properties page, click **Close**.

▶ To set up trusted data connection libraries

1. In Central Administration, in the **Application Management**, click **Manage Service Applications**.
2. Click the Excel Services service application.
3. Click **Trusted Data Connection Libraries**.
4. Click **Add Trusted Data Connection Library**.
5. In the **Address** box, paste the URL for the data connection library that you copied in the previous procedure. It should be in the following format:

```
http://<ServerName>/<ProjectSiteName>/ProjectBICenter/Data%20Connections%20for%20PerformancePoint/English%20(United%20States)
```

6. Click **OK**.

Start the Secure Store Service

In SharePoint Server, the Secure Store Service enables users to access multiple system resources without having to provide authentication credentials more than once. SharePoint Server implements Secure Store Service authentication by including a Windows service and a secure credentials database.

To authenticate a data connection in a workbook against an external data source, you can configure Excel Calculation Services to retrieve authentication credentials from the Secure Store Service. To enable Secure Store functionality for SharePoint Server, you need to start the Microsoft Single Secure Store service and then manage Secure Store settings in Central Administration.

Important:

If you are planning to use the Secure Store Service for purposes beyond reporting for Project Server, we highly recommend that you review the planning and operations articles for the Secure Store Service to assist with your deployment of the Secure Store Service on your SharePoint Server farm. For more information, see [Plan the Secure Store Service \(SharePoint Server 2010\)](#) and [Configure the Secure Store Service \(SharePoint Server 2010\)](#).

If the Secure Store is already running on your farm, proceed to [Configure Secure Store Service settings](#).

If you do not already have the Secure Store Service configured in your farm, you must do that first. This involves three steps:

- Turning on the Secure Store Service
- Creating a Secure Store Service service application
- Generating a Secure Store Service key

To turn on the Secure Store Service

1. On the SharePoint Central Administration Web site, in the **System Settings** section, click **Manage services on server**.
2. If you have more than one application server on the farm, choose the application server where you want to run the Secure Store Service from the **Server** list.
3. In the **Service** list, click **Start** next to **Secure Store Service**.

To create a Secure Store Service service application

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. On the **Service Applications** tab, click **New**, and then click **Secure Store Service**.
3. In the **Name** box, type a name for the service application.
4. In the **Application pool name** box, type a name for the application pool.
5. Choose the managed account that you created for application pools from the **Configurable** list.

6. Click **OK**.
7. When the service application has been successfully created, click **OK**.

▶ **To generate a Secure Store Service key**

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. Click the Secure Store service application.
3. On the **Edit** tab, click **Generate New Key**.
4. Type and confirm a **Pass Phrase**, and then click **OK**.

Configure Secure Store Service settings

Once the Secure Store Service Application has been created, you must create a Secure Store target application.

▶ **To create a Secure Store target application**

1. On the SharePoint Central Administration Home page, in the **Application Management** section, click **Manage Services Applications**.
 2. Click the Secure Store Service.
 3. On the Secure Store Service page, select the **Edit** tab.
 4. Click **New**.
 5. On the Create New Secure Store Target Application page:
 - a. In the **Target Application ID** box, type **ProjectServerApplication**.
-  **Note:**
This value is case-sensitive.
- b. In the **Display Name** box, type a name for the Secure Store Target Application.
 - c. In the **Contact Email** box, type an e-mail address.
 - d. From the **Target Application Type** drop-down list, select **Group**.
 - e. Click **Next**.
6. On the Specify the credential fields for your Secure Store Target Application page, click **Next**.
 7. On the Specify the membership settings page:
 - a. In the **Target Application Administrators** box, type the user name of the farm administrator.
 - b. In the **Members** box, type the name of the domain group you created for report viewers.
 - c. Click **OK**.
 8. On the Secure Store Service Application page, select the check box for the target application

that you just created.

9. On the ribbon, click **Set Credentials**.
10. On the **Set Credentials for Secure Store Target Application (Group)** dialog box, type the user name and password of the account you created for the secure store target application.



Important:

This account must have **db_datareader** permissions on the Project Server Reporting database. We recommend that you add this account to the Report Authors Active Directory group to give it the required permissions.

11. Click **OK**.

Populate the Report Authors and Report Viewers Active Directory groups

To provide your users with the needed access to the Business Intelligence Center in PWA and the reports within, you must populate the Report Authors and Report Viewers Active Directory groups as follows:

- Report Authors group — Add the Active Directory accounts of users who will be creating reports using Excel.
- Report Viewers — Add the Active Directory accounts of PWA users who will be viewing reports in the Business Intelligence Center.
- External Report Viewers (optional) — If you have users who do not have a PWA account but require access to the Business Intelligence Center to view reports, add their Active Directory accounts to this group and follow the procedure for granting this group access to the Business Intelligence Center in [Configure Business Intelligence Center access](#), below.

Configure Business Intelligence Center access

Users who have accounts in PWA area automatically granted access to the Business Intelligence Center as follows:

- Team Members — Members of the Team Members group in PWA are automatically added to the **Team members group (Microsoft Project Server)** SharePoint Group in the Business Intelligence Center.
- Project Managers — Members of the Project Managers group in PWA are automatically added to the **Project Managers Group (Microsoft Project Server)** SharePoint Group in the Business Intelligence Center.

If you have users who do not have PWA accounts but need to access reports in the Business Intelligence Center, you must grant them access separately. You can do this by adding those users to an Active Directory group for external report users (as noted in the [Accounts and security groups](#)

section above) and then granting permissions to the Active Directory group in the Business Intelligence Center.

Use the following procedure to grant permissions to external report viewers.

▶ To grant permissions to external report viewers

1. In PWA, in the left pane, click **Business Intelligence**.
2. In the Business Intelligence Center, click **Site Actions**, and then click **Site Permissions**.
3. On the **Edit** tab, click **Create Group**.
4. On the Create Group page:
 - a. In the **Name** box, type a name for the group (for example, External Report Viewers).
 - b. In the **Give Group Permissions to this Site** area, select the **Read** check box.
 - c. Leave the other options at their default values and click **OK**.
5. On the People and Groups page, click **New**.
6. On the **Grant Permissions** dialog box, type the name of the Active Directory group that you created for external report viewers, and then click **OK**.

Troubleshooting

If you get error messages when trying to view reports, see [Project Server 2010: Business Intelligence Center–Common Errors](http://go.microsoft.com/fwlink/?LinkId=202437) (http://go.microsoft.com/fwlink/?LinkId=202437) for troubleshooting information.

See Also

[About the BI Center](http://go.microsoft.com/fwlink/?LinkId=206333) (http://go.microsoft.com/fwlink/?LinkId=206333)

[Secure Store for Business Intelligence service applications](#)

[Project Server 2010 Ignite Training: Reporting Part 1](#)

[Project Server 2010 Ignite Training: Reporting Part 2](#)

Add an application server to a farm (Project Server 2010)

To add a Microsoft Project Server 2010 application server to an existing farm, you must do the following:

- Install Microsoft SharePoint Server 2010 prerequisites
- Install SharePoint Server 2010
- Install Project Server 2010
- Install required updates
- Add the server to the farm by running the SharePoint Products and Technologies Configuration Wizard

Video demonstration

This video shows the steps involved in adding an application server to the farm.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=169134) (http://go.microsoft.com/fwlink/?LinkId=169134). To download a copy of the file, right-click the link, and then click **Save Target As**.

Configure the application server

Use the following procedures to configure the application server and add it to the farm.

To install SharePoint Server 2010 prerequisites

1. On the SharePoint Server DVD, run default.hta.
2. Click **Install software prerequisites**.



Note:

You must be connected to the Internet to perform this step. If you are not connected to the Internet, you must install the prerequisites manually.

3. On the Welcome page, click **Next**.
4. Read the license agreement, and if you accept, then select the **I accept the terms of the License Agreement(s)** check box.
5. Click **Next**.



Note:

Depending on your configuration, you may be required to restart the server during this process.

▶ To install SharePoint Server 2010

1. On the SharePoint Server DVD, run default.hta.
2. Click **Install SharePoint Server**.
3. On the Enter your Product Key page, type your product key, and then click **Continue**.
4. Read the license agreement, and if you accept, then select the **I accept the terms of this agreement** check box, and then click **Continue**.
5. On the Choose the installation you want page, click **Server Farm**.
6. On the Server type page, click **Complete**.
7. If desired, select the **File Location** tab and change the installation location.
8. Click **Install Now**.
9. When installation has finished, clear the **Run the SharePoint Products and Technologies Configuration Wizard now** check box, and then click **Close**.

▶ To install Project Server 2010

1. On the Project Server DVD, run default.hta.
2. Click **Install Project Server**.
3. On the Enter your Product Key page, type your product key, and then click **Continue**.
4. Read the license agreement, and if you accept, then select the **I accept the terms of this agreement** check box.
5. Click **Continue**.
6. On the Choose a file location page, click **Install Now**.
7. When installation has finished, clear the **Run the SharePoint Products and Technologies Configuration Wizard now** check box, and then click **Close**.

Once SharePoint Server 2010 and Project Server 2010 are installed on the computer, you must install any required updates so that the updates on the new application server match those currently on the farm. Note that this includes Project Server 2010 and SharePoint Server 2010 updates, but does not include updates for other products, such as Windows Server or Microsoft SQL Server.

▶ To add the server to the farm

1. Click **Start, All Programs, Microsoft SharePoint 2010 Products, SharePoint 2010 Products Configuration Wizard**.
2. On the Welcome page, click **Next**.
3. On the warning dialog box, click **Yes**.
4. On the Connect to a server farm page, select the **Connect to an existing server farm** option.
5. Click **Next**.

Add an application server to a farm (Project Server 2010)

6. On the Specify Configuration Database Settings page, type the name of the instance of SQL Server where the SharePoint Server 2010 configuration database is located, and then click **Retrieve Database Names**.
7. Select the configuration database for the farm you want to join from the **Database name** drop-down box, and then click **Next**.
8. On the Specify Farm Security Settings page, type the farm pass phrase, and then click **Next**.
9. On the Completing the SharePoint Products Configuration Wizard page, click **Next**.
10. When the wizard has finished, click **Finish**.

Configure document library files

In order to be able to save documents to Project Server 2010 sites in SharePoint Server 2010, you must manually copy several files to the appropriate directory. Perform the following procedure on the new application server.

To copy document library files

1. Open Windows Explorer.
2. Navigate to the following folder:

```
Program Files\Common Files\Microsoft Shared\Web Server  
Extensions\14\Template\Features\DocumentLibrary\DocLib
```

3. Copy FileDlg.htm and EditDlg.htm.
4. Navigate to the following folder:

```
Program Files\Common Files\Microsoft Shared\Web Server  
Extensions\14\Template\Features\pwsdoclibs\pwsdoclib
```

5. Paste FileDlg.htm and EditDlg.htm.

Create a PWA site in backward compatibility mode (Project Server 2010)

Backward Compatibility Mode (BCM) is a feature in Microsoft Project Server 2010 that assists in the upgrade of your Enterprise Project Management environment. While BCM is turned on, Project Server 2010 accepts connections from Microsoft Office Project Professional 2007 with Service Pack 2 (SP2) and Microsoft Project Professional 2010.

BCM is enabled automatically after you upgrade to Project Server 2010 from a previous version, but you can also create a new Microsoft Project Web App (PWA) site with BCM turned on by using a set of empty Office Project Server 2007 databases. This allows you to continue to use Office Project Professional 2007 in your organization.



Note:

Some new features in Project Server 2010, such as manually scheduled tasks, are not available while BCM is turned on. Other features, such as departmental and workflow-controlled custom fields, have limited functionality.

Creating a new PWA site with BCM turned on consists of the following steps:

1. Download the empty Office Project Server 2007 databases
2. Restore the empty Office Project Server 2007 databases to an instance of Microsoft SQL Server
3. Create a PWA site that uses the restored databases

Download the databases

A set of empty Office Project Server 2007 databases is available from the Microsoft Download Center. This includes the four Project Server databases — Draft, Published, Archive, and Reporting. These are supported for production use.

These databases are English databases but they can be used to create PWA sites in other languages as long as both languages (English and the language of the PWA site) are installed on Project Server. For more information about installing language packs on Project Server, see [Deploy language packs \(Project Server 2010\)](#).

You can download the databases from the [Microsoft Download Center](#) (<http://go.microsoft.com/fwlink/?LinkId=207026>).

The database backup files are provided in a compressed folder. Unzip the database backup files to a file share that you can access from the instance of SQL Server where you want to restore the backups.

Restore the databases

Each of the four databases must be restored to an instance of SQL Server. The Draft, Published, and Archive databases must all reside on the same instance of SQL Server. The Reporting database can be restored to a different instance of SQL Server if you want.

Use the following procedure to restore each database backup.

▶ To restore a database

1. Open SQL Server Management Studio and connect to the database engine.
2. Right-click **Databases** and click **Restore Database**.
3. Select the **From device** option and click the browse button.
4. Click **Add**, select the backup that you want to restore, and then click **OK**.
5. Click **OK**.
6. In the **Restore** column of the **Select the backup sets to restore** list, select the check box for the backup that you want to restore.
7. In the **To database** text box, type a name for the restored database.
8. Click **OK**.

Create a PWA site that uses the restored databases

Creating a PWA site that uses the restored databases involves creating a new PWA site in the Project Service Application and specifying the names of the restored databases.

▶ To create a PWA site that uses the existing databases

1. In the SharePoint Central Administration Web site under **Application Management**, click **Manage service applications**.
2. Click the Project Server service application.
3. Click **Create Project Web App Site**.
4. Complete the Create Project Web App Site page as designated in the following table:

Option	Description
SharePoint Web Application to Host Project Web App	The Web application for the PWA site.
Project Web App path	The path from the root site for this PWA site.
Select a language	The user interface language for this PWA site.
Use Project Web App path as	Use this option if you want to host PWA on a root URL

Create a PWA site in backward compatibility mode (Project Server 2010)

host header	(for example, https://www.contoso.com).
Administrator Account	The user account that will be added to the Project Server Administrators security group in this instance of PWA. You must use this account the first time that you access PWA.
Primary database server	The instance of SQL Server where you restored the Office Project Server 2007 empty databases.
Published database name	The name of the Office Project Server 2007 Published database that you restored.
Draft database name	The name of the Office Project Server 2007 Draft database that you restored.
Archive database name	The name of the Office Project Server 2007 Archive database that you restored.
Reporting database server	The instance of SQL Server where you restored the Office Project Server 2007 Reporting database.
Use primary database server	Select the check box if you restored the Reporting database to the primary database server specified earlier. Clear the check box if you restored the Reporting database to a different database server, and specify the instance of SQL Server that you want to use in the Reporting database server box.
Reporting database name	The name of the Project Server Reporting database for this instance of PWA.
Quota for SharePoint content in this site	The maximum site storage, in megabytes, for the PWA site.
Quota Warning for SharePoint content in this site	The site storage level, in megabytes, at which a warning e-mail message will be sent to the site administrator.

5. Click **OK**.

Turning off BCM

You can use the PWA site with BCM for as long as required. When you no longer need to be able to access the PWA site from Office Project Professional 2007, you can turn off BCM, and the new features available in Project Server 2010 will become available.

Before you disable BCM, verify that all projects are checked in. If any projects are checked out when BCM is disabled, mismatched projects may exist (for example, the checked out projects will remain in

Create a PWA site in backward compatibility mode (Project Server 2010)

Backward Compatibility Mode). Projects in this condition can lead to problems with edits and data loss, and can cause Project Professional 2010 to stop responding.



Important:

Turning off BCM upgrades the database schemas of the Project Server databases to the standard Project Server 2010 schema. Once BCM has been turned off, it cannot be turned on again.

For more information about turning off BCM, see [Project Server 2010 backward compatibility mode \(BCM\)](#).

Testing a Project Server 2010 deployment (white paper)

This Microsoft Project Server 2010 deployment test white paper is designed for enterprise project management system administrators and solution testers as a guide for testing the functionality of a newly deployed Project Server 2010 instance.

This guide shows you the various functionalities found in the Server Settings page. It also discusses initial testing to connect and check server communications with the Project Professional 2010 client application.

The document assumes that you have knowledge about the basic structure and functionality of a Project Server 2010 deployment. And have followed the existing documentation for planning and deployment: [Planning and architecture for Project Server 2010](#) and [Deployment for Project Server 2010](#).

[Download as a Microsoft Word \(.doc\) file](http://go.microsoft.com/fwlink/?LinkID=207032) (http://go.microsoft.com/fwlink/?LinkID=207032) (250 KB)

Deploy Project Server 2010 to a test environment

This series of articles describes deploying a test installation of Microsoft Project Server 2010 in a virtual environment. The purpose of this series is as follows:

- Allows you to gain experience in the processes and procedures involved in deploying Project Server 2010
- Provides you with an isolated test environment where you can gain experience with the features in Project Server 2010

This series of articles describes a test installation only. If you are deploying Project Server 2010 in a production environment, see [Deploy Project Server 2010 to a server farm environment](#). If you are deploying Project Server 2010 to Hyper-V for production, see [Virtualizing Project Server 2010](#).

The infrastructure described in this series of articles includes the following servers:

- A domain controller for the virtual domain
- A server that is running Microsoft SQL Server 2008 and Analysis Services 2008
- A server that is running Microsoft SharePoint Server 2010 and Project Server 2010

Although you can install all of the described components on a single virtual or physical machine, we recommend that you create the individual virtual machines as described in these articles, as this provides a more realistic look at what a production installation looks like.

For the purposes of software installation, we assume that you have the given software on a CD or DVD, or that you have an ISO file that contains the software. If you have the software on a file or network share, we recommend that you create an ISO file for the purposes of installation in the virtual environment. There are many third-party applications that are available for creating ISO files, and ISO files can easily be mounted to the virtual DVD drive on Hyper-V virtual machines and those from other virtualization vendors.

To successfully create the environment described, you will need a computer that has 8GB of RAM and approximately 60GB of available disk space. The computer must be running Windows Server 2008 or Windows Server 2008 R2 with Hyper-V or another virtualization solution able to run 64-bit Windows Server 2008 virtual machines.

This series includes the following articles:

- [Hyper-V quick start for creating a Project Server 2010 test environment](#) — Provides an overview of how to configure and use Hyper-V, how to create a virtual machine, and how to load an operating system on the virtual machine
- [Set up a domain controller for a Project Server 2010 test environment](#) — Describes how to create a domain controller for the virtual domain

Deploy Project Server 2010 to a test environment

- [Add a virtual machine to the virtual domain in a Project Server 2010 test environment](#) — Describes how to add a virtual machine to the domain
- [Set up accounts for a Project Server 2010 test environment](#) — Lists the accounts that you will need to deploy Project Server 2010 and describes how to create them at the domain level
- [Set up SQL Server for a Project Server 2010 test environment](#) — Describes how to install and configure SQL Server 2008 and the required updates for compatibility with Project Server 2010
- [Install SharePoint Server 2010 on a Project Server 2010 test environment](#) — Describes how to install SharePoint Server 2010
- [Install and configure Project Server 2010 in a test environment](#) — Describes how to install Project Server 2010
- [Create a PWA site in a Project Server 2010 test environment](#) — Describes how to create a Project Web App site
- [Configure reporting for a Project Server 2010 test environment](#) — Describes the steps that you must follow to configure the reporting and business intelligence features in Project Server 2010

These sections should be read sequentially, as the procedures in each build on those in the last. However, if you are already familiar with Hyper-V or if you are using a different virtualization solution or if you are using physical hardware, you can skip the "Hyper-V Quick Start" article.

Hyper-V quick start for creating a Project Server 2010 test environment

(This article is part 1 of the Microsoft Project Server 2010 test environment deployment series. The articles in this series should be read sequentially, starting with this article, as the procedures in each build on those in the last.)

Hyper-V is the Microsoft virtualization solution. It is built into most versions of Windows Server 2008 and Windows Server 2008 R2. It offers an ideal platform to deploy a full-scale Microsoft Project Server 2010 test environment without the need to purchase multiple servers.

This article describes the steps that you must follow to enable Hyper-V and create virtual machines. If you are already familiar with Hyper-V, you can proceed to the next article, [Set up a domain controller for a Project Server 2010 test environment](#).

Video demonstration

This demonstration shows the steps for enabling Hyper-V on Windows Server 2008.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=196700) (http://go.microsoft.com/fwlink/?LinkId=196700). To download the video file, right-click the link, and then click **Save Target As**.

Enable Hyper-V

The first step is to enable Hyper-V. Hyper-V is a server role on Windows Server 2008. To enable it, log on to the computer as an administrator and perform the following procedure.

To enable Hyper-V

1. Click **Start**, click **Administrative Tools**, and then click **Server Manager**.
2. In the left pane, click **Roles**.
3. In the right pane, click **Add Roles**.
4. If the Before You Begin page is displayed, click **Next**.
5. On the Select Server Roles page, select the **Hyper-V** check box, and then click **Next**.
6. On the Hyper-V page, click **Next**.
7. On the Create Virtual Networks page, leave the network adapter check boxes cleared, and then click **Next**.
8. On the Confirm Installation Selections page, click **Install**.
9. On the Installation Results page, click **Close**.
10. Restart the server.

Configure a virtual network

Once Hyper-V is enabled, you must create a virtual network within Hyper-V so that the virtual machines can communicate with one another. Two virtual networks are required:

- An internal virtual network that allows the virtual machines to communicate with one another
- An external virtual network that allows the virtual machines to communicate with your corporate network and the Internet. (This is required specifically during installation of Microsoft SharePoint Server 2010 to download the prerequisites.)

To configure an internal network, perform the following procedure.

▶ To configure an internal virtual network

1. Click **Start**, click **Administrative Tools**, and then click **Hyper-V Manager**.
2. In the left pane, click the node of the local computer.
3. In the right pane, click **Virtual Network Manager**.
4. Click **Internal**, and then click **Add**.
5. In the **Name** text box, type **Internal Network**.
6. Ensure that the **Internal only** option is selected, and then click **OK**.

Once the internal network is created, create an external network by using the following procedure.

▶ To configure an external virtual network

1. Click **Start**, click **Administrative Tools**, and then click **Hyper-V Manager**.
2. In the left pane, click the node of the local computer.
3. In the right pane, click **Virtual Network Manager**.
4. Click **External**, and then click **Add**.
5. In the **Name** text box, type **External Network**.
6. Select the **External** option, and select a network adapter from the drop-down list.
7. Select the **Allow management operating system to share this network adapter** check box.
8. Click **OK**.
9. On the **Apply Network Changes** dialog box, click **Yes**.

Create virtual machines

When you have completed network configuration, you can start adding virtual machines to Hyper-V. To complete all the steps in this series of articles, you need the following virtual machines:

- **Litware-DC** — domain controller
- **Litware-SQL** — SQL Server 2008

- **Litware-Proj** — SharePoint Server 2010 and Project Server 2010

Perform the following procedure for each virtual machine that you want to create.

▶ To create a virtual machine

1. Click **Start**, click **Administrative Tools**, and then click **Hyper-V Manager**.
2. In the left pane, click the node of the local computer.
3. In the right pane, click **New**, and then click **Virtual Machine**.
4. On the Before You Begin page, click **Next**.
5. In the **Name** text box, type the name that you want to use for the virtual machine, and then click **Next**.
6. On the Assign Memory page, type a memory value appropriate for the virtual machine that you are creating.
7. On the Configure Networking page, select **External Network** from the drop-down list, and then click **Next**.
8. On the Connect Virtual Hard Disk page, leave the default values, and then click **Next**.
9. On the Installation Options page, leave the **Install an operating system later** option selected and then click **Next**.
10. Click **Finish**.

Loading an operating system

Once a virtual machine is created that has an empty hard disk, the next step is to install an operating system. Project Server 2010 requires Windows Server 2008 or Windows Server 2008 R2. We recommend that you use Windows Server 2008 or Windows Server 2008 R2 for each server virtual machine that you create. Perform the following procedure to install an operating system on a virtual machine.

▶ To load an operating system on a virtual machine

1. In Hyper-V Manager, right-click the virtual machine on which you want to load an operating system, and then click **Settings**.
2. In the left pane, click **DVD Drive**.
3. In the right pane, select the **Image file** option.
4. Click **Browse**, and locate the ISO file that contains the operating system.
5. Click **OK**.
6. In Hyper-V Manager, double-click the virtual machine on which you want to load the operating system.
7. In the Virtual Machine Connection window, click the Start icon on the toolbar.

Hyper-V quick start for creating a Project Server 2010 test environment

8. Install the operating system.

When you have created all of the virtual machines that you need and installed operating systems on each, the next step is to set up a domain controller. Proceed to the next article, [Set up a domain controller for a Project Server 2010 test environment](#).

Set up a domain controller for a Project Server 2010 test environment

(This article is part 2 of the Microsoft Project Server 2010 test environment deployment series. The procedures in this article assume that you have read the series in sequence starting with [Hyper-V quick start for creating a Project Server 2010 test environment](#).)

This article describes how to set up a domain controller on a virtual machine that is running Windows Server 2008. This article and the remaining articles in this series assume that you have created the following infrastructure of virtual machines:

Virtual machine	Operating system
Litware-DC	Windows Server 2008
Litware-SQL	Windows Server 2008
Litware-Proj	Windows Server 2008

To perform the procedures in this article, log on to the Litware-DC virtual machine as an administrator.

Video demonstration

This video shows the steps involved in configuring a domain controller.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=196701) (<http://go.microsoft.com/fwlink/?LinkId=196701>). To download a copy, right-click the link, and then click **Save Target As**.

Configure the domain controller

The first step in setting up a domain controller is to set a static IP address. Domain controllers require static IP addresses to function correctly. Before you start, ensure that the network connection on the Litware-DC virtual machine is set to Internal Network.

In this series of articles, we are using the 10.0.0.0 – 10.255.255.255 IP address range that is reserved for private networks. This address range is used on the internal network for the virtual domain. In situations where the External Network is used (such as for downloading Microsoft SharePoint Server 2010 prerequisites from the Internet), we assume that your existing corporate network will assign an appropriate IP address to the network adapter by using dhcp.

Depending on the network configuration, you may be able to use the 10.0.0.0 – 10.255.255.255 IP address range on a network adapter connected to your corporate network. This would enable you to

Set up a domain controller for a Project Server 2010 test environment

span the virtual machines across multiple physical host computers. However, you should beware of potential IP address conflicts when you use static IP addresses of any kind on a shared network.

Perform the following procedure to configure a static IP address.

▶ To configure a static IP address

1. Click **Start**, and then click **Control Panel**.
2. Click **Network and Internet**.
3. Click **Network and Sharing Center**.
4. Click **Change Adapter Settings**.
5. Right click the local area connection, and then click **Properties**.
6. On the **Local Area Connection Properties** dialog box, clear the **Internet Protocol Version 6 (TCP/IPv6)** check box.
7. Select **Internet Protocol Version 4 (TCP/IPv4)** and then click **Properties**.
8. On the **Internet Protocol Version 4 (TCP/IPv4) Properties** dialog box, select the **Use the following IP address** option, and then type **10.0.0.1** in the **IP address** box.
9. In the **Subnet mask** box, type **255.0.0.0**.
10. Select the **Use the following DNS server addresses** option, and then type **10.0.0.1** in the **Preferred DNS server** box.
11. Click **OK**.
12. Click **Close**.

Once you have set the static IP address, you are ready to promote the virtual machine to a domain controller. This is performed from the command line using the **dcpromo** command.



Note:

The password that you chose for the local administrator account for this virtual machine will become the domain administrator password as soon as the domain controller has been configured.

Perform the following procedure to configure the domain controller.

▶ To configure the domain controller

1. Click **Start**, click **Run**, type **dcpromo**, and then click **OK**.
2. On the Welcome to the Active Directory Domain Services Installation Services page, click **Next**.
3. On the Operating System Compatibility page, click **Next**.
4. On the Choose a Deployment Configuration page, select the **Create a new domain in a new forest** option, and then click **Next**.
5. In the Name the Forest Root Domain page, type **litware.local** in the **FQDN of the forest root domain** box, and then click **Next**.

Set up a domain controller for a Project Server 2010 test environment

6. On the Set Forest Functional Level page, click **Next**.
7. On the Set Domain Functional Level page, click **Next**.
8. On the Additional Domain Controller Options page, ensure that the **DNS server** check box is selected, and then click **Next**.
9. On the warning dialog box, click **Yes**.
10. On the Location for Database, Log Files, and SYSVOL page, keep the default values, and then click **Next**.
11. On the Directory Services Restore Mode Administrator Password page, type and confirm a password, and then click **Next**.
12. On the Summary page, click **Next**.
13. When the wizard has finished running, click **Finish**.
14. Restart the virtual machine.

Once the domain controller setup is complete, you can add the other virtual machines to the domain. Proceed to the next article, [Add a virtual machine to the virtual domain in a Project Server 2010 test environment](#).

See Also

[Deploy Project Server 2010 to a test environment](#)

Add a virtual machine to the virtual domain in a Project Server 2010 test environment

(This article is part 3 of the Microsoft Project Server 2010 test environment deployment series. The procedures in this article assume that you have read the series in sequence starting with [Hyper-V quick start for creating a Project Server 2010 test environment](#).)

This article describes adding virtual machines to the litware.local domain. For Project Server 2010 to function correctly, you must add the remaining virtual machines to the domain before you install Microsoft SQL Server, Microsoft SharePoint Server 2010, and Project Server 2010.

For this series of articles, we assume the following IP address and minimum memory configuration for the domain:

Virtual machine	IP Address	RAM
Litware-DC	10.0.0.1	512 MB
Litware-SQL	10.0.0.2	2 GB
Litware-Proj	10.0.0.3	2 GB



Note:

The memory configurations in this table are the minimum recommended for this configuration. If you experience performance issues, try adding memory, especially to the Litware-Proj virtual machine.

Video demonstration

This video shows the steps involved in configuring the virtual machine and joining it to the domain.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=196721) (<http://go.microsoft.com/fwlink/?LinkId=196721>). To download a copy, right-click the link, and then click **Save Target As**.

Configuring the virtual machine

As with the domain controller, each virtual machine must have the virtual network adapter set to Internal Network before you configure the static IP address.

Perform the following procedure for the Litware-SQL and Litware-Proj virtual machines. Use the IP addresses listed in the table.

▶ To configure a static IP address

1. Click **Start**, and then click **Control Panel**.
2. Click **Network and Internet**.
3. Click **Network and Sharing Center**.
4. Click **Change Adapter Settings**.
5. Right-click **local area connection**, and then click **Properties**.
6. On the **Local Area Connection Properties** dialog box, clear the **Internet Protocol Version 6 (TCP/IPv6)** check box.
7. Select **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.
8. On the **Internet Protocol Version 4 (TCP/IPv4) Properties** dialog box, select the **Use the following IP address** option, and then type the IP address for the virtual machine that you are configuring in the **IP address** box.
9. In the **Subnet mask** box, type **255.0.0.0**.
10. Select the **Use the following DNS server addresses** option, and then type **10.0.0.1** in the **Preferred DNS server** box.
11. Click **OK**.
12. Click **Close**.

Once the static IP address has been configured for each virtual machine, you can join the virtual machine to the litware.local domain. Perform the following procedure on the Litware-SQL and Litware-Proj virtual machines.



Note:

The default Windows Server 2008 firewall settings can interfere with the ability to join the computer to a domain. If you have problems joining the virtual machines to the domain, contact a network administrator for help. Because this is a private network that is not connected to the corporate network or the Internet, you can also consider turning off Windows Firewall.

▶ To connect to the domain

1. Click **Start**, right-click **Computer**, and then click **Properties**.
2. Under **Computer, name, domain, and workgroup settings**, click **Change settings**.
3. On the **Computer Name** tab, click **Change**.
4. Select the **Domain** option, and then type **litware.local**.
5. Click **OK**.
6. In the **Windows Security** dialog box, type the user name and password of a domain account that has permissions to join the domain. (You can use the domain administrator account for this.)

Add a virtual machine to the virtual domain in a Project Server 2010 test environment

7. Click **OK**.
8. On the **Welcome to the domain** dialog box, click **OK**.
9. On the **Computer Name/Domain Changes** dialog box, click **OK**.
10. Click **Close**.
11. Restart the virtual machine.

Once the virtual machines have been joined to the litware.local domain, the next step is to set up the domain accounts that you will need for Project Server 2010 and its associated applications. Proceed to the next article, [Set up accounts for a Project Server 2010 test environment](#).

See Also

[Deploy Project Server 2010 to a test environment](#)

Set up accounts for a Project Server 2010 test environment

(This article is part 4 of the Microsoft Project Server 2010 test environment deployment series. The procedures in this article assume that you have read the series in sequence starting with [Hyper-V quick start for creating a Project Server 2010 test environment](#).)

To configure Project Server 2010 in a server farm environment, there are several domain accounts needed to provide the most optimal and secure configuration. This article describes how to create accounts and groups at the domain level for use in the remaining configuration steps in this series of articles.

Although you can use a single account for everything, we highly recommend that you create the accounts listed in the following table and use them as described in the remaining articles in this series to provide the recommended Project Server 2010 setup.

Account	Domain account	Description
SQL Server Administrator	Litware\SQLAdmin	Administrator account for SQL Server 2008. Local Administrator on Litware-SQL.
Farm Administrator	Litware\FarmAdmin	Farm Administrator for the Project Server 2010 farm. Local Administrator on Litware-Proj.
Service application account	Litware\SVCApp	Domain account for running SharePoint Server 2010 service applications.
Workflow proxy account	Litware\WFProxy	Domain account for running Project Server 2010 workflows.
Reporting data access account	Litware\ProjDataAccess	Domain account that has access to the reporting database for use with Secure Store as part of Project Server 2010 reporting.

To create these accounts, you must be logged on to Litware-DC as the domain administrator (litware\administrator).

Perform the following procedure for each account listed in the table.

To create an Active Directory service account

1. Click **Start**, click **Administrative Tools**, and then click **Active Directory Users and Computers**.

Set up accounts for a Project Server 2010 test environment

2. Expand the domain node.
3. Right-click **Users**, click **New**, and then click **User**.
4. In the **Full name** box, type the name of the account (for example, **FarmAdmin**).
5. In the **User logon name** box, type the logon name for the account. (This can be the same as **Full name**.)
6. Click **Next**.
7. Type and confirm a password for the account.
8. Clear the **User must change password at next logon** check box.
9. Select the **Password never expires** check box.
10. Click **Next**.
11. Click **Finish**.

Configuring reporting and business intelligence in Project Server 2010 requires two Active Directory directory service groups — one for report authors and one for report viewers. These groups are given different permissions when you configure reporting.

Group	Domain group	Description
Report Authors	Litware\ProjReportAuthors	Active Directory group for report authors.
Report Viewers	Litware\ProjReportViewers	Active Directory group for report viewers.

Use the following procedure to create the two groups listed in this table.

To create an Active Directory group

1. Click **Start**, click **Administrative Tools**, and then click **Active Directory Users and Computers**.
2. Expand the domain node.
3. Right-click **Users**, click **New**, and then click **Group**.
4. Type a name for the group (for example, Report Authors) in the **Group name** box.
5. Click **OK**.

After you have created the groups, add the Litware\ProjDataAccess account to the Litware\ProjReportAuthors group. This will give it the needed database access for use with Secure Store.

After you have created the required user accounts and groups in Active Directory, you can start to install software. The first step is to install SQL Server 2008. Proceed to the next article, [Set up SQL Server for a Project Server 2010 test environment](#).

See Also

[Deploy Project Server 2010 to a test environment](#)

Set up SQL Server for a Project Server 2010 test environment

(This article is part 5 of the Microsoft Project Server 2010 test environment deployment series. The procedures in this article assume that you have read the series in sequence starting with [Hyper-V quick start for creating a Project Server 2010 test environment](#).)

This article describes how to install and configure Microsoft SQL Server 2008 for use with Project Server 2010. Project Server 2010 requires one of the following versions of SQL Server:

- Microsoft SQL Server 2008 with Service Pack 1 (SP1) and Cumulative Update 2
- Microsoft SQL Server 2005 SP3 with Cumulative update package 3 for SQL Server 2005 Service Pack 3

This article describes installing and configuring SQL Server 2008 SP1 with Cumulative update package 2 for SQL Server 2008 Service Pack 1.

Video demonstration

This video shows the steps involved in setting up SQL Server 2008 for use with Project Server 2010.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=196722) (http://go.microsoft.com/fwlink/?LinkId=196722). To download the video file, right-click the link, and then click **Save Target As**.

Configure a local administrator

We recommend that you install SQL Server 2008 while logged on with the SQL Server administrator domain account (Litware\SQLAdmin). Prior to doing this, you must add this account to the local Administrators group on the Litware-SQL virtual machine.

Log on to the Litware-SQL virtual machine with the domain administrator account (Litware\administrator) and perform the following procedure to add the Litware\SQLAdmin account to the local Administrators group.

To add a local administrator

1. Log on to the virtual machine where you want to install SQL Server as a domain administrator.
2. Click **Start**, click **Administrative tools**, and then click **Computer Management**.
3. Expand **Local Users and Groups**, and then click **Groups**.
4. In the right pane, right-click **Administrators**, and then click **Properties**.
5. Click **Add**.
6. Type the name of the SQL Server administrator account (Litware\SQLAdmin), and then click

OK.

7. Click **OK**.
8. Log off the virtual machine.

To perform the remaining procedures in this article, log on to the Litware-SQL virtual machine with the Litware\SQLAdmin account.

Install SQL Server 2008

The first step is to install SQL Server 2008. SQL Server 2008 requires the .NET Framework version 3.5. If the .NET Framework 3.5 is currently not installed, you must install it or enable it as a feature in Windows Server 2008 before you continue.

Perform the following procedure to install SQL Server 2008 on Litware-SQL.

To install SQL Server 2008

1. Attach the SQL Server 2008 DVD to the virtual machine DVD drive.
2. Log on to the virtual machine where you want to install SQL Server as the SQL Server administrator.
3. On the SQL Server DVD, double-click setup.exe.
4. If a compatibility warning is displayed, click **Run program**.
5. In the **SQL Server Installation Center**, in the left pane, click **Installation**.
6. In the right pane, click **New SQL Server stand-alone installation** or add features to an existing installation.
7. If a compatibility warning is displayed, click **Run program**.
8. On the Setup Support Rules page, click **OK**.
9. On the Product Key page, type your product key, and then click **Next**.
10. On the License Terms page, review the license agreement and, if you agree, select the **I accept the license terms** check box, and then click **Next**.
11. On the Setup Support Files page, click **Install**.
12. On the Setup Support Rules page, click **Next**.
13. On the Feature Selection page, select the following check boxes:
 - **Database Engine Services**
 - **Analysis Services**
 - **Reporting Services**
 - **Management Tools - Complete**



Note:

We also recommend that you install SQL Server Books Online.

Set up SQL Server for a Project Server 2010 test environment

14. Click **Next**.
15. On the Instance Configuration page, leave the **Default instance** option selected, and then click **Next**.
16. On the Disk Space Requirements page, click **Next**.
17. On the Server Configuration page, set an **Account Name** and **Password** for each service listed. We recommend that you use the SQL Server administrator account for this.
18. Set the **Startup Type** for the **SQL Server Agent service** to **Automatic**.
19. Click **Next**.
20. On the Database Engine Configuration page, select the **Mixed Mode** option, and type and confirm a password for the built-in SQL Server administrator account.
21. Click **Add Current User** to add the current user account as a SQL Server administrator.
22. Click **Next**.
23. On the Analysis Services Configuration page, click **Add Current User** to add the current user account as an Analysis Services administrator.
24. Click **Next**.
25. On the Reporting Services Configuration page, select the **Install the native mode default configuration** option, and then click **Next**.
26. On the Error and Usage Reporting page, leave the default values and then click **Next**.
27. On the Installation Rules page, click **Next**.
28. On the Ready to Install page, click **Install**.
29. When the setup process is complete, click **Next**.
30. On the Complete page, click **Close**.

Install SQL Server 2008 updates

Windows Server 2008 requires Service Pack 1 for SQL Server 2008. If the version of SQL Server 2008 that you installed did not include Service Pack 1, then you must install Service Pack 1 next. Perform the following procedure to install Service Pack 1 for SQL Server 2008.

To install SQL Server 2008 SP1

1. Attach the DVD that contains SQL Server 2008 SP1 to the virtual DVD drive.
2. On the DVD drive, double-click the KB968369 executable file.
3. On the Welcome page, click **Next**.
4. On the License Terms page, review the license agreement and if you agree, select the **I accept the license terms** check box, and then click **Next**.
5. On the Select Features page, click **Select All**, and then click **Next**.

Set up SQL Server for a Project Server 2010 test environment

6. On the Check Files in Use page, click **Next**.
7. On the Ready to Update page, click **Update**.
8. On the Update Progress page, click **Next**.
9. On the Complete page, click **Close**.

Microsoft SharePoint Server 2010 and Microsoft Project Server 2010 require Cumulative update package 2 for SQL Server 2008 Service Pack 1. Download the cumulative update at the following location:

<http://support.microsoft.com/kb/970315> (<http://go.microsoft.com/fwlink/?LinkID=165962>)

Perform the following procedure to install Cumulative update package 2 for SQL Server 2008 Service Pack 1.

▶ To install SQL Server 2008 SP1 CU2

1. Attach the DVD that contains SQL Server 2008 SP1 CU2 to the virtual DVD drive.
2. On the DVD drive, double-click the KB970315 executable file.
3. On the Welcome page, click **Next**.
4. On the License Terms page, review the license agreement and, if you agree, select the **I accept the license terms** check box, and then click **Next**.
5. On the Select Features page, click **Select All**, and then click **Next**.
6. On the Check Files in Use page, click **Next**.
7. On the Ready to Update page, click **Update**.
8. On the Update Progress page, click **Next**.
9. On the Complete page, click **Close**.
10. Restart the virtual machine.

When SQL Server 2008 and the required updates have been installed, the next step is to create a login for the Farm Administrator account (Litware\FarmAdmin) to provide the necessary permissions for SharePoint Server 2010 and Project Server 2010 installation and configuration.

Perform the following procedure to create a login for the Farm Administrator account.

▶ To create a login for the Farm Admin

1. In SQL Server Management Studio, expand **Security**, right-click **Logins**, and then click **New Login**.
2. In the **Login name** box, type **Litware\FarmAdmin**.
3. In the left pane, click **Server Roles**.
4. Select the **sysadmin** and **dbcreator** server roles.
5. Click **OK**.

Set up SQL Server for a Project Server 2010 test environment

Once the Farm Administrator account has been configured on SQL Server 2008, the next step is to install SharePoint Server 2010 on the Litware-Proj virtual machine. Proceed to the next article, [Install SharePoint Server 2010 on a Project Server 2010 test environment](#).

Install SharePoint Server 2010 on a Project Server 2010 test environment

(This article is part 6 of the Microsoft Project Server 2010 test environment deployment series. The procedures in this article assume that you have read the series in sequence starting with [Hyper-V quick start for creating a Project Server 2010 test environment](#).)

This article describes how to install Microsoft SharePoint Server 2010 on the Litware-Proj virtual machine.

Video demonstration

This video shows the steps involved in setting up SharePoint Server 2010.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=196723) (http://go.microsoft.com/fwlink/?LinkId=196723). To download the video file, right-click the link, and then click **Save Target As**.

Install SharePoint Server

The first step in installing SharePoint Server 2010 is to install the SharePoint Server 2010 prerequisites. These can be automatically downloaded from the Internet and installed by the SharePoint Server 2010 prerequisite installer tool that is built into SharePoint Server 2010 setup.



Important:

The Enterprise edition of SharePoint Server 2010 is required for a Project Server 2010 deployment.

For the Litware-Proj virtual machine to be able to download the necessary updates, you must add a second virtual network connection to the Litware-Proj virtual machine and connect it to the External Network connection.



Note:

To add a network connection, the virtual machine must be turned off. When the virtual machine is off, right-click the virtual machine in Virtual Machine Manager, and then click **Settings**. On the Settings page, select **Network Adapter** in the **Add Hardware** section, and connect it to **External Network**.



Note:

If you cannot create an internet connection from the virtual machine, you can download the prerequisites from the Internet and create an ISO file that you can attach to the virtual machine DVD drive. For more information about what prerequisites are required, see [Hardware and software requirements \(SharePoint Server 2010\)](#).

Install SharePoint Server 2010 on a Project Server 2010 test environment

For installation of SharePoint Server 2010 and its prerequisites, use the Litware\FarmAdmin account. This account must be a local administrator on the Litware-Proj virtual machine.

Log into the Litware-Proj virtual machine with the domain administrator account (Litware\administrator) and perform the following procedure to add the Litware\FarmAdmin account to the local Administrators group.

▶ To add a local administrator

1. Log into the virtual machine where you want to install SharePoint Server 2010 as a domain administrator.
2. Click **Start**, click **Administrative tools**, and then click **Computer Management**.
3. Expand **Local Users and Groups**, and then click **Groups**.
4. In the right pane, right-click **Administrators**, and then click **Properties**.
5. Click **Add**.
6. Type the name of the SQL Server administrator account (Litware\FarmAdmin), and then click **OK**.
7. Click **OK**.
8. Log off the virtual machine.

To perform the remaining procedures in this article, log on to the Litware-Proj virtual machine with the Litware\FarmAdmin account.

To install the SharePoint Server 2010 prerequisites, perform the following procedure.

▶ To install SharePoint Server 2010 prerequisites

1. On the SharePoint Server 2010 DVD, run default.hta.
2. On the SharePoint Server 2010 opening page, click **Install software prerequisites**.
3. Follow the wizard to complete installation of all prerequisites.



Note:

Depending on your configuration, you may have to restart your computer during this process.

4. When the wizard has finished, click **Finish**.

Once the prerequisites have been installed, you can install SharePoint Server 2010 itself. Perform the following procedure to install SharePoint Server 2010 on Litware-Proj.

▶ To install SharePoint Server 2010

1. On the SharePoint Server 2010 DVD, run default.hta.
2. On the SharePoint Server 2010 opening page, click **Install SharePoint Server**.

Install SharePoint Server 2010 on a Project Server 2010 test environment

3. On the Enter your Product Key page, type your product key, and then click **Continue**.
4. On the Read the Microsoft Software License Terms page, read the license agreement and accept the terms by selecting the **I accept the terms of this agreement** check box.
5. Click **Continue**.
6. On the Choose the installation you want page, click **Server Farm**.
7. On the Server Type page, select the **Complete – Install all components option**.
8. Click **Install Now**.
9. On the Run Configuration Wizard page, leave the **Run the SharePoint Products and Technologies Configuration Wizard now** check box selected, and then click **Close**.
10. On the Welcome to SharePoint Products page, click **Next**.
11. On the warning dialog box, click **Yes**.
12. On the Connect to a server farm page, select the **Create a new server farm** option, and then click **Next**.
13. On the Specify Configuration Database Settings page:
 - a. In the **Database server** box, type the name of the database server where you want to host the SharePoint Server 2010 databases (Litware-SQL).
 - b. Type the user name and password of the database access account (litware\FarmAdmin).
 - c. Click **Next**.
14. On the Specify Farm Security Settings page, type and confirm a pass phrase for the farm, and then click **Next**.
15. On the Configure SharePoint Central Administration Web Application page, select a port number for the SharePoint Central Administration Web site, and then click **Next**.
16. On the Completing the SharePoint Products Configuration Wizard page, click **Next**.
17. On the Configuration Successful page, click **Finish**.

Once SharePoint Server 2010 configuration has been completed, SharePoint Central Administration will open. There is no SharePoint Server 2010 configuration that is required before installing Project Server 2010. Therefore, you can close Central Administration.

Before continuing with the next article, [Install and configure Project Server 2010 in a test environment](#), restart the Litware-Proj virtual machine.

Install and configure Project Server 2010 in a test environment

(This article is part 7 of the Microsoft Project Server 2010 test environment deployment series. The procedures in this article assume that you have read the series in sequence starting with [Hyper-V quick start for creating a Project Server 2010 test environment](#).)

This article describes installing Project Server 2010 and configuring the various Microsoft SharePoint Server 2010 and Project Server 2010 services that are required for running Project Server 2010. To do the steps in this article, log on to Litware-Proj using the Litware\FarmAdmin account.

Video demonstration

This video shows the steps involved in installing Project Server 2010 in the Hyper-V based test environment.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=196724) (http://go.microsoft.com/fwlink/?LinkId=196724). To download the video file, right-click the link, and then click **Save Target As**.

Install Project Server

The first step is to install Project Server 2010 on the Litware-Proj virtual machine. Perform the following procedure to install Project Server.

To install Project Server

1. On the Project Server 2010 DVD, run default.hta. The **Setup** menu opens.



Note:

Default.hta may run automatically when you insert the disk.

2. On the Start page, click **Install Project Server**.
3. On the Enter your Product Key page, type your product key, and then click **Continue**.
4. On the End User License Agreement page, review the terms of the agreement. To accept the agreement, select the **I accept the terms of this agreement** check box.
5. Click **Continue**.
6. On the Choose a file location page, click **Install Now**.
7. When the installation is complete, select the **Run the SharePoint Products and Technologies Configuration Wizard now** check box.
8. Click **Close**.
9. On the Welcome to SharePoint Products page, click **Next**.

Install and configure Project Server 2010 in a test environment

10. On the warning dialog box, click **Yes**.
11. On the Completing the SharePoint Products Configuration Wizard page, click **Next**.
12. When the wizard is finished, click **Finish**.

Once Project Server 2010 is installed, the following configuration steps are required before creating a Microsoft Project Web App site and using Project Server 2010:

- Register a managed account
- Start the Project Application Service
- Start the PerformancePoint Service
- Create a Project Server service application
- Create a PerformancePoint service application
- Create a top-level Web site
- Set Read permissions on the top-level Web site
- Install SQL Server 2008 Analysis Management Objects

The procedures to complete these tasks are described in this article. Each of these procedures is completed by using the SharePoint Central Administration Web site.

Configure a managed account

Before you can use a domain account within SharePoint Server 2010, you must register it as a managed account.

The Litware\SVCApp account will be used to run the various service applications in this Project Server 2010. Perform the following procedure to register the Litware\SVCApp account as a managed account.

To register a managed account

1. In SharePoint Central Administration, click **Security**.
2. Under **General Security**, click **Configure managed accounts**.
3. On the Managed Accounts page, click **Register Managed Accounts**.
4. On the Register Managed Account page:
 - a. In the **User name** box, type **Litware\SVCApp**.
 - b. In the **Password** box, type the password for the Litware\SVCApp account.
 - c. Click **OK**.

Configure services and service applications

The first step is to start the Project Application Service and the PerformancePoint Service on Litware-
Proj.

▶ To start the Project Application Service

1. On the SharePoint Central Administration home page, in the **System Settings** section, click **Manage services on server**.
2. On the **Service** list, click **Start** next to **Project Application Service**.

▶ To start the PerformancePoint Service

1. On the Central Administration home page, in the **System Settings** section, click **Manage services on server**.
2. On the **Service** list, click **Start** next to **PerformancePoint Service**.

Once you have started the Project Application Service and PerformancePoint Service, you must create a service application for each service.

▶ To create a Project Server service application

1. On the Central Administration home page, in the **Application Management** section, click **Manage service applications**.
2. On the Manage Service Applications page, on the ribbon, click **New**, and then click **Project Server Service Application**.
3. On the Create Project Web App service application page:
 - a. In the **Project Web App service application name** box, type **Project Server Service App**.
 - b. In the **Application Pool** section, select the **Create new application pool** option, and in the **Application pool name** box, type **ProjectAppPool**.
 - c. Select the **Configurable** option, and select the **Litware\SVCApp** account from the drop-down list.
 - d. Click **OK**.

▶ To create a PerformancePoint service application

1. On the Central Administration home page, in the **Application Management** section, click **Manage service applications**.
2. On the Manage Service Applications page, on the ribbon, click **New**, and then click **PerformancePoint Service Application**.
3. On the New PerformancePoint Service Application page:
 - a. In the **Name** box, type **PerformancePoint Service Application**.
 - b. Select the **Add this service application's proxy to the farm's default proxy list** check box.
 - c. In the **Application Pool** area, select the **Create new application pool** option, and in the

Application pool name box, type **PerformancePointAppPool**.

- d. Select the **Configurable** option, and select the **Litware\SVCApp** account from the drop-down list.
 - e. Click **Create**.
4. When the service application has been successfully created, click **OK**.

Configure the top-level Web site

A Web application is required to host the Project Web App web site and the associated project sites. Perform the following procedure to create a Web application.

▶ To create a Web application

1. In Central Administration, in the **Application Management** section, click **Manage Web applications**.
2. On the toolbar, click **New**.
3. On the Create New Web Application page, keep the default values, and then click **OK**.
4. When the Web application has been created, click **OK**.

The next step is to create a top-level Web site and give users read permission to that site.

▶ To create a top-level Web site

1. In Central Administration, in the **Application Management** section, click **Create site collections**.
2. Type **Litware** in the **Title** box.
3. In the **Primary Site Collection Administrator** section, type **FarmAdmin**.
4. Click **OK**.

▶ To set Read permissions on the top-level Web site

1. Navigate to the root site (<http://litware-proj>).
2. Click **Site Actions**.
3. Click **Site Permissions**.
4. Click **Grant Permissions**.
5. In the **Users/Groups** box, type **NT AUTHORITY\Authenticated Users**.
6. Under **Give Permission**, select **Litware Visitors [Read]**.
7. Click **OK**.

Install and configure Project Server 2010 in a test environment

In order to use the reporting and business intelligence features of Project Server 2010, you must install the SQL Server 2008 Analysis Management Objects on the Litware-Proj virtual machine. Click the following link to download the Analysis Management Objects, and then install the package:

[Analysis Management Objects](http://go.microsoft.com/fwlink/?LinkId=130655&clcid=0x409) (http://go.microsoft.com/fwlink/?LinkId=130655&clcid=0x409)

Once the Analysis Management Objects have been installed, proceed to the next article, [Create a PWA site in a Project Server 2010 test environment](#).

See Also

[Project Server 2010 Ignite Training: Planning, Design, and Deployment](#)

Create a PWA site in a Project Server 2010 test environment

(This article is part 8 of the Microsoft Project Server 2010 test environment deployment series. The procedures in this article assume that you have read the series in sequence starting with [Hyper-V quick start for creating a Project Server 2010 test environment](#).)

In order to use Project Server 2010, you must create a Microsoft Project Web App (PWA) site. Log on to Litware-Proj using the Litware\FarmAdmin account, and perform the following procedures to create a PWA site.

Creating a PWA site takes five basic steps:

1. Temporarily lock down existing content databases.
2. Create a content database to host the PWA site and its associated project workspaces.
3. Create the PWA site itself.
4. Lock down the PWA content database to prevent additional site collections being added.
5. Unlock existing content databases.

Video demonstration

This video shows the steps involved in creating a PWA site and configuring time reporting periods and the workflow proxy account.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=196725) (http://go.microsoft.com/fwlink/?LinkId=196725). To download the video file, right-click the link, and then click **Save Target As**.

Create a PWA site

SharePoint Server 2010 uses a round-robin algorithm to determine the distribution of site collections across content databases. In order to deploy the PWA site to a specific content database, you must lock down any existing content databases in the farm. The process does not affect user access; it only affects the distribution of new site collections.

To lock down your content databases, follow these steps.

Important:

Ensure that no other administrators are adding site collections to the Web application where you plan to deploy PWA while you are performing the procedures in this section.

To lock down a content database

1. In the SharePoint Central Administration Web site, in the **Application Management** section,

Create a PWA site in a Project Server 2010 test environment

click **Manage content databases**.

2. In the **Current Number of Site Collections** column, note the number of site collections for the **WSS_Content** database (this should be 1).
3. In the **Database Name** column, click the link for the **WSS_Content** database.
4. In the **Database Capacity Settings** section:
 - a. In the **Maximum number of sites that can be created in this database** box, type the existing number of site collections for this database (as noted in the **Current Number of Site Collections** column, earlier in this procedure).
 - b. In the **Number of sites before a Warning event is generated** box, type a lower number than the value that is used for **Maximum number of sites that can be created in this database**.
5. Click **OK**.

▶ To create a content database

1. In SharePoint Central Administration, in the **Application Management** section, click **Manage content databases**.
2. Click **Add a content database**.
3. In the **Database Name** section, type **PWA_Content**.
4. Click **OK**.

Once the content database has been created and configured, the next step is to create the PWA site itself.

▶ To create a PWA site

1. In the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. On the Manage Service Applications page, click the **Project Server Service Application**.
3. On the Manage Project Web App Sites page, click **Create Project Web App Site**.
4. Keep the default values, and then click **OK**.

Project Server 2010 starts the PWA site creation process. This may take some time. When the site creation process is complete, the status shown on the PWA site list is **Provisioned**.

Once the PWA site is provisioned, you can access it using the URL <http://litware-proj/pwa>.

Once the PWA site has been provisioned, verify that it was created in the PWA_Content database. Use the Get-SPSite Windows PowerShell command, passing the new content database as a parameter:

▶ To verify the PWA site location

1. On the **Start** menu, click **All Programs**.

2. Click **Microsoft SharePoint 2010 Products**.
3. Click **SharePoint 2010 Management Shell**.
4. From the Windows PowerShell command prompt (that is, PS C:\>), type the following command and then press ENTER:

Get-SPSite -ContentDatabase <ContentDatabaseName>

The command should return the URL for your PWA site and no other URLs.

Once the PWA site is in the PWA_Content database, you must lock down the database to prevent SharePoint Server 2010 from adding additional site collections to the database. This is performed by configuring the maximum number of sites for the content database to one.



Note:

Configuring this setting does not prevent new project workspace sites from being created.

▶ To lock down the content database

1. In SharePoint Central Administration, in the **Application Management** section, click **Manage content databases**.
2. In the **Database Name** column, click the link for the PWA_Content database.
3. In the **Database Capacity Settings** section:
 - a. In the **Number of sites before a Warning event is generated** box, type **0**.
 - b. In the **Maximum number of sites that can be created in this database** box, type **1**.
4. Click **OK**.

Once you have locked down your PWA content database, you can return the WSS_Content database to its original values for **Maximum number of sites that can be created in this database** (15000) and **Number of sites before a Warning event is generated** (9000).

You can now access the new PWA site.

Configuring server settings

Each time that you create a PWA site, there are two additional configuration steps that you must take before you start to use Project Server 2010:

- Create time reporting periods
- Set the workflow proxy user account

Configuring time reporting periods is required for Team Member use of Time Tracking and Task Stating within Project Server 2010. Use the following procedure to create time reporting periods.

▶ To create time reporting periods

1. On the Project Web App site, click **Server Settings**.

Create a PWA site in a Project Server 2010 test environment

2. In the **Time and Task Management** section, click **Time Reporting Periods**.
3. On the Time Reporting Periods page:
 - a. Click the calendar button next to **Date the first period starts** and select a start date for the first time reporting period.



Important:

If you choose a length of seven days for a standard reporting period, all periods will begin on the day of the week you select for the first period start date. Choose a day of the week that conforms with the needs of your organization.



Important:

If you want to create variable-length periods, for example when you are using a period per calendar month, you must do these individually on the Time Reporting Periods page or programmatically through custom code.

- b. Click **Create Bulk**.
- c. Click **Save**.

The final step before you start to use the Project Web App site is to set the workflow proxy user account. By default, this account is set to the account that you used to create the PWA site. Although you can keep the default, we recommend that you use an account that was created for that purpose. In this case, we will use the Litware\WFProxy account. Note that you must change the account before you start any workflows or else in-progress workflows will break.

There are two steps that you must follow to set up the workflow proxy account:

- Create a Project Server 2010 user account for the Litware\WFProxy account
- Configure the Litware\WFProxy account as the workflow proxy user

Perform the following procedure to create a Project Server 2010 for the Litware\WFProxy account.

To create a user

1. In Project Web App, click **Server Settings**.
2. In the **Security** section, click **Manage Users**.
3. On the Manage Users page, click **New User**.
4. On the New User page:
 - a. Clear the **User can be assigned as a resource** check box.
 - b. In the **Display Name** box, type **Workflow Proxy User**.
 - c. In the User **Authentication** section, type **Litware\WFProxy** in the **User logon account** box.
 - d. Select the **Prevent Active Directory synchronization for this user** check box.
 - e. In the **Security Categories** area, select **My Organization** in **Available Categories**, and then click **Add**.

Create a PWA site in a Project Server 2010 test environment

- f. Under **Permissions for My Organization**, select **Allow** for the following permissions:
 - i. **Open Project**
 - ii. **Save Project to Project Server**
 - iii. **View Enterprise Resource Data**
 - iv.
 - g. Under **Global Permissions**, select **Allow** for the following permissions:
 - i. **Log On**
 - ii. **Manage Users and Groups**
 - iii. **Manage Workflow and Project Detail Pages**
5. Click **Save**.

Once the user account is created, you can set the workflow proxy user account. Perform the following procedure to configure the workflow proxy user account.

To set the workflow proxy user account

1. In PWA, click **Server Settings**.
2. On the Server Settings page, under **Workflow and Project Detail Pages**, click **Project Workflow Settings**.
3. On the Project Workflow Settings page, in the **Workflow Proxy User account** box, type **Litware\WFProxy**, and then click **Save**.

You are now ready to start using the Project Web App site. The next step is to configure reporting to enable the Project Server reporting and business intelligence features. Proceed to the next article, [Configure reporting for a Project Server 2010 test environment](#).

Configure reporting for a Project Server 2010 test environment

(This article is part 9 of the Microsoft Project Server 2010 test environment deployment series. The procedures in this article assume that you have read the series in sequence starting with [Hyper-V quick start for creating a Project Server 2010 test environment](#).)

This article describes the steps that you must follow to configure reporting for the Microsoft Project Web App (PWA) site. To configure reporting, you must follow these steps:

- Add a login for a report author in SQL Server
- Configure Excel Services
- Configure Secure Store Service

Video demonstration

This video shows the steps involved in configuring reporting for Project Server 2010.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=196726) (http://go.microsoft.com/fwlink/?LinkId=196726). To download the video file, right-click the link, and then click **Save Target As**.

Configure SQL Server

In order for the report author to be able to access the Project Server 2010 Reporting database from Microsoft Excel, you must configure Microsoft SQL Server access and add a SQL Server login. The login must enable specific access to the Project Server 2010 Reporting database to gain access to schema information and data. Use the domain group that you created for report viewers (Litware\ProjReportAuthors).

To add a login for a report author

1. Log on to Litware-SQL using the Litware\SQLAdmin account.
2. Click **Start, All Programs, Microsoft SQL Server 2008, SQL Server Management Studio**.
3. On the **Connect to Server** dialog box, type **localhost** in the **Server name** box, and then click **Connect**.
4. Expand **Security**, right-click **Logins**, and then click **New Login**.
5. On the **General** page, click **Search**.
6. Click **Object Types**, and select the **Groups** check box.
7. Click **OK**.
8. Type **Litware\ProjReportAuthors**.

9. Click **Check Names**.
10. Click **OK**.
11. Select the **User Mapping** page.
12. In the **Users mapped to this login** list, select the row that contains the Project Server 2010 Reporting database (**ProjectServer_Reporting**).
13. Select the **Map** check box for the Project Server 2010 Reporting database.
14. Select the **db_datareader** database role membership check box.
15. Click **OK**.

The remaining steps in this article are performed from the SharePoint Central Administration Web site. Log on to Litware-Proj using the Litware\FarmAdmin account.

Configure Excel Services

Project Server 2010 requires Excel Services in Microsoft SharePoint Server 2010. The first step to configuring Excel Services is to turn on the Excel Calculation Services service.

▶ To turn on the Excel Calculation Services service

1. On the SharePoint Central Administration Web site, in the **System Settings** section, click **Manage services on server**.
2. In the **Service** list, click **Start** next to **Excel Calculation Services**.

Once the Excel Services service is running, the next step is to create an Excel Services service application.

▶ To create an Excel Services service application

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. On the **Service Applications** tab, click **New**, and then click **Excel Services**.
3. In the **Name** box, type **Excel Services Service App**.
4. In the **Application pool name** box, type **ExcelServicesAppPool**.
5. Choose **Litware\SVCApp** from the **Configurable** list.
6. Click **OK**.

Once Excel Services has been configured, you must configure trusted file locations for the Project Server 2010 Sample Reports and Templates libraries.

Follow this procedure two times: one time for each library.

▶ To configure a trusted file location

Configure reporting for a Project Server 2010 test environment

1. In Central Administration, in the **Application Management** section, click **Manage service applications**.
2. Click the Excel Services service application.
3. On the Manage Excel Services page, click **Trusted File Locations**.
4. Click **Add Trusted File Location**.
5. In the **Address** box, type:
For the Templates library:
<http://litware-proj/pwa/ProjectBICenter/Templates/>
or
For the Sample Reports library:
<http://litware-proj/pwa/ProjectBICenter/Sample%20Reports/>
6. Under **Trust Children**, confirm that the **Children trusted** check box is selected.
7. In the **External Data** section:
 - a. Under **Allow External Data**, select the **Trusted data connection libraries and embedded** option.
 - b. Under **Warn on Refresh**, clear the **Refresh warning enabled** check box.
8. Click **OK**.

You must configure trusted data connection libraries in order to give users access to the connectors that link the report spreadsheets to the data in the Project Server 2010 Reporting database and OLAP databases. Perform the following procedure to set up the trusted data connection libraries.

To set up trusted data connection libraries

1. In Central Administration, in the **Application Management** section, click **Manage Service Applications**.
2. Click the Excel Services service application.
3. Click **Trusted Data Connection Libraries**.
4. Click **Add Trusted Data Connection Library**.
5. In the **Address** box, type:
[http://litware-proj/pwa/ProjectBICenter/Data%20Connections%20for%20PerformancePoint/English%20\(United%20States\)](http://litware-proj/pwa/ProjectBICenter/Data%20Connections%20for%20PerformancePoint/English%20(United%20States))
6. Click **OK**.

Configure Secure Store

In SharePoint Server 2010, the Secure Store Service enables users to access multiple system resources without having to provide authentication credentials multiple times. SharePoint Server 2010 implements Secure Store Service authentication by including a Windows service and a secure credentials database.

The next step is to configure Secure Store by turning on the Secure Store Service and creating a Secure Store Service service application. Perform the following procedure to turn on the Secure Store Service.

▶ To turn on the Secure Store Service

1. On the SharePoint Central Administration Web site, in the **System Settings** section, click **Manage services on server**.
2. In the **Service** list, click **Start** next to **Secure Store Service**.

Once the Secure Store service is running, you must create a Secure Store Service Application. Use the following procedure.

▶ To create a Secure Store Service service application

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. On the **Service Applications** tab, click **New**, and then click **Secure Store Service**.
3. In the **Name** box, type **Secure Store Service Application**.
4. In the **Application pool name** box, type **SecureStoreAppPool**.
5. Choose a managed account from the **Configurable** list.
6. Click **OK**.
7. When the service application has been successfully created, click **OK**.

When the Secure Store Service Application has been created, you must generate a Secure Store Service key before the Secure Store service can be used. Perform the following procedure to generate a key.

▶ To generate a Secure Store Service key

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. Click the Secure Store service application.
3. On the **Edit** tab, click **Generate New Key**.
4. Type and confirm a **Pass Phrase**, and then click **OK**.

Once Secure Store is configured, you must create a Secure Store target application.

▶ To create a Secure Store target application

1. On the SharePoint Central Administration Home page, in the **Application Management** section, click **Manage Services Applications**.
2. Click the Secure Store Service.
3. On the Secure Store Service page, select the **Edit** tab.
4. Click **New**.
5. On the Create New Secure Store Target Application page:
 - a. In the **Target Application ID** box, type **ProjectServerApplication**.
6. On the Specify the credential fields for your Secure Store Target Application page, click **Next**.
7. On the Specify the membership settings page:
 - a. In the **Target Application Administrators** box, type **Litware\FarmAdmin**.
 - b. In the **Members** box, type **Litware\ProjReportViewers**.
 - c. Click **OK**.
8. On the Secure Store Service Application page, select the check box for the target application that you just created.
9. On the ribbon, click **Set Credentials**.
10. On the **Set Credentials for Secure Store Target Application (Group)** dialog box, type the user name and password of the Litware\ProjDataAccess account.



Note:

This value is case-sensitive.

- b. In the **Display Name** box, type **ProjectServerApplication**.
 - c. In the **Contact Email** box, type an e-mail address.
 - d. From the **Target Application Type** drop-down list, select **Group**.
 - e. Click **Next**.
6. On the Specify the credential fields for your Secure Store Target Application page, click **Next**.
 7. On the Specify the membership settings page:
 - a. In the **Target Application Administrators** box, type **Litware\FarmAdmin**.
 - b. In the **Members** box, type **Litware\ProjReportViewers**.
 - c. Click **OK**.
 8. On the Secure Store Service Application page, select the check box for the target application that you just created.
 9. On the ribbon, click **Set Credentials**.
 10. On the **Set Credentials for Secure Store Target Application (Group)** dialog box, type the user name and password of the Litware\ProjDataAccess account.



Important:

This account must have **db_datareader** permissions on the Project Server Reporting database. This can be achieved by adding the Litware\ProjDataAccess account to the Litware\ProjReportAuthors group.

11. Click **OK**.

The Project Server 2010 reporting and business intelligence functionality is now configured and ready for use.

See Also

[Project Server 2010 Ignite Training: Reporting Part 1](#)

[Project Server 2010 Ignite Training: Reporting Part 2](#)

Configure reporting for a Project Server 2010 test environment

Install Project Server 2010 to a stand-alone computer

Microsoft Project Server 2010 can be installed in a stand-alone configuration that uses Microsoft SQL Server 2008 Express. This configuration is useful for demonstration, but should not be used for a production environment.

The stand-alone configuration has fewer features than a full farm installation. Microsoft SQL Server Analysis Services (SSAS) and OLAP are not present in the stand-alone configurations. (Analysis Services and OLAP functionality can be configured to use a different instance of Microsoft SQL Server if you want.)

To install Project Server 2010 in stand-alone mode, you must first install Microsoft SharePoint Server 2010 in stand-alone mode. This includes installing the prerequisites for SharePoint Server 2010.

▶ To install SharePoint Server 2010 prerequisites

1. On the SharePoint Server 2010 DVD, run default.hta.
2. On the SharePoint Server 2010 first page, click **Install software prerequisites**.
3. Follow the wizard to complete installation of all prerequisites.



Note:

Depending on your configuration, you may have to restart your computer during this process.

4. When the wizard has finished, click **Finish**.

Once the software prerequisites have been installed, you can install SharePoint Server 2010. Use the following procedure to install SharePoint Server 2010 in stand-alone mode.

▶ To install SharePoint Server 2010

1. On the SharePoint Server 2010 DVD, run default.hta.
2. On the SharePoint Server 2010 first page, click **Install SharePoint Server**.
3. On the Enter your Product Key page, type your product key, and then click **Continue**.
4. On the Read the Microsoft Software License Terms page, read the license agreement and accept the terms by selecting the **I accept the terms of this agreement** check box.
5. Click **Continue**.
6. On the Choose the installation you want page, click **Standalone**.
SharePoint Server 2010 will install.
7. When the installation is complete, Click **Close**.

Install Project Server 2010 to a stand-alone computer

The SharePoint Products Configuration Wizard starts.

8. On the Welcome to SharePoint Products page, click **Next**.
9. On the warning dialog box, click **Yes**.
10. On the Configuration Successful page, click **Finish**.

Once SharePoint Server 2010 is installed, the next step is to install Project Server 2010 and run the SharePoint Products Configuration Wizard.

▶ To install Project Server 2010

1. On the Project Server 2010 DVD, run default.hta. The Setup menu opens.



Note:

Default.hta may run automatically when you insert the disk.

2. On the Start page, click **Install Project Server**.
3. On the Enter your Product Key page, type your product key, and then click **Continue**.
4. In the End User License Agreement page, review the terms of the agreement. To accept the agreement, select the **I accept the terms of this agreement** check box.
5. Click **Continue**.
6. On the Choose a file location page, click **Install Now**.
7. When the installation is complete, click **Close**.

The SharePoint Products Configuration Wizard starts.

8. On the Welcome to SharePoint Products page, click **Next**.
9. On the warning dialog box, click **Yes**.
10. On the Configuration Successful page, click **Finish**.

When the SharePoint Products Configuration Wizard finishes, the system will automatically create a PWA site. This may take several minutes. When the site has been created, it can be accessed at <http://<servername>/pwa>.



Note:

The account that you used to install Project Server is automatically added to the Project Server Administrators group.

See Also

[Deploy Project Server 2010 to a server farm environment](#)

[Hardware and software requirements \(Project Server 2010\)](#)

Deploy language packs (Project Server 2010)

Microsoft Project Server 2010 language packs enable Project Server 2010 users to view Microsoft Project Web App and project sites in multiple languages without requiring separate installations of Project Server 2010. You can add language support for additional languages to Project Server 2010 by installing the language pack for the language that you want to add. Language packs are typically used in multinational deployments where one server farm supports people in different locations and users want to see Project Web App displayed in their preferred language.

Language packs are not bundled into multilingual installation packages. You must install a specific language pack for each language that you want to support.

In this article:

- [Available languages for Project Server 2010 language packs](#)
- [Compatibility with SharePoint Server 2010 language packs](#)
- [Deploy a Project Server 2010 language pack](#)
- [Project site provisioning behavior when applying language packs](#)
- [Uninstall language packs](#)

Available languages for Project Server 2010 language packs

Project Server 2010 language packs are available for the following languages:

- Arabic
- Brazilian
- Chinese (SC)
- Chinese (TC)
- Czech
- Danish
- Dutch
- English
- Finnish
- French
- German
- Greek
- Hebrew
- Hungarian

- Italian
- Japanese
- Korean
- Norwegian (Bokmal)
- Polish
- Portuguese
- Russian
- Slovak (New for Project Server 2010)
- Slovenian (New for Project Server 2010)
- Spanish
- Swedish
- Turkish
- Ukrainian (New for Project Server 2010)

Compatibility with SharePoint Server 2010 language packs

Project Server 2010 language packs are bundled with language packs for several other Office Server products. When you download a 2010 Server Language Pack, it will contain the language pack for SharePoint Server 2010, Project Server 2010, Microsoft Search Server 2010, and Microsoft Office Web Apps.

SharePoint Server 2010 language packs differ from Project Server 2010 language packs in the functionality that they provide. SharePoint Server 2010 language packs allow site administrators to create sites in different languages, which requires the installation of language files on the computer. Project Server 2010 language files allow Microsoft Project Web App (PWA) and other project sites to be displayed in a different language.



Important:

Project Server 2010 does not support all of the languages that SharePoint Server 2010 supports.

The following languages are supported by SharePoint Server 2010, but are not available in Project Server 2010 language packs:

- Bulgarian
- Croatian
- Estonian
- Hindi
- Kazakh

- Latvian
- Lithuanian
- Romanian
- Serbian (Latin)
- Thai

Therefore, the 2010 Server language pack for Romanian contains the SharePoint Server 2010 language pack, but does not contain a language pack for Project Server 2010.



Warning:

Currently, installing a SharePoint Server 2010 language pack in a language not supported in Project Server 2010 may potentially cause issues if you then need to upgrade Microsoft Office Project Server 2007 data to a Project Server 2010 farm. This issue will be addressed in a future cumulative update.

For more information about SharePoint Server 2010 language packs, see [Deploy language packs \(SharePoint Server 2010\)](#).

Deploy a Project Server 2010 language pack

The steps for deploying a Project Server 2010 language pack and making the language available to users are as follows:

1. [Download the language pack](#)
2. [Install the language pack](#)
3. [Make the language available for the Project Web App site](#)
4. [Specify the display language for the site](#)

Download the language pack

You must perform the following steps for each language that you want to support. If you decide to download more than one language, be aware that a unique file that has a common name is downloaded for each language. Therefore, make sure that you download each language pack to a separate folder on the hard disk so that you do not overwrite a language pack of a different language.

To download the language pack

1. In your Web browser, go to the [2010 Server Language Packs for SharePoint Server 2010, Project Server 2010, Search Server 2010, and Office Web Apps 2010 download page](#).
2. On the 2010 Server Language Packs download page for SharePoint Server 2010, Project Server 2010, Search Server 2010, and Office Web Apps, select the language that you want from the **Change Language** list, and then click **Change**.
3. The language displayed on the site now corresponds to the language selected in the previous

step. Click **Download** on the Web page.



Note:

If the language on the page has not changed prior to clicking the **Download** command, verify that the language that you selected in step 2 is displayed in the **Change Language** field.

4. In the dialog box that appears, click **Save** to download a copy of the file to the local computer.



Note:

If you are adding multiple language packs, you should rename the language pack file (ServerLanguagePack.exe) to a more descriptive name (for example, FrenchServerLanguagePack.exe). Because the default name for all language pack files is the same, renaming the file will help to prevent confusion when you are installing the language packs.

Install the language pack

If you have a server farm environment and you are installing language packs to support multiple languages, you must install each language pack on all application servers and Web servers in your farm.

If you are installing the Project Server 2010 language pack on a single-server farm, use the following procedure:

▶ To install a Project Server 2010 language pack for a single-server farm deployment

1. In Windows Explorer, double-click the ServerLanguagePack.exe file to start the installation.
2. On the Read the Microsoft Software License Terms page, review the terms, select the **I accept the terms of this agreement** check box, and then click **Continue**.
3. The Setup wizard runs and installs the language pack.
4. Run the SharePoint Products Configuration Wizard, using the default settings.

If you are installing Project Server 2010 language packs for a multi-server farm deployment, use the following procedure:

▶ To install a Project Server 2010 language pack for a multi-server farm deployment

1. On a Web or application server in your farm, double-click the ServerLanguagePack.exe file to start the installation.
2. On the Read the Microsoft Software License Terms page, review the terms, select the **I accept the terms of this agreement** check box, and then click **Continue**.
3. The Setup wizard runs and installs the language pack.
4. The Run Configuration Wizard page appears when the language pack installation is complete.

Clear the **Run the SharePoint Products Configuration Wizard now** check box, and then click **Close**.

 **Warning:**

Do not run the SharePoint Products Configuration Wizard at this time.

5. On each Web and application server in the farm, install the language pack by using steps 1–4. Make sure not to run the SharePoint Products Configuration Wizard after you install the language pack.

 **Note:**

If you are installing multiple language packs, install each one to all Web and application servers in the farm by using steps 1–5. Make sure not to run the SharePoint Products Configuration Wizard after installing the language pack.

6. After installing the Project Server 2010 language pack to all Web and application servers in the farm, return to your original server and run the SharePoint Products Configuration Wizard. Use the following steps to run the wizard:
 - a. Click **Start**, click **All Programs**, click **Microsoft SharePoint 2010 Products**, and then click **SharePoint 2010 Products Configuration Wizard**.
 - b. On the Welcome to SharePoint Products page, click **Next**.
 - c. Click **Yes** in the dialog box that alerts you that some services might have to be restarted during configuration.
 - d. On the Completing the SharePoint Products and Technologies Configuration Wizard page, click **Next**.
 - e. On the Configuration Successful page, click **Finish**.
7. Run the SharePoint Products Configuration Wizard on all Web and application servers on the farm to complete the installation.

Make the language available for the Project Web App site

After installing the language pack, you now have to make the language available for the site. When you make the language available, you are making the language available on a site-by-site basis. For example, making the French language available for Project Web App only allows French to be available for Project Web App and project sites. The language must be made available for the Business Intelligence Center or for the SharePoint Central Administration Web site for it to be possible to display the site in that language.

Use the following procedure to select the language that you want to make available for the site.

 **To select a language for the site**

1. On the site, click **Site Actions**, and then click **Site Settings**.
2. On the Site Settings page, in the **Site Administration** section, click **Language Settings**.

3. On the Language Settings page, in the **Alternate Language(s)** section, click the check box next to the language that you want to make available for the site. If you have installed the Project Server 2010 language pack, the language for that language pack will be listed as an option for you to select.



Note:

You can select multiple languages if the site has to be available in more than one language.

4. Click **OK**.

Specify the display language for the site

After you have specified the languages that are available for the site, users can then specify the language they want to display for that site. A site user can use the following procedure to display the site in an available language:

▶ To select a display language

1. On the site page, on the right side of the status bar, click the user account name to display the drop-down list, and then click **Select Display Language**.
2. Available display languages for site will appear. Select the language in which you want the site to appear.

Project site provisioning behavior when applying language packs

Project Server 2010 project sites that are provisioned before a Project Server 2010 language pack is applied will still be viewable in the new language, if two conditions are met. Those conditions are as follows:

1. The language is made available to Project Web App
2. The user selects the new language to display

Once a language pack is applied, you can then choose which one should be the default language for the new site. It can either be the base language or any applied language pack. This choice is specified through the Project Site Provisioning settings on the Server Settings page.

▶ To select a new default language for project sites

1. On the Project Web App home page, click **Server Settings**.
2. On the Server Settings page, in the **Operational Policies** section, click **Project Site Provisioning Settings**.
3. On the Project Site Provisioning page, in the **Default Site Properties** section, click the **Default**

site template language drop-down list to display the available languages.

4. From the drop down list, select the language that you want as the default language for all newly provisioned project sites.
5. Click **OK**.

If a project site is provisioned after a Project Server 2010 language pack is applied, the only slight difference is that the project site Web Part will display the **Welcome to your site!** heading in the new default language. Other wording on the site will follow any language made available and chosen by the user. The base language of the server will always be automatically selected as an alternate language if a default other than the base language is used for provisioning a site.

Uninstall language packs

Uninstalling Project Server 2010 language packs is not supported. Changes that have been made to the Project Server 2010 databases by the installation of language packs cannot be rolled back.

If you no longer want to make a language available for a site, clear the language from the list on the Language Settings page for the site.

To remove a language for the site

1. On the Web site, click **Site Actions**, and then click **Site Settings**.
2. On the Site Settings page, in the Site Administration section, click **Language Settings**.
3. On the Language Settings page, in the **Alternate Language(s)** section, clear the check box next to the language that you want to make unavailable for the site.
4. Click **OK**.

Deploy Project Server 2010 with Exchange Server

These articles describe how to configure integration with Exchange Server, enabling Microsoft Project Server 2010 users to view Project Server tasks in Microsoft Outlook.

In order to perform these procedures, you must be member of the Project Server and Exchange Server administrator groups on the local computer.

In this section:

- [Configure Project Server 2010 to work with Exchange Server 2007 SP2](#)
- [Configure Project Server 2010 to work with Exchange Server 2010](#)
- [Configure Exchange Server 2010 Impersonation](#)

Configure Project Server 2010 to work with Exchange Server 2007 SP2

This article describes how to configure integration with Exchange Server 2007 SP2, enabling Project Server 2010 users to view Project Server tasks in Microsoft Office Outlook. This functionality replaces the Outlook Add-in task status reporting functionality for non-time-phased tasks that is available in previous versions of Project Server and enables task assignment updates using % complete or total work remaining. These task assignment updates are then auto-submitted to the Task Status Manager when the tasks are updated in the Exchange client.



Important:

Project Server uses Secure Sockets Layer (SSL) to access the Exchange Server and must trust the SSL certificate that was used by the Exchange farm. If you have a certificate issued by a trusted authority such as VeriSign, Project Server will trust the certificate. If your SSL certificate has not been issued by a trusted authority, you may have to export the certificate from the Exchange farm and import it as a trusted certificate on the computer that is running Project Server.

In order to perform these procedures, you must be member of the Project Server and Exchange Server administrator groups on the local computer.



Note:

The procedures and Windows PowerShell commands in this article assume that you are using Exchange Server 2007.

Configure Project Web App settings

To configure Exchange integration, the Project Server administrator must grant access to the instance of Exchange Server and the Exchange administrator must grant Exchange access to the Project Server farm administrator account.

▶ To activate Exchange Server synchronization

1. In Microsoft Project Web App (PWA), click **Server Settings**.
2. In the **Operational Policies** section, click **Additional Server Settings**.
3. On the **Additional Server Settings** page, in the **Exchange Server Details** section, select the **Synchronize tasks** check box and then click **Save**.

Each Exchange Client Access server in an Exchange farm needs a user account in PWA. This account allows Exchange to call the Project Server Exchange Web service when there are task updates that need to be synchronized. Perform the following procedure for each Exchange Client Access server.

▶ To create a user account for an Exchange Client Access server

1. In Project Web App, click **Server Settings**.
2. In the **Security** section, click **Manage Users**.
3. On the **Manage Users** page, click **New User**.
4. On the **New User** page, clear the check box stating **User can be assigned as a resource** and type the name of the Exchange Client Access server in the **Display Name** box.
5. In the **User Authentication** section, select the **Windows Authentication, using the Windows account** option, and type the name of the Exchange Client Access server computer account in the **User logon account** box.
6. In the **Security Groups** section, in the **Available Groups** list, select **Administrators** and then click **Add**.
7. Click **Save**.

Synchronization must be set up for each individual Project Server user for whom you want to synchronize tasks. Perform the following procedure for each user.

▶ To configure a user account for Exchange Server synchronization

1. In Project Web App, click **Server Settings**.
2. Under **Security** click **Manage Users**.
3. In the users list click the name of the user that you want to configure.
4. On the **Edit User** page, select the **Synchronize Tasks** check box
5. Click **Save**.

When configuring Exchange, you have to know the application pool identity that is associated with your PWA site. Use the following procedure to determine the identity.

▶ To determine the application pool identity for the Project Web App site

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage Service Applications**.
2. On the **Application Management** page, click **Manage Service Applications**.
3. On the **Application Management** page, highlight **Project Service Application**, and on the ribbon click **Properties**.
4. In the properties window on the **Manage Project Web App Service Application** page, note the account configured to run the application pool. This account is required to configure Exchange Server settings in the next procedure.

Synchronization must be set up for each individual Project Server user for whom you want to synchronize tasks.

Configure Exchange Server settings

The next step is to configure Exchange Server. Use the following procedure to grant impersonation permission to the PWA application pool account. Perform this procedure on each Exchange Client Access server in an Exchange farm.

▶ To grant farm administrator impersonation permissions

1. Log on to the computer that is running Exchange Server as an administrator.

 **Warning:**

If your farm uses a different account to run the Project Server Queue Service you may need to use that one in place of the farm administrator account.

2. Click **Start, All Programs, Microsoft Exchange Server 2007 SP2, Exchange Management Shell**.
3. At the prompt, type the following command:

```
Add-ADPermission -Identity (get-exchangeserver).DistinguishedName -User (Get-User -Identity <AppPoolAccount>| select-object).identity -extendedRights ms-Exch-EPI-Impersonation
```

 **Note:**

Enter the above where <AppPoolAccount> is the application pool account for the Project Server service application noted in the previous procedure.

Perform the following procedure for each Project Server user for whom you want to synchronize tasks with Exchange.

▶ To configure an Exchange user

1. Log on to the computer that is running Exchange Server as an administrator.
2. Click **Start, All Programs, Microsoft Exchange Server 2007 SP2, Exchange Management Shell**.
3. At the prompt, type the following command: **Add-ADPermission -Identity "<ProjUser>" -User <FarmAdministrator> -extendedRights ms-Exch-EPI-May-Impersonate**.

 **Note:**

Enter the above where <ProjUser> is the name of the Project Server user that you are configuring and <FarmAdministrator> is the SharePoint Server farm administrator account.

See Also

[Deployment for Project Server 2010](#)

Configure Project Server 2010 to work with Exchange Server 2010

This article describes how to configure integration with Microsoft Exchange Server 2010, which enables Microsoft Project Server 2010 users to view Project Server tasks in Microsoft Outlook. This functionality replaces the Outlook Add-in task status reporting functionality for non-time-phased tasks that is available in previous versions of Project Server and enables task assignment updates using percent complete or total work remaining. These task assignment updates are then auto-submitted to the Task Status Manager when the tasks are updated in the Exchange client.

Important:

Project Server uses Secure Sockets Layer (SSL) to access Exchange Server and must trust the SSL certificate that was used by the Exchange farm. If you have a certificate issued by a trusted authority such as VeriSign, Project Server will trust the certificate. If your SSL certificate has not been issued by a trusted authority, you should export the certificate from the Exchange farm and import it as a trusted certificate on the computer that is running Project Server.

In order to perform these procedures, you must be a member of the Project Server and Exchange Server administrator groups on the local computer.

Note:

The procedures and Windows PowerShell commands in this article assume that you are using Exchange Server 2010.

Video demonstration

This video shows the steps involved in configuring integration with Exchange Server.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=202797) (http://go.microsoft.com/fwlink/?LinkId=202797). To download the video file, right-click the link, and then click **Save Target As**.

Configure Project Web App settings

To configure Exchange integration, the Project Server administrator must grant access to the instance of Exchange Server and the Exchange administrator must grant Exchange access to the Project Server farm administrator account.

To start Exchange Server synchronization

1. In Microsoft Project Web App (PWA), click **Server Settings**.
2. In the **Operational Policies** section, click **Additional Server Settings**.

Configure Project Server 2010 to work with Exchange Server 2010

3. On the **Additional Server Settings** page, in the **Exchange Server Details** section, select the **Synchronize tasks** check box and then click **Save**.

Each Exchange Client Access server in an Exchange farm needs a user account in PWA. This account allows for Exchange to call the Project Server Exchange Web service when there are task updates that have to be synchronized. Perform the following procedure for each Exchange Client Access server.

▶ To create a user account for an Exchange Client Access server

1. In Project Web App, click **Server Settings**.
2. In the **Security** section, click **Manage Users**.
3. On the **Manage Users** page, click **New User**.
4. On the **New User** page, clear the check box stating **User can be assigned as a resource** and type the name of the Exchange Client Access server in the **Display Name** box.
5. In the **User Authentication** section, select the **Windows Authentication, using the Windows account** option, and type the name of the Exchange Client Access server computer account in the **User logon account** box.
6. In the **Security Groups** section, in the **Available Groups** list, select **Administrators**, and then click **Add**.
7. Click **Save**.

Synchronization must be set up for each Project Server user for whom you want to synchronize tasks. Perform the following procedure for each user.

▶ To configure a user account for an Exchange Server synchronization

1. In Project Web App, click **Server Settings**.
2. In the **Security** section, click **Manage Users**.
3. In the Users list, click the name of the user whom you want to configure.
4. On the **Edit User** page, select the **Synchronize Tasks** check box.
5. Click **Save**.

When configuring Exchange, you have to know the application pool identity that is associated with your PWA site. Use the following procedure to determine the identity.

▶ To determine the application pool identity for the Project Web App site

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage Service Applications**.
2. On the **Application Management** page, click **Manage Service Applications**.
3. On the **Application Management** page, highlight **Project Service Application**, and on the ribbon click **Properties**.

4. In the properties window on the **Manage Project Web App Service Application** page, note the account configured to run the application pool. This account is required to configure Exchange Server settings in the next procedure.

Synchronization must be set up for each Project Server user for whom you want to synchronize tasks.

Configure Exchange Server settings

The next step is to configure Exchange Server. Use the following procedure to grant impersonation permission to the PWA application pool account. Perform this procedure on each Exchange Client Access server in an Exchange farm.

▶ To grant farm administrator impersonation permissions

1. Log on as an administrator to the computer that is running Exchange Server.

Warning:

If your farm uses a different account to run the Project Server Queue Service you may need to use that one in place of the farm administrator account.

2. Click **Start**, then click **All Programs**, then click **Microsoft Exchange Server 2010**, and then click **Exchange Management Shell**.
3. At the prompt, type the following command:

```
Add-ADPermission -Identity (get-exchangeserver).DistinguishedName -User (Get-User -Identity <AppPoolAccount>| select-object).identity -extendedRights ms-Exch-EPI-  
Impersonation
```

<AppPoolAccount> is the application pool account for the Project Server service application noted in the previous procedure.

Perform the following procedure for each Project Server user for whom you want to synchronize tasks with Exchange.

▶ To configure an Exchange user

1. Log on to the computer that is running Exchange Server as an administrator.
2. Click **Start**, **All Programs**, **Microsoft Exchange Server 2007**, **Exchange Management Shell**.
3. At the prompt, type the following command:

```
Add-ADPermission -Identity "<ProjUser>" -User <FarmAdministrator> -extendedRights ms-  
Exch-EPI-May-Impersonate
```

<ProjUser> is the name of the Project Server user whom you are configuring, and <FarmAdministrator> is the SharePoint Server farm administrator account.

Configure Project Server 2010 to work with Exchange Server 2010

See Also

[Deployment for Project Server 2010](#)

Configure Exchange Server 2010 Impersonation

This article describes how to configure Exchange Server Impersonation when you configure the integration of Microsoft Project Server 2010 in a Microsoft Exchange Server 2010 environment that has more than one computer that is running Exchange Server.

Configuring Exchange Impersonation is a resolution to the event log error PSError: GeneralExchangeSyncError (40500) System.Web.Services.Protocols.SoapException: The account does not have permission to impersonate the requested user.

In order to perform these procedures, you must be a member of the Project Server and Exchange Server administrator groups on the local computer.

**Note:**

The procedures and Windows PowerShell commands in this article assume that you are using Exchange Server 2010.

Configure Exchange Impersonation for all users in an organization

Because Microsoft Exchange Server 2010 uses the Role Based Access Control permissions model, you must first assign the ApplicationImpersonation role to Project Server users in the organization by using the **New-ManagementRoleAssignment** command in the Exchange Management Shell.

▶ To configure Exchange Impersonation for all users in an organization

1. Open the Exchange Management Shell.
2. Run the **New-ManagementRoleAssignment** command to add the permission to impersonate the specified user. The following example details how to configure Exchange Impersonation to enable a service account to impersonate all other users in an organization.

```
New-ManagementRoleAssignment -Name <impersonationAssignmentName> -Role  
applicationImpersonation -User <serviceAccount>
```

Each Exchange Client Access Server (CAS) role in an Exchange Server farm needs a user account in Microsoft Project Web App (PWA). This account allows for Exchange to call the Project Server Exchange Web service when there are task updates that have to be synchronized. Perform the following procedure for each Exchange Client Access server.

Configure Exchange Impersonation for specific users or groups of users

Whether for policy or even size of the Exchange Server deployment, you might have to configure Exchange Server impersonation only for specific users or groups. This can be achieved by creating a new management scope for the Exchange Role Based Access Control permissions.

► To configure Exchange Impersonation for specific users or groups of users

1. Open the Exchange Management Shell.
2. Run the **New-ManagementScope** command to create a scope to which the impersonation role can be assigned.

The following example shows how to create a management scope for a specific group.

```
New-ManagementScope -Name <scopeName> -RecipientRestrictionFilter  
<recipientFilter>
```

3. Run the **New-ManagementRoleAssignment** command to add the permission to impersonate the members of the specified scope. The following example shows how to configure Exchange Impersonation to enable a service account to impersonate all users in a scope.

```
New-ManagementRoleAssignment -Name <impersonationAssignmentName> -Role  
<ApplicationImpersonation> -User <serviceAccount> -CustomRecipientWriteScope  
<scopeName>
```

The `RecipientRestrictionFilter` parameter of the **New-ManagementScope** command defines the members of the scope. You can use properties of the identity object to create the filter.

After impersonation permissions have been established, the user who has impersonation permissions can make calls against the other user's account. For information about how to use Exchange Impersonation in an Exchange Web Services request see [Configuring Exchange Impersonation](http://go.microsoft.com/fwlink/?LinkId=195376) (<http://go.microsoft.com/fwlink/?LinkId=195376>) in the MSDN Library Online.

See Also

[Deployment for Project Server 2010](#)

[Configure Project Server 2010 to work with Exchange Server 2010](#)

Upgrade to Project Server 2010

This section of the Microsoft Project Server documentation covers the process of upgrading to Project Server 2010.

- [TechNet Webcast: Project Server 2010 upgrade and migration](#)
This Microsoft TechNet Webcast discusses Microsoft Project Server 2010 features, requirements, and deployment considerations that IT professionals need to know about.
- [Backward compatibility mode \(Project Server 2010 TechNet Webcast\)](#)
This Microsoft TechNet Webcast discusses the Microsoft Project Server 2010 Backwards Compatibility Mode (BCM) feature, which helps you to accelerate deployment of Microsoft Project 2010.
- [Backward compatibility mode \(BCM\) \(Project Server 2010\)](#)
These articles discuss backward compatibility mode (BCM) and how to create a Microsoft Project Web App in BCM.
- [In-place upgrade to Project Server 2010](#)
This article describes the process of doing an in-place upgrade from Microsoft Office Project Server 2007 to Project Server 2010.
- [Upgrade considerations for Project Web App Web Parts](#)
This article describes the corrective actions that are necessary for PWA Web Parts when you from Microsoft Office Project Server 2007 to Microsoft Project Server 2010.
- [Database-attach full upgrade to Project Server 2010](#)
This article describes how to do a database-attach full upgrade to Project Server 2010, in which you back up the required databases in the old farm and then restore them in the new farm.
- [Database-attach core upgrade to Project Server 2010](#)
This article describes how to do a database-attach core upgrade to Project Server 2010, in which you are basically using backup copies of your Office Project Server 2007 databases that contain your project data.
- [Virtual migration environment \(VME\) guide for Project Server 2010](#)
The Project Server VME is a virtualized Office Project Server 2007 environment that contains all the necessary applications and utilities required to migrate Microsoft Office Project Server 2003 data to Office Project Server 2007. To migrate from Project Server 2003 to Project Server 2010, first you must migrate your data to Office Project Server 2007 format.
- [Upgrade to Project Server 2010 from Project Server 2003](#)
This series of articles provides information and procedures about how to migrate from Microsoft Office Project Server 2003 to Project Server 2010.

TechNet Webcast: Project Server 2010 upgrade and migration

This Microsoft TechNet Webcast discusses Microsoft Project Server 2010 features, requirements, and deployment considerations that IT professionals need to know about. Topics discussed in this Webcast include upgrade options from both Microsoft Office Project Server 2003 and Microsoft Office Project Server 2007 to Microsoft Project Server 2010. Topics also include tools, processes, scenarios, best practices for upgrade and migration, the effect on Project Server of coexisting with SharePoint 2010 Products, and full-farm versus split-farm upgrades.

The presenters in this Webcast are:

- Jean-Francois LeSaux, EPM Lead Architect, Microsoft Corporation
- Steven Haden, Senior Consultant, Microsoft Corporation

[TechNet Webcast: Project Server 2010 Upgrade and Migration](http://go.microsoft.com/fwlink/?LinkId=190247)

(<http://go.microsoft.com/fwlink/?LinkId=190247>)



Note:

This Webcast is one of seven available in a series. For a complete list of all available Webcasts from this series, see [Project Server 2010 IT-Professional TechNet Webcasts](#).

Backward compatibility mode (Project Server 2010 TechNet Webcast)

This Microsoft TechNet Webcast discusses the Microsoft Project Server 2010 Backwards Compatibility Mode (BCM) feature, which helps you to accelerate deployment of Microsoft Project 2010. With BCM, various desktop and server versions of Microsoft Project can seamlessly coexist and exchange data. BCM exists on Project 2010 desktop applications and Microsoft Project Server 2010, and in certain scenarios BCM makes it possible for Microsoft Office Project Professional 2007 to access Project Server 2010. We advise you to view [TechNet Webcast: Project Server 2010 Upgrade and Migration](http://go.microsoft.com/fwlink/?LinkId=190247) (<http://go.microsoft.com/fwlink/?LinkId=190247>) prior to attending this Webcast.

The presenter in this Webcast is Jan Kalis (Senior Technical Product Manager, Microsoft Corporation).

[TechNet WebCast: Project Server 2010 – Backwards Compatibility Mode](#)



Note:

This Webcast is one of seven in a series. For a complete list of all available Webcasts from this series, see [Project Server 2010 IT-Professional TechNet Webcasts](#).

Backward compatibility mode (BCM) (Project Server 2010)

Backward compatibility mode (BCM) is a feature in upgraded Microsoft Project Server 2010 environments that allows for connectivity from both Project Professional 2010 and Project Professional 2007 SP2 clients. This feature allows you the convenience of upgrade your Project Professional clients (it does not have to be done the same time as the server upgrade). It is also possible to create a new Project Server 2010 Project Web App site in backward compatibility mode if you create the site with empty Office Project Server 2007 databases.

For more information about BCM, see the following articles:

- [Project Server 2010 backward compatibility mode \(BCM\)](#)
- [Create a PWA site in backward compatibility mode \(Project Server 2010\)](#)

Project Server 2010 backward compatibility mode (BCM)

Backward Compatibility Mode (BCM) is a feature in Project Server 2010 that assists in the upgrade of your Enterprise Project Management environment. Project Server 2010 accepts connections from the Microsoft Project Professional 2010 client, but it can also accept connections from Microsoft Office Project Professional 2007 with Service Pack 2 (SP2) if BCM is enabled in Project Server 2010. BCM is enabled automatically after you upgrade to Project Server 2010. By enabling BCM after you upgrade from Office Project Server 2007 to Project Server 2010, you avoid having to upgrade your Office Project Professional 2007 client computers at the same time. Because Project Server 2010 accepts connections from both Office Project Professional 2007 SP2 and Project Professional 2010 clients when BCM is enabled, you can decide to upgrade your clients later, and in batches (running in a mixed environment), if you want. When you have finished upgrading the clients to Project Professional 2010, you can turn off BCM in Project Server 2010 server settings, which then allows for only Project Professional 2010 connections.

For more information about BCM, you can also view the training video [TechNet WebCast: Project Server 2010 – Backward Compatibility Mode](#).

Disabling Backward Compatibility Mode



Important:

Once BCM is disabled, it cannot be re-enabled. Verify that you want to disable BCM if you are going to make the change.



Important:

Before disabling BCM, verify that all projects are checked in. If any projects are checked out when BCM is disabled, mismatched projects may exist (for example, checked out projects will remain in compatibility mode). Projects in this condition can lead to problems with edits and data loss, and can cause Project Professional 2010 to stop responding.



Note:

Microsoft Office Project Professional 2003 cannot connect to Project Server 2010, even if BCM is enabled.

To disable Backward Compatibility Mode

1. On the Project Server 2010 home page, click **Server Settings**.
2. On the Server Settings page, in the **Operational Policies** section, click **Additional Settings**.
3. On the Additional Settings page, in the **Project 2007 Compatibility Mode** section, clear the

Enable Project 2007 Compatibility Mode check box.

4. Click **OK**.
5. After making the change, you must check out and open the Enterprise Global file in Microsoft Project Professional 2010. In the Enterprise Global file, make a very minor change (for example, dragging the splitter bar on the screen), save the file, and then check it back in. This is required to upgrade the Enterprise Global file to the newer version of the Microsoft Project Professional client.



Important:

The Enterprise Global file must be upgraded to the Project Professional 2010 client after BCM is disabled. This ensures that all new projects are in native mode with all Project Professional 2010 features enabled. (All new projects are based on the Enterprise Global file). This also ensures that workflows function correctly.

We recommend that BCM only be enabled as a temporary measure to help in the upgrade process. When Project Server 2010 is configured in Backward Compatibility Mode, Project Professional 2010 clients that connect with Project Server 2010 have certain features that are disabled. These include the following:

- Manually scheduled tasks are not available on the server or client.
- Tasks cannot be set to inactive.
- Font strikethrough is not available.
- All departmental custom fields are enforced in Office Project Professional 2007.
- Workflow-controlled custom fields are available as read-only.

All new features that are available in Project Professional 2010 (for example, Timeline, Team Planner, 32-bit colors) are available to Project Professional 2010 users, but not to Office Project Professional 2007 SP2 users.

Office Project Professional 2007 SP2 connecting to Project Server 2010 in BCM mode is blocked from providing functionality that requires loading a Microsoft Project Web App page in the client. This includes doing approvals and opening enterprise resources. As a workaround, you can use Project Web App on a Web browser to do these functions until you are ready to upgrade to Project Professional 2010.

Additionally, workflow-controlled custom fields are not available in Office Project Professional 2007 SP2.



Note:

Project Web App access to Project Server 2010 requires that you use either Windows Internet Explorer 7 or Windows Internet Explorer 8 as your Web browser. For more information, see [Plan browser support \(Project Server 2010\)](#).

Enabling Backward Compatibility Mode on a new installation of Project Server 2010

By default, in non-upgrade installations of Project Server 2010, the BCM option is not available (the option is not available within the Server Settings page). However, it is possible to use BCM with a new instance of Project Web App by deploying PWA with a set of empty Office Project Server 2007 SP2 or SP3 databases. This would enable the new Project Server 2010 instance to accept connections from both Office Project Professional 2007 with Service Pack 2 (with the BCM client limitations listed above) and Project Professional 2010.

For information about using Office Project Server 2007 empty databases to enable BCM on a new installation of Project Server 2010, see [Create a PWA site in backward compatibility mode \(Project Server 2010\)](#). This article also references the [Project Server 2007 empty databases for use with Project Server 2010 Backward Compatibility Mode](#) page in the Microsoft Download Center.

See Also

[Project Server 2010 upgrade overview](#)

[In-place upgrade to Project Server 2010](#)

[Database-attach full upgrade to Project Server 2010](#)

[Database-attach core upgrade to Project Server 2010](#)

[TechNet Webcast: Project Server 2010 upgrade and migration](#)

[Backward compatibility mode \(Project Server 2010 TechNet Webcast\)](#)

Create a PWA site in backward compatibility mode (Project Server 2010)

Backward Compatibility Mode (BCM) is a feature in Microsoft Project Server 2010 that assists in the upgrade of your Enterprise Project Management environment. While BCM is turned on, Project Server 2010 accepts connections from Microsoft Office Project Professional 2007 with Service Pack 2 (SP2) and Microsoft Project Professional 2010.

BCM is enabled automatically after you upgrade to Project Server 2010 from a previous version, but you can also create a new Microsoft Project Web App (PWA) site with BCM turned on by using a set of empty Office Project Server 2007 databases. This allows you to continue to use Office Project Professional 2007 in your organization.



Note:

Some new features in Project Server 2010, such as manually scheduled tasks, are not available while BCM is turned on. Other features, such as departmental and workflow-controlled custom fields, have limited functionality.

Creating a new PWA site with BCM turned on consists of the following steps:

1. Download the empty Office Project Server 2007 databases
2. Restore the empty Office Project Server 2007 databases to an instance of Microsoft SQL Server
3. Create a PWA site that uses the restored databases

Download the databases

A set of empty Office Project Server 2007 databases is available from the Microsoft Download Center. This includes the four Project Server databases — Draft, Published, Archive, and Reporting. These are supported for production use.

These databases are English databases but they can be used to create PWA sites in other languages as long as both languages (English and the language of the PWA site) are installed on Project Server. For more information about installing language packs on Project Server, see [Deploy language packs \(Project Server 2010\)](#).

You can download the databases from the [Microsoft Download Center](#) (<http://go.microsoft.com/fwlink/?LinkId=207026>).

The database backup files are provided in a compressed folder. Unzip the database backup files to a file share that you can access from the instance of SQL Server where you want to restore the backups.

Restore the databases

Each of the four databases must be restored to an instance of SQL Server. The Draft, Published, and Archive databases must all reside on the same instance of SQL Server. The Reporting database can be restored to a different instance of SQL Server if you want.

Use the following procedure to restore each database backup.

▶ To restore a database

1. Open SQL Server Management Studio and connect to the database engine.
2. Right-click **Databases** and click **Restore Database**.
3. Select the **From device** option and click the browse button.
4. Click **Add**, select the backup that you want to restore, and then click **OK**.
5. Click **OK**.
6. In the **Restore** column of the **Select the backup sets to restore** list, select the check box for the backup that you want to restore.
7. In the **To database** text box, type a name for the restored database.
8. Click **OK**.

Create a PWA site that uses the restored databases

Creating a PWA site that uses the restored databases involves creating a new PWA site in the Project Service Application and specifying the names of the restored databases.

▶ To create a PWA site that uses the existing databases

1. In the SharePoint Central Administration Web site under **Application Management**, click **Manage service applications**.
2. Click the Project Server service application.
3. Click **Create Project Web App Site**.
4. Complete the Create Project Web App Site page as designated in the following table:

Option	Description
SharePoint Web Application to Host Project Web App	The Web application for the PWA site.
Project Web App path	The path from the root site for this PWA site.
Select a language	The user interface language for this PWA site.
Use Project Web App path as	Use this option if you want to host PWA on a root URL (for

Create a PWA site in backward compatibility mode (Project Server 2010)

host header	example, https://www.contoso.com).
Administrator Account	The user account that will be added to the Project Server Administrators security group in this instance of PWA. You must use this account the first time that you access PWA.
Primary database server	The instance of SQL Server where you restored the Office Project Server 2007 empty databases.
Published database name	The name of the Office Project Server 2007 Published database that you restored.
Draft database name	The name of the Office Project Server 2007 Draft database that you restored.
Archive database name	The name of the Office Project Server 2007 Archive database that you restored.
Reporting database server	The instance of SQL Server where you restored the Office Project Server 2007 Reporting database.
Use primary database server	Select the check box if you restored the Reporting database to the primary database server specified earlier. Clear the check box if you restored the Reporting database to a different database server, and specify the instance of SQL Server that you want to use in the Reporting database server box.
Reporting database name	The name of the Project Server Reporting database for this instance of PWA.
Quota for SharePoint content in this site	The maximum site storage, in megabytes, for the PWA site.
Quota Warning for SharePoint content in this site	The site storage level, in megabytes, at which a warning e-mail message will be sent to the site administrator.

5. Click **OK**.

Turning off BCM

You can use the PWA site with BCM for as long as required. When you no longer need to be able to access the PWA site from Office Project Professional 2007, you can turn off BCM, and the new features available in Project Server 2010 will become available.

Before you disable BCM, verify that all projects are checked in. If any projects are checked out when BCM is disabled, mismatched projects may exist (for example, the checked out projects will remain in

Create a PWA site in backward compatibility mode (Project Server 2010)

Backward Compatibility Mode). Projects in this condition can lead to problems with edits and data loss, and can cause Project Professional 2010 to stop responding.



Important:

Turning off BCM upgrades the database schemas of the Project Server databases to the standard Project Server 2010 schema. Once BCM has been turned off, it cannot be turned on again.

For more information about turning off BCM, see [Project Server 2010 backward compatibility mode \(BCM\)](#).

In-place upgrade to Project Server 2010

 **Important:**

Upgrading from the Project Server 2010 public Beta to the Project Server 2010 released version is explicitly blocked and not supported. This restriction applies to both the in-place and database-attach upgrade methods.

When you run an in-place upgrade from Microsoft Office Project Server 2007 to Microsoft Project Server 2010, the configuration data for the farm and all the content in the farm is upgraded on the existing hardware, in a fixed order. When you start the in-place upgrade process, Setup takes the entire farm offline and the Web sites and Microsoft Project Web App sites are unavailable until the upgrade is finished, and then Setup restarts the server. After you begin an in-place upgrade, you cannot pause the upgrade or roll back to the previous version.

You can also choose to upgrade only your project data and optionally your Project Web App site data to another server, which would be required if the in-place upgrade requirements mentioned later in this article are not met. For more information about other Project Server 2010 upgrade methods, see [Project Server 2010 upgrade overview](#).

 **Important:**

You must be running Office Project Server 2007 with SP2 with the October 2009 Cumulative Update in a 64-bit Windows Server 2008 environment to perform an in-place upgrade to Project Server 2010. You must also be running a 64-bit version of Microsoft SQL Server 2008 Service Pack 1 with Cumulative Update 2, or the 64-bit version of Microsoft SQL Server 2005 Service Pack 3 with Cumulative Update 3.

In this article:

- [Process overview](#)
- [Before you begin](#)
- [Install prerequisites](#)
- [Run SharePoint Server 2010 Setup on all servers](#)
- [Run Project Server 2010 Setup on all servers](#)
- [Run the SharePoint Products and Technologies Configuration Wizard](#)
- [Verification](#)

Process overview

By using the procedures in this article, you install Project Server 2010 and upgrade Project Web App and all the project data in the environment. Microsoft SharePoint Server 2010 Enterprise version is a prerequisite for Project Server 2010 and must be installed on all servers in the farm also. We

recommend that you try out the upgrade process on a test environment before you attempt to upgrade your production environment.

When upgrading a server farm, install and configure the new version to the servers in the following order:

1. Install SharePoint Server 2010 on all servers in the server farm.
2. Install Project Server 2010 on all servers in the server farm.
3. Run the SharePoint Products and Technologies Configuration Wizard on the server that contains the SharePoint Central Administration Web site.

To determine which server is running SharePoint Central Administration, open the Servers in Farm page (http://server_name:adminport/_admin/farmservers.aspx) and note which server or servers have **Central Administration services** running. Perform this step before you install SharePoint Server 2010, while SharePoint Central Administration for Office Project Server 2007 is still available.



Note:

If you have multiple servers running SharePoint Central Administration, pick one and use that as the initial server on which to run upgrade. After you have completed the process on that one, you can continue with any other servers running SharePoint Central Administration.

4. Run the configuration wizard on the remaining front-end Web servers and application servers in the farm in any order.



Note:

It is important that you only run the SharePoint Products Configuration Wizard after the installation files for both SharePoint Server 2010 and Project Server 2010 are on all servers in the farm. Running it prior to this can cause data inconsistencies on the farm.

Before you begin

It is recommended that you back up your environment before you begin the upgrade process. For more information, see [Back up and restore a Project Server 2007 farm](#).

Review required permissions

To deploy Project Server 2010 on a server farm, you must provide credentials for several different accounts.

The following table describes the accounts that are used to install and configure Project Server 2010.



Important:

Although it is a good practice to install Project Server 2010 by using the least-privileged administration method, you cannot perform an in-place upgrade by using this method. To run

Setup and the SharePoint Products Configuration Wizard, you must have administrator access to the local computer and to Microsoft SQL Server.

Account	Purpose	Requirements
SQL Server service account	<p>The SQL Server service account is used to run SQL Server. It is the service account for the following SQL Server services:</p> <ul style="list-style-type: none"> • MSSQLSERVER • SQLSERVERAGENT <p>If you do not use the default SQL Server instance, these services will be shown as the following:</p> <ul style="list-style-type: none"> • MSSQL\$InstanceName • SQLAgent\$InstanceName 	<p>Use either a Local System account or a domain user account.</p> <p>If you plan to back up to or restore from an external resource, permissions to the external resource must be granted to the appropriate account. If you use a domain user account for the SQL Server service account, grant permissions to that domain user account. However, if you use the Network Service or the Local System account, grant permissions to the external resource to the machine account (domain_name\SQL_hostname\$).</p>
Setup user account	<p>The Setup user account is used to run the following:</p> <ul style="list-style-type: none"> • Setup • The SharePoint Products Configuration Wizard 	<ul style="list-style-type: none"> • Domain user account. • Member of the Administrators group on each server on which Setup is run. • SQL Server login on the computer that runs SQL Server. • Member of the following SQL Server security roles: <ul style="list-style-type: none"> • securityadmin fixed server role • dbcreator fixed server role <p>If you run Windows PowerShell cmdlets that affect a database, this account must be a member of the db_owner fixed database role for the database.</p>
Server farm account or database access account	<p>The server farm account is used to perform the following tasks:</p> <ul style="list-style-type: none"> • Configure and manage the server farm. • Act as the application pool identity for the SharePoint Central 	<ul style="list-style-type: none"> • Domain user account. <p>Additional permissions are automatically granted for the server farm account on Web servers and application servers that are joined to a server farm.</p> <p>The server farm account is automatically added as a SQL Server login on the</p>

Account	Purpose	Requirements
	<p>Administration Web site.</p> <ul style="list-style-type: none"> Run the Windows SharePoint Services Timer service. 	<p>computer that runs SQL Server. The account is added to the following SQL Server security roles:</p> <ul style="list-style-type: none"> dbcreator fixed server role securityadmin fixed server role db_owner fixed database role for all databases in the server farm

Review required hardware and software

You must have the following software and hardware installed and configured to perform the steps in this article.

	Requirement	Details
Operating System	Windows Server 2008 R2 and Windows Server 2008 with Service Pack 2 (SP2) (64-bit)	For more information about migrating to a 64-bit operating system, see Migrate an existing server farm to a 64-bit environment (Project Server 2007) .
Project Server	Project Server 2007 Service Pack 2 with the October 2009 Cumulative Update applied	<p> Important</p> <ul style="list-style-type: none"> You must apply both Service Pack 2 and the October 2009 Cumulative update. If you attempt to execute and in-place upgrade without these updates, it can result in an unrecoverable state. For information about installing Office Project Server 2007 SP2, see Deploy Service Pack 2 for Office Project Server 2007. For more information about installing cumulative updates, see Deploy cumulative updates (Project Server 2007).
SQL Server	64-bit version of SQL Server 2005 Service Pack 2 with Cumulative Update 3, OR	For more information about moving databases to a 64-bit version of SQL Server, see Migrate an existing server farm to a 64-bit environment a

	Requirement	Details
	64-bit version of SQL Server 2008 Service Pack 1 with Cumulative Update 2 Your databases must be hosted on either of these two 64-bit versions of SQL Server. SQL Server 2000 and non-64-bit versions are not supported for Project Server 2010.	64-bit environment (Project Server 2007) .
Windows SharePoint Services	Windows SharePoint Services 3.0 with SP2	Although not a requirement, as a best practice, you may want to match the cumulative update level of Office Server 2007 applications.

If you are using the in place upgrade method to upgrade a Office Project Server 2007 farm that is integrated with Office SharePoint Server 2007, then Office SharePoint Server 2007 has this additional requirement:

	Requirement	Details
Service Pack Level	Office SharePoint Server 2007 with SP2	For information about installing Office SharePoint Server 2007 SP2, see Deploy software updates for Office SharePoint Server 2007 .

Install prerequisites

Before you can upgrade, you must run the prerequisite installer successfully on each server that has Office Project Server 2007 installed. A prerequisite installer is available to install software needed to support Project Server 2010.

To run the prerequisite installer

1. From the product disc, open the installation folder and run splash.hta to open the Start page. On the Start page, click **Install software prerequisites** to run Prerequisite Installer.
The SharePoint Products and Technologies 2010 Preparation tool opens.
2. Click **Next**.
3. On the License Terms page, select the **I accept the terms of the License Agreement(s)**

check box, and then click **Next**.

The tool runs, installing and configuring required software.

4. Click **Next**.
5. On the Installation Complete screen, verify that each prerequisite is listed as successfully installed or already installed.
6. Click **Finish** to close the wizard.

Run SharePoint Server 2010 Setup on all servers

After all of the prerequisites are installed, you can run the SharePoint Server 2010 Setup.exe on all servers in your server farm.

Important:

If you are running an in-place upgrade on a server farm, disconnect all the users from the server farm by stopping the World Wide Web Publishing Service (W3SVC) on all front-end Web servers. If you allow users in a server farm to connect after the files and databases have been updated on one Web server, but before the other Web servers have been updated, users will not be able to browse the Web sites. You should also stop the Project Queuing service on all application servers. This action ensures that nothing will be processed by Project Server 2007 while the upgrade is happening.

To install the new version of SharePoint Server 2010

1. Run Splash.hta to open the Start page. On the Start page, click **Install SharePoint Server**.
2. On the Enter your Product Key page, type your product key for SharePoint Server 2010 Enterprise edition, and then click **Continue**.
3. On the Read the Microsoft Software License Terms page, review the terms, select the **I accept the terms of this agreement** check box, and then click **Continue**.
4. On the Upgrade earlier versions page, click **Install Now**.
5. Setup runs and installs SharePoint Server 2010.

On the completion page, clear the **Run the SharePoint Products and Technologies Configuration Wizard now** check box, and then click **Close**.

Important:

Do not run the SharePoint Products Configuration Wizard at this time. You will be directed to run it later when all installation files for both applications are installed on all Web and application servers in the server farm.

If you require any language template packs for SharePoint Server 2010, install them now. For more information, see [Install available language template packs \(SharePoint Server 2010\)](#).

Run Project Server 2010 Setup on all servers

After SharePoint Server 2010 is installed to all servers in the farm, you can run the Project Server 2010 Setup.exe on all servers in your server farm.

To install the new version of Project Server 2010

1. Run Splash.hta to open the menu page. Click **Install Project Server**.
2. On the Enter your Product Key page, type your product key for Project Server 2010, and then click **Continue**.
3. On the Read the Microsoft Software License Terms page, review the terms, select the **I accept the terms of this agreement** check box, and then click **Continue**.
4. On the Upgrade earlier versions page, click **Install Now**.
5. Setup runs and installs Project Server 2010.

On the completion page, clear the **Run the SharePoint Products and Technologies Configuration Wizard now** check box, and then click **Close**.

Run the SharePoint Products and Technologies Configuration Wizard

If you are upgrading a single server, you can run the SharePoint Products and Technologies Configuration Wizard on only that server and start upgrading content. If you are upgrading a server farm, first run the SharePoint Products and Technologies Configuration Wizard on the server running SharePoint Central Administration. Then go to each server in the farm and run the wizard. It is important to upgrade SharePoint Central Administration before you attempt to upgrade any other content in the farm, and completing the wizard on the server running SharePoint Central Administration allows you to do so.

Be sure that you have installed any language template packs before you run the SharePoint Products and Technologies Configuration Wizard.

Caution:

After you run the configuration wizard, Office Project Server 2007 will no longer be available. You cannot pause or roll back the setup and upgrade process. Be sure that you have a current and valid backup of your environment before you proceed with installing Project Server 2010.

Important:

When you run the SharePoint Products and Technologies Configuration Wizard, make sure that the wizard completely finishes running before you attempt to run it on another server. The wizard will also start the Upgrade Timer job, and this must completely finish running as well. You should inspect the upgrade logs for completion of the upgrade session on the server before attempting to run the wizard on another server.

▶ **To run the SharePoint Products and Technologies Configuration Wizard**

1. Click **Start**, point to **All Programs**, click **SharePoint Products**, and then click **SharePoint 2010 Products Configuration Wizard**.
2. In the SharePoint Products Configuration Wizard, on the Welcome to SharePoint Products and Technologies page, click **Next**.

A message appears, notifying you that Internet Information Services (IIS), the SharePoint Administration Services v4, and the SharePoint Timer Service v4 may need to be restarted or reset during configuration.
3. Click **Yes** to continue with the wizard.
4. On the Specify Farm Settings page, in the **Passphrase** box, type a passphrase and in the **Confirm passphrase** box, type the same passphrase.

The passphrase should be at least 8 characters and should contain at least three of the following four character groups:

 - English uppercase characters (from A through Z)
 - English lowercase characters (from a through z)
 - Numerals (from 0 through 9)
 - Nonalphabetic characters (such as !, \$, #, %)
5. On the Completing the SharePoint Products and Technologies Configuration Wizard page, verify the settings, and then click **Next**.

The configuration wizard runs and configures the configuration database and SharePoint Central Administration for Project Server 2010.
6. A message appears, notifying you that if you have a server farm with multiple servers, you must run Setup on each server to install new binary files before continuing the configuration wizard.
 - If this is the only server in your farm, or if you have already run Setup on all of the servers in your farm, click **OK** to continue with the wizard.
 - If you have not yet run Setup on all of the servers in your farm, run Setup on the remaining servers now, and then return to this server and click **OK** to continue with the wizard.

The configuration wizard continues the upgrade process by setting up the configuration database and installing SharePoint Central Administration.
7. On the Configuration Successful, Upgrade in Progress page, review the settings that have been configured, and then click **Finish**.

The SharePoint Products and Technologies Configuration Wizard closes and the Upgrade Status page opens. You might be prompted to enter your user name and password before the Upgrade Status page will open. The upgrade process might take a while to complete, depending on how much data is in your farm.
8. If you are upgrading a server farm, you can now complete the SharePoint Products and

Technologies Configuration Wizard on the other servers in the farm.

9. After upgrade is completed successfully for all sites, if you stopped the World Wide Web Publishing Service (W3SVC) on all front-end Web servers before the upgrade, manually start the World Wide Web Publishing Service on the front-end Web servers to make the Web servers available to users. Also verify that the Project Queuing service has restarted on all Project application servers in the farm. If it has not, restart it.

If you are upgrading a Office Project Server 2007 farm that is integrated with Office SharePoint Server 2007, you can monitor the upgrade process for each site from the Upgrade Status page in SharePoint Central Administration or by using the **localupgradestatus** operation in Stsadm.exe. For more information, see [Verify upgrade and review upgraded sites \(SharePoint Server 2010\)](#).

Verification

If upgrade fails or reports issues, you can refer to the log and error files for more information. Upgrade logs files are generated to the following default location: C: \Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\Logs

Each upgrade log file will be stamped with the date and time that it was generated.

There are two types of possible failures that you might find in the log:

- **Failures in the psconfig portion of the upgrade:** You can restart the SharePoint Products and Technologies Configuration Wizard to restart the upgrade.
- **Failures in the SPTimer portion of the upgrade:** You can restart upgrade by running the following command in a Command Prompt window:

Psconfig -cmd -upgrade -inplace v2v -force -wait

Upgrade considerations for Project Web App Web Parts

When you upgrade from Microsoft Office Project Server 2007 to Microsoft Project Server 2010, the Project Web Access Web Parts used in Office Project Server 2007 are upgraded to Project Server 2010 and may present certain problems and may require corrective action. The actions that you have to take include the following:

- Verify that the visual upgrade feature is configured to use the SharePoint Server 2010 user interface
- Fix the upgraded Project Web App Web Parts on sites in the same site collection as Project Web App
- Fix the upgraded Project Web App Web Parts on sites not in the same site collection as Project Web App
- Remove the upgraded Data Analysis Web Part



Important:

It is especially important to be aware of Project Web Access Web Part upgrade issues if you are upgrading both your Office Project Server 2007 and the Microsoft Office SharePoint Server 2007 environment on which it resides.

For more information about Project Web App Web Parts in Project Server 2010, see the following articles:

- [Plan for Project Server 2010 Web Parts](#)
- [Add or remove Project Web App Web Parts for a site in the Project Web App site collection \(Project Server 2010\)](#)
- [Add Project Web App Web Parts to a site not within the Project Web App site collection \(Project Server 2010\)](#)

Verify that the visual upgrade feature is configured to use the SharePoint Server 2010 user interface

Project Web App Web Parts do not appear correctly with the Office SharePoint Server 2007 user interface that is available through the SharePoint Server 2010 visual upgrade feature. By default, the SharePoint Server 2010 visual upgrade feature preserves the Office SharePoint Server 2007 user interface of upgraded sites. However, there is also an option during upgrade setup that enables you to upgrade all sites to the SharePoint Server 2010 user interface.

For sites that have the Office SharePoint Server 2007 user interface after the upgrade process, a switch to the SharePoint Server 2010 user interface is still possible. Site owners and site collection

owners can change to the new user interface in the **Site Settings** section by selecting the **Update the User Interface** option. Site owners and site collection owners can also see how the site will look in SharePoint Server 2010 by using the **Preview User Interface** option.

For more information about the SharePoint Server 2010 visual upgrade feature, see [Plan visual upgrade \(SharePoint Server 2010\)](#).

To change the visual upgrade feature to the SharePoint Server 2010 user interface

1. On the site, click **Site Actions**, and then click **Site Settings**.
2. On the Site Settings page, in the **Look and Feel** section, click **Title, Description, and Icon**.
3. On the Title, Description, and Icon page, in the **Visual Upgrade** section, click **Preview the New User Interface** to temporarily view the site in the SharePoint Server 2010 user interface. This lets you see how the Web Parts appear on the site in the SharePoint Server 2010 user interface.
4. To permanently change the site user interface from Office SharePoint Server 2007 to SharePoint Server 2010, return to the Title, Description, and Icon page and click **Update the User Interface**, and then click **OK**.

Important:

Once you decide to update the user interface, you cannot revert to the Office SharePoint Server 2007 user interface.

Fix the upgraded Project Web App Web Parts on sites in the same site collection as Project Web App

After you upgrade to Project Server 2010, all Project Web App Web Parts on sites in the same site collection as Project Web App require an update to their PSIURL property. The PSIURL property is a URL that points to the target Project Web App you are referencing. The format should be `http://<server>/<pwa>`.

For example, after you upgrade, you have a Project site (`http://contoso/PWA/sites/Projectsite1`) that contains a Project Center Web Part. You would have to edit the Project Center Web Part and update the PSIURL to point to the PWA site that you want the Web Part to connect to and display data from (`http://contoso/pwa`).

To change the PSIURL property of a Project Web App Web Part

1. On the site, click the **Site Actions** menu, and then click **Site Settings**.
2. On the Site Settings page, in the **Galleries** section, click **Web Parts**.
3. In the Web Parts Gallery, select the check box next to the Web Part that you want to edit.
4. Click the **Documents** tab to ensure that the Documents server ribbon appears. In the

Upgrade considerations for Project Web App Web Parts

Documents server ribbon, click **Download a Copy**.

5. In the **File Download** dialog box, click **Save**.
6. In the **Save As** dialog box, select a location on your computer in which to save the file. Click **Save**.
7. Open the Web Part in Notepad. In Notepad, in the `<properties>` section, add the following property:

```
PSIURL <property name="PsiUrl" type="string"> http://server/PWA</property>
```

For the PSIURL value, verify that the URL you enter is for the PWA site that the Project Web App Web Part is using as a data source. For example: For example: `PSIURL <property name="PsiUrl" type="string"> http://Contoso/PWA</property>`

If the PSIURL property already exists, edit the entry to point to the correct URL. If you edit the entry, verify that you remove a `null="true"` parameter that may exist in the PSIURL property. Ensure that the PSIURL property that you edit contains only the name and type parameters and the URL (as shown in the examples earlier).

8. Click **File**, and then click **Save** to save your changes. Close Notepad.
9. In the Web Parts Gallery page, on the Documents server ribbon, click **Upload Document**, and then click **Upload Document – Upload a document from your computer to the library**.
10. In the **Upload Web Part** dialog box, make sure **Overwrite existing files** is selected, and then click **Browse**. In the **Choose File to Upload** dialog box, locate and select the Web Part file that you edited, and then click **Open**.
11. In the **Upload Web Part** dialog box, click **Open**.
12. In the Web Part Gallery property page for the Web Part, click **Save**.



Important:

After updating all the Project Web App Web Parts on the site, make sure that you refresh the site to verify that the Project Web App Web Parts appear correctly.

Fix the upgraded Project Web App Web Parts on sites not in the same site collection as Project Web App

After you upgrade from Office Project Server 2007 to Project Server 2010, Project Web App Web Parts that are on sites that are not in the Project Web App site collection must be manually removed and replaced. This is required because the upgrade process replaces the Project Web App Web Parts on these sites with invalid Web Parts (also known as "error Web Parts").

The following are the steps that are required to replace the invalid Project Web App Web Parts to make them functional on the site page:

1. Remove the Project Web App Web Parts from the site.
2. Import valid Project Web App Web Parts from a site in the Project Web App site collection.

Upgrade considerations for Project Web App Web Parts

3. Change the PSIURL for the imported Project Web App Web Parts.
4. Upload the Project Web App Web Parts to the Web Parts Gallery for the site.
5. Add the Project Web App Web Parts to the site.

Remove the Project Web App Web Parts from site

Use the following procedure to delete the invalid Project Web App Web Parts from the Web Parts page for the site.

To remove a Project Web App Web Part from a page

1. On the site, click the **Site Actions** menu, and then click **Edit Page**.
2. The page will appear in Edit mode. Select the Web Part that you want to remove, click the Web Part menu (next to the check box in the upper-right corner of the Web Part), and then click **Delete**.
3. In the **Message from Web Part** dialog box, click **OK** to confirm that you want to delete the Web Part.
4. The page will appear with the Web Part removed. Click the **Page** tab to display the Page server ribbon, and then click **Stop Editing**.

Import valid Project Web App Web Parts from a site in the Project Web App site collection

After you have removed all the invalid Project Web App Web Parts from the site, you import valid Project Web App Web Parts into the Web Parts Gallery. You can import them from a site that is already in the Project Web App site collection. This makes them available when you have to re-add them to the site.

To import Project Web App Web Parts from a site in the Project Web App site collection

1. Open a site in the Project Web App site collection.
2. Click the **Site Actions** menu, and then click **Site Settings**. On the Site Setting page, in the **Galleries** section, click **Web Parts**.
3. On the All Web Parts page, from the **Web Parts** list, select the check box next to all of the Project Web App Web Parts that you want to import to the other site.
4. Click the **Documents** tab to display the Documents server ribbon. Click **Download a Copy**. In the **File Download** dialog box, click **Save**. In the **Save As** dialog box, select a location on your desktop to save the Web Part to and then click **Save**.

Update the PSIURL property for each Project Web App Web Part

After you download the Project Web App Web Parts to your desktop, you must add or update the PSIURL property for each Web Part file.

▶ To change the PSIURL property for a Web Part file

1. Open the Web Part in Notepad. In Notepad, in the `<properties>` section, add the following property:

```
PSIURL <property name="PsiUrl" type="string"> http://server/PWA</property>
```

For the PSIURL value, verify that the URL you enter is for the PWA site that the Project Web App Web Part is using to display its data. For example: `PSIURL <property name="PsiUrl"`

```
type="string"> http://Contoso/PWA</property>
```

If the PSIURL property already exists, edit the entry to point to the correct URL.

2. Click **File**, and then click **Save** to save your changes to the Web Part file.
3. Repeat the procedure for all Project Web App Web Parts that you are importing.

Add the Project Web App Web Part to the Web Part Gallery for the site

After you edit the PSIURL for each Project Web App Web Part, you must upload the Web Parts to the Web Part Gallery for the site to make them available to add to the Web Parts page.

▶ To add the Project Web App Web Parts to the Web Part Gallery

1. Open the site to which you want to import the Project Web App Web Parts. On this site, click **Site Actions**, and then click **Site Settings**. On the Site Settings page, in the **Galleries** section, click **Web Parts**.
2. Click the **Documents** tab to display the Documents server ribbon. Click **Upload Document**.
3. Select the Web Parts you want to import from your desktop and upload them to the Web Parts Gallery.

Add the Project Web App Web Parts to the site

After you import valid Project Web App Web Parts into the site's Web Part Gallery, you must add the valid Project Web App Web Parts to the site. You might also have to enable the Project Web Access server ribbon on the site, if the Project Web App Web Part you are adding to the site has a dependency on the ribbon.

▶ To add the valid Project Web Access Web Parts to the site

1. On the site page, click the **Site Actions** menu, and then click **Edit Page**. The page will appear

Upgrade considerations for Project Web App Web Parts

in Edit mode.

2. Click **Add a Web Part** in the location in which you want to add the Project Web App Web Part.
3. On the Browse server ribbon, in the **Category** list, select **Project Web App**, and then click the Project Web App Web Part that you want to add to the location on the page. Click **Add**. Repeat steps 2 and 3 to add any remaining Project Web App Web Parts that you want to add to the page.

The page then appears with the added Project Web App Web Parts, but it is still in Edit mode.

4. When you are finished adding the Project Web App Web Parts to the page, click the **Page** tab to display the Page server ribbon, and then click **Stop Editing**.
5. Refresh the site to verify that the Project Web App Web Parts appear correctly.

Some Project Web App Web Parts have a ribbon dependency and must have the Project Web App server ribbon enabled on the site in order to appear correctly. You must enable the Project Web App ribbon on the site before adding any Project Web App Web Parts that require the ribbon.

The PWA Web Parts that have a ribbon dependency are as follows:

- Project Details
- Project Center
- Resource Assignments
- Resource Center
- My Tasks
- Approval Center
- Team Tasks
- My Schedule
- My Timesheet

Use the following procedure to enable the Project Web App server ribbon feature on a site if the PWA Web Part that you are adding has a dependency on it:

To enable the ribbon feature on a site

1. On the site on which you want to enable the ribbon, click the **Site Actions** menu, and then click **Site Settings**.
2. On the Site Settings page, in the **Site Collection Administration** section, click **Site Collection Features**.
3. On the Site Collection Administration-Features page, find **Project Web App Ribbon** and then click the **Activate** button to the right of it.

Remove the upgraded Data Analysis Web Part

The Data Analysis Web Part is not available in Project Server 2010. Upgrading from Office Project Server 2007 to Project Server 2010 replaces the Data Analysis Web Part with an error Web Part. After you upgrade from Office Project Server 2007, the Data Analysis Web Part should be removed from the Web Part Gallery. Removing it from the Web Part Gallery makes it unavailable for all users.

To remove the Project Web App Data Analysis Web Part from the Web Part Gallery

1. Open a site in the Project Web App site collection.
2. On the site page, click the **Site Actions** menu, and then click **Site Settings**.
3. On the Site Settings page, in the Galleries section, click **Web Parts**.
4. In the All Web Parts page, click the check box next to the Data Analysis Web Part.
5. Click the **Documents** tab to display the Documents server ribbon. On the Documents ribbon, click **Delete Document**.
6. On the confirmation dialog box that asks you to confirm, click **OK** to delete the Web Part from the Gallery.

See Also

[Add or remove Project Web App Web Parts for a site in the Project Web App site collection \(Project Server 2010\)](#)

[Plan for Project Server 2010 Web Parts](#)

[Add Project Web App Web Parts to a site not within the Project Web App site collection \(Project Server 2010\)](#)

[Manage Web Parts \(SharePoint Server 2010\)](#)

[Developing Project Server 2010 Web Parts \(http://go.microsoft.com/fwlink/?LinkID=204589\)](http://go.microsoft.com/fwlink/?LinkID=204589)

Database-attach full upgrade to Project Server 2010

**Important:**

Upgrading from the Project Server 2010 public Beta to the Project Server 2010 released version is explicitly blocked and not supported. This restriction applies to both the in-place and database-attach upgrade methods.

When you upgrade from Microsoft Office Project Server 2007 to Microsoft Project Server 2010 by using the database attach upgrade process, you upgrade only the content for your environment, and not the configuration settings. Using a database attach upgrade process is useful when you are changing hardware or want to reconfigure your server farm topology as part of the upgrade process. It is also required if you are upgrading from Office Project Server 2007 deployed on a hardware that only supports a 32-bit server operating system.

Database-attach upgrade to Project Server 2010 can be done in either of two ways:

- Database Attach full upgrade: Migrates the project data stored in the Office Project Server 2007 databases, plus the Microsoft Project Web App (PWA) site data stored in a SharePoint content database.
- Database Attach core upgrade: Migrates only the project data stored in the Office Project Server 2007 databases.

This article provides the procedures required to perform a database attach full upgrade. For information about different types of methods for upgrading to Project Server 2010, see [Project Server 2010 upgrade overview](#).

Process overview

When you perform a database attach full upgrade, you will back up the required databases in the old farm and then restore them in the new farm. When you restore the SharePoint content database that contains your Project Web Access site data and add it to the new farm, the upgrade process runs and upgrades the database. After you restore the Office Project Server 2007 databases, they are upgraded to Project Server 2010 when they are used to provision a Project Web Access instance in Project Server 2010. While both the database attach upgrade process and the in-place upgrade process are similar in functionality, the database attach upgrade keeps the original Office Project Server 2007 environment intact because you are using backup copies of the databases for the upgrade processes.

Before you begin

Before you begin the database attach full upgrade to Office Project Server 2007, review the following information about permissions, hardware requirements, and software requirements. Follow the specified steps to install or configure prerequisite software or to modify settings.

Review required permissions

You must have at least the following permissions to complete the procedures in this article:

- On the database server from which the databases are being detached you must be a member of the following roles:
 - The **db_owner** fixed database role.
 - The **db_backupoperator** fixed database role.
- On the server farm to which the databases are being attached, you must be a member of the local Administrators group, and you must be a member of the following roles on the database server:
 - The **dbcreator** fixed server role.
 - The **db_owner** fixed database role.
- In some environments, you must coordinate the move procedures with the database administrator. Be sure to follow any applicable policies and guidelines for handling databases.

Review required hardware and software

You must be running one of the following products on the database servers to perform these procedures:

- On your Office Project Server 2007 environment: the Microsoft SQL Server Client tools for SQL Server 2000, SQL Server 2005, or SQL Server 2008. These are required to back up your required databases.
- On your Project Server 2010 environment: a 64-bit version of one of the following products:
 - SQL Server 2008 Service Pack 1 with Cumulative Update 2
 - SQL Server 2005 Service Pack 3 with Cumulative Update 3



Note:

Project Server 2010 databases can only be hosted on 64-bit versions of these two versions of SQL Server.

Perform prerequisite steps

Before you back up the databases, you must prepare for the upgrade by following these steps:

1. Create a new server farm environment. For information about creating the new environment, see [Deploy Project Server 2010 to a server farm environment](#).

2. If you have custom site definitions in the old environment, create new site definitions and upgrade definition files for these site definitions and deploy them to the new environment.

Database attach full upgrade overview

A database attach full upgrade will upgrade your Office Project Server 2007 databases and will also restore and the Project Web Access site's content database to your Project Server 2010 farm. The following databases are upgraded in a database attach full upgrade:

- Draft
- Archive
- Publish
- Reporting
- SharePoint content database (containing your Project Web Access site data)

A database attach full upgrade differs from a database attach core upgrade in the fact that the core upgrade will only upgrade your Office Project Server 2007 databases, migrating only your Office Project Server 2007 project data. If you only want to upgrade your Office Project Server 2007 project data, see [Database-attach core upgrade to Project Server 2010](#).

To perform a database attach full upgrade, you must follow these general steps:

1. [Verify your Project Server 2007 data](#)
2. [Extract your Project Web Access site from a content database to a new content database \(Optional\)](#)



Note:

This extraction is only required if your Project Web Access site data is not contained in its own site collection (and therefore, its own content database). Doing this step extracts your Project Web Access site data from an existing content database and then puts it in its own content database.

3. [Back up the databases in SQL Server](#)
4. [Restore the backup copies to the new farm](#)
5. [Add the restored content database to the Project Server 2010 farm](#)
6. [Provision a new Project Server 2010 PWA instance using the restored databases](#)
7. [Diagnose failures](#)
8. [Configure for post-installation](#)
9. [Verify whether the migration has been successful](#)

These steps require that you have Project Server 2010 installed in your environment. You do not need to configure a Project Web Access site prior to doing this procedure. You also do not need to do post-installation configuration such as configuring for Exchange Server integration or reporting, which can be

done after upgrading. For more information about installing Project Server 2010, please see [Deploy Project Server 2010 to a server farm environment](#).

Verify your Project Server 2007 data

You must verify that your Office Project Server 2007 data is in a valid state to help ensure that your upgrade will be successful. You must verify the following:

- All projects should be checked-in.
- The Project Web App site name of "ProjectBICenter" is reserved in Project Server 2010. Verify that Office Project Server 2007 does not use this as a Project Web App site name.
- The list name of "Project Detail Page" is reserved in Project Server 2010. Verify that Office Project Server 2007 Project Web Access does not contain a list with this same name.
- Resolve all custom field and lookup table name conflicts with names that are reserved in Project Server 2010. See the [Custom field and lookup table name conflicts](#) section for more information.

Custom field and lookup table name conflicts

There are certain custom fields and lookup tables name that are reserved in both Office Project Server 2007 and Project Server 2010. If you are upgrading from Office Project Server 2007, verify that you do not have custom field names that are in conflict with the names reserved for Project Server 2010. If any of these names are used in the current Office Project Server 2007 database, the custom fields and outline codes must be changed in Office Project Server 2007 before proceeding further with the migration. Use Microsoft Office Project Professional 2007 connected to a Office Project Server 2007 instance to validate and take corrective action.

Reserved outline code names

Outline code name	Type	Office Project Server 2007	Project Server 2010
Cost Type	Resource	X	X
Health	Task	X	X
State	Project	X	X
Team Name	Resource	X	X
Department			X
Flag Status			X

Reserved custom field names

Custom field name	Type	Office Project Server 2007	Project Server 2010
Cost Type	Resource	X	X
Health	Task	X	X
State	Project	X	X
Team Name	Resource	X	X
Sample Approved Finish Date	Project		X
Sample Approved Start Data	Project		X
Sample Areas Impacted	Project		X
Sample Assumptions	Project		X
Sample Business Need	Project		X
Sample Compliance Proposal	Project		X
Flag Status	Task		X
Sample Goals	Project		X
Sample Post-Implementation Review Date	Project		X
Sample Post-Implementation Review Notes	Project		X
Sample Primary Objectives	Project		X
Project Departments	Project		X
Project Impact	Project		X
Sample Proposal Cost	Project		X
Sample Proposed Finish Date	Project		X
Sample Proposed Start Date	Project		X
Relative Importance	Project		X
Resource Departments	Resource		X

Extract your Project Web Access site from a content database to a new content database (Optional)



Note:

Only use this procedure if you do not have a separate content database for your Project Web Access site data.

If you do not have a separate content database for your Project Web Access site, your Project Web App site data may share its content database with data from other sites. In this situation, we recommend that you extract the Windows SharePoint Services site collection for PWA into a new content database.

Using this procedure has the following requirements.

- You must have a fully functional Office Project Server 2007 farm.
- You must have administrative access to the computer in which the farm is running.
- In your Office Project Server 2007 farm, you must have at least one Web application (other than the Web application where your Project Web App site exists). A new Web application on `http://server:82` is an example of such an application.
- You know where your Stsadm command-line tool exists. The default location is:
%PROGRAMFILES%\Common Files\Microsoft Shared\Web Server Extensions\12\BIN.

▶ To extract Project Web Access site content from a content database to a new content database:

1. Identify the URL of the site collection you want to back up (for example, `http://server/PWA`).
2. Use the following Stsadm command to back up the site collection:

Stsadm -o backup -url<SiteURL>-filename<FullPathToBackupFile>

For example: `Stsadm -o backup -url http://server/pwa -filename c:\temp\backup.bak`

3. Use the following Stsadm command to create a new content database in your second Web application.

Stsadm.exe -o addcontentDB -url<NewWebAppURL>-ds<SQLServerName>-dn<NewContentDBName>

For example: `Stsadm.exe -o addcontentDB -url http://server:82 -ds CorpSQL1 -dn PWAContentDB`

4. Use the following Stsadm command to restore the site collection to the second Web application.

Stsadm -o restore -url<SiteURL>-filename<FullPathToBackupFile>

For example: `Stsadm -o restore -url http://server:82/NewPWA -filename c:\temp\backup.bak`

Make sure the site URL that you intend to use while restoring does not already exist in the new Web application (or else this procedure will fail). You are not required to use the same name

you used during backup.

The name you use to restore should be the name you intend to use when you upgrade the data to Project Server 2010.

Back up the databases in SQL Server

Follow the appropriate procedure to back up your Office Project Server 2007 databases and your Project Web Access site content database in SQL Server 2000, SQL Server 2005, or SQL Server 2008 (depending on which you are using to host the databases). Repeat the procedure for each of the following databases in the original server farm:

- Content
- Project Server_Draft
- Project Server_Archived
- Project Server_Published
- Project Server_Reporting

At the end of this procedure, you will have created duplicates of each database.

► To back up a database in SQL Server 2000

1. On the database server, click **Start**, point to **All Programs**, point to **Microsoft SQL Server**, and then click **Enterprise Manager**.
2. In SQL Server Enterprise Manager, expand **Microsoft SQL Servers**.
3. Expand **SQL Server Group**.
4. Expand **(local) (Windows NT)**.
5. Expand **Databases**.
6. Right-click the database that you want to back up, point to **All Tasks**, and then click **Backup Database**.
7. In the **SQL Server Backup** dialog box, in the **Name** box, specify a name for the backup, and then, in the **Backup** area, select **Database - complete**.
8. In the **Destination** area, either select an existing destination or do the following:
 - a. Click **Add**.
 - b. In the **Select Backup Destination** box, select **File Name**, and then, next to the **File Name** box, click **Browse**.
 - c. In the **Backup Device Location - (local)** dialog box, in the **File name** box, type a file name, and then click **OK**.
 - d. Click **OK** again to close the **Select Backup Destination** dialog box.
9. Click **OK** to start the backup process.
10. Click **OK** to acknowledge that the backup process is complete.

Repeat the previous procedure to back up the remaining required databases.

▶ To back up a database in SQL Server 2005

1. On the database server, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
2. In the **Connect to Server** box, fill in the connection information, and then click **Connect**.
3. After you connect to the appropriate instance of the SQL Server 2005 Database Engine, in Object Explorer, expand the server tree by expanding the server name.
4. Expand **Databases**, right-click the database that you want to back up, point to **Tasks**, and then click **Back Up**. The **Back Up Database** dialog box appears.
5. In the **Source** area, in the **Database** box, verify the database name.
6. In the **Backup type** box, select **Full**.
7. Under **Backup component**, select **Database**.
8. In the **Backup set** area, in the **Name** text box, either accept the default backup set name that is suggested or type a different name for the backup set.
9. In the **Destination** area, specify the type of backup destination by selecting **Disk** or **Tape**, and then specify a destination. To create a different destination, click **Add**.
10. Click **OK** to start the backup process.

Repeat the previous procedure to back up the remaining required databases.

▶ To back up a database in SQL Server 2008

1. On the database server, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2008**, and then click **SQL Server Management Studio**.
2. In the **Connect to Server** box, fill in the connection information, and then click **Connect**.
3. After you connect to the appropriate instance of the SQL Server 2008 Database Engine, in Object Explorer, expand the server name.
4. Expand **Databases**, right-click the database that you want to back up, point to **Tasks**, and then click **Back Up**. The **Back Up Database** dialog box appears.
5. In the **Source** area, in the **Database** box, verify the database name.
6. In the **Backup type** box, select **Full**.
7. Under **Backup component**, select **Database**.
8. In the **Backup set** area, in the **Name** box, either accept the default backup set name or type a new name.
9. In the **Destination** section, specify the type of backup destination by selecting **Disk** or **Tape**, and then specify a destination. To create a different destination, click **Add**.
10. Click **OK** to start the backup process.

If you need more information about backing up databases in SQL Server, see the following articles:

- SQL Server 2008 Books Online: [Backing up and restoring databases in SQL Server](#)
- SQL Server 2005 Books Online: [Backing up and restoring databases in SQL Server](#)
- SQL Server 2000 Books Online: [Backup and restore operations](#)

Restore the backup copies to the new farm

After you have configured the new Project Server 2010 server farm, you can restore the backup copies of the databases on the SQL Server instance that you are using to host your Project Server 2010 databases. Note that you must restore to a 64-bit version of SQL Server 2008 SP1 with CU2, or 64-bit SQL Server 2005 SP3 with CU3. Start with one database, and then verify that the recovery has worked before you restore the other databases.

The following section provides procedures for restoring the backups.

▶ To restore a backup copy of a database in SQL Server 2005 Enterprise Edition

1. In SQL Server Management Studio, right-click **Databases**, and then click **Restore Database**. The **Restore Database** dialog box appears.
2. In the **Restore Database** dialog box, on the **General** page, in the **To database** box, type the name of the database you are restoring.
3. In the **To a point in time** box, keep the default (**Most recent possible**).
4. To specify the source and location of the backup sets to restore, click **From device**, and then click **Browse** to select the backup file.
5. In the **Specify Backup** dialog box, in the **Backup media** box, be sure that **File** is selected.
6. In the **Backup location** area, click **Add**.
7. In the **Locate Backup File** dialog box, select the file that you want to restore, and then click **OK**.
8. In the **Select the backup sets to restore** grid, select the **Restore** check box next to the most recent full backup.
9. In the **Restore Database** dialog box, on the **Options** page, under **Restore options**, select the **Overwrite the existing database** check box.
10. Click **OK** to start the recovery process.

Repeat the previous procedure to restore the remaining required databases.

▶ To restore a backup copy of a database in SQL Server 2008 Enterprise

1. After you connect to the appropriate instance of the SQL Server 2008 Database Engine, in Object Explorer, expand the server name.
2. Right-click **Databases**, and then click **Restore Database**. The **Restore Database** dialog box

appears.

3. In the **Restore Database** dialog box, on the **General** page, type the name of the database to be restored in the **To database** list.
4. In the **To a point in time** box, retain the default (**Most recent possible**).
5. To specify the source and location of the backup sets to restore, click **From device**, and then click **Browse** to select the backup file.
6. In the **Specify Backup** dialog box, in the **Backup media** box, be sure that **File** is selected.
7. In the **Backup location** area, click **Add**.
8. In the **Locate Backup File** dialog box, select the file that you want to restore, click **OK**, and then, in the **Specify Backup** dialog box, click **OK**.
9. In the **Restore Database** dialog box, under **Select the backup sets to restore** grid, select the **Restore** check box next to the most recent full backup.
10. In the **Restore Database** dialog box, on the **Options** page, under **Restore options**, select the **Overwrite the existing database** check box.
11. Click **OK** to start the recovery process.

Repeat the previous procedure to restore the remaining required databases.

For more information about restoring databases in SQL Server, see the following articles:

- SQL Server 2008 Books Online: [Backing up and restoring databases in SQL Server](#)
- SQL Server 2005 Books Online: [Backing up and restoring databases in SQL Server](#)

Add the restored content database to the Project Server 2010 farm

After restoring the Windows SharePoint Services Content database, you need to add it to the Project Server 2010 farm.



Note:

Ensure that the Web application in your Project Server 2010 farm does not contain a site with the same name as the one you are upgrading.

▶ Add the content database to the Project Server 2010 farm

1. Open a Command Prompt window as Administrator, and navigate to:
%PROGRAMFILES%\Common Files\Microsoft Shared\Web Server Extensions\14\BIN
2. Run the following:
**STSADM.EXE -o addcontentDB -url<WebAppURL>-databaseserver<SQLServerName>-
databasename<WSSContentDBName>**

For example:

```
STSADM.EXE -o addcontentDB -url http://fabrikam/pwa -ds Contoso1 -dn WSS_Content
```

The database name should be the exact name of the content database you restored to SQL Server in the previous procedure. When the command prompt returns, the step has been completed.

3. Monitor the upgrade logs for failure. The Upgrade logs are located at:
%PROGRAMFILES%\Common Files\Microsoft Shared\Web Server Extensions\14\Logs
4. If there are any reported failures, navigate to the PWA site (http://server/pwa/_layouts/settings.aspx). If this page loads successfully, proceed to the next procedure.

Provision a new Project Server 2010 PWA instance using the restored databases

In Project Server 2010, you can now create a Project Web App instance using the Office Project Server 2007 databases you restored to SQL Server in the previous step. When the instance is created, the restored databases will be upgraded to Project Server 2010.

Create a Project Server 2010 Project Web Access instance using the restored Project Server 2007 databases

1. On SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. On the Manage Service Applications page, click **Project Server Service Application**.
3. On the toolbar, click **Manage**.
4. On the Manage Project Web Access Sites page, click **Create Project Web Access Site**.
5. On the Create Project Web Access Site page:
 - a. In the **Project Web Access Site Location** and **Administrator Account** fields, keep the default values.
 - b. In the **Primary Database** field, type the name of the database server where your restored Office Project Server 2007 databases are located.
 - c. Verify that the names of the Project Server databases match the names of the restored Office Project Server 2007 databases that you will use. If they do not, change them so that they match.



Important:

The databases names must be exact matches with the restored Office Project Server 2007 database names in SQL Server. If the names do not match, a new Project Server 2010 database will be created and the restored Office Project Server 2007 database will not be upgraded.

- d. Click **OK**.

Project Server will start the PWA site creation process. Click **Refresh** occasionally to view the status of the instance provisioning. Be patient as this occurs, as it may take a while to finish. When the site creation process has finished, the status shown on the PWA site list is **Provisioned**.

The URL can now be used to connect Internet Explorer, the Project client, and custom-code based clients to Project Web App.



Note:

The first invocation of the Internet Information Services (IIS) application pool that contains the Project Web App application can be slow as the .NET Framework application is loaded and compiled.

Diagnose failures

If your Project Web App instance does not provision successfully, the provision process will return a status of Failed, at which point you can check the upgrade logs for additional details about the failure.

The upgrade log is located in the following default location: %PROGRAMFILES%\Common Files\Microsoft Shared\Web Server Extensions\14\Logs

Each upgrade attempt creates a new log, so view the most current logs. You can view the correct log file by noting the Date/Time stamp that is embedded in the log file name (for example, Upgrade<DateTime>.LOG). Open the log files in Microsoft Excel and search for “Failure” to find more information about the why the upgrade failed. For example, the log file may describe the failure occurring because of an invalid custom field name in the data. You would then need to return to Office Project Server 2007 and fix the issue (possibly by renaming the custom field). You would then need to run through the steps in this procedure again (back up and restore the databases, and then create a new instance in Project Server 2010).

If the upgrade log does not give you any insight in correcting the problem, contact Microsoft Support Services.

Configure for post-installation

After creating the Project Web App instance to upgrade your Office Project Server 2007 databases to Project Server 2010, you can do additional post-installation steps to make the deployment more functional. For example, additional post-installation configuration steps include:

- Configure reporting for Project Server 2010
- Configure Excel Services in Microsoft Office SharePoint Server 2007
- Configure single sign-on
- Configure the cube building service
- Configure Time Reporting periods
- Configure Exchange integration

For more information about these steps, see [Install and configure Project Server 2010](#).

Verify whether the migration has been successful

Open Project Web App and check whether your data has migrated properly. Run your regular testing on this server. If you notice any differences from normal behavior, document this and contact Project Server 2010 Support Services.

Database-attach core upgrade to Project Server 2010

Important:

Upgrading from the Project Server 2010 public Beta to the Project Server 2010 released version is explicitly blocked and not supported. This restriction applies to both the in-place and database-attach upgrade methods.

When you upgrade from Microsoft Office Project Server 2007 to Project Server 2010 by using the database attach upgrade process, you upgrade only the content for your environment, and not the configuration settings. Using the database attach upgrade process is useful when you are changing hardware or want to reconfigure your server farm topology as part of the upgrade process. It is also required if you are upgrading from Office Project Server 2007 deployed on a hardware that only supports a 32-bit server operating system.

Database-attach upgrade to Project Server 2010 can be done either one of two ways:

- Database Attach full upgrade: Migrates the project data stored in the Office Project Server 2007 databases, plus the Microsoft Project Web App (PWA) site data stored in a SharePoint content database.
- Database Attach core upgrade: Migrates only the project data stored in the Office Project Server 2007 databases.

This article provides the procedures required to perform a database attach core upgrade. For information about different types of methods for upgrading to Project Server 2010, see [Project Server 2010 upgrade overview](#).

Process overview

When you perform a database attach core upgrade, you are basically using backup copies of your Office Project Server 2007 databases that contain your project data. You restore them on the Microsoft SQL Server instance that you are using for Project Server 2010, and then you upgrade the databases by creating a Microsoft Project Web App instance in Project Server 2010 that points to them. While both the database attach upgrade process and the in-place upgrade process are similar in functionality, the database attach upgrade keeps the original Office Project Server 2007 environment intact because you are using backup copies of the databases for the upgrade process.

Before you begin

Before you begin the database attach full upgrade to Office Project Server 2007, review the following information about permissions, hardware requirements, and software requirements. Follow the specified steps to install or configure prerequisite software or to modify settings.

Review required permissions

You must have at least the following permissions to complete the procedures in this article:

- On the database server from which the databases are being detached you must be a member of the following roles:
 - The **db_owner** fixed database role.
 - The **db_backupoperator** fixed database role.
- On the server farm to which the databases are being attached, you must be a member of the local Administrators group, and you must be a member of the following roles on the database server:
 - The **dbcreator** fixed server role.
 - The **db_owner** fixed database role.
- In some environments, you must coordinate the move procedures with the database administrator. Be sure to follow any applicable policies and guidelines for handling databases.

Review required hardware and software

You must be running one of the following products on the database servers to perform these procedures:

- On your Office Project Server 2007 environment: the Microsoft SQL Server Client tools for SQL Server 2000, SQL Server 2005, or SQL Server 2008. These are required to back up your required databases.
- On your Project Server 2010 environment: a 64-bit version of one of the following products:
 - SQL Server 2008 Service Pack 1 with Cumulative Update 2
 - SQL Server 2005 Service Pack 3 with Cumulative Update 3



Note:

Project Server 2010 databases can only be hosted on 64-bit versions of these two versions of SQL Server.

Perform prerequisite steps

Before you back up the databases, you must prepare for the upgrade by following these steps:

1. Create a new server farm environment. For information about creating the new environment, see [Deploy Project Server 2010 to a server farm environment](#).
2. If you have custom site definitions in the old environment, create new site definitions and upgrade definition files for these site definitions and deploy them to the new environment.

Database attach core upgrade overview

A database attach core upgrade will upgrade your Office Project Server 2007 databases:

- Draft
- Archive
- Publish
- Reporting

The difference between a database attach core upgrade and a database attach full upgrade is that a full upgrade will upgrade not only your Office Project Server 2007 databases, but also your Project Web Access site data contained in a SharePoint content database. If you only want to upgrade your Project Web Access site data plus your Office Project Server 2007 project data, see [Database-attach core upgrade to Project Server 2010](#).

To perform a database attach core upgrade, you must follow these general steps:

1. [Verify your Project Server 2007 data](#)
2. [Back up the databases in SQL Server](#)
3. [Restore the backup copies to the new farm](#)
4. [Provision a new Project Server 2010 PWA instance using the restored databases](#)
5. [Diagnose failures](#)
6. [Configure for post-installation](#)
7. [Verify whether the migration has been successful](#)

These steps require that you have Project Server 2010 installed in your environment. You will not need to configure a Project Web App site prior to doing this procedure. You also do not need to do post-installation configuration such as configuring for Exchange Server integration or reporting, which can be done after upgrading. For more information about installing Project Server 2010, please see [Deploy Project Server 2010 to a server farm environment](#).

Verify your Project Server 2007 data

You must verify that your Office Project Server 2007 data is in a valid state to help ensure that your upgrade will be successful. You must verify the following:

- All projects should be checked-in.
- The Project Web App site name of "ProjectBICenter" is reserved in Project Server 2010. Verify that Office Project Server 2007 does not use this as a Project Web App site name.
- The list name of "Project Detail Page" is reserved in Project Server 2010. Verify that Office Project Server 2007 Project Web App does not contain a list with this same name.
- Resolve all custom field and lookup table name conflicts with names that are reserved in Project Server 2010. See the [Custom field and lookup table name conflicts](#) section for more information.

Custom field and lookup table name conflicts

There are certain custom fields and lookup tables name that are reserved in both Office Project Server 2007 and Project Server 2010. If you are upgrading from Office Project Server 2007, verify that you do not have custom field names that are in conflict with the names reserved for Project Server 2010. If any of these names are used in the current Office Project Server 2007 database, the custom fields and outline codes must be changed in Office Project Server 2007 before proceeding further with the migration. Use Microsoft Office Project Professional 2007 connected to a Office Project Server 2007 instance to validate and take corrective action.

Reserved outline code names

Outline code name	Type	Office Project Server 2007	Project Server 2010
Cost Type	Resource	X	X
Health	Task	X	X
State	Project	X	X
Team Name	Resource	X	X
Department			X
Flag Status			X

Reserved custom field names

Custom field name	Type	Office Project Server 2007	Project Server 2010
Cost Type	Resource	X	X
Health	Task	X	X
State	Project	X	X
Team Name	Resource	X	X
Sample Approved Finish Date	Project		X
Sample Approved Start Data	Project		X
Sample Areas Impacted	Project		X
Sample Assumptions	Project		X
Sample Business Need	Project		X
Sample Compliance Proposal	Project		X
Flag Status	Task		X

Custom field name	Type	Office Project Server 2007	Project Server 2010
Sample Goals	Project		X
Sample Post-Implementation Review Date	Project		X
Sample Post-Implementation Review Notes	Project		X
Sample Primary Objectives	Project		X
Project Departments	Project		X
Project Impact	Project		X
Sample Proposal Cost	Project		X
Sample Proposed Finish Date	Project		X
Sample Proposed Start Date	Project		X
Relative Importance	Project		X
Resource Departments	Resource		X

Back up the databases in SQL Server

Follow the appropriate procedure to back up your Office Project Server 2007 databases in SQL Server 2000, SQL Server 2005, or SQL Server 2008 (depending on which you are using to host the databases). Repeat the procedure for each of the following databases in the original server farm:

- Project Server_Draft
- Project Server_Archived
- Project Server_Published
- Project Server_Reporting

At the end of this procedure, you will have created duplicates of each database.

To back up a database in SQL Server 2000

1. On the database server, click **Start**, point to **All Programs**, point to **Microsoft SQL Server**, and then click **Enterprise Manager**.
2. In SQL Server Enterprise Manager, expand **Microsoft SQL Servers**.
3. Expand **SQL Server Group**.
4. Expand **(local) (Windows NT)**.

5. Expand **Databases**.
6. Right-click the database that you want to back up, point to **All Tasks**, and then click **Backup Database**.
7. In the **SQL Server Backup** dialog box, in the **Name** box, specify a name for the backup, and then, in the **Backup** area, select **Database - complete**.
8. In the **Destination** area, either select an existing destination or do the following:
 - a. Click **Add**.
 - b. In the **Select Backup Destination** box, select **File Name**, and then, next to the **File Name** box, click **Browse**.
 - c. In the **Backup Device Location - (local)** dialog box, in the **File name** box, type a file name, and then click **OK**.
 - d. Click **OK** again to close the **Select Backup Destination** dialog box.
9. Click **OK** to start the backup process.
10. Click **OK** to acknowledge that the backup process is complete.

Repeat the previous procedure to back up the remaining required databases.

▶ **To back up a database in SQL Server 2005**

1. On the database server, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
2. In the **Connect to Server** box, fill in the connection information, and then click **Connect**.
3. After you connect to the appropriate instance of the SQL Server 2005 Database Engine, in Object Explorer, expand the server tree by expanding the server name.
4. Expand **Databases**, right-click the database that you want to back up, point to **Tasks**, and then click **Back Up**. The **Back Up Database** dialog box appears.
5. In the **Source** area, in the **Database** box, verify the database name.
6. In the **Backup type** box, select **Full**.
7. Under **Backup component**, select **Database**.
8. In the **Backup set** area, in the **Name** text box, either accept the default backup set name that is suggested or type a different name for the backup set.
9. In the **Destination** area, specify the type of backup destination by selecting **Disk** or **Tape**, and then specify a destination. To create a different destination, click **Add**.
10. Click **OK** to start the backup process.

Repeat the previous procedure to back up the remaining required databases.

▶ **To back up a database in SQL Server 2008**

1. On the database server, click **Start**, point to **All Programs**, point to **Microsoft SQL Server**

2008, and then click **SQL Server Management Studio**.

2. In the **Connect to Server** box, fill in the connection information, and then click **Connect**.
3. After you connect to the appropriate instance of the SQL Server 2008 Database Engine, in Object Explorer, expand the server name.
4. Expand **Databases**, right-click the database that you want to back up, point to **Tasks**, and then click **Back Up**. The **Back Up Database** dialog box appears.
5. In the **Source** area, in the **Database** box, verify the database name.
6. In the **Backup type** box, select **Full**.
7. Under **Backup component**, select **Database**.
8. In the **Backup set** area, in the **Name** box, either accept the default backup set name or type a new name.
9. In the **Destination** section, specify the type of backup destination by selecting **Disk** or **Tape**, and then specify a destination. To create a different destination, click **Add**.
10. Click **OK** to start the backup process.

If you need more information about backing up databases in SQL Server, see the following articles:

- SQL Server 2008 Books Online: [Backing up and restoring databases in SQL Server](#)
- SQL Server 2005 Books Online: [Backing up and restoring databases in SQL Server](#)
- SQL Server 2000 Books Online: [Backup and restore operations](#)

Restore the backup copies to the new farm

After you have configured the new Project Server 2010 server farm, you can restore the backup copies of the databases on the SQL Server instance that you are using to host your Project Server 2010 databases. Note that you must restore to a 64-bit version of SQL Server 2008 SP1 with CU2, or 64-bit SQL Server 2005 SP3 with CU3. Start with one database, and then verify that the recovery has worked before you restore the other databases.

The following section provides procedures for restoring the backups.

▶ To restore a backup copy of a database in SQL Server 2005 Enterprise Edition

1. In SQL Server Management Studio, right-click **Databases**, and then click **Restore Database**. The **Restore Database** dialog box appears.
2. In the **Restore Database** dialog box, on the **General** page, in the **To database** box, type the name of the database you are restoring.
3. In the **To a point in time** box, keep the default (**Most recent possible**).
4. To specify the source and location of the backup sets to restore, click **From device**, and then click **Browse** to select the backup file.
5. In the **Specify Backup** dialog box, in the **Backup media** box, be sure that **File** is selected.

6. In the **Backup location** area, click **Add**.
7. In the **Locate Backup File** dialog box, select the file that you want to restore, and then click **OK**.
8. In the **Select the backup sets to restore** grid, select the **Restore** check box next to the most recent full backup.
9. In the **Restore Database** dialog box, on the **Options** page, under **Restore options**, select the **Overwrite the existing database** check box.
10. Click **OK** to start the recovery process.

Repeat the previous procedure to restore the remaining required databases.

▶ **To restore a backup copy of a database in SQL Server 2008 Enterprise**

1. After you connect to the appropriate instance of the SQL Server 2008 Database Engine, in Object Explorer, expand the server name.
2. Right-click **Databases**, and then click **Restore Database**. The **Restore Database** dialog box appears.
3. In the **Restore Database** dialog box, on the **General** page, type the name of the database to be restored in the **To database** list.
4. In the **To a point in time** box, retain the default (**Most recent possible**).
5. To specify the source and location of the backup sets to restore, click **From device**, and then click **Browse** to select the backup file.
6. In the **Specify Backup** dialog box, in the **Backup media** box, be sure that **File** is selected.
7. In the **Backup location** area, click **Add**.
8. In the **Locate Backup File** dialog box, select the file that you want to restore, click **OK**, and then, in the **Specify Backup** dialog box, click **OK**.
9. In the **Restore Database** dialog box, under **Select the backup sets to restore** grid, select the **Restore** check box next to the most recent full backup.
10. In the **Restore Database** dialog box, on the **Options** page, under **Restore options**, select the **Overwrite the existing database** check box.
11. Click **OK** to start the recovery process.

Repeat the previous procedure to restore the remaining required databases.

For more information about restoring databases in SQL Server, see the following articles:

- SQL Server 2008 Books Online: [Backing up and restoring databases in SQL Server](#)
- SQL Server 2005 Books Online: [Backing up and restoring databases in SQL Server](#)

Provision a new Project Server 2010 PWA instance using the restored databases

In Project Server 2010, you can now create a Project Web App instance using the Office Project Server 2007 databases you restored to SQL Server in the previous step. When the instance is created, the restored databases will be upgraded to Project Server 2010.

Create a Project Server 2010 PWA instance using the restored Office Project Server 2007 databases

1. On the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. On the Manage Service Applications page, click **Project Server Service Application**.
3. On the toolbar, click **Manage**.
4. On the Manage Project Web App Sites page, click **Create Project Web App Site**.
5. On the Create Project Web App Site page:
 - a. In the **Project Web App Site Location** and **Administrator Account** fields, keep the default values.
 - b. In the **Primary Database** field, type the name of the database server where your restored Office Project Server 2007 databases are located.
 - c. Verify that the names of the Project Server databases match the names of the restored Office Project Server 2007 databases that you will use. If they do not, change them so that they match.



Important:

The databases names must be exact matches with the restored Office Project Server 2007 database names in SQL Server. If the names do not match, a new Project Server 2010 database will be created and the restored Office Project Server 2007 database will not be upgraded.

- d. Click **OK**.

Project Server will start the PWA site creation process. Click **Refresh** occasionally to view the status of the instance provisioning. Be patient as this occurs, as it may take a while to finish. When the site creation process has finished, the status shown on the PWA site list is **Provisioned**.

The URL can now be used to connect Internet Explorer, the Project client, and custom-code based clients to Project Web App.



Note:

The first invocation of the Internet Information Services (IIS) application pool that contains the Project Web App application can be slow as the .NET Framework application is loaded and compiled.

Diagnose failures

If your Project Web App instance does not provision successfully, the provision process will return a status of Failed, at which point you can check the upgrade logs for additional details about the failure.

The upgrade log is located in the following default location: %PROGRAMFILES%\Common Files\Microsoft Shared\Web Server Extensions\14\Logs

Each upgrade attempt creates a new log, so view the most current logs. You can view the correct log file by noting the Date/Time stamp that is embedded in the log file name (for example, Upgrade<DateTime>.LOG). Open the log files in Microsoft Excel and search for “Failure” to find more information about the why the upgrade failed. For example, the log file may describe the failure occurring because of an invalid custom field name in the data. You would then need to return to Office Project Server 2007 and fix the issue (possibly by renaming the custom field). You would then need to run through the steps in this procedure again (back up and restore the databases, and then create a new instance in Project Server 2010).

If the upgrade log does not give you any insight in correcting the problem, contact Microsoft Support Services.

Configure for post-installation

After creating the Project Web App instance to upgrade your Office Project Server 2007 databases to Project Server 2010, you can do additional post-installation steps to make the deployment more functional. For example, additional post-installation configuration steps include:

- Configure reporting for Project Server 2010
- Configure Excel Services in Microsoft Office SharePoint Server 2007
- Configure single sign-on
- Configure the cube building service
- Configure Time Reporting periods
- Configure Exchange integration

For more information about these steps, see [Install and configure Project Server 2010](#).

Verify whether the migration has been successful

Open Project Web App and check whether your data has migrated properly. Run your regular testing on this server. If you notice any differences from normal behavior, document this and contact Project Server 2010 Support Services.

Virtual migration environment (VME) guide for Project Server 2010

The Project Server VME is a virtualized Office Project Server 2007 environment that contains all the necessary applications and utilities required to migrate Project Server 2003 data to Office Project Server 2007.

Chapters in this guide:

[Overview of the virtual migration environment \(VME\) for Project Server 2010](#)

[Configure the Hyper-V environment for the Project Server VME](#)

[Project Server VME: Pre-migration phase](#)

[Project Server VME: Migration phase](#)

[Project Server VME: Post-migration phase](#)

[Project Server VME: Plan to upgrade data to Project Server 2010](#)

Overview of the virtual migration environment (VME) for Project Server 2010

This article discusses the Microsoft Project Server virtual migration environment (VME).

In this article:

- [About the Project Server virtual migration environment](#)
- [Requirements for the virtual migration environment](#)
- [What the VME contains](#)
- [Phases of migration with the VME](#)

The Project Server VME can be downloaded from the [Project Server VME download page](#) (<http://go.microsoft.com/?linkid=9729345>) located in the Microsoft Download Center.

About the Project Server virtual migration environment

The Project Server VME is a virtualized Office Project Server 2007 environment that contains all the necessary applications and utilities required to migrate Project Server 2003 data to Office Project Server 2007. To migrate from Microsoft Office Project Server 2003 to Microsoft Project Server 2010, first you must migrate your data to Microsoft Office Project Server 2007 format. If you do not have an Office Project Server 2007 deployment readily available, you can choose to use the Project Server virtual migration environment (VME) to migrate your data to Office Project Server 2007 format.

The VME is a fully configured Microsoft Office Project Server 2007 with Service Pack 2 (SP2) environment packaged as a Hyper-V image. The VME should be run as a stand-alone environment for the sole purpose of migrating Project Server 2003 data to the Office Project Server 2007 data format. (The VME does not have to be connected to the network or require network access).

The process of migrating Project Server 2003 data by using the VME provides the following advantages:

- It can run in a stand-alone environment and does not require network access
- It requires minimal hardware investment
- It provides a fully functional environment that requires little intervention to use
- It provides the ability to run migrations iteratively so that issues can be resolved and retested

Warning:

Do not use the VME for production use. It is intended to be used only as a pass-through environment to migrate your Project Server 2003 data to Office Project Server 2007.

Requirements for the virtual migration environment

The VME environment configuration requires the following:

- The Hyper-V feature on Windows Server 2008 R2
- 3096 MB or more of allocated memory for the image
- Two virtual processors for the image (recommended)



Important:

The VME is only supported on Windows Server 2008 R2 with its Hyper-V Manager feature.
The VME does not run on Windows Server 2008.

Because the VME runs in a stand-alone environment, an internal network must still exist between the virtual machine that is running the VME and the Virtual Host Machine. This internal network must exist in order to transfer your Project Server 2003 databases to the virtual machine that is hosting the VME. (For example, the database might be attached to the Virtual Host Machine through an external hard drive.) After the Project Server 2003 data has been migrated to Office Project Server 2007 through the VME, the Office Project Server 2007 databases can then be transferred back to the external hard drive.

What the VME contains

When the Project Server 2010 VME image is restored to a virtual machine on a Hyper-V Server, the virtual machine will have the following two hard drives:

- Virtual Hard Drive 1: Contains all system software. This virtual hard drive will have an expiration limit of 180 days. The expiration limit is intended to make sure that the applications are not used for production use, for which it is not supported.
- Virtual Hard Drive 2 (E drive): Contains all VME content (SQL scripts, migration configuration files, and commands needed to run the migration).

Operating system and installed applications

The VME contains the following operating system and installed software applications:

- Windows Server 2008 R2 operating system
- Office Project Server 2007 with SP2 with the October 2009 Cumulative Update
- Microsoft Office SharePoint Server 2007 with Service Pack 2 (SP2) with the October 2009 Cumulative Update
- Windows SharePoint Services 3.0 with Service Pack 2 (SP2) with the October 2009 Cumulative Update
- Microsoft Office Project Professional 2007 with Service Pack 2 October 2009 Cumulative Update and the Project Migration Tool installed
- Microsoft SQL Server 2005 with Service Pack 3 and Cumulative Update 17



Note:

The Windows Server 2008 Release 2 operating system must be activated within 10 days. You can use the Activate-by-telephone option if the VME virtual machine is not on the network.

Overview of the migration scripts

The SQL scripts on Virtual Hard Drive 2 were created to help in the migration process. Use of these scripts is optional, but highly recommended. These scripts include the following:

Script name	Purpose
VME Script 1.sql	Checks your Project Server 2003 data for conditions that may prevent the data from upgrading successfully.
VME Script 2.sql	Provides statistics about the Project Server 2003 data that you are migrating (for example, number of projects, tasks, assignments, and so on).
VME Script 3.sql	Provides a data validation snapshot of your pre-migration Project Server 2003 data and stores it to a database. This data can be compared to a post migration data snapshot (from VME Script 5.sql) to determine differences between the pre-migration and migrated data.
VME Script 4.sql	Lists all projects with associated project workspace sites from the Project Server 2003 database.
VME Script 5.sql	Provides a data validation snapshot of migrated Office Project Server 2007 data and stores it to a database.
VME Script 6.sql	Lists all projects with associated project workspace sites from the migrated Office Project Server 2007 database.
VME Script 7.sql	Compares data validation snapshots (pre-migration Project Server 2003 and post-migration Office Project Server 2007) and lists the differences between them. This can help determine whether specific data was not migrated.
VME Script 8.sql	Compares projects with associated workspaces from pre-migration (Project Server 2003) and post-migration (Office Project Server 2007), and then shows the projects with workspaces that have not been re-linked or converted in the Office Project Server 2007 environment after migration.
VME Script 9.sql	Does a pre-migration check on the Office Project Server 2007 database to check for known data issues that can cause upgrade to fail when you upgrade to Project Server 2010.
VME Script 10.sql	Checks your Office Project Server 2007 data for a known issue in which multi-language lookup tables are not updated correctly after migration. This script will

Overview of the virtual migration environment (VME) for Project Server 2010

Script name	Purpose
	make corrective action to your Office Project Server 2007 data.

Phases of migration with the VME

The process of running the VME to migrate your Project Server 2003 data consists of the following five phases:

[Configure the Hyper-V environment for the Project Server VME](#)

[Project Server VME: Pre-migration phase](#)

[Project Server VME: Migration phase](#)

[Project Server VME: Post-migration phase](#)

[Project Server VME: Plan to upgrade data to Project Server 2010](#)

Click the link to each chapter for more information about the procedures needed for that phase.

Configure the Hyper-V environment for the Project Server VME



Important:

The Project Server virtual migration environment (VME) is only supported on Windows Server 2008 R2 using the Hyper-V Manager feature. The VME does not run on Windows Server 2008.

This chapter describes the procedures required to set up the Project Server VME and move your Microsoft Office Project Server 2003 data to the VME. Restoring the VME image to a virtual machine requires you to have a working host computer that is running Windows Server 2008 R2 Hyper-V Manager. The host computer must also have at least 4 GB of RAM total and 3 GB of RAM available for the virtual migration environment. There should be a minimum of four times the size of your Project and SharePoint databases available to the VME for the upgrade. The host computer can be either stand-alone or connected to the network. The VME uses local accounts for all actions.

After the VME is restored, a snapshot of the virtual machine is available in Hyper-V Manager so that you are able to reset the VM to its original state. This enables you to easily restore the original image if you have to rerun the migration.

This chapter includes the following articles:

- [Project Server VME: Create a backup of the existing Project Server 2003 database](#)
- [Project Server VME: Import the virtual migration environment](#)
- [Project Server VME: Set up data exchange between the host computer and VME virtual machine](#)
- [Load data to the Project Server virtual migration environment \(VME\)](#)
- [Project Server VME: Restore your project workspace data](#)

For more information about the Project Server virtual migration environment, see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#). For more information about how to upgrade to Microsoft Project Server 2010, see [Project Server 2010 upgrade overview](#).

Project Server VME: Create a backup of the existing Project Server 2003 database

This article describes how to create backups of your Microsoft Office Project Server 2003 databases in your Project Server 2003 environment. You can then move them to the Project Server virtual migration environment (VME) to migrate your data to Microsoft Office Project Server 2007.

- If the Project Server 2003 data is contained in a single database, create a backup of your Project Server database.
- If your Project Server 2003 data is split into two databases, create a backup copy of both your Project Server database and your Project Web database.
- Optionally, if you are migrating your project workspace data, you have to make a backup of the Windows SharePoint Services 2.0 content database that contains your project workspace data.

You may want to make the Project Server 2003 database backup files accessible to the virtual migration environment virtual machine by copying them to an external hard drive. This allows you to attach the external hard drive to the virtual machine host to make them accessible to the VME. After you have migrated your Project Server 2003 data to Office Project Server 2007 on the VME, you can then copy the migrated data to the external hard drive in order to upgrade in Project Server 2010.



Important:

Project Server 2003 Service Pack 3 is a requirement for migrating your data to Office Project Server 2007. Prior to creating database backups, verify that Project Server 2003 Service Pack 3 is installed in your Project Server 2003 environment. Additionally, if you have project workspace data that you plan to migrate, you should also verify that Windows SharePoint Services 2.0 is updated to Service Pack 3.

This article describes one of several tasks that is required to configure your Hyper-V environment for the Project Server virtual migration environment. For more information about other tasks required to configure your Hyper-V, see [Configure the Hyper-V environment for the Project Server VME](#). For more information about the VME, see [Overview of the virtual migration environment \(VME\) for Project Server 2010](#).

Create a backup of existing Project Server 2003 databases

Use either of the following procedures to create a backup of the Project Server 2003 databases that you need for the VME.

- To back up a database in SQL Server 2000
- To back up a database in SQL Server 2005

▶ **To back up a database in SQL Server 2000**

1. On the database server, click **Start**, point to **All Programs**, point to **Microsoft SQL Server**, and then click **Enterprise Manager**.
2. In SQL Server Enterprise Manager, expand **Microsoft SQL Servers**.
3. Expand **SQL Server Group**.
4. Expand **(local) (Windows NT)**.
5. Expand **Databases**.
6. Right-click the database that you want to back up, point to **All Tasks**, and then click **Backup Database**.
7. In the **SQL Server Backup** dialog box, in the **Name** box, specify a name for the backup, and then, in the **Backup** area, select **Database - complete**.
8. In the **Destination** area, either select an existing destination or do the following:
 - a. Click **Add**.
 - b. In the **Select Backup Destination** box, select **File Name**, and then, next to the **File Name** box, click **Browse**.
 - c. In the **Backup Device Location - (local)** dialog box, in the **File name** box, type a file name, and then click **OK**.
 - d. Click **OK** again to close the **Select Backup Destination** dialog box.
9. Click **OK** to start the backup process.
10. Click **OK** to acknowledge that the backup process is complete.

▶ **To back up a database in SQL Server 2005**

1. On the database server, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
2. In the **Connect to Server** box, specify the connection information, and then click **Connect**.
3. After you connect to the appropriate instance of the SQL Server 2005 Database Engine, in Object Explorer, expand the server tree by expanding the server name.
4. Expand **Databases**, right-click the database that you want to back up, point to **Tasks**, and then click **Back Up**. The **Back Up Database** dialog box appears.
5. In the **Source** area, in the **Database** box, verify the database name.
6. In the **Backup type** box, select **Full**.
7. In the **Backup component** section, select **Database**.
8. In the **Backup set** area, in the **Name** box, either accept the default backup set name that is suggested or type a different name for the backup set.
9. In the **Destination** area, specify the type of backup destination by selecting **Disk**, and then

Project Server VME: Create a backup of the existing Project Server 2003 database

specify a destination. To create a different destination, click **Add**.

10. Click **OK** to start the backup process.

Project Server VME: Import the virtual migration environment

The Project Server virtual migration environment (VME) must be imported from the [Project Server Virtual Migration Environment download package](http://go.microsoft.com/?linkid=9729345) (http://go.microsoft.com/?linkid=9729345) in the Microsoft Download Center. The following procedure is used to import the VME and restore it in a virtual machine on a Windows Server 2008 R2 computer by using Hyper-V Manager.



Important:

The VME is only supported on Windows Server 2008 R2 using the Hyper-V Manager feature. The VME does not run on Windows Server 2008.

This article describes one of several tasks required to configure your Hyper-V environment for the Project Server virtual migration environment. For more information about other tasks required to configure your Hyper-V environment, see [Configure the Hyper-V environment for the Project Server VME](#). For more information about the VME, see [Overview of the virtual migration environment \(VME\) for Project Server 2010](#).



To import the virtual migration environment

1. Create a directory on the Hyper-V host to contain the VME files. The zip file is approximately 3.5 GB and when unzipped the files occupy approximately 7 GB. Plan appropriately for hard disk space.
2. Download the "Project Server VME.ZIP" file. Unzip the contents of the file to the directory created above. After unzipping is complete, you will see a subdirectory called "ProjectVME".
3. Start the Hyper-V manager on the Hyper-V host computer.
4. From the **Actions** pane, select **Import Virtual Machine**.
5. In the **Import Virtual Machine** dialog box, click **Browse**. In the **Select Folder** dialog box, select the ProjectVME directory created in step 2, and then click **Select Folder**. This contains a config.xml file.
6. In the **Import Virtual Machine** dialog box, click **Import**.



Note:

After the import process is completed, do not start the VME virtual machine yet.

After the import has completed, see the [Project Server VME: Set up data exchange between the host computer and VME virtual machine](#) to configure data exchange between the VME virtual machine and VM host computer.

Project Server VME: Set up data exchange between the host computer and VME virtual machine

This article describes how to set up communication between the Project Server virtual migration environment (VME) host computer and the VME virtual machine. This allows you to transfer the Microsoft Office Project Server 2003 databases to the VME virtual machine for upgrading, and to transfer the upgraded Microsoft Office Project Server 2007 databases from the VME. If you have added the VME to your network, you will not have to do this procedure because you can simply create a shared folder in which you can copy and paste your databases. If the VME is not on your network, you have to run through the procedures in this article to create a virtual network in Hyper-V manager. This process establishes communication between the Windows Server 2008 R2 computer that is hosting the Project Server Virtual Migration virtual machine and the VME virtual machine. After establishing communication, see [Load data to the Project Server virtual migration environment \(VME\)](#) for information about setting up the shared folder and transferring data to the VME virtual machine.



Important:

The VME is only supported on Windows Server 2008 R2 by using the Hyper-V Manager feature. The VME does not run on Windows Server 2008.

This article describes one of several tasks required to configure your Hyper-V environment for the Project Server virtual migration environment. For more information about other tasks required to configure your Hyper-V environment, see [Configure the Hyper-V environment for the Project Server VME](#). For more information about the VME, see [Overview of the virtual migration environment \(VME\) for Project Server 2010](#).

Create a virtual network

You can create a virtual network on the server running Hyper-V to provide communication between the virtualization server and virtual machines by creating an Internal Virtual Network. An Internal Virtual Network allows for communications between the virtual machines and the physical computer. After creating the Internal Virtual Network, you have to add a network adapter to the VME virtual machine. The following procedures provide the basic instructions to create a virtual network in Hyper-V Manager.

▶ To create an Internal Virtual Network

1. On the VM host computer, click **Start**, click **Administrative Tools**, and then click **Hyper-V Manager**.
2. On the Hyper-V Manager page, in the **Actions** pane, click **Virtual Network Manager**.

Project Server VME: Set up data exchange between the host computer and VME virtual machine

3. On the Virtual Network Manager page, in the **Create virtual network** section, in the **What type of network you want to create?** list, select **Internal**. Then click **Add**.
4. In the New Virtual Networks page, in the **Name** field, type a name for the new network. Review the other properties and modify them as necessary. Click **OK** to create the virtual network and close the Virtual Network Manager.

To add a network adapter to a virtual machine

1. Click **Start**, click **Administrative Tools**, and then click **Hyper-V Manager**.
2. On the Hyper-V Manager page, in the **Virtual Machines** list, select the virtual machine that you want to configure (ProjectVME).



Note:

The virtual machine you select must not be in a **Running** state.

3. In the **Actions** pane, in the menu for the virtual machine that you selected, click **Settings**.
4. On the Settings page, in the **Add Hardware** section, choose a network adapter or a legacy network adapter. Network adapters can only be added to a virtual machine when the machine is turned off. (For more information about each type of adapter, see the [Additional considerations](#) section below.) Click **Add**.
5. In the **Network Adapter** section, from the **Network** drop-down list select the virtual network that you want to connect to.
6. In the **MAC Address** section, if you want to configure a static MAC address or virtual LAN identifier, specify the address or identifier that you want to use.
7. Click **OK**.

For more information, see the following blog post: [Exchanging files between Parent and Child Partitions in Hyper-V](http://go.microsoft.com/fwlink/?LinkId=192759) (<http://go.microsoft.com/fwlink/?LinkId=192759>).

Additional considerations

By default, membership in the local Administrators group, or equivalent, is the minimum required to complete this procedure. However, an administrator can use Authorization Manager to modify the authorization policy so that a user or group of users can complete this procedure.

A legacy network adapter works without installing a virtual machine driver because the driver is already available on most operating systems. The legacy network adapter emulates a physical network adapter, multiport DEC 21140 10/100TX 100 MB. A legacy network adapter also supports network-based installations because it includes the ability to boot to the Pre-Boot Execution Environment (PXE). The legacy network adapter is not supported in the 64-bit edition of Windows Server 2003 or the Windows XP Professional x64 Edition.



Important:

Project Server VME: Set up data exchange between the host computer and VME virtual machine

Make sure to reboot your VME virtual machine after initial start. The reason you have to do this is that the operating system determines that the hardware you are running is different from the hardware on which the VME was created and last run, which requires a reboot.

Load data to the Project Server virtual migration environment (VME)

This article describes how to move the Microsoft Office Project Server 2003 data from the virtual machine host to the Project Server virtual migration environment (VME) virtual machine. Before doing procedures in this article you must have created a backup copy of your Project Server 2003 databases and established data exchange between the host computer and the VME virtual machine. These procedures are described in the following two articles:

[Project Server VME: Create a backup of the existing Project Server 2003 database](#)

[Project Server VME: Set up data exchange between the host computer and VME virtual machine](#)

This article describes:

- Move Project Server 2003 database backups to the VME virtual machine
- Restore your database to the VME virtual machine

This article is one of several tasks required to configure your Hyper-V environment for the Project Server virtual migration environment (VME). For more information about other tasks required to configure the Hyper-V environment, see [Configure the Hyper-V environment for the Project Server VME](#). For more information about the VME, see [Overview of the virtual migration environment \(VME\) for Project Server 2010](#).

Move Project Server 2003 database backups to the VME virtual machine

Use the following procedure to create a share on the Project Server VME and to move the backup copies of your Project Server 2003 databases from the virtual machine host to the VME virtual machine.



Note:

If the following procedure requires you to enter credentials for the VME virtual machine, the domain and User ID are "VME\Administrator", and the password is "pass@word1".

► Move Project Server 2003 database backups to the VME

1. On the VME virtual machine, open a Command Prompt window and run the command **IPConfig**. Notice the **Autoconfiguration IPv4 Address** specified there.
2. On the Hyper-V host machine, click **Start**, and then click **Run**. In the **Open** field, type **\\<IP Address of the VME virtual machine>\E\$**. For "IP Address of the VME virtual machine", use the Autoconfiguration IPv4 Address that you noted in the previous step. If you are prompted for your credentials, enter the credentials for the VME virtual machine listed earlier. (The Domain\Username is "VME\Administrator", and the password is "pass@word1".)

Load data to the Project Server virtual migration environment (VME)

3. In Windows Explorer, click **New folder** and create a folder in the root of the E drive of the VME virtual machine and give it a name (for example, "ProjectServerData").
4. In Windows Explorer, copy the backup copies of your Project Server 2003 database or databases from the location they are stored at. Paste them to the folder you have just created on the E drive of the VME virtual machine in the previous step. If you are migrating the project workspace data, also copy your backup of the Windows SharePoint Services 2.0 databases that contain your project workspace data to the folder.

Restore your database to the VME virtual machine

After copying backups of the Project Server 2003 database (or databases) to the VME virtual machine, use the following procedure to restore the database or databases to Microsoft SQL Server 2005 on the VME virtual machine.

Restore the database to the VME

1. In Hyper-V Manager, switch to the VME virtual machine.
2. Click **Start**, click **All Programs**, click **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
3. On the Connect to Server dialog box, click **Connect**.
4. On the Microsoft SQL Server Management Studio page, in the **Object Explorer** section, right-click **Databases**, and then click **Restore Database**.
5. On the Restore Database page, in the **Destination to restore** section, in the **To database** field, type **Project2003SourceDB**.



Important:

When restoring your databases, verify that you are renaming them to the exact name specified in the procedures. The migration tool configuration file and the optional migration scripts need the database names to be accurate to function correctly.

6. In the **Source for restore** section, to the right of the **From device** option button, click the ellipsis (...) button.
7. In the **Specify Backup** dialog box, click **Add**.
8. Select the folder on the E drive to which you copied the database backups and select the Project Server 2003 database backup file. Click **OK**. On the Specify Backup page, click **OK** again.
9. In the **Select the backup sets to restore** list, click the check box in the **Restore** column.
10. Click **OK**. Your database will be restored.

If the Project Server 2003 database is partitioned into two separate databases, you also must restore the Project Web database (default name "Project2003WebTablesDB"). Run through the step again to

Load data to the Project Server virtual migration environment (VME)

restore this database. Make sure to restore this database to the name **Project2003SourceWebDB**. Again note that it is important to restore the Project Web database to this exact name.



Note:

If you are migrating the Project Server 2003 workspace data, read the directions first. See [Project Server VME: Restore your project workspace data](#) for more information before attempting to restore the Windows SharePoint Services 2.0 content database that contains your project workspace data.

Project Server VME: Restore your project workspace data

 **Warning:**

This step is optional and is only required if you are migrating the Microsoft Office Project Server 2003 project workspace data.

The Project Server 2003 project workspace data is contained in a Windows SharePoint Services 2.0 content database on the computer that is running Microsoft SQL Server and that is hosting your Project Server 2003 farm environment. Windows SharePoint Services 2.0 was an optional application that you could install with Project Server 2003. It allowed for the creation of project workspaces in Project Server 2003. All data (issues, risks, and documents stored in the project workspaces, as well as associations between the Project items and Windows SharePoint Services 2.0 items) are stored to a Windows SharePoint Services 2.0 content database. If you want to migrate your project workspace data to Microsoft Project Server 2010, this database must be restored and migrated to Windows SharePoint Services 3.0. The Project Server virtual migration environment (VME) allows you to do this. This article describes the two steps in restoring your project workspace content database to the VME virtual machine:

- Run the Pre-Upgrade Pre-scan tool on your Windows SharePoint Services 2.0 content database
- Move the Windows SharePoint Services 2.0 content database to the VME

This article describes one of several tasks required to configure your Hyper-V environment for the Project Server virtual migration environment. For more information about other tasks required to configure your Hyper-V environment, see [Configure the Hyper-V environment for the Project Server VME](#). For more information about the VME, see [Overview of the virtual migration environment \(VME\) for Project Server 2010](#).

Run the Pre-scan tool on your Windows SharePoint Services 2.0 content database

Prior to migrating the project workspace sites and their content to Windows SharePoint Services 3.0, we recommend that you use the Pre-scan tool to validate the Windows SharePoint Services 2.0 content database that contains the project workspaces.

In addition, if customization has been applied to site templates or objects, the Pre-scan utility validates whether they are compatible with Windows SharePoint Services 3.0.

 **Important:**

This must be done in the Project Server 2003 environment. It should not be done in the VME.

▶ To run Pre-scan

1. Download the Pre-Scan utility from the [SharePoint Products and Technologies Utility: Upgrade Pre-scan Tool](#) page on the Microsoft Download Center. Download the file named Prescan.exe to the server running Windows SharePoint Services 2.0.
2. Open a Command Prompt window and run the following command: **Prescan.exe /all**
3. When the process is complete, "Operation Completed Successfully" appears.

For more information about running the Pre-scan utility, see the "Prescan.exe ReadMe" document available from the same download page. (The file name is Prescan.doc.)

View the following articles if you encounter any problems when running the Pre-Scan tool:

[Your Friend Prescan.exe - How to Get it & What it Does - Part 2](#)

[Understanding Pre-Scan errors](#)

Move the Windows SharePoint Service 2.0 content database to the VME

After running Pre-scan, make a backup copy of the content database containing your project workspace data. You can use the procedures in [Project Server VME: Create a backup of the existing Project Server 2003 database](#) to create a backup of the Windows SharePoint Services 2.0 content database.

After making the backup copy of the database, move the backup copy of the database to the VME virtual machine, and then restore the database in Microsoft SQL Server 2005. Use the procedures described in [Load data to the Project Server virtual migration environment \(VME\)](#) to move the database to the VME virtual machine, and to restore the database in SQL Server 2005. Make sure to restore the content database to a unique database name.

For more information about migrating your Windows SharePoint Services 2.0 content database to Windows SharePoint Services 3.0 in the virtual migration environment, see the "Full Migration from Windows SharePoint Services 2.0 (to a different computer)" section of [Upgrade project workspaces from Project Server 2003](#).

For additional documentation about Microsoft SharePoint Server migration and upgrade, see the \SharePoint folder on the E drive of the VME. To view the content, you must first click **Click I Accept at bottom to start - MigrationEULA** (located in the "Migrate SharePoint" folder) to accept the licensing agreement.

Project Server VME: Pre-migration phase

This chapter describes the tasks required in the pre-migration phase when you are using the Project Server Virtual Migration Environment (VME) to migrate your Microsoft Office Project Server 2003 data to Microsoft Office Project Server 2007. Run these tasks after you have completed the tasks listed in [Configure the Hyper-V environment for the Project Server VME](#) and before you try to run the migration.

Articles in this chapter are as follows:

- [Check for reserved custom field, lookup table, or outline code name conflicts \(Project Server\)](#)
- [Disable Dynamic Content Compression in Internet Information Services \(IIS\) Manager](#)
- [Project Server VME: Run pre-migration scripts \(optional\)](#)

After completing the tasks required in the pre-migration phase, see [Project Server VME: Migration phase](#).

The Project Server virtual migration environment is a Office Project Server 2007 virtual environment used to migrate Project Server 2003 data to Microsoft Project Server 2010. There is no direct migration path from Office Project Server 2007 to Project Server 2010. However, the Project Server VME can be used as a pass-through environment to upgrade your Project Server 2003 data to Office Project Server 2007 before upgrading the data to Project Server 2010. For more information about the Project Server virtual migration environment, see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#). For more information about how to upgrade to Microsoft Project Server 2010, see [Project Server 2010 upgrade overview](#).

Check for reserved custom field, lookup table, or outline code name conflicts (Project Server)

The first pre-migration task that you have to do in the Project Server virtual migration environment (VME) is to check your Microsoft Office Project Server 2003 data for reserved custom field, lookup table, and outline code names that may cause the migration to fail. There are certain of these names that are reserved in both Microsoft Office Project Server 2007 and Microsoft Project Server 2010. Verify that your Project Server 2003 data does not have custom field, lookup table, or outline code names that conflict with the names reserved for Office Project Server 2007 and Project Server 2010. If any of these names are used in the current Project Server 2003 database, the names must be changed before you continue with the migration.

You have to correct the Project Server 2003 database through Microsoft Office Project Professional 2003 in your Project Server 2003 environment. After making corrections, make a backup copy of the Project Server 2003 database, and use the procedures in [Load data to the Project Server virtual migration environment \(VME\)](#) to restore the updated database to the VME virtual machine.

For more information about the Project Server VME, see [Overview of the virtual migration environment \(VME\) for Project Server 2010](#).

Reserved outline code/lookup table names

Outline code name	Type	Office Project Server 2007	Project Server 2010
Cost Type	Resource	X	X
Health	Task	X	X
State	Project	X	X
Team Name	Resource	X	X
Department			X
Flag Status			X

Reserved custom field names

Custom field name	Type	Office Project Server 2007	Project Server 2010
Cost Type	Resource	X	X
Health	Task	X	X
State	Project	X	X

Check for reserved custom field, lookup table, or outline code name conflicts (Project Server)

Custom field name	Type	Office Project Server 2007	Project Server 2010
Team Name	Resource	X	X
Sample Approved Finish Date	Project		X
Sample Approved Start Date	Project		X
Sample Areas Impacted	Project		X
Sample Assumptions	Project		X
Sample Business Need	Project		X
Sample Compliance Proposal	Project		X
Flag Status	Task		X
Sample Goals	Project		X
Sample Post-Implementation Review Date	Project		X
Sample Post-Implementation Review Notes	Project		X
Sample Primary Objectives	Project		X
Project Departments	Project		X
Project Impact	Project		X
Sample Proposal Cost	Project		X
Sample Proposed Finish Date	Project		X
Sample Proposed Start Date	Project		X
Relative Importance	Project		X
Resource Departments	Resource		X

Disable Dynamic Content Compression in Internet Information Services (IIS) Manager

The second pre-migration task that you have to do in the Project Server virtual migration environment (VME) is to disable Dynamic Content Compression in Internet Information Services (IIS) Manager. By default, Dynamic Content Compression is turned on in Windows Server 2008 R2, which is the server operating system on which the Project Server VME is running. Having Dynamic Content Compression enabled can cause issues if you have to make corrective changes to your Microsoft Office Project Server 2007 data in the VME. (Specifically, it may cause issues with editing custom fields and resources).

For more information about other pre-migration tasks required for the Project Server VME, see [Project Server VME: Pre-migration phase](#). For more information about the Project Server VME, see [Overview of the virtual migration environment \(VME\) for Project Server 2010](#).

To disable Dynamic Content Compression

1. On the Project Server VME, click **Start**, click **Administrative Tools**, and then click **Internet Information Services (IIS) Manager**.
2. In Internet Information Services (IIS) Manager, in the **Connection** pane, select **VME (VME\Administrator)**.
3. In the VME **Home** pane, in the **IIS** section, click **Compression**.
4. In the **Compression** section, clear the **Enable dynamic content compression** check box to disable this feature.
5. In the **Actions** pane, click **Apply** to save the change. The alert **The changes have been successfully saved** appears if the change is applied successfully.
6. Close Internet Information Services (IIS) Manager.



Note:

For more information about Dynamic Content Compression in Windows Server 2008 R2, see [Internet Information Services \(IIS\) 7.5](#).

Project Server VME: Run pre-migration scripts (optional)

After checking for reserved custom field, lookup table, and outline code names in your Microsoft Office Project Server 2003 data in the Project Server Virtual Migration Environment (VME), you have the option to run the following migration scripts. The migration scripts are optional, but are highly recommended to help find issues that might prevent you from migrating your data correctly.

- [Run Migration Script 1 to check the Project Server 2003 data](#)
- [Run Migration Script 2 to capture statistics about the data](#)
- [Run Migration Script 3 to capture a Project Server 2003 data snapshot](#)
- [Run Migration Script 4 to capture all Project Server 2003 projects with associated project workspaces](#)

The Project Server virtual migration environment is a Microsoft Office Project Server 2007 virtual environment used to migrate Project Server 2003 data to Microsoft Project Server 2010. There is no direct migration path from Office Project Server 2007 to Project Server 2010. However, the Project Server VME can be used as a pass-through environment to upgrade your Project Server 2003 data to Office Project Server 2007 before upgrading the data to Project Server 2010. For more information about the Project Server virtual migration environment, see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#). For more information about how to upgrade to Microsoft Project Server 2010, see [Project Server 2010 upgrade overview](#).

Run Migration Script 1 to check the Project Server 2003 data

Migration Script 1 is one of several migration scripts included in the Project Server virtual migration environment (VME) to assist in migrating Microsoft Office Project Server 2003 data. Running this script against the Project Server 2003 database identifies possible errors that will prevent the migration process from completing successfully. This SQL Server script only reads from your Project Server 2003 database. (it will not write to the Project Server 2003 database.)

Warning:

This script is one of several pre-migration scripts included in the Project Server virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the pre-migration scripts that are available, see [Project Server VME: Run pre-migration scripts \(optional\)](#).

This script identifies the following problems:

- Version of Project Server 2003 database (which must be SP3 before the migration)
- Projects are checked out
- Projects have been externally edited
- Projects have status updates pending
- Duplicate enterprise resources exist
- Duplicate enterprise resources exist in projects
- Enterprise Global template have been externally edited
- Enterprise Global template is checked out
- Enterprise Global template is locked
- Default language is different between the Project tables and the Web tables
- Resource has a comma in its name
- Required enterprise resource custom fields have no values
- Required enterprise resource custom fields have values which are not in the lookup table definition
- Enterprise resources have been externally edited
- Enterprise resource duration custom fields have value lists
- Enterprise resource duration custom fields have invalid values

To run Script 1

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window

Run Migration Script 1 to check the Project Server 2003 data

that displays the contents of drive E.

2. In Windows Explorer, double-click the following folder:
 - If you have one Project Server 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 1.sql**. This opens SQL Server Management Studio and displays Script 1.
4. Click **Execute** to run the script.
5. Check the results of the script. Take corrective action as necessary.



Note:

For additional information about Project Server 2003 data validation steps and corrective actions, see [Fix data issues identified in the pre-migration script A1 \(Project Server 2010\)](#).

You have to make corrections to the Project Server 2003 database through Microsoft Office Project Professional 2003 in your Project Server 2003 environment. After making corrections, make a backup copy of the Project Server 2003 database, and then use the procedures in [Load data to the Project Server virtual migration environment \(VME\)](#) to restore the updated database to the VME virtual machine. You can then re-run Script 1 on the updated database to verify that all issues have been fixed.

Script 1

Script 1 contains the following code:

```
-----  
/* Pre-Migration Steps from Project 2003 SP3 to Project 2007 SP2  
-----*/  
  
USE Project2003SourceDB  
  
-----  
  
/* Check Project 2003 Version: Must be SP3 = 11.3  
-----*/  
  
select replace(str(WADMIN_VERSION_MAJOR)+'.'+str(WADMIN_VERSION_MINOR),' ','')  
as 'Project Server Version SP3 Must Be 11.3 or Higher. If not, upgrade your 2003 database to  
SP3'  
  
from dbo.MSP_WEB_ADMIN  
  
go  
-----
```

Run Migration Script 1 to check the Project Server 2003 data

```
/* Display the projects checked out?
-----*/
select PROJ_NAME AS 'List of Projects Checked-out: Must be Fixed'
from dbo.MSP_PROJECTS where PROJ_CHECKEDOUT = 1 and PROJ_TYPE in (0, 1)
go
-----

/* Display the projects Externally Edited?
-----*/
select PROJ_NAME AS 'List of Projects Externally Edited: Must be Fixed'
from dbo.MSP_PROJECTS where (PROJ_EXT_EDITED = 1 or RESERVED_BINARY_DATA is null) and PROJ_TYPE
in (0, 1)
go
-----

/* Determining whether projects have status updates pending
-----*/
select distinct PROJ_NAME AS 'List of Projects with Status Updates Pending: Must be Fixed'
from dbo.MSP_WEB_ASSIGNMENTS wa, dbo.MSP_WEB_TRANSACTIONS trans,
dbo.MSP_WEB_PROJECTS wp where wa.WPROJ_ID = wp.WPROJ_ID
and trans.WASSN_ID = wa.WASSN_ID and trans.WTRANS_STATE in (0, 1, 2)
go
-----

/* Determining whether there are duplicate Enterprise Resources
-----*/
select res_uid, res_name AS 'Duplicate Enterprise Resources: Must be Fixed' from msp_resources
where res_name in (select distinct r1.RES_NAME from dbo.MSP_RESOURCES r1
inner join dbo.MSP_RESOURCES r2 on (r1.RES_NAME = r2.RES_NAME and r1.PROJ_ID = r2.PROJ_ID)
where r1.PROJ_ID = 1
and r1.RES_UID != r2.RES_UID) and proj_id = 1 order by res_name asc

go
-----

/* Determining whether there are duplicate Enterprise Resources
Check for duplicate enterprise resources used in your projects
```

Run Migration Script 1 to check the Project Server 2003 data

```
-----*/
select  distinct res_name AS 'Duplicate Enterprise Resources Used in Projects: Must be Fixed',
res_euid
from msp_resources
where res_name in (select distinct r1.RES_NAME from dbo.MSP_RESOURCES r1
inner join dbo.MSP_RESOURCES r2 on (r1.RES_NAME = r2.RES_NAME
and r1.PROJ_ID = r2.PROJ_ID) where r1.PROJ_ID = 1
and r1.RES_UID != r2.RES_UID) and proj_id <> 1 and res_euid is not null
order by res_name, res_euid asc
go

-----

/* Enterprise Global template should not be externally edited
-----*/
select PROJ_NAME 'Enterprise Global Template Externally Edited: Must be Fixed' from
dbo.MSP_PROJECTS
where (PROJ_EXT_EDITED = 1 or RESERVED_BINARY_DATA is null)
and PROJ_TYPE = 2

go

-----

/* Determining whether the Enterprise Global template is checked out
-----*/
select count(*) AS 'Enterprise Global Template Checked Out: Must be Fixed' from
dbo.MSP_PROJECTS
where PROJ_CHECKEDOUT = 1 and PROJ_TYPE = 2

go

-----

/* Determining whether the Enterprise Global template is locked
-----*/
select cast(isnull(PROJ_LOCKED, '0') as int) AS 'Enterprise Global Template Is Locked: Must be
Fixed'
```

Run Migration Script 1 to check the Project Server 2003 data

```
from dbo.MSP_PROJECTS where PROJ_TYPE = 2

go

-----
-----

/* Determining whether the default language on the Web tables database and Project tables
database should match

-----
-----*/

select WADMIN_DEFAULT_LANGUAGE As 'The Deafault Language on Web and Project Tables should
Match: Must be Fixed'
from dbo.MSP_WEB_ADMIN

go

-----
-----

/* Determining whether a resource has a comma in its name

-----
-----*/

select RES_NAME 'List of Resources With a Comma in the Name: Not Allowed: Must be Fixed'
from MSP_RESOURCES where RES_NAME is not null and charindex(',', RES_NAME) > 0

go

-----
-----

/* Determining whether required enterprise resource custom fields do not have values

-----
-----*/

declare @eglobal_proj_id int
set @eglobal_proj_id = (select PROJ_ID from dbo.MSP_PROJECTS where PROJ_TYPE = 2)

select
    r1.RES_NAME as 'Resource Name',
    ast1.AS_VALUE as 'Custom Field Name with NO VALUE: Must be Fixed'
```

Run Migration Script 1 to check the Project Server 2003 data

```
from
    dbo.MSP_RESOURCES r1
    inner join dbo.MSP_CODE_FIELDS cf1 on (r1.RES_UID = cf1.CODE_REF_UID)
    inner join dbo.MSP_FIELD_ATTRIBUTES fa1 on (cf1.CODE_FIELD_ID = fa1.ATTRIB_FIELD_ID)
    inner join dbo.MSP_ATTRIBUTE_STRINGS ast1 on (fa1.AS_ID = ast1.AS_ID)
    inner join dbo.MSP_OUTLINE_CODES oc3 on (cf1.CODE_UID = oc3.CODE_UID
    and oc3.PROJ_ID = @eglobal_proj_id)
    left join dbo.MSP_OUTLINE_CODES oc1 on (oc1.CODE_UID = cf1.CODE_UID
    and cf1.CODE_FIELD_ID = oc1.OC_FIELD_ID and oc1.PROJ_ID = @eglobal_proj_id)
    left join (
        select
            oc.CODE_UID,
            fa.ATTRIB_FIELD_ID as OC_FIELD_ID,
            @eglobal_proj_id as PROJ_ID
        from
            dbo.MSP_OUTLINE_CODES oc
            inner join dbo.MSP_FIELD_ATTRIBUTES fa on (fa.PROJ_ID = oc.PROJ_ID
            and fa.ATTRIB_VALUE = oc.OC_FIELD_ID and fa.ATTRIB_ID = 212)
        where
            oc.PROJ_ID = @eglobal_proj_id
            and fa.PROJ_ID = @eglobal_proj_id
            and fa.ATTRIB_ID = 212
    ) as oc2 on (oc2.CODE_UID = cf1.CODE_UID and cf1.CODE_FIELD_ID = oc2.OC_FIELD_ID
    and oc2.PROJ_ID = @eglobal_proj_id)
where
    r1.PROJ_ID = 1
    and cf1.proj_id = 1
    and fa1.PROJ_ID = @eglobal_proj_id
    and fa1.ATTRIB_ID = 206
    and ast1.PROJ_ID = @eglobal_proj_id
    and oc3.PROJ_ID = @eglobal_proj_id
    and oc1.CODE_UID is null
    and oc2.CODE_UID is null
```

Run Migration Script 1 to check the Project Server 2003 data

```
order by
    r1.RES_NAME,
    ast1.AS_VALUE

go

-----
-----
/* Determining whether a resource custom field has a value which is not in the lookup table
definition
-----
-----*/

declare @eglobal_proj_id int
set @eglobal_proj_id = (select PROJ_ID from dbo.MSP_PROJECTS where PROJ_TYPE = 2)

select
    r1.RES_NAME AS 'Resource Name',
    ast1.AS_VALUE AS 'Custom Field Name with Invalid Value: Must be Fixed'
from
    dbo.MSP_RESOURCES r1
    inner join dbo.MSP_CODE_FIELDS cf1 on (r1.RES_UID = cf1.CODE_REF_UID)
    inner join dbo.MSP_FIELD_ATTRIBUTES fa1 on (cf1.CODE_FIELD_ID = fa1.ATTRIB_FIELD_ID)
    inner join dbo.MSP_ATTRIBUTE_STRINGS ast1 on (fa1.AS_ID = ast1.AS_ID)
    left join dbo.MSP_OUTLINE_CODES oc1 on (oc1.CODE_UID = cf1.CODE_UID
    and cf1.CODE_FIELD_ID = oc1.OC_FIELD_ID and oc1.PROJ_ID = @eglobal_proj_id)
    left join (
        select
            oc.CODE_UID,
            fa.ATTRIB_FIELD_ID as OC_FIELD_ID,
            @eglobal_proj_id as PROJ_ID
        from
            dbo.MSP_OUTLINE_CODES oc
            inner join dbo.MSP_FIELD_ATTRIBUTES fa on (fa.PROJ_ID = oc.PROJ_ID
            and fa.ATTRIB_VALUE = oc.OC_FIELD_ID and fa.ATTRIB_ID = 212)
```

Run Migration Script 1 to check the Project Server 2003 data

```
where
    oc.PROJ_ID = @eglobal_proj_id
    and fa.PROJ_ID = @eglobal_proj_id
    and fa.ATTRIB_ID = 212
) as oc2 on (oc2.CODE_UID = cf1.CODE_UID and cf1.CODE_FIELD_ID = oc2.OC_FIELD_ID
and oc2.PROJ_ID = @eglobal_proj_id)
where
    r1.PROJ_ID = 1
    and cf1.proj_id = 1
    and cf1.code_uid is not null
    and fal.PROJ_ID = @eglobal_proj_id
    and fal.ATTRIB_ID = 206
    and ast1.PROJ_ID = @eglobal_proj_id
    and ocl.CODE_UID is null
    and oc2.CODE_UID is null
union
select
    r1.RES_NAME,
    ast1.AS_VALUE
from
    dbo.MSP_RESOURCES r1
    inner join dbo.MSP_MV_FIELDS cf1 on (r1.RES_UID = cf1.CODE_REF_UID)
    inner join dbo.MSP_FIELD_ATTRIBUTES fal on (cf1.CODE_FIELD_ID = fal.ATTRIB_FIELD_ID)
    inner join dbo.MSP_ATTRIBUTE_STRINGS ast1 on (fal.AS_ID = ast1.AS_ID)
    left join dbo.MSP_OUTLINE_CODES ocl on (ocl.CODE_UID = cf1.CODE_UID
and (cf1.CODE_FIELD_ID - 76) = ocl.OC_FIELD_ID and ocl.PROJ_ID = @eglobal_proj_id)
    left join (
        select
            oc.CODE_UID,
            fa.ATTRIB_FIELD_ID as OC_FIELD_ID,
            @eglobal_proj_id as PROJ_ID
        from
            dbo.MSP_OUTLINE_CODES oc
```

Run Migration Script 1 to check the Project Server 2003 data

```
inner join dbo.MSP_FIELD_ATTRIBUTES fa on (fa.PROJ_ID = oc.PROJ_ID
and fa.ATTRIB_VALUE = oc.OC_FIELD_ID and fa.ATTRIB_ID = 212)
where
oc.PROJ_ID = @eglobal_proj_id
and fa.PROJ_ID = @eglobal_proj_id
and fa.ATTRIB_ID = 212
) as oc2 on (oc2.CODE_UID = cf1.CODE_UID and (cf1.CODE_FIELD_ID - 76) = oc2.OC_FIELD_ID
and oc2.PROJ_ID = @eglobal_proj_id)
where
r1.PROJ_ID = 1
and cf1.proj_id = 1
and cf1.code_uid is not null
and fal.PROJ_ID = @eglobal_proj_id
and fal.ATTRIB_ID = 206
and ast1.PROJ_ID = @eglobal_proj_id
and ocl.CODE_UID is null
and oc2.CODE_UID is null
order by
r1.RES_NAME,
ast1.AS_VALUE

go
-----
-----
/* Determining whether Enterprise resources are externally edited
-----
-----*/

select count(*) AS 'Number of Enterprise Resources Externally Edited: Must be Fixed'
from dbo.MSP_RESOURCES
where PROJ_ID = 1 and cast(EXT_EDIT_REF_DATA as varchar(1)) = '1'

go
```

Run Migration Script 1 to check the Project Server 2003 data

```
-----  
-----  
/* Determining whether There are Enterprise Resource Duration Custom Fields with Value Lists  
-----  
-----*/
```

```
declare @proj_id int  
set @proj_id = (select proj_id from msp_projects where proj_type = 2)  
select ats.as_value as 'Enterprise Resource Duration Custom Field with Value Lists: Must be  
Fixed'  
from msp_attribute_strings ats  
inner join msp_field_attributes fa on (fa.proj_id = ats.proj_id and fa.as_id = ats.as_id)  
where fa.attrib_id = 206 and fa.proj_id = @proj_id  
and fa.attrib_field_id >= 205521382 and fa.attrib_field_id <= 205521391  
and exists (select * from msp_field_attributes fa2  
where fa2.proj_id = fa.proj_id and fa2.attrib_field_id = fa.attrib_field_id  
and fa2.attrib_id = 210)
```

```
go
```

```
-----  
-----  
/* Determining whether Enterprise Resource Duration custom fields contain valid values  
-----  
-----*/
```

```
select r.res_name AS 'Resource Name'  
, mas.as_value AS 'Enterprise Resource Duration Custom Field with Invalid Value: Must be Fixed'  
from msp_resources r  
inner join msp_duration_fields df on (df.dur_ref_uid = r.res_euid and df.proj_id = r.proj_id)  
inner join msp_projects p on (p.proj_type = 2)  
inner join msp_field_attributes fa on (fa.proj_id = p.proj_id and fa.attrib_field_id =  
df.dur_field_id)  
inner join msp_attribute_strings mas on (mas.proj_id = p.proj_id and fa.as_id = mas.as_id)  
where (dur_value < 0 or dur_value > 34689600) and df.proj_id = 1 and p.proj_type = 2  
and fa.attrib_id = 206
```

Run Migration Script 1 to check the Project Server 2003 data

go

Run Migration Script 2 to capture statistics about the data

Migration Script 2 is one of several migration scripts included in the Project Server virtual migration environment (VME) to assist in migrating your Microsoft Office Project Server 2003 data. Run Script 2 to capture statistics about the project data contained in your Project Server 2003 database that you plan to migrate.

 **Warning:**

This script is one of several pre-migration scripts included in the Microsoft Office Project Server 2003 virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the pre-migration scripts that are available, see [Project Server VME: Run pre-migration scripts \(optional\)](#).

This script's output provides information about the following:

- Size of the databases (the Project Tables and Web Tables databases)
- Number of projects
- Number of inserted projects
- Number of cross-project links
- Number of tasks
- Number of assignments
- Number of Enterprise resources
- Number of custom fields in use
- Number of Project-authenticated users
- Number of Windows-authenticated users
- Number of security groups
- Number of security categories
- Whether there is Windows SharePoint Services integration
- Number of linked issues
- Number of linked risks
- Number of linked documents
- Number of custom Office Project Web Access views

This script's output provides information about the Project Server 2003 data that you are migrating. You can make a general estimate of how long the migration process will take from some of this data. Generally, the migration process will take about 30 seconds to one minute for each project that you are

Run Migration Script 2 to capture statistics about the data

migrating, varying by a number of factors, such as number of assignments, tasks, computer speed, and so on. Therefore, if your Project Server 2003 database contained 600 projects, it would take about 10 hours to migrate, based on the one minute per project estimate.

▶ To run Script 2

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project Server 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 2.sql**. This opens SQL Server Management Studio and displays Script 2.
4. Click **Execute** to run the script.
5. Check the results of the script for information about your data.

Script 2

Script 2 contains the following code:

```
/*-----  
-----  
Script A2: Project Server 2003 Database Profile  
  
This script reads the Project Server 2003 database (Project Tables and View Tables may be in  
the same or separate database)  
  
-----*/  
use <Enter "Project Tables" database name>  
  
--Total size of DB  
exec sp_spaceused  
  
--Number of projects in the database  
select count(*) as 'Total Number of Projects in 2003' from msp_projects  
  
--Number of inserted projects  
select count(*) as 'Number of Inserted Projects in 2003'
```

Run Migration Script 2 to capture statistics about the data

```
from MSP_TEXT_FIELDS where TEXT_FIELD_ID = 188743706

--Number of cross-project links
select count(*) as 'Number of cross-project links in 2003'
  from MSP_TEXT_FIELDS
  where TEXT_FIELD_ID = 239075346 or TEXT_FIELD_ID = 239075347

--Number of total tasks, assignments in the system
select count(*) as 'Number of tasks in 2003' from msp_tasks
select count(*) as 'Number of assignments in 2003' from msp_assignments

--Number of Enterprise resources (in ResGlobal)
select count(*) as 'Number of Enterprise Resources in 2003'
  from msp_resources where proj_id = 1 and res_name is not null

--Number of custom fields in use
select count(*) as 'Number of Custom Fields in use in 2003'
  from msp_field_attributes
  where attrib_id = 206 and proj_id in (select proj_id
  from msp_projects where proj_type =2 )

/*-----
-----
This script reads the Project Server 2003 database (Project Tables and View Tables may be in
the same or separate database)
-----
-----*/

use <Enter "Web Tables" database name>

--Total size of DB
exec sp_spaceused
```

Run Migration Script 2 to capture statistics about the data

```
--Number of Project Authenticated users, Windows authenticated users
select count(*) as 'Number of Project Authenticated users in 2003'
  from MSP_WEB_RESOURCES
  where WRES_USE_NT_LOGON = 0
  and WRES_CAN_LOGIN <>0 and WRES_COUNT_LICENSE <> 0
select count(*) as 'Number of Windows Authenticated users in 2003'
  from MSP_WEB_RESOURCES
  where WRES_USE_NT_LOGON <> 0
  and WRES_CAN_LOGIN <>0 and WRES_COUNT_LICENSE <> 0

--Number of security groups, security categories
select count(*) as 'Number of Security Groups in 2003'
  from MSP_WEB_SECURITY_GROUPS
select count(*) as 'Number of Security Categories in 2003'
  from MSP_WEB_SECURITY_CATEGORIES

--Is there any Windows SharePoint Services integration ?
select count(*) as 'Is there any Windows SharePoint Services Integration in 2003?'
  from msp_web_admin where WADMIN_CURRENT_STS_SERVER_ID <> -1

--Number of linked issues, risks, documents
-- (indicates how much Windows SharePoint Services integration is used)
select count(*) as
  'Number of linked Windows SharePoint Services issues/risks/documents in 2003'
  from MSP_WEB_OBJECT_LINKS

--Number of custom Project Web Access views
select count(*) as 'Number of customer Project Web Access views in 2003'
  from MSP_WEB_VIEW_REPORTS where WVIEW_ID > 100
```

Run Migration Script 3 to capture a Project Server 2003 data snapshot

Migration Script 3 is one of several migration scripts included in the Microsoft Office Project Server 2003 virtual migration environment (VME) to assist in migrating your Microsoft Office Project Server 2003 data. Run Script 3 to take a data snapshot of the Project Server 2003 database that you plan to migrate. The script takes a data snapshot of the Projects and Tasks tables and then stores the information in a table created dynamically within the script. The stored results from this script can be compared later to a post-migration data snapshot to verify whether all data has migrated successfully.

 **Warning:**

This script is one of several pre-migration scripts included in the Microsoft Office Project Server 2003 virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the pre-migration scripts that are available, see [Project Server VME: Run pre-migration scripts \(optional\)](#).

 **To run Script 3**

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project Server 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 3.sql**. This opens Microsoft Office Project Server 2003 and displays Script 3.
4. Click **Execute** to run the script.
5. The results from the script are saved to the ProjectServer_Migration_Data_Validation database in the table named dbo.Migration_PS2003_Data_Validation_Snapshot.

Script 3

Script 3 contains the following code:

```
/*-----  
-- Script A3: Capture Data Validation Snapshot for Project Server 2003 ---- Updated Jan 12,  
2010
```

Run Migration Script 3 to capture a Project Server 2003 data snapshot

```
-- This script:
-- 1. drops the PS2003 Validation Snapshot table if it exists from the Migration Validation
    Database previously created
    2. Reads the Project Server 2003 SP2a database to extract Projects and Tasks information
    3. Stores the output dataset into a new table created in the Migration Validation
        Database
    This script requires to set the database names of the Migration Validation Database and the
    Project Server 2003 database in the USE statements
-----
*/
USE ProjectServer_Migration_Data_Validation
IF EXISTS (SELECT id FROM dbo.sysobjects WHERE id =
OBJECT_ID(N'Migration_PS2003_Data_Validation_Snapshot')
AND OBJECTPROPERTY(id, N'IsUserTable') = 1)
DROP TABLE dbo.Migration_PS2003_Data_Validation_Snapshot
GO
USE [Project2003SourceDB]
GO
SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED
GO
SELECT p11p.proj_name as N'Project Name',
    p11p.proj_id as 'Project ID',
    p11p.proj_version as N'Project Version',
    p11p.proj_info_start_date as N'Proj Start Date',
    p11p.proj_info_finish_date as N'Proj Finish Date',
    p11p.proj_info_status_date as N'Proj Status Date',
    p11p.proj_info_cal_name as N'Proj Calendar Name',
    p11p.proj_type as N'Proj Type',
        p11t.task_name as N'Task Name',
        p11t.task_uid as N'Task UID',
        p11t.task_type as N'Task Type',
        p11t.task_start_date as N'Task Start Date',
        p11t.task_finish_date as N'Task Finish Date',
```

Run Migration Script 3 to capture a Project Server 2003 data snapshot

```
p11t.task_act_start as N'Task Act Start',
p11t.task_act_finish as N'Task Act Finish',
p11t.task_constraint_date as N'Task Constraint Date',
p11t.task_deadline as N'Task Deadline',
p11t.task_work as N'Task Work',
p11t.task_act_work as N'Task Actual Work',
p11t.task_rem_work as N'Task Rem Work',
p11t.task_ovt_work as N'Task Ovt Work',
p11t.task_act_ovt_work as N'Task Actual Ovt Work',
p11t.task_rem_ovt_work as N'Task Rem Ovt Work',
p11t.task_pct_comp as N'Task %Complete',
p11t.task_pct_work_comp as N'Task %Work Complete',
p11t.task_phy_pct_comp as N'Task % Phys Work Complete',
p11t.task_dur as N'Task Duration',
p11t.task_rem_dur as N'Task Rem Duration',
p11t.task_act_dur as N'Task Actual Duration',
p11t.task_is_milestone as N'Task Milestone',
p11t.task_cost as N'Task Cost',
p11t.task_fixed_cost as N'Task Fixed Cost',
p11t.task_act_cost as N'Task Actual Cost',
p11t.task_rem_cost as N'Task Rem Cost',
p11t.task_ovt_cost as N'Task Ovt Cost',
p11t.task_act_ovt_cost as N'Task Actual Ovt Cost',
p11t.task_rem_ovt_cost as N'Task Rem Ovt Cost'

INTO ProjectServer_Migration_Data_Validation.dbo.Migration_PS2003_Data_Validation_Snapshot

FROM msp_projects AS p11p,
msp_tasks AS p11t
WHERE (p11p.proj_id = p11t.proj_id)

ORDER BY 1,5
```

Run Migration Script 4 to capture all Project Server 2003 projects with associated project workspaces

Migration Script 4 is one of several migration scripts included in the Project Server virtual migration environment (VME) to assist in migrating your Microsoft Office Project Server 2003 data. Run Script 4 to take a data snapshot of the Project Server 2003 database from the Project table and then store the data in a table created dynamically within the script. Script 4 lists all projects in the Project Server 2003 database that have an associated project workspace site. This data is saved to a table in the ProjectServer_Migration_Data_Validation database and can be compared to post-migration results to verify whether all Project Server 2003 projects with associated workspaces have been migrated and relinked.

Warning:

This script is one of several pre-migration scripts included in the Project Server virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the pre-migration scripts that are available, see [Project Server VME: Run pre-migration scripts \(optional\)](#).

To run Script 4

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project Server 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 4.sql**. This opens SQL Server Management Studio and displays Script 4.
4. Click **Execute** to run the script.
5. The results from the script are saved to the ProjectServer_Migration_Data_Validation database in the table named dbo.Migration_PS2003_ProjectWorkspaces.

Script 4

Script 4 contains the following code:

Run Migration Script 4 to capture all Project Server 2003 projects with associated project workspaces

```
/*-----  
-- Script A4: Capture WSS2 Project Workspaces Data Snapshot  
-- List all Projects 2003 with Associated WSS workspace sites  
-- Updated the USE statement to point to the Project Server 2003 database  
-----*/  
  
USE ProjectServer_Migration_Data_Validation  
  
IF EXISTS (SELECT id FROM dbo.sysobjects WHERE id =  
OBJECT_ID(N'Migration_PS2003_ProjectWorkspaces')  
AND OBJECTPROPERTY(id, N'IsUserTable') = 1)  
DROP TABLE dbo.Migration_PS2003_ProjectWorkspaces  
  
GO  
  
USE ProjectServer_2003  
  
SELECT [PROJ_NAME]  
, [WPROJ_ID]  
    , [WPROJ_STS_SUBWEB_NAME]  
    , [WPROJ_ISSUE_LIST_NAME]  
    , [WPROJ_RISK_LIST_NAME]  
  
    INTO ProjectServer_Migration_Data_Validation.dbo.Migration_PS2003_ProjectWorkspaces  
FROM [MSP_WEB_PROJECTS] P, dbo.MSP_WEB_STS_SERVERS W  
where [WPROJ_STS_SUBWEB_NAME] IS NOT NULL  
and p.[WSTS_SERVER_ID] = w.[WSTS_SERVER_ID]
```

Project Server VME: Migration phase

This chapter describes the tasks required during the migration phase when you are using the Project Server virtual migration environment (VME) to migrate your Microsoft Office Project Server 2003 data to Microsoft Office Project Server 2007. Run these tasks after you have completed the tasks listed in [Project Server VME: Pre-migration phase](#).

In this chapter:

- [Project Server VME: Run verification](#)
- [Project Server VME: Migrate the Enterprise Global data](#)
- [Project Server VME: Migrate the Project Server 2003 project data](#)
- [Project Server VME: Attach the Windows SharePoint Services 2.0 content database to the farm](#) (optional)
- [Project Server VME: Relink project workspace sites](#) (optional)



Note:

The last two items in the list are optional migration steps. They are only necessary if you plan to migrate your Project Server 2003 project workspace data.

After completing the tasks required in the migration phase, see [Project Server VME: Post-migration phase](#).

The Project Server virtual migration environment is a Office Project Server 2007 virtual environment used to migrate Project Server 2003 data to Microsoft Project Server 2010. There is no direct migration path from Office Project Server 2007 to Project Server 2010. However, the Project Server VME can be used as a pass-through environment to upgrade your Project Server 2003 data to Office Project Server 2007 before upgrading the data to Project Server 2010. For more information about the Project Server virtual migration environment (VME) see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#). For more information about how to upgrade to Microsoft Project Server 2010, see [Project Server 2010 upgrade overview](#).

Project Server VME: Run verification

The first thing you must do in the Project Server virtual migration environment (VME) migration phase is to run the migration verification check on your Microsoft Office Project Server 2003 data. The verification process runs a minimum of data validation checks and writes this information to the migration log file. It specifically checks for the following conditions in your data, which would cause your migration to fail:

- There are projects that are checked out
- There are projects that have been modified externally
- There are projects with pending status updates
- There are duplicate enterprise resources

The Run Verification step is the first step in the VME migration phase. For additional steps, see [Project Server VME: Migration phase](#).

Run migration verification

When you run the migration verification, a status screen will display the progress. If no potential problems are found, the status screen will end with “Project Migration Successful”. If your migration fails, check the migration log for more information about the error. The migration log file and its location will be displayed in the first few lines of the status screen. Note that the migration verification process will not write to or fix issues in the Microsoft Office Project Server 2007 database.

**Note:**

For additional information about Project Server 2003 data validation steps and corrective actions, see [Fix data issues identified in the pre-migration script A1 \(Project Server 2010\)](#).

To run migration verification

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project Server 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Click **1-Run Verification** to start the migration tool. This command opens a Command Prompt window that displays the status of the verification checks as they occur.
4. When the verification checks complete successfully, the End Summary displays **Project Migration successful**.

Project Server VME: Run verification

If you encounter an error, check the migration log file for more information about the problem. The specific migration log file for your migration is displayed in the first few lines (for example, "Using log file: E:\MigrationLogs\Batch1-20100503-1704.log"). You can view the log in a text editor such as Notepad.



Important:

Although this "Run Verification" step makes several key data validation checks on your Project Server 2003 data, we recommend that you also run SQL Script 1. Script 1 looks for many additional data validation errors that could cause your migration to fail.

Project Server VME: Migrate the Enterprise Global data

After running the migration verification in the Project Server virtual migration environment (VME), you must migrate the Microsoft Office Project Server 2003 Enterprise Global data to Microsoft Office Project Server 2007 before you migrate the project data. The virtual migration environment uses the migration tool and calls on a pre-configured configuration file to migrate the Enterprise Global data. The VME automates this process for you.

Single database migration uses the P12SingleMigrationEG.ini configuration file when you run the migration tool to migrate your Enterprise Global file. Split database migration uses P12SplitMigrationEG.ini.

**Note:**

If you need to change the default settings in the migration configuration file, see [Configure the migration tool \(Project Server\)](#).

Migrating your Enterprise Global data is the second step in the VME migration phase. For additional steps, see [Project Server VME: Migration phase](#).

▶ To migrate your Enterprise Global data

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project Server 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 database, open **Migrate_Proj_2003_Split_DB**.
3. Click **2-Run EntGlobal-ResPool Migration** to start the migration tool. This opens a Command Prompt window that displays the status of the Enterprise Global data migration as it occurs.
4. When the Enterprise Global migration is completed successfully, the End Summary displays **Project Migration successful**.

If you encounter an error, check the migration log file for more information about the problem. The specific migration log file for this migration is displayed in the first few lines (for example, "Using log file: E:\MigrationLogs\Batch1-20100503-1704.log"). You can view the log in a text editor such as Notepad.

Project Server VME: Migrate the Project Server 2003 project data

After you have migrated the Microsoft Office Project Server 2003 Enterprise Global data to Microsoft Office Project Server 2007, you are ready to migrate your Project Server 2003 project data. For project data migration, the virtual migration environment (VME) again uses the migration tool and calls on a different configuration file specifically set to migrate only your project data. The VME automates this process for you.

Single database migration uses the P12SingleMigration.ini configuration file when you run the migration tool to migrate the project data. Split database migration uses P12SplitMigration.ini.



Note:

If you need to change the default settings in the migration configuration file, see [Configure the migration tool \(Project Server\)](#).

Migrating project data is the third step in the VME migration phase. For additional steps, see [Project Server VME: Migration phase](#).

▶ To run migration verification

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project Server 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 database, open **Migrate_Proj_2003_Split_DB**.
3. Click **3-Migrate Projects** to start the migration tool. This opens a Command Prompt window that displays the status of the project data migration as it occurs.
4. When the project data migration is completed successfully, the End Summary displays **Project Migration successful**.

If you encounter an error, check the migration log file for more information about the problem. The specific migration log file for this migration is displayed in the first few lines (for example, "Using log file: E:\MigrationLogs\Batch1-20100503-1704.log"). You can view the log in a text editor such as Notepad.

Project Server VME: Attach the Windows SharePoint Services 2.0 content database to the farm

Important:

This step is optional and is only required if you are migrating Microsoft Office Project Server 2003 project workspace data.

Use the following procedure to attach the copy of the Windows SharePoint Services 2.0 content database to the Microsoft Office Project Server 2007 farm in the VME. Perform this procedure after you have restored the content database containing your project workspace data to the Project Server virtual migration environment (VME) virtual machine in Microsoft SQL Server 2005. Once attached, the project workspaces are migrated to Windows SharePoint Services 3.0.

Attaching your Windows SharePoint Services 2.0 content database to the farm in the VME is a step in the VME migration phase. For additional steps, see [Project Server VME: Migration phase](#).

To attach the Windows SharePoint Services 2.0 content database to the VME farm

1. Open a Command Prompt window and navigate to the location of Stsadm.exe. (The default location is <Drive>:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\bin.)
2. Run the following Stsadm command to attach a copy of your Windows SharePoint Services 2.0 content database to Windows SharePoint Services 3.0 and upgrade it.

```
stsadm.exe -o addcontentdb -url http://<server>:<port> -databasename <WSS v2.0 content database> -databaseserver <DB Server name>
```

For example:

```
stsadm.exe -o addcontentdb -url http://VME -databasename YourContentDBName  
databaseserver VME
```

3. After running Stsadm.exe, you can track the progress of the upgrade by looking at upgrade.log in the ULS log directory. (The default location is C:\program files\common files\Microsoft shared\Web server extensions\12\logs\upgrade.log.) Upgrade has finished on a given content database when the following line is included in the log:
4. If the upgrade process fails for any reason (as indicated in the log), the Windows SharePoint Services upgrade process can be restarted. To restart the upgrade process, run the command **Stsadm.exe -o upgrade** and look at the logs to view the progress. Upgrade has finished when the command prompt returns Operation completed successfully.

Note:

Project Server VME: Attach the Windows SharePoint Services 2.0 content database to the farm

For more information about how to migrate a content database to Windows SharePoint Services 3.0, see [Attach databases and upgrade to SharePoint Foundation 2010](#).

Project Server VME: Relink project workspace sites



Important:

This step is optional and is only required if you are migrating your Microsoft Office Project Server 2003 project workspace data.

After you attach the Windows SharePoint Services 2.0 content database to the farm to upgrade your project workspace sites to Windows SharePoint Services 3.0, you must relink the project workspace sites to their associated projects. You can do this by using the Project Workspace Site Relinker Tool, which is located on the root of drive E in the virtual migration environment (VME).

Relinking project workspace sites in the VME is a step in the VME migration phase. For additional steps, see [Project Server VME: Migration phase](#).

Run the tool at a command prompt with the following syntax:

```
RelinkAllWSSsites WSSServerURL ProjectServerURL [Silent] [QuitOnError]
```

Option	Description
RelinkAllWSSsites	Calls the executable file.
WSSServerURL	The Windows SharePoint Services Web application that contains project workspaces. This is a required parameter and must be entered in the form <code>http://<server>:<port></code> . Example: <code>http://myWSSserver:80</code>
ProjectServerURL	The Project Web Access URL that contains the reference to the project workspaces to which you are relinking. This is a required parameter and must be entered in the form <code>http://<server>/pwa</code> . Example: <code>http://myProjectserver/pwa</code>
Silent	(Optional.) Progress information for each project is not displayed.
QuitOnError	(Optional.) The application stops if an error is encountered.

For example:

```
RelinkAllWSSsites http://myWSSserver:80 http://myProjectserver/pwaSilent
```

Project Server VME: Relink project workspace sites

You may be required run the Project Workspace Site Relinker tool multiple times to relink all the sites referenced within your Project Server instance. For example, you may have two Windows SharePoint Services Web applications (<http://myWSSServer:80> and <http://myWSSServer2:80>) that contain project workspaces. In such a case you would run the tool twice — once for each Web application.

For more information about the tool, see [Project Workspace Site Relinker Tool](#).

Project Server VME: Post-migration phase

This chapter describes the post-migration tasks required when you are using the Project Server virtual migration environment (VME) to migrate your Microsoft Office Project Server 2003 data to Microsoft Office Project Server 2007. These tasks are performed after you have completed the tasks listed in the Project Server VME [Project Server VME: Migration phase](#).

In this chapter:

- [Project Server VME: Do post-migration tasks](#)
- [Project Server VME: Run post-migration scripts \(optional\)](#)

After you complete the post-migration tasks, see [Project Server VME: Plan to upgrade data to Project Server 2010](#) to migrate your Office Project Server 2007 data to Microsoft Project Server 2010.

The Project Server virtual migration environment is a Office Project Server 2007 virtual environment that is used to migrate Project Server 2003 data to Microsoft Project Server 2010. There is no direct migration path from Project Server 2003 to Project Server 2010. However, the Project Server VME can be used as a pass-through environment to upgrade your Project Server 2003 data to Office Project Server 2007 before upgrading the data to Project Server 2010. For more information about the Project Server virtual migration environment (VME), see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#). For more information about how to upgrade to Microsoft Project Server 2010, see [Project Server 2010 upgrade overview](#).

Project Server VME: Do post-migration tasks

After you have finished migrating your data from Microsoft Office Project Server 2003 to Microsoft Office Project Server 2007 in the Project Server virtual migration environment (VME), there are subsequent tasks that have to be completed. If these post-migration tasks are not performed, the data may not upgrade correctly to Microsoft Project Server 2010. These tasks include the following:

- [Verify that the migration was successful](#)
- [Update migrated server settings](#)
- [Synchronize the migrated forms-authenticated users by using the Project Server 2007 forms-based authentication store](#)
- [Verify the project workspace provisioning settings](#)
- [Delete migrated inactive users \(optional\)](#)
- [Fix project currency settings](#)
- [Change local Windows accounts that were migrated](#)
- [Update multi-language lookup tables](#)
- [Address user and permission issues](#)
- [Address authentication issues](#)
- [Address master-project issues](#)

For information about other things that are required in the post-migration phase, see [Project Server VME: Post-migration phase](#).

For more information about the Project Server virtual migration environment (VME), see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#).

Verify that the migration was successful

During each of the three instances that the migration tool was run in the Migration phase (verification, enterprise global data migration, project migration), verify from the migration tool command line display or from the migration logs that the migration was successful. If the migration tool failed at any point, view the contents of the migration log file for more information about the error. Make corrections, import the updated data to the VME, and then re-run the migration tool.

If there is an irrecoverable problem, restore the VME virtual machine image to the original configuration, import and restore your Project Server 2003 databases, and then retry migration. Hyper-V manager automatically takes a snapshot of the VME virtual machine when the image is first restored. You can reapply the snapshot (titled "As Shipped") to restore the VME to its original state.

If the migration process appears to have been successful, ensure that the data migrated correctly to Office Project Server 2007 by doing the following tests:

- **Verify project data:** Open the migrated projects in Project Professional 2007, change them, add enterprise resources, publish them, accept status updates, and so on. The VME includes Microsoft Office Project Professional 2007.
- **Verify Project Web Access data:** Open Office Project Web Access to connect to your data. Verify that you can fill timesheets, create proposals, and so on.

We highly recommend that you have a migration checklist specific to your needs and that you test those items after migration.

Update migrated server settings

Not all kinds of data can be migrated from Project Server 2003 to Office Project Server 2007. (See [Data that cannot be migrated to Project Server 2007](#).) Therefore we recommend that you review all the Office Project Server 2007 server settings and make sure that they are as you want them to be. Some specific areas are listed here:

- **Security settings:** There are some security permissions (global and category) that are new in Office Project Server 2007. These permissions may not get migrated. You may want to review each one and decide on whether to give users that permission. For more information, see [Security and protection for Office Project Server 2007](#).
- **Project Web Access view definitions:** The "Filter by" and "Group by" clauses are not migrated from Project Server 2003. You may have to re-create these clauses. Also, some Office Project Web Access view fields do not migrate. You may want to make sure that all the fields important to you are available in the migrated views.
- **Merge and rename similar security groups, categories, and templates and Project Web Access view definitions:** If there is a naming conflict during migration that involves security templates, view definitions, or security groups or categories, the migration tool attaches a prefix or suffix to the conflicting names. This action is taken to preserve both Office Project Server 2007 entities and Project Server 2003 entities in one system. Then you can select which one to keep or else decide to merge them, as appropriate. We recommend that you resolve them so that end users do not become confused.

Synchronize the migrated forms-authenticated users by using the Project Server 2007 forms-based authentication store

This is a required step to make sure that the migrated forms-authenticated users work in Office Project Server 2007. For more information, see [Configure SQL Membership Provider forms authentication for Project Server 2007](#).

Verify the project workspace provisioning settings

In Office Project Server 2007, the migration tool resets the **Automatically Provision** option in the Project Workspace Provisioning Settings page of Server Settings to **Manually Create a workspace for each project**. This setting ensures that the migration process does not provision duplicate workspaces for projects that may already have workspaces that are yet to be migrated.

After running the migration tool, check the **Project Workspace Provisioning** settings located in the **Operational Policies** section of Office Project Web Access Server Settings. Verify that the **Site URL** and the **Automatic Provisioning** options are configured correctly per your needs. In Office Project Server 2007, after the migration tool is run, you may want to reset the **Automatically Provision** option to **Automatically create a workspace for the project when a project is published**.

Delete migrated inactive users (optional)

By default, the Manage Groups page in Project Server 2003 does not display inactive users. But in Office Project Server 2007, by default, inactive users are displayed. Therefore, after the migration process (which migrates the inactive users also), you may see additional users in the Manage Groups Project Web Access page in Office Project Server 2007.

You can permanently delete the inactive users, if you need to.

To permanently delete the inactive users

1. In Office Project Web Access, click **Server Settings**.
2. In the **Database Administration** section, click **Delete Enterprise Objects**.
3. On the Delete Enterprise Objects page, in the **What do you want to delete from Project Server** section, select **Resources and Users**.
4. In the list of users that appears, select the users that you want to permanently delete, and then click **Delete**.

Fix project currency settings

It is a known issue that project currencies are not migrated correctly. Run the following query on the Project Server 2003 Project Tables database to get a list of projects and their currencies. This information can be used to manually correct the currency settings after migration.

```
select PROJ_NAME, PROJ_OPT_CURRENCY_SYMBOL from dbo.MSP_PROJECTS where PROJ_TYPE in (0, 1, 2)
```

Change local Windows accounts that were migrated

Local Windows accounts (for example, ComputerName\Brad Joseph), for computer names that are no longer valid should be removed. Go to Office Project Web Access Server Settings and use the **Manage Users** options to edit those accounts so that they are valid.

Update multi-language lookup tables

Multilanguage lookup tables are not updated correctly after migration. Run the following SQL statements on the Office Project Server 2007 Published database to resolve this problem.

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_LANGUAGES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)

DELETE FROM dbo.MSP_LOOKUP_TABLE_MASK_VALUES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)

DELETE FROM dbo.MSP_LOOKUP_TABLE_MASK_STRUCTURES WHERE LT_UID NOT IN (SELECT LT_UID
FROM dbo.MSP_LOOKUP_TABLES)

DELETE FROM dbo.MSP_LOOKUP_TABLE_VALUES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)

DELETE FROM dbo.MSP_LOOKUP_TABLE_STRUCTURES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)
```



Note:

This script (Script 10) is included in the VME in the Verification Scripts folder. Note that this script takes corrective action on the Office Project Server 2007 data.

If you are using Microsoft Office Project Portfolio Server 2007 with Office Project Server 2007, it is especially important to run these SQL statements to update the tables. If the statements are not run, you may encounter a "GeneralUnhandledException" error when you perform an export from Office Project Portfolio Server 2007 to Office Project Server 2007. The error would resemble this and would appear in the ULS logs:

PSI: LookupTable.ReadLookupTablesMultiLang Undefined Attributes: PSError: GeneralUnhandledException Underlined attributes list: System.Data.ConstraintException: Failed to enable constraints. One or more rows contain values violating non-null, unique, or foreign-key constraints....

Address user and permission issues

After migration (especially in localized builds), the users may not have certain expected permissions in the migrated Office Project Server 2007 installation. For example, imagine that you were assigned your permissions through the administrator template, but you cannot view timesheets. There are several reasons that such a situation might occur:

1. In Project Server 2003, a permission is denied at the organization level. You can verify this by checking your Office Project Web Access permissions to see whether any are disabled and whether they are the cause of your problem. To check your Office Project Web Access permissions:
 - a. In the Office Project Web Access home page, in the left pane, click **Server Settings**.
 - b. In Server Settings, in the **Security** section, click **Project Web Access Permissions**.
2. There are some permissions that are new in Office Project Server 2007. These permissions may not be mapped correctly during migration. You can check the Security documentation for a list of these permissions to determine whether they are the cause of your problem. For more information about Office Project Server 2007 permissions, see [Security and protection for Office Project Server 2007](#).
3. If a Project Server 2003 user or resource exists in Office Project Server 2007 (by name or Windows NT account), then that user or resource's security permissions are not migrated. For example, if you had done an Active Directory synchronization before migration (and if most of those users exist in Project Server 2003), those user permissions would not have been migrated. This problem should not be encountered in the VME, because the Office Project Server 2007 environment you are migrating to should not have any users in it before the migration process.

Address authentication issues

Project Server authentication is used in Project Server 2003, but it is not supported in Office Project Server 2007. When you migrate Project Server authenticated users to Office Project Server 2007, the user accounts are reset, because the forms-based authentication mechanism in Office Project Server 2007 is architecturally different from the Project Server authentication that is used in Project Server 2003. You do not see these users listed in the Office Project Web Access Server Settings Manage Users page, or the **User Authentication** section for the user does not appear. However, you can still edit these migrated users in the Project Web Access Resource Center.

Address master-project issues

When you migrate master projects and their associated subprojects from Project Server 2003 to Office Project Server 2007, the following two scenarios cause the project migration to fail:

- A subproject that is migrated after its master project. (You can correct the order of migration in the migration configuration file.)



Important:

For more information about the migration configuration file, see [Configure the migration tool \(Project Server\)](#).

- A project that is a subproject to two master projects. (Such an arrangement is allowed in Project Server 2003, but not in Office Project Server 2007). The migration for this project will fail when you attempt to publish the project.

Project Server VME: Run post-migration scripts (optional)

After doing post-migration tasks to your migrated Microsoft Office Project Server 2007 data in the Project Server virtual migration environment (VME), you have the option to run the following migration scripts. The migration scripts are optional, but are highly recommended in helping to find issues that might prevent you from migrating your data properly.

- [Run Migration Script 5 to capture a post-migration Project Server 2007 data snapshot](#)
- [Run Migration Script 6 to capture all Project Server 2007 projects with associated project workspaces](#)
- [Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots](#)
- [Run Migration Script 8 to list projects with unlinked workspaces](#)
- [Run Migration Script 9 to test your Project Server 2007 data for known migration issues](#)
- [Run Migration Script 10 to correct multilanguage lookup table upgrade issues](#)

The Project Server virtual migration environment is a Office Project Server 2007 virtual environment used to migrate Project Server 2003 data to Microsoft Project Server 2010. There is no direct migration path from Office Project Server 2007 to Project Server 2010. However, the Project Server VME can be used as a pass-through environment to upgrade the Project Server 2003 data to Office Project Server 2007 before you upgrade the data to Project Server 2010. For more information about the Project Server virtual migration environment (VME), see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#). For more information about upgrading to Microsoft Project Server 2010, see [Project Server 2010 upgrade overview](#).

Run Migration Script 5 to capture a post-migration Project Server 2007 data snapshot

Run Migration Script 5 to take a data snapshot of the Microsoft Office Project Server 2007 database that contains your migrated Microsoft Office Project Server 2003 data. The script takes a data snapshot of the Projects and Tasks tables and then stores the information in a table that is created dynamically within the script. The stored results from this script can be compared later to the results from the pre-migration snapshot taken of your Project Server 2003 data to verify whether all data has migrated successfully.

Warning:

This script is one of several post-migration scripts included in the Project Server virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the post-migration scripts that are available, see [Project Server VME: Run post-migration scripts \(optional\)](#).

To run Script 5

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 5.sql**. This opens SQL Server Management Studio and displays Script 5.
4. Click **Execute** to run the script.
5. The results from the script are saved to the ProjectServer_Migration_Data_Validation database in the table named dbo.Migration_PS2007_Data_Validation_Snapshot.

Script 5

Script 5 contains the following code:

```
/*-----  
-- Script A5: Capture Data Validation Snapshot for Project Server 2007 after migration----  
Updated Jan 10,2010  
-- This script:
```

Run Migration Script 5 to capture a post-migration Project Server 2007 data snapshot

-- 1. drops the PS2007 Validation Snapshot table if it exists from the Migration Validation Database previously created

2. Reads the Project Server 2007 SP2 Draft database to extract Projects and Tasks information

3. Stores the output dataset into a new table created in the Migration Validation Database

This script requires to set the database names of the Migration Validation Database and the Project Server 2007 database in the USE statements

*/

```
USE ProjectServer_Migration_Data_Validation
IF EXISTS (SELECT id FROM dbo.sysobjects WHERE id =
OBJECT_ID(N'Migration_PS2007_Data_Validation_Snapshot')
AND OBJECTPROPERTY(id, N'IsUserTable') = 1)
DROP TABLE dbo.Migration_PS2007_Data_Validation_Snapshot
GO
USE [ProjectServer_Draft]
GO
SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED
GO
SELECT p12p.proj_name as N'Project Name',
       p12p.proj_uid as 'Project UID',
       p12p.proj_info_start_date as N'Proj Start Date',
       p12p.proj_info_finish_date as N'Proj Finish Date',
       p12p.proj_info_status_date as N'Proj Status Date',
       p12p.CAL_UID as N'Proj Calendar UID',
       p12t.task_name as N'Task Name',
       p12t.TASK_ID AS N'Task ID',
       p12t.task_type as N'Task Type',
       p12t.task_start_date as N'Task Start Date',
       p12t.task_finish_date as N'Task Finish Date',
p12t.task_act_start as N'Task Act Start',
```

Run Migration Script 5 to capture a post-migration Project Server 2007 data snapshot

```
p12t.task_act_finish as N'Task Act Finish',
p12t.task_constraint_date as N'Task Constraint Date',
p12t.task_deadline as N'Task Deadline',
p12t.task_work as N'Task Work',
p12t.task_act_work as N'Task Actual Work',
p12t.task_rem_work as N'Task Rem Work',
p12t.task_ovt_work as N'Task Ovt Work',
p12t.task_act_ovt_work as N'Task Actual Ovt Work',
p12t.task_rem_ovt_work as N'Task Rem Ovt Work',
p12t.task_pct_comp as N'Task %Complete',
p12t.task_pct_work_comp as N'Task % Work Complete',
p12t.task_phy_pct_comp as N'Task % Phys Work Complete',
p12t.task_dur as N'Task Duration',
p12t.task_rem_dur as N'Task Rem Duration',
p12t.task_act_dur as N'Task Actual Duration',
p12t.task_is_milestone as N'Task Milestone',
p12t.task_cost as N'Task Cost',
p12t.task_fixed_cost as N'Task Fixed Cost',
p12t.task_act_cost as N'Task Actual Cost',
p12t.task_rem_cost as N'Task Rem Cost',
p12t.task_ovt_cost as N'Task Ovt Cost',
p12t.task_act_ovt_cost as N'Task Actual Ovt Cost',
p12t.task_rem_ovt_cost as N'Task Rem Ovt Cost'
INTO ProjectServer_Migration_Data_Validation.dbo.Migration_PS2007_Data_Validation_Snapshot
FROM dbo.msp_projects AS p12p,
dbo.msp_tasks AS p12t
WHERE (p12p.proj_uid = p12t.proj_uid)

ORDER BY 1,4

/*-----
-- Script A5: Capture Data Validation Snapshot for Project Server 2007 after migration----
Updated Jan 10,2010
-- This script:
```

Run Migration Script 5 to capture a post-migration Project Server 2007 data snapshot

-- 1. drops the PS2007 Validation Snapshot table if it exists from the Migration Validation Database previously created

2. Reads the Project Server 2007 SP2 Draft database to extract Projects and Tasks information

3. Stores the output dataset into a new table created in the Migration Validation Database

This script requires to set the database names of the Migration Validation Database and the Project Server 2007 database in the USE statements

*/

```
USE ProjectServer_Migration_Data_Validation
IF EXISTS (SELECT id FROM dbo.sysobjects WHERE id =
OBJECT_ID(N'Migration_PS2007_Data_Validation_Snapshot')
AND OBJECTPROPERTY(id, N'IsUserTable') = 1)
DROP TABLE dbo.Migration_PS2007_Data_Validation_Snapshot
GO
USE [ProjectServer_Draft_Migrated]
GO
SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED
GO
SELECT p12p.proj_name as N'Project Name',
       p12p.proj_uid as 'Project UID',
       p12p.proj_info_start_date as N'Proj Start Date',
       p12p.proj_info_finish_date as N'Proj Finish Date',
       p12p.proj_info_status_date as N'Proj Status Date',
       p12p.CAL_UID as N'Proj Calendar UID',
       p12t.task_name as N'Task Name',
       p12t.TASK_ID AS N'Task ID',
       p12t.task_type as N'Task Type',
       p12t.task_start_date as N'Task Start Date',
       p12t.task_finish_date as N'Task Finish Date',
p12t.task_act_start as N'Task Act Start',
```

Run Migration Script 5 to capture a post-migration Project Server 2007 data snapshot

```
p12t.task_act_finish as N'Task Act Finish',
p12t.task_constraint_date as N'Task Constraint Date',
p12t.task_deadline as N'Task Deadline',
p12t.task_work as N'Task Work',
p12t.task_act_work as N'Task Actual Work',
p12t.task_rem_work as N'Task Rem Work',
p12t.task_ovt_work as N'Task Ovt Work',
p12t.task_act_ovt_work as N'Task Actual Ovt Work',
p12t.task_rem_ovt_work as N'Task Rem Ovt Work',
p12t.task_pct_comp as N'Task %Complete',
p12t.task_pct_work_comp as N'Task % Work Complete',
p12t.task_phy_pct_comp as N'Task % Phys Work Complete',
p12t.task_dur as N'Task Duration',
p12t.task_rem_dur as N'Task Rem Duration',
p12t.task_act_dur as N'Task Actual Duration',
p12t.task_is_milestone as N'Task Milestone',
p12t.task_cost as N'Task Cost',
p12t.task_fixed_cost as N'Task Fixed Cost',
p12t.task_act_cost as N'Task Actual Cost',
p12t.task_rem_cost as N'Task Rem Cost',
p12t.task_ovt_cost as N'Task Ovt Cost',
p12t.task_act_ovt_cost as N'Task Actual Ovt Cost',
p12t.task_rem_ovt_cost as N'Task Rem Ovt Cost'
INTO ProjectServer_Migration_Data_Validation.dbo.Migration_PS2007_Data_Validation_Snapshot
FROM dbo.msp_projects AS p12p,
dbo.msp_tasks AS p12t
WHERE (p12p.proj_uid = p12t.proj_uid)

ORDER BY 1,4
```

Run Migration Script 6 to capture all Project Server 2007 projects with associated project workspaces

Run Script 6 to list all projects in the Microsoft Office Project Server 2007 Published database that have an associated project workspace site. This data is saved to a table in the ProjectServer_Migration_Data_Validation database. The data can be compared to pre-migration results from Script 4 to check whether all Microsoft Office Project Server 2003 projects with associated workspaces have been migrated and relinked.



Note:

This script is one of several post-migration scripts included in the Project Server virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the post-migration scripts that are available, see [Project Server VME: Run post-migration scripts \(optional\)](#).

▶ To run Script 6

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 6.sql**. This opens SQL Server Management Studio and displays Script 6.
4. Click **Execute** to run the script.
5. The results from the script are saved to the ProjectServer_Migration_Data_Validation database in the table named dbo.Migration_PS2007_ProjectWorkspaces.

Script 6

```
/*-----  
-- Script A6  
-- Project2007_Projects_With_WSS_Sites.sql  
-- List all Projects with Associated WSS workspace sites
```

Run Migration Script 6 to capture all Project Server 2007 projects with associated project workspaces

Run this query against the Project Server 2007 Published database

```
-----*/
USE ProjectServer_Migration_Data_Validation
IF EXISTS (SELECT id FROM dbo.sysobjects WHERE id =
OBJECT_ID(N'Migration_PS2007_ProjectWorkspaces')
AND OBJECTPROPERTY(id, N'IsUserTable') = 1)
DROP TABLE dbo.Migration_PS2007_ProjectWorkspaces
go
USE ProjectServer_Published
SELECT [PROJ_NAME]
, [PROJ_UID]
, [WPROJ_STS_SUBWEB_NAME]
, [WPROJ_ISSUE_LIST_NAME]
, [WPROJ_RISK_LIST_NAME]
INTO ProjectServer_Migration_Data_Validation.dbo.Migration_PS2007_ProjectWorkspaces
FROM [MSP_PROJECTS] P
where [WPROJ_STS_SUBWEB_NAME] IS NOT NULL
order by proj_name
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

Migration Script 7 compares the pre-migration Microsoft Office Project Server 2003 data snapshot (created by Script 3) with the post-migration Microsoft Office Project Server 2007 data snapshot (created by Script 5). Script 7 does the following:

1. Lists the projects not migrated to the draft database (existing projects in Project Server 2003 but not in the Office Project Server 2007 Published database)
2. Lists the distinct project names with differences in specific fields
3. Lists the distinct project names and tasks with differences in specific fields

This script sets variables for the Work, Duration, and Cost fields of the projects and tasks. The variables are used to determine the differences on various fields that are either greater than the positive margin of error or smaller than the negative margin of error, measure in terms of percentage. This feature allows the user to ignore the differences that are within the margin of error and to focus on the significant differences.

Warning:

This script is one of several post-migration scripts included in the Project Server virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the post-migration scripts that are available, see [Project Server VME: Run post-migration scripts \(optional\)](#).

To run Script 7

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 7.sql**. This opens SQL Server Management Studio and displays Script 7.
4. Click **Execute** to run the script.
5. View the results.

Script 7

Script 7 contains the following code:

```
/*-----  
-- Script A7: Compares data validation snapshot between Pre-Migration (2003) and Post-Migration  
(2007) databases ----  
-- This script:  
-- 1. Compares the project data before and after the migration from Project Server 2003 SP3 to  
Project Server 2003 SP2  
-- 2. List the projects not migrated to the draft database (existing in Project Server 2003 but  
missing in 2007)  
    3. List the distinct project names with differences on specific fields  
    4. List the distinct project names and tasks with differences on specific fields  
    5. Adjust to parameters by using variables containing the % of difference between the Project  
2003 and 2007 data  
  
This script requires to set the database names of the Migration Validation Database.  
By default we have: USE ProjectServer_Migration_Data_Validation  
  
This script allows to set variables for the Work, Duration and Cost fields of the projects  
and tasks. The variables are used  
to expose the differences on various fields which are either greater to the positive margin  
of error (in %) or smaller than  
the negative margin of error (in %). This feature allows the user to ignore the differences  
which are within the margin of error,  
and focus on the significant differences.  
  
-- ***** BEGIN DECLARE VARIABLES  
***** --  
*/  
  
DECLARE @Work_Ratio decimal(18,4);-- Variable to set the Work Ratio differences in % (+ or -)  
which are tolerable  
  
DECLARE @Duration_Ratio decimal(18,4);-- Variable to set the Duration Ratio differences in % (+  
or -) which are tolerable
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
DECLARE @Cost_Ratio decimal(18,4);-- Variable to set the Cost Ratio differences in % (+ or -)
which are tolerable
```

```
----- END DECLARE VARIABLES -----
```

```
-- ***** BEGIN SET VARIABLE VALUES
***** --
```

```
SET @Work_Ratio = 0.005;-- Set the Work Ratio to a % to ignore differences (+ or -) which are
tolerable
```

```
SET @Duration_Ratio = 0.005;-- Set local variable to a % to ignore differences (+ or -) which
are tolerable
```

```
SET @Cost_Ratio = 0.005;-- Set local variable to a % to ignore differences (+ or -) which are
tolerable
```

```
----- END SET VARIABLE VALUES -----
```

```
*/
```

```
USE ProjectServer_Migration_Data_Validation
```

```
-----
-- List of Projects not migrated to the Project Server 2007 Draft database
-----
```

```
select distinct [Project Name] AS 'List of Projects not migrated to the Project Server 2007
Draft database'
```

```
from Migration_PS2003_Data_Validation_Snapshot
```

```
where replace([Project Name], '.Published', '_Published') not in
```

```
(select [Project Name] from Migration_PS2007_Data_Validation_Snapshot)
```

```
and Migration_PS2003_Data_Validation_Snapshot.[proj type] in (0,1,100)
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
-----  
-- Projects with different start date  
-----  
  
select  
Migration_PS2003_Data_Validation_Snapshot.[Project Name]  
AS 'List of Projects with Project Start Dates not Matching After Migration',  
datediff(day,  
Migration_PS2003_Data_Validation_Snapshot.[Proj Start Date],  
Migration_PS2007_Data_Validation_Snapshot.[Proj Start Date])  
as Difference_in_Days  
from  
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot WITH  
(NOLOCK)  
where  
REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')  
= Migration_PS2007_Data_Validation_Snapshot.[Project Name] and  
Migration_PS2003_Data_Validation_Snapshot.[Proj Start Date]  
<> Migration_PS2007_Data_Validation_Snapshot.[Proj Start Date]  
order by Difference_in_Days  
  
-----  
-- Projects with different finish date  
-----  
  
select distinct  
Migration_PS2003_Data_Validation_Snapshot.[Project Name]  
AS 'List of Projects with Project Finish Dates not Matching After Migration',  
Migration_PS2003_Data_Validation_Snapshot.[Proj Finish Date],  
Migration_PS2007_Data_Validation_Snapshot.[Proj Finish Date],
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
datediff(day,
Migration_PS2003_Data_Validation_Snapshot.[Proj Finish
Date],Migration_PS2007_Data_Validation_Snapshot.[Proj Finish Date])
as Difference_in_Days
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where
REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name] and
Migration_PS2003_Data_Validation_Snapshot.[Proj Finish Date] <>
Migration_PS2007_Data_Validation_Snapshot.[Proj Finish Date]
order by Difference_in_Days
```

```
-----
-- Projects with different Project Work
-----
```

```
select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Work not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Work] AS 'Project 2003 Work'
, Migration_PS2007_Data_Validation_Snapshot.[Task Work] AS 'Project 2007 Work',
(Migration_PS2003_Data_Validation_Snapshot.[Task Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Work]) as 'Work Difference'
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where
REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
and Migration_PS2003_Data_Validation_Snapshot.[Task Work] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Work])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Work])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Work])/100))
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Work Difference'

-----
-- Projects with different Actual Work
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Actual Work not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work] AS 'Project 2003 Actual Work'
, Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work] AS 'Project 2007 Actual Work',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work]) as 'Actual Work Difference'
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work]
<> Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work])/100))
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
    Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Actual Work Difference'
```

```
-----
-- Projects with different Remaining Work
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Remaining Work not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work] AS 'Project 2003 Rem Work'
, Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work] AS 'Project 2007 Rem Work',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work]) as 'Rem Work Difference'
from
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)

where

REPLACE (Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work]
<> Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work])/100))
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Rem Work Difference'

-----
-- Projects with different Project % Complete
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Task % Complete not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task %Complete] AS 'Project 2003 %Complete'
, Migration_PS2007_Data_Validation_Snapshot.[Task %Complete] AS 'Project 2007 %Complete',
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
(Migration_PS2003_Data_Validation_Snapshot.[Task %Complete]
- Migration_PS2007_Data_Validation_Snapshot.[Task %Complete]) as '%Complete Difference'
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where

REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task %Complete]
<> Migration_PS2007_Data_Validation_Snapshot.[Task %Complete]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by '%Complete Difference'

-----
-- Projects with different Project %Work Complete
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Task %Work Complete not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task %Work Complete] AS 'Project 2003 %Work
Complete'
, Migration_PS2007_Data_Validation_Snapshot.[Task % Work Complete] AS 'Project 2007 %Work
Complete',
(Migration_PS2003_Data_Validation_Snapshot.[Task %Work Complete]
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
- Migration_PS2007_Data_Validation_Snapshot.[Task % Work Complete]) as '%Work Complete
Difference'

from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where

REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task %Work Complete]
<> Migration_PS2007_Data_Validation_Snapshot.[Task % Work Complete]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
    Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by '%Work Complete Difference'

-----
-- Projects with different Task % Phys Work Complete
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Task % Phys Work Complete not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task % Phys Work Complete] AS 'Project 2003 % Phys
Work Complete'
, Migration_PS2007_Data_Validation_Snapshot.[Task % Phys Work Complete] AS 'Project 2007 % Phys
Work Complete',
(Migration_PS2003_Data_Validation_Snapshot.[Task % Phys Work Complete]
- Migration_PS2007_Data_Validation_Snapshot.[Task % Phys Work Complete]) as '% Phys Work
Complete Difference'
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where

REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task % Phys Work Complete]
<> Migration_PS2007_Data_Validation_Snapshot.[Task % Phys Work Complete]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by '% Phys Work Complete Difference'
```

```
-----
-- Projects with different Duration
-----
```

```
select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Duration not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Duration] AS 'Project 2003 Duration'
, Migration_PS2007_Data_Validation_Snapshot.[Task Duration] AS 'Project 2007 Duration',
(Migration_PS2003_Data_Validation_Snapshot.[Task Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Duration]) as 'Duration Difference'
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

where

```
REPLACE (Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task Duration]
<> Migration_PS2007_Data_Validation_Snapshot.[Task Duration]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Duration])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Duration])/100)
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Duration Difference'
```

```
-----
-- Projects with different Remaining Duration
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Remaining Duration not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration] AS 'Project 2003 Rem Duration'
, Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration] AS 'Project 2007 Rem Duration',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration]) as 'Rem Duration Difference'
from
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)

where

REPLACE (Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration]
<> Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration])/100)
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Rem Duration Difference'

-----
-- Projects with different Actual Duration
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Actual Duration not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration] AS 'Project 2003 Actual
Duration'
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
, Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration] AS 'Project 2007 Actual
Duration',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration]) as 'Actual Duration
Difference'
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where

REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]
<> Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration])/100))
and (Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration]) != -1
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Actual Duration Difference'
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
-----  
-- Projects with different Cost  
-----  
  
select distinct  
Migration_PS2003_Data_Validation_Snapshot.[Project Name]  
AS 'List of Projects with Project Cost not Matching After Migration'  
, Migration_PS2003_Data_Validation_Snapshot.[Task Cost] AS 'Project 2003 Cost'  
, Migration_PS2007_Data_Validation_Snapshot.[Task Cost] AS 'Project 2007 Cost',  
(Migration_PS2003_Data_Validation_Snapshot.[Task Cost]  
- Migration_PS2007_Data_Validation_Snapshot.[Task Cost]) as 'Cost Difference'  
from  
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH  
(NOLOCK)  
where  
  
REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')  
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]  
and Migration_PS2003_Data_Validation_Snapshot.[Task Cost]  
<> Migration_PS2007_Data_Validation_Snapshot.[Task Cost]  
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Cost]  
- Migration_PS2007_Data_Validation_Snapshot.[Task Cost])  
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Cost])/100)  
or  
((Migration_PS2003_Data_Validation_Snapshot.[Task Cost]  
- Migration_PS2007_Data_Validation_Snapshot.[Task Cost])  
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Cost])/100))  
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]  
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]  
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0  
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =  
Migration_PS2007_Data_Validation_Snapshot.[Task Type]  
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
order by 'Cost Difference'
```

```
-----  
-- Projects with different Fixed Cost  
-----
```

```
select distinct  
Migration_PS2003_Data_Validation_Snapshot.[Project Name]  
AS 'List of Projects with Project Fixed Cost not Matching After Migration'  
, Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost] AS 'Project 2003 Fixed Cost'  
, Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost] AS 'Project 2007 Fixed Cost',  
(Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]  
- Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost]) as 'Fixed Cost Difference'  
from  
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH  
(NOLOCK)  
where  
  
REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')  
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]  
and Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]  
<> Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost]  
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]  
- Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost])  
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost])/100)  
or  
((Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]  
- Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost])  
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost])/100))  
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]  
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]  
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0  
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Fixed Cost Difference'

-----
-- Projects with different Actual Cost
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Actual Cost not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost] AS 'Project 2003 Actual Cost'
, Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost] AS 'Project 2007 Actual Cost',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost]) as 'Actual Cost Difference'
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where

REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost]
<> Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost])/100))
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
    Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Actual Cost Difference'

-----
-- Projects with different Remaining Cost
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Remaining Cost not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost] AS 'Project 2003 Rem Cost'
, Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost] AS 'Project 2007 Rem Cost',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost]) as 'Rem Cost Difference'
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot --WITH
(NOLOCK)
where

REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost]
<> Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost])/100))
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
    Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Rem Cost Difference'

-----
-- Projects with different Overtime Cost
-----

select distinct
Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with Project Overtime Cost not Matching After Migration'
, Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost] AS 'Project 2003 Ovt Cost'
, Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost] AS 'Project 2007 Ovt Cost',
(Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost]) as 'Ovt Cost Difference'
from
Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot
where

REPLACE(Migration_PS2003_Data_Validation_Snapshot.[Project Name],'.Published','_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name]
and Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost]
<> Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost])/100)
or
((Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost])
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost])/100)
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
    Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1
order by 'Ovt Cost Difference'

-----

/* Distinct Projects with one or more mismatch
-----*/

select Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects with at least one mismatch After Migration',
datediff(day,
Migration_PS2003_Data_Validation_Snapshot.[Proj Start Date],
Migration_PS2007_Data_Validation_Snapshot.[Proj Start Date]) as Start_Date_Diff_in_Days,
datediff(day,
Migration_PS2003_Data_Validation_Snapshot.[Proj Finish Date],
Migration_PS2007_Data_Validation_Snapshot.[Proj Finish Date]) as Finish_Date_Diff_in_Days,
(Migration_PS2003_Data_Validation_Snapshot.[Task Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Work]) as 'Work Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work]) as 'Actual Work Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work]) as 'Rem Work Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task %Complete]
- Migration_PS2007_Data_Validation_Snapshot.[Task %Complete]) as '%Complete Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task %Work Complete]
- Migration_PS2007_Data_Validation_Snapshot.[Task % Work Complete]) as '%Work Complete Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task % Phys Work Complete]
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
- Migration_PS2007_Data_Validation_Snapshot.[Task % Phys Work Complete]) as '% Phys Work Complete Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Duration]) as 'Duration Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration]) as 'Rem Duration Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration]) as 'Actual Duration Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Cost]) as 'Cost Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost]) as 'Fixed Cost Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost]) as 'Actual Cost Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost]) as 'Rem Cost Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost]) as 'Ovt Cost Diff'

from Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot
where
replace(Migration_PS2003_Data_Validation_Snapshot.[Project Name], '.Published', '_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name] and
(
Migration_PS2003_Data_Validation_Snapshot.[Proj Start Date] <>
Migration_PS2007_Data_Validation_Snapshot.[Proj Start Date] or
Migration_PS2003_Data_Validation_Snapshot.[Proj Finish Date] <>
Migration_PS2007_Data_Validation_Snapshot.[Proj Finish Date]
or (Migration_PS2003_Data_Validation_Snapshot.[Task Work] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Work]-
Migration_PS2007_Data_Validation_Snapshot.[Task Work])
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Work])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Work] -
Migration_PS2007_Data_Validation_Snapshot.[Task Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Work])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work]-
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work] -
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work]-
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work] -
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work])/100)))
or Migration_PS2003_Data_Validation_Snapshot.[Task %Complete] <>
Migration_PS2007_Data_Validation_Snapshot.[Task %Complete]
or Migration_PS2003_Data_Validation_Snapshot.[Task %Work Complete]<>
Migration_PS2007_Data_Validation_Snapshot.[Task % Work Complete]
or Migration_PS2003_Data_Validation_Snapshot.[Task % Phys Work Complete] <>
Migration_PS2007_Data_Validation_Snapshot.[Task % Phys Work Complete]
or (Migration_PS2003_Data_Validation_Snapshot.[Task Duration] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Duration]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Duration]-
Migration_PS2007_Data_Validation_Snapshot.[Task Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Duration])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Duration] -
Migration_PS2007_Data_Validation_Snapshot.[Task Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Duration])/100)))
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
or (Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration]
    and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration]-
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration] -
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration]
    and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]-
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration] -
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Cost]
    and ((Migration_PS2003_Data_Validation_Snapshot.[Task Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Cost])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost]
    and ((Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost]
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost])/100))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost])/100))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost])/100))
)
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]= 0
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
and Migration_PS2007_Data_Validation_Snapshot.[Task Type] = 1

-----
/* Distinct Projects and Tasks with one or more mismatch
-----*/
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
select distinct Migration_PS2003_Data_Validation_Snapshot.[Project Name]
AS 'List of Projects and tasks with at least one mismatch after Migration',
Migration_PS2007_Data_Validation_Snapshot.[Task Name],
Migration_PS2007_Data_Validation_Snapshot.[Task ID],
Migration_PS2007_Data_Validation_Snapshot.[Task Type],
datediff(day,
Migration_PS2003_Data_Validation_Snapshot.[Proj Start Date],
Migration_PS2007_Data_Validation_Snapshot.[Proj Start Date]) as Start_Date_Diff_in_Days,
datediff(day,
Migration_PS2003_Data_Validation_Snapshot.[Proj Finish Date],
Migration_PS2007_Data_Validation_Snapshot.[Proj Finish Date]) as Finish_Date_Diff_in_Days,
(Migration_PS2003_Data_Validation_Snapshot.[Task Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Work]) as 'Work Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work]) as 'Actual Work Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work]) as 'Rem Work Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task %Complete]
- Migration_PS2007_Data_Validation_Snapshot.[Task %Complete]) as '%Complete Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task %Work Complete]
- Migration_PS2007_Data_Validation_Snapshot.[Task % Work Complete]) as '%Work Complete Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task % Phys Work Complete]
- Migration_PS2007_Data_Validation_Snapshot.[Task % Phys Work Complete]) as '% Phys Work
Complete Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Duration]) as 'Duration Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration]) as 'Rem Duration Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration]) as 'Actual Duration Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Cost]) as 'Cost Diff',
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
(Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost]) as 'Fixed Cost Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost]) as 'Actual Cost Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost]) as 'Rem Cost Diff',
(Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost]
- Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost]) as 'Ovt Cost Diff'

from Migration_PS2003_Data_Validation_Snapshot, Migration_PS2007_Data_Validation_Snapshot
where
replace(Migration_PS2003_Data_Validation_Snapshot.[Project Name], '.Published', '_Published')
= Migration_PS2007_Data_Validation_Snapshot.[Project Name] and
(
Migration_PS2003_Data_Validation_Snapshot.[Proj Start Date] <>
Migration_PS2007_Data_Validation_Snapshot.[Proj Start Date] or
Migration_PS2003_Data_Validation_Snapshot.[Proj Finish Date] <>
Migration_PS2007_Data_Validation_Snapshot.[Proj Finish Date]
or (Migration_PS2003_Data_Validation_Snapshot.[Task Work] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Work]-
Migration_PS2007_Data_Validation_Snapshot.[Task Work])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Work])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Work] -
Migration_PS2007_Data_Validation_Snapshot.[Task Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Work])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work]-
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work])/100)
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work] -
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Work])/100))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work]-
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work] -
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Work])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Work])/100))
or Migration_PS2003_Data_Validation_Snapshot.[Task %Complete] <>
Migration_PS2007_Data_Validation_Snapshot.[Task %Complete]
or Migration_PS2003_Data_Validation_Snapshot.[Task %Work Complete]<>
Migration_PS2007_Data_Validation_Snapshot.[Task % Work Complete]
or Migration_PS2003_Data_Validation_Snapshot.[Task % Phys Work Complete] <>
Migration_PS2007_Data_Validation_Snapshot.[Task % Phys Work Complete]
or (Migration_PS2003_Data_Validation_Snapshot.[Task Duration] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Duration]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Duration]-
Migration_PS2007_Data_Validation_Snapshot.[Task Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Duration])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Duration] -
Migration_PS2007_Data_Validation_Snapshot.[Task Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Duration])/100))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration]-
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration] -
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Duration])/100))
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
or (Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration]
    and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration]-
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration] -
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Duration])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Duration])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Cost]
    and ((Migration_PS2003_Data_Validation_Snapshot.[Task Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Cost])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]<>
Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost]
    and ((Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Fixed Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Fixed Cost])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost]
    and ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Actual Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Actual Cost])/100)))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost]
```

Run Migration Script 7 to compare Project Server 2003 and Project Server 2007 data validation snapshots

```
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Rem Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Rem Cost])/100))
or (Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost] <>
Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost]
and ((Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost]-
Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost])
> ((@Work_Ratio * Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost])/100)
or ((Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost] -
Migration_PS2007_Data_Validation_Snapshot.[Task Ovt Cost])
< ((@Work_Ratio*-1) * Migration_PS2003_Data_Validation_Snapshot.[Task Ovt Cost])/100))
)
and Migration_PS2003_Data_Validation_Snapshot.[Task UID]
= Migration_PS2007_Data_Validation_Snapshot.[Task ID]
and Migration_PS2003_Data_Validation_Snapshot.[Task Type] =
Migration_PS2007_Data_Validation_Snapshot.[Task Type]
order by Migration_PS2003_Data_Validation_Snapshot.[Project Name],
Migration_PS2007_Data_Validation_Snapshot.[Task ID]
```

Run Migration Script 8 to list projects with unlinked workspaces

Run Script 8 to list Microsoft Office Project Server 2007 projects that have to be relinked to their project workspaces. This script compares the result from Script 4 (pre-migration Microsoft Office Project Server 2003 projects with associated workspaces) and Script 6 (post-migration Office Project Server 2007 projects with associated workspaces). The data for both are stored in the `dbo.Migration_PS2003_ProjectWorkspaces` and `dbo.Migration_PS2007_ProjectWorkspaces` tables in the `ProjectServer_Migration_Data_Validation` database.

Warning:

This script is one of several post-migration scripts included in the Project Server virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the post-migration scripts that are available, see [Project Server VME: Run post-migration scripts \(optional\)](#).

To run Script 8

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 8.sql**. This opens SQL Server Management Studio and displays Script 8.
4. Click **Execute** to run the script.
5. The results shown are the projects that have to be relinked to their project workspaces.

Script 8

Script 8 contains the following code:

```
/*-----
-- Script A8: Compares workspaces associated with projects pre-migration (2003) and Post-
Migration (2007) ----
-- This script shows the workspaces that have not been re-linked and/or converted in the 2007
environment after migration
```

Run Migration Script 8 to list projects with unlinked workspaces

```
--
*****
***** --
*/
USE ProjectServer_Migration_Data_Validation
-----
-- List of projects with workspaces missing in 2007
-- These workspaces should be re-linked manually after migration
-----
select distinct [PROJ_NAME] AS 'List of Projects with Missing Workspaces in the Project Server
2007 Published database. Re-Link them manually'
from dbo.Migration_PS2003_ProjectWorkspaces
where replace([PROJ_NAME], '_Published', '') not in
(select [PROJ_NAME] from dbo.Migration_PS2007_ProjectWorkspaces)
```

Run Migration Script 9 to test your Project Server 2007 data for known migration issues

Run Script 9 to run a data validation check on your Microsoft Office Project Server 2007 databases to look for known conditions that may cause an upgrade to Microsoft Project Server 2010 to fail. Script 9 checks for the following conditions:

1. Office Project Server 2007 is updated to Service Pack 2 and the October 2009 Cumulative Update
2. Projects not saved and published since the installation to Office Project Server 2007 of both Service Pack 2 and the October 2009 Cumulative Update
3. Lookup tables that are using names that are reserved in Project Server 2010
4. Custom field names that are reserved in Project Server 2010
5. Office Web Components (OWC) views in Office Project Server 2007 that need to be migrated to Excel Services for use in Project Server 2010
6. User accounts with forms-authenticated login names
7. Team names that have no associated lookup table or a value
8. Office Project Web Access Portfolio Analyzer OWC views in Project Server 2003 that may need to be migrated to Office Project Server 2007



Note:

This script is one of several post-migration scripts included in the Project Server virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the post-migration scripts that are available, see [Project Server VME: Run post-migration scripts \(optional\)](#).

▶ To run Script 9

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 9.sql**. This opens SQL Server Management Studio and displays Script 9.
4. Click **Execute** to run the script.
5. The results will appear. Try to resolve any issues that are found before migrating your data to Project Server 2010.

Run Migration Script 9 to test your Project Server 2007 data for known migration issues

You can use Microsoft Office Project Professional 2007 (included in the VME) to try to resolve some of data issues that are detected in this script.

Script 9

Script 9 includes the following code:

```
-----
/* Pre-Migration Steps from Project 2007 SP2 to Project 2010
VME Script 12
-----*/

-----
/* Check Project 2007 Version: Must be SP2 + October CU = ??
-----*/

USE ProjectServer_Draft

select Version

as 'Project Server 2007 SP2 + Oct09CU Version Must Be 12.0.6520.5000 or Higher. If not, upgrade
to SP2 + Oct2009 CU'

, timestamp

from dbo.Versions

go

-----
/* Display the projects not saved or published since the installation of SP2 + December 09 CU?
-----
*/

select Distinct PROJ_NAME AS 'List of Projects Not Saved and Published Since the Installation
of Service Pack2'

, PROJ_PROP_AUTHOR, PROJ_LAST_SAVED, WPROJ_LAST_PUB

from dbo.MSP_PROJECTS

where PROJ_TYPE = 0

and ((dbo.MSP_PROJECTS.PROJ_LAST_SAVED < (SELECT MAX(TimeStamp) FROM dbo.Versions))

OR (dbo.MSP_PROJECTS.WPROJ_LAST_PUB < (SELECT MAX(TimeStamp) FROM dbo.Versions)))

GROUP BY PROJ_NAME, PROJ_PROP_AUTHOR, PROJ_LAST_SAVED, WPROJ_LAST_PUB

Order by PROJ_NAME
```

Run Migration Script 9 to test your Project Server 2007 data for known migration issues

go

```
-----  
/* Display the Lookup tables using reserved names in 2010  
This query is to be run against the Published database of Project Server 2007  
-----*/  
  
USE ProjectServer_Published  
  
select LT_NAME  
  
AS 'List of Lookup Table names with Reserved Names. These names must be changed before  
proceeding with the Upgrade'  
  
from dbo.MSP_LOOKUP_TABLES  
  
WHERE LT_NAME IN  
  
( 'Department',  
  
'Project Impact',  
  
'Relative Importance',  
  
'Sample Areas Impacted',  
  
'Sample Primary Objective')  
  
-- Cost Type, Health, RBS and State are standard in 2007  
  
go
```

```
-----  
/* Display the Custom Fields using reserved names in 2010  
This query is to be run against the Published database of Project Server 2007  
-----*/  
  
USE ProjectServer_Published  
  
select MD_PROP_NAME  
  
AS 'List of Custom Fields names with Reserved Names. These names must be changed before  
proceeding with the Upgrade'  
  
from dbo.MSP_CUSTOM_FIELDS  
  
WHERE MD_PROP_NAME IN  
  
( 'Flag Status',  
  
'Project Departments',  
  
'Project Impact',  
  
'Relative Importance',  
  
'Resource Departments',
```

Run Migration Script 9 to test your Project Server 2007 data for known migration issues

```
'Sample Approved Finish Date',
'Sample Approved Start Date',
'Sample Areas Impacted',
'Sample Assumptions',
'Sample Business Need',
'Sample Compliance Proposal',
'Sample Goals',
'Sample Post Implementation Review Date',
'Sample Post Implementation Review Notes',
'Sample Primary Objectives',
'Sample Proposal Cost',
'Sample Proposed Finish Date',
'Sample Proposed Start Date')
go

-----
-----
/* Displays Existing OWC Views in 2007 that need to be migrated to Excel Services in Project
Server 2010
-----
-----*/

select WVIEW_NAME AS 'List of PWA Data Analysis OWC Views to Migrate to Excel Services in
Project Server 2010'
FROM dbo.MSP_WEB_VIEW_REPORTS
WHERE WVIEW_OWC_PIVOT_XML is not null
OR WVIEW_OWC_CHART_XML is not null

-----
-----
/* Displays User Accounts with Forms Auth Login Names > 249 Ch. -- on 2007
-----*/

select RES_NAME AS 'List of FBA accounts with Names > 249 Ch. Shorten the Resource Names below'
FROM dbo.MSP_RESOURCES
WHERE RES_IS_WINDOWS_USER = 0
AND (Select LEN(RES_NAME)) > 249
```

Run Migration Script 9 to test your Project Server 2007 data for known migration issues

go

```
-----  
/* Display Team Names with no Lookup Tables and a Value -- on 2007
```

```
-----*/
```

```
select TEXT_VALUE AS 'List of Team Names with values and NO Lookup Tables. Create a LT for  
these Teams'
```

```
FROM dbo.MSP_RES_CUSTOM_FIELD_VALUES, dbo.MSP_CUSTOM_FIELDS, dbo.MSP_LOOKUP_TABLES
```

```
WHERE dbo.MSP_RES_CUSTOM_FIELD_VALUES.CUSTOM_FIELD_UID = dbo.MSP_CUSTOM_FIELDS.MD_PROP_UID
```

```
AND MD_PROP_NAME = 'Team Name'
```

```
AND dbo.MSP_CUSTOM_FIELDS. MD_LOOKUP_TABLE_UID IS NULL
```

go

```
-----  
-----  
/* Displays Existing PWA Portfolio Analyzer OWC Views in 2003 that may need to be migrated to  
Project Server 2007
```

```
-----*/
```

```
USE Project2003SourceDB
```

```
select WVIEW_NAME AS 'List of PWA Portfolio Analyzer OWC Views to Migrate to Project Server  
2007'
```

```
FROM dbo.MSP_WEB_VIEW_REPORTS
```

```
WHERE WVIEW_OWC_PIVOT_XML is not null
```

```
OR WVIEW_OWC_CHART_XML is not null
```

Run Migration Script 10 to correct multilanguage lookup table upgrade issues

Run Script 10 to check your Microsoft Office Project Server 2007 data for a known issue in which multilanguage lookup tables are not updated correctly after migration from Microsoft Office Project Server 2003 to Office Project Server 2007. This script corrects and updates the Office Project Server 2007 Published database if the issue is detected.

Warning:

This script is one of several post-migration scripts included in the Project Server virtual migration environment (VME). Running the scripts is optional, but highly recommended for helping to detect issues that may prevent a successful migration of your data. For more information about the post-migration scripts that are available, see [Project Server VME: Run post-migration scripts \(optional\)](#).

To run Script 10

1. On the VME desktop, click **Start Migration Process**. This opens a Windows Explorer window that displays the contents of drive E.
2. In Windows Explorer, double-click the following folder:
 - If you have one Project 2003 database, open the **Migrate_Proj_2003_Single_DB** folder.
 - If you have split Project Server 2003 databases, open **Migrate_Proj_2003_Split_DB**.
3. Open the Verification Scripts folder, and then click **VME Script 10.sql**. This opens SQL Server Management Studio and displays Script 10.
4. Click **Execute** to run the script.

Script 10

Script 10 contains the following code:

```
Use ProjectServer_Published
```

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_LANGUAGES WHERE LT_UID NOT IN (SELECT LT_UID FROM  
dbo.MSP_LOOKUP_TABLES)
```

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_MASK_VALUES WHERE LT_UID NOT IN (SELECT LT_UID FROM  
dbo.MSP_LOOKUP_TABLES)
```

Run Migration Script 10 to correct multilanguage lookup table upgrade issues

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_MASK_STRUCTURES WHERE LT_UID NOT IN (SELECT LT_UID FROM  
dbo.MSP_LOOKUP_TABLES)
```

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_VALUES WHERE LT_UID NOT IN (SELECT LT_UID FROM  
dbo.MSP_LOOKUP_TABLES)
```

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_STRUCTURES WHERE LT_UID NOT IN (SELECT LT_UID FROM  
dbo.MSP_LOOKUP_TABLES)
```

Project Server VME: Plan to upgrade data to Project Server 2010

After you have completed the Project Server virtual migration environment (VME) post-migration phase, you will have successfully migrated your Microsoft Office Project Server 2003 data to Office Project Server 2007 with SP2. You can now move your Office Project Server 2007 databases to your Microsoft Project Server 2010 environment to upgrade your data to Project Server 2010.

Migrating from Project Server 2003 to Project Server 2010 through the VME is a three-step process:

- Migrate the data from Project Server 2003 to Office Project Server 2007 with SP2. (This step occurs in the virtual migration environment.)
- Move the data from the VME to the Project Server 2010 farm database server.
- Upgrade the data from Office Project Server 2007 to Project Server 2010.

The virtual migration environment only migrates the data from Project Server 2003 to Office Project Server 2007 with SP2. To complete the upgrade to Project Server 2010, you must use the database-attach upgrade method to upgrade the Office Project Server 2007 with SP2 databases to Project Server 2010. This requires that you have an installation of Project Server 2010 in your organization.

For more information about installing Project Server 2010, see [Deploy Project Server 2010 to a server farm environment](#).

In this article:

- [Database-attach upgrade](#)
- [Create database backups](#)
- [Migrate to Project Server 2010](#)



Note:

For more information about the Project Server virtual migration environment (VME), see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#). For more information about upgrading to Project Server 2010, see [Project Server 2010 upgrade overview](#).

Database-attach upgrade

Migrating your data from the VME to Project Server 2010 requires you to use the database-attach upgrade method. A database-attach upgrade lets you "attach" restored copies of your Office Project Server 2007 databases to a new Project Server 2010 installation. Office Project Server 2007 farm databases are backed up and then restored on the computer that is running Microsoft SQL Server that is hosting the Project Server 2010 databases. The new Project Server 2010 farm points to these restored databases when the Microsoft Project Web App instance is created. When you connect to the

databases from the new Project Server 2010 instance, the databases are upgraded to Project Server 2010.

There are two variations of the database-attach upgrade:

- **Database attach full:** Upgrades the four Office Project Server 2007 databases and the content database that contains the Project Web App site data. Use this method if you also want to migrate your project workspace data.
- **Database attach core:** Upgrades only the four Office Project Server 2007 databases. Use this method if you do not want to migrate your project workspace data.

A database-attach full upgrade requires the following databases from the Office Project Server 2007 farm:

- ProjectServer_Archive
- ProjectServer_Draft
- ProjectServer_Published
- ProjectServer_Reporting
- Windows SharePoint Services 3.0 content database containing the project workspace data

A database-attach core upgrade requires the following Office Project Server 2007 databases from the farm:

- ProjectServer_Archive
- ProjectServer_Draft
- ProjectServer_Published
- ProjectServer_Reporting



Note:

For more information about database-attach upgrades, see [Project Server 2010 upgrade overview](#).

Create database backups

You have to create database backups of the required databases in SQL Server 2005 on the VME, as described in the following procedure:

▶ To back up a database in SQL Server 2005

1. On the VME virtual machine, open **SQL Server Management Studio**.
2. In the **Connect to Server** dialog box, click **Connect**.
3. In SQL Server Management Studio, in Object Explorer, expand **Databases**. Right-click the database that you want to back up, click **Tasks**, and then click **Back Up**. The **Back Up Database** dialog box appears.
4. In the **Back Up Database** dialog box, in the **Source** section, in the **Database** field, verify that

the database name is the one for which you want to create a backup.

5. In the **Backup type** field, select **Full**.
6. In the **Backup component** field, select **Database**.
7. In the **Backup set** section, in the **Name** field, either accept the default backup set name that is suggested or type a different name for the backup set.
8. In the **Destination** section, select **Disk**, and then specify a destination to which you want to save the backup file.
9. Click **OK** to start the backup process.

Repeat the procedure to back up the remaining required databases.

Migrate to Project Server 2010

After you have created database backups of your required databases, move the copies from the VME to the computer that is running SQL Server that is hosting the Project Server 2010 databases. If the VME virtual machine is not on the network, you can transfer the files through an internal virtual network between the VME and the computer that hosts the VME virtual machine. This was established previously when you transferred Project Server 2003 data from the virtual machine host to the VME virtual machine. For more information, see [Load data to the Project Server virtual migration environment \(VME\)](#).

The following articles describe how to migrate your Office Project Server 2007 databases to Project Server 2010 to complete your migration from Project Server 2003. Choose the right method for you and follow the procedures in that article:

- [Database-attach full upgrade to Project Server 2010](#)
- [Database-attach core upgrade to Project Server 2010](#)

Upgrade to Project Server 2010 from Project Server 2003

This chapter provides information and procedures about how to migrate from Microsoft Office Project Server 2003 to Microsoft Project Server 2010 .

[Migration overview and considerations \(Project Server 2010\)](#)

[Prepare your environments for migrating from Project Server 2003](#)

[Pre-migration tasks for migrating your Project Server 2003 data](#)

[Migration tasks for migrating to Project Server 2007](#)

[Post-migration tasks after migrating your Project Server 2003 data](#)

[Complete your upgrade from Project Server 2003 to Project Server 2010](#)

[Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#)

Additionally, Microsoft provides a Microsoft Office Project Server 2007 virtual migration environment as an option for migrating your Project Server 2003 data to Project Server 2010. This option is an alternative to installing your Office Project Server 2007 environment manually, or it can be used if you do not have Office Project Server 2007 readily available.



Note:

You must migrate your Project Server 2003 data first to Office Project Server 2007, before migrating it to Project Server 2010. There is no way to migrate directly to Project Server 2010 from Project Server 2003.

For more information about the Office Project Server 2007 virtual migration environment, see: [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#).

Migration overview and considerations (Project Server 2010)

 **Important:**

Upgrading from the Project Server 2010 public Beta to the Project Server 2010 released version is explicitly blocked and not supported. This restriction applies to both the in-place and database-attach upgrade methods.

Migration from Microsoft Office Project Server 2003 to Microsoft Project Server 2010 is a two-step process:

1. Migrate from Project Server 2003 to Microsoft Office Project Server 2007
2. Migrate from Office Project Server 2007 to Project Server 2010

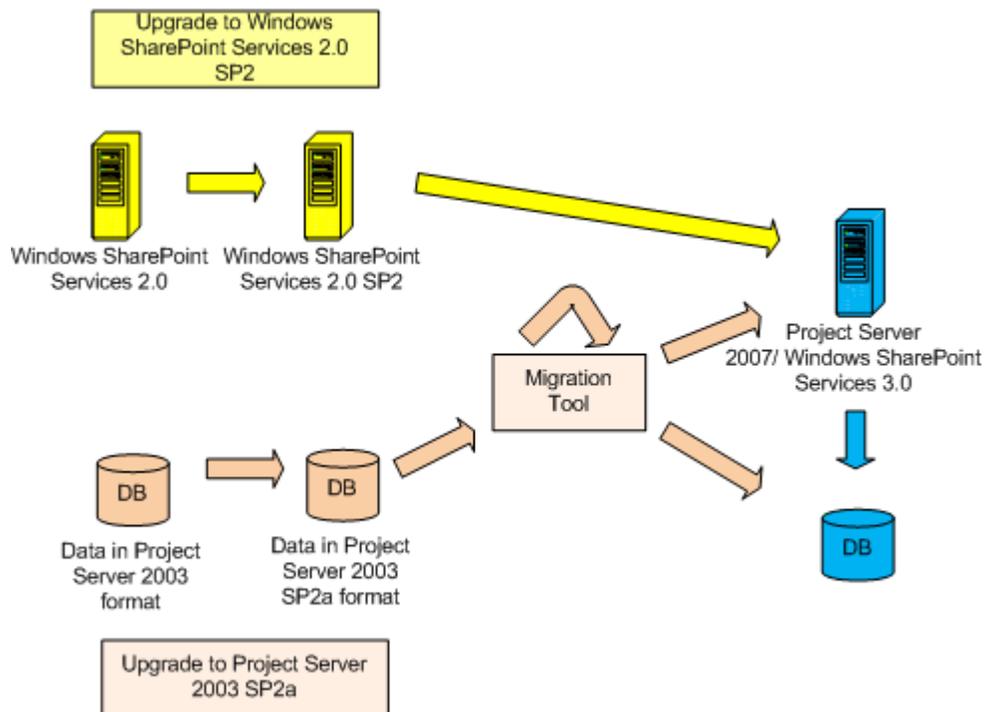
Migrating from Project Server 2003 to Project Server 2007

Migration from Project Server 2003 to Office Project Server 2007 can be done in one of two ways:

- Standard migration: A standard migration requires you to install Office Project Server 2007 and then migrate your data from Project Server 2003 through a utility known as the Migration tool.
- Virtual Migration Environment (VME): A fully configurable environment that has Office Project Server 2007 with SP2 and that is packaged in a Hyper-V image. It can be run as a stand-alone environment for the sole purpose of migrating Project Server 2003 data to the Office Project Server 2007 data format. The VME provides Project Server 2003 you a way to migrate to Project Server 2010 without having to set up an intermediate Office Project Server 2007 environment.

Migrating data from Project Server 2003 to Office Project Server 2007 is done by the "migration tool" (which can be installed from the Microsoft Office Project Professional 2007 installation disk). This is a command-line tool.

Migration overview and considerations (Project Server 2010)



The migration tool reads data from the Project Server 2003 database, cleanses and reformats the data and saves it to Office Project Server 2007. Some data, including projects and enterprise resources, is saved to the computer running Office Project Server 2007 through the Project Server Interface (PSI). Other data, including all Office Project Web Access data and upgrade metadata, is directly written to the Office Project Server 2007 database.

If Project Server 2003 is integrated with Windows SharePoint Services 2.0, you must upgrade Windows SharePoint Services 2.0 to Service Pack 2 (SP2) and then upgrade it to Windows SharePoint Services 3.0. Both the data (issues, risks, documents) and the links between Project items and Windows SharePoint Services items are upgraded at the end of the migration process.

You can only migrate data to Office Project Server 2007 from a Project Server 2003 database with Service Pack 2a (SP2a) or a subsequent service pack applied. The most current service pack for Project Server 2003 is Service Pack 3.



Note:

Windows SharePoint Services 2.0 was an optional component for Project Server 2003 (Office Project Web Access did not depend on Windows SharePoint Services 2.0). But Windows SharePoint Services 3.0 is a required component for Office Project Server 2007 (Office Project Web Access for Office Project Server 2007 is built on top of Windows SharePoint Services 3.0, and Office Project Server 2007 deployment is based on the Windows SharePoint Services

farm infrastructure). That is the reason that Office Project Server 2007 and Windows SharePoint Services 3.0 are represented on the same server in the diagram above.



Note:

The command-line migration tool can be thought of as a specialized version of Office Project Professional 2007 without any user interface — so Microsoft Project Professional and the migration tool cannot be running on the same computer at the same time.

For detailed documentation for migrating from Project Server 2003 to Office Project Server 2007, see [Upgrade to Project Server 2010 from Project Server 2003](#).

Migrating from Project Server 2007 to Project Server 2010

Migrating from Office Project Server 2007 to Project Server 2010 can be done through two methods:

- **In-place:** The Office Project Server 2007 installation is upgraded to Project Server 2010 on the same computer on which it is installed.
- **Database attach:** The Office Project Server 2007 databases are backed up and then restored on the computer that is running SQL Server that will host the Project Server 2010 databases. Office Project Server 2007, installed on another computer, then upgrades the databases by provisioning a Microsoft Project Web App instance using the restored Office Project Server 2007 databases.

When migrating from Project Server 2003 to Office Project Server 2007 in order to upgrade to Project Server 2010, you can use either method described above.

If you plan to use the database attach method of upgrading:

- Use the database attach full upgrade method if you need to migrate your Office Project Web Access site data plus your project data. For more information about this method, see [Database-attach full upgrade to Project Server 2010](#).
- Use the database attach core upgrade method if you only need to migrate your Office Project Server 2007 project data. For more information about this method, see [Database-attach core upgrade to Project Server 2010](#).



Important:

If you intend to do an in-place upgrade of Project Server 2010, your Office Project Server 2007 installation must be on a Windows Server 2008 64-bit platform. For more information about requirements, see the [Server requirements](#) section in this article. For more information about in-place upgrade, see [In-place upgrade to Project Server 2010](#).



Note:

If you are planning to upgrade through the Virtual Migration Environment when it becomes available, note that after using it to migrate from Project Server 2003 to Office Project Server 2007, you will only be able to upgrade to Project Server 2010 using the database attach method.

For more information about Project Server 2010 upgrade methods, see [Project Server 2010 upgrade overview](#).

Server requirements

When you are planning to upgrade from Project Server 2003 to Project Server 2010, it is important to plan for server requirements needed for Project Server 2003 and Office Project Server 2007.

A major difference between Project Server 2003 and Office Project Server 2007 is the availability of 32-bit and 64-bit versions of the application software. For Office Project Server 2007, we already recommend that you deploy 64-bit versions of the application, both on the front-end Web server and on the application server roles. In Project Server 2010, only a 64-bit version of the application is available.

A 64-bit version of Microsoft SQL Server is highly recommended for Office Project Server 2007, and it is mandatory for Project Server 2010. The 64-bit applications benefit from a much larger addressable memory space, which improves the performance under medium to heavy workloads.

It is also important to note that Microsoft SharePoint Server 2010 Enterprise edition is a requirement for installing Project Server 2010.

The official support of virtualized environments is also a new benefit of Office Project Server 2007 and Project Server 2010.

	Project Server 2003	Office Project Server 2007	Project Server 2010
Operating System	Windows Server 2000 SP3 32-bit Windows Server 2003 32-bit	Windows Server 2003 SP1 32-bit or 64-bit Windows Server 2008 32-bit or 64-bit	Windows Server 2008 64-bit Windows Server 2008 R2 64-bit
SharePoint Products and Technologies	Windows SharePoint Services 2.0 (optional)	Windows SharePoint Services 3.0 32-bit or 64-bit	SharePoint Server 2010 Enterprise Edition 64-bit
SQL Server	SQL Server 2000 SP3	SQL Server 2000 SP3 SQL Server 2005 SP3 with CU6 SQL Server 2008	SQL Server 2005 SP3 CU3 64-bit SQL Server 2008 SP1 CCU2 64-bit
Virtualization	Not supported.	Supported	Supported

Using the Virtual Migration Environment (VME) to upgrade from Project Server 2003 to Office Project Server 2007 requires you to have the Hyper-V feature on Windows Server 2008 or Hyper-V Server 2008.

Cross-version compatibility between client and server products

When migrating to Project Server 2010, you must also plan for client compatibility requirements. The following table shows cross-version capability between Microsoft Project Professional client versions to Project Server versions. You will need to verify that all Microsoft Project Professional users have the proper version to access Project Server after the upgrade.

This client version	Only connects to this server version
Office Project Professional 2003	Project Server 2002, Project Server 2003
Office Project Professional 2007	Office Project Server 2007, Project Server 2010  Note: Office Project Professional 2007 only connects to Project Server 2010 when Backwards Compatibility Mode (BCM) is enabled on the server. For more information about BCM, see Project Server 2010 upgrade overview .
Microsoft Project Professional 2010	Project Server 2010

The following table describes supported browsers required for Project Web App for each version of Project Server. If you are upgrading from Project Server 2003 to Project Server 2010, verify that your Project Web App users have the required browser to access their data after the upgrade.

Project Web App version	Required browser
Project Server 2003	Internet Explorer 5.5, 6.0, 7.0, and 8.0
Office Project Server 2007	Internet Explorer 6.0, 7.0, and 8.0
Project Server 2010	Internet Explorer 7.0 and 8.0

Custom field and lookup table name conflicts

There are certain custom fields and lookup tables name that are reserved in both Office Project Server 2007 and Project Server 2010. If any of these names are used in the current Project Server 2003 database, the custom fields and outline codes must be changed in Project Server 2003 before

Migration overview and considerations (Project Server 2010)

proceeding further with the migration. Use Microsoft Office Project Professional 2003 connected to a Project Server 2003 instance to validate and take corrective action.

Outline code or custom-field name that is reserved	Type	Office Project Server 2007	Project Server 2010
Cost Type	Resource	X	X
Health	Task	X	X
State	Project	X	X
Team Name	Resource	X	X
Approved Finish Date	Project		X
Approved Start Date	Project		X
Areas affected	Project		X
Assumptions	Project		X
Business Need	Project		X
Compliance Proposal	Project		X
Flag Status	Task		X
Goals	Project		X
Post-Implementation Review Date	Project		X
Post-Implementation Review Notes	Project		X
Primary Objectives	Project		X
Project Departments	Project		X
Proposal Cost	Project		X
Proposed Finish Date	Project		X
Proposed Start Date	Project		X
Resource Department	Resource		X

Additionally, make sure to see [Verify your Project Server 2003 data](#) for additional things you can check for before migrating your Project Server 2003 data.

Prepare your environments for migrating from Project Server 2003

Before migrating your Microsoft Office Project Server 2003 data to Microsoft Project Server 2010, you must prepare each of your environments to help to ensure that your migration is successful. This includes:

[Prepare your Project Server 2003 environment](#) Provides information about installing required updates for your Project Server 2003 environment.

[Prepare your Project Server 2007 environment](#) Provides information about installing Microsoft Office Project Server 2007, applying required updates, backing up your environment, and installing the migration tool.

[Prepare your Project Server 2010 environment](#) Provides information about installing your Project Server 2010 environment.

Prepare your Project Server 2003 environment

You must prepare your Microsoft Office Project Server 2003 environment for migration to Microsoft Office Project Server 2007 in order to migrate to Microsoft Project Server 2010. To prepare your Project Server 2003 environment, you must do the following:

- Update your Project Server 2003 installation to Project Server 2003 Service Pack 3 (only required if your Project Server 2003 deployment does not have a service pack that supports upgrade (Service Pack 2a or Service Pack 3)).
- If you are using Windows SharePoint Services 2.0 for project workspaces, you must update to Windows SharePoint Services 2.0 Service Pack 3 (only required if your Windows SharePoint Services 2.0 deployment is not updated with a service pack that supports upgrade (Service Pack 2 or Service Pack 3)).



Important:

If you do not want to upgrade your project workspace sites, you do not need to apply the update to Windows SharePoint Services 2.0.

Update Project Server 2003 with Service Pack 3

Project Server 2003 SP3 is composed of three parts, each of which can be downloaded and installed separately, as needed:

1. An upgrade for the Project Server 2003 database
2. An update for the Project Server application binaries
3. An update for the Project Server template files on Windows SharePoint Services

Depending on your migration deployment strategy, you may need one or more of the parts listed above.

- To upgrade your existing installation to the latest service pack, you must use all three parts and upgrade your existing Project Server 2003 and Windows SharePoint Services 2.0 installation to SP3. This is the simplest way to upgrade.
- To keep your existing Project Server 2003 installation (without applying SP3), you must do the following:
 - a. Create a backup of your Project Server 2003 database. Restore it, optionally using a different name. Apply SP3 part 1 to the restored database.
 - b. Apply SP3 part 3 to the Windows SharePoint Services 2.0 installation.



Note:

More information about the service pack can be found in the Knowledge Base article named [Description of Project Server 2003 Service Pack 3](http://go.microsoft.com/fwlink/?LinkId=188720) (<http://go.microsoft.com/fwlink/?LinkId=188720>).

Update Windows SharePoint Services 2.0 with Service Pack 3



Note:

As mentioned previously, if you do not want to migrate your project workspace sites from Project Server 2003, you do not need to apply this update.

For information about Windows SharePoint Services 2.0 Service Pack 3, see [Description of Windows SharePoint Services 2.0 Service Pack 3](http://go.microsoft.com/fwlink/?LinkID=101608) (<http://go.microsoft.com/fwlink/?LinkID=101608>).

Prepare your Project Server 2007 environment

In order to migrate to Microsoft Project Server 2010, you must prepare your Microsoft Office Project Server 2007 environment when you migrate from Microsoft Office Project Server 2003 to Office Project Server 2007. Things that you need to do to prepare your environment include the following:

- Install Office Project Server 2007
- Apply updates to Office Project Server 2007 and Windows SharePoint Services 3.0
- Set up forms-based authentication (optional)
- Back up all Project Server 2003 and Office Project Server 2007 databases
- Determine the number of workstations where the migration tool must be installed
- Install the migration tool
- Apply updates to Microsoft Office Project Professional 2007 for the migration tool

If you do not have the Office Project Server 2007 installation media available to you within your company, you can download the evaluation version of Office Project Server 2007 from the [Microsoft TechNet Office Project Professional 2007 and Office Project Server 2007 Evaluation Download Page](#). If you do not have Office Project Professional 2007, you should also download the evaluation version of it from that page, because you have to run the Migration Tool that is included with it.



Note:

Microsoft also provides a Office Project Server 2007 virtual migration environment (VME) that can be used for migrating your Microsoft Office Project Server 2003 data to Office Project Server 2007. Office Project Server 2007 VME is a stand-alone environment that can be used only for migration purposes. It can be downloaded from the Microsoft Download Center and can be run on a virtual machine on a Windows Server 2008 R2Hyper-V Server. It also includes many helpful migration scripts that can make the migration process easier. For more information, see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#).

Install Project Server 2007

Which computer you install Office Project Server 2007 on is important — read [IT deployment options for migration to Project Server 2007](#) (<http://go.microsoft.com/fwlink/?LinkId=188765>) closely and select an option that is right for you. For more information about how to install, see [Deploy Project Server 2007 to a server farm environment](#) (<http://go.microsoft.com/fwlink/?LinkId=188762>). Follow the instructions, install Project Server 2010, and provision a Microsoft Project Web App site to migrate to. For the purposes of this article, we will call that site the "target Project Web Access site."



Important:

This Project Web Access site should be empty —that is, it should not have any projects, users, resources, or other global data.



Note:

Office Project Server 2007 can be installed on the same computer as Project Server 2003. If you want Windows SharePoint Services to take over the Internet Information Services (IIS) virtual server that was hosting Project Server 2003, you have to create several "managed paths" to exclude the Project Web Access virtual directories. For more information, see the Knowledge Base article named [How to enable an ASP.NET application to run on a SharePoint virtual server](http://go.microsoft.com/fwlink/?LinkID=25292) (http://go.microsoft.com/fwlink/?LinkID=25292).

When this step is completed, you should have an empty, working Project Web Access site into which you can migrate (the target Project Web Access site alluded to earlier).

Apply updates to Project Server 2007 and Windows SharePoint Services 3.0

When migrating your Project Server 2003 data to Office Project Server 2007, you must apply the following updates to your Office Project Server 2007 environment:

- Office Project Server 2007 Service Pack 2
- Windows SharePoint Services 3.0 Service Pack 2

For information about how to apply both service packs, see [Deploy Service Pack 2 for Office Project Server 2007](http://go.microsoft.com/fwlink/?LinkId=188768) (http://go.microsoft.com/fwlink/?LinkId=188768).

We also recommend that you also apply the latest cumulative updates to Office Project Server 2007. For more information about how to apply cumulative updates, see [Deploy cumulative updates \(Project Server 2007\)](http://go.microsoft.com/fwlink/?LinkId=188772) (http://go.microsoft.com/fwlink/?LinkId=188772).

Set up forms-based authentication, if necessary

If you are using Project Server authenticated users (non-Windows users) in Project Server 2003, you will not be immediately able to log on to Office Project Server 2007 with those accounts after migration. Office Project Server 2007 relies on Windows SharePoint Services and ASP.NET forms authentication infrastructure. Therefore, you need to set up forms-based authentication on the Office Project Server 2007 installation — and this is a separate step. For more information, see [Plan Project Server 2007 authentication method](http://go.microsoft.com/fwlink/?LinkId=188779) (http://go.microsoft.com/fwlink/?LinkId=188779).

When this step is completed, you should have forms-based authentication enabled and working on the target Project Web Access site.

Back up and restore the Project Server 2003 and Project Server 2007 databases

We recommend that you back up all Project Server 2003 and Office Project Server 2007 databases that are involved in the data migration.

The following databases should be backed up:

- Project Server 2003 database
- Office Project Server 2007 databases:
 - Published
 - Reporting
 - Draft
 - Versions
- Windows SharePoint Services 3.0 configuration and content databases

Once you have created backup copies of the databases that are involved with data migration, you can quickly restart the migration if any non-recoverable problems occur during the migration process. For example, if an error occurs during migration due to a data problem in Project Server 2003, it might corrupt the Office Project Server 2007 database. If the problem is corrected in Project Server 2003, you will have to create a new Office Project Server 2007 Project Web Access site before retrying migration. However, if an Office Project Server 2007 backup is already available, it will not be necessary to recreate a new Project Web Access site. You can simply restore the Office Project Server 2007 databases and retry the migration.

The Office Project Server 2007 configuration and content databases can be backed up in case a non-recoverable problem occurs when you migrate Windows SharePoint Services workspace data to Office Project Server 2007. A pre-migration database backup will assist you in quickly starting over again.

Next, you must decide where to restore the Project Server 2003 database(s).

- Keep the Project Server 2003 database(s) on a separate computer from the Office Project Server 2007 databases: This is a good idea if the database is large enough that backing up or restoring will take a long time. In this case, you have to manually set up a "linked server" on the Office Project Server 2007 computer that points to the Project Server 2003 computer. For more information, look at the **Project2003LinkedSQLServer** parameter in the migration configuration file. For more information, see [Configure a linked server in SQL Server \(Project Server 2010\)](#).
- Restore Project Server 2003 database(s) to the same computer that is hosting the Office Project Server 2007 databases: This is a good idea for optimizing performance — the migration process is faster if the Project Server 2003 database and the Office Project Server 2007 databases are on the same computer.

When this step is completed, you should have all the relevant databases backed up so that you can restore them and quickly restart migration as needed.

Install the migration tool

The migration tool is available on the Microsoft Office Project Professional 2007 installation media. (By default, it is not installed.) The migration tool does not have to be installed on the Project Server computers that are involved in the migration; it only must be able to connect to them over the network. Use the following procedures to install the migration tool.

▶ To install the migration tool (if Office Project Professional 2007 is not installed)

1. Run Setup on the Office Project Professional 2007 installation CD.
2. Select the **Customize** option. (Do not select **Install Now**).
3. On the **Installation Options** tab, expand the feature tree for Microsoft Office Project 2007.
4. Right-click **Migration tool** and change its state from **Not Available** to **Run from My Computer**.
5. Click **Install Now**. The migration tool executable file (P12migrationtool.exe) file is installed to the location that you specify. The default location is as follows: C:\Program Files\Microsoft Office\OFFICE12.

▶ To install the migration tool (if Office Project Professional 2007 is already installed)

1. In Windows XP, click the **Start** button, and then click **Control Panel**.
2. In Control Panel, double-click **Add or Remove Programs**.
3. From the **Currently installed programs** list, select Office Project Professional 2007, and then click **Change**.
4. In the **Change your installation of Microsoft Office** window that appears, select **Add or Remove Features**, and then click **Continue**.
5. On the **Installation Options** tab, expand **Microsoft Office Project** and right-click **Microsoft Office Project Upgrader tool**. Change the status from **Not Available** to **Run from My Computer**.
6. Click **Continue**. This action starts the installation of the migration tool, which adds the migration tool executable file (P12migrationtool.exe) to the same location as the Office Project Professional 2007 executable file (WinProj.exe). The default location is as follows: C:\Program Files\Microsoft Office\OFFICE12.
7. When installation successfully finishes, click **Close** on the next window that appears.

Apply updates to Project Professional 2007 for the migration tool

You must apply updates to the Office Project Professional 2007 installation on which the migration tool is used. You should apply the following:

- Office Project Professional 2007 Service Pack 2

Prepare your Project Server 2007 environment

- The latest cumulative update for Office Project Professional 2007 (this should match the date of the cumulative update applied to Office Project Server 2007).

Prepare your Project Server 2010 environment

When upgrading data from Microsoft Office Project Server 2003, you must prepare your Microsoft Project Server 2010 environment.

Prepare your Project Server 2010 64-bit environment

If you have installed Microsoft Office Project Server 2007 in a Windows Server 2008 64-bit environment after successfully migrating your data from Project Server 2003, then you simply need to run an in-place upgrade to Project Server 2010. An in place upgrade to Project Server 2010 requires the following:

- The Windows Server operating system must be Windows Server 2008 R2 (64-bit) or Windows Server 2008 with Service Pack 2 (SP2) (64-bit)
- The computer running SQL Server used to host the Project Server 2010 data must be either:
 - 64-bit version of SQL Server 2005 Service Pack 2 with Cumulative Update 3
 - 64-bit version of SQL Server 2008 Service Pack 1 with Cumulative Update 2

Prepare your Project Server 2010 environment when migrating from a 32-bit environment

When migrating to Project Server 2010 from an Office Project Server 2007 32-bit environment, you are required to migrate your data by using the database attach method. The database attach method requires a Project Server 2010 installation that the data can be migrated to. (The databases cannot be upgraded in place as the bits are upgraded.) This requires you to install Project Server 2010. For instructions on installing Project Server 2010, see [Deploy Project Server 2010 to a server farm environment](#).



Note:

For more information about Project Server 2010 upgrade methods, see [Project Server 2010 upgrade overview](#).

Pre-migration tasks for migrating your Project Server 2003 data

The following articles describe the pre-migration tasks that should be completed before you migrate your Microsoft Office Project Server 2003 data to Microsoft Office Project Server 2007.

- [Data that cannot be migrated to Project Server 2007](#)
- [Migration best practices \(Project Server 2010\)](#)
- [Configure the migration administrator account \(Project Server 2010\)](#)
- [Configure a linked server in SQL Server \(Project Server 2010\)](#)
- [Verify your Project Server 2003 data](#)
- [List the Project Server 2003 database profile](#)
- [Capture a Project Server 2003 data snapshot before migration](#)
- [Validate the Windows SharePoint Services 2.0 Content database](#)
- [Capture the Windows SharePoint Services 2.0 workspaces linked to projects](#)

Data that cannot be migrated to Project Server 2007

This article describes data in Microsoft Office Project Server 2003 that is not migrated at all or that requires attention when being migrated to Microsoft Office Project Server 2007.

Project Server 2003 data that is not migrated

Project Server 2003 item not migrated	Comment
Outstanding status updates	Outstanding status updates are not migrated if the StopProjectUpdatesIfUpdatesPending setting in the migration configuration file is set to Yes (which is the default option). It is a best practice to make project managers accept or reject project status updates before running the migration tool.
Timesheet history	Timesheet history data is not migrated. Timesheet data in the following tables is not migrated: <ul style="list-style-type: none"> • MSP_WEB_WORK • MSP_WEB_ADJUSTED • MSP_WEB_TRANSACTIONS However, timesheet periods are migrated. Also, all status data entered by team members (for example, Tom worked eight hours on assignment X), does get migrated. If you have a reporting system based on timesheet history, then your reports will be affected and will need to be redone.
Status reports	Status report definitions and responses are not migrated.
To-do lists	The related feature in Office Project Server 2007 is called project proposals . Project proposal assignments affect resource availability, whereas to-do list assignments in Project Server 2003 do not. If you are manually shifting from to-do lists to project proposals, you need to take this situation into account.
View filters	Each filter in each view that is not upgraded is noted in a log file. These log entries can help the administrator to recreate the filters manually in Office Project Server 2007.
Project versions	Office Project Server 2007 does not have the concept of project versions. The version name from Project Server 2003 is appended to the project name as part of migration. For example, Project1, version 'target',

Data that cannot be migrated to Project Server 2007

Project Server 2003 item not migrated	Comment
	becomes Project1_target after migration. Project2, version 'published', becomes Project2_published after migration.
Status update rules	Not migrated.
Extra tables or fields added to the database	Any extra tables or fields added to the database file by customers or partners are not migrated. They must be manually migrated to Project Server 2010.
Project Web Access links and Saved Links	You must manually create your links to Project Web Access after migration. This includes the Saved Links feature in Project Server 2003.

Project Server 2003 data that is migrated with caveats

Project Server 2003 data	Comment
Non-project time	<p>Project Server 2003 administrative projects are migrated as Office Project Server 2007 administrative projects. They are not migrated into the new non-project time infrastructure in Office Project Server 2007 Office Project Server 2007 enterprise resources.</p> <p> Note: In Project Server 2003, you can publish projects without saving them as enterprise projects. A non-enterprise mode does not exist in Office Project Server 2007, and users can have assignments only if it is an enterprise resource. Therefore, users with assignments in Project Server 2003 are converted to enterprise resources in Office Project Server 2007, so that the assignment information is not lost.</p>
Alert preferences	Migrated to notifications.
Enterprise resources	<p>Enterprise resource migration is a very important part of migration. Following are examples of conflicts that may occur during enterprise resource migration:</p> <ul style="list-style-type: none"> • Case 1: When a Project 2003 enterprise resource matches with a Project 2007 enterprise resource (by name or Windows NT account): <ol style="list-style-type: none"> a. The Project 2003 enterprise resource is not migrated. b. The resource is replaced by the Project 2007 enterprise resource. • Case 2: When a Project 2003 enterprise resource matches with a Project 2007 enterprise user (by name or Windows NT account):

Data that cannot be migrated to Project Server 2007

Project Server 2003 data	Comment
	<ul style="list-style-type: none"> a. The Project 2003 enterprise resource is not migrated. b. The resource is converted to a local resource in Project 2007. • Case 3: When a Project 2003 local resource matches with a Project 2007 enterprise resource (by name) <ul style="list-style-type: none"> • The local resource is not converted to an enterprise resource. • Case 4: When a Project 2003 enterprise resource of type X (say, generic resource) matches with a Project 2007 enterprise resource of type Y (say, a material resource) (by name) <ul style="list-style-type: none"> a. The Project 2003 enterprise resource is not migrated. b. The resource is converted to a local resource.
Enterprise resource pool Active Directory group mappings	<p>Mappings from Project Server 2003 security groups to enterprise resource pool Active Directory groups are not migrated to Office Project Server 2007. However, users and resources added by using Project Server 2003 Active Directory synchronization are migrated. After migration, use the migration log file to assist in manually setting up the mappings for Active Directory groups to the enterprise resource pool and Project Server security groups in Office Project Server 2007.</p> <p> Note: Synchronizing to an organization unit — while supported in Project Server 2003 — is not supported in Office Project Server 2007. In Office Project Server 2007, you should synchronize with an Active Directory group because there is not a group-member size limitation as there is in Project Server 2003.</p>
Project Server users	<p>If there is a Project Server user in Office Project Server 2007 either with the same name or Windows NT account as a Project Server 2003 user, then the Project Server 2003 user's details (for example, name, e-mail address, security settings) are not migrated. (In other words, the Office Project Server 2007 data prevails in the case of a conflict).</p>

Migration best practices (Project Server 2010)

Review this list of best practices to observe when migrating from Microsoft Office Project Server 2003 to Microsoft Office Project Server 2007.

- **Do a pilot migration with a small department.** It is sensible to experiment with the process by starting with a small migration rather than a large one.
- **Back up your Project Server 2003 database before migration.** This action enables you to easily restart the migration process if an error should occur.
- **Make sure no users are editing project data during migration.** The edited data would not be migrated properly.
- **Upgrade Microsoft Windows SharePoint Services data first, and then the projects.** If you do not follow this sequence, after migration you will need to republish the projects to get them all linked to their SharePoint sites in Office Project Server 2007.
- **If you have projects that contain subprojects, ensure in the migration configuration file that the subprojects are migrated before the master projects.**
- **Set your database recovery model to Simple in Microsoft SQL Server before starting migration.** Otherwise, you may run into a situation where the database transaction logs of the Published and Draft databases reach their size limits (because so many projects are being added to the database at once).
- **Migrate and publish all relevant administrative projects first.** This ensures that the non-project time is reflected in the Office Project Server 2007 resource availability.
- **Do not delete any migrated Project Server 2007 enterprise resource for the duration of the migration.** To illustrate, imagine that such a resource were deleted, and you then migrate a Project Server 2003 project that uses this enterprise resource. The enterprise resource in the migrated project would become a local resource after migration. However, the enterprise resource could be recovered: If you were to add the deleted resource back again (with the same name or Windows NT account) and resave the project, then the project manager would be prompted to replace the local resource with the enterprise resource.
- **Keep the number of projects to migrate below 1000 in each configuration file.** Each migration configuration file should not exceed 1000 projects to be migrated at one time.
- **During the migration of projects, publish only the projects with a Published version.** Because a given project can have multiple versions but at least one which is called .published, be sure that a project with a version different than .Published is not automatically published during the migration process.

Configure the migration administrator account (Project Server 2010)

This article describes how to configure the Migration Administrator account when migrating your Microsoft Office Project Server 2003 data to Microsoft Office Project Server 2007. Configuring the migration administrator account is one of the pre-migration tasks that are required before performing the migration.

When you configure the Migration Administrator account, you must do the following:

- Give the appropriate permissions to the migration administrator account.
- Verify that the Migration Administrator account has proper access.

Give appropriate permissions to the Migration Administrator account

The Migration Administrator account is the account with which the migration is run. In other words, the P12migrationtool.exe command-line tool is run under this account. The account needs the following permissions:

- Database reader permissions on the Project Server 2003 database(s).
- Administrator permissions on the target Project Web Access site.

Adding the Migration Administrator account to the default (unaltered) "Administrators" security group should give all relevant permissions. If an enterprise resource with the same name or Windows account exists in Project Server 2003, the Migration Administrator account has to be made an enterprise resource as well.

- System administrator privileges on the Office Project Server 2007 databases.

Adding the Migration Administrator account to the "SysAdmin" SQL Server group gives this permission. If the Migration Administrator account is the farm administrator on the Office Project Server 2007 farm, then this permission will already be available.

Verify that the Migration Administrator account has proper access

After installing Office Project Server 2007, you need to verify that your installation is functional before proceeding to migrate data to it. You can do this by performing the following tasks.

To verify that the migration administrator account has proper access

1. Using the Migration Administrator account, log on to the computer on which you have installed the migration tool.
2. Navigate to the Office Project Server 2007 version of Microsoft Office Project Web Access. Log

Configure the migration administrator account (Project Server 2010)

on by using the Migration Administrator account and make sure that you can access any page in Office Project Web Access Server Settings. This ensures that when the migration tool tries to add data to Office Project Server 2007 by using the Migration Administrator account, it will succeed.

3. Start Microsoft Office Project Professional 2007, create a profile with the Migration Administrator account, and then connect to Office Project Server 2007 with that profile.
4. Create, save, and publish a project. Verify that you do not encounter any errors during this process. Delete the project when you are done.
5. Open SQL Query Analyzer, connect to the computer running SQL Server that is hosting the Project Server 2003 database(s), and log on using the Migration Administrator account. Verify that you can access data in each Project Server 2003 database.
6. Open SQL Query Analyzer, connect to the computer running SQL Server that is hosting the Office Project Server 2007 database(s), and log in using the Migration Administrator account. Verify that you have system administrator privileges.

Configure a linked server in SQL Server (Project Server 2010)

Configuring a linked server connection in Microsoft SQL Server is done in conjunction with using the **Project2003LinkedSQLServer=** setting in the migration configuration file. You only need to use this setting and configure the linked server connection when you are migrating a Microsoft Office Project Server 2003 database that cannot be copied and restored on the Microsoft Office Project Server 2007 database server and it must be connected to remotely.

Configure a Linked Server connection using SQL Server 2000

If you are migrating a Project Server 2003 database in SQL Server 2000 to Office Project Server 2007 on another computer, and the database tier for Office Project Server 2007 is SQL Server 2000 as well, use the following procedure to configure a linked server connection.

Configure the connection

1. Connect to the SQL Server hosting the Office Project Server 2007 databases by using Enterprise Manager.
2. In the tree structure, click to expand the Security folder.
3. Right-click **Linked Servers**, and then click **New Linked Server**.
4. Refer to SQL Server documentation for more information on how to create a linked server (search for the term "linked servers"). Make sure you click the Security tab and select the correct security option. (For example, select be made using the login's current security context option button. If this option does not work in your environment, select be made using this security context and give a valid user name and password that works on the computer running SQL Server that is hosting the Project Server 2003 database.)
5. Verify that the linked server you created functions properly before proceeding with the migration. You should see the linked server you just created under the Linked Servers node. Once you expand the linked server, you should see the Tables and Views nodes. If you click Tables or Views, you should see some entries
6. Use the name of the linked server as the value for the **Project2003LinkedSQLServer=** parameter in the migration configuration file.



Note:

In some IT environments, specific ports related to Microsoft Distributed Transaction Coordinator (MSDTC) might need to be opened for the linked server configuration to work. For more

information, see the SQL Server documentation about linked servers or contact your system administrator.

Configure a linked server connection from SQL Server 2000 to SQL Server 2005

If you are migrating a Project Server 2003 database in SQL Server 2000 to Office Project Server 2007 on another computer, but the database server being used by Office Project Server 2007 is SQL Server 2005, use the following procedures to configure a linked server connection.

First, in both SQL Server 2000 and SQL Server 2005, set the authentication mode to mixed, so that SQL Server logins are accepted along with Windows logins.

▶ Configure SQL Server 2005 authentication to mixed mode

1. Open SQL Server 2005 Management Studio.
2. In the **Object Explorer** pane, right-clicking the SQL 2005 server name, then click **Properties**.
3. In the **Select a Page** list, click **Security**.
4. In the **Server Authentication** section, select **SQL Server and Windows Authentication Mode**.
5. Click **OK**.

▶ Configure SQL Server 2000 authentication to mixed mode

1. Open SQL Server Enterprise Manager.
2. Expand the server group that contains the database server that you will use with Project Server 2003.
3. Right-click the server, and then click **Properties**.
4. Click the **Security** tab.
5. Under **Authentication**, click **SQL Server and Windows**.
6. Click **OK**.

▶ Configure the connection

1. On the computers running SQL Server 2000 and SQL Server 2005, create an identical SQL authenticated user account to run the linked server connection. Make sure that the password is the same for the accounts on both servers. Ensure that the accounts have read/write access to the databases you intend to access using the linked server system.
2. In SQL Server 2000, open Query Analyzer and on your master database run a file called **instcat.sql**. It should be located under your SQL folders in Program Files.
3. In SQL Server 2005 Management Studio, select your computer running SQL Server 2005,

Configure a linked server in SQL Server (Project Server 2010)

expand **Server Objects**, right-click **Linked Servers**, and click **New Linked Server**.

- a. Enter the server name of your computer running SQL Server 2000.
 - b. Select the **SQL Server** option.
 - c. Click the **Security** tab in the side pane.
 - d. Select the **Be made using this security context** option.
 - e. Enter the SQL account and password needed to access the Project Server 2003 databases and Office Project Server 2007 databases (created in step 1).
 - f. Click **OK**.
4. In SQL Server 2005 Management Studio, launch a query against the linked server to verify that it worked:
- a. `SELECT * from <P200Server>.<P11DBName>.dbo.msp_web_admin`
 - b. Replace the server and database name with appropriate values.
 - c. If this query returns successfully, your connection is successful.



Note:

When you run the migration, make sure the user account with which you are running the migration tool has read access to both your Project Server 2003 and Office Project Server 2007 databases.

Configure a linked server connection from SQL Server 2000 to SQL Server 2008

If you are migrating a Project Server 2003 database in SQL Server 2000 to Office Project Server 2007 on another computer, but the database server being used by Office Project Server 2007 is SQL Server 2008, use the following procedures to configure a linked server connection.

First, in both SQL Server 2000 and SQL Server 2008, set the authentication mode to mixed, so that SQL Server logins are accepted along with Windows logins.

▶ Configure SQL Server 2008 authentication to mixed mode

1. 0.1. Open SQL Server 2008 Management Studio.
2. In the **Object Explorer** pane, right-clicking the SQL 2008 server name, then click **Properties**.
3. In the **Select a Page** list, click **Security**.
4. In the **Server Authentication** section, select **SQL Server and Windows Authentication Mode**.
5. Click **OK**.

▶ Configure SQL Server 2000 authentication to mixed mode

Configure a linked server in SQL Server (Project Server 2010)

1. Open SQL Server Enterprise Manager.
2. Expand the server group that contains the database server that you will use with Project Server 2003.
3. Right-click the server, and then click **Properties**.
4. Click the **Security** tab.
5. Under **Authentication**, click **SQL Server and Windows**.
6. Click **OK**.

Configure the connection

1. On the computers running SQL Server 2000 and SQL Server 2008, create an identical SQL authenticated user account to run the linked server connection. Make sure that the password is the same for the accounts on both servers. Ensure that the accounts have read/write access to the databases you intend to access using the linked server system.
2. In SQL Server 2000, open Query Analyzer and on your master database run a file called instcat.sql. It should be located under your SQL folders in Program Files.
3. In SQL Server 2008 Management Studio, select your computer running SQL Server 2008, expand Server Objects, right-click Linked Servers, and click New Linked Server.
 - a. Enter the server name of your computer running SQL Server 2000.
 - b. Select the SQL Server option.
 - c. Click the Security tab in the side pane.
 - d. Select the Be made using this security context option.
 - e. Enter the SQL account and password needed to access the Project Server 2003 databases and Office Project Server 2007 databases (created in step 1).
 - f. Click OK.
4. In SQL Server 2008 Management Studio, launch a query against the linked server to verify that it worked:
 - a. `SELECT * from <P2003Server>.<P11DBName>.dbo.msp_web_admin`
 - b. Replace the server and database name with appropriate values.
 - c. If this query returns successfully, your connection is successful.



Note:

When you run the migration, make sure the user account with which you are running the migration tool has read access to both your Project Server 2003 and Office Project Server 2007 databases.

Verify your Project Server 2003 data

The articles in this section describe how to verify that the Microsoft Office Project Server 2003 source data that you plan to migrate is in a valid state to migrate to Microsoft Office Project Server 2007. They describe useful tools for verifying that the data you plan to migrate is not invalid or corrupt. These include SQL queries included in the pre-migration script A1 to run on your Project Server 2003 databases. It also describes general checks you should do in your Project Server 2003 environment prior to migrating.

To verify your Project Server 2003 data, you must do the following:

- Run the Office Project Server 2007 pre-migration script A1 on your Project Server 2003 data
- Fix data issues identified by running the script on your Project Server 2003 data
- Identify and fix Enterprise Custom fields and Outline Codes with name conflicts

See Also

[Run the pre-migration script A1 \(Project Server 2010\)](#)

[Fix data issues identified in the pre-migration script A1 \(Project Server 2010\)](#)

[Identify and fix Enterprise Custom fields and Outline Codes with name conflicts \(Project Server 2010\)](#)

Run the pre-migration script A1 (Project Server 2010)

Running this script against the Microsoft Office Project Server 2003 database identifies possible errors that will prevent the migration process from completing. This SQL script only reads a database from Project Server 2003 Service Pack 3.

This script identifies the following problems:

1. Version of Project Server 2003 database (which must be SP3 before the migration)
2. Projects are checked out
3. Projects have been externally edited
4. Projects have status updates pending
5. Duplicate enterprise resources
6. Duplicate enterprise resources in projects
7. Enterprise Global template externally edited
8. Enterprise Global template checked out
9. Enterprise Global template locked
10. Default language is different between the Project tables and the Web tables
11. Resource has a comma in its name
12. Required enterprise resource custom fields have no values
13. Required enterprise resource custom fields have values which are not in the lookup table definition
14. Enterprise resources externally edited
15. Enterprise resource duration custom fields have value lists
16. Enterprise resource duration custom fields have invalid values

Project Server 2007 Pre-Migration Script 1

```
-----  
/* Pre-Migration Steps from Project 2003 SP3 to Project 2007 SP2
```

```
-----*/
```

```
USE Proj2003SourceDB
```

```
-----  
/* Check Project 2003 Version: Must be SP3 = 11.3
```

Run the pre-migration script A1 (Project Server 2010)

```
-----*/
select replace(str(WADMIN_VERSION_MAJOR)+'.'+str(WADMIN_VERSION_MINOR),' ','')
as 'Project Server Version SP3 Must Be 11.3 or Higher. If not, upgrade your 2003 database to
SP3'
from dbo.MSP_WEB_ADMIN
go
-----

/* Display the projects checked out?
-----*/
select PROJ_NAME AS 'List of Projects Checked-out: Must be Fixed'
from dbo.MSP_PROJECTS where PROJ_CHECKEDOUT = 1 and PROJ_TYPE in (0, 1)
go
-----

/* Display the projects Externally Edited?
-----*/
select PROJ_NAME AS 'List of Projects Externally Edited: Must be Fixed'
from dbo.MSP_PROJECTS where (PROJ_EXT_EDITED = 1 or RESERVED_BINARY_DATA is null) and PROJ_TYPE
in (0, 1)
go
-----

/* Determining whether projects have status updates pending
-----*/
select distinct PROJ_NAME AS 'List of Projects with Status Updates Pending: Must be Fixed'
from dbo.MSP_WEB_ASSIGNMENTS wa, dbo.MSP_WEB_TRANSACTIONS trans,
dbo.MSP_WEB_PROJECTS wp where wa.WPROJ_ID = wp.WPROJ_ID
and trans.WASSN_ID = wa.WASSN_ID and trans.WTRANS_STATE in (0, 1, 2)
go
-----

/* Determining whether there are duplicate Enterprise Resources
-----*/
select res_uid, res_name AS 'Duplicate Enterprise Resources: Must be Fixed' from msp_resources
where res_name in (select distinct r1.RES_NAME from dbo.MSP_RESOURCES r1
inner join dbo.MSP_RESOURCES r2 on (r1.RES_NAME = r2.RES_NAME and r1.PROJ_ID = r2.PROJ_ID)
```

Run the pre-migration script A1 (Project Server 2010)

```
where r1.PROJ_ID = 1
and r1.RES_UID != r2.RES_UID) and proj_id = 1 order by res_name asc

go

-----
/* Determining whether there are duplicate Enterprise Resources
Check for duplicate enterprise resources used in your projects
-----*/

select distinct res_name AS 'Duplicate Enterprise Resources Used in Projects: Must be Fixed',
res_euid
from msp_resources
where res_name in (select distinct r1.RES_NAME from dbo.MSP_RESOURCES r1
inner join dbo.MSP_RESOURCES r2 on (r1.RES_NAME = r2.RES_NAME
and r1.PROJ_ID = r2.PROJ_ID) where r1.PROJ_ID = 1
and r1.RES_UID != r2.RES_UID) and proj_id <> 1 and res_euid is not null
order by res_name, res_euid asc

go

-----
/* Enterprise Global template should not be externally edited
-----*/

select PROJ_NAME 'Enterprise Global Template Externally Edited: Must be Fixed' from
dbo.MSP_PROJECTS
where (PROJ_EXT_EDITED = 1 or RESERVED_BINARY_DATA is null)
and PROJ_TYPE = 2

go

-----
/* Determining whether the Enterprise Global template is checked out
-----*/

select count(*) AS 'Enterprise Global Template Checked Out: Must be Fixed' from
dbo.MSP_PROJECTS
where PROJ_CHECKEDOUT = 1 and PROJ_TYPE = 2
```

Run the pre-migration script A1 (Project Server 2010)

```
go
-----
/* Determining whether the Enterprise Global template is locked
-----*/
select cast(isnull(PROJ_LOCKED, '0') as int) AS 'Enterprise Global Template Is Locked: Must be
Fixed'
    from dbo.MSP_PROJECTS where PROJ_TYPE = 2

go
-----
-----
/* Determining whether the default language on the Web tables database and Project tables
database should match
-----
-----*/
select WADMIN_DEFAULT_LANGUAGE As 'The Deafault Language on Web and Project Tables should
Match: Must be Fixed'
    from dbo.MSP_WEB_ADMIN

go
-----
-----
/* Determining whether a resource has a comma in its name
-----
-----*/
select RES_NAME 'List of Resources With a Comma in the Name: Not Allowed: Must be Fixed'
    from MSP_RESOURCES where RES_NAME is not null and charindex(',', RES_NAME) > 0

go
-----
-----
/* Determining whether required enterprise resource custom fields do not have values
```

Run the pre-migration script A1 (Project Server 2010)

```
-----*/
declare @eglobal_proj_id int
set @eglobal_proj_id = (select PROJ_ID from dbo.MSP_PROJECTS where PROJ_TYPE = 2)

select
    r1.RES_NAME as 'Resource Name',
    ast1.AS_VALUE as 'Custom Field Name with NO VALUE: Must be Fixed'
from
    dbo.MSP_RESOURCES r1
    inner join dbo.MSP_CODE_FIELDS cf1 on (r1.RES_UID = cf1.CODE_REF_UID)
    inner join dbo.MSP_FIELD_ATTRIBUTES fa1 on (cf1.CODE_FIELD_ID = fa1.ATTRIB_FIELD_ID)
    inner join dbo.MSP_ATTRIBUTE_STRINGS ast1 on (fa1.AS_ID = ast1.AS_ID)
    inner join dbo.MSP_OUTLINE_CODES oc3 on (cf1.CODE_UID = oc3.CODE_UID
    and oc3.PROJ_ID = @eglobal_proj_id)
    left join dbo.MSP_OUTLINE_CODES oc1 on (oc1.CODE_UID = cf1.CODE_UID
    and cf1.CODE_FIELD_ID = oc1.OC_FIELD_ID and oc1.PROJ_ID = @eglobal_proj_id)
    left join (
        select
            oc.CODE_UID,
            fa.ATTRIB_FIELD_ID as OC_FIELD_ID,
            @eglobal_proj_id as PROJ_ID
        from
            dbo.MSP_OUTLINE_CODES oc
            inner join dbo.MSP_FIELD_ATTRIBUTES fa on (fa.PROJ_ID = oc.PROJ_ID
            and fa.ATTRIB_VALUE = oc.OC_FIELD_ID and fa.ATTRIB_ID = 212)
        where
            oc.PROJ_ID = @eglobal_proj_id
            and fa.PROJ_ID = @eglobal_proj_id
            and fa.ATTRIB_ID = 212
    ) as oc2 on (oc2.CODE_UID = cf1.CODE_UID and cf1.CODE_FIELD_ID = oc2.OC_FIELD_ID
    and oc2.PROJ_ID = @eglobal_proj_id)
where
```

Run the pre-migration script A1 (Project Server 2010)

```
r1.PROJ_ID = 1
and cf1.proj_id = 1
and fa1.PROJ_ID = @eglobal_proj_id
and fa1.ATTRIB_ID = 206
and ast1.PROJ_ID = @eglobal_proj_id
and oc3.PROJ_ID = @eglobal_proj_id
and oc1.CODE_UID is null
and oc2.CODE_UID is null

order by
    r1.RES_NAME,
    ast1.AS_VALUE

go

-----
-----
/* Determining whether a resource custom field has a value which is not in the lookup table
definition
-----
-----*/

declare @eglobal_proj_id int
set @eglobal_proj_id = (select PROJ_ID from dbo.MSP_PROJECTS where PROJ_TYPE = 2)

select
    r1.RES_NAME AS 'Resource Name',
    ast1.AS_VALUE AS 'Custom Field Name with Invalid Value: Must be Fixed'
from
    dbo.MSP_RESOURCES r1
    inner join dbo.MSP_CODE_FIELDS cf1 on (r1.RES_UID = cf1.CODE_REF_UID)
    inner join dbo.MSP_FIELD_ATTRIBUTES fa1 on (cf1.CODE_FIELD_ID = fa1.ATTRIB_FIELD_ID)
    inner join dbo.MSP_ATTRIBUTE_STRINGS ast1 on (fa1.AS_ID = ast1.AS_ID)
    left join dbo.MSP_OUTLINE_CODES oc1 on (oc1.CODE_UID = cf1.CODE_UID
    and cf1.CODE_FIELD_ID = oc1.OC_FIELD_ID and oc1.PROJ_ID = @eglobal_proj_id)
    left join (
```

Run the pre-migration script A1 (Project Server 2010)

```
select
    oc.CODE_UID,
    fa.ATTRIB_FIELD_ID as OC_FIELD_ID,
    @eglobal_proj_id as PROJ_ID
from
    dbo.MSP_OUTLINE_CODES oc
    inner join dbo.MSP_FIELD_ATTRIBUTES fa on (fa.PROJ_ID = oc.PROJ_ID
        and fa.ATTRIB_VALUE = oc.OC_FIELD_ID and fa.ATTRIB_ID = 212)
where
    oc.PROJ_ID = @eglobal_proj_id
    and fa.PROJ_ID = @eglobal_proj_id
    and fa.ATTRIB_ID = 212
) as oc2 on (oc2.CODE_UID = cf1.CODE_UID and cf1.CODE_FIELD_ID = oc2.OC_FIELD_ID
and oc2.PROJ_ID = @eglobal_proj_id)
where
    r1.PROJ_ID = 1
    and cf1.proj_id = 1
    and cf1.code_uid is not null
    and fal.PROJ_ID = @eglobal_proj_id
    and fal.ATTRIB_ID = 206
    and ast1.PROJ_ID = @eglobal_proj_id
    and ocl.CODE_UID is null
    and oc2.CODE_UID is null
union
select
    r1.RES_NAME,
    ast1.AS_VALUE
from
    dbo.MSP_RESOURCES r1
    inner join dbo.MSP_MV_FIELDS cf1 on (r1.RES_UID = cf1.CODE_REF_UID)
    inner join dbo.MSP_FIELD_ATTRIBUTES fal on (cf1.CODE_FIELD_ID = fal.ATTRIB_FIELD_ID)
    inner join dbo.MSP_ATTRIBUTE_STRINGS ast1 on (fal.AS_ID = ast1.AS_ID)
    left join dbo.MSP_OUTLINE_CODES ocl on (ocl.CODE_UID = cf1.CODE_UID
```

Run the pre-migration script A1 (Project Server 2010)

```
and (cf1.CODE_FIELD_ID - 76) = oc1.OC_FIELD_ID and oc1.PROJ_ID = @eglobal_proj_id)
left join (
    select
        oc.CODE_UID,
        fa.ATTRIB_FIELD_ID as OC_FIELD_ID,
        @eglobal_proj_id as PROJ_ID
    from
        dbo.MSP_OUTLINE_CODES oc
        inner join dbo.MSP_FIELD_ATTRIBUTES fa on (fa.PROJ_ID = oc.PROJ_ID
        and fa.ATTRIB_VALUE = oc.OC_FIELD_ID and fa.ATTRIB_ID = 212)
    where
        oc.PROJ_ID = @eglobal_proj_id
        and fa.PROJ_ID = @eglobal_proj_id
        and fa.ATTRIB_ID = 212
) as oc2 on (oc2.CODE_UID = cf1.CODE_UID and (cf1.CODE_FIELD_ID - 76) = oc2.OC_FIELD_ID
and oc2.PROJ_ID = @eglobal_proj_id)
where
    r1.PROJ_ID = 1
and cf1.proj_id = 1
and cf1.code_uid is not null
and fal.PROJ_ID = @eglobal_proj_id
and fal.ATTRIB_ID = 206
and ast1.PROJ_ID = @eglobal_proj_id
and oc1.CODE_UID is null
and oc2.CODE_UID is null
order by
    r1.RES_NAME,
    ast1.AS_VALUE

go
-----
-----

/* Determining whether Enterprise resources are externally edited
```

Run the pre-migration script A1 (Project Server 2010)

```
-----  
-----*/  
  
select count(*) AS 'Number of Enterprise Resources Externally Edited: Must be Fixed'  
from dbo.MSP_RESOURCES  
where PROJ_ID = 1 and cast(EXT_EDIT_REF_DATA as varchar(1)) = '1'  
  
go  
  
-----  
-----*/  
  
/* Determining whether There are Enterprise Resource Duration Custom Fields with Value Lists  
-----  
-----*/  
  
declare @proj_id int  
set @proj_id = (select proj_id from msp_projects where proj_type = 2)  
select ats.as_value as 'Enterprise Resource Duration Custom Field with Value Lists: Must be  
Fixed'  
from msp_attribute_strings ats  
inner join msp_field_attributes fa on (fa.proj_id = ats.proj_id and fa.as_id = ats.as_id)  
where fa.attrib_id = 206 and fa.proj_id = @proj_id  
and fa.attrib_field_id >= 205521382 and fa.attrib_field_id <= 205521391  
and exists (select * from msp_field_attributes fa2  
where fa2.proj_id = fa.proj_id and fa2.attrib_field_id = fa.attrib_field_id  
and fa2.attrib_id = 210)  
  
go  
  
-----  
-----*/  
  
/* Determining whether Enterprise Resource Duration custom fields contain valid values  
-----  
-----*/  
  
select r.res_name AS 'Resource Name'  
, mas.as_value AS 'Enterprise Resource Duration Custom Field with Invalid Value: Must be Fixed'  
from msp_resources r  
inner join msp_duration_fields df on (df.dur_ref_uid = r.res_euid and df.proj_id = r.proj_id)
```

Run the pre-migration script A1 (Project Server 2010)

```
inner join msp_projects p on (p.proj_type = 2)
inner join msp_field_attributes fa on (fa.proj_id = p.proj_id and fa.attrib_field_id =
df.dur_field_id)
inner join msp_attribute_strings mas on (mas.proj_id = p.proj_id and fa.as_id = mas.as_id)
where (dur_value < 0 or dur_value > 34689600) and df.proj_id = 1 and p.proj_type = 2
and fa.attrib_id = 206

go
```

Fix data issues identified in the pre-migration script A1 (Project Server 2010)

After you run the pre-migration script A1 on your Microsoft Office Project Server 2003 data, check the output of the script for problems that might exist. This article describes methods of resolving issue with the data that are identified in the output. This includes:

- Projects that are checked out
- Project that have been edited externally
- Projects that have status updates pending
- Duplicate enterprise resources
- Product version of Project Server 2003 should be at least Service Pack 2a
- Duplicate enterprise resources in projects
- The Enterprise Global template has been externally edited
- The Enterprise Global template has been checked out
- The Enterprise Global template is locked
- The default language of the Web tables database and Project tables database should match
- Enterprise resources should not have commas in their names
- Required enterprise resource custom fields do not have values
- Required enterprise resource custom fields have values which are not in the lookup table definition
- Enterprise Resources have been externally edited
- Enterprise resource duration custom fields have value lists
- Enterprise resource duration custom fields have invalid values

After resolving data issues as prescribed in this section, rerun the pre-migration script A1 to verify that the data issues have been resolved.

Project that are checked out

A project cannot be migrated if it is checked-out. It is a best practice before any migration to get the source data to a stable state—consciously checking in projects ensures that a project is in a stable state for being migrated. Migration coordinators could set a deadline for Project Managers to check in their projects by a certain date, and beyond that date can force a check-in of all projects.

How to fix the problem

Check in all projects that are checked out.

▶ Check in projects that are checked out in Project Server 2003

1. In Microsoft Office Project Server 2003 Project Web Access, click **Admin**.
2. Click **Manage Enterprise Features**.
3. Click **Check in Enterprise Projects** and see which projects are checked out. Coordinate its check-in or do a forced check-in operation from Project Web Access.



Note

- You can also test for checked-out projects by running the following SQL query in the "Project Server 2003 Project tables" and "Project Server 2003 Web Tables" databases.
- ```
select PROJ_NAME from dbo.MSP_PROJECTS where PROJ_CHECKEDOUT = 1 and PROJ_TYPE in (0, 1)
```
- If any results are returned, then the projects referred to are checked out.

## Projects that have been edited externally

A project cannot be migrated if it has been externally edited.

### How to fix the problem

Open the externally edited project in Project Professional 2003, save it, and check it back in to the server. This action should set the **Externally edited** flag to **false**.

## Project that have status updates pending

By default, if Project Server 2003 projects have pending updates, they will not migrate to Project Server 2007. Before you migrate, we recommend that your users accept or reject status updates to ensure that projects are in a stable state to migrate.

### How to fix the problem

The **StopProjectMigrationIfStatusUpdatesPending** parameter in the migration configuration file can be configured to allow the migration of projects with pending updates. For more information about this parameter, see [Configure the migration tool \(Project Server\)](#).

As a pre-migration best practice, you could set a deadline for project managers to accept or reject pending status updates by a certain date. Beyond that date you could then force-migrate all projects (even if status updates are not up-to-date).

## Duplicate enterprise resources

Having multiple resources in the enterprise resource pool with the same name is not supported in Project Server 2003 or Project Server 2007. If this situation occurs, it might be the result of direct

## Fix data issues identified in the pre-migration script A1 (Project Server 2010)

database edits. Note that the duplicate names may not appear in Project Professional when you are editing the Enterprise Resource Pool. This occurs because there might be just one entry in the MSP\_WEB\_RESOURCES table for an enterprise resource with this name. There is no simple way to resolve this situation. Work with your Project Server expert to resolve it. Following are some guidelines to help you check for and fix issues that occur with duplicate enterprise resources.

### Identifying duplicate enterprise resources

The pre-migration script A1 identifies duplicate enterprise resources if they are contained in your data. If the script finds any duplicate enterprise resources, the data will be displayed similarly to the following example of two duplicate resources:

| RES_UID | RES_NAME    | RES_EUID |
|---------|-------------|----------|
| 123     | Peter Krebs | 123      |
| 124     | Peter Krebs | 123      |
| 125     | Brad Sutton | 125      |
| 126     | Brad Sutton | 126      |

### Identify duplicate enterprise resources used in your projects

The pre-migration script A1 identifies duplicate enterprise resources if they are contained in your data. If the script finds any duplicate enterprise resources, the data will be displayed similarly to the following example of two duplicate resources:

| RES_NAME    | RES_EUID |
|-------------|----------|
| Peter Krebs | 123      |
| Brad Sutton | 125      |
| Brad Sutton | 126      |

### Fix projects that use duplicate enterprise resources

Running the following query (query 1) returns project IDs that are associated with duplicate enterprise resources. You need to eliminate this kind of duplication such that only one "res\_name, res\_euid" combination is ever used in your projects. If duplicates exist, you must designate one of the duplicates as the "correct" resource and make sure all projects use this resource. (Update the

## Fix data issues identified in the pre-migration script A1 (Project Server 2010)

MSP\_RESOURCES.RES\_EUID column for that project to point it to the enterprise resource you have designated as the correct one.) After doing this, run script A1 to repeat your verification test for duplicate enterprise resources used in projects.

Query 1:

```
select res_name, res_euid, proj_id from msp_resources where res_name in (select distinct
r1.RES_NAME from dbo.MSP_RESOURCES r1 inner join dbo.MSP_RESOURCES r2 on (r1.RES_NAME =
r2.RES_NAME and r1.PROJ_ID = r2.PROJ_ID) where r1.PROJ_ID = 1 and r1.RES_UID != r2.RES_UID) and
proj_id <> 1 and res_euid is not null order by res_name, res_euid asc
```

For example, let's say that running Query 1 returns the following results:

| RES_NAME    | RES_EUID | PROJ_ID |
|-------------|----------|---------|
| Brad Sutton | 125      | 12      |
| Brad Sutton | 126      | 13      |
| Brad Sutton | 125      | 14      |

To fix the situation, you could choose 'Brad Sutton' with RES\_EUID=125 as the "correct" enterprise resource and fix the rows as follows:

| RES_NAME    | RES_EUID | PROJ_ID |
|-------------|----------|---------|
| Brad Sutton | 125      | 12      |
| Brad Sutton | 125      | 13      |
| Brad Sutton | 125      | 14      |

## Fix the duplicate enterprise resources to point to the correct one

In the previous section you designated a correct resource among the duplicates and fixed the projects to point to it. Now, you must change the MSP\_RESOURCES table in accordance with the resource you have designated. Run Query 4 (which is the same as Query 1) to get a list of the duplicate enterprise resources. Then update the RES\_EUID column for the duplicate resource to point it to the resource you have designated as the correct one.

Query 4:

```
select res_uid, res_name, res_euid from msp_resources where res_name in (select distinct
r1.RES_NAME from dbo.MSP_RESOURCES r1 inner join dbo.MSP_RESOURCES r2 on (r1.RES_NAME =
```

## Fix data issues identified in the pre-migration script A1 (Project Server 2010)

```
r2.RES_NAME and r1.PROJ_ID = r2.PROJ_ID) where r1.PROJ_ID = 1 and r1.RES_UID != r2.RES_UID) and
proj_id = 1 order by res_name asc
```

For example, let's say that running Query 4 returns the following results. The 'Peter Krebbs' row is correct. 'Brad Sutton' needs to be corrected.

| RES_UID | RES_NAME     | RES_EUID |
|---------|--------------|----------|
| 123     | Peter Krebbs | 123      |
| 124     | Peter Krebbs | 123      |
| 125     | Brad Sutton  | 125      |
| 126     | Brad Sutton  | 126      |

To fix the situation, you could choose 'Brad Sutton' with RES\_UID=125 as the "correct" resource and update the other row to point to that item. For example:

| RES_UID | RES_NAME     | RES_EUID |
|---------|--------------|----------|
| 123     | Peter Krebbs | 123      |
| 124     | Peter Krebbs | 123      |
| 125     | Brad Sutton  | 125      |
| 126     | Brad Sutton  | 125      |

## Remove the duplicate resource from the Enterprise Resource Pool

You can remove a duplicate resource from the Enterprise Resource Pool by pointing the duplicate resource to a bogus project (PROJ\_ID = maximum integer value). In addition, we also need to clean up the related enterprise calendars. Run Query 5 to do this.

Query 5:

```
update msp_resources set proj_id=2147483647 WHERE res_uid != res_euid and res_euid is not null
and res_uid > 0 and proj_id = 1
```

```
update msp_calendars set proj_id=2147483647 WHERE res_uid not in (select res_uid from
msp_resources where proj_id=1) and proj_id = 1 and cal_uid > 0 and res_uid is not null
```

After completing the preceding steps, attempt to run the migration tool with the **-verify** option again to verify that the duplicate resource problem is resolved.

## Project version should be at least 'Project Server 2003 SP2a'

Microsoft supports migration from Project Server 2003 SP2a or SP3. If you do not have at least service pack 2a installed, you will need to apply one of them (we recommend the latest, Service Pack 3).

### How to fix the problem

Apply Project Server 2003 SP3 to your Project Server 2003 installation. For more information about Project Server 2003 SP3, see the knowledge base article [Description of Project Server 2003 Service Pack 3](http://go.microsoft.com/fwlink/?LinkId=188720) (<http://go.microsoft.com/fwlink/?LinkId=188720>).

## The Enterprise Global template has been externally edited

The 'Externally Edited' flag is set to **true** when the Enterprise Global template is edited outside of Project (for example, by a third-party application). Project Professional will check for this flag: If it is set to **true**, Project Professional recalculates all data in the Enterprise Global template to ensure consistency. Set this flag to **false** to enable migration.

### How to fix the problem

Open the Enterprise Global in Project Professional and save it back to the server.

## The Enterprise Global template is checked out

The Enterprise Global template should not be checked out when you are migrating your projects.

### How to fix the problem

Make sure that the Enterprise Global is checked in.

1. In Project Server 2003 Project Web Access, click **Admin**.
2. Click **Manage Enterprise Features**.
3. Click **Check in Enterprise Projects**, and see who has checked out the Enterprise Global. Coordinate its check-in or do a forced check-in operation from Project Web Access.

## Determining whether the Enterprise Global template is locked

A project becomes locked if the computer shuts down abnormally, or if Project Professional exits abnormally. If the Enterprise Global template is locked, the migration tool cannot run.

## How to fix the problem

The following SQL query unlocks the Enterprise Global Template. Run the following SQL query in the "Project Server 2003 Project tables" database.

```
Update MSP_PROJECTS set PROJ_LOCKED = 1 where PROJ_TYPE = 2
```

## Determining whether the default language on the Web tables database and Project tables database should match

The default language on the Project Server 2003 Web Tables database and the Project Server 2003 Project Tables database must match prior to migration.

## How to fix the problem

Work with your administrator to correct the inconsistent state between the two databases.

## Determining whether a resource has a comma in its name

It is a limitation of Project Server 2007 that an Enterprise Resource (of any language) cannot have a comma character (,) in its name. The character must be replaced with a valid character.

## How to fix the problem

Run the following SQL query in the "Project Server 2003 Project tables" and the "Project Server 2003 Web tables" databases. It replaces the comma character with an underscore character. If you want to use a different valid character, you can edit the query.

```
-- run this against the project tables db
declare @replacement_char char
declare @char_to_replace char
set @replacement_char = '_'
set @char_to_replace = ','
update dbo.MSP_RESOURCES set RES_NAME = replace(RES_NAME, @char_to_replace, @replacement_char)
where RES_NAME is not null and charindex(@char_to_replace, RES_NAME) > 0

-- run this against the web tables db
declare @replacement_char char
declare @char_to_replace char
set @replacement_char = '_'
```

## Fix data issues identified in the pre-migration script A1 (Project Server 2010)

```
set @char_to_replace = ','
update dbo.MSP_WEB_RESOURCES set RES_NAME = replace(RES_NAME, @char_to_replace,
@replacement_char)
where RES_NAME is not null and charindex(@char_to_replace, RES_NAME) > 0
```

## Required enterprise resource custom fields do not have values

Any enterprise resource that does not have a value for a required enterprise custom field (like the RBS), will fail to migrate. It will post an error in the migration log during migration. We recommend that you check for this scenario before migration. If your enterprise resources are very old (created before the custom field was made 'Required') or inactive, they might not have values for the required custom field.

### How to fix the problem

In Project Server 2003, open the enterprise resource pool and set values for the required custom fields or set the affected custom fields as 'Not Required'. You can then change them back manually in Office Project Server 2007 after they are migrated.

## Resource custom field has a value which is not in the lookup table definition

A resource custom field's values must all be in the lookup definition table.

### How to fix the problem

The following SQL query sets invalid resource custom field values to null. Run the following SQL query in the "Project Server 2003 Project tables" databases.

```
declare @eglobal_proj_id int
set @eglobal_proj_id = (select PROJ_ID from dbo.MSP_PROJECTS where PROJ_TYPE = 2)

update dbo.MSP_MV_FIELDS
set
 CODE_UID = NULL
from dbo.MSP_MV_FIELDS cf1
left join dbo.MSP_OUTLINE_CODES oc1 on (oc1.CODE_UID = cf1.CODE_UID and (cf1.CODE_FIELD_ID -
76) = oc1.OC_FIELD_ID and oc1.PROJ_ID = @eglobal_proj_id)
left join (
 select
```

## Fix data issues identified in the pre-migration script A1 (Project Server 2010)

```
 oc.CODE_UID,
 fa.ATTRIB_FIELD_ID as OC_FIELD_ID,
 @eglobal_proj_id as PROJ_ID
from
 dbo.MSP_OUTLINE_CODES oc
 inner join dbo.MSP_FIELD_ATTRIBUTES fa on (fa.PROJ_ID = oc.PROJ_ID and fa.ATTRIB_VALUE
= oc.OC_FIELD_ID and fa.ATTRIB_ID = 212)
where
 oc.PROJ_ID = @eglobal_proj_id
 and fa.PROJ_ID = @eglobal_proj_id
 and fa.ATTRIB_ID = 212
) as oc2 on (oc2.CODE_UID = cf1.CODE_UID and (cf1.CODE_FIELD_ID - 76) = oc2.OC_FIELD_ID and
oc2.PROJ_ID = @eglobal_proj_id)
where
 cf1.proj_id = 1
 and oc1.CODE_UID is null
 and oc2.CODE_UID is null

update dbo.MSP_CODE_FIELDS
set
 CODE_UID = NULL
from dbo.MSP_CODE_FIELDS cf1
 left join dbo.MSP_OUTLINE_CODES oc1 on (oc1.CODE_UID = cf1.CODE_UID and cf1.CODE_FIELD_ID =
oc1.OC_FIELD_ID and oc1.PROJ_ID = @eglobal_proj_id)
 left join (
 select
 oc.CODE_UID,
 fa.ATTRIB_FIELD_ID as OC_FIELD_ID,
 @eglobal_proj_id as PROJ_ID
 from
 dbo.MSP_OUTLINE_CODES oc
 inner join dbo.MSP_FIELD_ATTRIBUTES fa on (fa.PROJ_ID = oc.PROJ_ID and fa.ATTRIB_VALUE
= oc.OC_FIELD_ID and fa.ATTRIB_ID = 212)
 where
 oc.PROJ_ID = @eglobal_proj_id
```

## Fix data issues identified in the pre-migration script A1 (Project Server 2010)

```
and fa.PROJ_ID = @eglobal_proj_id
and fa.ATTRIB_ID = 212
) as oc2 on (oc2.CODE_UID = cf1.CODE_UID and cf1.CODE_FIELD_ID = oc2.OC_FIELD_ID and
oc2.PROJ_ID = @eglobal_proj_id)
where
cf1.proj_id = 1
and oc1.CODE_UID is null
and oc2.CODE_UID is null

update dbo.MSP_PROJECTS set PROJ_EXT_EDITED = 1, PROJ_EXT_EDITED_CODE = 1 where PROJ_ID = 1
```

## Enterprise resources have been externally edited

In order for enterprise resources to be migrated from Project Server 2003 to Project Server 2007, they must not be externally edited.

### How to fix the problem

To fix the problem, you need to first set all the Enterprise Resources as externally edited. This can be done through an SQL query. You can then make a change to each Enterprise Resource so that all relevant refreshes are done by Project Professional when the Enterprise Resource Pool is saved. This action removes the "externally edited" flag for each Enterprise resource. If an enterprise resource is not changed, no recalculations are done by Project Professional to that resource. That specific enterprise resource continues to be flagged as externally edited, and the Enterprise Resource Pool will not migrate.



#### Note:

After the Enterprise Resource Pool is migrated, the changes you made to each Enterprise Resource can be removed.

You can use the following general workaround to remove all externally edited flags from your Enterprise Resources.

1. Set all enterprise resources to be externally edited. You can do this by running the following SQL query in the "Project Server 2003 Project tables" databases.

```
Update dbo.MSP_RESOURCES set EXT_EDIT_REF_DATA = 1 where PROJ_ID = 1
Update dbo.MSP_PROJECTS set PROJ_EXT_EDITED = 1, PROJ_EXT_EDITED_DATE = 1,
PROJ_EXT_EDITED_DUR = 1, PROJ_EXT_EDITED_NUM = 1, PROJ_EXT_EDITED_FLAG = 1,
PROJ_EXT_EDITED_CODE = 1, PROJ_EXT_EDITED_TEXT = 1 where PROJ_ID = 1
```

## Fix data issues identified in the pre-migration script A1 (Project Server 2010)

2. Temporarily add an inconsequential resource custom field to each Enterprise Resource to force recalculations to be done by Project Professional 2003. The forced recalculations will mark each Enterprise Resource as no longer externally edited. As an example, in Project Professional 2003 you can create a 'test' resource custom field that will be added to each Enterprise Resource. You can use any custom field type. For example, you can use a Resource Duration custom field, which is seldom used.



### Note:

If you use an Enterprise Resource Duration custom field, do not create a value list for it. Enterprise Resource Duration custom fields with value lists will not migrate. When creating this temporary custom field, use a numeric value.

You can name the new custom field "Test Resource CF". After creating the "Test Resource CF" custom field, open the Enterprise Resource Pool and add the "Test Resource CF" column. Set a valid value for this custom field for all resources. Save the Enterprise Resource Pool and perform the migration. After migration, remove the "Test Resource CF" custom field in Microsoft Office Project Professional 2007.

## Enterprise Resource Duration custom fields with value lists

Enterprise Resource Duration custom fields with associated value lists will cause migration to fail.

### How to fix the problem

To fix the problem, you must manually remove all values lists from each Enterprise Resource Duration custom field found in the SQL query. You can do this using the following procedure.

1. Open Project Professional 2003 connected to the Project Server 2003 server.
2. On the **Tools** menu, point to **Enterprise Options**, and then click **Open Enterprise Global**.
3. On the Microsoft Project - Checked-out Enterprise Global page, on the **Tools** menu, point to **Customize**, and then click **Enterprise Fields**.
4. On the Custom Enterprise Fields page, in the **Custom Fields** tab, in the **Fields** section, click **Resource**.
5. In the **Type** drop-down list, click **Duration**. All Enterprise Duration custom fields will appear in the **Field** list.
6. In the **Field** list, select the first Enterprise Resource Duration custom field that matches the ones returned by the SQL query you ran previously. In the **Custom Attributes** section, click the **Value List** button. In the value list for the specific Enterprise Duration custom field, delete any values in the **Value** column, and then click **OK**. On the Microsoft Office Project dialog box that appears, click **OK**.

## Fix data issues identified in the pre-migration script A1 (Project Server 2010)

7. On the Customize Enterprise Fields page, in the **Custom Attributes** section, verify that **Value List** is not selected for the Enterprise Resource Duration custom field selected in the **Field** list. If **Value List** is selected, select **None**.
8. In the **Field** list, select all remaining Enterprise Resource Duration custom fields that correspond to the SQL query and repeat steps 6 and 7.
9. Click **OK**.

## Enterprise Resource Duration custom fields contain valid values

Project Server 2010 does not allow negative duration values or duration values greater than 34689600. If you attempt to migrate Project Server 2003 Enterprise Resource Duration custom fields which contain either, your migration will fail.

### How to fix the problem

To fix the problem, you must manually edit the Enterprise Resource Duration custom field value for each of the custom fields identified. You need to ensure that the field values are valid (between 0 and 34689600).

If the field identified by the query is a simple custom field (not a formula field), you can change the field value to fall within the allowed range. If the field identified by the query is a formula field, you will have to alter the formula to make sure that the results fall within the valid range.

## Identify and fix Enterprise Custom fields and Outline Codes with name conflicts (Project Server 2010)

There are certain custom fields and lookup tables name that are reserved in both Microsoft Office Project Server 2007 and Microsoft Project Server 2010. If any of these names are used in the current Project Server 2003 database, the custom fields and outline codes must be changed in Project Server 2003 before proceeding further with the migration. Use Microsoft Office Project Professional 2003 connected to a Project Server 2003 instance to look for reserved names, and take corrective action if necessary.

### Reserved outline code names

| Outline Code Name | Type     | Office Project Server 2007 | Project Server 2010 |
|-------------------|----------|----------------------------|---------------------|
| Cost Type         | Resource | X                          | X                   |
| Health            | Task     | X                          | X                   |
| State             | Project  | X                          | X                   |
| Team Name         | Resource | X                          | X                   |
| Department        |          |                            | X                   |
| Flag Status       |          |                            | X                   |

### Reserved custom field names

| Custom field name           | Type     | Office Project Server 2007 | Project Server 2010 |
|-----------------------------|----------|----------------------------|---------------------|
| Cost Type                   | Resource | X                          | X                   |
| Health                      | Task     | X                          | X                   |
| State                       | Project  | X                          | X                   |
| Team Name                   | Resource | X                          | X                   |
| Sample Approved Finish Date | Project  |                            | X                   |
| Sample Approved Start       | Project  |                            | X                   |

**Identify and fix Enterprise Custom fields and Outline Codes with name conflicts (Project Server 2010)**

| <b>Custom field name</b>                | <b>Type</b> | <b>Office Project Server 2007</b> | <b>Project Server 2010</b> |
|-----------------------------------------|-------------|-----------------------------------|----------------------------|
| Data                                    |             |                                   |                            |
| Sample Areas Impacted                   | Project     |                                   | X                          |
| Sample Assumptions                      | Project     |                                   | X                          |
| Sample Business Need                    | Project     |                                   | X                          |
| Sample Compliance Proposal              | Project     |                                   | X                          |
| Flag Status                             | Task        |                                   | X                          |
| Sample Goals                            | Project     |                                   | X                          |
| Sample Post-Implementation Review Date  | Project     |                                   | X                          |
| Sample Post-Implementation Review Notes | Project     |                                   | X                          |
| Sample Primary Objectives               | Project     |                                   | X                          |
| Project Departments                     | Project     |                                   | X                          |
| Project Impact                          | Project     |                                   | X                          |
| Sample Proposal Cost                    | Project     |                                   | X                          |
| Sample Proposed Finish Date             | Project     |                                   | X                          |
| Sample Proposed Start Date              | Project     |                                   | X                          |
| Relative Importance                     | Project     |                                   | X                          |
| Resource Departments                    | Resource    |                                   | X                          |

## List the Project Server 2003 database profile

---

You can run the Microsoft Office Project Server 2003 profile script A2 to capture statistics about the database that you plan on migrating. This script's output will provide information about:

- Size of the databases (Project Tables and Web Tables databases)
- Number of projects
- Number of inserted projects
- Number of cross-project links
- Number of tasks
- Number of assignments
- Number of Enterprise resources
- Number of custom fields in use
- Number of Project-authenticated users
- Number of Windows-authenticated users
- Number of security groups
- Number of security categories
- If there is Windows SharePoint Services integration
- Number of linked issues
- Number of linked risks
- Number of linked documents
- Number of custom Project Web Access views

You must enter the name of your Project Tables database and of your Web Tables database in the USE statements in the script.

### Project Server 2003 profile script A2

```
/*-----

Script A2: Project Server 2003 Database Profile

This script reads the Project Server 2003 database (Project Tables and View Tables may be in
the same or separate database)

-----*/

use <Enter "Project Tables" database name>
```

## List the Project Server 2003 database profile

--Total size of DB

```
exec sp_spaceused
```

--Number of projects in the database

```
select count(*) as 'Total Number of Projects in 2003' from msp_projects
```

--Number of inserted projects

```
select count(*) as 'Number of Inserted Projects in 2003'
from MSP_TEXT_FIELDS where TEXT_FIELD_ID = 188743706
```

--Number of cross-project links

```
select count(*) as 'Number of cross-project links in 2003'
from MSP_TEXT_FIELDS
where TEXT_FIELD_ID = 239075346 or TEXT_FIELD_ID = 239075347
```

--Number of total tasks, assignments in the system

```
select count(*) as 'Number of tasks in 2003' from msp_tasks
select count(*) as 'Number of assignments in 2003' from msp_assignments
```

--Number of Enterprise resources (in ResGlobal)

```
select count(*) as 'Number of Enterprise Resources in 2003'
from msp_resources where proj_id = 1 and res_name is not null
```

--Number of custom fields in use

```
select count(*) as 'Number of Custom Fields in use in 2003'
from msp_field_attributes
where attrib_id = 206 and proj_id in (select proj_id
from msp_projects where proj_type =2)
```

```
/*-----

```

## List the Project Server 2003 database profile

This script reads the Project Server 2003 database (Project Tables and View Tables may be in the same or separate database)

```
-----*/
-----*/

use <Enter "Web Tables" database name>

--Total size of DB
exec sp_spaceused

--Number of Project Authenticated users, Windows authenticated users
select count(*) as 'Number of Project Authenticated users in 2003'
 from MSP_WEB_RESOURCES
 where WRES_USE_NT_LOGON = 0
 and WRES_CAN_LOGIN <>0 and WRES_COUNT_LICENSE <> 0
select count(*) as 'Number of Windows Authenticated users in 2003'
 from MSP_WEB_RESOURCES
 where WRES_USE_NT_LOGON <> 0
 and WRES_CAN_LOGIN <>0 and WRES_COUNT_LICENSE <> 0

--Number of security groups, security categories
select count(*) as 'Number of Security Groups in 2003'
 from MSP_WEB_SECURITY_GROUPS
select count(*) as 'Number of Security Categories in 2003'
 from MSP_WEB_SECURITY_CATEGORIES

--Is there any Windows SharePoint Services integration?
select count(*) as 'Is there any Windows SharePoint Services Integration in 2003?'
 from msp_web_admin where WADMIN_CURRENT_STS_SERVER_ID <> -1

--Number of linked issues, risks, documents
-- (indicates how much Windows SharePoint Services integration is used)
select count(*) as
```

## List the Project Server 2003 database profile

```
'Number of linked Windows SharePoint Services issues/risks/documents in 2003'
from MSP_WEB_OBJECT_LINKS

--Number of custom Project Web Access views
select count(*) as 'Number of customer Project Web Access views in 2003'
from MSP_WEB_VIEW_REPORTS where WVIEW_ID > 100
```

# Capture a Project Server 2003 data snapshot before migration

---

In this step, run Script 3 to take a data snapshot of the Microsoft Office Project Server 2003 database from the Projects and Tasks tables and then stored in a table created dynamically within the script. Prior to running the script, instruct your SQL DBA to create a database that will be used to store several data validation tables and content used to validate the success of the migration downstream.

1. Have the SQL DBA create a database and provide its name.
2. Run the script after updating the two USE statements to point to the database created in step 1 and the database name of the Project Server 2003 database that is ready for migration.

## Script 3

```

/*-----
-- Script A3: Capture Data Validation Snapshot for Project Server 2003 ---- Updated Jan 10,
2010
-- This script:
-- 1. drops the PS2003 Validation Snapshot table if it exists from the Migration Validation
 Database previously created
 2. Reads the Project Server 2003 SP2a database to extract Projects and Tasks information
 3. Stores the output dataset into a new table created in the Migration Validation
 Database
 This script requires to set the database names of the Migration Validation Database and the
 Project Server 2003 database in the USE statements

*/

USE ProjectServer_Migration_Data_Validation

IF EXISTS (SELECT id FROM dbo.sysobjects WHERE id =
OBJECT_ID(N'Migration_PS2003_Data_Validation_Snapshot')
AND OBJECTPROPERTY(id, N'IsUserTable') = 1)
DROP TABLE dbo.Migration_PS2003_Data_Validation_Snapshot

GO

USE [Proj2003SourceDB]

GO

```

## Capture a Project Server 2003 data snapshot before migration

```
SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED
GO
SELECT pl1p.proj_name as N'Project Name',
 pl1p.proj_id as 'Project ID',
 pl1p.proj_version as N'Project Version',
 pl1p.proj_info_start_date as N'Proj Start Date',
 pl1p.proj_info_finish_date as N'Proj Finish Date',
 pl1p.proj_info_status_date as N'Proj Status Date',
 pl1p.proj_info_cal_name as N'Proj Calendar Name',
 pl1t.task_name as N'Task Name',
 pl1t.task_uid as N'Task UID',
 pl1t.task_type as N'Task Type',
 pl1t.task_start_date as N'Task Start Date',
 pl1t.task_finish_date as N'Task Finish Date',
 pl1t.task_act_start as N'Task Act Start',
 pl1t.task_act_finish as N'Task Act Finish',
 pl1t.task_constraint_date as N'Task Constraint Date',
 pl1t.task_deadline as N'Task Deadline',
 pl1t.task_work as N'Task Work',
 pl1t.task_act_work as N'Task Actual Work',
 pl1t.task_rem_work as N'Task Rem Work',
 pl1t.task_ovt_work as N'Task Ovt Work',
 pl1t.task_act_ovt_work as N'Task Actual Ovt Work',
 pl1t.task_rem_ovt_work as N'Task Rem Ovt Work',
 pl1t.task_pct_comp as N'Task %Complete',
 pl1t.task_pct_work_comp as N'Task %Work Complete',
 pl1t.task_phy_pct_comp as N'Task % Phys Work Complete',
 pl1t.task_dur as N'Task Duration',
 pl1t.task_rem_dur as N'Task Rem Duration',
 pl1t.task_act_dur as N'Task Actual Duration',
 pl1t.task_is_milestone as N'Task Milestone',
 pl1t.task_cost as N'Task Cost',
 pl1t.task_fixed_cost as N'Task Fixed Cost',
```

## Capture a Project Server 2003 data snapshot before migration

```
p11t.task_act_cost as N'Task Actual Cost',
p11t.task_rem_cost as N'Task Rem Cost',
p11t.task_ovt_cost as N'Task Ovt Cost',
p11t.task_act_ovt_cost as N'Task Actual Ovt Cost',
p11t.task_rem_ovt_cost as N'Task Rem Ovt Cost'
INTO ProjectServer_Migration_Data_Validation.dbo.Migration_PS2003_Data_Validation_Snapshot

FROM msp_projects AS p11p,
msp_tasks AS p11t
WHERE (p11p.proj_id = p11t.proj_id)

ORDER BY 1,5
```

# Validate the Windows SharePoint Services 2.0 Content database

---



## Important:

This procedure is optional and only needs to be done if you plan to migrate your project workspace site and content that is saved in Windows SharePoint Services 2.0.

Prior to migrating the Project workspace sites and their content from Windows SharePoint Services 2.0 to Windows SharePoint Services 3.0, we recommend that you use the Upgrade Pre-Scan tool to validate the SharePoint content database containing the workspaces. In addition, if customization has been applied to site templates or objects, the PreScan Tool will validate whether they are compatible with Windows SharePoint Services 3.0.

The PreScan tool can be downloaded from the following site: [SharePoint Products and Technologies Utility: Upgrade Pre-scan Tool](http://go.microsoft.com/fwlink/?LinkID=92383) (http://go.microsoft.com/fwlink/?LinkID=92383)

Extract the utility onto the server running Windows SharePoint Services 2.0 and run the utility with the command: **Prescan.exe /all**

For more information about running the Pre-scan tool, see [Run the pre-upgrade scan tool](#)

You can also refer to the following articles for more information about running the Pre-Scan tool:

1. [Joel Oleson's blog: Your Friend Prescan.exe - How to Get it & What it Does - Part 2](http://go.microsoft.com/fwlink/?LinkId=186362)  
(http://go.microsoft.com/fwlink/?LinkId=186362)
2. [Bill Baer blog: Understanding PRESCAN.EXE Errors](http://go.microsoft.com/fwlink/?LinkId=186366)  
(http://go.microsoft.com/fwlink/?LinkId=186366)

# Capture the Windows SharePoint Services 2.0 workspaces linked to projects

---

 **Important:**

This procedure is optional and only needs to be performed if you want to migrate your Windows SharePoint Services 2.0 project workspace sites and content.

Script A4 takes a data snapshot of the Microsoft Office Project Server 2003 database from the Project table and then stores the data in a table created dynamically within the script. Script A4 lists all projects in the Project Server 2003 database that have an associated project workspace site.

Run Script A4 after updating the two USE statements to point to the validation database created above and the database name of the Microsoft Office Project Server 2003 database that you plan to migrate.

## Script A4

```

/*-----
-- Script A4: Capture WSS2 Project Workspaces Data Snapshot
-- Project2003_Projects_With_WSS_Sites.sql
-- List all Projects with Associated WSS workspace sites
-----*/

USE ProjectServer_Migration_Data_Validation

IF EXISTS (SELECT id FROM dbo.sysobjects WHERE id =
OBJECT_ID(N'Migration_PS2003_ProjectWorkspaces')
AND OBJECTPROPERTY(id, N'IsUserTable') = 1)

DROP TABLE dbo.Migration_PS2003_ProjectWorkspaces

GO

USE ProjectServer_2003

SELECT [PROJ_NAME]
, [WPROJ_ID]
, [WPROJ_STS_SUBWEB_NAME]
, [WPROJ_ISSUE_LIST_NAME]
, [WPROJ_RISK_LIST_NAME]

INTO ProjectServer_Migration_Data_Validation.dbo.Migration_PS2003_ProjectWorkspaces

```

## Capture the Windows SharePoint Services 2.0 workspaces linked to projects

```
FROM [MSP_WEB_PROJECTS] P, dbo.MSP_WEB_STS_SERVERS W
where [WPROJ_STS_SUBWEB_NAME] IS NOT NULL
and p.[WSTS_SERVER_ID] = w.[WSTS_SERVER_ID]
```

# Migration tasks for migrating to Project Server 2007

---

After you have completed all of the pre-migration tasks for migrating your Microsoft Office Project Server 2003 data, you can begin with the migration itself. The migration tasks that you must do include:

- [Upgrade project workspace data from Project Server 2003](#): This task is optional and is not required if you only want to migrate your project data.
- [Configure the migration tool \(Project Server\)](#): The migration tool is the utility used to perform the migration, and it must be installed to your environment. It also uses an initialization (.ini) file that requires your configuration.
- [Run the migration tool \(Project Server\)](#): The migration tool can migrate projects in batches or all at one time.
- [Troubleshoot migration to Project Server 2007](#): Use the migration log files to help troubleshoot migration issues.

# Upgrade project workspace data from Project Server 2003

---



## Important:

This procedure is optional and only needs to be performed if you want to migrate your Windows SharePoint Services 2.0 project workspace sites and content.

This article describes how to migrate your Windows SharePoint Services 2.0 project workspace data to Windows SharePoint Services 3.0. This part of the data migration process from Project Server 2003 to Project Server 2007 is only necessary if you want to migrate your project workspace data. There are two ways that this can be done:

- If you do an in-place upgrade from Windows SharePoint Services 2.0 to Windows SharePoint Services 3.0, you can run an Stsadm command to make your workspaces active.
- If you are migrating to a different computer, you can back up your Windows SharePoint Services 2.0 database to restore them to the Windows SharePoint Services 3.0 computer to upgrade it.

## Migrating Windows SharePoint Services 2.0 project workspace data to Windows SharePoint Services 3.0 by doing an in-place upgrade

In this case, all the Windows SharePoint Services 2.0 workspaces would have already been upgraded to Windows SharePoint Services 3.0 when you chose the in-place upgrade option when installing Windows SharePoint Services 3.0. But the upgraded project workspaces may not be active. Do the following to make them active.

1. Open a Command Prompt window and navigate to the location of Stsadm.exe. (The default location is <drive>:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\bin.)
2. Run the following Stsadm command to force an upgrade.

### **stsadm -o upgrade**

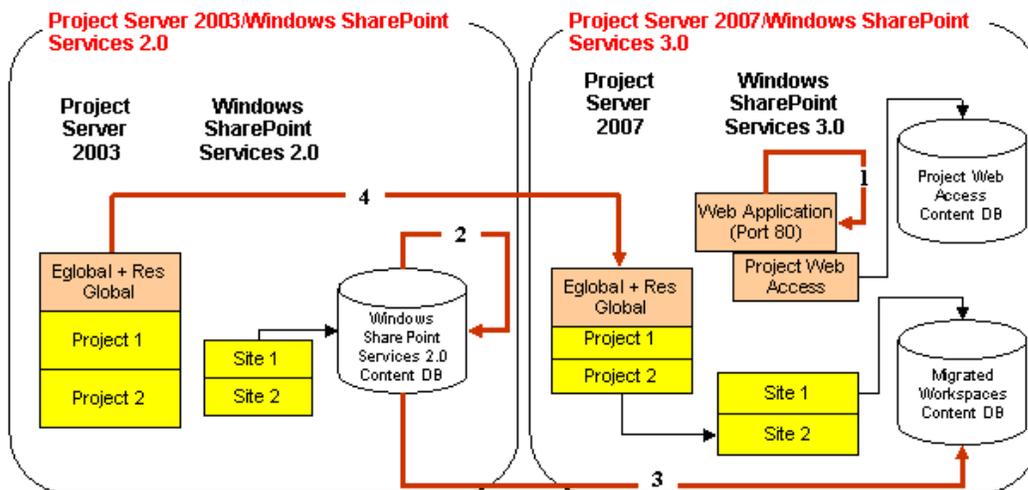
To check progress, you can look at the upgrade.log file: <drive>:\program files\common files\Microsoft shared\Web server extensions\12\logs\upgrade.log

The upgrade process will be complete when the command prompt returns **Operation completed successfully**.

3. Browse to the upgraded project workspaces and ensure that they work correctly.

## Migrating Windows SharePoint Services 2.0 project workspace data to Windows SharePoint Services 3.0 by using a backup and restore approach

If you installed Office Project Server 2007 on a clean computer and if you want to migrate Windows SharePoint Services data, you will be using the content database backup-and-restore approach. It involves the following steps:



1. Run the Windows SharePoint Services pre-upgrade scanning tool on the Windows SharePoint Services 2.0 SP2 farm. If it has not already been done (as noted in the pre-migration tasks). This process prepares the Windows SharePoint Services 2.0 content database for upgrade to Windows SharePoint Services 3.0.
2. Attach a copy of all the Windows SharePoint Services 2.0 content databases to the Office Project Server 2007 farm: Once attached, the Windows SharePoint Services 2.0 sites in the content database are upgraded to Windows SharePoint Services 3.0. We strongly recommend that a copy of the Windows SharePoint Services 2.0 content database be upgraded — not the original content database. At the end of this step, all the Project Server 2003 workspaces will have been upgraded to Windows SharePoint Services 3.0, but they will not yet be linked to the projects.
  - a. Open a Command Prompt window and navigate to the location of Stsadm.exe. (The default location is <drive>:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\bin.)
  - b. Run the following Stsadm command to attach a copy of your Windows SharePoint Services 2.0 content database to Windows SharePoint Services 3.0 and upgrade it.

**stsadm.exe -o addcontentdb -url http://<server>:<port> -databasename <WSS v2.0 content database> -databaseserver <DB Server name>**

## Upgrade project workspace data from Project Server 2003

For example:

```
stsadm.exe -o addcontentdb -url http://MyServer:80 -databasename WSS_V2_ContentDB -
databaseserver Sample
```

- c. After running `Stsadm.exe`, you can track the progress of the upgrade by looking at `upgrade.log` in the ULS log directory. (The default location is `c:\program files\common files\Microsoft shared\Web server extensions\12\logs\upgrade.log`.) The upgrade process has finished on a given content database when the following line is included in the log:

```
[SPManager] [DEBUG] [<Date> <Time>]: Using cached [SPContentDatabase Name=<DB NAME>
Parent=SPDatabaseServiceInstance] NeedsUpgrade value: False.
```

- d. Navigate to the upgraded project workspaces to verify that upgrade has succeeded.
- e. If upgrade fails for any reason (as indicated in the log), the Windows SharePoint Services upgrade process can be restarted. To restart the upgrade process, run the command **Stsadm.exe -o upgrade** and look at the logs to view the progress. The upgrade process has finished when the command prompt returns **Operation completed successfully**.

When the migration tool saves and publishes projects later in the migration process, the links between projects, tasks, and assignments and the SharePoint Foundation items will be fixed.

# Configure the migration tool (Project Server)

This article provides information on how to configure the initialization (.ini) file used by the migration tool to migrate Microsoft Office Project Server 2003 data to Microsoft Office Project Server 2007. This article also provides several SQL queries used to search the Project Server 2003 database for projects in certain states to include in the migration configuration file.

In this article:

- [Migration configuration file overview](#)
- [Migration configuration parameters](#)
- [Migration configuration file example](#)
- [Querying the Project Server 2003 database for projects](#)

## Migration configuration file overview

Typically the migration tool is invoked using a command line that looks similar to this:

```
D:\Program Files\Microsoft Office\OFFICE12>P12MigrationTool.exe -c
d:\migration\ProjectServer2007Migrate.ini
```

Before you run the migration tool, you must manually edit the migration configuration file in a text editor. This file configures the parameters that specify the location of the upgrade log file, which projects to migrate, the location of the computer running Microsoft SQL Server on which the Office Project Server 2007 databases will exist, and so forth.

A sample migration configuration file (named ProjectServer2007Migrate.ini.sample) is installed in the same directory as the migration tool. You can update this sample file with the correct configuration parameters and then point to it when you run the migration tool. The sample file includes comments that describe configuration options that are available for each parameter.

The following sections provide more details about the migration configuration file.

## Migration configuration parameters

Following are the parameters that you can configure in the migration configuration file.

| Parameter         | Description                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>[General]</b>  | General configuration section. The parameters for this section are listed next.                                                               |
| <b>BatchName=</b> | You can run the migration tool multiple times (for example, to migrate projects in batches). Therefore, specify a unique name for each run of |

## Configure the migration tool (Project Server)

| Parameter                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | <p>the migration tool. The log file that is generated from each run of the migration tool is named according to the specified <b>BatchName</b> parameter. If a unique name is not specified, the log file that is generated will write over the previous log file.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>LogFileNamePrefix=</b> | <p>Identifies the prefix of the migration log file. The log file name is a combination of <b>LogFileNamePrefix</b> and a timestamp specifying when the migration started. For example, if you have a log file name of batch1-20060314-1542.log:</p> <ul style="list-style-type: none"> <li>• <b>LogFileNamePrefix=batch1</b></li> <li>• The migration run for this log was started on 3/14/2006 at 3:42 pm</li> </ul> <p>Being able to apply a prefix to the log file name can be useful when you are migrating multiple times, such as in a gradual migration approach.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>LogFilepath=</b>       | <p>Identifies the path to the log files that are generated by the migration tool. The migration tool writes verbose information to the log file. The log file is your main source of troubleshooting information for the migration tool. If the migration tool cannot write to the log file, it stops running, so you can be sure that you can always refer to the log file for more information about the migration run.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>MigrateAll=</b>        | <p><b>Save:</b> All projects in Project Server 2003 are migrated to Office Project Server 2007 and none of them are published.</p> <p><b>Publish:</b> All projects in Project Server 2003 are migrated to Office Project Server 2007 and the published projects in Project Server 2003 are automatically published in Office Project Server 2007.</p> <p>If you want the <b>MigrateAll</b> parameter to be ignored, comment out the <code>MigrateAll</code> line with a semicolon. If this is done, no projects will be migrated when running the migration tool.</p> <p> <b>Note:</b><br/>           Comment out the <b>MigrateAll</b> parameter if you choose to follow the best practice of running the migration tool to migrate non-project data (enterprise global template, enterprise resources, and Project Web Access data) prior to migrating any projects. You must also verify that no projects are specified in the <b>[Project Names to Save and Publish]</b> and <b>[Project Names to Publish]</b> sections.</p> <p> <b>Important:</b><br/>           The <b>MigrateAll=</b> setting is ignored if you have specified any</p> |

## Configure the migration tool (Project Server)

| Parameter                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | project names in the <b>[Project Names to Save and Publish]</b> or <b>[Project Names to Publish]</b> section.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>FixUpSecurityCategories=</b>                    | If <b>FixUpSecurityCategories</b> is set to <b>Yes</b> , projects are automatically added to security categories after they are migrated. If it is set to <b>No</b> , projects are not added to any security category after migration. Typically, you would set this policy to <b>No</b> if the categories in Office Project Server 2007 will be significantly different from the categories you have in Project Server 2003 and you want to add your projects to security categories manually.                                                                                                                                                                                                                                                                    |
| <b>StopProjectMigrationIfStatusUpdatesPending=</b> | By default, the value of <b>StopProjectMigrationIfStatusUpdatesPending</b> is <b>Yes</b> . If it is set to <b>Yes</b> , any projects that have pending updates are not migrated. If this setting is set to <b>No</b> , any projects that have pending updates are migrated. The <b>No</b> option is useful if customers want to migrate projects even though they have pending updates. An example of this situation is when there are old projects that need to be migrated, but there are no active project managers for these projects to process pending updates.                                                                                                                                                                                              |
| <b>NeverPublishMasterProjects=</b>                 | <p>By default, the value for <b>NeverPublishMasterProjects</b> is set to <b>Yes</b>. This setting ensures that master projects do not get published by mistake. This is useful for customers who have set the <b>Never Publish Master Projects</b> option in Project Server 2003.</p> <p>If you want any master projects published after migration, set <b>NeverPublishMasterProjects</b> to <b>No</b>. Even if you specify this setting, you need to manually include the master project in the <b>[Project Names to Save and Publish]</b> section.</p> <p> <b>Note:</b><br/>Publishing a master project in Office Project Server 2007 does not double-count availability.</p> |
| <b>[Project Names to Save]</b>                     | <p>Type the names of the projects you want to save after migration. Projects specified in this section are not published.</p> <p> <b>Note:</b><br/>You must specify the complete name (as stored in the PROJ_NAME column in the MSP_PROJECTS table).</p>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>[Project Names to Save and Publish]</b>         | Type the names of the projects that you want to save and publish after migration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Configure the migration tool (Project Server)

| Parameter                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | <p> <b>Note:</b><br/>Only published projects (with .PUBLISHED extensions) in Project Server 2003 can be published to Office Project Server 2007. If you specify a versioned project, then it will only be saved and not published.</p> <p> <b>Note:</b><br/>You must specify the complete name of the project (as stored in the PROJ_NAME column in the MSP_PROJECTS table).</p> <p> <b>Note:</b><br/>If you specify a master project and set <b>neverPublishMasterProjects=false</b>, then the subprojects (if they are already migrated or are being migrated as part of this migration run) will also get published automatically. Also note that publishing a master project in Project Server 2010 does not double-count availability.</p> |
| <b>[Excluded Project Names]</b> | <p>Specify any project that you want explicitly excluded during migration. This option is typically used with the <b>MigrateAll</b> setting when you want to migrate most, but not all, of your projects.</p> <p> <b>Note:</b><br/>You must specify the complete name of the project (as stored in the PROJ_NAME column in the MSP_PROJECTS table).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>[Project Server 2007]</b>    | <p>The Office Project Server 2007 configuration section. The parameters for this section are listed next.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Project2007PWAServer=</b>    | <p>Type the Microsoft Project Web App URL. For example,<br/><b>Project2007PWAServer=http://Project2007PWAServer/pwa</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Project2007SQLServer=</b>    | <p>Type the name of the instance of SQL Server that hosts the Office Project Server 2007 databases.</p> <p> <b>Important:</b><br/>By default, the Project Server 2003 databases also should be part of the same instance of SQL Server as Office Project Server 2007. To do this, back up and restore the Project Server 2003 databases into the instance of SQL Server that hosts the Office Project Server 2007 databases. If this is a major restriction for you, refer to the Project2003LinkedSQLServer property in the <b>[Project Server 2003]</b> section.</p>                                                                                                                                                                                                                                                                                                                                          |

## Configure the migration tool (Project Server)

| Parameter                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DraftDB =</b>                                | Type the name of the Office Project Server 2007 draft database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>PublishedDB =</b>                            | Type the name of the Office Project Server 2007 published database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>[Project Server 2003]</b>                    | The Project Server 2003 configuration section. The parameters for this section are listed next.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Project2003ProjectTablesDB =</b>             | <p>If you have a single database configuration for the Project Server 2003 database (as opposed to a split database configuration), then type the name of the database in this configuration setting as well as the <b>Project2003WebTablesDB=</b> setting that follows.</p> <p> <b>Note:</b><br/>The migration tool does not migrate SQL Server Analysis Services cube tables. You will have to rebuild cubes after migration.</p>                                                                                                                                                                                                                                                                                                                                       |
| <b>Project2003WebTablesDB =</b>                 | If the Project Server 2003 database is in a split database configuration, type the name of the Web Tables database. As noted above, if Project Server 2003 is in a single database configuration, enter the database name here as well as in the <b>Project2003ProjectTablesDB=</b> setting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Project2003LinkedSQLServer=SQLServerName</b> | By default, this setting is not enabled (the <b>Project2003LinkedSQLServer=</b> setting is commented out). If this parameter is not specified, the migration tool assumes that the Project 2003 databases reside in the computer hosting the Office Project Server 2007 SQL Server. If the SQL Server computer in which the Project 2003 databases reside cannot reside on the computer that hosts the Office Project Server 2007 databases, you can use this setting to specify the computer on which the Project Server 2003 database resides. However, for this to work you must add the Project Server 2003 database as a linked server to the Office Project Server 2007 SQL Server. To configure an SQL linked server connection, see the pre-migration task article <a href="#">Configure a linked server in SQL Server (Project Server 2010)</a> . |

## Migration configuration file example

The following is an example of a configured migration configuration file.

```
[General]
```

```
LogFilePath=C:\ProjectServer2007Migration
```

## Configure the migration tool (Project Server)

```
LogFilePrefix=Batch1
MigrateAll=Publish
FixUpSecurityCategories=yes
StopProjectMigrationIfStatusUpdatesPending=yes
NeverPublishMasterProjects=yes
[Project Names to Save]
Project1.published
Project2.Target
[Project Names to Save and Publish]
Project3.Published
Project4.Published
[Excluded Project Names]
Project5.Published
Project6.Target
[Project Server 2007]
Project2007PWAServer=http://Project2007pwaserver/pwa
Project2007SQLServer=Project2007sqlserver
DraftDB=Project2007ProjectServerDraft
PublishedDB=Project2007ProjectServerPublished
[Project Server 2003]
Project2003ProjectTablesDB=Project2003ProjDB
Project2003WebTablesDB=Project2003WebDB
;Project2003LinkedSQLServer=LinkedSQLServerName
```



### Note:

The migration configuration file that is installed with the migration tool contains comments that describe the configuration options that are available. The comments can help you correctly configure the file. You can leave the comments in the file after you configure it.

## Querying the Project Server 2003 database for projects

The SQL Server scripts shown in this section can be very useful for searching your Project Server 2003 database for projects that need to be included in any of the following sections of the migration configuration file:

- **[Project Names to Save]**
- **[Project Names to Save and Publish]**
- **[Excluded Project Names]**
- The project names resulting from the queries can then be copied into the appropriate sections of the migration configuration file as needed.

### Projects not yet started

```
SELECT p.PROJ_NAME FROM dbo.MSP_PROJECTS p
 INNER JOIN dbo.MSP_TASKS t ON (t.PROJ_ID = p.PROJ_ID AND t.TASK_UID = 0)
WHERE p.PROJ_TYPE = 0 AND t.TASK_PCT_COMP = 0 AND t.TASK_PCT_WORK_COMP = 0
```

### Projects that are finished

```
SELECT p.PROJ_NAME FROM dbo.MSP_PROJECTS p
 INNER JOIN dbo.MSP_TASKS t ON (t.PROJ_ID = p.PROJ_ID AND t.TASK_UID = 0)
WHERE p.PROJ_TYPE = 0 AND t.TASK_PCT_COMP = 100 AND t.TASK_PCT_WORK_COMP = 100
```

### Projects not yet finished

```
SELECT p.PROJ_NAME FROM dbo.MSP_PROJECTS p
 INNER JOIN dbo.MSP_TASKS t ON (t.PROJ_ID = p.PROJ_ID AND t.TASK_UID = 0)
WHERE p.PROJ_TYPE = 0 AND (t.TASK_PCT_COMP != 100 OR t.TASK_PCT_WORK_COMP != 100)
```

### Project that are in progress

```
SELECT p.PROJ_NAME FROM dbo.MSP_PROJECTS p
 INNER JOIN dbo.MSP_TASKS t ON (t.PROJ_ID = p.PROJ_ID AND t.TASK_UID = 0)
WHERE p.PROJ_TYPE = 0 AND (t.TASK_PCT_COMP > 0 OR (t.TASK_STOP_DATE > t.TASK_START_DATE AND
t.TASK_DUR > 0))
```

### Projects with the project outline code 'Project Status' equal to 'Opportunity'

For the following query, substitute the outline code and value you want to query with the "Project Status" and "Opportunity" values used for this example.

```
SELECT p1.PROJ_NAME
FROM dbo.MSP_FIELD_ATTRIBUTES fa
INNER JOIN dbo.MSP_ATTRIBUTE_STRINGS ats ON (fa.PROJ_ID = ats.PROJ_ID AND fa.AS_ID = ats.AS_ID
AND fa.ATTRIB_ID = 206)
```

## Configure the migration tool (Project Server)

```
INNER JOIN dbo.MSP_PROJECTS p ON (p.PROJ_ID = fa.PROJ_ID AND p.PROJ_TYPE = 2)
INNER JOIN dbo.MSP_OUTLINE_CODES oc ON (p.PROJ_ID = oc.PROJ_ID AND oc.OC_FIELD_ID =
fa.ATTRIB_FIELD_ID)
INNER JOIN dbo.MSP_CODE_FIELDS cf ON (cf.CODE_FIELD_ID = oc.OC_FIELD_ID AND cf.CODE_UID =
oc.CODE_UID)
INNER JOIN dbo.MSP_PROJECTS p1 ON (p1.PROJ_ID = cf.PROJ_ID)
WHERE ats.AS_VALUE like '%Project Status%' AND oc.OC_CACHED_FULL_NAME like 'Opportunity'
```

## Project templates

```
SELECT p.PROJ_NAME FROM dbo.MSP_PROJECTS p WHERE PROJ_TYPE = 1
```

# Run the migration tool (Project Server)

---

In this article:

- [Migrate global data](#)
- [Migrate projects \(full migration\)](#)
- [Migrate projects \(gradual migration\)](#)

This article describes the steps involved in running the migration tool to migrate global data or projects from Microsoft Office Project Server 2003 to Microsoft Office Project Server 2007.

## Migrate global data

Before migrating projects either through a full migration or a batch of gradual migrations, we recommend as a best practice that you make an initial run of the migration tool to migrate global data such as the enterprise global template, enterprise resources, and Project Web Access data. Once you verify that the data has migrated correctly, you can then migrate projects.

In order to migrate only global data, the migration configuration file must have the following parameters set correctly:

- **MigrateAll=** Leave this value empty.
- **[Project Names to Save]** Do not enter any project names in this section.
- **[Project names to Save and Publish]** Do not enter any project names in this section.



### Note:

After initially running the migration tool to migrate global data, subsequent attempts to migrate global data will not overwrite or update the data in Office Project Server 2007. Global data migration can only occur once. If there are any incremental changes to the Project Server 2003 global data, they must be applied manually to Office Project Server 2007.



### Important:

If the global data migration process stops in the middle, it needs to be run again from the beginning. The migration tool may stop in the middle because of an error in Project Server 2003 data (for example, a particular resource does not have a valid value for a resource outline code). The way to fix this problem is to open ResGlobal in Project Professional 2003, fix the issue, and retry migration. Repeat this process until the global migration process proceeds to completion. Once it finishes successfully, you know that the Project Server 2003 data is clean. Next, you need to clean up the Office Project Server 2007 data (restore the Office Project Server 2007 databases to a clean state) and re-migrate the global data again from scratch. You should re-migrate the global data to a new Office Project Server 2007 instance.

For information about restoring Office Project Server 2007 databases, see [Troubleshoot migration to Project Server 2007](#).

 **Important:**

Once you have upgraded Project Server 2003 workspaces, then you need to configure the Project Workspace provisioning settings. Once global data migration finishes successfully:

- a. In the migrated Project Web Access site, click **Server Settings**.
- b. On the Server Settings page, in the **Operational Policies** section, click **Project Workspace Provisioning Settings**.
- c. In the **Site URL** section, make sure that **Default Web Application and Site URL** points to the SharePoint site with the upgraded workspaces. If this value is not set, the link from projects, tasks, and assignments to issues, risks, and documents will not be fixed correctly when projects are migrated and published.

## Migrate projects (full migration)

When running the migration tool to migrate all projects at one time (full migration), the migration configuration file's **MigrateAll=** parameter must be configured with one of the following two options:

- **MigrateAll=Save** All projects in Project Server 2003 are migrated to Office Project Server 2007 and none of them are published.
- **MigrateAll=Publish** All projects in Project Server 2003 are migrated to Office Project Server 2007 and the published projects in Project Server 2003 are automatically published in Office Project Server 2007.

You can also enter all the project names manually in the **[Project Names to Save]** or **[Project Names to Save and Publish]** sections.



**Note:**

It is a best practice to migrate and save projects first (by adding them to the **[Project Names to Save]** section), verifying that the migration worked correctly, and then publishing the projects (by adding them to the **[Project Names to Save and Publish]** section). If a project is added to the **[Project Names to Save and Publish]** section and the project already exists in Office Project Server 2007, then it is only published.



**Note:**

When entering project names in both of these sections of the migration configuration file, you must specify the complete name (as stored in the PROJ\_NAME column of the MSP\_PROJECTS table of the Project Server 2003 database). For example, do not simply specify "Project1." Instead, specify "Project1.Published."

## Migrate projects (gradual migration)

When migrating Project Server 2003 data to Office Project Server 2007 with the purpose of migrating to Microsoft Project Server 2010, in some cases you might want to migrate your projects in batches (gradual migration) as opposed to all at one time (full migration). For example, you might have several thousand projects, and as a best practice you want to migrate them in batches of 1,000. Another example is if you want to migrate all subprojects first before migrating a master project.

When running the migration tool to migrate subsets of projects in a series of batches (gradual migration), the **MigrateAll=** parameter is left empty. The migration tool is run once for each batch of projects you wish to migrate. The names of the projects you want to migrate for each batch must be entered into the migration configuration file in either of the following sections:

- **[Project Names to Save]** Type the project names of the projects you want saved after migrating them to Office Project Server 2007.
- **[Project Names to Save and Publish]** Type the project names of the projects you want saved and published after migrating them to Office Project Server 2007. Only published projects (with the ".published" extension) in Project Server 2003 can be published to Office Project Server 2007. Versioned projects specified in this section are saved but not published.

# Troubleshoot migration to Project Server 2007

---

This article describes options that are available to you if you encounter problems during the migration process to Microsoft Office Project Server 2007.

In this article:

- [Before you troubleshoot: Verify functionality in Project Server 2007](#)
- [Error logging](#)
- [Restoring the Project Server 2007 database](#)
- [Migrated user and permission issues](#)
- [Authentication issues](#)
- [Migration flowchart](#)

## Before you troubleshoot: Verify functionality in Project Server 2007

Before going further with troubleshooting, first check whether Office Project Server 2007 itself is working correctly. Identifying whether the problem is with migration or Office Project Server 2007 configuration can save you time.

- Create a new Project Web Access instance on the Project Server computer. Make sure that this instance is not used for migration. You can delete this instance after you are done troubleshooting.
- On the computer running Office Project Server 2007, create, save, and publish a project on the newly created instance of Project Web Access. Verify that you can open the project in the Project Center. If you cannot do this, it is possible that the problem you are having may pertain to the Office Project Server 2007 configuration.
- Verify that the Queuing service and the Eventing service are running on the application server.

## Error logging

When you are troubleshooting migration, it is important to know where to look for any pertinent error logging information. This section describes several mechanisms that have error-logging information.

- View the Queue Management page to verify whether there are any jobs in a failed state. View the Error column of these entries to see if it provides any clues to the problem.
- View the upgrade log file. It is available in the path specified in the migration configuration file. It provides a detailed description of failures that occurred during the migration.
- Look at the server's event log and trace log.

- To open and view the event log, on the server computer click **Start**, then **Run**, type **Eventvwr**, and then click **OK**. Then click the Application node. This action displays a list of application events raised on the server.
- To open and view the trace log, on the server computer go to the following folder: <drive>:\program files\common files\Microsoft Shared\web server extensions\12\LOGS. The ULS trace logs are named in the following format: <servername>-yyyymmdd-time.log (for example, contoso-20060720-1506.log).
- If you cannot determine the cause of the failure from the log file, and you plan on contacting Microsoft Product Support Services for assistance, have the following information available:
  - a. **Upgrade logs** (which are available in the path you specified in the migration configuration file)



### Note

Make sure the server writes verbose logs, which ensures that as much information as possible is logged for debugging. You can set this parameter in the SharePoint Central Administration Web site in the **Operations** tab on the Diagnostic Logging page. In the **Event Throttling** section of this page, set the following parameters:

- **Least critical event to report in the event log: Success**
- **Least critical event to report in the trace log: Verbose**

Click **OK** to save the settings. You may want to verify that the settings have been saved. To do this, in the same section select an individual category from the **Update Single Category** list and verify that the settings are the same.

- b. **A copy of the event log file:** To do this, open the event log, right-click the Application node and select **Save Log File As**. This allows you to save the event log to a file so that you can send it to Microsoft Product Support Services.



### Note:

Make sure to reproduce the problem to ensure that the problem is recorded to the event and trace logs.

- c. **A copy of the latest trace log files:** If you are sending trace information for debugging, reproduce the problem on the server and send the latest two or three trace log files. You can identify the log files by the date-and-time stamp used to name each file.
  - d. **A copy of the Project Server 2003 database file**
- If the migration tool stops responding, a Microsoft Office Project dialog box appears that allows you to further troubleshoot the issue with Microsoft Product Support Services. In the dialog box, select **Send Error Report** in order for this issue to be sent to Product Support Services. Once the error report is sent, go to the Event viewer, look for an event with event ID = 1001, copy the contents in the description field to a text editor and send it to your Product Support Services contact.
  - Restore Office Project Server 2007 to a clean state and retry migration. Instead of provisioning the Office Project Server 2007 instance again, you can restore the backed-up, clean Office Project Server 2007 database and the Project Server 2003 database, and then run the upgrade process

again. For information about how to restore the backed-up, clean Office Project Server 2007 database, read the **Restoring the Project Server 2007 database** section.

## Finding errors, warnings, and failures in an upgrade log file

You can run the following commands at the command prompt to find and compile warnings, errors, and failures from your upgrade log file.

- To find all lines denoting warnings in the upgrade log file, run the following command:

**Find /I "warning" <source log files> >> <output file>**

For example:

**Find /I "warning" c:\myupgradelog.log >> c:\errors.log**

- To find all lines denoting errors in the upgrade log file, run the following command:

**Find /I "error" <source log files> >> <output file>**

For example:

**Find /I "error" c:\myupgradelog.log >> c:\errors.log**

- To find all lines denoting failures in the upgrade log file, run the following command:

**Find /I "fail" <source log files> >> <output file>**

For example:

**Find /I "fail" c:\myupgradelog.log >> c:\errors.log**

## Restoring the Project Server 2007 database

If you encounter non-recoverable problems during the data migration, you can restore your Office Project Server 2007 database and then run the upgrade process again. The following is a sample script used to restore your Office Project Server 2007 database. This is not a prescriptive script; modify it as necessary to meet your needs. You must run this script on a computer where OSQL is available.

```
Rem Note that if you have any open connections to the database,
Rem the Restore operation will fail. You can view open connections in
Rem Enterprise Manager:
Rem under <Server> - Management - Current Activity
Rem (hit F5 to refresh) - Process Info.
Rem You can stop a process by right-clicking, and choosing Kill Process.
echo off

set P12SQLServerName=<SQL Server Name>
```

```

Set publishedDB=<DB Name>
Set draftDB=<DB Name>
Set archiveDB=<DB Name>
Set ReportingDB=<DB Name>

Set RestorePublishedDB='<Full path of the backup>'
Set RestoreWorkingDB= '<Full path of the backup>'
Set RestorearchiveDB= '<Full path of the backup>'
Set RestoreReportingDB= '<Full path of the backup>'

Rem The following commands ensure that there are no open connections to
Rem the databases that we are restoring to. You can also do this manually.

Set SqlCmd="USE master ALTER DATABASE %publishedDB% SET SINGLE_USER WITH ROLLBACK IMMEDIATE"
osql -E -S %P12SQLServerName% -Q %SqlCmd%

Set SqlCmd="USE master ALTER DATABASE %draftDB% SET SINGLE_USER WITH ROLLBACK IMMEDIATE"
osql -E -S %P12SQLServerName% -Q %SqlCmd%

Set SqlCmd="USE master ALTER DATABASE %archiveDB% SET SINGLE_USER WITH ROLLBACK IMMEDIATE"
osql -E -S %P12SQLServerName% -Q %SqlCmd%

Set SqlCmd="USE master ALTER DATABASE %ReportingDB% SET SINGLE_USER WITH ROLLBACK IMMEDIATE"
osql -E -S %P12SQLServerName% -Q %SqlCmd%

Rem Restoring the database
set SqlCmd= "RESTORE DATABASE %publisheddb%
 From disk = %RestorePublishedDB%
 with replace RESTORE DATABASE %draftdb% From disk = %RestoreWorkingDB%
 with replace RESTORE DATABASE %archivedb%
 From disk = %RestorearchiveDB%
 with replace RESTORE DATABASE %reportingdb%
 From disk = %RestoreReportingDB% with replace"

```

## Troubleshoot migration to Project Server 2007

```
osql -E -S %P12SQLServerName% -Q %SqlCmd%

Set SqlCmd="USE master ALTER DATABASE %publishedDB% SET MULTI_USER"

osql -E -S %P12SQLServerName% -Q %SqlCmd%

Set SqlCmd="USE master ALTER DATABASE %draftDB% SET MULTI_USER"

osql -E -S %P12SQLServerName% -Q %SqlCmd%

Set SqlCmd="USE master ALTER DATABASE %archiveDB% SET MULTI_USER"

osql -E -S %P12SQLServerName% -Q %SqlCmd%

Set SqlCmd="USE master ALTER DATABASE %ReportingDB% SET MULTI_USER"

osql -E -S %P12SQLServerName% -Q %SqlCmd%

Rem Clearing the cache

rd /s /q "%APPDATA%\Microsoft\MS Project\cache"

goto :Clean

:Clean

Rem To clean up the environment variables created

set P12SQLServerName=

Set RestorePublishedDB=

Set RestoreWorkingDB=

Set RestorearchiveDB=

Set RestoreReportingDB=

set SqlCmd=

Set publishedDB=

Set draftDB=
```

Set archiveDB=

Set ReportingDB=

## Migrated user and permission issues

After migration (especially in localized builds), your users may not have certain expected permissions in the migrated Office Project Server 2007 installation. For example, imagine that you were assigned your permissions through the administrator template, but you cannot view timesheets. There are several reasons that such a situation might occur:

- In Project Server 2003, a permission is denied at the organization level. You can verify this by checking your Project Web Access permissions to see whether any permissions are disabled and whether they are the cause of your problem.  
To check your Project Web Access Permissions
  - a. In the Project Web Access home page, in the left pane click **Server Settings**.
  - b. In Server settings, in the **Security** section, click **Project Web Access Permissions**.
- There are some permissions that are new in Office Project Server 2007. These permissions may not be mapped correctly during migration. You can check the Security documentation for a list of these permissions to see whether they are the cause of your problem. For more information about Office Project Server 2007 permissions, see [Introduction to permissions in Microsoft Office Project Server 2007](http://go.microsoft.com/fwlink/?LinkId=188797) (http://go.microsoft.com/fwlink/?LinkId=188797).
- If a Project Server 2003 user or resource exists in Office Project Server 2007 (by name or Windows NT account), that user or resource's security permissions will not be migrated. For example, if you had done an "AD Sync" prior to migration (and if most of those users exist in Project Server 2003), none of those user permissions would have been migrated. If you encounter this problem, set the target Project Web Access to "Empty" and start the migration process again.

## Authentication issues

Project authentication is used in Project Server 2003, but it is not supported in Office Project Server 2007. When you migrate Project authenticated users to Office Project Server 2007, the user accounts are reset, because the forms authentication mechanism in Office Project Server 2007 is architecturally different from the Project authentication used in Project Server 2003. You will not see these users listed in the Project Web Access Server Settings Manage Users page, or the **User Authentication** section for the user will not appear. However, you can still edit these migrated users in the Project Web Access Resource Center.

Migrated resources in the resource database may end up out of sync with the published database.

## Issues when migrating master projects

When you are migrating master projects and their associated subprojects from Project Server 2003 to Office Project Server 2007, the following two scenarios will cause the project migration to fail:

- A subproject migrated after its master project. (You can correct the order of migration in the migration configuration file.)
- A project that is a subproject to two different master projects. (Such an arrangement is allowed in Project Server 2003, but not in Office Project Server 2007). The migration for this project will fail when it attempts to publish the project.

## Migration flowchart

The following flowchart provides a graphic representation of how data is migrated from Project Server 2003 to Office Project Server 2007. It can be used in troubleshooting issues that might occur in migration.

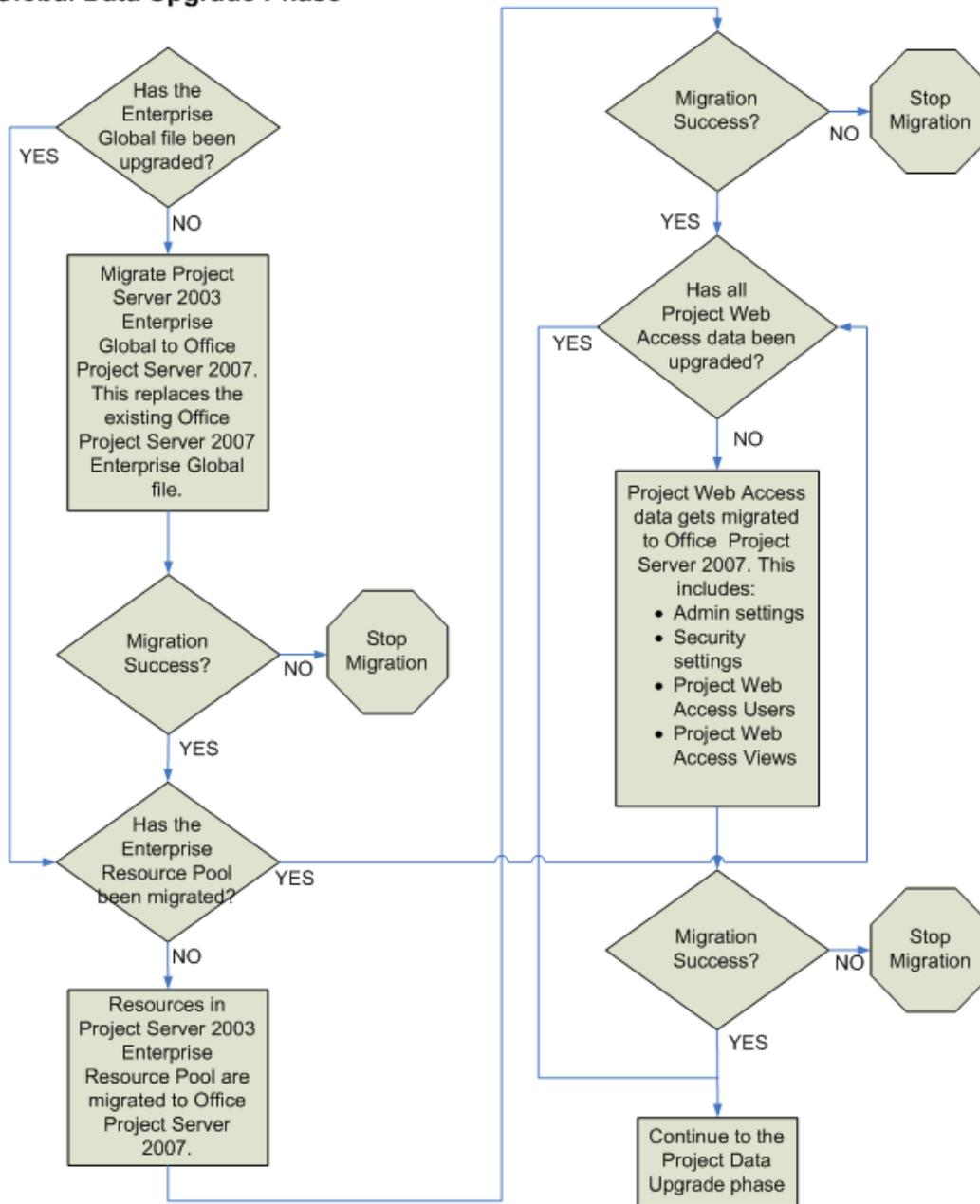
The upgrade from Project Server 2003 to Office Project Server 2007 involves both Windows client-based and SQL Server 2000-based upgrade steps.

There are three phases of the upgrade process:

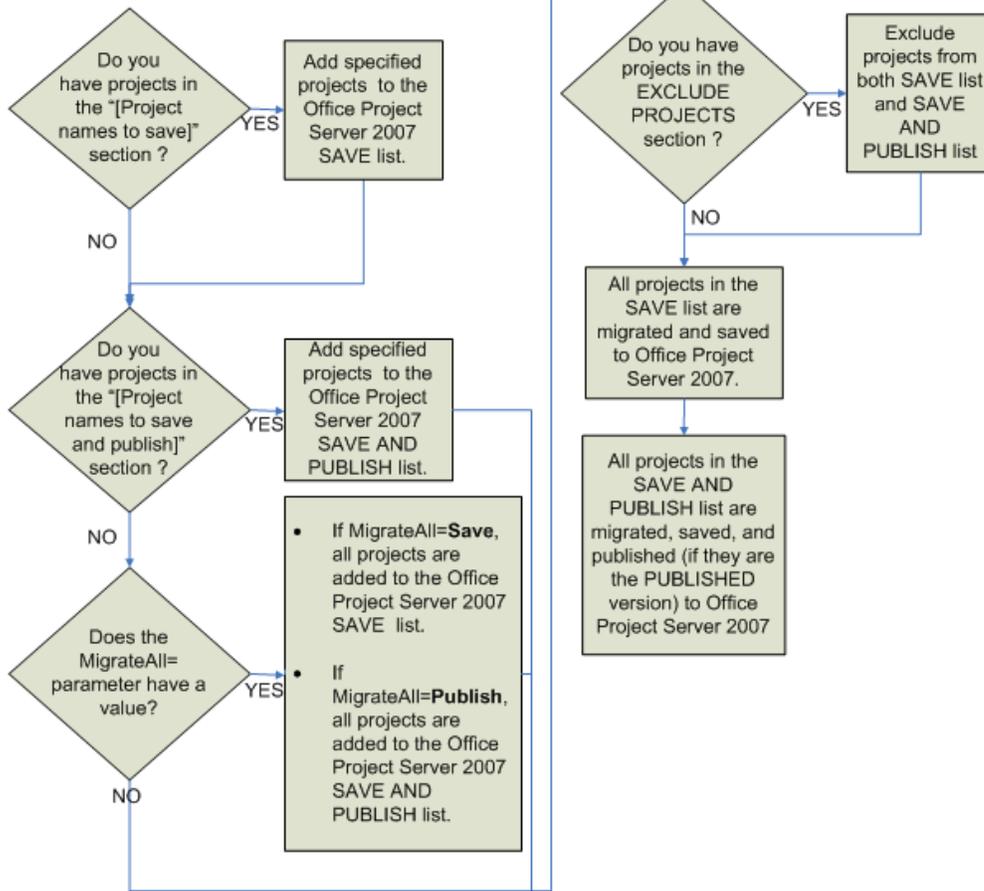
1. **Global data upgrade phase:** Upgrading of global and Project Web Access data to Project Server 2010.
2. **Project data upgrade phase:** Upgrading of project data to Project Server 2010.
3. **Windows SharePoint Services data upgrade phase:** Needed only if you have Windows SharePoint Services data for projects in Project Server 2003. This phase occurs separately from the running of the migration tool and therefore is not included in this flowchart.

The following flow charts illustrate the first two phases of the upgrade process, respectively.

Global Data Upgrade Phase



Project Data Upgrade Phase



# Post-migration tasks after migrating your Project Server 2003 data

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After you have run the migration tool to migrate Microsoft Office Project Server 2003 data to Microsoft Office Project Server 2007, there are several post-migration tasks that need to be addressed. These tasks include:

- [Verify whether the migration worked](#)
- [Update migrated server settings](#)
- [Synchronize the migrated forms-authenticated users with the Project Server 2007 forms-based authentication store](#)
- [Verify the project workspace provisioning settings](#)
- [Delete migrated inactive users \(optional\)](#)
- [Fix project currency settings](#)
- [Change migrated local Windows accounts](#)
- [Update multilanguage lookup tables](#)

This article also includes information about how to [Roll back migration](#).

## Verify whether the migration worked

Look at the migration tool command line or the migration log to verify that the migration was successful. If it was not successful, make corrections and re-run the migration tool. If there is an irrecoverable problem, make changes in Project Server 2003, restore the clean Office Project Server 2007 databases, and retry the migration. If the migration process appears to have been successful, ensure that the data migrated correctly to Office Project Server 2007 by doing the following kinds of tests:

- Verify project data: Open the migrated projects, make changes to them, add enterprise resources, publish them, accept status updates, and so on
- Verify Project Web Access data: Fill in timesheets, create proposals, build a cube, and so on

We highly recommend that you have a migration checklist specific to your needs and that you test those items after migration.

## Update migrated server settings

As explained in [Data that cannot be migrated to Project Server 2007](#), all data from Project Server 2003 may not be migrated to Office Project Server 2007. Therefore we highly recommend that you go over all the Office Project Server 2007 server settings and make sure that they are as you want them to be. Some specific areas are listed below:

## Post-migration tasks after migrating your Project Server 2003 data

1. **Security settings:** There are some security permissions (global and category) that are new in Office Project Server 2007. These permissions may not get migrated. You may want to review each one and make a decision on whether to give users that permission. For more information, see [Introduction to permissions in Microsoft Office Project Server 2007](http://technet.microsoft.com/en-us/library/cc197530(office.12).aspx) ([http://technet.microsoft.com/en-us/library/cc197530\(office.12\).aspx](http://technet.microsoft.com/en-us/library/cc197530(office.12).aspx)).
2. **Project Web Access view definitions:** The "Filter by" and "Group by" clauses are not migrated from Project Server 2003. You may need to re-create these. Also, some Project Web Access view fields do not migrate. You may want to make sure that all the fields of interest to you are available in the migrated views.
3. **Merge and rename similar security groups, categories, and templates and Project Web Access view definitions:** If there is a name clash during migration of security templates, view definitions, and security groups and categories, the migration tool attaches a prefix or suffix to the clashing names. This action is taken to preserve both Project 2007 entities and Project 2003 entities in one system. Then you can select which one to keep or elect to merge them, as appropriate. We recommend that you resolve them so that end users do not become confused.

## Synchronize the migrated forms-authenticated users with the Project Server 2007 forms-based authentication store

This is a required step to make sure that the migrated forms-authenticated users work in Office Project Server 2007. For more information, see [Configure SQL Membership Provider forms authentication for Project Server 2007](http://go.microsoft.com/fwlink/?LinkId=188757) (<http://go.microsoft.com/fwlink/?LinkId=188757>).

## Verify the project workspace provisioning settings

The migration tool resets the **Automatically Provision** option in the Project Workspace Provisioning Settings page of Server Settings to **Manually Create a workspace for each project** in Office Project Server 2007. This setting ensures that the migration process does not provision duplicate workspaces for projects that may already have workspaces that are yet to be migrated.

After running the migration tool, check the **Project Workspace Provisioning** settings located in the **Operational Policies** section of Project Web Access Server Settings. Verify that the **Site URL** and the **Automatic Provisioning** options are configured correctly per your needs. If you want Office Project Server 2007 to automatically create a workspace when a project is published, reset the **Automatically Provision** option to **Automatically create a workspace for the project when a project is published** in Office Project Server 2007 after the migration tool is run.

## Delete migrated inactive users (optional)

The Manage Groups page in Project Server 2003 does not display inactive users by default. But in Office Project Server 2007, inactive users are displayed by default. Therefore, after the migration process (which migrates the inactive users as well), you may see extra users in the Manage Groups Project Web Access page in Office Project Server 2007.

You can permanently delete the inactive users if needed.

To permanently delete the inactive users:

1. In Project Web Access, click **Server Settings**.
2. In the **Database Administration** section, click **Delete Enterprise Objects**.
3. In the Delete Enterprise Objects page, in the **What do you want to delete from Project Server** section, select **Resources and Users**.
4. In the list of users that displays, select the users you want to permanently delete, and then click **Delete**.

## Fix project currency settings

It is a known issue that project currencies are not migrated correctly. Run the following SQL query on the Project Server 2003 Project Tables database to get a list of projects and their currencies. This information can be used to manually correct the currency settings post migration.

```
select PROJ_NAME, PROJ_OPT_CURRENCY_SYMBOL
 from dbo.MSP_PROJECTS where PROJ_TYPE in (0, 1, 2)
```

## Change migrated local Windows accounts

If you had any local Windows accounts (for example, ComputerName\Brad Joseph), and the computer names are no longer valid, make sure you go to Project Web Access Server Settings and use the **Manage Users** options to edit those accounts so that they are valid.

## Update multilanguage lookup tables

Multilanguage lookup tables are not updated correctly after migration. Run the following SQL statements on the Office Project Server 2007 Published database to correct this problem.

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_LANGUAGES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)

DELETE FROM dbo.MSP_LOOKUP_TABLE_MASK_VALUES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)

DELETE FROM dbo.MSP_LOOKUP_TABLE_MASK_STRUCTURES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)
```

## Post-migration tasks after migrating your Project Server 2003 data

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_VALUES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)
```

```
DELETE FROM dbo.MSP_LOOKUP_TABLE_STRUCTURES WHERE LT_UID NOT IN (SELECT LT_UID FROM
dbo.MSP_LOOKUP_TABLES)
```

If you are using Microsoft Office Project Portfolio Server 2007 with Office Project Server 2007, it is especially important to run these SQL statements to update the tables. If the statements are not run, you may encounter a “GeneralUnhandledException” error when performing an export from Office Project Portfolio Server 2007 to Office Project Server 2007. The error would look like this and would appear in the ULS logs:

```
PSI: LookupTable.ReadLookupTablesMultiLang Undefined Attributes: PSError:
GeneralUnhandledException Underlined attributes list: System.Data.ConstraintException: Failed to
enable constraints. One or more rows contain values violating non-null, unique, or foreign-key
constraints...
```

## Roll back migration

You may want to roll back if one of the following situations occurs:

- Migration fails in the middle of the process
- A lot of data changes in Project Server 2003 after migration. If so, the migration process should be done again from scratch.

Because migrating to Office Project Server 2007 is not an in-place upgrade, no Project Server 2003 data is modified during the process. Therefore, a rollback is equivalent to restoring a clean instance of Office Project Server 2007 Project Web Access. (It may be from a backup.) You can then run the migration again.

If you want to re-migrate a few projects (perhaps because they changed in Project Server 2003), the roll-back method is to delete the projects in Office Project Server 2007 and re-migrate them.

### **Important:**

If the global data migration process stops in the middle, it needs to be run again from the beginning. The migration tool may stop in the middle because of an error in Project Server 2003 data (for example, a particular resource does not have a valid value for a resource outline code). The way to fix this problem is to open ResGlobal in Project Professional 2003, fix the issue, and retry migration. Repeat this process until the global migration process proceeds to completion. Once it finishes successfully, you know that the Project Server 2003 data is clean. Next, you need to clean up the Office Project Server 2007 data and re-migrate the global data again from scratch.

# Complete your upgrade from Project Server 2003 to Project Server 2010

After you have successfully migrated your Microsoft Office Project Server 2003 data to Microsoft Office Project Server 2007, you can upgrade to Microsoft Project Server 2010 to complete the upgrade process. You can upgrade from Office Project Server 2007 to Project Server 2010 by using either the in-place upgrade method, or the database-attach upgrade method. The following table addresses the method available to you, depending on your Office Project Server 2007 installation environment:



**Note:**

For more information about Project Server 2010 upgrade methods and their requirements, see [Project Server 2010 upgrade overview](#).

Use the table below to see the suggested upgrade method for your Office Project Server 2007 environment. The documentation links will provide procedures for upgrading to Project Server 2010 for the suggested upgrade method.

| Project Server 2007 environment                   | Upgrade method                                                                                                                               | For more information about the upgrade method                                                                                              |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Project Server 2007 on 64-bit Windows Server 2008 | In-place upgrade<br><b>Note:</b><br>Although the in-place upgrade method is recommended, you can use the database attach method if required. | <a href="#">In-place upgrade to Project Server 2010</a>                                                                                    |
| Project Server 2007 on 32-bit Windows Server 2008 | Database-attach upgrade only                                                                                                                 | <a href="#">Database-attach full upgrade to Project Server 2010</a><br><a href="#">Database-attach core upgrade to Project Server 2010</a> |
| Project Server 2007 on 64-bit Windows Server 2003 | Database-attach upgrade<br><b>Note:</b><br>It is also possible to upgrade the server operating system to 64-bit Windows Server 2008, and     | <a href="#">Database-attach full upgrade to Project Server 2010</a><br><a href="#">Database-attach core upgrade to Project Server 2010</a> |

## Complete your upgrade from Project Server 2003 to Project Server 2010

| Project Server 2007 environment                         | Upgrade method                        | For more information about the upgrade method                                                                                              |
|---------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                                                         | then use the in-place upgrade method. |                                                                                                                                            |
| Project Server 2007 on 32-bit Windows Server 2003       | Database-attach upgrade only          | <a href="#">Database-attach full upgrade to Project Server 2010</a><br><a href="#">Database-attach core upgrade to Project Server 2010</a> |
| Project Server 2007 Virtual Migration Environment (VME) | Database-attach upgrade only          | <a href="#">Database-attach full upgrade to Project Server 2010</a><br><a href="#">Database-attach core upgrade to Project Server 2010</a> |

The differences between the database-attach methods are:

- Database attach *full* method: Upgrades the four Office Project Server 2007 databases and the content database that contains the Project Web Access site data.
- Database attach *core* method: Upgrades the four Office Project Server 2007 databases only. Use this method if you do not want to migrate any of your Project Web Access site data.



**Note:**

For more information about the Project Server 2007 Virtual Migration Environment (VME), see [Migrate your Project Server 2003 data by using the Virtual Migration Environment \(VME\)](#).

# Migrate your Project Server 2003 data by using the Virtual Migration Environment (VME)

---

To migrate from Microsoft Office Project Server 2003 to Microsoft Project Server 2010, first you must migrate your data to Office Project Server 2007 format. If you do not have Office Project Server 2007 readily available, you can choose to use the virtual migration environment (VME) to migrate your data to Office Project Server 2007 format. The VME is a fully configured Office Project Server 2007 Service Pack 2 (SP2) environment that is packaged as a Hyper-V image. The VME should be run as a stand-alone environment for the sole purpose of migrating Microsoft Office Project Server 2003 data to the Office Project Server 2007 data format (it does not have to be connected to the network).



**Warning:**

Do not use the VME for production use. It is intended to be used only as a pass-through environment to migrate your Project Server 2003 data to Office Project Server 2007.

The VME image contains the following:

- Office Project Server 2007 with SP2 with the October 2009 Cumulative Update
- Microsoft Office SharePoint Server 2007 with Service Pack 2 (SP2) with the October 2009 Cumulative Update
- Windows SharePoint Services 3.0 with Service Pack 2 (SP2) with the October 2009 Cumulative Update
- Microsoft Office Project Professional 2007 with Service Pack 2 with the Migration Tool installed.
- SQL scripts that were developed to find potential upgrade issues
- Windows Server 2008 R2
- Microsoft SQL Server 2005 with Service Pack 3 and Cumulative Update 17

See the [Virtual Migration Environment \(VME\) home page](#) in the Microsoft Download Center to download the VME virtual machine image and the VME guide. For detailed documentation about using the Project Server VME, see [Virtual migration environment \(VME\) guide for Project Server 2010](#).

# Operations for Project Server 2010

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This article provides links to articles about operations.

In this section:

- [Back up and restore databases \(Project Server 2010\)](#)  
This chapter covers backing up and restoring databases, including the prerequisites for performing these tasks.
- [Project backup and recovery \(Project Server 2010\)](#)  
This chapter covers backup and recovery operations for Microsoft Project Server 2010, including migrating a Project Web App instance and backing up and restoring a Project Server farm.
- [Manage security in Project Server 2010](#)  
Microsoft Project Server 2010 security is based on users, groups, and categories. Groups contain sets of users who need to access the same set of data in the same way. Categories provide access to projects and resources based on parameters that you define.
- [OLAP database management \(Project Server 2010\)](#)  
Through Microsoft Project Web App (PWA), multiple OLAP databases can be delivered that contain the specific resources, projects, and custom fields that each group within your organization requires for its particular group reporting needs.
- [Database management \(Project Server 2010\)](#)  
This section covers database maintenance procedures.
- [Add or remove Project Web App Web Parts for a site in the Project Web App site collection \(Project Server 2010\)](#)  
This article describes how to add or remove a Microsoft Project Web App Web Part from a Web site that resides in the same site collection as the Project Web App (PWA) instance.
- [Add Project Web App Web Parts to a site not within the Project Web App site collection \(Project Server 2010\)](#)  
This article describes how to add Microsoft Project Web App Web Parts to a site that is not in a Project Web App (PWA) site collection.

## See Also

[Migrate a Project Web App instance in Project Server 2010](#)

# Back up and restore databases (Project Server 2010)

---

If your IT environment requires that your database administrator (DBA) or administrator of your SharePoint Products and Technologies deployment must back up or restore the databases associated with the Shared Services Provider (SSP), you must coordinate your backup and recovery operations with either your DBA or the administrator of the host SharePoint Products and Technologies deployment.

## Task requirements



### Important:

When using SQL Server 2005, the account used to back up the databases must be a member of the Microsoft SQL Server **db\_backupoperator** fixed database role. The account used to restore the databases must be a member of the SQL Server **dbcreator** fixed server role.

To back up Project Server 2010 databases, see [Back up databases \(Project Server 2010\)](#).

To restore Project Server 2010 databases, see [Restore databases \(Project Server 2010\)](#).

### See Also

[Back up and restore the Project Server 2010 farm](#)

# Back up databases (Project Server 2010)

---

This article guides you through the process of backing up a Microsoft SQL Server database.

## Backing up databases by using Project Server 2010 built-in tools

### Important:

This method should only be used to create a full farm back up. The SharePoint Central Administration Web site is the only recommended way to perform a full farm back up or recovery.

Use this procedure to back up a database by using the SharePoint Central Administration Web site.

To back up your farm using Office Project Server built-in tools, you must use the following accounts and permissions:

- You must be logged on to the server that runs Central Administration.
- You must have a shared folder that you will use to store the backup files.

### Important:

You must be a member of the Farm Administrators SharePoint group to complete the following procedure.

### Important:

If any failures occur during the backup process, the entire process must be restarted to prevent data corruption.

### Back up a database by using Central Administration

1. In the SharePoint Central Administration Web site, on the Operations page, in the **Backup and Restore** section, click **Perform a backup**.
2. On the Select Component to Backup page, select the check boxes for the databases you want to back up. Click **Continue to Backup Options**.
3. On the Select Backup Options page, a differential backup backs up data created or changed since the last backup. If you are performing a combination of full and differential backups, restoring requires you to have the last full backup, the last differential backup, and intervening differential backups.
  - In the **Backup Content** section, verify that the database you selected is displayed.
  - In the **Type of Backup** section, select **Full**.
  - In the **Backup File Location** section, type the UNC path of the backup folder.

## Back up databases (Project Server 2010)

4. Click **OK**.

You can view the backup job status on the backup status page by clicking **Refresh**. The page also refreshes every 30 seconds automatically. Backup and recovery is a Timer service job, so it may take few seconds for the backup to start.

If you receive any errors, you can find more information by looking in the spbackup.log at the UNC path you specified above.

### See Also

[Migrate a Project Web App instance in Project Server 2010](#)

[Restore databases \(Project Server 2010\)](#)

# Restore databases (Project Server 2010)

---

You can restore the following Project Server and Microsoft SharePoint 2010 databases:

**Important:**

You can only perform a full farm recovery using the SharePoint Central Administration Web site.

- Content database
- Draft database
- Published database
- Archive database
- Reporting database
- Databases for Service Applications)
- Central Administration content database
- Configuration database

**Note:**

The configuration database and the Central Administration content database contain computer-specific information. Therefore, you can restore them only to an environment that you configure to be precisely the same, including all software updates, server names, and numbers of servers. That is, you cannot back up the configuration database, change your topology or server roles, and then restore the configuration database.

For more information about using Microsoft SQL Server to restore databases, see [Backing Up and Restoring Databases in SQL Server](http://go.microsoft.com/fwlink/?LinkID=102629&clcid=0x409) (<http://go.microsoft.com/fwlink/?LinkID=102629&clcid=0x409>).

## Restoring Project Server 2010 databases

**Note:**

When protecting Microsoft Project 2010, we recommend that you configure a recovery farm—a second farm that is only used to restore data—for site and item recovery. The recovery farm is not intended to be a live farm. The recovery farm does not need to have the same hardware as your primary farm; we recommend that you use a single server installation or a virtual farm.

If your IT environment requires that your database administrator (DBA) must restore the databases associated with the Service Applications you must coordinate your backup and recovery operations with your DBA. The account used to restore the databases must be a member of the SQL Server **dbcreator** fixed server role.

## Restoring a database by using built-in tools

Use this procedure to restore a database by using the Microsoft SharePoint 2010 built-in tools.



### Important:

Membership in the Farm Administrators SharePoint group is the minimum required to complete the following procedure.



### Restore a database by using Central Administration

1. On the SharePoint Central Administration Web site, on the Operations page, in the **Backup and Restore** section, click **Restore from Backup**.
2. On the Select Backup Location page, in the **Backup File Location** section, enter the universal naming convention (UNC) path to the backup folder.
3. On the Select Backup Package to Restore page, select the backup file you want to restore, and then click **Continue Restore Process**.
4. On the Select Component to Restore page, select the database you want to restore, and then click **Continue Restore Process**.
5. On the Select Restore Options page:
  - a. In the **Restore Component** section, verify that the database you selected is displayed.
  - b. In the **Restore Options** section, select **Same configuration**.  
A message appears, notifying you that the current farm will be overwritten. Click **OK**.
  - c. In the **New Names** section, type new names and URLs for each component, or accept the default values.
6. Click **OK**.

### See Also

[Back up and restore databases \(Project Server 2010\)](#)

[Back up databases \(Project Server 2010\)](#)

# Project backup and recovery (Project Server 2010)

---

This chapter covers backup and recovery operations for Microsoft Project Server 2010.

In this section:

- [Migrate a Project Web App instance in Project Server 2010](#)
- [Back up and restore the Project Server 2010 farm](#)
- [The Microsoft Project Server 2010 Server Settings Backup/RestoreTool](#)

# Migrate a Project Web App instance in Project Server 2010

---

Microsoft Project Server 2010 provides various methods for backing up, restoring, or migrating a Project Server farm, Web applications, and content databases. This article discusses the variations in those methods based on specific needs and outcomes.

## Project Server migration and Project Web App provisioning methods

### Provisioning Project Web App to another site

Restoring by provisioning Microsoft Project Web App to another site is the preferred method for restoring a corrupted Project Web App instance. This method involves attaching the content database at `http://servername` and then provisioning the Project Web App site and the four project databases to a new Project Web App site at `http://servername/newpwa`. Workspaces can then be re-linked to the new Project Web App site.

### Storing site content in a separate database

Storing the content in a separate database involves attaching a content database to a new Project Web App site such as `http://servername/workspaces`, while maintaining a provisioned Project Web App site at the original location of `http://servername/pwa` and then relinking the workspaces.

### Restoring a Project Web App site completely

This method completely restores Project Web App and the content databases to their original state by temporarily attaching the content database somewhere else, such as `http://servername/else`. Then you would provision the new Project Web App site at the original location, say `http://servername/pwa`, and then use the Windows PowerShell **export** command to take each site from the content database at `http://servername/else`. Then, using the procedure found in [Back up and restore the Project Server 2010 farm](#), you can import all of your sites back under the newly provisioned site at `http://servername/pwa`. This method is the most complicated, and you should take into consideration how many Project Web App sites exist in the database that need to be exported and imported to the new Project Web App site.



**Important:**

Links to tasks may break when performing this procedure.

### Migrating Project Server to an existing server farm

When you are migrating to an existing farm, the steps are the same as migrating to a new farm, but first you must decide if you will add your content database to one of the existing Web applications (as described above) or if you plan to add your content database to a newly created Web application.

There are a number of reasons why you might choose to create a new Web application, but perhaps the most common is that the content that you are migrating requires a different kind of authentication than is offered on the existing server. For example, imagine that the existing server is configured to authenticate Windows users but the new content requires forms-based authentication. In this case, you would need to create a new Web application. You might also need to extend your Web application, and in that case, you would also need to create a new Web application.

If you are in an extranet environment where you want different users to access content by using different domains, you might also need to extend a Web application to another Internet Information Services (IIS) Web site. This action exposes the same content to different sets of users by using an additional IIS Web site to host the same content.

### Preparing to migrate a Project Server instance

If this will be the only instance or it is the first instance of Project Server 2010 to be installed on the server farm, do the following on the target server farm:

|                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Run Setup and select the Complete Server Installation Type.                                                                                                                                                   |
| Run the SharePoint Products and Technologies Configuration Wizard: <ul style="list-style-type: none"><li>• <input type="checkbox"/> Create a new farm</li><li>• <input type="checkbox"/> Create a new Configuration database</li></ul> |
| <input type="checkbox"/> Configure the farm services and start the Project Application service.                                                                                                                                        |
| Create Web applications: <ul style="list-style-type: none"><li>• <input type="checkbox"/> Create a Web application for the Project Web App site content</li></ul>                                                                      |
| <input type="checkbox"/> Create the Services Application.                                                                                                                                                                              |
|  <b>Note:</b><br>You can migrate the Shared Services Application database or you can create a new one.                                              |

This is a general checklist of the steps needed to prepare the server farm for migration. For more detailed information about installing Project Server 2010, see [Deploy Project Server 2010 to a server farm environment](#).

#### See Also

[Move all databases \(Project Server 2010\)](#)

[Back up and restore databases \(Project Server 2010\)](#)

[Restore item-level objects by using Project Web App \(Project Server 2010\)](#)

# Move all databases (Project Server 2010)

---

This article contains information and steps to move all of the databases associated with Microsoft Project Server 2010 from one database server to another database server within the same farm.



## Important:

This task requires you to stop the entire farm. This will make all farm sites and assets unavailable to users until the process is complete.

This article does not provide information about how to migrate or move the Project Server 2010 farm from one group of servers to another group of servers. For more information about how to move the complete farm from one set of farm servers to another, see [Migrate a Project Web App instance in Project Server 2010](#).

This article does not provide information about how to upgrade SQL Server 2008 on the database server. For more information about how to upgrade SQL Server 2008, see [Upgrading to SQL Server 2008](#) (<http://go.microsoft.com/fwlink/?LinkId=188747>) in SQL Server 2008 Books Online.

You must move the following databases associated with Project Server 2010:

- Draft database
- Published database
- Archive database
- Reporting database
- Content database

The following are required to perform the procedures for this task:

- You must be logged on to the server that is running the SharePoint Central Administration Web site.
- You must have membership in the following roles in SQL Server:
  - **db\_backupoperator** fixed database role to back up the databases.
  - **dbcreator** fixed server role on the destination server that is running SQL Server or an instance of SQL Server to restore the databases.
- You must coordinate the move procedures with the database administrator (DBA). Steps that require the involvement of the DBA are signified by the prefix "[DBA]".

## Procedure overview

This section summarizes the procedures that you must follow to complete the move process for all the databases associated with Project Server 2010. To see the actual procedure steps, see each procedure following the overview.

## Move all databases (Project Server 2010)

In the move process, you will use Project Server 2010 tools and SQL Server 2005 or SQL Server 2008 tools. Moving all of the databases from one database server to another database server consists of the following steps:

(In some environments, the database administrator must perform certain steps. Those steps begin with "[DBA]".)

1. Perform a full backup of the default Shared Services Application (SSP).
2. Completely stop the farm by stopping the services associated with Project Server 2010 and by stopping Internet Information Services (IIS).
3. [DBA] [Backing up databases on the source database server](#) by using SQL Server tools:
  - Draft database
  - Published database
  - Archive database
  - Reporting database
  - Content database
4. [DBA] [Copying or moving the backup files to the destination database server](#).
5. [DBA] [Restoring databases on the destination database server](#) by using SQL Server tools.
6. [DBA] [Copying to the destination server all of the SQL Server logins, fixed server roles, fixed database roles, and permissions for these databases](#).

### Backing up databases on the source database server



#### Important:

Membership in the **db\_backupoperator** fixed database role is the minimum required to complete this procedure.



#### Important:

It is important that the queue service is emptied and stopped to prevent data inconsistencies.

In some environments, the DBA must perform these steps.



#### Back up databases on the source database server

1. Open Microsoft SQL Server Management Studio and connect to the database server.
2. In Object Explorer, expand **Databases**.
3. Right-click the database that you want to back up, point to **Tasks**, and then click **Back Up**.
4. In the **Back Up Database** dialog box, select the type of backup that you want to perform from the **Backup type** list. For more information about which backup type to use, see [Overview of the Recovery Models](http://go.microsoft.com/fwlink/?LinkId=114396) (<http://go.microsoft.com/fwlink/?LinkId=114396>) in SQL Server 2008 Books Online.
5. Under **Backup component**, select the **Database** option.

6. In the **Backup Set** section, either use the default name provided or specify a name for the backup set in the **Name** text box.
7. Specify the expiration date for the backup set. This determines how long, or when, the backup set can be overwritten by any later backups with the same name. By default, the backup set is set to never expire (0 days).
8. In the **Destination** section, if the correct path of the backup folder is not listed, you can add the path by clicking **Add**.
9. Click **OK** to back up the database.
10. Repeat steps 3-9 for each database that you want to move.

 **Important:**

You should only back up the Draft and Published databases from the source database server.

## Copying or moving the backup files to the destination database server

 **Important**

- Read access to the shared folder on the source computer and Write access to the shared folder on the destination computer is the minimum required to complete this procedure.
- In some environments, the DBA must perform these steps.

 **Copy or move the backup files to the destination database server**

1. In Windows Explorer, browse to the location of the .bak files for the databases.
2. Select the .bak files for the databases that you want to move, and then either copy or move them to the destination directory.

## Restoring databases on the destination database server

 **Important**

- Membership in the **dbcreator** fixed server role is the minimum required to complete this procedure.
- You must add the Farm Administrator account to the **dbcreator** fixed server role to perform this procedure. The account can be removed from the role after recovery operation is complete.
- In some environments, the DBA must perform these steps.

 **Restore databases on the destination database server**

1. Open Microsoft SQL Server Management Studio and connect to the database server.
2. In Object Explorer, expand the database instance.

3. Right-click the **Databases** node, and then click **Restore Database**.
4. In the **Restore Database** dialog box, under **Destination for restore**, type the name of the database. You must use the identical name for the database that it had on the source database server.
5. Under **Source for restore**, select the **From device** option.
6. In the **Specify Backup** dialog box, select **File** from the **Backup media** list.
7. Click **Add**, and then browse to the .bak file for the database.
8. Select the .bak file, and then click **OK**. Click **OK** again to add the path of the **Restore Backup** dialog box.
9. Ensure that the backup set is selected in the **Select backup sets to restore** list.
10. In the **Select a page** pane, click **Options**.
11. In the **Restore options** section, select only **Overwrite the existing database**. Unless the environment or policies require otherwise, do not select the other options in this section.
12. In the **Recovery state** section, select the **RESTORE WITH RECOVERY** option.  
For more information about these recovery options, see [Restore Database \(Options Page\)](http://go.microsoft.com/fwlink/?LinkId=114420) (<http://go.microsoft.com/fwlink/?LinkId=114420>).
13. Click **OK** to complete the recovery operation.
14. Repeat steps 3-13 for each database that you are moving.

## Copying to the destination server all of the SQL Server logins, fixed server roles, fixed database roles, and permissions for these databases

For information about how to copy SQL Server roles and permissions to the destination database server, see Microsoft Help and Support article 246133, [How to transfer logins and passwords between instances of SQL Server](http://go.microsoft.com/fwlink/?LinkId=114420) (<http://go.microsoft.com/fwlink/?LinkId=114420>). For troubleshooting information, see Microsoft Help and Support article 240872, [How to resolve permission issues when you move a database between servers that are running SQL Server](http://go.microsoft.com/fwlink/?LinkId=123469) (<http://go.microsoft.com/fwlink/?LinkId=123469>).

## Restarting the server



### Important:

Membership in the Administrators group on the local computer is the minimum required to complete these procedures.



### Restart the server

1. Restart the server that is running Project Server.

## Move all databases (Project Server 2010)

2. In the **Services** snap-in, ensure that the following services are started:
  - SharePoint Server Project Server Eventing service
  - SharePoint Foundation Project Server Queue service
3. In Internet Information Services (IIS) Manager, ensure that the following Web sites are started:
  - Office Server Web Services
  - All SSP Web sites
  - SharePoint Central Administration

### See Also

[Migrate a Project Web App instance in Project Server 2010](#)

[Back up and restore the Project Server 2010 farm](#)

[Back up databases \(Project Server 2010\)](#)

[Restore databases \(Project Server 2010\)](#)

# Back up item-level objects by using Project Web App (Project Server 2010)

This article enables you to back up specific project items. This procedure does not back up the physical files of a database (.mdb), but creates backups of specific items in the database. These items are backed up from the Microsoft Project Server 2010 Published database to the Project Server 2010 Archive database.

In order to perform these procedures, you must log on to Microsoft Project Web App as a member of the Project Server administrator group.

## Backing up item-level objects

You can use the procedures in this article to back up the following project items:

| Item                                   | Description                                                                                                          |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Project                                | Includes project resources, assignments, tasks, custom field values, baseline data                                   |
| Enterprise resource pool and calendars | Includes enterprise resources and enterprise calendars                                                               |
| Enterprise custom field                | Includes enterprise custom field metadata, enterprise lookup table metadata, enterprise lookup table values          |
| Enterprise global template             | Includes all Project Professional table, macro, and view definitions                                                 |
| View definition                        | Includes statusing, Project Center, Portfolio Analyzer, and Resource Center view definitions                         |
| System setting                         | Includes the Web settings table. These are all of your system settings choices but do not include OLAP cube options. |
| Category and group setting             | Includes settings for all Project Server categories and groups.                                                      |

### To back up data automatically by using a daily schedule

1. Browse to Project Web App.
2. On the Quick Launch, click **Server Settings**.
3. On the Server Settings page, click **Schedule Backup**.

## Back up item-level objects by using Project Web App (Project Server 2010)

4. On the Daily Backup Schedule page, in the **Project Retention Policy** box, type the number of backups that you want to retain.



### Note:

Increasing the number of backups requires more database space.

5. For each project item in the **Item** section, select either **Schedule** or **Never** from the **Option** list to indicate whether you want to schedule a backup for that item.
6. If you selected **Schedule** from the **Option** list, select the time that you want the backup to occur each day.
7. Click **Save**.

### ▶ To back up data manually

1. Browse to Project Web App.
2. On the Quick Launch, click **Server Settings**.
3. On the Server Settings page, click **Administrative Backup**.
4. In the **Select Items** section, select the check box next to each project item that you want to back up.
5. Click **Backup**. The items that you have selected are backed up immediately.

### See Also

[Restore item-level objects by using Project Web App \(Project Server 2010\)](#)

[Back up and restore the Project Server 2010 farm](#)

[Back up a Project Server 2010 farm by using built-in tools](#)

# Restore item-level objects by using Project Web App (Project Server 2010)

This article enables you to restore specific project items. This procedure does not restore the physical files of a database (.mdb), but restores backups of specific items in the database. These items are backed up from the Microsoft Project Server 2010 Published database to the Project Server 2010 Archive database.

Before you perform this procedure, confirm that project items have been backed up.



## Important:

You must log on to Microsoft Project Web App as a member of the Project Server administrator group to complete this procedure.

## Restoring item-level objects

Use the procedure to restore the following project items:

| Item                                  | Description                                                                                                          |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Project                               | Includes project resources, assignments, tasks, custom field values, baseline data                                   |
| Enterprise resource pool and calendar | Includes enterprise resources and enterprise calendars                                                               |
| Enterprise custom field               | Includes enterprise custom field metadata, enterprise lookup table metadata, enterprise lookup table values          |
| Enterprise global template            | Includes all Project Professional table, macro, and view definitions                                                 |
| View definition                       | Includes statusing, Project Center, Portfolio Analyzer and Resource Center view definitions                          |
| System setting                        | Includes the Web settings table. These are all of your system settings choices but do not include OLAP cube options. |
| Category and group setting            | Includes settings for all Project Server categories and groups.                                                      |

### To restore project items by using Project Web App

1. Browse to Project Web App.
2. On the Quick Launch, click **Server Settings**.

## Restore item-level objects by using Project Web App (Project Server 2010)

3. On the Server Settings page, click **Administrative Restore**.
4. In the **Item** list, select the item that you want to restore.
5. If you selected **Projects** from the **Item** list, select the version of the project that you want to restore as the current working version of the project.



**Note:**

The versions that are available for you to restore depend upon the number of backups that have been completed and the total number of backups that you have chosen to retain.

6. Click **Restore**.
7. Any changes that were made between when the item was deleted and when the item was most recently backed up cannot be restored.

### See Also

[Back up item-level objects by using Project Web App \(Project Server 2010\)](#)

[Back up and restore the Project Server 2010 farm](#)

[Restore a Project Server 2010 farm by using built-in tools](#)

# Back up and restore the Project Server 2010 farm

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This document set is written to meet the requirements of information technology (IT) professionals who are responsible for the planning, design, deployment, and operations of backup and recovery solutions in enterprise, corporate, or branch office environments. The readers of this document set are expected to have an understanding of its technical details. However, service-level expertise is not needed to follow the enterprise-level discussions and to understand the decisions that are made.

A *backup* is a copy of data that is used to restore and recover that data after a system failure or corruption. Backups allow you to restore data after a failure. With proper backups, you can recover from many failures, including:

- Media failure
- User errors (such as deleting a Project file or Microsoft Project Web App (PWA) site by mistake)
- Hardware failures (such as a damaged disk drive or permanent loss of a server)
- Natural disasters

Additionally, keeping backups of Project Server databases is useful for routine purposes, such as copying a database from one production server to another, moving databases from a production environment to a test environment, restoring Project Web App sites, archiving for legal purposes, and disaster recovery. For specific guidance on which backup or recovery method you should use for your specific requirements, see [Prepare to back up and restore a Project Server 2010 farm](#).

## Back up and restore all or part of the farm and content

The following tasks for backup and recovery are performed to back up a Project Server farm by using built-in tools:

- [Back up a Project Server 2010 farm by using built-in tools](#)
- [Restore a Project Server 2010 farm by using built-in tools](#)

### See Also

[Prepare to back up and restore a Project Server 2010 farm](#)

## Prepare to back up and restore a Project Server 2010 farm

---

Before you back up project data, you must first create a shared folder on the network in which to store the data. You should also ensure that the accounts needed to perform a backup have access to the shared folder. This article and the procedures that follow cover preliminary considerations and the steps that you must take before you back up your data.

Preparation is the key to ensuring that you are backing up and can recover the data that will be needed should a failure occur. Before backing up your Project Server deployment, review your backup and recovery plan and consider the following key activities:

- When you deploy Microsoft Project Server 2010, keep a record of the accounts that you create, and the computer names, passwords, and setup options that you choose. Keep this information in a safe place.
- Always keep a copy of all recovery materials, documents, and database and transaction log backups at an offsite location. For more information about planning for backup and recovery, see [Plan for disaster recovery in Project Server 2010](#).
- Be certain that your system has adequate space to accommodate your backup. For more information about planning storage capacity, see [Planning for Storage](#) (<http://go.microsoft.com/fwlink/?LinkId=121920>) in the "Windows Server 2003 Deployment Guide."
- Periodically perform a trial data recovery operation to verify that your files are properly backed up. A trial data recovery can uncover hardware problems that do not show up with software verifications.
- To safeguard against loss from a catastrophic event, such as a fire or earthquake, maintain duplicate copies of your server backups in a separate location from the servers. Doing so can help protect you against the loss of critical data. As a best practice, keep three copies of the backup media, and keep at least one copy offsite in a properly controlled environment.

The following restrictions and exceptions may apply when backing up or restoring the SharePoint 2010 Products server farm:

- Built-in tools in SharePoint 2010 Products might not back up or restore the following:
  - Any custom solutions that have been deployed
  - Alternate access mappings
  - The Web application that hosts the SharePoint Central Administration Web site
  - The Internet Information Services (IIS) metabase
  - The Central Administration content database
  - The configuration database

### Important

Although the configuration database and Central Administration content database can be backed up, we recommend against doing it with built-in tools on a running farm. Restoring backups of the configuration database and Central Administration content database taken from a running farm by using the tools built in to SharePoint 2010 Products or SQL Server is not supported.

This is because data in these databases may not be synchronized with data in other SharePoint 2010 Products databases. Therefore, the tools built in to SharePoint 2010 Products do not recover these databases during a farm-level recovery operation.

You can recover a farm, including the configuration database and Central Administration content database, in the following ways:

- Use farm-level backups of a running farm taken with Microsoft System Center Data Protection Manager 2007 to recover an entire farm, including the configuration database and Central Administration content database. For more information, see [Restore a farm \(SharePoint Server 2010\)](#).
- Restore a backup of the configuration database and Central Administration content database taken from a fully stopped farm. For more information, see [Move all databases \(Project Server 2010\)](#).

If the configuration database and the Central Administration content database of a farm become unsynchronized, you must re-create both databases by using the SharePoint Products Configuration Wizard or Psconfig command-line tool.

To protect the configuration database and the Central Administration content database:

- Document all configuration settings and all your customizations so that you can correctly re-create the databases. For more information about recovering a farm, see [Recovering your deployment in Project Server 2010](#).
- Site collection backup and recovery does not support migrating a Central Administration site to a non-Central Administration site.
- The SQL Server VSS Writer service, which is available with Microsoft SQL Server database software, must be started for the Windows SharePoint Services VSS Writer service to work properly. By default, the Windows SharePoint Services VSS Writer service is not automatically started.
- If you want to move the backups that you created by using SharePoint 2010 Products to another location, be sure to copy and move the entire backup folder and not the individual backup folders under this folder.
- If you want to schedule backups, you can use the Windows Task Scheduler to run them by using Windows PowerShell.

### Important:

## Prepare to back up and restore a Project Server 2010 farm

Do not modify the spbackup.xml file. Doing so can corrupt your backup or restored farm and make it unrecoverable.

- If you use Central Administration to back up, you cannot use other methods to restore, such as Microsoft SQL Server 2005 or Microsoft SQL Server 2008 tools.
- If you perform a backup while any task that creates or deletes databases is running, these changes might not be included in the backup.
- You should maintain a separate backup of all your custom solutions.
- SQL Server does not support performing a backup to mapped drives, shares that end in "\$" on remote computers, or IP addresses.
- Backing up the Service Application does not back up the global search settings.

## Task requirements

The following components are required to perform the procedures for this task:

- Microsoft Project Server 2010 must be installed. For more information about installing Project Server 2010, see [Deploy Project Server 2010 to a server farm environment](#).
- The accounts listed in the following table must be enabled to do backup and recovery.

| Account                                                                                                        | Description                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SQL Server service account (MSSQLSERVER)                                                                       | If the Local System account is used for this service account, and if the shared folder is on another computer, you must give the computer that is running SQL Server Change and Read permissions to the shared folder. Alternatively, you can specify a domain user account and give that account permissions to the shared folder. |
| A local administrator's account                                                                                | To perform backup and recovery by using Windows PowerShell, you must be logged on as a member of the Administrators group on the computer that holds Windows PowerShell.                                                                                                                                                            |
| The SharePoint Central Administration application pool identity account in Internet Information Services (IIS) | This application pool identity account is required to do backup and recovery when you use Central Administration. Therefore, the security account for this application pool must have Change and Read permissions to the shared folder that contains the backup data.                                                               |

- If you have changed the farm account, before you back up, you must grant the new account the correct permissions to the shared folder that will contain your backup data.
- If you are backing up by using Central Administration, the database server's SQL Server account, the Timer service account, and the Central Administration application pool identity account must have Write permissions to the backup locations. If you are using Windows PowerShell, the account that you use to log on must have Write permissions to the backup locations.
- The database server and farm server being backed up must be able to connect to one another.

## Creating a shared folder on the network

Use this procedure to create a shared folder on the network that can receive and hold backed-up data. You can also use this shared folder when you restore data. If you already have a shared folder that serves this purpose, you do not need to perform this procedure. By performing the following procedure, you ensure that you can access the shared folder from the computer that runs Microsoft SQL Server database software and from the computer that hosts the SharePoint Central Administration Web site.

### **Important:**

Membership in the Administrators group on the computer on which the shared folder is located is the minimum requirement to complete this procedure.

### **Create a shared folder on the network**

1. If you create the shared folder on a computer other than the one running SQL Server, ensure that the service account for SQL Server (MSSQLSERVER) is using a domain user account. For information about accounts in SQL Server, see the following resource:
  - [SQL Server Books Online](http://go.microsoft.com/fwlink/?LinkId=83543) (<http://go.microsoft.com/fwlink/?LinkId=83543>)
2. On the server on which you want to store your backup data, create a shared folder.
3. On the **Sharing** tab of the **Properties** dialog box, click **Permissions**, and then add the following accounts:
  - SQL Server service account (MSSQLSERVER)
  - The SharePoint Central Administration application pool identity account.
4. Select **Allow** for the **Change** and **Read** permissions, and then click **OK**.
5. On the **Security** tab of the **Properties** dialog box, grant all the permissions except **Full Control** to the accounts listed in step 3, and then click **OK**.

## Preparing to restore

You should be aware of the following before beginning to restore:

### **Important:**

Although the configuration database and the Central Administration content database can be backed up, we recommend against doing it with built-in tools on a running farm. Restoring backups of the configuration database and the Central Administration content database taken from a running farm by using the tools built in to SharePoint 2010 Products or SQL Server is not supported.

This is because data in these databases may not be synchronized with data in other SharePoint Server 2010 or SharePoint Foundation 2010 databases. Therefore, the tools built in to SharePoint 2010 Products do not recover these databases during a farm-level recovery operation.

If this data is not synchronized, users might experience various random errors.

## Prepare to back up and restore a Project Server 2010 farm

You can recover a farm, including the configuration database and the Central Administration content database, in the following ways:

- You can use farm-level backups of a running farm taken with System Center Data Protection Manager to recover an entire farm, including the configuration database and the Central Administration content database. For more information, see [Restore a farm \(SharePoint Server 2010\)](#).
- You can restore a backup of the configuration database and the Central Administration content database taken from a fully stopped farm. For more information, see [Move all databases \(Project Server 2010\)](#).

If the configuration database and the Central Administration content databases of a farm become unsynchronized, you must re-create both databases by using the SharePoint Products Configuration Wizard or Psconfig command-line tool.

To protect the configuration database and the Central Administration content database:

- Document all configuration settings and all your customizations so that you can correctly re-create the databases. For more information about recovering a farm, see [Restore a Project Server 2010 farm by using built-in tools](#).
- Consider a redundancy solution, such as clustering or mirroring, for the computer running SQL Server that is hosting the configuration database.
- Project Server 2010 does not support a backup made from one version to be restored to another version of Project Server 2010. To do this, use the upgrade process.
- If you are restoring by using the SharePoint Central Administration Web site, then the database server's SQL Server account, the Timer service account, and the Central Administration application pool account must have Read permissions to the backup locations.
- If you are using Windows PowerShell, the account you logged on with must have Read permissions to the backup locations.
- If the crawl-related account's credentials have changed between the time you backed up and the time you restore, you must reenter all crawl-related passwords after a restore is performed. This includes the password of the default content access account and each of the include crawl rules that has credentials.
- Before restoring a service application on a stand-alone installation, the administrator must manually start the Microsoft SharePoint Service Application Administration service so that search can be provisioned. This service is required to create the search directories on the local server. These directories hold the search index files.
- On stand-alone installations, you must restart the Timer service before restoring the service application.
- If you are restoring or migrating search services and indexes to a new installation, make sure the search service is running before performing the recovery.  
After restoration, search might take up to 15 minutes to be available again.
- Make sure that the synchronization service is paused before restoring any Web applications.

## **Prepare to back up and restore a Project Server 2010 farm**

- Be aware that you cannot perform more than one recovery from the same backup at the same time.

## Back up a Project Server 2010 farm by using built-in tools

---

There are two methods you can use to back up data for Microsoft Project Server 2010 by using SharePoint 2010 Products:

- You can use the SharePoint Central Administration Web site to back up Project Server 2010. This tool allows you to perform backups from the user interface. When you use this method, you can back up the server farm, Web applications, and any or all of the content databases in your server farm. You can use Windows PowerShell 2.0 to view backup and recovery history and to view backup and recovery job status.
- You can use Windows PowerShell to back up the server farm, Web applications, and any or all of the content databases in your server farm. You can use Windows PowerShell to view backup and recovery history and to view backup and recovery job status. This method of backing up and restoring data does not require SQL Server tools. However, you must still be an administrator on a server computer that has Project Server 2010 installed in order to perform this method of backing up and restoring.

We recommend that you regularly back up the complete farm by backing up both the configuration and content. Regularly backing up the farm reduces the possibility of data losses that might occur from hardware failures, power outages, or other problems. It is a simple process and helps to ensure that all the farm data and configurations are available for recovery, if that is required.

Performing a backup does not affect the state of the farm. However, it does require resources and might slightly affect farm performance when the backup is running. You can avoid performance issues by backing up the farm during hours when farm use is lowest, such as outside office hours.

## Use Central Administration to back up a Project Server farm



### Important:

To perform this procedure, you must be a member of the Farm Administrators group on the computer that is running Central Administration.



### To back up a Project Server farm by using Central Administration

1. In Central Administration, on the Home page, in the **Backup and Restore** section, click **Perform a backup**.
2. On the Perform a Backup — Step 1 of 2: Select Component to Back Up page, select the farm from the list of components, and then click **Next**.

## Back up a Project Server 2010 farm by using built-in tools

3. On the Start Backup — Step 2 of 2: Select Backup Options page, in the **Backup Type** section, select either **Full** or **Differential**.



### Note:

If you are backing up the farm for the first time, you must use the **Full** option. You must perform a full backup before you can perform a differential backup.

4. In the **Back Up Only Configuration Settings** section, click **Back up content and configuration settings**.
5. In the **Backup File Location** section, type the UNC path of the backup folder, and then click **Start Backup**.
6. You can view the general status of all backup jobs at the top of the Backup and Restore Status page in the **Readiness** section. You can view the status for the current backup job in the lower part of the page in the **Backup** section. The status page updates itself every 30 seconds automatically. You can manually update the status details by clicking **Refresh**. Backup and recovery are Timer service jobs. Therefore, it may take several seconds for the backup to start. If you receive any errors, you can review them in the **Failure Message** column of the Backup and Restore Job Status page. You can also find more details in the Spbackup.log file at the UNC path that you specified in step 5.

## Use Windows PowerShell to back up a Project Server farm

You can use Windows PowerShell to back up your Project Server 2010 farm manually or as part of a script that can be run at scheduled intervals.

### ► To back up a Project Server farm by using Windows PowerShell

1. Verify that you meet the following minimum requirements: See [Add-SPShellAdmin](#).
2. On the **Start** menu, click **All Programs**.
3. Click **Microsoft SharePoint 2010 Products**.
4. Click **SharePoint 2010 Management Shell**.
5. At the Windows PowerShell command prompt (that is, PS C:\>), type the following command, and then press ENTER:

**Backup-SPFarm -Directory <BackupShare> -BackupMethod [full/incremental]**

**-Directory** specifies the Universal Naming Convention (UNC) path of the backup folder.



### Note:

If you are backing up the farm for the first time, you must use the **full** option. You must perform a full backup before you can perform a differential backup. To view the progress of the backup operation, use the **-Verbose** parameter.

## Back up a Project Server 2010 farm by using built-in tools

If you do not use the `-Verbose` parameter, the Command Prompt window displays no message if the operation succeeds. If the operation does not finish successfully, the Command Prompt window displays an error message, such as the following.

```
Backup-SPFarm: The backup job failed. For more information,
see the error log that is located in the backup directory.

At line: <line> char:<column>.

+ <cmdlet> <<<< <location of error>
```



### Note:

The error message is displayed even if the backup task finished, but resulted in at least one warning or error message. The summary of the backup job is listed at the end of the `Spbackup.log` file. The summary contains specific details about the errors in the `Spbackup.log` file.

6. If there are errors or warnings, or if the backup does not finish successfully, review the `Spbackup.log` file in the backup folder.

For more information, see [Backup-SPFarm](#).



### Note:

We recommend that you use Windows PowerShell when performing command-line administrative tasks. The `Stsadm` command-line tool has been deprecated, but is included to support compatibility with previous product versions.

### See Also

[Prepare to back up and restore a Project Server 2010 farm](#)

## Restore a Project Server 2010 farm by using built-in tools

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Microsoft Project Server 2010 provides two methods for restoring a server farm, Web applications, and content databases. Restoring by using the SharePoint Central Administration Web site offers the convenience of working from the user interface, while restoring by using Windows PowerShell 2.0 offers a wide range of parameters and allows automation of your recovery process.

Before restoring your farm, ensure that the following requirements are met.

- To restore your farm by using the SharePoint Central Administration Web site, the database server's Microsoft SQL Server account, the Timer service account, and the Central Administration pool account must have Read permissions to the backup locations. (The Timer service account and the Central Administration pool account are generally the same.)

Consider the following before restoring your farm:

- Restoring from one version of SharePoint Products and Technologies to a different version is not supported. For information about migrating, see [Migrate a Project Web App instance in Project Server 2010](#).
- After recovery, Search might take up to 15 minutes to be available again and could take longer if Search has to re-index all of the content. To avoid having Search do a full search and re-index, you can back up and restore the entire Service Application node.
- You cannot perform more than one recovery from the same backup at the same time. Moreover, you can only perform one recovery or one backup operation at a time.

## Use Central Administration to restore a Project Server farm

To perform this procedure, you must be a member of the Farm Administrators group on the computer that is running Central Administration.

### To restore a farm by using SharePoint Central Administration

1. In Central Administration, on the Home page, in the **Backup and Restore** section, click **Restore from a backup**.
2. On the Restore from Backup — Step 1 of 3: Select Backup to Restore page, from the list of backups, select the backup job that contains the farm backup, and then click **Next**.



**Note:**

If the correct backup job does not appear, in the **Current Directory** box, enter the UNC path of the correct backup folder, and then click **Update**.

## Restore a Project Server 2010 farm by using built-in tools

3. On the Restore from Backup — Step 2 of 3: Select Component to Restore page, select the check box that is next to the farm, and then click **Next**.
4. On the Restore from Backup — Step 3 of 3: Select Restore Options page, in the **Restore Component** section, ensure that "Farm" appears in the **Restore the following content** list. In the **Restore Only Configuration Settings** section, ensure that the **Restore content and configuration settings** option is selected. In the **Restore Options** section, select the **Type of Restore** option. Use the **Same configuration** setting unless you are migrating the farm or using a recovery farm. If you select this option, a dialog box appears that asks you to confirm the operation. Click **OK**.



### Note:

If the **Restore Only Configuration Settings** section does not appear, then the backup that you selected is a configuration-only backup. You must select another backup.

Click **Start Restore**.

5. You can view the general status of all recovery jobs at the top of the Backup and Restore Status page in the **Readiness** section. You can view the status for the current recovery job in the lower part of the page in the **Restore** section. The status page updates itself every 30 seconds automatically. You can manually update the status details by clicking **Refresh**. Backup and recovery are Timer service jobs. Therefore, it may take several seconds for the recovery to start. If you receive any errors, you can review them in the **Failure Message** column of the Backup and Restore Job Status page. You can also find more details in the Sprestore.log file at the UNC path that you specified in step 2.

## Use Windows PowerShell to restore a Project Server farm

You can use Windows PowerShell to restore a Microsoft Office Project 2007 farm.

### ▶ To restore a Project Server farm by using Windows PowerShell

1. Verify that you meet the following minimum requirements: See [Add-SPShellAdmin](#).
2. On the **Start** menu, click **All Programs**.
3. Click **Microsoft SharePoint 2010 Products**.
4. Click **SharePoint 2010 Management Shell**.
5. At the Windows PowerShell command prompt (that is, PS C:\>), type the following command, and then press ENTER:

```
Restore-SPFarm -Directory<BackupShare>-RestoreMethod [new/overwrite]
```



### Note:

## Restore a Project Server 2010 farm by using built-in tools

If you are not logged on as the Farm account, you will be prompted for the Farm account's credentials.

To restore to the same farm, use the **-RestoreMethod Overwrite** parameter. To restore to a different farm, such as a recovery farm, use the **-RestoreMethod New** parameter. To view the progress of the operation, use the **-Verbose** parameter.

6. If you do not use the **-Verbose** parameter, the Command Prompt window displays no message if the operation succeeds. If the job does not finish successfully, the Command Prompt window displays an error message, such as the following.
7. If there are errors or warnings, or if the job does not finish successfully, review the Spstore.log file in the backup folder.

For more information, see [Restore-SPFarm](#).



### Note:

We recommend that you use Windows PowerShell when performing command-line administrative tasks. The Stsadm command-line tool has been deprecated, but is included to support compatibility with previous product versions.

### See Also

[Prepare to back up and restore a Project Server 2010 farm](#)

# The Microsoft Project Server 2010 Server Settings Backup/RestoreTool

---

The Microsoft Project Server 2010 Server Settings Backup/Restore tool is part of the Microsoft Project Server 2010 Resource Kit (PRK). It enables Project Server 2010 administrators to back up server settings from a selected Project Server 2010 instance to an XML or binary .playbook file. The tool can then restore the server settings to another Project Server 2010 instance. The data from the exported XML (or binary) file is what is imported to the target Project Server 2010 instance. This tool can be especially useful when you move server settings from a test to a production environment, but could also be used to generate a simple “playbook” of custom fields and views (for example, for different industries).

You can access the Project Server 2010 Server Settings Backup/Restore tool by downloading the [Project 2010 PRK](#) from the Microsoft Download Center.



**Note:**

You should import server settings only from sources that you trust.

## Requirements

The Server Settings Backup/Restore tool has the following usage requirements:

- Windows 7, Windows XP, Windows Vista, Windows Server 2003, or Windows Server 2008
- Microsoft .NET Framework 2.x or 3.x
- Administrator permissions on the instance of Project Server 2010 that you are accessing
- You are migrating settings either from a Project Server 2010 site to another Project Server 2010 site, or from a Project Server 2010 upgraded site (running in Backward Compatibility Mode) to a full Project Server 2010 site.



**Note:**

When moving from an upgraded site to a full site, notice that Enterprise Global will be unable to be restored.

- For most settings, you can back up and restore settings to Project Server instances without running the Project Server 2010 Server Settings Backup/Restore tool on the computer that is hosting that instance. However, for certain Workflow settings (see the [Server Settings](#) section), you must be on the server computer that is hosting the Project Server 2010 instance to run either a backup or a restore process by using the tool. If the Project Server 2010 Server Settings Backup/Restore tool is not run from a server computer for the Workflow Settings, then you may see an error message that resembles the following:



**Note:**

Do not alter a server manually during a backup or restore process, and do not run multiple instances of the Project Server 2010 Server Settings Backup/Restore tool at the same time. Either of these actions could lead to unwanted server alteration or data corruption.

## Backing up server settings

The first step in using the Project Server 2010 Server Settings Backup/Restore tool is to save the server settings of the Project Server 2010 instance that you want to back up. These server settings are restored to a different Project Server 2010 instance later.

### ► To back up server settings

1. Run Playbooks.exe to start the Project Server 2010 Server Settings Backup/Restore tool.
2. On the Select Server URL page, enter information about the Project Server 2010 instance from which you want to back up server settings.



The screenshot shows a dialog box titled "Select Server URL". It features a text input field for "Server URL" containing the text "http://servername/pwa". Below the input field is a descriptive label: "Specify the URL of the Project Web Access Server where you would like to backup or restore settings." There are two radio button options: "Use Windows Authentication" (which is selected) and "Use Forms Authentication". Below the radio buttons are two text input fields labeled "User Name" and "Password". At the bottom of the dialog are "OK" and "Cancel" buttons.

- a. In the **Server URL** box, type the URL of the instance of Project Server 2010 from which you want to back up the server settings. By default, the URL is the name of the server on which you run the tool and targets the default PWA instance. Replace the default information if it is incorrect.
- b. Click either **Use Windows Authentication** or **Use Forms Authentication** to specify the authentication mode with which you are connecting to Project Server 2010. If you select **Use Forms Authentication**, type the user name and password in the corresponding text boxes. Click **OK**.

## The Microsoft Project Server 2010 Server Settings Backup/RestoreTool

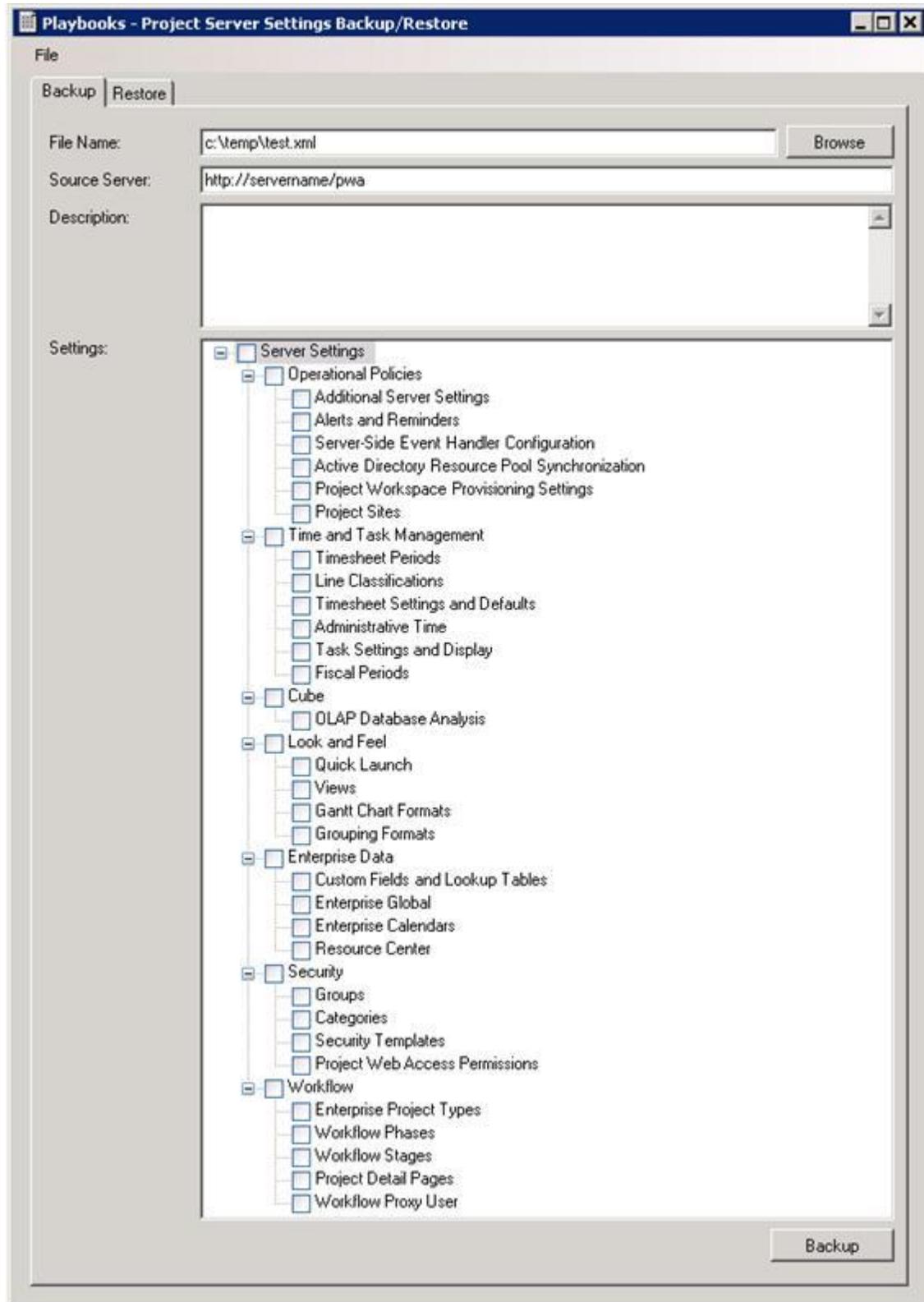


### **Note:**

If Project Server 2010 is configured for "multi-authentication" (Windows and forms-based authentication on the same URL), then you can only log on by using the **Forms Authentication** option.

3. On the Playbooks – Project Server Settings Backup/Restore page, click the **Backup** tab.

## The Microsoft Project Server 2010 Server Settings Backup/RestoreTool



- In the **File Name** box, type a path and name of the backup file that you are creating to which you are exporting the server settings information. (By default, it is saved as an .xml file, but it can also be set to a binary .playbook file.) You can also use the **Browse** button to select a path.
- The read-only **Source Server** box shows you the URL of the server that you are currently connected to.
- In the optional **Description** box, type information about your backup.

## Restore server settings

After you save your Project Server 2010 server settings, you can now use the Project Server 2010 Server Settings Backup/Restore tool to restore them to a different server farm.



**Note:**

To ensure successful restoration of your server settings, make sure that all enterprise objects (such as Custom Fields, Lookup Tables, and Calendars) are checked in to the restored PWA instance prior to the restoration process. You can use the **Force Check-In Enterprise Objects** setting in the **Server Settings** section of the Microsoft Project Web App site to force a check-in of all checked-out enterprise objects.

### ▶ To restore your server settings

1. Run Playbooks.exe to start the Server Settings Backup/Restore tool.
2. On the Select Server URL page, in the **Server URL** box, type URL of your instance of Project Server 2010. By default, the URL uses the name of the server on which you run the tool, and it targets the default PWA instance.
3. Also on the Select Server URL page, click either **Use Windows Authentication** or **Use Forms Authentication** to specify the authentication mode with which you are connecting to Project Server 2010. If you select **Use Forms Authentication**, type the user name and password in the corresponding boxes. Click **OK**.

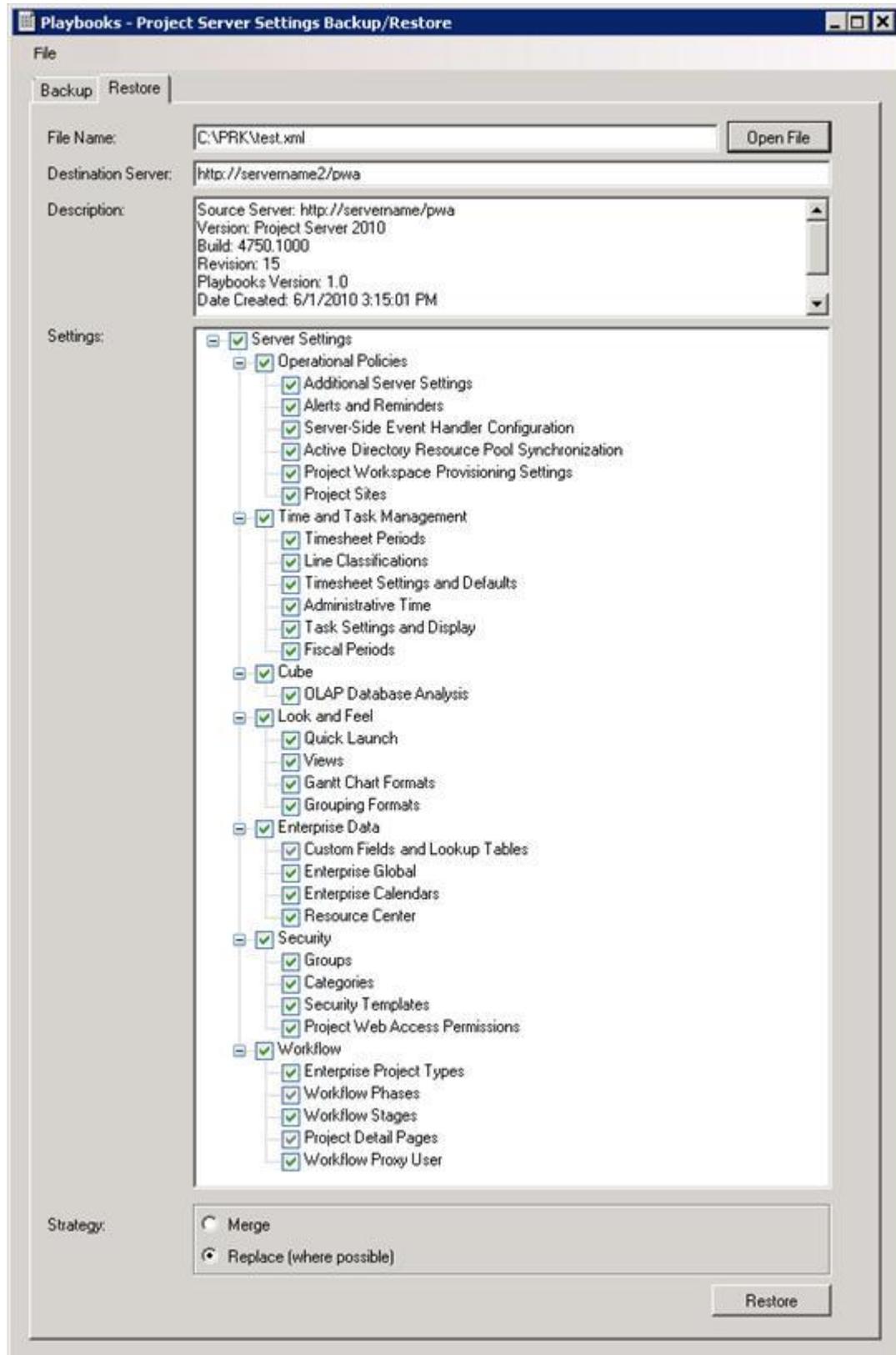


**Note:**

If Project Server 2010 is configured for "multi-authentication" (Windows and forms-based authentication on the same URL), then you can only log on by using the **Forms Authentication** option.

4. On the Playbooks – Project Server Settings Backup/Restore page, click the **Restore** tab.

## The Microsoft Project Server 2010 Server Settings Backup/RestoreTool



- In the File Name box, click the **Open File** button to browse to and select your server settings backup file. The Description and Settings boxes will be populated after the backup file is selected.
- In the read-only **Destination Server** box, view the URL of the server which you are currently connected to. To connect to a different server, you may click **Change Server URL** on the File menu of the dialog box. The read-only **Description** box contains information about the server settings backup file including the source server, version, build, revision, playbooks version, and date created.

## Server Settings

The following is a list of Project Server 2010 server settings that can be backed up or restored.

### Operational policies

#### Additional Server Settings

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/ServerConfig.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/ServerConfig.aspx)

#### Alerts and Reminders

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/Notification.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/Notification.aspx)

#### Server-Side Event Handler Configuration

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/Events.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/Events.aspx)

#### Project Workspace Provisioning Settings

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/WorkspaceProvisioningSettings.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/WorkspaceProvisioningSettings.aspx)



**Note:**

The Project Server 2010 Server Settings Backup/Restore tool does not back up any "Site URL" information from the Project Workspace Provisioning Settings.

### Time and task management

#### Time Reporting Periods

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/TimePeriod.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/TimePeriod.aspx)

Time Reporting Periods always take a replace approach, regardless of which recovery method is selected, to avoid period conflicts.

If a Time Reporting Period has a Timesheet associated to it, it cannot be deleted. Therefore,, if the destination server has a Time Reporting Period with a Timesheet associated to it, the restoration of Time Reporting Periods fails.

#### Timesheet Classifications

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/LineClass.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/LineClass.aspx)

#### Timesheet Settings and Defaults

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/TSSettings.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/TSSettings.aspx)

**Administrative Time**

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/AdmTime.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/AdmTime.aspx)

**Task Settings and Display**

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/Statusing.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/Statusing.aspx)

## Database administration

**OLAP Database Management**

[http://<ServerName>/<PWASite>/\\_layouts/pwa/CubeAdmin/CubeGenAdmin.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/CubeAdmin/CubeGenAdmin.aspx)

## Look and Feel

**Quick Launch**

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/SiteMap.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/SiteMap.aspx)

**Views**

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/ViewsMain.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/ViewsMain.aspx)

## Enterprise data

**Custom Fields and Lookup Tables**

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/CustomizeFields.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/CustomizeFields.aspx)

Custom Field restoration for Playbooks is not case-sensitive, but on Project Server, Custom Fields are case-sensitive. If you have two Custom Fields with the same name but in a different case setup, change the name of one of these Custom Fields if you want both on the destination server.

**Enterprise Global**

Backs up the Enterprise Global. The E-Global binary is persisted within the XML file.

**Enterprise Calendars**

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/Admin/CalendarsMain.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/Admin/CalendarsMain.aspx)  
Enterprise base calendars; resource calendars are separate.

## Security

### Groups

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/ManageGroups.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/ManageGroups.aspx)  
Because only group setting information is restored, this setting does not persist any user information in the groups.

### Categories

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/ManageCategories.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/ManageCategories.aspx)  
Because only category setting information is restored, this setting does not persist any user information in the groups.

### Security Templates

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/ManageTemplates.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/ManageTemplates.aspx)

### Project Web Access Permissions

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/OrgPermissions.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/OrgPermissions.aspx)

## Workflow

### Enterprise Project Types

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/Admin/EnterpriseProjectTypes.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/Admin/EnterpriseProjectTypes.aspx)  
As Enterprise Project Types (EPTs) depend on Project Detail Pages (PDP), they must follow the same rules as PDPs noted later in this article.

If you are migrating EPTs that belong to departments, you must also migrate Custom Fields for that EPT to be restored on the destination server.

### Workflow Phases

[http://<ServerName>/<PWASite>/\\_layouts/pwa/WorkflowPhases.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/WorkflowPhases.aspx)

### Workflow Stages

[http://<ServerName>/<PWASite>/\\_layouts/pwa/WorkflowStages.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/WorkflowStages.aspx)  
Workflow Stages depend on PDPs, and they must follow the same rules as PDPs

described here.

### **Project Detail Pages**

[http://<ServerName>/<PWASite>/Project Detail Pages/Forms/AllItems.aspx](http://<ServerName>/<PWASite>/Project%20Detail%20Pages/Forms/AllItems.aspx)

Project Detail Pages can only be accessed by the Project Server 2010 Server Settings Backup/Restore tool if the PWA instance being connected to is located on the computer on which the tool is running. This means three things:

1. In order to back up and restore PDPs, the tool must be run locally first on the computer that is hosting the server to be backed up.
2. The created .xml or .playbook backup must be sent to the computer that is hosting the server to receive the restore.
3. the tool must be run locally on the computer that is hosting the restored-to server in order to run the restore process.

Claims-forms servers cannot access PDPs because of limitations intrinsic to Microsoft SharePoint Server 2010. If you are migrating settings to or from a claims-forms server, please notice that most of the workflow settings will be unable to be migrated.

The account that is used to log on to Project Server 2010 must also have read/write permission to the SharePoint content database, and it must also be a site administrator. The recommended approach is to use the default PWA site administrator account.

If you restore PDPs to a site that shares the same content database as the site that was backed up, the process may fail. In the ULS log, you will see an error message that resembles: Violation of UNIQUE KEY constraint 'Docs\_IdLevelUnique'. This occurs because each PDP in the content database must be unique. If you back up from one site and restore to another site in the same database, the same restored PDP will have the same GUID as one that already exists in the database.

### **Workflow Proxy User**

[http://<ServerName>/<PWASite>/\\_layouts/pwa/Admin/WorkflowSettings.aspx](http://<ServerName>/<PWASite>/_layouts/pwa/Admin/WorkflowSettings.aspx)

This is the name of the account that acts as the proxy user for workflow execution.

During the recovery process, the physical account associated with the Workflow Proxy User must exist on the destination server. The restore process will not create the account but only creates the link from the server setting to the physical account.

# Manage security in Project Server 2010

---

Microsoft Project Server 2010 security is based on users, groups, and categories. Groups contain sets of users who need to access the same set of data in the same way. Categories provide access to projects and resources based on parameters that you define.

Define your groups by identifying common needs based on the areas of Project Server to which users in your organization need access. After you define your groups, you can add users to the groups and grant permissions to the groups. Permissions assigned to groups apply to all of the users that the group contains. Using groups to control access to Project Server simplifies security administration.

Project Server users can be automatically added or removed from groups based on Active Directory group membership. This can be configured in Project Server 2010 through the Active Directory synchronization feature. For more information, see [Manage security group synchronization with Active Directory in Project Server 2010](#).

Users can belong to multiple groups according to their role in the organization and their access requirements. Several groups are created by default when Project Server 2010 is installed, each of which is assigned a set of predefined categories and permissions. For more information, see [Manage security groups in Project Server 2010](#).

Administrators usually assign permissions by adding a user account to one of the built-in groups or by creating a new group and assigning specific permissions to that group.

For complete lists of Project Server permissions, see [Project Server 2010 category permissions](#) and [Project Server 2010 global permissions](#).

The following tasks for managing security in Project Server are performed on these components:

- [Manage users in Project Server 2010](#)
- [Manage security groups in Project Server 2010](#)
- [Manage categories in Project Server 2010](#)
- [Manage security templates in Project Server 2010](#)
- [Manage Project Web App permissions in Project Server 2010](#)
- Manage Enterprise Resource Pool synchronization with Active Directory in Project Server 2010
- Manage delegates in Project Server 2010

## See Also

[Plan groups, categories, and RBS in Project Server 2010](#)

# Manage users in Project Server 2010

---

When you make the initial connection to Microsoft Project Server 2010 through the Microsoft Project Web App (PWA) site, you must be logged on using the administrator account used to provision the PWA site. You can use this initial account to create other user accounts that can access Project Server. For example, this initial account could be used to create the user accounts that will serve as Project Server administrators, who will in turn create other user accounts and will do additional post-installation configuration.

You can use the Manage Users page that is available from the Server Settings page to add new individual users, modify existing users, deactivate user accounts, and reactivate inactive user accounts. You can also assign permissions to users by adding them to one of the built-in groups or by creating a custom group and assigning specific permissions to the custom group.

## Task requirements

The following are required to perform the procedures for this task:

- Access to Project Server through the Project Web App site.
- The **Manage users and groups** global permission in order to add, modify, deactivate, or reactivate a user account

To manage users in Project Server, you can perform the following procedures:

- [Add a user account in Project Server 2010](#)
- [Modify a user account in Project Server 2010](#)
- [Deactivate a user account in Project Server 2010](#)
- [Reactivate a user account in Project Server 2010](#)

### See Also

[Manage security in Project Server 2010](#)

[Manage security groups in Project Server 2010](#)

[Manage categories in Project Server 2010](#)

[Manage security templates in Project Server 2010](#)

[Manage Project Web App permissions in Project Server 2010](#)

# Add a user account in Project Server 2010

---

Every Microsoft Project Server 2010 user must have a user account before he or she can log on to Project Server 2010 and interact with Project Server data. User accounts can be added through the Manage Users page in Microsoft Project Web App (PWA) Server Settings.

**Note:**

Windows users can also be added to Microsoft Project Web App from the Active Directory directory service through Active Directory Synchronization.

Before you perform this procedure, confirm that:

- You have read [Manage users in Project Server 2010](#).
- You have access to Project Server 2010 through the Project Web App site.
- The user accounts you are adding are properly configured in either Active Directory or the forms-based membership provider so that their information is available to Project Server 2010. Project Server 2010 supports two authentication methods for its users (Windows authentication and forms-based authentication). For more information about supported authentication methods for Project Server 2010, see [Plan for authentication in Project Server 2010](#).

**Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To add a user account

Use this procedure to add a Project Server 2010 user account to your Project Server 2010 instance.

### ▶ Add a user account

1. On the PWA home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Users**.
3. On the Manage Users page, click **New User**.
4. On the New User page, in the **Identification Information** section, do the following, as needed:
  - a. Select **User can be assigned as a resource** if you want this user account to be able to be assigned tasks as a resource. Selecting this entry makes the user an Enterprise Resource. This setting is selected by default.
  - b. In the **Display Name** text box, type the name for the user account. This is a required field.
  - c. Optionally, in the **E-mail** address text box, type the email address for the user. If you want this user to be emailed for notifications and reminders, this is a required field.

- d. Optionally, in the **RBS** box, enter a Resource Breakdown Structure code value. Click the Select Value icon to display the RBS Code list from which you can select a value. The RBS code defines the hierarchical position that a resource holds in the organization.
  - e. Optionally, in the **Initials** box, type the initials for the user.
  - f. If the user maintains a team Web site, type the hyperlink destination and URL address in the **Hyperlink Name** and **Hyperlink URL** boxes, respectively.
5. In the **User Authentication** section, type the user logon account in the **User logon account** box.



### Note

If you are using Integrated Windows authentication, type the user's account name in the form of DomainName\UserAccountName. To prevent the user's information from being synchronized with your organization's Active Directory directory service, select **Prevent Active Directory synchronization for this user**.

If you are using Forms authentication, type the user account name in the form of MembershipProvider:UserAccount.

6. In the **Assignment Attributes** section, specify the following information about the user's ability to be assigned to projects as a resource:
- a. Select **Resource can be leveled** to allow the user to be subject to the leveling process. This option is selected by default.  
  
Leveling is the process used to resolve resource conflicts or over-allocations by delaying or splitting certain tasks. When Project levels a resource, its selected assignments are distributed and rescheduled.
  - b. In the **Base Calendar** list, select a base calendar for the user. A base calendar is a calendar that can be used as a project and task calendar that specifies default working and non-working time for a set of resources.
  - c. In the **Default Booking Type** list, select the user's booking type as either **Committed** or **Proposed**. A committed resource is formally allocated to any task assignment within a project. A proposed resource has a pending resource allocation to a task assignment that has not yet been authorized. This resource assignment does not detract from the availability of the resource to work on other projects.
  - d. In the **Timesheet manager** box, if the user has a timesheet manager, type or search for the manager's name.
  - e. In the **Default Assignment Owner** text box, type or search for the default assignment owners. An assignment owner is an enterprise resource who is responsible for entering progress information in PWA. This person can be different from the person initially assigned to the task.
  - f. In the **Earliest Available** box, type or select the earliest date that the user will be available as a resource.

- g. In the **Latest Available** box, type or select the latest date that the user will be available as a resource.
  - h. In the **Standard Rate** box, type the rate for the work on an assignment that is scheduled during the regular working hours of an assigned resource.
  - i. In the **Overtime Rate** box, type the rate for the work on an assignment that is scheduled beyond the regular working hours of an assigned resource.
  - j. In the **Current Max. Units (%)** box, type the percentage of time the resource is available for assignments.
  - k. In the **Cost/Use** box, type the per-use cost of the resource if applicable. For work resources, a per-use cost accrues each time that the resource is used. For material resources, a per-use cost is accrued only once.
7. In the **Exchange Server Details** section, select the **Synchronize Tasks** check box if you want to enable task synchronization using Microsoft Exchange for this user.



**Note:**

Exchange integration must be configured in order for task synchronization to function.

8. In the **Security Groups** section, in the **Available Groups** list, select the groups to which the user will belong and then click **Add**. The groups that you select appear in the **Groups that contain this user** list. If you want the user to be a member of all available groups, click **Add All**. Users automatically inherit the permissions associated with any groups they belong to. Use the **Remove** and **Remove All** buttons to remove the user from groups to which they currently belong.
9. In the **Security Categories** section, in the **Available Categories** list, select the category which the user will access, and then click **Add**. The categories that you select appear in the **Selected Categories** list. If you want the user to access all available categories, click **Add All**.
- For each category in the **Selected Categories** list, specify the permissions that you want the user to have when the user accesses the category. The category permissions list for a specific category will appear when you select the corresponding category in the **Selected Category** list. You can set permissions manually for any category or you can apply a security template that contains predefined permission settings.
- To set permissions by using a security template, in the **Selected Categories** list, select the category to which you want to apply the template. Select the template to apply from the list next to the **Set Permissions with Template** button, and then click **Apply**.
  - To set permissions manually in the **Selected Categories** list, select the category to which you want to apply permissions. In the **Permissions** list, click **Allow** or **Deny** for each activity. In most cases, you only need to set permissions at the group level rather than configuring permissions for individual users; use category permissions for users with special needs that are not covered by the permissions that are assigned to groups.



**Note:**

For more information about category permissions, see Microsoft Project Server 2010 category permissions.

10. In the **Global Permissions** section, select the global permissions for the user. You can apply global permissions manually or by using a security template. To set global permissions using a template, select the template to apply from the list next to the **Set Permissions with Template** button, and then click **Apply**.



**Note:**

For more information about global permissions, see Microsoft Project Server 2010 global permissions and [Plan groups, categories, and RBS in Project Server 2010](#).

11. In the **Group Fields** section, if your organization created codes for grouping and costing purposes, type these codes in the **Group** box, **Code** box, **Cost Center** box, or **Cost Type** box.
12. In the **Team Details** section, if you want the user to be a member of an existing team, select **Team Assignment Pool**, and then type the name of the team in the **Team Name** box.
13. In the **System Identification** section, you can optionally type additional identifying information for the user in the **External ID** box. This information can be used to link the person to corresponding information in a human resources department, or to facilitate the consolidation of reporting of resource use beyond what Project Server provides.
14. Click **Save**.

## Additional considerations

It is a best practice to avoid assigning global permissions directly to individual user accounts. It is preferable to add users to groups that have the required permissions.

### See Also

[Manage users in Project Server 2010](#)

# Modify a user account in Project Server 2010

---

In Microsoft Project Server 2010, you can modify existing account information for any user. You might want to do this, for example, if a resource name is changed or if a resource changes roles in your organization.

Before you perform this procedure, confirm that:

- You have read [Manage users in Project Server 2010](#).
- You have access to Project Server 2010 through the Microsoft Project Web App site.



**Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To modify a user account

Use this procedure to modify an existing Project Server 2010 user account.

 **Modify a user account**

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Users**.
3. On the Manage Users page, in the **Users** list, click the name of the user you want to edit.
4. On the Edit User page for the selected user, make your changes to the user account information.
5. Click **Save**.

**See Also**

[Manage users in Project Server 2010](#)

# Deactivate a user account in Project Server 2010

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At times, you may need to make Project Server user accounts unavailable. When you deactivate a user account, that user's information and data remains in the database, but the user is unavailable for new assignments. The user account is inactive until it is reactivated.

Deactivating a user account means that it can no longer be used to log on to Project Server 2010. Users cannot use this account to send assignment updates, request status reports, or delegate tasks. Once a user is deactivated, the Project Manager will be prompted to reassign the user's work. This prompt occurs when the Project Manager opens the project in Microsoft Project Professional 2010.

**Note:**

User accounts, when deactivated, are not actually deleted from the Project Server database. This is to ensure that any relationships that resource might have with project data can be preserved in case the account is reactivated later.

Before you perform this procedure, confirm that:

- You have read [Manage users in Project Server 2010](#).
- You have access to Project Server 2010 through the Microsoft Project Web App site.
- The user account you are deactivating truly needs to be deactivated.

**Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To deactivate a user account

Use this procedure to deactivate an active Project Server 2010 user account. After using this procedure, the account will not be able to access Project Server 2010 until it has been reactivated.

**Deactivate a user account**

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Users**.
3. On the Manage Users page, in the **Users** list, find the user account you want to deactivate. (You can use the **Search** box to search for a specific user.) Click the check box next to the user name of the account you want to deactivate. Note that you can select multiple user accounts.
4. Click **Deactivate Users**.
5. A message box will appear asking confirmation. Click **OK** to deactivate the user account or

user accounts.

**See Also**

[Reactivate a user account in Project Server 2010](#)

# Reactivate a user account in Project Server 2010

---

After deactivating a user account, you may need to reactivate it at some later time. Because the user information still exists in the Project Server database, you simply need to change the account status from **Inactive** to **Active**.

Before you perform this procedure, confirm that:

- You have read [Manage users in Project Server 2010](#).
- You have access to Project Server 2010 through the Microsoft Project Web App site.



**Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To reactivate a user account

Use this procedure to reactivate a deactivated Project Server 2010 user account. After you have performed this procedure, the reactivated account is able to access Project Server 2010.

### Reactivate a user account

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Users**.
3. On the Manage Users page, in the **Users** list, find the user account you want to reactivate. (You can use the **Search** box to search for a specific user.) Click the user name of the account.
4. On the Edit User page for the selected user, in the **Identification Information** section, select **Active** from the **Account Status** drop-down list.
5. Click **Save**.

### See Also

[Deactivate a user account in Project Server 2010](#)

# Manage security groups in Project Server 2010

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A *group* is a container for users that can be assigned permissions in Microsoft Project Server 2010. Users automatically inherit the permissions of any group to which they belong. By adding users to groups, you can significantly reduce the amount of time spent managing user permissions. You can manage groups from the Microsoft Project Web App (PWA) Server Settings page.

The following groups are created by default when Project Server 2010 is installed:

- **Team Members** Users have general permissions for using PWA, but limited project-level permissions. This group is intended to give everyone basic access to PWA. All new users are added to the Team Members group automatically. This group is associated with the My Tasks category.
- **Project Managers** Users have most global and category-level project permissions and limited resource permissions. This group is intended for users who maintain project schedules on a daily basis. This group is associated with the My Organization and My Projects categories.
- **Resource Managers** Users have most global and category-level resource permissions. This group is intended for users who manage and assign resources and edit resource data. This group is associated with the My Direct Reports, My Organization, My Projects, and My Resources categories.
- **Executives** Users have permissions to view project and Project Server data. This group is intended for high-level users who need visibility into projects but are not themselves assigned project tasks. This group is associated with the My Organization category.
- **Team Leads** Users have limited permissions around task creation and status reports. This group is intended for people in a lead capacity who do not have regular assignments on a project. This group is associated with the My Projects category.
- **Portfolio Managers** Users can create and edit data, but cannot perform Project Server administrative tasks such as adding users or creating groups. Portfolio Managers are able to view and edit all projects and resources in the organization. This group is associated with the My Organization category.
- **Administrators** This group is granted all available Project Server permissions. It is associated with the My Organization category.

These default groups are designed to be used together with the five default categories.

## Task requirements

The following are required to perform the procedures for this task:

- Access to Project Server 2010 through the Project Web App site.

## Manage security groups in Project Server 2010

- The **Manage users and groups** global permission in Project Server 2010 in order to add, modify, or delete a group.

To manage groups in Project Server 2010, you can perform the following procedures:

- [Create a security group in Project Server 2010](#)
- [Modify a security group in Project Server 2010](#)
- [Delete a security group in Project Server 2010](#)

### See Also

[Manage security in Project Server 2010](#)

# Create a security group in Project Server 2010

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Seven default security groups are installed with Microsoft Project Server 2010. To better meet the security requirements of your own organization, you can also create custom groups by using the Manage Groups page on the Microsoft Project Web App (PWA) site Server Settings page.

Before you perform this procedure, confirm that:

- You have read [Manage security groups in Project Server 2010](#).
- You have access to Project Server 2010 through Microsoft Project Web App.



### Important:

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To add a security group

Perform the following procedure to create a custom group in Project Server 2010.

### ▶ Add a group

1. On the PWA home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Groups**.
3. On the Manage Groups page, click **New Group**.
4. On the Add or Edit Group page, in the **Group Information** section:
  - a. In the **Group Name** box, type the name of the new group.
  - b. In the **Description** box, type a brief description of the group.
  - c. If you are synchronizing this group with a group in the Active Directory directory service, click **Find Group**. On the Find Group in Active Directory page, search for an Active Directory group with which to synchronize your Project Server group. Search results will appear in the group name list. From the group name list, select the group with which you want to synchronize, and then click **OK**. The group name will then appear in the **Group Information** section next to **Active Directory Group to Synchronize**.



### Note:

There are additional Active Directory synchronization options on the Manage Groups page.

5. In the **Users** section, you can add users that belong in this group. In the **Available Users** list, select users and then click **Add** to add them to the group.
  - Click **Add All** to add all available users to the group.

- To select multiple users at once, press the CTRL key while making your selections.
  - Users added to the group appear in the **Selected Users** list.
  - Use the **Remove** or **Remove All** button to remove users from the group.
6. In the **Categories** section, in the **Available Categories** list, select the category that you want to associate with this group, and then click **Add**. The categories that you select will appear in the **Selected Categories** list. If you want to add all available categories, click **Add All**.

For each category in the **Selected Categories** list, specify the permissions that you want the users in the group to have in that category. The category permissions list for a specific selected category appears when you select the corresponding category in the **Selected Categories** list. You can set permissions manually for any category or you can apply a security template that contains predefined permission settings.

- To set permissions by using a security template, in the **Selected Categories** list, select the category to which you want to apply the template. Select the template to apply from the list next to the **Set Permissions with Template** button, and then click **Apply**.
- To set permissions manually in the **Selected Categories** list, select the category to which you want to apply permissions. In the **Permissions** list, click **Allow** or **Deny** for each activity. Although you can also set category permissions for individual users, it is preferable to set permissions at the group level and then add users to the group. Use category permissions for individual users with special requirements that are not covered by the permissions that are assigned to groups.



**Note:**

For more information about category permissions, see Microsoft Project Server 2010 category permissions.

7. In the Global Permissions section, select the global permissions for the group. You can apply global permissions manually or by using a security template. To set global permissions using a template, select the template to apply (from the list next to the **Set Permissions with Template** button), and then click **Apply**.

For more information about global permissions, see Microsoft Project Server 2010 global permissions.

8. Click **Save**.

## Additional considerations

Avoid creating unnecessary groups. Having a large number of groups and categories within an organization can lead to additional management complexity. Additionally, large numbers of groups and categories can stress the authorization system, which can affect performance.

### See Also

[Manage security groups in Project Server 2010](#)

# Modify a security group in Project Server 2010

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You can modify the information associated with any security group in Microsoft Project Server 2010. For example, you may need to modify the group for changes to users or categories, or for changes to the Active Directory group to which it is currently being synchronized.

Before you perform this procedure, confirm that:

- You have read [Manage security groups in Project Server 2010](#).
- You have access to Project Server 2010 through the Microsoft Project Web App site.



**Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## Modify a security group

Perform the following procedure to modify an existing group in Project Server 2010.

 **To modify a group**

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Groups**.
3. On the Manage Groups page, in the **Group Name** list, click the name of the group you want to modify.
4. On the Add or Edit Group page for the selected group, make your changes to the group information.
5. Click **Save**.

**See Also**

[Manage security groups in Project Server 2010](#)

# Delete a security group in Project Server 2010

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If you no longer need a security group in Microsoft Project Server 2010, you can delete it. Before you delete a group, ensure that no other users or groups are dependent on it for required permissions.

Before you perform this procedure, confirm that:

- You have read [Manage users in Project Server 2010](#).
- You have access to Project Server 2010 through the Microsoft Project Web App site.

**Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To delete a security group

Perform the following procedure to delete a group in Project Server 2010.

**Important:**

We highly recommend not deleting the default Project Server groups. The Team Members group cannot be deleted.

**Delete a custom group**

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Groups**.
3. On the Manage Groups page, in the **Group Name** list, find the group you want to delete. Select the check box next to the group that you want to delete. Note that you can select multiple groups.
4. Click **Delete Group**.
5. A message box appears, asking for confirmation and noting that the group will be permanently removed. Click **OK** to delete the group.

**Note:**

Security groups are permanently deleted, unlike deactivated user accounts (which can be reactivated). If you delete a security group and then find that you want to have it again, you must recreate it.

**See Also**

[Manage users in Project Server 2010](#)

## Manage categories in Project Server 2010

*Categories* are the collections of projects, resources, and views to which users and groups in Project Server are granted access. Categories define which collections of specific data (projects, resources, and views) that these users and groups have access to. Categories also allow the administrator to filter data using security rules, like Resource Breakdown Structure (RBS), that can help organize and display data in specific ways.

You can add projects and resources to categories manually by choosing them from lists, or you can use dynamic filters to automatically add them to categories. Any user associated with a category can be granted permission to the projects and resources in that category.

- You must have the **Manage users and groups** global permission to add, modify, or delete a group.
- Avoid creating unnecessary categories. Having a large number of groups and categories within an organization can stress the authorization system, which can affect performance.

Microsoft Project Server 2010 creates five default categories during installation. These default categories are designed to enable Project Server to provide the most common layer of security for a hierarchical organization or matrix organization.

| Default category  | Default groups in the category                                                              | Description                                                                                                                                                                                                                                                                        |
|-------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| My Tasks          | Team Members                                                                                | Primarily used by project resources who have assigned tasks.                                                                                                                                                                                                                       |
| My Projects       | Project Managers<br>Resource Managers<br>Team Leads                                         | Provides access to all projects that a user owns.                                                                                                                                                                                                                                  |
| My Resources      | Resource Managers                                                                           | Intended for resource managers and is useful only after the Resource Breakdown Structure (RBS) is defined.                                                                                                                                                                         |
| My Direct Reports | Resource Managers                                                                           | Intended for users who need to be able to approve timesheets.                                                                                                                                                                                                                      |
| My Organization   | Executives<br>Portfolio Managers<br>Project Managers<br>Resource Managers<br>Administrators | Used to grant access to all information in the organization. This category is intended for members of a Project Management Office (PMO), executives in an organization, and other key users who require the ability to view projects and resources across the entire organization. |

## Task requirements

The following are required to perform the procedures for this task:

- Access to Project Server 2010 through the Microsoft Project Web App site.
- The **Manage users and groups** global permission in Project Server 2010 in order to create, modify, or delete a category.

To manage categories in Project Server 2010, you can perform the following procedures:

- [Create a category in Project Server 2010](#)
- [Modify a category in Project Server 2010](#)
- [Delete a category in Project Server 2010](#)

### See Also

[Manage security in Project Server 2010](#)

# Create a category in Project Server 2010

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In Microsoft Project Server 2010, you can add custom security categories as necessary to create a Project Server security model that meets the specific needs of users and groups in your organization.

Before you perform this procedure, confirm that:

- You have read [Manage categories in Project Server 2010](#).
- You have access to Project Server 2010 through a Microsoft Project Web App (PWA) site.



### Important:

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To add a category

Perform the following procedure to create a category in Project Server 2010.

### ▶ Add a category

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Categories**.
3. On the Manage Categories page, click **New Category**.
4. On the Add or Edit Category page, in the **Name and Description** section:
  - a. In the **Category Name** box, type a name for the category.
  - b. In the **Description** box, type a short description of the category.
5. In the **Users and Groups** section, select the users and groups you want to include in this category. In the **Available User and Groups** list, select the users and groups you want to include in the category, and then click **Add**. Group names will be noted with an asterisk. Hold down the CTRL key to select multiple users and groups. Use the **Add All** button to include all available users and groups in the category. Users and groups added to the category appear in the **Users and Groups with permissions** list.

Use the **Remove** or **Remove All** button to remove any users or groups that are currently included in the category.

For each user or group in the **Users and Groups with permissions** list, specify the permissions that you want the user or group to have when he or she accesses the category. The category permissions list for a selected user or group appears when you select the corresponding user or group in the **Users and Groups with permissions** list.

You can set permissions manually for any user or group or you can apply a security template that contains predefined permission settings.

- To set permissions by using a security template, in the **Users and Groups with permissions** list, select the user or group to which you want to apply the template. Select the template to apply from the list next to the **Set Permissions with Template** button, and then click **Apply**.
- To set permissions manually, select the user or group to which you want to apply permissions from the **Users and Groups with permissions** list. In the Permissions list that appears, click **Allow** or **Deny** for each activity.



**Note:**

For more information about category permissions, see Microsoft Project Server 2010 category permissions.

6. In the **Project** section, specify the projects that users with access to this category can view. There are two options.
  - a. Select **All current and future projects in the Project Server database** if you want users and groups with access to this category to see all projects.
  - b. Select **Only the project indicated** if you want users and groups with access to this category to access only the projects you specify. Select the projects you want to be accessible through the category from the **Available projects** list. Use the **Add** or **Add All** button to move projects to the **Selected projects** list.

Use the **Apply the above Project security permissions to all projects where** option to use dynamic rules to determine which projects that users or groups in this category are allowed to access. Select any of the available options:

| Option                                                                                              | Effect                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| The User is the Project Owner or the User is the Status Manager on assignments within that Project. | Gives users permissions on any project they own. Also gives Status Managers permissions on projects that contain assignments that they manage. |
| The User is on that project's Project Team                                                          | Gives users permissions on any project where they are on the project team. Users do not need to have assignments on the project.               |
| The Project Owner is a descendant of the User via RBS                                               | Gives users permissions on any project that is managed by resources subordinate to them in the Resource Breakdown Structure (RBS) hierarchy.   |
| A resource on the project's Project Team is a descendant of the User via RBS                        | Allows a user to view any project where a resource subordinate to the user in the RBS is on the project team.                                  |

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      |  <b>Note:</b><br>Avoid using this rule for users who have many resources under them in the RBS. If the resources under them are on a lot of projects involving many categories, this stress on the authorization system can affect performance (for example, delay the loading of the Project Center page). |
| The Project Owner has the same RBS value as the User | Allows a user to view projects managed by persons that have the same RBS value that the user has.                                                                                                                                                                                                                                                                                            |



**Note:**

Use of the dynamic rules is enabled by selecting **Only the project indicated**. If you solely want to use dynamic rules to allow your users to access projects, then select **Only the projects indicated**, do not select any projects from the **Available projects list**, and select your dynamic rules. However, it is possible to also select specific projects as well as use dynamic rules to allow your users to access projects. For more information, see [Plan groups, categories, and RBS in Project Server 2010](#).

7. In the **Resources** section, select the resources that the users with access to this category can view. There are three options:
  - a. Select **All current and future resource in the Project Server database** if you want all users and groups who access this category to see information about all resources.



**Note:**

Selecting the **All current and future resource in the Project Server database** option restricts you from using the dynamic rules.

- b. Select **Only the resources indicated** if you want users and groups with access to this category to see only the resources you specify. Select the resources that you want users to see information about from the **Available resources** list. Use the **Add** or **Add All** button to move resources to the **Selected resources** list.
  - c. Use the **Apply the above Resource security permissions to all resources where** option to use dynamic rules to determine which resources that users or groups in this category are allowed to see. You can select any of the available options:

| Dynamic resource rule                                             | Effect                                                                                               |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| The User is the resource                                          | Gives users permissions to view information about themselves (such as assignments).                  |
| They are members of a Project Team on a project owned by the User | Gives users permissions to view information for all resources in projects they own.                  |
| They are descendants of the User via RBS                          | Gives users permissions to view information for all resources under them in the RBS.                 |
| They are direct descendants of the User via RBS                   | Gives users permissions to view information about resources that are directly under them in the RBS. |
| They have the same RBS value as the User                          | Gives user permissions to view information about resources that have the same RBS value.             |

**Note:**

Use of the dynamic rules is enabled by selecting **Only the resources indicated**. If you solely want to use dynamic rules to view resources, then select **Only the resources indicated**, do not select any resources from the **Available Resources list**, and select your dynamic rules. However, it is possible to also select specific resources as well as use dynamic rules to view resources.

8. In the **Views - Add to Category** section, specify which views that the user and group who access this category can view. From the **View** list, select the check box next to the view that you want to add.
9. Click **Save**.

## Additional considerations

When creating categories in Project Server 2010, note the following:

- Avoid creating unnecessary categories. Having a large number of groups and categories within an organization can lead to greater administrative complexity. Additionally, large numbers of groups and categories can stress the authorization system, which can affect performance.
- If there are many users at the highest level of the RBS, consider adding them to a custom category that gives them visibility of all projects (avoiding dynamic rules). Top-level RBS users probably have access to all projects, so assigning them to this category avoids unneeded work by the authorization system.

**See Also**

[Manage categories in Project Server 2010](#)

# Modify a category in Project Server 2010

---

In Microsoft Project Server 2010, you can modify an existing category from the Manage Categories page in on the Microsoft Project Web App (PWA) Server Settings page. You might want to do this, for example, if an existing category needs to be updated for new projects and resources.

Before you perform this procedure, confirm that:

- You have read [Manage categories in Project Server 2010](#).
- You have access to Project Server 2010 through the Project Web App site.



**Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## Modify a category

Perform the following procedure to modify an existing category in Project Server 2010.

 **To modify a category**

1. On the PWA home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Categories**.
3. On the Manage Categories page, in the **Category Name** list, click the name of the category you want to edit.
4. On the Add or Edit Category page, make your changes to the category information.
5. Click **Save**.

**See Also**

[Manage categories in Project Server 2010](#)

# Delete a category in Project Server 2010

---

In Microsoft Project Server 2010, you can delete any existing custom category from the Manage Categories page in Microsoft Project Web App.

**Note:**

Default Project Server categories cannot be deleted.

Before you perform this procedure, confirm that:

- You have read [Manage categories in Project Server 2010](#).
- You have access to Project Server 2010 through the Microsoft Project Web App site.

**Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To delete a category

Perform the following procedure to delete an existing category in Project Server 2010.

### Delete a category

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Categories**.
3. On the Manage Categories page, in the **Category Name** list, find the category that you want to delete. Select the check box next to the category that you want to delete. Note that you can select multiple categories.
4. Click **Delete Categories**.

A warning message appears, noting that the category will be permanently removed.

**Caution:**

Verify that the category you are deleting is the one you intend to delete. If you accidentally delete the wrong category, it is permanently deleted and will need to be recreated.

5. Click **OK**.

**See Also**

[Manage categories in Project Server 2010](#)

# Manage security templates in Project Server 2010

---

*Security templates* provide a means for you to quickly apply or reset predefined permission profiles to new or existing users, groups, and categories. By applying security templates, you can easily standardize the permissions that you assign according to user's role in the organization. A number of predefined security templates are created by default when Microsoft Project Server 2010 is installed. These align with the predefined groups. You can customize these security templates or create new security templates according to your needs.

Creating custom templates requires planning. You must first identify the common Project Server usage patterns in your organization that are not reflected in the default Project Server security templates. This helps you to identify your requirements for custom security templates. Then, determine the permissions that the users who share the common Project Server usage patterns require. This defines the security template. Next, determine the set of projects, resources, views, and so on, that the users and groups require access to; this defines the security category. Create the custom security template and apply it to the group of users that share the common usage pattern. The permissions that you define in the custom security template will enable users to access the Project Server security objects that they require.

Project Server 2010 creates eight default security templates during installation.

- Administrators
- Executives
- Portfolio Managers
- Project Managers
- Proposal Reviewers
- Resource Managers
- Team Leads
- Team Members

Each security template is given a set of default category and global permissions, based on the functions that each group typically does in an organization. As mentioned previously, when creating new security templates, you are allowed to copy the permissions for a default security template and then customize it to suit your needs.

**Note:**

For information about the permissions assigned to default security templates, see Microsoft Project Server 2010 default template and group global permissions.

## Task requirements

The following are required to perform the procedures for this task:

- Access to Project Server 2010 through the Microsoft Project Web App site.
- The **Manage users and groups** global permission in Project Server 2010 to create, modify, or delete a security template.

To manage security templates in Project Server 2010, you can perform the following procedures:

- [Create a security template in Project Server 2010](#)
- [Modify a security template in Project Server 2010](#)
- [Delete a security template in Project Server 2010](#)

### See Also

[Manage security in Project Server 2010](#)

# Create a security template in Project Server 2010

---

In Microsoft Project Server 2010, you can group commonly used permissions into a security template and then use it to assign permissions to users, groups, and categories.

Before you perform this procedure, confirm that:

- You have read [Manage security templates in Project Server 2010](#).
- You have access to Project Server 2010 through the Microsoft Project Web App site.



### Important:

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To create a template

Perform the following procedure to create a template in Project Server 2010.

### ▶ Create a template

1. On the PWA home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Templates**.
3. On the Manage Templates page, click **New Template**.
4. On the Add or Edit Template page, in the **Name** section, do the following:
  - a. In the **Template Name** box, type a name for the template.
  - b. In the **Description** box, type a short description of the template.
  - c. Optionally, you can base the new template on an existing template, and then make any required changes. To do this, select an existing template from the **Copy Template** list. The new template will be populated with the security permissions from the template you selected.
5. In the **Category Permissions** section, select the permissions in the **Allow** or **Deny** column that you want to apply towards projects and resources whenever this template is used to set permissions.

For more information about specific category permissions, see Microsoft Project Server 2010 category permissions.
6. In the **Global Permissions** section, select the permissions in the **Allow** or **Deny** columns that you want to apply across Project Server 2010 whenever this template is used to set permissions.

## Create a security template in Project Server 2010

For more information about specific global permissions, see Microsoft Project Server 2010 global permissions.

7. Click **Save**.

### See Also

[Manage security templates in Project Server 2010](#)

# Modify a security template in Project Server 2010

---

In Microsoft Project Server 2010, you can modify the permissions for any existing template in the Manage Templates page in Microsoft Project Web App Server Settings.

 **Important:**

As a best practice, do not make any changes to the default Project Server templates.

Before you perform this procedure, confirm that:

- You have read [Manage security templates in Project Server 2010](#).
- You have access to Project Server 2010 through the Project Web App site.

 **Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To modify a template

Perform the following procedure to modify an existing template in Project Server 2010.

 **Modify a template**

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Templates**.
3. On the Manage Templates page, in the **Template Name** list, click the template that you want to edit.
4. On the Add or Edit Template page, make your changes to the template.
5. Click **Save**.

**See Also**

[Manage security templates in Project Server 2010](#)

# Delete a security template in Project Server 2010

---

In Microsoft Project Server 2010, you can delete any existing security templates from the Manage Templates page on the Microsoft Project Web App site.

 **Important:**

As a best practice, do not delete any of the default Project Server templates.

Before you perform this procedure, confirm that:

- You have read [Manage security templates in Project Server 2010](#).
- You have access to Project Server 2010 through the Project Web App site.

 **Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To delete a template

Perform the following procedure to delete an existing template in Project Server 2010.

 **Delete a template**

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Manage Templates**.
3. On the Manage Templates page, in the **Template Name** list, select the check box next to the templates that you want to delete.
4. Click **Delete Template**.  
A warning message appears, noting that the template will be permanently removed.
5. Click **OK**.

**See Also**

[Manage security templates in Project Server 2010](#)

# Manage Project Web App permissions in Project Server 2010

---

You can use the Manage Project Web App Permissions page to control which global and category permissions are enabled on a given Microsoft Project Server 2010 instance. An administrator can use the Project Web App Permissions page to deny access to all Project Server 2010 users for a particular feature in Microsoft Project Professional or a Microsoft Project Web App (PWA) instance. If a Project Web App permission is disabled on this page, the equivalent global or category permission is disabled for users throughout WPA. All permissions on this page are enabled by default.

For example, if you deny the **Delete project** permission, users throughout PWA cannot delete projects, regardless of whether they have the Delete project category permission.



## Important:

Before disabling a Project Web App permission, thoroughly consider the effects on your organization of doing so. If you want to turn off a permission for only some Project Web App users, verify whether you can do it by creating a custom group and denying the permissions you want to restrict.

## Task requirements

The following are required to perform the procedures for this task:

- Access to Project Server 2010 through the Project Web App site
- The **Manage users and groups** global permission in Project Server 2010 to manage Project Web App organizational permissions

To manage Project Web App organizational permissions in Project Server 2010, you can perform the following procedure:

- [Disable a Project Web App permission in Project Server 2010](#)

### See Also

[Manage security in Project Server 2010](#)

[Project Server 2010 category permissions](#)

[Project Server 2010 global permissions](#)

# Disable a Project Web App permission in Project Server 2010

---

 **Important:**

In Microsoft Project Server 2010, thoroughly consider the effects on your organization of disabling permissions before making such a change. If the removal of the permission does not need to be applied to all users, then verify whether another approach could be used. For example, could you create a custom group and deny the permission you want to restrict instead of disabling the permission throughout the organization?

Before you perform this procedure, confirm that:

- You have read [Manage Project Web App permissions in Project Server 2010](#).
- You have access to Project Server 2010 through the Microsoft Project Web App site.

 **Important:**

The **Manage users and groups** global permission in Project Server 2010 is required to complete this procedure.

## To disable a Project Web App organizational permission

Perform the following procedure to disable a Project Web App organizational permission in Project Server 2010.

 **Disable a Project Web App permission**

1. On the Project Web App home page, in the Quick Launch, click **Server Settings**.
2. On the Server Settings page, in the **Security** section, click **Project Web App Permissions**.
3. On the **Project Web App Permissions** page, in the **Available Project Web App Permissions** list, clear the **Enable** check box next to the permission that you no longer want to make available to Project Web App users. (All Project Web App permissions are enabled by default.)
4. Click **Save**.

 **Note:**

Enabling a previously disabled permission is simply done by selecting the **Enable** check box next to the permission that has been disabled.

**See Also**

[Manage Project Web App permissions in Project Server 2010](#)

# OLAP database management (Project Server 2010)

---

Through Microsoft Project Web App (PWA), multiple OLAP databases can be delivered that contain the specific resources, projects, and custom fields that each group within your organization requires for its particular group reporting needs.

In Microsoft Project Server 2010, you can create multiple OLAP databases that have the following characteristics:

- They only contain data for projects and resources that they administer
- They only contain facts and dimensions that they select from the new integrated OLAP database management user interface
- They support departmental filtering to restrict which projects, custom fields, and resources are loaded into the OLAP database
- They support selection of intrinsic measures for inclusion/exclusion. For example, you can remove fields that you may not use, such as baseline cost 7, to reduce data clutter.
- They include data for Inactive Tasks and User Scheduled Tasks
- They let you choose whether to add Timephased/NonTimephased data
- They have support for Multiple Measure groups in a single OLAP database
- They contain field names in multiple languages to enable multi-language report creation

Also, when a new OLAP database is created, the necessary Office Data Connections and Excel Reporting templates are created in the Business Intelligence Center in the Reports folder. This data-connected blank template will help you quickly create new reports that are based on the new OLAP database.

For more information about the cubes created within each OLAP database, see [Cube Build Service](http://go.microsoft.com/fwlink/?LinkId=186369) (<http://go.microsoft.com/fwlink/?LinkId=186369>) in the MSDN Library Online.

## Departments

The Department field is a new feature for Project Server 2010. Both projects and resources can have departments. The main purpose of departments is to act as a filter for what custom fields are displayed to users within given areas of Microsoft Project Professional 2010 and PWA. Departments allow for different business units to define and make visible their own set of custom fields. Departments are also used to filter OLAP databases so that only the data for that department is loaded.

When configuring a cube, you can specify both the project and resource departments so that the database data is filtered based on these criteria. These values are specified in the OLAP Database Build Settings page.

Also, within the OLAP database configuration, you can add the Project department field as a dimension to the Project and Tasks cubes. And you can add the Resource department field as a dimension to the Resource cube as long as the department field has not been converted to a multi-value field.

With Project Server 2010, departmental custom fields help relieve the problem of too much information and too many choices. Departments help you manage the custom field list, and help you define, at a resource, task, or project level, which fields are required or not required.

Whereas in Microsoft Office Project Server 2007 all custom fields are globally scoped, which means the fields are available to all users, in Project Server 2010, fields can be globally scoped or they can be scoped to a specific department.

Departmental fields enable two primary functions:

- Filtering custom fields so that a user sees, by default, only those fields that are either global to the system or in the department that the user belongs to.
- Controlling which fields require input.

### Example of departments in use

| Field              | Scope      | Department  | Required? |
|--------------------|------------|-------------|-----------|
| ProjectCustomText1 | Global     | -           | No        |
| ProjectCustomText2 | Global     | -           | Yes       |
| ProjectCustomText3 | Department | Marketing   | No        |
| ProjectCustomText4 | Department | Marketing   | Yes       |
| ProjectCustomText5 | Department | Development | Yes       |
| ProjectCustomText6 | Department | Development | No        |

If John Woods belongs to the Development department, then when he views areas of the product that have departmental custom fields enabled, he will see:

- ProjectCustomText1
- ProjectCustomText2
- ProjectCustomText5
- ProjectCustomText6

John will be required to enter data into ProjectCustomText2 and ProjectCustomText5.

Cindy White belongs to the Marketing department; when she views areas of the product that have departmental custom fields enabled, she will see:

- ProjectCustomText1
- ProjectCustomText2
- ProjectCustomText3

- ProjectCustomText4

Cindy will be required to enter data into ProjectCustomText2 and ProjectCustomText4.

By default, departments filter the list of custom fields that John Woods and Cindy White see. But the filter does not prevent them from viewing custom fields assigned to the other departments.

Departmental fields are not tied into security. You cannot use them with security categories and groups to enable or disable fields and their functions. Instead, their main purpose is to filter out fields which are not useful for the target user.

**Department considerations for cubes**

| Which cubes are filtered by which value | No project department specified                                                                                                                                                                                         | Project department specified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No resource department specified        | All data is loaded for all cubes                                                                                                                                                                                        | Project non-timephased cube<br>Task non-timephased cube<br>Issues cube<br>Risks cube<br>Deliverables cube<br>MSP_Project_WSS virtual cube<br>MSP_Project_Timesheet virtual cube<br>MSP_Portfolio_Analyzer virtual cube<br>Assignment non-timephased cube<br>Assignment timephased cube<br>EPM timesheet cube                                                                                                                                                                                                          |
| Resource department specified           | Assignment non-timephased cube<br>Assignment timephased cube<br>Resource non-timephased cube<br>Resource timephased cube<br>Timesheet cube<br>MSP_Project_Timesheet virtual cube<br>MSP_Portfolio_Analyzer virtual cube | Filtered by Project Department: <ul style="list-style-type: none"> <li>• Project non-timephased cube</li> <li>• Task non-timephased cube</li> <li>• Issues cube</li> <li>• Risks cube</li> <li>• Deliverables cube</li> <li>• MSP_Project_WSS virtual cube</li> </ul> Filtered by Resource & Project Department: <ul style="list-style-type: none"> <li>• Assignment non-timephased cube</li> <li>• Assignment timephased cube</li> <li>• EPM timesheet cube</li> <li>• MSP_Project_Timesheet virtual cube</li> </ul> |

## OLAP database management (Project Server 2010)

| Which cubes are filtered by which value | No project department specified | Project department specified                                                                                                                                                                                                                                            |
|-----------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         |                                 | <ul style="list-style-type: none"> <li>• MSP_Portfolio_Analyzer virtual cube</li> </ul> Filtered by Resource Department: <ul style="list-style-type: none"> <li>• Resource no- timephased cube</li> <li>• Resource timephased cube</li> <li>• Timesheet cube</li> </ul> |

Cubes include assignments for resources in projects that belong to other departments or to no department. This ensures that all data is present when examining data such as a department's resources full calendar capacity.

The subset of projects and resources will be used to filter at the project and timesheet level as follows:

Project non-timephased:

- The data in this cube will be filtered by the departmental project list.
- Projects with assignments to the department's resources will be included.

Task non-timephased:

- Non-departmental tasks with assignments to the department's resources will be included. The full non-departmental project will not be included.
- All tasks for departmental projects will be included.

Assignment non-timephased:

- Non-departmental project assignments for the department's resources will be included.
- All assignments for departmental projects will be included.

Assignment timephased:

- Non-departmental project assignments for the department's resources will be included.
- All assignments for departmental projects will be included.

Deliverables:

- All deliverables owned by the filtered list of projects will be included.
- All deliverables to which the filtered list subscribes and the projects/tasks that subscribe to the filtered list's deliverables will be included.
- All deliverables offered by non-departmental projects that are subscribed to by departmental projects will be included.

Issues:

- Issues connected to the filtered list of projects and tasks will be included.

Risks:

- Risks connected to the filtered list of projects and tasks will be included.

Resource non-timephased:

- Resources in the departmental list will be included.

Resource timephased:

- Resources in the departmental list will be included.

Timesheet:

- Timesheets for departmental list resources will be included.

EPM Timesheet:

- Timesheets for departmental list resources will be included.
- Task assignments from projects outside the department will be included.

Resources are described in three ways in the OLAP databases:

- Fact focus (timesheets, capacity)
- Associated with Facts (project task assignments)
- Owing Facts (project owner, issue owner, assignment owner)

The departmental resource list is used to filter facts with focus (Timesheets). Consequently, a non-departmental resource will never have any timesheets or capacity in the OLAP database if the database has a resource filter. However the non-departmental resource will be in the Resource List dimension if it has association with a departmental project, and will only have the relevant assignment facts.

Resources who own things that have separate dimensions (that is, Assignment Owner) do not have to be in the resource list. The Resource List dimension for a specific OLAP database contains:

- The departmental resources
- All resources with assignments to departmental projects

### **See Also**

[Create an OLAP cube \(Project Server 2010\)](#)

[Configure an OLAP cube \(Project Server 2010\)](#)

[Copy an OLAP cube \(Project Server 2010\)](#)

[Delete an OLAP cube \(Project Server 2010\)](#)

[Build an OLAP cube \(Project Server 2010\)](#)

## Create an OLAP cube (Project Server 2010)

OLAP cubes are managed on the OLAP Database Management page in Server Settings on a Microsoft Project Web App (PWA) site.

To create an OLAP cube, you must have the Manage Cube Building Service Global Permission. Perform the following procedure to create a new OLAP cube.

### To create an OLAP cube

1. On the PWA home page, click **Server Settings**.
2. On the Server Settings page, in the **Database Administration** section, click **OLAP Database Management**.
3. On the OLAP Database Management page, click **New**.
4. Configure the settings on the OLAP Database Build Settings page:

| Setting                                                                       | Description                                                                                                                                                                          |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Analysis Services Server</b>                                               | The name of the instance of Microsoft SQL Server Analysis Services (SSAS) where you want to build the cube.                                                                          |
| <b>Analysis Services Database to be created</b>                               | The name of the database that you want to create.                                                                                                                                    |
| <b>Extranet URL</b>                                                           | The URL for the extranet site.                                                                                                                                                       |
| <b>Description</b>                                                            | A description of this OLAP cube.                                                                                                                                                     |
| <b>Project Departments</b>                                                    | If you have projects assigned to departments, you have the option of choosing the departments that you want to have included in the cube. By default, all departments are included.  |
| <b>Resource Departments</b>                                                   | If you have resources assigned to departments, you have the option of choosing the departments that you want to have included in the cube. By default, all departments are included. |
| <b>Use the earliest project start date and the latest project finish date</b> | Select this option if you want to base the date range of the cube on the earliest start date of any project and the latest finish date of any project.                               |
| <b>Use the following last and next time units to calculate</b>                | Select this option if you want the date range to be configured automatically based on a delta from the date on which the                                                             |

## Create an OLAP cube (Project Server 2010)

|                                                                                                      |                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>the date range at the time that the OLAP database is built</b>                                    | cube is built. In the <b>Last</b> and <b>Next</b> boxes, type the number of days, weeks, or months that you want to use for the delta.                                                                                   |
| <b>Use the fixed date range specified below</b>                                                      | Select this option if you want to use a fixed date range. In the <b>From</b> and <b>To</b> boxes, type the dates that you want to use.                                                                                   |
| <b>Update periodically</b>                                                                           | Select this option if you want to schedule an update frequency. If this option is not selected, the cube is not updated automatically.                                                                                   |
| <b>Immediately retry the OLAP database update if scheduled time fails because of queue down time</b> | If the scheduled cube build fails because the queue is not available, selecting this option causes the build job to start automatically when the queue becomes available instead of waiting for the next scheduled time. |
| <b>Update every</b>                                                                                  | Select the number of hours, days, weeks, or months for the cube to be rebuilt.                                                                                                                                           |
| <b>Start date</b>                                                                                    | Select the start date for the first automated cube build.                                                                                                                                                                |
| <b>Start time</b>                                                                                    | Select the start time for each automated cube build.                                                                                                                                                                     |

5. Click **Save**.

## Configure an OLAP cube (Project Server 2010)

OLAP cubes are managed on the OLAP Database Management page in Server Settings on a Microsoft Project Web App (PWA) site. You can configure OLAP cube dimensions and measures, or you can configure the build settings of a cube.

To configure an OLAP cube, you must have the Manage Cube Building Service Global Permission.

There are two sets of parameters that can be configured on an existing OLAP cube:

- Dimensions and measures
- Cube build settings

Perform the following procedure to configure the dimensions and measures of an existing OLAP cube.

### ► To configure OLAP cube dimensions and measures

1. On the PWA home page, click **Server Settings**.
2. On the Server Settings page, in the **Database Administration** section, click **OLAP Database Management**.
3. On the OLAP Database Management page, select an OLAP database from the list, and then click **Configuration**.
4. Configure the settings on the Database Configuration page:

| Setting                    | Description                                                                                                                                     |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cube Dimensions</b>     | Select the cube from the drop-down list and choose the additional data elements that you want to add to provide additional groups.              |
| <b>Cube Measures</b>       | Select the cube from the drop-down list and choose the fields that you want to include in the cube. This adds more data that can be aggregated. |
| <b>Built-in Measures</b>   | Select the built-in measures that you want to include in the cube.                                                                              |
| <b>Inactive Tasks</b>      | If you want the cube to include inactive tasks, select the <b>Include Inactive Tasks</b> check box.                                             |
| <b>Calculated Measures</b> | Click <b>Insert</b> to add a custom MDX expression.                                                                                             |

5. Click **Save**.

Perform the following procedure to configure the build settings of an existing OLAP cube.

► To configure OLAP cube build settings

1. On the PWA home page, click **Server Settings**.
2. On the Server Settings page, in the **Database Administration** section, click **OLAP Database Management**.
3. On the OLAP Database Management page, in the **OLAP Database Name** column, click the database that you want to configure.
4. Configure the settings on the OLAP Database Build Settings page:

| Setting                                                                                                                   | Description                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Analysis Services Server</b>                                                                                           | The name of the instance of Microsoft SQL Server Analysis Services (SSAS) where you want to build the cube.                                                                                                                                  |
| <b>Analysis Services Database to be created</b>                                                                           | The name of the database that you want to create.                                                                                                                                                                                            |
| <b>Extranet URL</b>                                                                                                       | The URL for the extranet site.                                                                                                                                                                                                               |
| <b>Description</b>                                                                                                        | A description of this OLAP cube.                                                                                                                                                                                                             |
| <b>Project Departments</b>                                                                                                | If you have projects assigned to departments, you have the option of selecting the departments that you want to have included in the cube. By default, all departments will be included.                                                     |
| <b>Resource Departments</b>                                                                                               | If you have resources assigned to departments, you have the option of selecting the departments that you want to have included in the cube. By default, all departments will be included.                                                    |
| <b>Use the earliest project start date and the latest project finish date</b>                                             | Select this option if you want to base the date range of the cube on the earliest start date of any project and the latest finish date of any project.                                                                                       |
| <b>Use the following last and next time units to calculate the date range at the time that the OLAP database is built</b> | Select this option if you want the date range to be configured automatically based on a delta from the date on which the cube is built. In the <b>Last</b> and <b>Next</b> boxes, type the number of days, weeks, or months that you want to |

## Configure an OLAP cube (Project Server 2010)

|                                                                                                      |                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                      | use for the delta.                                                                                                                                                                                                           |
| <b>Use the fixed date range specified below</b>                                                      | Select this option if you want to use a fixed date range. In the <b>From</b> and <b>To</b> boxes, type the dates that you want to use.                                                                                       |
| <b>Update periodically</b>                                                                           | Select this option if you want to schedule an update frequency. If this option is not selected, the cube will not be updated automatically.                                                                                  |
| <b>Immediately retry the OLAP database update if scheduled time fails because of queue down time</b> | If the scheduled cube build fails because the queue is not available, selecting this option will cause the build job to start automatically when the queue becomes available instead of waiting for the next scheduled time. |
| <b>Update every</b>                                                                                  | Select the number of hours, days, weeks, or months for the cube to be rebuilt.                                                                                                                                               |
| <b>Start date</b>                                                                                    | Select the start date for the first automated cube build.                                                                                                                                                                    |
| <b>Start time</b>                                                                                    | Select the start time for each automated cube build.                                                                                                                                                                         |

5. Click **Save**.

## Copy an OLAP cube (Project Server 2010)

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OLAP cubes are managed on the OLAP Database Management page in Server Settings on a Microsoft Project Web App (PWA) site.

To copy an OLAP cube, you must have the Manage Cube Building Service Global Permission. Perform the following procedure to copy an existing OLAP Cube.

### To copy an OLAP cube

1. On the PWA home page, click **Server Settings**.
2. On the Server Settings page, in the **Database Administration** section, click **OLAP Database Management**.
3. On the OLAP Database Management page, select the cube that you want to copy, and then click **Copy**.
4. On the OLAP Database Build Settings page, type the name of the server and the database that you want created and adjust any other desired settings.
5. Click **Save**.



#### **Note:**

This procedure copies the cube configuration but does not build the cube. You can build the cube manually or wait for it to build on the schedule that you set.

## Delete an OLAP cube (Project Server 2010)

---

OLAP cubes are managed on the OLAP Database Management page in Server Settings on a Microsoft Project Web App (PWA) site.

To delete an OLAP cube, you must have the Manage Cube Building Service Global Permission. Perform the following procedure to delete an OLAP Cube.

### To delete an OLAP cube

1. On the PWA home page, click **Server Settings**.
2. On the Server Settings page, in the **Database Administration** section, click **OLAP Database Management**.
3. On the OLAP Database Management page, select the cube that you want to delete, and then click **Delete**.



#### **Note:**

This procedure deletes the cube and its associated configuration from Microsoft Project Server. The actual OLAP database is not deleted from Microsoft SQL Server Analysis Services (SSAS).

## Build an OLAP cube (Project Server 2010)

---

OLAP cubes are managed on the OLAP Database Management page in Server Settings on a Microsoft Project Web App (PWA) site.

OLAP cubes can be scheduled to be built on a regular basis. For more information, see [Configure an OLAP cube \(Project Server 2010\)](#). You can also start the build process manually.

To build an OLAP cube, you must have the Manage Cube Building Service Global Permission. Perform the following procedure to build an existing OLAP cube.

### To build an OLAP cube

1. On the PWA home page, click **Server Settings**.
2. On the Server Settings page, in the **Database Administration** section, click **OLAP Database Management**.
3. On the OLAP Database Management page, select the cube that you want to build, and then click **Build Now**.

## Database management (Project Server 2010)

---

This section covers database maintenance procedures.

In this section:

- [Move the Reporting database to a new server \(Project Server 2010\)](#)
- [Move all databases to a different server \(Project Server 2010\)](#)
- [Configure availability by using SQL Server database mirroring \(Project Server 2010\)](#)

# Move the Reporting database to a new server (Project Server 2010)

---

Microsoft Project Server 2010 performance can be improved by deploying the Reporting database to a separate instance of Microsoft SQL Server from the other three Project Server databases. If you want to move the Reporting database to a different instance of SQL Server after you have deployed your Microsoft Project Web App (PWA) site, you can do so by using the procedures in this article.

Moving the Reporting database is a major maintenance procedure and should be done at a time of minimal system activity. Users cannot access the PWA site while you are performing these procedures.

The basic steps involved in moving the Reporting database are as follows:

1. Unprovision the PWA site
2. Detach the Reporting database
3. Copy the Reporting database to the new instance of SQL Server
4. Attach the Reporting database to the new instance of SQL Server
5. Reprovision the PWA site

## Video demonstration

This video shows the steps involved in moving the Reporting database to a new instance of Microsoft SQL Server.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=202555) (http://go.microsoft.com/fwlink/?LinkId=202555). To download the video file, right-click the link, and then click **Save Target As**.

## Unprovision the PWA site

When moving the Reporting database, you must unprovision the PWA site as a first step. This removes references to the site from Microsoft SharePoint Server 2010 without making any changes to the site itself. Once you have done this, you can reconfigure PWA by moving the Reporting database and then reprovision the PWA site.

### To unprovision the PWA site

1. In the SharePoint Central Administration Web site, in the **Application Management** section, click **Manage service applications**.
2. On the Manage Service Applications page, click the Project Server service application.
3. On the Manage Project Web App Sites page, click the drop-down menu for the PWA site where you want to move the reporting database, and then click **Delete**.

## Move the Reporting database to a new server (Project Server 2010)

4. On the Delete Project Web App Site page:
  - a. Clear the **Delete site collection from SharePoint** check box.



### Caution:

The **Delete site collection from SharePoint** check box must be cleared or else the PWA site will be deleted from the Content database.

- b. Click **Delete**.

Unprovisioning the site may take several minutes. Once the PWA site is no longer listed on the Manage Project Web App Sites page, it is unprovisioned and you can move the reporting database.

## Move the reporting database

The Reporting database can be moved by detaching it from the current instance of SQL Server and attaching it to the new instance of SQL Server. We recommend that you have your database administrator perform these steps if you are unfamiliar with moving databases in SQL Server.

### ▶ To move the Reporting database

1. Start SQL Server Management Studio.
2. Connect to the instance of SQL Server where the Reporting database is located.
3. In Object Explorer, expand **Databases**.
4. Right-click the Reporting database, click **Tasks**, and then click **Detach**.
5. Copy the database files (.mdf and .ldf files) to the new instance of SQL Server.
6. In SQL Server Management Studio, in Object Explorer, click **Connect**, and then click **Database Engine**.
7. Connect to the instance of SQL Server where you copied the Reporting database.
8. Right-click **Databases** and then click **Attach**.
9. Click **Add**.
10. Select the Reporting database (.mdf) file and then click **OK**.
11. Click **OK**.

Once the Reporting database is attached to the new instance of SQL Server, you can reprovision the PWA site.

## Reprovision the PWA site

Reprovisioning the PWA site is achieved by adding a new PWA site and connecting it to your existing databases and site collection. This is performed from SharePoint Central Administration.

### ▶ To update PWA properties

## Move the Reporting database to a new server (Project Server 2010)

1. In SharePoint Central Administration, in the **Application Management** section, click **Manage service applications**.
2. Click the Project Server service application.
3. On the Manage Project Web App Sites page, click **Create Project Web App site**.
4. On the Create Project Web App Site page:
  - a. Check all settings to make sure that they match the PWA site that you unprovisioned. Database names must exactly match the databases in SQL Server for this PWA site.
  - b. In the **Reporting Database** section, make sure that the values for **Reporting database server** and **Reporting database name** correspond to the Reporting database that you just moved.
5. Click **OK**.

Once the PWA site has been reprovisioned (when the status is **Provisioned**), the users can return to using PWA as usual.

# Move all databases to a different server (Project Server 2010)

---

If you want to move the databases associated with a Microsoft Project Web App (PWA) site to a different instance of Microsoft SQL Server, you can do so by using the procedures in this article.

Moving the PWA databases is a major maintenance procedure and should be done at a time of minimal system activity. Users cannot access the PWA site while you are performing these procedures.



**Note:**

This article describes how to move the Microsoft Project Server 2010 databases to a new instance of SQL Server while keeping the same PWA site. For information about how to move your Project Server databases to a different PWA site, see [Move all databases \(Project Server 2010\)](#).

The basic steps involved in moving a database are as follows:

1. Unprovision the PWA site
2. Detach the databases
3. Copy the databases to the new instance of SQL Server
4. Attach the databases to the new instance of SQL Server
5. Reprovision the PWA site

## Unprovision the PWA site

When moving the PWA databases, you must unprovision the PWA site as a first step. This removes references to the site from Microsoft SharePoint Server 2010 without making any changes to the site itself. Once you do this, you can reconfigure PWA by moving the reporting database and then reprovision the PWA site.

### ▶ To unprovision the PWA site

1. In the SharePoint Central Administration Web site, under **Application Management**, click **Manage service applications**.
2. On the Manage Service Applications page, click the Project Server service application.
3. On the Manage Project Web App Sites page, point to the PWA site where the databases that you want to move reside, click the arrow that appears, and then click **Delete**.
4. On the Delete Project Web App Site page:
  - a. Clear the **Delete site collection from SharePoint** check box.



**Important:**

## Move all databases to a different server (Project Server 2010)

The **Delete site collection from SharePoint** check box must be cleared or the PWA site will be deleted from the content database.

- b. Click **Delete**.

Deprovisioning the site may take several minutes. Once the PWA site is no longer listed on the Manage Project Web App Sites page, it is deprovisioned and you can continue with moving the databases.

## Move the databases

Any combination of the following databases can be moved:

- The Draft, Published, and Archive databases
- The Reporting database
- The SharePoint Server content database where the PWA site and project workspaces reside

You can move any or all of these databases to different instances of SQL Server. The Draft, Published, and Archive databases must reside on the same instance of SQL Server. The Reporting database and SharePoint Server content database can reside on different instances of SQL Server if you want.

If you plan to move the SharePoint Server content database, you must follow the recommended procedures published for SharePoint Server 2010. For more information, see [Move content databases \(SharePoint Server 2010\)](#).



### Important:

If you are going to move the content database, you must do so while the PWA site is deprovisioned. Follow the published SharePoint Server 2010 procedures for moving a content database and then complete the rest of the procedures shown here.

Each Project Server database can be moved by detaching it from the current instance of SQL Server and attaching it to the new instance of SQL Server. We recommend that you have your database administrator follow these steps if you are unfamiliar with moving databases in SQL Server. Perform the following procedure for each database that you want to move.

### ▶ To move a database

1. Start SQL Server Management Studio.
2. Connect to the instance of SQL Server where the database is located.
3. In Object Explorer, expand **Databases**.
4. Right-click the database that you want to move, click **Tasks**, and then click **Detach**.
5. Copy the database files (.mdf and .ldf files) to the new instance of SQL Server.
6. In SQL Server Management Studio, in Object Explorer, click **Connect**, and then click **Database Engine**.
7. Connect to the instance of SQL Server where you copied the database.
8. Right-click **Databases** and then click **Attach**.

## Move all databases to a different server (Project Server 2010)

9. Click **Add**.
10. Select the database file (.mdf file) and then click **OK**.
11. Click **OK**.

Once you have finished moving the databases, you can reprovision the PWA site.

## Reprovision the PWA site

Reprovisioning the PWA site is achieved by adding a new PWA site and connecting it to your existing databases and site collection. This is performed from SharePoint Central Administration.

### To update PWA properties

1. In SharePoint Central Administration, under **Application Management**, click **Manage service applications**.
2. Click the Project Server service application.
3. On the Manage Project Web App Sites page, click **Create Project Web App site**.
4. On the Create Project Web App Site page, check all settings to make sure that they match the PWA site that you deprovisioned.



#### **Important:**

Database names must exactly match the databases in SQL Server for this PWA site, and database server names must correspond to the instances of SQL Server where you reattached the databases.

5. Click **OK**.

Once the PWA site is reprovisioned (when the status is **Provisioned**), the users can return to using PWA as usual.

## Configure availability by using SQL Server database mirroring (Project Server 2010)

---

Microsoft SQL Server database mirroring provides availability support by sending transactions directly from a principal database and server to a mirror database and server. This can provide redundancy for the four Microsoft Project Server 2010 databases and for the associated content database. This is useful in the event of a system failure, and also for regular system maintenance.

This article describes requirements for using database mirroring with a Microsoft Project Web App (PWA) site. This article applies specifically to the four Project Server 2010 databases (Draft, Published, Archive, and Reporting), and also to the Microsoft SharePoint Server 2010 content database associated with PWA. For information about database mirroring for the rest of your SharePoint Server 2010 farm, see [Configure availability by using SQL Server clustering \(SharePoint Server 2010\)](#)

Database mirroring for Project Server 2010 can only be configured by using Windows PowerShell. When you create a new PWA site, use the **New-SPProjectWebInstance** cmdlet; when you update an existing PWA site for use with database mirroring, use the **Set-SPProjectWebInstance** cmdlet. By using these cmdlets, you can specify the primary and secondary mirroring servers for the four Project Server 2010 databases.

For detailed information about how to configure database mirroring in SQL Server, see [Database Mirroring](#).



**Important:**

Project Server 2010 requires synchronous mirroring.

### Failover considerations

Project Server 2010 requires manual failover for the Draft, Published, and Archive databases. These databases all interact with one another. These databases must all reside on the same instance of SQL Server. Using automatic failover with a witness server could cause one of these databases to fail over to the mirror server while the other databases remain on the primary server. This could result in failures in Project Server Interface (PSI) calls and other Project Server functionality. When you have to fail over the Draft, Published, or Archive database, manually fail over all three of them to the secondary server at the same time.

The Reporting database operates independently of the other three Project Server databases. Use of a witness server and automatic failover for the Reporting database is supported.

When failing over the Project Server databases for the purposes of system maintenance or other non-urgent tasks, we recommend failing over during a time of low usage for the system. This minimizes the time that is required for log-redo tasks on the secondary server and lets you bring Project Server online on the secondary server faster.

## Video demonstration

This video shows the steps involved in configuring database mirroring.

[Watch the video](http://go.microsoft.com/fwlink/?LinkId=202557) (http://go.microsoft.com/fwlink/?LinkId=202557). To download a copy of the video file, right-click the link, and then click **Save Target As**.

## Configuration

We recommend that you configure mirroring at a time of minimal system use. This speeds initial database synchronization.

Before you configure SQL Server mirroring, ensure that any database access accounts that are used by SharePoint Server or Project Server are duplicated on the instance of SQL Server where you plan to deploy your mirrored databases. This includes the Farm Administrator account and any other accounts that you might use for database access related to Project Server.

We recommend that you transfer your logins and permissions from the principal server to the mirror server by running a script. An example script is available in [Knowledge Base article 918992 How to transfer the logins and the passwords between instances of SQL Server 2005](#)

(http://go.microsoft.com/fwlink/?LinkId=122053&clcid=0x409). For more information about how to transfer SQL Server metadata between instances, see the SQL Server Books Online article [Managing Metadata When Making a Database Available on Another Server Instance](#)

(http://go.microsoft.com/fwlink/?LinkId=122055&clcid=0x409).

SQL Server mirroring requires that the recovery model be set to Full on each database that you plan to mirror. Full recovery is the default for Project Server databases, but we recommend that you confirm this setting before configuring mirroring.

Perform the following procedure for each Project Server database that you plan to mirror.

### To set the recovery model

1. In SQL Server Management Studio, expand **Databases**.
2. Right-click the database, and then click **Properties**.
3. In the left pane, select **Options**.
4. From the **Recovery model** list, choose **Full**.
5. Click **OK**.

Once you have verified the recovery model, you must do the following:

1. Configure SQL Server mirroring in SQL Server for each database that you want to mirror.
2. Configure the PWA settings to point to the mirror server.
3. If you are mirroring the content database, configure SharePoint Server to mirror that content database.

## Configure mirroring on SQL Server

You must back up each database that you plan to mirror and restore it to the instance of SQL Server where you want the mirror to reside. A transaction log backup is also required.



### Important:

The Draft, Archive, and Published databases must all be running on the same instance of SQL Server. If you mirror one of them, you must mirror all three of them.

Perform the following procedures on each Project Server database that you plan to mirror.

### ▶ To back up a database

1. In SQL Server Management Studio, expand **Databases**.
2. Right-click the database, click **Tasks**, and then click **Back up**.
3. Confirm that the backup type is **Full**.
4. Set the backup destination to **Disk** and choose a location on the local disk.
5. Click **OK**.

Once the database backup has finished, you must back up the transaction log.

### ▶ To back up the transaction log

1. In SQL Server Management Studio, expand **Databases**.
2. Right-click the database, click **Tasks**, and then click **Back up**.
3. In the **Backup type** list, select **Transaction Log**.
4. Set the backup destination to the same file and location as the Full backup.
5. Click **OK**.

Once you have backed up each database, copy the database backup files to the instance of SQL Server where you want to create the mirror.

On the instance of SQL Server where you want to create the mirror, restore each database by using the following procedure.

### ▶ To restore a database for mirroring

1. In SQL Server Management Studio, right-click **Databases**, and then click **Restore Database**.
2. In the **To database** box, type the name of the database that you are restoring.
3. Select the **From device** option, and then click **Browse**.
4. In the **Specify Backup** dialog box, confirm that the **Backup media type** is **File** and then click **Add**.
5. Navigate to the location of your backup files and select the database that you want to restore.
6. Click **OK**.

## Configure availability by using SQL Server database mirroring (Project Server 2010)

7. Click **OK**.
8. In the **Select backup sets to restore** table, select the check boxes for both the **Full** and **Transaction Log** backups.
9. In the left pane, click **Options**.
10. In the **Recovery state** section, select the **RESTORE WITH NORECOVERY** option.



### **Important:**

You must restore the database by using NORECOVERY for mirroring to function.

11. Click **OK**.

Once the backups have been restored, you can configure mirroring. For each database that you want to mirror, perform the following procedure on the instance of SQL Server where your active databases reside.

### **To configure mirroring**

1. In SQL Server Management Studio, expand **Databases**.
2. Right-click the database that you want to mirror, click **Tasks**, and then click **Mirror**.
3. On the **Database Properties** dialog box, click **Configure Security**.
4. On the wizard, click **Next**.
5. On the **Include Witness Server** page, select the **No** option, and then click **Next**.
6. On the Principal Server Instance page, click **Next**.
7. On the Mirror Server Instance page, click **Connect**.
8. On the **Connect to Server** dialog box, type the name of the mirror server, and then click **Connect**.
9. Click **Next**.
10. On the Service Accounts page, type the names of the service accounts for the Principal and Mirror servers, and then click **Next**.
11. Click **Finish**.
12. When the **Configuring Endpoints** dialog box shows **Success**, click **Close**.
13. On the **Database Properties** dialog box, click **Start Mirroring**.
14. Click **OK**.

Once SQL Server is configured for mirroring, you must configure Project Server. You must also configure SharePoint Server if you are mirroring the content database.

## Configure Project Server for mirroring

Configuring Project Server for mirroring involves using the Windows PowerShell **Set-SPProjectWebInstance** cmdlet to set the mirror server for the Project Server database that you are

## Configure availability by using SQL Server database mirroring (Project Server 2010)

mirroring. The **-PrimaryDBMirrorServer** parameter configures the mirror server for the Draft, Archive, and Published databases. The **-ReportingDBMirrorServer** parameter configures the mirror server for the Reporting database.

Perform the following procedure on the application server where Project Server is running.

### ▶ To configure mirroring in Project Server

1. Click **Start, All Programs, Microsoft SharePoint 2010 Products**.
2. Right-click **SharePoint 2010 Management Shell**, and then click **Run as administrator**.
3. Run the Windows PowerShell **Set-SPPProjectWebInstance** cmdlet with the appropriate values for your mirror servers. For example:

```
Set-SPPProjectWebInstance -AdminAccount Litware\FarmAdmin -ArchiveDbname Proj_Archive -
DraftDbname Proj_Draft -PrimaryDbserver SQL1 -PublishedDbname Proj_Pub -ReportingDbname
Proj_Rep -ReportingDbserver SQL1 -PrimaryDBMirrorServer SQL2 -ReportingDBMirrorServer
SQL2 -Url http://SharePointFarm/pwa
```

Database mirroring configuration is now complete for the Project Server databases.

## Configure SharePoint Server for mirroring

If you are mirroring the content database, you must configure the **Failover Database Server** settings in the SharePoint Central Administration Web site after database mirroring has been configured in SQL Server. Perform the following procedure for the content database if you are mirroring the content database.

### ▶ To configure SharePoint Server to mirror the content database

1. In Central Administration, under **Application Management**, click **Manage content databases**.
2. In the **Database Name** section, click the Project Server content database that you want to mirror.
3. On the Database settings page, in the **Failover Database Server** box, type the name of your mirror server.
4. Click **OK**.

The content database is now configured to enable failover to the mirror server.

## Failing over databases

You can decide to fail databases over to the mirror server for several reasons, including the need to perform maintenance on the primary server, or in response to a hardware failure on the primary server.

When failing over Project Server databases, be aware of the following:

## Configure availability by using SQL Server database mirroring (Project Server 2010)

- The Draft, Archive, and Published databases must all be running on the same instance of SQL Server. If you fail one of them over, you must fail over the other two also. The Reporting database and the content database can each be failed over independently.
- Failing over databases is not a method of moving databases to a new server permanently. Project Server is still configured to use the original database server; it merely redirects database calls to the mirror server until you fail the databases back to the original server.

Failing over a mirrored database is done through SQL Server. Use the following procedure to fail over a database to the mirror server. Perform this procedure on the instance of SQL Server where the mirroring Principal is located (not the mirror).

### To fail a database over to the mirror server

1. In SQL Server Management Studio, expand **Databases**.
2. Right-click the database, click **Tasks**, and then click **Mirror**.
3. Click **Failover**.
4. On the confirmation dialog box, click **Yes**.

When you fail over a database, SQL Server will swap roles between the principal and mirror servers — the mirror will become the principal and the principal will become the mirror. To fail back, perform the same procedure on the instance of SQL Server where the now-principal database is located.

Note that if you fail over databases in response to a hardware failure or other problem on the primary server, the farm can run on the mirror server as long as necessary. However, you will not have database redundancy until you fix the failure and reconfigure mirroring.

When you have completed the necessary maintenance or repairs on the primary server, make sure that you fail your databases back to the original server.

# Add or remove Project Web App Web Parts for a site in the Project Web App site collection (Project Server 2010)

---

You can add or remove a Microsoft Project Web App Web Part from a Web site that resides in the same site collection as the Project Web App (PWA) instance. For sites that are in the same site collection as the Project Web App instance, the Project Web App Web Parts are readily available for you to add from the Web Part Gallery.

If you want to add a Project Web App Web Part to a site that is not in the Project Web App site collection, you must import the PWA Web Parts into the Web Part Gallery for the site. For more information about how to add a PWA Web Part to a site not in the PWA site collection, see [Add Project Web App Web Parts to a site not within the Project Web App site collection \(Project Server 2010\)](#).

This article contains the following sections:

- [Requirements to add or remove a Project Web App Web Part from a Web Parts page](#)
- [Add a Project Web App Web Part to a page](#)
- [Remove a Project Web App Web Part from a page](#)

For more information about Project Web App Web Parts in Microsoft Project Server 2010, see the following articles:

- [Plan for Project Server 2010 Web Parts](#)
- [Add Project Web App Web Parts to a site not within the Project Web App site collection \(Project Server 2010\)](#)
- [Upgrade considerations for Project Web App Web Parts](#)

## Requirements to add or remove a Project Web App Web Part from a Web Parts page

There are two requirements for a user to add a Web Part to a Web Parts page:

- You must have at least SharePoint "Design" permissions to the page.



**Note:**

The SharePoint "Design" permission is not required to add a Web Part when you are personalizing pages that are viewable only by you.

- You must have a supported browser. Project Web App requires Windows Internet Explorer 7 or 8.



**Note:**

## Add or remove Project Web App Web Parts for a site in the Project Web App site collection (Project Server 2010)

Ensure that all Project Web App users are using supported browsers. Microsoft SharePoint Server 2010 supports additional browsers that are not supported by Project Web App. For more information, see [Plan browser support \(Project Server 2010\)](#).

### Add a Project Web App Web Part to a page

When you are adding a Project Web App Web Part to a page in a Web site that resides in the same site collection as Project Web App, it can be added through the user interface in the following ways:

#### ▶ To add a Project Web App Web Part to a page

1. On the Web page, click the **Site Actions** menu, and then click **Edit Page**.  
The page appears in Edit Mode. In Edit mode, the Web Parts page for the site lets you add Web Parts to different areas on the page (Header, Left, Middle, Right, and Footer).
2. Click **Add a Web Part** in the location in which you want to add the Web Part.
3. On the Browse server ribbon, in the **Category** list, select **Project Web Access**. Web Parts that are contained in the Project Web Access category appear in the Web Parts list.
4. Select the Web Part that you want to add to the site and then click **Add**.  
When you select a Web Part, a brief description of it appears in the About Web Part section.
5. The page appears with the added Web Part, but is still in Edit Mode. When you are finished adding Web Parts to the page, click the **Page** tab to display the Page server ribbon, and then click **Stop Editing**.

Or, you can add a Web Part to a Web Parts page by using the Insert server ribbon.

#### ▶ To add a Web Part to a page by using the Insert server ribbon

1. On the Web page, click the **Site Actions** menu, and then click **Edit Page**.  
The page appears in Edit Mode.
2. Click the **Page** tab, and then click **Insert** to display the Insert server ribbon. Click **Web Part**.
3. In the **Category** list, select **Project Web Access**. Web Parts that are contained in the Project Web Access category appear in the Web Parts list.
4. Select the Web Part that you want to add to the site.  
A brief description of that Web Part appears in the About Web Part section.
5. In the About Web Part section, specify a location by using the **Add Web Part to** control. Choose a location from that drop-down list, and then click **Add**.  
The page then appears with the added Web Part, but it is still in Edit Mode.
6. When you are finished adding Web Parts to the page, click the **Page** tab to display the Page server ribbon, and then click **Stop Editing**.

## Remove a Project Web App Web Part from a page

The procedure for removing a PWA Web Part from a page is the same for a site in the PWA site collection or a site not in the PWA site collection.

### To remove a Web Part from a page

1. On the Web page, click the **Site Actions** menu, and then click **Edit Page**.  
The page appears in Edit Mode.
2. Select the Web Part that you want to remove, click the Web Part menu (which is the downward pointing arrow next to the check box in the upper-right corner of the Web Part), and then click **Delete**.
3. In the **Message from Web Part** dialog box, click **OK** to confirm that you want to delete the Web Part.  
The page appears with the Web Part removed, but it is still in Edit Mode.
4. Click the **Page** tab to display the Page server ribbon, and then click **Stop Editing**.

### See Also

[Upgrade considerations for Project Web App Web Parts](#)

[Plan for Project Server 2010 Web Parts](#)

[Add Project Web App Web Parts to a site not within the Project Web App site collection \(Project Server 2010\)](#)

[Manage Web Parts \(SharePoint Server 2010\)](#)

[Developing Project Server 2010 Web Parts](#)

## Add Project Web App Web Parts to a site not within the Project Web App site collection (Project Server 2010)

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You can add Microsoft Project Web App Web Parts to a site that is not in a Project Web App (PWA) site collection. Sites that are not in the same site collection as the Project Server 2010 instance do not have the PWA Web Parts in the Web Part Gallery for the site collection. Sites that are in the farm but not in the same site collection as the PWA instance have two requirements for you to add PWA Web Parts to them:

- The PWA Web Part must be imported into the Web Part Gallery for the site collection.
- If the PWA Web Part has a ribbon dependency, the Project Web App server ribbon must be enabled on the site.



**Note:**

There are additional actions that you must take if the site on which your Project Web Access Web Parts reside was upgraded from Microsoft Office SharePoint Server 2007. For more information, see the [Fix the upgraded Project Web App Web Parts on sites not in the same site collection as Project Web App](#) section of [Upgrade considerations for Project Web App Web Parts](#).

For more information about PWA Web Parts in Project Server 2010, see the following articles:

- [Plan for Project Server 2010 Web Parts](#)
- [Add or remove Project Web App Web Parts for a site in the Project Web App site collection \(Project Server 2010\)](#)
- [Upgrade considerations for Project Web App Web Parts](#)

## Import a Project Web App Web Part into a Web Part Gallery for a site collection

A site that is not in the Project Web App site collection does not have the Project Web App Web Parts available for use. They must be imported to the Web Part Gallery of the site collection to make them available to load to sites in the site collection. The PWA Web Parts must be imported from an existing site that is already in a Project Web App site collection on the farm. Use the following steps to import PWA Web Parts from a site in the PWA site collection to the Web Part Gallery of the site that is not in the PWA site collection.

▶ **To upload the Project Web App Web Part to the Web Part Gallery**

## Add Project Web App Web Parts to a site not within the Project Web App site collection (Project Server 2010)

1. Open a site in the Project Web App site collection.
2. Click **Site Actions**, and then click **Site Settings**. On the Site Setting page, in the **Galleries** section, click **Web Parts**.
3. On the All Web Parts page, in the Web Parts section, select the check box next to all of the PWA Web Parts that you want to import to the other site.
4. Click the **Documents** tab to display the Documents server ribbon. Click **Download a Copy**. In the **File Download** dialog box, click **Save**. In the **Save As** dialog box, select a convenient location to save the Web Part to and then click **Save**.
5. Open the site to which you want to import the PWA Web Parts. On this site, click **Site Actions**, and then click **Site Settings**. On the Site Settings page, in the **Galleries** section, click **Web Parts**.
6. Click the **Documents** tab to display the Documents server ribbon. Click **Upload Document**.
7. Select the Web Parts you want to import from the location that you saved them to, and then upload them to the Web Part Gallery.

## Enable the Project Web App Server ribbon on the site

Some PWA Web Parts require the Project Web App Server ribbon to be on the page in order to use them. If the Web Part has a ribbon dependency and the Web Part is added to a non-Project Web App site collection, the ribbon feature must be enabled on the target site collections.

The PWA Web Parts that have a ribbon dependency are as follows:

- Project Details
- Project Center
- Resource Assignments
- Resource Center
- My Tasks
- Approval Center
- Team Tasks
- My Schedule
- My Timesheet

Use the following procedure to enable the Project Web App Server ribbon feature on a site if the PWA Web Part that you are adding has a dependency on it:

### To enable the ribbon feature on a site

1. On the site on which you want to enable the ribbon, click the **Site Actions** menu, and then click **Site Settings**.

## Add Project Web App Web Parts to a site not within the Project Web App site collection (Project Server 2010)

2. On the Site Settings page, in the **Site Collection Administration** section, click **Site Collection Features**.
3. On the Site Collection Administration-Features page, find **Project Web App Ribbon** and then click the **Activate** button to the right of it.

### See Also

[Plan for Project Server 2010 Web Parts](#)

[Add or remove Project Web App Web Parts for a site in the Project Web App site collection \(Project Server 2010\)](#)

[Upgrade considerations for Project Web App Web Parts](#)

[Manage Web Parts \(SharePoint Server 2010\)](#)

[Developing Project Server 2010 Web Parts](#)

# Security and protection for Project Server 2010

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This section provides information and best practices about how to make the Microsoft Project Server 2010 system more secure and how to help protect data.

- [Security and protection for SharePoint Server 2010](#)
- [Plan for authentication in Project Server 2010](#)
- [Plan groups, categories, and RBS in Project Server 2010](#)
- [Project Server 2010 global permissions](#)
- [Project Server 2010 category permissions](#)

# Troubleshooting for Project Server 2010

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Welcome to the Troubleshooting documentation for Microsoft Project Server 2010. You can use this documentation to diagnose and resolve specific error conditions and to verify that those error conditions are no longer present.

The troubleshooting information is organized according to the logical areas of interest to the administrator when monitoring and troubleshooting Project Server 2010. Within each logical area of manageability, you will find reference and troubleshooting information relevant to each event logged by Project Server 2010. For example, events related to the timer jobs are assigned to a functional area called Timer Jobs.

We encourage you to give us your feedback. Your comments, suggestions, and troubleshooting tips can be incorporated into future versions of this content.

# Technical reference for Project Server 2010

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Technical references include information about the Microsoft Project 2010 provider for Windows PowerShell, the Stsadm command-line tool, and other useful reference information about general settings, security, and tools.

In this section:

- [Windows PowerShell for Project Server 2010](#)  
Windows PowerShell can be used with Microsoft Project Server 2010 to perform both simple and complex administrative tasks.
- [Project Server 2010 global permissions](#)  
This article describes the global permissions for Microsoft Project Server 2010.
- [Project Server 2010 category permissions](#)  
This article describes the category permissions for Microsoft Project Server 2010.
- [Microsoft Project Server 2010 default categories](#)  
This article describes the default settings for each of seven default categories for Project Server 2010.
- [Project Server 2010 default group permissions](#)  
This article describes the default permissions that are given to the default templates and user groups in Project Server 2010.
- [System Center Operations Manager knowledge articles \(Project Server 2010\)](#)  
The articles in this section are knowledge articles for the Microsoft Project Server 2010 management pack for Microsoft System Center Operations Manager 2007. Typically, you would encounter one of these articles after clicking a link in an alert in the Operations Manager console. You can use these articles to help you troubleshoot and resolve problems in Project Server 2010.
- [Conformance statement A-level \(Project Server 2010\)](#)  
This article is a conformance statement for Project Server 2010 in regards to [Web Content Accessibility Guidelines 2.0](#) (<http://www.w3.org/TR/WCAG20/>).
- [Conformance statement AA-level \(Project Server 2010\)](#)  
This article is a conformance statement for Project Server 2010 in regards to [Web Content Accessibility Guidelines 2.0](#) (<http://www.w3.org/TR/WCAG20/>).

# Windows PowerShell for Project Server 2010

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Windows PowerShell can be used with Microsoft Project Server 2010 to perform both simple and complex administrative tasks. Information about cmdlets in Project Server 2010 is currently accessible using command-line Help. For information about Windows PowerShell in general, visit the [Windows PowerShell Technology Center](http://go.microsoft.com/fwlink/?LinkId=167152) (<http://go.microsoft.com/fwlink/?LinkId=167152>).

In this section:

- [SharePoint 2010 Products administration by using Windows PowerShell](#)
- [Windows PowerShell for Project Server 2010 reference](#)

## See Also

[TechNet Script Center Repository](http://go.microsoft.com/fwlink/?LinkId=190444) (<http://go.microsoft.com/fwlink/?LinkId=190444>)

[MSDN Code Gallery: Windows PowerShell Cmdlets for Project Server PSI](http://go.microsoft.com/fwlink/?LinkId=190445)  
(<http://go.microsoft.com/fwlink/?LinkId=190445>)

# SharePoint 2010 Products administration by using Windows PowerShell

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This article describes how to use Windows PowerShell with Microsoft SharePoint 2010 Products and provides an overview of basic Windows PowerShell cmdlets and concepts necessary to get the most benefit from this powerful functionality.

In this article:

- [Overview](#)
- [Accessing Windows PowerShell for SharePoint 2010 Products](#)
- [Permissions](#)
- [Learning Windows PowerShell](#)

## Overview

Windows PowerShell is a command-line scripting tool that provides an administrator full access to applicable application programming interfaces (APIs), along with the ability to unlock the capability to interact directly with SharePoint 2010 Products to manipulate Web applications, site collections, sites, lists and much more. In addition, the administrator has the ability to script cmdlets (pronounced "command-lets"), which makes for an improved experience from past product versions.

Windows PowerShell 2.0 is a pre-requisite for installing SharePoint 2010 Products. It will be installed, if necessary, when you run the Microsoft SharePoint Products Preparation Tool. By default, Windows PowerShell is located at the following path:

**<%SystemRoot%>\System32\WindowsPowerShell\v1.0\PowerShell.exe.**



**Note:**

Windows PowerShell 2.0 is backward compatible with Windows PowerShell 1.0 and subsequently installs to the v1.0 folder.

For a list of new features for Windows PowerShell version 2.0, see [About Windows PowerShell 2.0](http://go.microsoft.com/fwlink/?LinkId=113247) (<http://go.microsoft.com/fwlink/?LinkId=113247>).

We recommend that you use Windows PowerShell when performing command-line administrative tasks. The Stsadm command-line tool has been deprecated, but is included to support compatibility with previous product versions.

## Accessing Windows PowerShell for SharePoint 2010 Products

After installing SharePoint 2010 Products, the applicable Windows PowerShell cmdlets are available by using the SharePoint 2010 Management Shell, or by using the Windows PowerShell console. With the management shell, you can manage every aspect of SharePoint 2010 Products. You can create new site collections, Web applications, user accounts, service applications, proxies, and more. The commands from the management shell output SharePoint objects based on the Microsoft .NET Platform. These objects can be applied as input to subsequent commands or stored in local variables for later use.

With the management shell, you do not have to register the snap-in that contains the cmdlets. Registration of the Microsoft.SharePoint.PowerShell.dll module for SharePoint 2010 cmdlets is automatic, as a result of the line `Add-PSSnapin Microsoft.SharePoint.PowerShell` in the SharePoint.ps1 file located in `%CommonProgramFiles%\Microsoft Shared\Web Server Extensions\14\Config\PowerShell\Registration`. If you choose to use the Windows PowerShell console, you must register this snap-in manually.

Whether you are using the management shell or the Windows PowerShell console, you can also load additional snap-ins. For more information, see [Customizing Profiles](http://go.microsoft.com/fwlink/?LinkId=183166) (<http://go.microsoft.com/fwlink/?LinkId=183166>).

### To access the SharePoint 2010 Management Shell

1. On the **Start** menu, click **All Programs**.
2. Click **Microsoft SharePoint 2010 Products**.
3. Click **SharePoint 2010 Management Shell**.



#### Note:

The SharePoint 2010 Management Shell and the Windows PowerShell console also differ in the use of the `ReuseThread` option, which defines how the threading model is used. The management shell's use is defined by this line, `{Host.Runspace.ThreadOptions = "ReuseThread"}`, which is in the SharePoint.ps1 file. For more information, see [PSThreadOptions Enumeration](http://go.microsoft.com/fwlink/?LinkId=183145) (<http://go.microsoft.com/fwlink/?LinkId=183145>).

## Permissions

Before you can use the management shell and the Windows PowerShell cmdlets, verify that you meet the following minimum requirements: See [Add-SPShellAdmin](#).

If you do not have membership in the `SharePoint_Shell_Access` role or `WSS_Admin_WPG` local group, use the `Add-SPShellAdmin` cmdlet. When the **Add-SPShellAdmin** cmdlet is used, the user is added to the **WSS\_Admin\_WPG** group in all front-end Web servers and is added to the **SharePoint\_Shell\_Access** role. If the target database does not have a **SharePoint\_Shell\_Access**

role, the role is automatically created. Once the **Add-SPShellAdmin** cmdlet has been run, the user can run SharePoint 2010 Windows PowerShell cmdlets in a multiple-server farm environment.

When you run the **Add-SPShellAdmin** cmdlet to add a user to the **SharePoint\_Shell\_Access** role, you must have the following security permissions:

- **Securityadmin** server role access on the SQL instance and the **db\_owner** role in a database.
- Administrative permission on the local computer.



**Note:**

Typically, the person that will use the **Add-SPShellAdmin** cmdlet must be associated with the user account that was used for Setup.

You must run the **Add-SPShellAdmin** cmdlet for all databases to which you want to grant access. If no database is specified, the farm configuration database is used. If you do specify a database, the farm content database will be included in addition to the farm configuration database you specify.

To see a list of all of the **\*SPShellAdmin** cmdlets, from a Windows PowerShell command prompt, type `Get-Command -Noun SPSHellAdmin.`

## Learning Windows PowerShell

There are several Windows PowerShell learning resources for SharePoint IT professionals who are not familiar with Windows PowerShell.

### TechNet Scripting Center

The TechNet Scripting Center includes many resources for learning the basics of using Windows PowerShell. It also contains script repositories with samples of scripts commonly used with various Microsoft products. The following table shows the main learning resources.

| Page                                                                                                                                                       | Description                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="http://go.microsoft.com/fwlink/?LinkId=187813">Windows PowerShell Documentation on TechNet</a><br>(http://go.microsoft.com/fwlink/?LinkId=187813) | This section of the TechNet Library contains Web copies of the core Windows PowerShell Get-Help topics. The section also has Web copies of the Windows PowerShell Getting Started document, the PowerShell.exe help, and a Windows PowerShell primer. |
| <a href="http://go.microsoft.com/fwlink/?LinkId=187815">Scripting With Windows PowerShell</a><br>(http://go.microsoft.com/fwlink/?LinkId=187815)           | The home page for Windows PowerShell scripting learning resources.                                                                                                                                                                                    |
| <a href="http://go.microsoft.com/fwlink/?LinkId=187817">Windows PowerShell Owner's Manual</a><br>(http://go.microsoft.com/fwlink/?LinkId=187817)           | Web-based guide for getting started with Windows PowerShell.                                                                                                                                                                                          |
| <a href="http://go.microsoft.com/fwlink/?LinkId=187819">Windows PowerShell Quick Reference</a><br>(http://go.microsoft.com/fwlink/?LinkId=187819)          | Downloadable copy of the Quick Reference document installed with Windows PowerShell.                                                                                                                                                                  |

### Windows PowerShell documents

Windows PowerShell installs the following documents in the Windows PowerShell 1.0 program group. They can also be installed after downloading the [Windows PowerShell 1.0 Documentation Pack](http://go.microsoft.com/fwlink/?LinkId=187822) (<http://go.microsoft.com/fwlink/?LinkId=187822>).

| File               | Description                                                                                                                                                        |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GettingStarted.rtf | Describes how to start using Windows PowerShell.                                                                                                                   |
| UsersGuide.rtf     | A primer for the Windows PowerShell environment and language.                                                                                                      |
| QuadFold.rtf       | A printable quick reference document for the commonly used Windows PowerShell syntax and commands. Also available as a download from the TechNet Scripting Center. |

As you read these resources, consider that the following concepts and cmdlets are useful ones to learn before using Windows PowerShell for SharePoint 2010 Products:

- [Get-Command](http://go.microsoft.com/fwlink/?LinkId=171069) (<http://go.microsoft.com/fwlink/?LinkId=171069>)
- [Get-Member](http://go.microsoft.com/fwlink/?LinkId=171070) (<http://go.microsoft.com/fwlink/?LinkId=171070>)
- [Get-Help](http://go.microsoft.com/fwlink/?LinkId=171068) (<http://go.microsoft.com/fwlink/?LinkId=171068>).
- [Aliasing](http://go.microsoft.com/fwlink/?LinkId=113207) (<http://go.microsoft.com/fwlink/?LinkId=113207>)
- [Piping and the Pipeline in Windows PowerShell](http://go.microsoft.com/fwlink/?LinkId=187808) (<http://go.microsoft.com/fwlink/?LinkId=187808>)
- [Cmdlet Parameter Sets](http://go.microsoft.com/fwlink/?LinkId=187810) (<http://go.microsoft.com/fwlink/?LinkId=187810>)
- [Foreach-Object](http://go.microsoft.com/fwlink/?LinkId=187812) (<http://go.microsoft.com/fwlink/?LinkId=187812>)
- [Where-Object](http://go.microsoft.com/fwlink/?LinkId=187811) (<http://go.microsoft.com/fwlink/?LinkId=187811>)

# Windows PowerShell for Project Server 2010 reference

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The following article lists Windows PowerShell cmdlets for Microsoft Project Server 2010 by functionality.

|                                             |
|---------------------------------------------|
| <b>Category article</b>                     |
| <a href="#">Project Server 2010 cmdlets</a> |

## Project Server 2010 cmdlets

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Microsoft Project Server is a project management tool that you can use to manage projects more efficiently and effectively. You can stay informed; control project work, schedules, and finances; keep project teams aligned; and be more productive through integration with familiar Microsoft Office system programs.

New features in Microsoft Project Server 2010 include more closely integrated project and portfolio management capabilities, better and more scalable collaboration for both small teams and enterprises, and the ability to extended platform and integration with related Microsoft technologies.

You can use Windows PowerShell cmdlets to create and configure a Project Server Service application, create and configure a Microsoft Project Web App (PWA) instance, and create and configure Project Server permissions.

| Cmdlet name                                                      | Description                                                                           |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <a href="#">Add-SPProjectTenantAdministratorGroupAndTemplate</a> | Adds the Tenant Administrator security group to Microsoft Project Server.             |
| <a href="#">Get-SPProjectWebInstance</a>                         | Returns an instance of a Project Server Service application.                          |
| <a href="#">New-SPProjectServiceApplication</a>                  | Creates a new Project Server Service application.                                     |
| <a href="#">New-SPProjectServiceApplicationProxy</a>             | Creates a proxy for a Project Server Service application.                             |
| <a href="#">New-SPProjectSiteAdministrator</a>                   | Creates a Microsoft Project Server 2010 administrator account for the requested user. |
| <a href="#">New-SPProjectWebInstance</a>                         | Creates a new instance of a Project Server Service application.                       |
| <a href="#">Remove-SPProjectSiteAdministrator</a>                | Removes an account from a Microsoft Project Web App (PWA) instance.                   |
| <a href="#">Remove-SPProjectWebInstance</a>                      | Deletes an instance of a Project Server Service application.                          |
| <a href="#">Set-SPProjectServiceApplication</a>                  | Sets properties of a Project Server Service application.                              |
| <a href="#">Set-SPProjectWebInstance</a>                         | Sets the properties of an instance of a Project Server Service application.           |
| <a href="#">Upgrade-SPProjectWebInstance</a>                     | Upgrades a single Project Web App site.                                               |

## Project Server 2010 global permissions

The following is a list of global permissions for Microsoft Project Server 2010. The columns in the table include the following:

- **Description** Describes what the permission enables you to do.
- **Dependencies** Lists any other permissions (global or category) or requirements necessary for the permission to function.
- **Previous name, if renamed from Project Server 2003** Specifies the Office Project Server 2007 permission name if the permission was renamed from Office Project Server 2007 but provides the same functionality.
- **New for Project Server 2010** Displays an x symbol if the permission is new for Project Server 2010.

| Permission                     | Description                                                                                                                                                                                                                                                                                   | Dependencies                                                                                                         | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
| About Microsoft Project Server | Allows a user to access the About Project Server page through Project Web App Server Settings.                                                                                                                                                                                                |                                                                                                                      |                                                           |                             |
| Accept Timesheets              | Allows a user to accept but not approve a timesheet. An example would be where an administrative assistant would view the timesheets to make sure that there were no inaccuracies in them. When it is accepted then a manager with Approve Timesheets permission will approve the timesheets. | Users have access to the Approval Center if they have either the Accept Timesheets or the View Approvals permission. |                                                           |                             |
| Build Team On New Project      | Allows a user to add resources to a project that has not been saved to                                                                                                                                                                                                                        | User has to be granted the <b>Assign</b>                                                                             |                                                           |                             |

## Project Server 2010 global permissions

| Permission       | Description                                                                                                                                                                                                                                                                                                                            | Dependencies                                                                                                                                                                                                 | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                  | Project Server. Grant this permission to project managers who want to use the Build Team feature in Microsoft Project Professional to staff their projects before they save (and publish) them to Project Server.                                                                                                                      | <b>Resources and View Enterprise Resource Data</b> category permissions in order to see resources that are part of the Enterprise Resource Pool in the Build Team feature in Microsoft Project Professional. |                                                           |                             |
| Can be Delegate  | Specifies whether a user can be a delegate.                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                              |                                                           | X                           |
| Change Password  | Allows a user to change their Forms user account password user account password from Project Web App. Forms authentication is provided through a membership provider and individual membership providers may prevent the changing of passwords. Please verify this with your membership provider if you intend to use this permission. |                                                                                                                                                                                                              |                                                           |                             |
| Change Workflow  | Allows a user to change a project's Enterprise Project type. (Change Project Type).                                                                                                                                                                                                                                                    |                                                                                                                                                                                                              |                                                           | X                           |
| Clean up Project | Allows a user to access the                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                    | Description                                                                                                                                                                                                                                                                                                                                               | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
| Server database               | Delete Enterprise Objects page available through the Server Settings page in Project Web App. Grant this permission to users who have to delete timesheets, status reports responses, projects, resources, users, and user delegates from Project Server.                                                                                                 |              |                                                           |                             |
| Close Task to Updates         | Allows a user to close tasks to Time Reporting. It gives access to the Close Tasks to Update Project Web App page.                                                                                                                                                                                                                                        |              |                                                           |                             |
| Contribute to Project Web App | Allows users to edit items within lists in Project Web App project sites.                                                                                                                                                                                                                                                                                 |              | Contribute to Project Web App                             |                             |
| Edit Status Report Requests   | Allows a user to access the Request a status report link on the Project Web App Status Reports center and to view team reports. Grant this permission to any member of your organization who has to create status report requests and view team reports, usually project managers, resource managers, team leads, and members of your organization's PMO. |              |                                                           |                             |
| Edit Status Report            | Allows a user to access the                                                                                                                                                                                                                                                                                                                               |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                                         | Description                                                                                                                                                                                                                                                           | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
| Responses                                          | Submit a status report link on the Status Reports center in Project Web App. Grant this permission to any user of Project Web App who must be able to submit status reports.                                                                                          |              |                                                           |                             |
| Log on                                             | Allows a user to connect to Project Server from Microsoft Project Professional or to log on to Project Web App. Grant this permission to any user who is authorized to connect to Project Server from Microsoft Project Professional or log on to Project Web App.    |              |                                                           |                             |
| Log on to Project Server from Project Professional | Allows a user to load the Enterprise Global Template when he or she connects Microsoft Project Professional to Project Server. Grant this permission to all users in your organization who will be using Microsoft Project Professional to connect to Project Server. |              |                                                           |                             |
| Manage Active Directory Settings                   | Allows users to modify any Active Directory Synchronization settings within the Project Web App Administration. If the user is denied this permission then they cannot modify                                                                                         |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                      | Description                                                                                                                                                                                                                                                                                                                                   | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|                                 | settings for any of the following: <ul style="list-style-type: none"> <li>• Enterprise Resource Pool synchronization settings.</li> <li>• Project Web App Security Groups synchronization settings.</li> <li>• Choose an Active Directory Group to synchronize against a specific Security Group within the Add/Modify Group page.</li> </ul> |              |                                                           |                             |
| Manage Check-Ins                | Allows a user to access the Forced Check-in Enterprise Objects page in Project Web App. This page lets users force check-in projects, resources, custom fields, calendars, lookup tables and resource plans.                                                                                                                                  |              |                                                           |                             |
| Manage Cube Building Service    | Allows a user to the set and modify the settings for OLAP cube creation.                                                                                                                                                                                                                                                                      |              |                                                           |                             |
| Manage Enterprise Calendars     | Allows a user to create, modify and delete Enterprise Calendars within Project Web App.                                                                                                                                                                                                                                                       |              |                                                           |                             |
| Manage Enterprise Custom Fields | Allows a user to modify the definitions of Enterprise Custom Fields and lookup                                                                                                                                                                                                                                                                |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                              | Description                                                                                                                                                                            | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|                                         | table from Project Web App.                                                                                                                                                            |              |                                                           |                             |
| Manage Exchange Integration             | Allows administrators to enable the synchronization of project tasks with Exchange Server.                                                                                             |              |                                                           | X                           |
| Manage Gantt Chart and Grouping Formats | Allows a user to access the Gantt chart and grouping formats customization options in the Project Server Administration page for Project Web App views.                                |              |                                                           |                             |
| Manage Lists in Project Web App         | Allows a user to create, modify, and delete lists within the Project Web App project site. This permission is used when synchronizing a user against the Project Web App project site. |              |                                                           |                             |
| Manage Notification and Reminders       | Allows a user to manage the Notification and Reminders settings.                                                                                                                       |              |                                                           | X                           |
| Manage My Delegates                     | Allows users to see the "Manage Delegates" link and to set a delegate on the "Add/Modify Delegation" page.                                                                             |              |                                                           | X                           |
| Manage My Resource Delegates            | Allows users to set a user who requires a substitute on the Add/Modify Delegation page.                                                                                                |              |                                                           | X                           |
| Manage Personal                         | Allows a user to access the Manage My Alerts and                                                                                                                                       |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                    | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
| Notifications                 | Reminders page in Project Web App. Grant this permission to any user that you want to be able to sign up for e-mail notifications and reminders related to tasks and status reports.                                                                                                                                                                                                                               |              |                                                           |                             |
| Manage Portfolio Analyses     | Allows a user to create, read, update, and delete Portfolio analyses.                                                                                                                                                                                                                                                                                                                                              |              |                                                           | X                           |
| Manage Prioritizations        | Allows a user to create, read, update, and delete driver prioritizations.                                                                                                                                                                                                                                                                                                                                          |              |                                                           | X                           |
| Manage Project Server Backup  | Allows a user to schedule the backup or immediately back up several entities on Project Server, including the following: <ul style="list-style-type: none"> <li>• Projects</li> <li>• The Enterprise Resource Pool</li> <li>• Calendars</li> <li>• Custom fields</li> <li>• The Enterprise Global template</li> <li>• Views</li> <li>• System settings</li> <li>• Categories</li> <li>• Group settings.</li> </ul> |              |                                                           |                             |
| Manage Project Server Restore | Allows a user to immediately restore several entities on Project Server, including the                                                                                                                                                                                                                                                                                                                             |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|                              | <p>following:</p> <ul style="list-style-type: none"> <li>• Projects</li> <li>• The Enterprise Resource Pool</li> <li>• Calendars</li> <li>• Custom fields</li> <li>• The Enterprise Global template</li> <li>• Views</li> <li>• System settings</li> <li>• Categories</li> <li>• Group settings.</li> </ul> <p> <b>Note:</b><br/>Similar to Server Backup, except that the permission does not let you to schedule a recovery.</p> |              |                                                           |                             |
| Manage Project Web App Views | <p>Allows a user to access the Manage Views page in the Server Settings page in Project Web App. Users with permission to access this page are able to add, modify, or delete Project, Project Center, Resource Center, Assignment, or Portfolio Analyzer views, and they are able to modify Timesheet views. Grant</p>                                                                                                                                                                                             |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|                               | <p>this permission to project managers, resource managers, and members of your organization's PMO so they can create project data views for users to access in Project Web App and Microsoft Project Professional. It is important to remember that if your organization is allowing project managers to create custom fields at the project level, then each project may require its own unique view. The number of projects in this kind of environment may be too many for the IT administrator team; offloading this work to the people in your organization that work at the project level on a day-to-day basis is one way to distribute the workload of managing views.</p> |              |                                                           |                             |
| Manage Queue                  | <p>Allows the user to read or set queue configuration settings and retry, cancel, and unblock jobs in the queue.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                                                           |                             |
| Manage Resource Notifications | <p>Allows a user to access the Alert me about my resources on tasks and status reports link on the</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission      | Description                                                                                                                                                                                                                                                                                                                                                                    | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|                 | Project Web App home page. Grant this permission to any resource manager or project manager you want to be able to sign up for e-mail notifications and reminders related to their resource's tasks and status reports.                                                                                                                                                        |              |                                                           |                             |
| Manage Rules    | Allows a user to access the Rules page from the Approval Center in Project Web App and set rules on how update transactions will be automatically processed. Grant this permission to project managers, resource managers, or members of your organization's PMO so they can define how they will automatically receive and accept changes to transactions by their resources. |              |                                                           |                             |
| Manage security | Allows a user to access the Manage security page in Project Web App to define security categories, security templates, and user authentication settings. Grant this permission to Project Server administrators or a very small and closely managed group of people.                                                                                                           |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                  | Description                                                                                                                                                                                                                                                                                                                                            | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|                             | <p>This page lets users change Project Server security settings, create security categories and security templates. Changes to settings on this page, once you have begun using Project Server in your organization, should be carefully managed and (ideally) infrequent.</p>                                                                         |              |                                                           |                             |
| Manage Server Events        | <p>Allows a user to register event handlers for specific Project Server server-side events. The Manager Server Events page requires the event handler to be registered by the server as defined in the Project Server SDK.</p>                                                                                                                         |              |                                                           | X                           |
| Manage Server Configuration | <p>Allows a user to access the Project Web App Permissions page in Project Web App. Users with permission to access the Project Web App Permissions page can enable or disable enterprise features, manage organizational permissions, and create custom menus (both top-level and side-pane) in Project Web App. Grant this permission to Project</p> |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                                  | Description                                                                                                                                                                                                                                                                                                                                    | Dependencies                                                                                                                                                 | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                                             | Server administrators or a very small and closely managed group of people.                                                                                                                                                                                                                                                                     |                                                                                                                                                              |                                                           |                             |
| Manage SharePoint Foundation                | Allows a user to create and delete project sites, whether or not sites are created on project publish, permission synchronization settings, and site path updates. Grant this permission to members of your organization who are administrators for Project Web App or administrators for the servers that are running SharePoint Server 2010. | Users with this permission should be granted administrative privileges to all of the servers that are running Project Server 2010 and SharePoint Server 2010 | Manage Windows SharePoint Services                        | X                           |
| Manage Site Services                        | Allows users or groups the ability to manage Queue Settings, Active Directory Synchronization, and Event handlers.                                                                                                                                                                                                                             |                                                                                                                                                              |                                                           | X                           |
| Manage Time Reporting and Financial Periods | Allows a user to create and modify Timesheet and Fiscal period definitions.                                                                                                                                                                                                                                                                    |                                                                                                                                                              | Manage Timesheet and Financial Periods                    | X                           |
| Manage Time Tracking                        | Allows a user to be forwarded timesheets for review. After reviewing the timesheet, the user will be required the following permissions: <ul style="list-style-type: none"> <li>• Accept Timesheet</li> <li>• Approve Timesheet</li> </ul>                                                                                                     |                                                                                                                                                              |                                                           |                             |

## Project Server 2010 global permissions

| Permission                               | Description                                                                                                                                                                                                                                                                                                                                                                                                              | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
| Manage Users and Groups                  | Allows a user to access the Manage Users and Groups page in the Server Settings page in Project Web App. Users with this permission will be able to add, modify, or delete Project Server users and manage Project Server security groups. Grant this permission to members of your organization who are Project Server administrators. Only a small group of people should have permission to access this set of pages. |              |                                                           |                             |
| Manage Workflow and Project Detail Pages | Allows a user to manage and view workflow and Project Detail Pages (PDPs).                                                                                                                                                                                                                                                                                                                                               |              |                                                           | X                           |
| New Project                              | Allows a user to add a new project to Project Server using Microsoft Project Professional, Project Web App, or the Project Server Interface (PSI). New functionality in Project Server 2010 for this permission: If you do not also have the Open Project permission, after you create a project, you are taken back to the Project Center.                                                                              |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
| New Resource        | <p>Allows a project manager to add new resources to the Enterprise Resource Pool using Microsoft Project Professional, the Project Web App Resource Center, or the Project Server Interface (PSI). Grant this permission to any member of your organization who has to create new enterprise resources in Project Server.</p> <p> <b>Note:</b><br/>If your organization is using the Active Directory synchronization feature, you may want to consider denying this permission to all non-IT administrators in your organization.</p> |              |                                                           |                             |
| New Task Assignment | <p>Allows users to access the Create a New Task and Add Yourself to a Task links from the Insert Row button found on the Tasks page of Project Web App. Grant this permission to any member of your organization who has to create new assignments on</p>                                                                                                                                                                                                                                                                                                                                                               |              |                                                           |                             |

## Project Server 2010 global permissions

| Permission            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dependencies                                                                                                                                           | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                       | <p>existing tasks in projects that have been published to Project Server. Users with this permission will also be able to use the Create a New Task link to create new tasks in Project Web App for any project to which the user has access. The list of available projects for a user to create new tasks is determined by the Create New Tasks or Assignment category permission. A user who has the New Task Assignment permission must also have access to the projects to which they want to assign themselves to a task.</p> |                                                                                                                                                        |                                                           |                             |
| Open Project Template | <p>Allows a user to open an Enterprise Project Template from Project Server using Microsoft Project Professional. Grant this permission to all users in your organization who will be using Microsoft Project Professional to create and manage projects that are based on Enterprise Project Templates.</p>                                                                                                                                                                                                                        | <p>User must be granted the <b>New Project</b> global permission in order to save the project to the Project Server database as an actual project.</p> |                                                           |                             |
| Reassign Task         | <p>Allows a user to delegate an assigned task to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                        |                                                           |                             |

Project Server 2010 global permissions

| Permission | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|            | <p>another (existing) user. Grant this permission to members of your organization who need the ability to delegate task assignments to other resources. For example, a large project may be run by a single project manager, but actually implemented by several teams, each with their own team lead. A project manager could assign the team leads in the project plan, and then the team leads could in turn delegate each task to individual members of their teams. This example creates an additional layer of task management within the larger organization, but it can also simplify resource allocation within projects themselves and make it easier for a project manager to manage large projects. Or, if you have a resource that is about to leave on a three-week vacation, and this resource had this permission, they would be able to assign their tasks directly to other resources instead of having the project manager check out the project and</p> |              |                                                           |                             |

Project Server 2010 global permissions

| Permission             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Dependencies                                                                                                                                                                                                                                    | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                        | reassign resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                 |                                                           |                             |
| Save Enterprise Global | Allows a user to check out, modify, and save the Enterprise Global Template to the Project Server database from Microsoft Project Professional. This permission should only be granted to a small group of people in your organization; either project managers, members of your organization's PMO, or Project Server administrators.                                                                                                                                      |                                                                                                                                                                                                                                                 |                                                           |                             |
| Save Project Template  | Allows a user to create and save a project as an Enterprise Project Template from Microsoft Project Professional to the Project Server database. Grant this permission to members of your organization who are tasked with creating Enterprise Project Templates. When a user saves a project to Project Server for the first time, the option to select Template (as opposed to Project) from the Type drop-down list in the Save to Project Server dialog box is enabled. | User needs to be granted the <b>Assign Resources</b> and <b>View Enterprise Resource Data</b> category permissions in addition to this permission if they are also responsible for adding Generic resources to the Enterprise Project Template. |                                                           |                             |

## Project Server 2010 global permissions

| Permission                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Dependencies                                                          | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
| Save Unprotected Baseline | <p>Allows a user to save a non-protected baseline or clear a non-protected baseline associated with an enterprise project published to the Project Server database.</p> <p>Baselines are saved by using the Set Baseline functionality accessed from the Microsoft Project Professional ribbon on the <b>Project</b> tab in the <b>Schedule</b> group. Click the <b>Set Baseline</b> button and then select <b>Save Baseline</b> or <b>Clear Baseline</b>.</p> <p>Unprotected Baselines are in the range of Baseline 6-10 inclusive.</p> | User needs to be granted the <b>Save Project</b> category permission. |                                                           |                             |
| Self-Assign Team Tasks    | Resources can be members of a Team Assignment Pool. With this permission, it is possible for users to assign tasks, which have been assigned to their Team Assignment Pool, to themselves through the Team Tasks page in Project Web App.                                                                                                                                                                                                                                                                                                |                                                                       |                                                           |                             |
| Status Broker Permission  | Allows API updates to occur for a user from places like Microsoft Exchange Server.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                       |                                                           | X                           |
| View Approvals            | Allows a user to view the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Users have                                                            |                                                           |                             |

## Project Server 2010 global permissions

| Permission                      | Description                                                                                                                                                                                                         | Dependencies                                                                                              | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                                 | Approval Center.                                                                                                                                                                                                    | access to the Approval Center if they have either the Accept Timesheets or the View Approvals permission. |                                                           |                             |
| View Business Intelligence Link | Allows a user to see the Business Intelligence link in Quick Launch. However, it has no impact on Report Center Security.                                                                                           |                                                                                                           |                                                           | X                           |
| View OLAP Data                  | Allows a user to read from the output for the OLAP cube. This permission is only checked when the OLAP cube is built.                                                                                               |                                                                                                           |                                                           |                             |
| View Project Center             | Allows users to access the Project Center from Project Web App or Microsoft Project Professional.                                                                                                                   | User needs to be granted the <b>View Project Summary in Project Center</b> category permission.           |                                                           |                             |
| View Project View               | Allows a user to access project views in Project Web App. Grant this permission to users who need to drill down into project details using the Project Center in Project Web App or Microsoft Project Professional. |                                                                                                           |                                                           |                             |
| View Project Schedule Views     | Allows a user to see the link in the Quick Launch. However, it has no impact                                                                                                                                        |                                                                                                           |                                                           | X                           |

## Project Server 2010 global permissions

| Permission                            | Description                                                                                                                                                                                                                                                                                                                                                                        | Dependencies                                                                           | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                                       | on Report Center Security.                                                                                                                                                                                                                                                                                                                                                         |                                                                                        |                                                           |                             |
| View Project Timesheet Line Approvals | Allows a user to approve timesheets on a line-by-line basis.                                                                                                                                                                                                                                                                                                                       |                                                                                        |                                                           | X                           |
| View Resource Availability            | Allows a user to access the View Resource Availability page to view resource allocation data in Project Web App. Grant this permission to users in your organization who need to view resource availability in Project Web App.                                                                                                                                                    |                                                                                        |                                                           |                             |
| View Resource Center                  | Allows users to access the Resource Center from Project Web App or Microsoft Project Professional and view resource allocation data. Grant this permission to users who need to view the Resource Center in Project Web App by clicking the Resources link in the top-level navigation, or in Microsoft Project Professional by selecting Resource Center on the Collaborate menu. | User needs to be granted the <b>View Enterprise Resource Data</b> category permission. |                                                           |                             |
| View Resource Plan                    | Allows a user to access the Resource Plan page within Project Web App.                                                                                                                                                                                                                                                                                                             |                                                                                        |                                                           | X                           |
| View Resource Timesheet               | Allows users to view the timesheets, regardless of their state or ownership, for                                                                                                                                                                                                                                                                                                   | Users must be granted the <b>Accept</b>                                                |                                                           |                             |

## Project Server 2010 global permissions

| Permission        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Dependencies                                                                                                                                                                                                                                                                                     | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                   | resources identified in the category selection criteria.                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Timesheet</b> global permission to use this permission.                                                                                                                                                                                                                                       |                                                           |                             |
| View Task Center  | <p>This permission when denied prevents users from seeing the Task Center link on the Project Web App Quick Launch menu</p> <p> <b>Note:</b><br/>This permission does not lock down access to the Task Center page. It is still possible for users to navigate to this page</p>                                                                                                                  | <ul style="list-style-type: none"> <li>•</li> </ul>                                                                                                                                                                                                                                              |                                                           |                             |
| View Team Builder | <p>Allows a user to use Build Team in Project Web App and Microsoft Project Professional, as well as determine the list of available resources. Grant this permission to resource managers to allow them to use Build Team in Project Web App to add resources to projects that have been saved to the Project Server database. Project Managers can also use this permission to allow them to use Build Team in Microsoft Project Professional to add resources to projects.</p> | <ul style="list-style-type: none"> <li>• User needs to be granted the <b>Assign Resources</b> category permission in addition to the <b>View Team Builder</b> global permission. The Assign Resources category permission determines the list of resources available in Build Team in</li> </ul> |                                                           |                             |

## Project Server 2010 global permissions

| Permission      | Description                                                                                                                                                                                                                                                             | Dependencies                                                                                                                                                                                                                                                                                                                                                                              | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                 |                                                                                                                                                                                                                                                                         | <p>both Microsoft Project Professional and Project Web App.</p> <ul style="list-style-type: none"> <li>User needs to be granted the <b>Build Team on Project</b> category permission. The Build Team on Project permission determines with which projects Build Team can be used. This applies to using Build Team in both Microsoft Project Professional and Project Web App.</li> </ul> |                                                           |                             |
| View Timesheets | <p>When this permission is denied it prevents users from seeing the Timesheet Center link on the Project Web App Quick Launch menu</p> <p> <b>Note:</b><br/>This permission does</p> |                                                                                                                                                                                                                                                                                                                                                                                           | View Timesheet Center                                     | X                           |

## Project Server 2010 global permissions

| Permission | Description                                                                                         | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------|-----------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|            | not lock down access to the Timesheet page. It is still possible for users to navigate to this page |              |                                                           |                             |

### See Also

[Project Server 2010 category permissions](#)

## Project Server 2010 category permissions

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The following is a list of category permissions for Microsoft Project Server 2010. The table includes columns with the following information:

- **Description** Describes what the permission lets you do.
- **Dependencies** Lists any other permissions (global or category) or requirements to allow the permission to function.
- **Previous name, if renamed from Office Project Server 2007** Specifies the Microsoft Office Project Server 2007 permission name if the permission was renamed from Office Project Server 2007 but provides the same functionality.
- **New for Project Server 2010** Displays an X symbol if the permission is new for Project Server 2010.

| Permission                  | Description                                                                                                                                                                                                                                                | Dependencies                                                                         | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
| Accept Task Update Requests | Allows a user to accept updates on projects without requiring that the user have the Save Project to Project Server permission                                                                                                                             |                                                                                      |                                                           |                             |
| Adjust Timesheet            | Allows a Project Web App user to adjust a team member's submitted timesheet entries. Grant this permission to any member of your organization who requires the ability to adjust a resource's timesheet entry after that resource has submitted the entry. | User must have the <b>View Resource Timesheet</b> permission to use this permission. |                                                           |                             |

## Project Server 2010 category permissions

| Permission         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Dependencies                                                                                                                                                                                                                                                                                                                                                                                                            | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
| Approve Timesheets | <p>Allows a user to approve a team member's submitted timesheet entries. Grant this permission to any member of your organization who requires the ability to approve a resource's timesheet.</p>                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• User must have the <b>Approve Timesheets</b> permission through a category which contains the resources which they want to approve timesheets on.</li> </ul>                                                                                                                                                                                                                   |                                                           |                             |
| Assign Resources   | <p>Allows a user to assign or allocate a given resource to projects. This permission controls the list of available resources in Team Builder in both Project Web App and Project Professional. Grant this permission to all project managers and resource managers who have to assign, manage, or allocate resources. For example, if you want to add resource R to project P, then you must have permission to assign resource R (Assign Resources) plus permission to build the team on Project P (Build Team on</p> | <ul style="list-style-type: none"> <li>• User must have the <b>View Team Builder</b> global permission in order to use the Build Team page in Project Web App or Project Professional.</li> <li>• User must have the <b>Build Team on Project</b> category permission in order to assign a resource in an existing enterprise project.</li> <li>• User must have the <b>Build Team on New Project</b> global</li> </ul> |                                                           |                             |

## Project Server 2010 category permissions

| Permission            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dependencies                                                                                                                                                                                                                                                                                                                                                                                                                                | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                       | Project). In addition, you must have access to the Team Builder page through either Project Web App or Project Professional (Assign Resources to Project Team).                                                                                                                                                                                                                                                                                                                                                                       | permission in order to assign a resource in a new enterprise project.                                                                                                                                                                                                                                                                                                                                                                       |                                                           |                             |
| Build Team On Project | Allows a user to add resources to a project that has already been saved to the Project Server database. Grant this permission to project managers who want to use the Build Team feature in Project Professional to staff their projects before they save (and publish) them to the Project Server database. Or, grant this permission to resource managers who want to use the Build Team feature in the Project Center of Project Web App to add resources to a project that has already been saved to the Project Server database. | <ul style="list-style-type: none"> <li>• User must have the <b>View Enterprise Resource Data and Assign Resources</b> category permissions in order to see resources that are part of the Enterprise Resource Pool in the Build Team feature in Project Professional and Project Web App.</li> <li>• User must have permission (at the category level) to access the specific projects and resources that have to be accessed to</li> </ul> |                                                           |                             |

## Project Server 2010 category permissions

| Permission                    | Description                                                                                                                                                                                                                                                                   | Dependencies                                                                                                                   | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                               |                                                                                                                                                                                                                                                                               | build the project team or assign resources.                                                                                    |                                                           |                             |
| Create New Task or Assignment | Determines which projects are available when you are creating new tasks. Grant this permission to any group of projects that individual users will be able to create new tasks in by using the Create a new task page in Project Web App.                                     | User must be granted the <b>New Task Assignment</b> global permission in order to access the New task page in Project Web App. |                                                           |                             |
| Create Object Links           | When allowed, this permission enables a user to create, modify, or delete links between Project Tasks and items in the Project Workspace (documents, issues, deliverables or risks).                                                                                          |                                                                                                                                |                                                           |                             |
| Delete Project                | Allows users of Project Professional to delete a project saved to the Project Server database from the Open from Microsoft Project Server dialog box in Project Professional. Grant this permission to members of your organization to enable them to more closely manage the |                                                                                                                                |                                                           |                             |

## Project Server 2010 category permissions

| Permission                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Dependencies                                                                              | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                                      | <p>projects he or she has saved to the Project Server database from Project Professional or by using the "Delete Enterprise Objects" link in Project Web App. Before letting users delete projects, you should consider how your organization will recover those projects, if you have to do so.</p>                                                                                                                                                                                            |                                                                                           |                                                           |                             |
| <p>Edit Enterprise Resource Data</p> | <p>Allows a project manager to edit enterprise resource data by using Project Professional (checked-out Enterprise Resource Pool) or a resource manager to edit enterprise resources using Project Web App (Resource Center). Grant this permission to project managers and resource managers who have to make updates to resources that belong to the Enterprise Resource Pool. Resource managers with this permission are able to edit enterprise resource data in the Resource Center in</p> | <p>User must be granted the <b>View Enterprise Resource Data</b> category permission.</p> |                                                           |                             |

## Project Server 2010 category permissions

| Permission | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|            | <p>Project Web App, and they can make updates to cost data, custom outline code data, custom field data, and other static information related to resources. Resource managers cannot add or delete resources from the Enterprise Resource Pool in Project Web App. Project managers can add or delete resources from the Enterprise Resource Pool in Project Professional if they have the <b>New Resource</b> global permission (to add resources) or the <b>Clean Up Project Server Database</b> global permission (to delete resources). These permissions are required in addition to the <b>Edit Enterprise Resource Data</b> category permission.</p> <p> <b>Note:</b><br/>The Project Server Interface (PSI) can also be</p> |              |                                                           |                             |

## Project Server 2010 category permissions

| Permission                    | Description                                                                                                                                                                                                                                                           | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|                               | used to create or delete resources in the Enterprise Resource Pool and to edit enterprise resource data.                                                                                                                                                              |              |                                                           |                             |
| Edit Project Summary Fields   | Allows a user to edit only the enterprise project fields shown in the new project fields Web Part. If you do not have this permission, but have "Save Project to Project Server" you can still edit project-level fields/custom fields in the project field Web Part. |              | Edit Project Properties in Project Center                 | X                           |
| Manage Basic Project Security | Controls whether a specific Project Permission can be set on a single project through the new Project Permissions feature.                                                                                                                                            |              |                                                           | X                           |
| Manage Resource Delegates     | Allows a user to see other users whom he or she manages and to set delegates for them.                                                                                                                                                                                |              |                                                           | X                           |
| Manage Resource Plan          | Allows a user to edit a resource plan.                                                                                                                                                                                                                                |              |                                                           |                             |
| Open Project                  | Allows a user to open a project from the Project Server database in                                                                                                                                                                                                   |              |                                                           |                             |

## Project Server 2010 category permissions

| Permission      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Dependencies                                                                                                                                                                                                                                                                                             | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                 | <p>read-only mode using Project Professional. Grant this permission to any member of your organization who has to use the <b>Open from Microsoft Project Server</b> dialog box in Project Professional or in the Project Center in Project Web App to open projects that have been saved to the Project Server database. If users are not assigned the <b>Save Project to Project Server</b> permission, then the project will only be open in read-only mode.</p> |                                                                                                                                                                                                                                                                                                          |                                                           |                             |
| Publish Project | <p>Allows a user to Publish projects to the Project Server Published database using Project Professional and Project Web App. Grant this permission to all members of your organization who will be publishing projects.</p>                                                                                                                                                                                                                                       | <p>User must be granted the <b>Open Project</b> category permission on any project that has to be checked out from the Project Server database. If the project has changed since opening, the user will be required to have the <b>Save Project to Project Server</b> permission on that project. If</p> |                                                           |                             |

## Project Server 2010 category permissions

| Permission                     | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Dependencies                                                                                                                                                                                                                                                                                       | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                    | not, when a publish occurs, it will only publish the outdated version.                                                                                                                                                                                                                             |                                                           |                             |
| Save Project to Project Server | Allows a user to save projects to the Project Server database using Project Professional. Also gives Project Web App users the permission to save schedules and strategic impact data. Grant this permission to all members of your organization who will be saving projects from Project Professional to the Project Server database using the Save to Project Server dialog box or through Server-side projects. | <ul style="list-style-type: none"> <li>• User must be granted the <b>New Project</b> permission in order to create the project.</li> <li>• User must be granted the <b>Open Project</b> category permission on any project that has to be checked out from the Project Server database.</li> </ul> |                                                           |                             |
| Save Protected Baseline        | Allows a user to save a protected baseline or clear a protected baseline associated with an enterprise project published to the Project Server database. Grant this permission to project managers who have to save baselines in their projects. Baselines are saved by using the Set                                                                                                                              | User must be granted the <b>Save Project to Project Server</b> category permission.                                                                                                                                                                                                                |                                                           |                             |

## Project Server 2010 category permissions

| Permission                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                            | Dependencies                                                                                                  | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|
|                                          | <p>Baseline functionality accessed from the Project Professional ribbon on the <b>Project</b> tab in the <b>Schedule</b> group. Click the <b>Set Baseline</b> button and then select <b>Save Baseline</b> or <b>Clear Baseline</b>. Protected Baselines are in the range of Baseline 0-5 inclusive. Only users who have Save Unprotected Baseline, Open Project and Save Project Category permissions are able to save Baselines in Baseline 6-10.</p> |                                                                                                               |                                                           |                             |
| View Project Summary in Project Center   | <p>Allows a user to access a specific project in the Project Center from Project Web App. Grant this permission to any member of your organization who has to view projects summaries in the Project Center.</p>                                                                                                                                                                                                                                       | <p>Users also must be granted the View Project Center View permission in order to see the Project Center.</p> |                                                           |                             |
| View Project Schedule in Project Web App | <p>Allows a user to view project information for a specific project from the Project Center in Project Web App. Grant this permission to users</p>                                                                                                                                                                                                                                                                                                     |                                                                                                               | View Project Details in Project Center                    | X                           |

## Project Server 2010 category permissions

| Permission                                    | Description                                                                                                                                                                                                                                                               | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|                                               | who have to view project details in the Project Center.                                                                                                                                                                                                                   |              |                                                           |                             |
| View Resource Assignments in Assignment Views | Allows a user to view assignment details using assignment views in the Resource Center. Grant this permission to project managers and resource managers who have to view resource assignment details in the Resource Center from Project Professional or Project Web App. |              |                                                           |                             |
| View Enterprise Resource Data                 | Allows a user to view resources and resource data that is stored in the Enterprise Resource Pool. Grant this permission to any user who has to view resources and resource data that is stored in the Enterprise Resource Pool.                                           |              |                                                           |                             |
| View Project Site                             | Allows users to view Risks, Issues, and Documents areas in Project Web App and Project Professional. Grant this permission to any user of Project Professional who has to select Project site,                                                                            |              | View Project Workspace                                    | X                           |

## Project Server 2010 category permissions

| Permission | Description                                                                                                                                                                                | Dependencies | Previous name, if renamed from Office Project Server 2007 | New for Project Server 2010 |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|-----------------------------|
|            | Documents, Issues, or Risks from the Info page in the Backstage or any user of Project Web App who has to access the Project site, Documents, Issues, or Risks top-level navigation links. |              |                                                           |                             |

### See Also

[Project Server 2010 global permissions](#)

# Microsoft Project Server 2010 default categories

Microsoft Project Server 2010 creates seven default categories during installation. Each of the categories is configured to be accessed by specified default user groups. Each category has a predefined set of category permissions for default user groups that have access to that category. The following sections list the default settings for each category for Project Server 2010.

In this article:

- [Categories](#)
- [Category permissions](#)

## Categories

Specific default groups are already associated with each of the default categories. The following table shows the default categories and the default groups that can access each of them.



**Note:**

For more information about the relationship between groups and categories, see [Plan groups, categories, and RBS in Project Server 2010](#).

| Category Name        | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|----------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| My Direct Reports    |                |            |                    |                  | X                 |            |              |
| My Organization      | X              | X          | X                  | X                | X                 |            |              |
| My Personal Projects |                | X          | X                  | X                | X                 | X          | X            |
| My Projects          |                |            |                    | X                | X                 | X          |              |
| My Resources         |                |            |                    |                  | X                 |            |              |
| My Tasks             |                |            |                    |                  |                   |            | X            |

## Category permissions

The following table describes the default category permissions for each default group. For example, a user in the default Administrators group (who is associated to the My Organization category by default) has the permissions allowed in the Administrators column in the table. These category permissions only apply to all projects, resources, and views selected for the My Organization category. However, a user in the default Project Managers group (who is associated to the My Organization and My Projects categories) has a different set of category permissions for the objects in the My Organization category. This allows you to conveniently set a more or less restrictive set of permissions for different types of users to a group of projects, resources, and views.



**Note:**

For more information about category permissions, see [Project Server 2010 category permissions](#). For more information about how categories relate to groups, see [Plan groups, categories, and RBS in Project Server 2010](#).

Use the following legend for the table below.

- My Org = My Organization
- My Dir = My Direct Reports
- My Proj = My Projects
- My Res = My Resources
- My Tsks = My Tasks

| Permission Name             | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|-----------------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| Accept Task Update Requests | My Org         |            |                    | My Proj          |                   |            |              |
| Adjust Timesheet            | My Org         |            |                    |                  |                   |            |              |
| Approve Timesheets          | My Org         |            | My Org             |                  | My Dir, My Res    |            |              |
| Assign Resource             | My Org         |            | My Org             | My Org           | My Res            |            |              |
| Build Team On Project       | My Org         |            | My Org             | My Proj          | My Org            |            |              |
| Create New Task or          | My Org         |            |                    | My Proj          | My Proj           | My Proj    | My Tsks      |

Microsoft Project Server 2010 default categories

| Permission Name                | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers       | Team Leads | Team Members |
|--------------------------------|----------------|------------|--------------------|------------------|-------------------------|------------|--------------|
| Assignment                     |                |            |                    |                  |                         |            |              |
| Create Object Links            | My Org         | My Org     | My Org             | My Proj          | My Org, My Proj, My Res | My Proj    | My Tsks      |
| Delete Project                 | My Org         |            | My Org             | My Proj          |                         |            |              |
| Edit Enterprise Resource Data  | My Org         |            | My Org             |                  | My Res                  |            |              |
| Edit Project Summary Fields    | My Org         |            |                    | My Proj          |                         |            |              |
| Manage Basic Project Security  | My Org         |            | My Org             | My Proj          |                         |            |              |
| Manage Resource Delegates      | My Org         |            |                    |                  | My Res                  |            |              |
| Manage Resource Plan           | My Org         |            | My Org             | My Org           | My Res                  |            |              |
| Open Project                   | My Org         |            | My Org             | My Proj          |                         |            | My Tsks      |
| Publish Project                | My Org         |            | My Org             | My Proj          |                         |            |              |
| Save Project to Project Server | My Org         |            | My Org             | My Proj          |                         |            |              |
| Save Protected Baseline        | My Org         |            |                    | My Proj          |                         |            |              |
| View Enterprise                | My Org         | My Org     | My Org             | My Org, My Proj  | My Res                  |            |              |

## Microsoft Project Server 2010 default categories

| Permission Name                               | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|-----------------------------------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| Resource Data                                 |                |            |                    |                  |                   |            |              |
| View Project Schedule in Project Web App      | My Or          | My Org     | My Org             | My Proj          |                   | My Proj    | My Tsks      |
| View Project Site                             | My Org         | My Org     | My Org             | My Proj          | My Proj           | My Proj    | My Tsks      |
| View Project Summary in Project Center        | My Org         | My Org     | My Org             | My Proj          | My Proj           | My Proj    | My Tsks      |
| View Resource Assignments in Assignment Views | My Org         | My Org     | My Org             | My Proj          | My Res            | My Proj    | My Tsks      |

### See Also

[Project Server 2010 global permissions](#)

[Project Server 2010 category permissions](#)

[Project Server 2010 default group permissions](#)

[Plan groups, categories, and RBS in Project Server 2010](#)

# Project Server 2010 default group permissions

---

In this article:

- [Default global permissions](#)
- [Default category permissions](#)

This article describes the default permissions that are given to the default templates and user groups in Microsoft Project Server 2010.

Project Server 2010 creates seven default groups during installation:

- Administrators
- Executives
- Portfolio Managers
- Project Managers
- Resource Managers
- Team Leads
- Team Members

Each group is given a default set of permissions (global and category). Templates are also included to allow these default permissions to be assigned to new groups created by the administrator. After using the template to create a new group, you can then choose to customize the new group to better suit your users by editing the permission for the group.

Global permissions differ from category permissions in that they apply to functionality that the user is allowed to use in Project Server 2010. Category permissions apply to what users are allowed to do with specific projects, resources, and views as defined by the category that the group is associated with. For more information about groups and categories, see [Plan groups, categories, and RBS in Project Server 2010](#).

## Default global permissions

The following table contains a list of the default global permissions for each of the default user groups.

| Permission Name                | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|--------------------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| About Microsoft Project Server | X              |            |                    |                  |                   |            |              |
| Accept                         | X              |            | X                  |                  | X                 |            |              |

Project Server 2010 default group permissions

| Permission Name                                    | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|----------------------------------------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| Timesheets                                         |                |            |                    |                  |                   |            |              |
| Build Team On New Project                          | X              |            | X                  | X                | X                 |            |              |
| Can Be Delegate                                    | X              |            |                    |                  |                   |            |              |
| Change Password                                    | X              | X          | X                  | X                | X                 | X          | X            |
| Change Workflow                                    | X              |            |                    |                  |                   |            |              |
| Clean Up Project Server Database                   | X              |            |                    |                  |                   |            |              |
| Close Tasks To Updates                             | X              | X          |                    | X                |                   |            |              |
| Contribute to Project Web App                      | X              |            |                    |                  | X                 | X          | X            |
| Edit Status Report Requests                        | X              | X          | X                  | X                | X                 | X          |              |
| Edit Status Report Responses                       | X              | X          | X                  | X                | X                 | X          | X            |
| Log On                                             | X              | X          | X                  | X                | X                 | X          | X            |
| Log on to Project Server from Project Professional | X              |            | X                  | X                | X                 |            |              |
| Manage Active Directory Settings                   | X              |            |                    |                  |                   |            |              |

**Project Server 2010 default group permissions**

| <b>Permission Name</b>                  | <b>Administrators</b> | <b>Executives</b> | <b>Portfolio Managers</b> | <b>Project Managers</b> | <b>Resource Managers</b> | <b>Team Leads</b> | <b>Team Members</b> |
|-----------------------------------------|-----------------------|-------------------|---------------------------|-------------------------|--------------------------|-------------------|---------------------|
| Manage Check-Ins                        | X                     |                   | X                         |                         |                          |                   |                     |
| Manage Cube Building Service            | X                     |                   | X                         |                         |                          |                   |                     |
| Manage Drivers                          | X                     | X                 | X                         |                         |                          |                   |                     |
| Manage Enterprise Calendars             | X                     |                   | X                         |                         |                          |                   |                     |
| Manage Enterprise Custom Fields         | X                     |                   | X                         |                         |                          |                   |                     |
| Manage Exchange Integration             | X                     |                   |                           |                         |                          |                   |                     |
| Manage Gantt Chart and Grouping Formats | X                     |                   |                           |                         |                          |                   |                     |
| Manage Lists in Project Web App         | X                     | X                 | X                         | X                       |                          |                   |                     |
| Manage My Delegates                     | X                     |                   |                           |                         | X                        |                   |                     |
| Manage My Resource Delegates            | X                     |                   |                           |                         | X                        |                   |                     |
| Manage Notification and Reminders       | X                     |                   |                           |                         | X                        |                   |                     |
| Manage Personal                         | X                     | X                 | X                         | X                       | X                        | X                 | X                   |

Project Server 2010 default group permissions

| Permission Name               | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|-------------------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| Notifications                 |                |            |                    |                  |                   |            |              |
| Manage Portfolio Analyses     | X              | X          | X                  |                  |                   |            |              |
| Manage Prioritizations        | X              | X          | X                  |                  |                   |            |              |
| Manage Project Server Backup  | X              |            |                    |                  |                   |            |              |
| Manage Project Server Restore | X              |            |                    |                  |                   |            |              |
| Manage Project Web App Views  | X              |            | X                  |                  |                   |            |              |
| Manage Queue                  | X              |            | X                  |                  |                   |            |              |
| Manage Resource Notifications | X              |            | X                  | X                |                   | X          |              |
| Manage Rules                  | X              |            |                    | X                |                   |            |              |
| Manage Security               | X              |            |                    |                  |                   |            |              |
| Manage Server Configuration   | X              |            |                    |                  |                   |            |              |
| Manage Server Events          | X              |            |                    |                  |                   |            |              |
| Manage SharePoint Foundation  | X              |            |                    |                  |                   |            |              |
| Manage Site                   | X              |            |                    |                  |                   |            |              |

**Project Server 2010 default group permissions**

| <b>Permission Name</b>                      | <b>Administrators</b> | <b>Executives</b> | <b>Portfolio Managers</b> | <b>Project Managers</b> | <b>Resource Managers</b> | <b>Team Leads</b> | <b>Team Members</b> |
|---------------------------------------------|-----------------------|-------------------|---------------------------|-------------------------|--------------------------|-------------------|---------------------|
| Services                                    |                       |                   |                           |                         |                          |                   |                     |
| Manage Time Reporting and Financial Periods | X                     |                   |                           |                         |                          |                   |                     |
| Manage Time Tracking                        | X                     |                   |                           |                         |                          |                   |                     |
| Manage Users and Groups                     | X                     |                   |                           |                         |                          |                   |                     |
| Manage Workflow Project Detail Pages        | X                     |                   |                           |                         |                          |                   |                     |
| New Project                                 | X                     | X                 | X                         | X                       | X                        | X                 | X                   |
| New Resource                                | X                     |                   | X                         |                         | X                        |                   |                     |
| New Task Assignment                         | X                     |                   |                           | X                       |                          | X                 | X                   |
| Open Project Template                       | X                     |                   | X                         | X                       |                          |                   |                     |
| Reassign Task                               | X                     |                   |                           | X                       |                          |                   | X                   |
| Save Enterprise Global                      | X                     |                   | X                         |                         |                          |                   |                     |
| Save Project Template                       | X                     |                   | X                         | X                       |                          |                   |                     |
| Save Unprotected Baseline                   | X                     |                   | X                         | X                       |                          |                   |                     |
| Self-assign Team Tasks                      | X                     |                   |                           | X                       | X                        | X                 | X                   |

**Project Server 2010 default group permissions**

| <b>Permission Name</b>                | <b>Administrators</b> | <b>Executives</b> | <b>Portfolio Managers</b> | <b>Project Managers</b> | <b>Resource Managers</b> | <b>Team Leads</b> | <b>Team Members</b> |
|---------------------------------------|-----------------------|-------------------|---------------------------|-------------------------|--------------------------|-------------------|---------------------|
| Status Broker Permission              | X                     |                   |                           |                         |                          |                   |                     |
| View Approvals                        | X                     |                   |                           | X                       | X                        | X                 |                     |
| View Business Intelligence Link       | X                     | X                 | X                         | X                       |                          |                   |                     |
| View OLAP Data                        | X                     | X                 | X                         | X                       |                          |                   |                     |
| View Project Center                   | X                     | X                 | X                         | X                       | X                        | X                 | X                   |
| View Project Schedule Views           | X                     | X                 | X                         | X                       | X                        | X                 | X                   |
| View Project Timesheet Line Approvals | X                     | X                 | X                         | X                       |                          |                   |                     |
| View Resource Availability            | X                     | X                 | X                         | X                       | X                        |                   |                     |
| View Resource Center                  | X                     | X                 | X                         | X                       | X                        |                   |                     |
| View Resource Plan                    | X                     | X                 | X                         | X                       | X                        |                   |                     |
| View Resource Timesheet               | X                     |                   |                           |                         |                          |                   |                     |
| View Task Center                      | X                     | X                 | X                         | X                       | X                        | X                 | X                   |

## Project Server 2010 default group permissions

| Permission Name   | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|-------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| View Team Builder | X              |            | X                  | X                | X                 |            |              |
| View Timesheets   | X              | X          | X                  | X                | X                 | X          | X            |

## Default category permissions

The following table contains a list of the default category permissions for each of the default user groups.

Use the following legend for the table below.

- My Org = My Organization
- My Dir = My Direct Reports
- My Proj = My Projects
- My Res = My Resources
- My Tsks = My Tasks

For example, a user in the default Administrators group (who is associated to the My Organization category by default) has permissions allowed in the Administrators column in the table. These category permissions only apply to all projects, resources, and views selected for the My Organization category. However, a user in the default Project Managers group (who is associated to the My Organization and My Projects categories) has a different set of category permissions for the objects in the My Organization category. This allows you to conveniently set a more or less restrictive set of permissions for different types of users to a group of projects, resources, and views.

For more information about groups and categories, see [Plan groups, categories, and RBS in Project Server 2010](#).

| Permission Name             | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|-----------------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| Accept Task Update Requests | My Org         |            |                    | My Proj          |                   |            |              |
| Adjust Timesheet            | My Org         |            |                    |                  |                   |            |              |
| Approve                     | My Org         |            | My Org             |                  | My Dir,           |            |              |

**Project Server 2010 default group permissions**

| <b>Permission Name</b>        | <b>Administrators</b> | <b>Executives</b> | <b>Portfolio Managers</b> | <b>Project Managers</b> | <b>Resource Managers</b> | <b>Team Leads</b> | <b>Team Members</b> |
|-------------------------------|-----------------------|-------------------|---------------------------|-------------------------|--------------------------|-------------------|---------------------|
| Timesheets                    |                       |                   |                           |                         | My Res                   |                   |                     |
| Assign Resource               | My Org                |                   | My Org                    | My Org                  | My Res                   |                   |                     |
| Build Team On Project         | My Org                |                   | My Org                    | My Proj                 | My Org                   |                   |                     |
| Create New Task or Assignment | My Org                |                   |                           | My Proj                 | My Proj                  | My Proj           | My Tsks             |
| Create Object Links           | My Org                | My Org            | My Org                    | My Proj                 | My Org, My Proj, My Res  | My Proj           | My Tsks             |
| Delete Project                | My Org                |                   | My Org                    | My Proj                 |                          |                   |                     |
| Edit Enterprise Resource Data | My Org                |                   | My Org                    |                         | My Res                   |                   |                     |
| Edit Project Summary Fields   | My Org                |                   |                           | My Proj                 |                          |                   |                     |
| Manage Basic Project Security | My Org                |                   | My Org                    | My Proj                 |                          |                   |                     |
| Manage Resource Delegates     | My Org                |                   |                           |                         | My Res                   |                   |                     |
| Manage Resource Plan          | My Org                |                   | My Org                    | My Org                  | My Res                   |                   |                     |
| Open Project                  | My Org                |                   | My Org                    | My Proj                 |                          |                   | My Tsks             |
| Publish Project               | My Org                |                   | My Org                    | My Proj                 |                          |                   |                     |
| Save Project                  | My Org                |                   | My Org                    | My Proj                 |                          |                   |                     |

## Project Server 2010 default group permissions

| Permission Name                               | Administrators | Executives | Portfolio Managers | Project Managers | Resource Managers | Team Leads | Team Members |
|-----------------------------------------------|----------------|------------|--------------------|------------------|-------------------|------------|--------------|
| to Project Server                             |                |            |                    |                  |                   |            |              |
| Save Protected Baseline                       | My Org         |            |                    | My Proj          |                   |            |              |
| View Enterprise Resource Data                 | My Org         | My Org     | My Org             | My Org, My Proj  | My Res            |            |              |
| View Project Schedule in Project Web App      | My Or          | My Org     | My Org             | My Proj          |                   | My Proj    | My Tsks      |
| View Project Site                             | My Org         | My Org     | My Org             | My Proj          | My Proj           | My Proj    | My Tsks      |
| View Project Summary in Project Center        | My Org         | My Org     | My Org             | My Proj          | My Proj           | My Proj    | My Tsks      |
| View Resource Assignments in Assignment Views | My Org         | My Org     | My Org             | My Proj          | My Res            | My Proj    | My Tsks      |

### See Also

[Project Server 2010 global permissions](#)

[Project Server 2010 category permissions](#)

[Project Server 2010 default group permissions](#)

[Plan groups, categories, and RBS in Project Server 2010](#)

[Microsoft Project Server 2010 default categories](#)

## System Center Operations Manager knowledge articles (Project Server 2010)

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The articles in this section are knowledge articles for the Microsoft Project Server 2010 management pack for Microsoft System Center Operations Manager 2007. Typically, you would see these articles after clicking a link in an alert in the Operations Manager console. You can use these articles to help you troubleshoot and resolve problems in Project Server 2010.

In this section:

[Project Active Directory connection failed](#)

[Project Active Directory exception occurred during synchronization](#)

[Project Active Directory nested foreign security principal could not be resolved](#)

[Project Active Directory nested object could not be resolved](#)

[Project Active Directory PWA group could not be resolved](#)

[Project Active Directory top-level group has no members](#)

[Project Creating Report Center Web failed](#)

[Project Cube Build Service Analysis Services server connection failure](#)

[Project Cube Build Service Analysis Services server lock time out](#)

[Project Cube Build Service attempt to overwrite failed](#)

[Project Cube Build Service Decision Support Object is not installed](#)

[Project notification XSLT transformation error](#)

[Project Failure creating a Project workspace](#)

[Project General Data Access Layer error connecting to database](#)

[Project General Data Access Layer error while getting connection strings](#)

[Project notification e-mail delivery failed](#)

[Project notification XSLT transformation error](#)

[Project Queue general percentage SQL retries per day](#)

[Project Queue general percentage SQL retries per hour](#)

[Project Queue jobs average wait time per day](#)

[Project queue jobs percentage jobs failed per day](#)

[Project queue jobs percentage failed per hour](#)

[Project Queue System restarting due to unexpected error](#)

[Project Reporting server side event has failed](#)

[Project Server event handler could not be found](#)

[Project Server event service could not be found](#)

[Project SQL user view refresh message was not queued](#)

[Project user view was truncated](#)

[Project Windows SharePoint Services format error](#)

[Project Winproj average time taken for project open](#)

[Project Winproj average percentage of incremental save to full save](#)

[Project workspace user synchronization failed](#)

# Project Active Directory connection failed

---

**Element ID / Rule name:** Project\_Active\_Directory\_Connection\_Failed

**Summary:** This monitor indicates that Microsoft Project Web App could not access the Active Directory directory service. When an administrator browses to the "Active Directory Enterprise Resource Pool Synchronization" or "Add or Edit Group" page by using Project Web App, Project Web App checks the current availability of the Active Directory forests. This check determines whether the **Find Group** button on those pages is enabled. If the **Find Group** button is available, administrators can use it to choose which Active Directory group to use for synchronization.

**Cause:** One or more of the following situations might be the cause:

- The Microsoft Project Server application server is using a SharePoint Service Account (SA) account that does not have read access to Active Directory.
- The Project Server application server may no longer be joined to an Active Directory domain.
- The Project Server application server does not currently have network access to the domain.
- Ports required for Project Server 2010 and Active Directory to communicate are not open between the Project Server 2010 application server and the Active Directory store. This can occur if a firewall is configured to block a port described in the following list:
  - 389/UDP – LDAP: LDAP is the Lightweight Directory Access Protocol that is designed to provide a standard way to access directory services. LDAP is the primary protocol used to access an Active Directory store.
  - 636/TCP – LDAP over SSL: When Secure Sockets Layer (SSL) is enabled, the LDAP data that is transmitted and received is encrypted.
  - 3268/TCP – Microsoft Global Catalog: Active Directory global catalogs listen on this port.
  - 3269/TCP – Microsoft Global Catalog with LDAP/SSL: Microsoft global catalog SSL connections listen on this port.

**Possible resolutions include:**

- Verify that the service account used by the SA used by the Project Server application server is a domain account that has read access to Active Directory.
- Verify that the Project Server application server is joined to an Active Directory domain.
- Verify that the Project Server application server has network access.
- Verify that the ports listed in the previous section are open between the Active Directory store and the Project Server application server.

# Project Active Directory exception occurred during synchronization

---

**Element ID / Rule Name:** Project\_Active\_Directory\_Exception\_Occurred\_During\_Synchronization

**Summary:** During a synchronization process, Microsoft Project Server 2010 attempts to obtain a reference to an Active Directory group that is mapped to either the Enterprise Resource Pool or a Project Server security group by using the GUID of the Active Directory group in an LDAP query. If the LDAP query fails, an Active Directory synchronization exception is recorded in the Windows Server event log. When this exception occurs, it typically means that the Active Directory synchronization process failed either partly or completely.

**Cause:** The Project Server application server cannot access the Active Directory directory service for any of the following reasons:

- The Project Server application server is using a SharePoint Service Account (SA) account that does not have read access to Active Directory.
- The Project Server application server may no longer be joined to an Active Directory domain.
- The Project Server application server does not currently have network access to the domain.
- Ports required for Project Server 2010 and Active Directory to communicate are not open between the Project Server 2010 application server and the Active Directory store. This can occur if a firewall is configured to block the ports described in the following list:
  - 389/UDP – LDAP: LDAP is the Lightweight Directory Access Protocol that provides a standard way to access directory services. LDAP is the primary protocol that is used to access an Active Directory store.
  - 636/TCP – LDAP over SSL: When Secure Sockets Layer (SSL) is enabled, the LDAP data that is transmitted and received is encrypted.
  - 3268/TCP – Microsoft global catalog: Active Directory global catalogs listen on this port.
  - 3269/TCP – Microsoft global catalog with LDAP/SSL: Microsoft global catalog SSL connections listen on this port.
- The Active Directory group no longer exists in the Active Directory store. For example, the group may have been deleted by an administrator.
- The Project Server application server's SA account does not have read access to an Active Directory group or user object.

**Possible resolutions include the following:**

- Verify that the service account that is used by the SA used by the Project Server application server is a domain account that has read access to Active Directory.
- Verify that the Project Server application server is joined to an Active Directory domain.
- Verify that the Project Server application server has network access.

## Project Active Directory exception occurred during synchronization

- Verify that the ports listed in the previous section are open between the Active Directory store and the Project Server application server.
- Verify that at least one Active Directory group exists in the Active Directory store with the same Active Directory GUID that is stored in the Project Server application server.
- Use the ADSI Edit tool to check security permissions on individual Active Directory group and user objects. The SA account must be able to read all Active Directory group and user objects that are involved in the synchronization process.



### **Note:**

The ADSI Edit tool is available for Windows Server 2008 when you install the Active Directory Domain Services (AD DS) role to make a server a domain controller. It is also available as a part of the Remote Server Administration Tools (RSAT) kit available. See [Installing or Removing the Remote Server Administration Tools Pack](http://go.microsoft.com/fwlink/?LinkId=143345) (<http://go.microsoft.com/fwlink/?LinkId=143345>) in the TechNet Library.

# Project Active Directory nested foreign security principal could not be resolved

---

## Element ID / Rule

**Name:** Project\_Active\_Directory\_Nested\_Foreign\_Security\_Principal\_Could\_Not\_Be\_Resolved

**Summary:** During synchronization with the Active Directory directory service, Microsoft Project Server 2010 could not resolve a nested Active Directory foreign security principal. The foreign security principal could be either a user or a group residing in a remote Active Directory forest or external domain. However, this warning message does verify that the top-level Active Directory group was resolved. This means that communication between the Project Server 2010 application server that initiated the Active Directory synchronization and the Active Directory domain or forest to which the top-level Active Directory group belongs was successfully established. However, the foreign security principal listed in the Windows Server event log cannot be resolved. Active Directory synchronization was tagged for partial failure.

**Cause:** Possible causes include the following:

- The Active Directory group no longer exists in the Active Directory store. For example, the group may have been deleted by an administrator.
- The Project Server application server's SharePoint Service Account (SA) account does not have read access to the Active Directory group or user object listed in the Windows Server event log.
- A communication problem exists between Project Server 2010 and the Active Directory domain in which the Active Directory group or user object resides.

**Possible resolutions include the following:**

- Verify that at least one Active Directory group exists in the Active Directory store with the same Active Directory GUID that is stored in the Project Server application server.
- Use the Active Directory Service Interfaces (ADSI) Edit tool to check security permissions on individual Active Directory group and user objects. The SA account must be able to read all Active Directory group and user objects that are involved in the synchronization process.



**Note:**

The ADSI Edit tool is available for Windows Server 2008 when you install the Active Directory Domain Services (AD DS) role to make a server a domain controller. It is also available as a part of the Remote Server Administration Tools (RSAT) kit available. See [Installing or Removing the Remote Server Administration Tools Pack](http://go.microsoft.com/fwlink/?LinkId=143345) (<http://go.microsoft.com/fwlink/?LinkId=143345>) in the TechNet Library.

- Ensure that the local Active Directory forest or domain has access to the remote Active Directory forest or domain on which the foreign security principal resides.

# Project Active Directory nested object could not be resolved

---

**Element ID / Rule Name:** Project\_Active\_Directory\_Nested\_Object\_Could\_Not\_Be\_Resolved

**Summary:** Microsoft Project Server 2010 could not resolve a nested Active Directory object during Active Directory synchronization. The Active Directory object could be either a user or a group. However, this warning message does verify that the top-level Active Directory group was resolved. This means that communication between the Project Server 2010 application server that initiated the Active Directory synchronization and the Active Directory domain or forest to which the top-level Active Directory group belongs was successfully established. However, the nested Active Directory object listed in the Windows Server event log cannot be resolved. Active Directory synchronization was tagged for partial failure.

**Cause:** Possible causes include the following:

- The Active Directory group no longer exists in the Active Directory store. For example, the group may have been deleted by an administrator.
- The Project Server application server's SharePoint Service Account (SA) account does not have read access to the Active Directory group or user object listed in the Windows Server event log.
- A communication problem exists between Project Server 2010 and the Active Directory domain in which the Active Directory group or user object resides.

**Possible resolutions include the following:**

- Verify that at least one Active Directory group exists in the Active Directory store with the same Active Directory GUID that is stored in the Project Server application server.
- Use the Active Directory Service Interfaces (ADSI) Edit tool to check security permissions on individual Active Directory group and user objects. The SA account must be able to read all Active Directory group and user objects that are involved in the synchronization process.



**Note:**

The ADSI Edit tool is available for Windows Server 2008 when you install the Active Directory Domain Services (AD DS) role to make a server a domain controller. It is also available as a part of the Remote Server Administration Tools (RSAT) kit available. See [Installing or Removing the Remote Server Administration Tools Pack](http://go.microsoft.com/fwlink/?LinkId=143345) (<http://go.microsoft.com/fwlink/?LinkId=143345>) in the TechNet Library.

- Ensure the local Active Directory forest or domain has access to the remote Active Directory forest or domain on which the foreign security principal resides.

# Project Active Directory PWA group could not be resolved

---

**Element ID / Rule Name:** Project\_Active\_Directory\_PWA\_Group\_Could\_Not\_Be\_Resolved

**Summary:** During Microsoft Project Web App security group synchronization, Microsoft Project Server 2010 could not resolve the top-level Active Directory object for the Project Web App security group. Active Directory synchronization has been tagged for failure for this Project Web App group.

**Cause:** The Project Server application server cannot access Active Directory for any of the following reasons:

- The Project Server 2010 application server is using a SharePoint Service Account (SA) account that does not have read access to the Active Directory directory service. This can occur if the SSP is configured to use a local computer account.
- The Project Server 2010 application server does not currently have network access to the domain.
- TCP or UDP ports that are required for Project Server 2010 and Active Directory to communicate are not open between the Project Server 2010 application server and the Active Directory store. This can occur if a firewall is configured to block the ports described in the following list:
  - 389/UDP – LDAP: LDAP is the Lightweight Directory Access Protocol that provides a standard way to access directory services. LDAP is the primary protocol that is used to access an Active Directory store.
  - 636/TCP – LDAP over SSL: When Secure Sockets Layer (SSL) is enabled, the LDAP data that is transmitted and received is encrypted.
  - 3268/TCP – Microsoft global catalog: Active Directory global catalogs listen on this port.
  - 3269/TCP – Microsoft global catalog with LDAP/SSL: Microsoft global catalog SSL connections listen on this port.
- The Active Directory group no longer exists in the Active Directory store. For example, the group may have been deleted by an administrator.
- The Project Server application server's SA account does not have read access to an Active Directory group or user object.

**Possible resolutions include the following:**

- Verify that the service account that is used by the SA that is used by the Project Server 2010 application server is a domain account that has read access to Active Directory.
- Verify that the Project Server 2010 application server is joined to an Active Directory domain.
- Verify that the Project Server 2010 application server has network access.
- Verify that the TCP and UDP ports listed in the previous section are open between the Active Directory store and the Project Server 2010 application server.

## Project Active Directory PWA group could not be resolved

- Verify that at least one Active Directory group exists in the Active Directory store with the same Active Directory GUID that is stored in the Office Project Server 2010 application server.
- Use the Active Directory Service Interfaces (ADSI) Edit tool to check security permissions on individual Active Directory group and user objects. The SA account must be able to read all Active Directory group and user objects that are involved in the synchronization process.



**Note:**

The ADSI Edit tool is available for Windows Server 2008 when you install the Active Directory Domain Services (AD DS) role to make a server a domain controller. It is also available as a part of the Remote Server Administration Tools (RSAT) kit available. See [Installing or Removing the Remote Server Administration Tools Pack](http://go.microsoft.com/fwlink/?LinkId=143345) (<http://go.microsoft.com/fwlink/?LinkId=143345>) in the TechNet Library.

# Project Creating Report Center Web failed

---

**Element ID / Rule Name:** Project\_Creating\_Report\_Center\_Web\_Failed

**Summary:** The ProjectBICenter web could not be created during provisioning.

**Cause:** The ProjectBICenter web could not be created during provisioning for any of the following reasons:

- The required web template is not available on the site collection.
- At least one of the following required features could not be activated:
  - Office Server Publishing Site
  - BasicWebParts
  - PerformancePoint SiteCollection
  - PremiumSite
- There already is a web with the same name as ProjectBICenter that is not of type Business Intelligence.

**Possible resolutions include the following:**

- Make sure that the PerformancePoint service application is created. Re-try Microsoft Project Web App (PWA) creation.
- Activate the following features:
  - Office Server Publishing Site
  - BasicWebParts
  - PerformancePoint SiteCollection
  - PremiumSite
- Move the content and delete the old ProjectBICenter site. Then re-create PWA site.

## Project Cube Build Service Analysis Services server connection failure

---

### Element ID / Rule

**Name:** Project\_Cube\_Build\_Service\_Analysis\_Services\_Server\_Connection\_Failure

**Summary:** Microsoft Project Server 2010 failed to connect to the Microsoft SQL Server Analysis Services (SSAS) server for building cubes.

**Cause:** This error can occur for a number of reasons. Most commonly, this can occur when the SQL Server Analysis Services server is unavailable or the account used to access the Analysis Services server does not have adequate permissions to connect.

### Possible resolutions include the following:

- Ensure that the MSSQLServerOLAPService service (if SQL Server 2000 is used as the back-end database) or SQL Server Analysis Services (if Microsoft SQL Server 2005 is used as the back-end database) is running.
- Ensure that the account running the Microsoft Project Server Queuing Service is a member of the OLAP Administrators group on the Analysis Services server.

# Project Cube Build Service Decision Support Object is not installed

---

**Element ID / Rule Name:** Project\_Cube\_Build\_Service\_Decision\_Support\_Object\_Is\_Not\_Installed

**Summary:** The Cube Build Service requires the Decision Support Object (DSO) component of SQL Server Analysis Services be installed on the Microsoft Project Server 2010 application server from which the Project Server farm connects to the Analysis Services server to generate the cubes structure.

**Cause:** The DSO component of Analysis Services is not installed on the Project Server application server.

**Possible resolutions include the following:**

- Use the Analysis Services 2000 setup wizard to install the DSO component on the Project Server 2010 application server. Note that you do not have to install the Analysis Services, only the DSO component. In the setup wizard, the DSO component is known as the "Client Component."
- If the cubes will be built on SQL Server 2005 Analysis Services, you have to install the following components on the application server:
  - Microsoft SQL Server Native Client (installed by using sqlncli.msi).
  - Microsoft SQL Server 2005 Management Objects Collection (installed by using sqlserver2005\_xmo.msi).
  - Microsoft SQL Server 2005 Backward Compatibility Components (installed by using SQLServer2005\_BC.msi).



**Note:**

These components can be downloaded from the [Feature Pack for Microsoft SQL Server 2005 - April 2006 release](#) (or newer). For additional configuration information, see [Deployment for Project Server 2010](#).

- Move the Content and Delete the old ProjectBICenter site. And then re-create PWA site.

# Project Cube Build Service Analysis Services server lock time out

---

**Element ID / Rule Name:** Project\_Cube\_Build\_Service\_OLAP\_Processing\_Failure

**Summary:** After the Microsoft Project Server 2010 cube structures are built, the Microsoft SQL Server Analysis Services (SSAS) server processes the cubes in order to obtain the data from its data source, which is the associated Project Server 2010 Reporting database. This processing also obtains any customized data that was added to the cubes.

**Cause:** Several things could cause the SQL Server Analysis Services database processing to fail. The most common case is that the Analysis Services server does not have access to the data in the Project Server Reporting database. This could be the case if the computer that is running SQL Server and that is hosting the Reporting database and the Analysis Services server are on separate computers and the SQL Server Analysis Services is not running under an account that has at least read access to the Reporting database. This might also occur if there is a custom extension to the cubes that attempts to read data from a source without having sufficient permission.

**Possible resolutions include the following:**

- Use the ULS logs to verify that the processing failure is caused by permission problems.
- Resolve permission problems:
  - In the computer where the Analysis Services server is running, ensure that the account that is used by the computer that is running SQL Server Analysis Services is a Windows domain account instead of in a service account, such as Local System.
  - Ensure that this account has read access to the Project Server Reporting database from the site on which you want to build cubes. Note that, if there are multiple sites building cubes on the same Analysis Services server, the Windows domain account that is used by the SQL Server Analysis Services should have read access to all corresponding Project Server Reporting databases.
- If processing fails but the credentials are configured properly, go directly to the Analysis Services server and manually attempt to process the database. This action will provide you with detailed information about where the failure is occurring.

# Project Cube Build Service OLAP Processing Failure

---

**Element ID / Rule Name:** Project\_Cube\_Build\_Service\_OLAP\_Processing\_Failure

**Summary:** After the Microsoft Project Server 2010 cube structures are built, the computer that is running Microsoft SQL Server Analysis Services (SSAS) processes the cubes in order to obtain the data from its data source. The data source is the associated Project Server 2010 Reporting database. This processing also obtains any customized data that was added to the cubes.

**Cause:** Several things could cause the SQL Server Analysis Services database processing to fail. The most common case is that the Analysis Services server does not have access to the data in the Project Server Reporting database. This could be the case if the following are true:

- The Reporting database and the Analysis Services server are on separate computers
- The instance of SQL Server Analysis Services is not running under an account that has at least read access to the Reporting database

This might also occur if there is a custom extension to the cubes that attempts to read data from a source without having sufficient permission.

**Possible resolutions include the following:**

- You can use the ULS logs to verify that the processing failure is caused by permission problems.
- To resolve permission problems:
  - a. In the computer where Analysis Services server is running, ensure that the account that is used by the computer that is running SQL Server Analysis Services is a Windows domain account instead of a service account, such as Local System.
  - b. Ensure that this account has read access to the Project Server Reporting database from the site on which you want to build cubes. If there are multiple sites building cubes on the same Analysis Services server, the Windows domain account that is used by SQL Server Analysis Services should have read access to all corresponding Project Server Reporting databases.
- If processing fails but the credentials are configured correctly, go directly to the Analysis Services server and manually attempt to process the database. This action will give you detailed information about where the failure is occurring.

# Project Failure creating a Project workspace

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**Element ID / Rule Name:** Project\_Failure\_Creating\_A\_Project\_Workspace

**Summary:** Microsoft Project sites are created asynchronously on project publish through the Project Server Queue Service. This applies to projects published from Project Professional and those published using Microsoft Project Web App alike. This alert occurs when asynchronous Project site creation fails.

**Cause:** Failure creating a project workspace may be caused by any of the following reasons:

- An invalid template. If the administrator has incorrectly extended the Project Site template, or has incorrectly deployed the template, site creation using that template may fail.

**Possible resolutions include the following:**

- Attempt to create a Project site manually to determine whether the site template is valid. If site creation succeeds, the problem may be related to other operations that occur during Project site creation, such as site linking or user synchronization. If Project site creation fails, review the Windows Event log and trace logs and troubleshoot accordingly.
- If the problem persists, determine whether the underlying Project Server Interface methods that support site creation are functioning correctly. If the site is provisioned correctly through the user interface (which is a synchronous operation), the problem may be related to the queue.
- Create a Project site manually
  - a. Log on to Project Web App as an administrator.
  - b. On the **Site Actions** menu, click **Site Settings**.
  - c. In the **Site Administration** section, click **Sites and Workspaces**.
  - d. On the Sites and Workspaces page, click **Create**.
  - e. On the New SharePoint Site page, select the options that you want and then click **Create**.



**Note:**

You must specifically choose the Microsoft Project site template.

- Verify that the underlying Project Server Interface methods that support site creation work.
  - a. Log on to Project Web App as an administrator.
  - b. In the Quick Launch, click **Server Settings**.
  - c. In the **Operational Policies** section, click **Project Sites**.
  - d. On the Project Sites page, select a project that does not have a site, and then click **Create Site**.
  - e. In the **Create Project Site** dialog box, enter this project site in the **Site URL** box and then click **OK**.



**Tip:**

## Project Failure creating a Project workspace

Notice that, as you type the path in the **Site URL** box, the URL displayed to the right of the **Destination URL** label is automatically updated.

# Project General Data Access Layer error connecting to database

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**Element ID / Rule Name:** Project\_General\_Data\_Access\_Layer\_Error\_Connecting\_To\_Database

**Summary:** This message indicates that the Data Access Layer on a Microsoft Project Server application server tried but could not connect to one of the four Project Server databases that hold the data for a Microsoft Project Server 2010 site. The effect that this problem has on the Project Server deployment varies, depending on whether the problem is caused at the server or the database level, and whether a database is affected. The following list describes how the effect on the Project Server deployment varies, depending on which database the error originated from:

1. **Draft Database** Project managers will be unable to save edits to data. However, some Microsoft Project Web App functionality will be available, although typically read-only. All Reporting database read-only functionality should be available. Limited Archive database functionality will be available, but no project archive or restore functions will be available.
2. **Published Database** Most system functionality will be impaired because the security data that is used for authorization is stored in this database. All Reporting database functionality should be available. However, no Archive database functionality will be available.
3. **Archive Database** Most system functionality will be available except for archive and restore functions that are either scheduled or performed manually.
4. **Reporting Database** Most system functionality will be available except for relational reporting.



**Note:**

If either the Published database or the Draft database is unavailable, the Project Server queue service will degrade over time as queued actions either fail or are blocked.

**Cause:** Possible causes include the following:

- Network connectivity issues that prevent the Project Server application servers from connecting to the one or more computers that are running Microsoft SQL Server.
- Invalid service account credentials caused by account lockouts or failure to propagate changes.
- Database availability issues caused by hardware problems, such as failed hard disk drives or controllers.
- Data access issues caused by an administrator who changes database permissions, which results in the account that is used to access data being denied authorization.

**Possible resolutions include the following:**

- Troubleshoot and resolve network connectivity between the Project Server application server and its SQL Server computers. For more information, see [How to troubleshoot network connectivity problems](http://go.microsoft.com/fwlink/?LinkID=72704) (http://go.microsoft.com/fwlink/?LinkID=72704).

## Project General Data Access Layer error connecting to database

- Troubleshoot and resolve SQL Server connectivity problems. For more information, see [How to troubleshoot connectivity issues in SQL Server 2000](http://go.microsoft.com/fwlink/?LinkID=72704) (http://go.microsoft.com/fwlink/?LinkID=72704).
- Troubleshoot and recover from database issues. For more information, see [INF: Disaster Recovery Articles for Microsoft SQL Server](http://go.microsoft.com/fwlink/?LinkID=72704) (http://go.microsoft.com/fwlink/?LinkID=72704).



**Note:**

Once connectivity to the databases is restored, the application administrator should use the Manage Queue Jobs page in Project Web App to review the queue and take any corrective actions as indicated by the queue management documentation.

- Access the Manage Queue Jobs page
  - a. Log on to Project Web App as an administrator.
  - b. In the Quick Launch, click **Server Settings**.
  - c. On the Server Settings page, in the **Queue** section, click **Manage Queue**.

# Project General Data Access Layer error while getting connection strings

---

## Element ID / Rule

**Name:** Project\_General\_Data\_Access\_Layer\_Error\_While\_Getting\_Connection\_Strings

**Summary:** The Data Access Layer reads information from the configuration database of the SharePoint Server farm when a Project Server application server is starting. The configuration database contains system infrastructure information, including the location of the Microsoft Project Server databases. If a Project Server application server cannot obtain this information from the configuration database, it cannot start.

**Cause:** A General Data Access Layer Error may occur for any of the following reasons:

- Infrastructure availability problems that affect the configuration database or the Microsoft SQL Server computer where the configuration database is hosted.
- Credential issues with the service account. This can be caused by a failure to propagate an account or a changed password, or the account has been locked out.
- Incomplete or incorrect information in the configuration database due to a partial farm restore of an older copy of the configuration database that does not contain the Project Server information.

## Possible resolutions include the following:

- Depending on the root cause of the issue, you might use the troubleshooting guides in the following list to resolve the problem or restore the configuration database from backup. Possible resolutions include the following:
  - If the problem is due to network connectivity problems between the Project Server application servers and SQL Server computers, see [How to troubleshoot network connectivity problems](http://go.microsoft.com/fwlink/?LinkID=72704) (<http://go.microsoft.com/fwlink/?LinkID=72704>).
  - If the problem is due to SQL Server connectivity issues, see [How to troubleshoot connectivity issues](http://go.microsoft.com/fwlink/?LinkID=72704) (<http://go.microsoft.com/fwlink/?LinkID=72704>).
  - If the problem is due to incorrect data in SQL Server, see [Disaster Recovery Articles for SQL Server](http://go.microsoft.com/fwlink/?LinkID=72704) (<http://go.microsoft.com/fwlink/?LinkID=72704>).
  - In the case of an out-of-step restore of the configuration database that has no possibility of rolling forward based on database logs, it is recommended that you reinstall Project Server and restore its data from backup into the new databases.

# Project notification e-mail delivery failed

---

**Element ID / Rule Name:** Project\_Notification\_E\_mail\_Delivery\_Failed

**Summary:** The connection to the SMTP server failed..

**Cause:** A functioning connection to the SMTP server is unavailable.

**Possible resolutions include the following:**

- Verify that the correct name of the SMTP Server is configured in Microsoft Project Server 2010.
- Verify that the SMTP Server is functioning normally. For example, the SMTP server may be incorrectly configured to use the wrong SMTP server name or port number.



**Note:**

After verifying the information listed earlier in this section, retry the queue job.

# Project notification XSLT transformation error

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**Element ID / Rule Name:** Project\_Notification\_XSLT\_Transformation\_Error

**Summary:** This alert indicates that the XSL used to transform XML data in the body of an e-mail message has failed.

**Cause:** Possible causes may include:

- The XSL data might be corrupted.
- If the XSL data was customized, there could be an error in the custom code.
- Other custom updates to the server farm might create a situation that is not compatible with the XSL data.

**Possible resolutions include the following:**

- Make sure the performance point service application is created. Re-try Microsoft Project Web App (PWA) creation.
- Performing the following steps:
  - a. Check the Windows NT Event log to determine the notification e-mail type UID.
  - b. Using the notification e-mail type UID from the Windows NT Event log, query the MSP\_Notification\_XSLS table in the Published database to return the notification e-mail XSL.
  - c. Verify that the XSL does not contain any errors.
  - d. If necessary, restore the XSL for the specified notification e-mail type UID from backup.

# Project Queue jobs average wait time per day

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**Element ID / Rule Name:** Project\_Queue\_Jobs\_Average\_Wait\_Time\_Per\_Day

**Summary:** This alert indicates that the amount of time jobs are waiting in the queue (on average) before they are processed has exceeded the threshold set for this rule. This gives you a direct way to determine whether your Service Levels are not being met. Note that if this alert occurs repeatedly, this indicates that service is poor.



**Note**

- Average wait time is calculated as follows:
- Average wait time = Time when the job was picked up for processing – Time when the job was put into the queue.

**Cause:** Possible causes include the following:

- Jobs are blocked in the queue of the Project Server application server.
- The Project Server application server may be overloaded.
- The Project Server application server may have fewer job processor threads than required to meet the inflow of jobs.

**Possible resolutions include the following:**

Perform the following steps:



1. Verify whether jobs are blocked in the queue by reviewing the Windows NT Event log and trace logs, and troubleshoot accordingly.
2. If the problem persists, determine whether the problem is due to an overloaded Project Server application server by monitoring the following performance counters on the affected server: Processor, Memory, and PhysicalDisk.



**Important:**

If these performance counters indicate a bottleneck, upgrade the components that are causing the bottlenecks, or add one more additional Project Server application server as a service application so that the load is balanced among multiple servers.



**Warning:**

When you add another service application to the farm, the farm and the queue infrastructure provide load balancing automatically. If these performance counters indicate that the Project Server application server is not bottlenecked. However, the average wait time remains high, this may indicate that your Project Server application server might have fewer job processor threads than are required to meet the inflow of

## Project Queue jobs average wait time per day

jobs. You can also increase the number of job processor threads.

3. Try increasing the number of job processor threads by using the following procedure:
  - a. Log on to Microsoft Project Web App as an administrator.
  - b. In the Quick Launch, click **Server Settings**.
  - c. On the Server Settings page, in the **Queue** section, click **Queue Settings**.
  - d. On the Queue Settings page, in the **Maximum Number of Job Processor Threads** section, enter the maximum number of threads you want to use.



### **Note:**

This setting is for a particular Project Web App site. This means that, if your Project Server application server has three Project Web App sites and you set the number of threads to 4 for each site, this will result in a total of 12 job processor threads for the Service Application ( $3 * 4 = 12$ ). This is important to understand, because setting the total number of job processor threads too high can affect the performance of your server.

## Project Queue general percentage SQL retries per day

---

**Element ID / Rule Name:** Project\_Queue\_General\_Percentage\_SQL\_Retries\_Per\_Day

**Summary:** This alert occurs if the queue is hit with a number of SQL retries when it is trying to read jobs from the Microsoft Project database or write status back.



**Caution:**

Note that this does not include SQL retries that may result from individual jobs being processed — but still gives a fair idea that there is something potentially wrong with the Project Server-to-SQL interaction.

**Cause:** Possible causes include the following:

- The network connection between the Project Server application server and the SQL Server computer may be a bottleneck (if they are on different computers).
- The SQL Instance that Project Server connects to may be overloaded.

**Possible resolutions include the following:**

- Use a network Ping to verify whether there is excessive network latency between the Project Server application server and the SQL Server computer. If it is determined that the network is the bottleneck, resolve accordingly.
- Monitor the performance objects on the computer that is running SQL Server, such as Processor, Memory, PhysicalDisk, and SQL-specific counters. If the problem is caused by too many applications that run on the SQL Server computer used by the Project Server application server, do one of the following:
  - Move the Project application to another computer that is running SQL Server.
  - Move other applications from the instance of SQL Server that Project Server is using to another instance of SQL Server.
  - Set up a SQL Cluster to improve the efficiency of the back-end database.

# Project Queue general percentage SQL retries per hour

---

**Element ID / Rule Name:** Project\_Queue\_General\_Percentage\_SQL\_Retries\_Per\_Hour

**Summary:** This alert indicates that the number of SQL retries has exceeded the threshold for the past hour. This alert is based on the same performance counter as the "QueueGeneral: % SQL Retries / Day rule." It also helps to show spikes in SQL retries over a shorter period of time so you can choose to investigate possible causes before customers become aware of a potential problem.

**Cause:** Possible causes include the following:

- The network connection between the Project Server application server and the SQL Server computer may be a bottleneck (if they are on different computers).
- The SQL instance that Project Server connects to may be overloaded.

**Possible resolutions include the following:**

- Use a network Ping to determine whether there is excessive network latency between the Project Server application server and the SQL Server computer. If you decide that the network is the bottleneck, resolve accordingly.
- Monitor the performance objects on the SQL Server computer, such as Processor, Memory, PhysicalDisk, and SQL-specific counters. If the problem is caused by too many applications running on the SQL Server computer used by the Project Server application server, do one of the following:
  - Move the Project application to another SQL Server computer.
  - Move other applications from the SQL Server computer that Project Server is using to another SQL Server computer.
  - Set up a SQL cluster to improve the efficiency of the back-end database.

# Project Cube Build Service attempt to overwrite failed

---

**Element ID / Rule Name:** Project\_Cube\_Build\_Service\_Attempt\_To\_Overwrite\_Failed

**Summary:** The Microsoft Project Server 2010 Cube Build Service failed to build a Microsoft SQL Server Analysis Services (SSAS) database because another SQL Server Analysis Services database already exists with the same name from a different Microsoft Project Web App site.

**Cause:** This error can occur when more than one Project Web App site attempts to build an Analysis Services database in the same Analysis Services server that uses the same database name.

**Possible resolutions include the following:**

- Ensure that all Analysis Services database names for a particular Analysis Services server are unique across all Project Web App sites.

# Project Active Directory top-level group has no members

---

**Element ID / Rule Name:** Project\_Active\_Directory\_Top\_Level\_Group\_Has\_No\_Members

**Summary:** The top-level Active Directory group that is mapped to the Enterprise Resource Pool or a Microsoft Project Web App Security Group does not contain any members. Because of this, no user objects in the Active Directory directory service will be synchronized with Microsoft Project Server 2010.

**Cause:** The top-level Active Directory group that is mapped to the Enterprise Resource Pool or a Project Web App Security Group does not contain any members.

**Possible resolutions include the following:**

- To keep this warning from occurring, add members to the Active Directory group. If you have created the Active Directory group and plan to add members to the group at a later time, you can ignore this message.

# Project workspace user synchronization failed

---

**Element ID / Rule Name:** Project\_Workspace\_User\_Synchronization\_Failed

**Summary:** Microsoft Project Server users are added as users to Project sites based on the permissions that are assigned to them by an administrator in Project Server. This allows for Project team members to access the Project site. This alert occurs when the synchronization of users from Project Server to the Project site fails. This indicates that some or all of the project users were not added to the SharePoint groups for the Project site. Until this problem is resolved, those project users will not have access to the Project site.

**Cause:** User synchronization may have failed for one of the following reasons:

- There was an error communicating with the site. For example, the Web application that hosts the Project site may be down.
- User synchronization may have encountered an error when you are adding one or more users to the Project site.
- User synchronization may have timed out on the Project Server application server.

**Possible resolutions include the following:**

- Make sure the PerformancePoint service application is created. Re-try Microsoft Project Web App(PWA) creation.
- You can troubleshoot user synchronization errors by doing the following:
  - Attempt to synchronize users to a Project site manually, as described in the following steps. If this action works, the error might have occurred because a user has inadequate permissions.
  - Review the trace logs to determine whether synchronization failed for a specific user. Take action on that error and retry user synchronization.
- Synchronize users to a Project site manually
  - a. Log on to Project Web App as an administrator.
  - b. In the Quick Launch, click **Server Settings**.
  - c. In the **Operational Policies** section, click **Project Sites**.
  - d. On the Project Sites page, select a project and then click **Synchronize**.

## Project Winproj average percentage of incremental save to full save

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**Element ID / Rule Name:** Project\_Winproj\_Percentage\_Of\_Incremental\_Save\_To\_Full\_Save

**Summary:** The first time that a project is created on the Microsoft Project Server application server from Microsoft Project Professional, it is saved using a *full save*, which means that all of the project data is transmitted and saved in the database used by the Project Server application server. Subsequent saves of the project are saved incrementally, by default. This means that only the project data that has CHANGED is transmitted to the server and saved in the database. This is mainly to optimize performance.

Full saves also occur in the following situations:

1. If the incremental save fails, a FULL SAVE is attempted.
2. The "correlated job group" for a particular project is blocked. For example, a project check-in failure can block the correlated job group for that project. After this, when a user attempts to save that same project from Microsoft Project Professional, the "correlated job group" for that project is canceled and a FULL SAVE of a project is performed. For more information about correlated job groups, see the queue documentation.



**Note:**

Note that users are never aware of whether their project is saved using a FULL SAVE or an incremental save. However, the administrator should care about this issue because it directly affects performance.



**Note:**

This alert occurs if the percentage of incremental saves is less than the threshold.

**Cause:** The number of full saves that are occurring has exceeded the threshold set for this alert.

**Possible resolutions include the following:**

- Use the Queue Management page in Microsoft Project Web App and check for failed jobs to determine which jobs are blocking the correlated job group. Review the Windows NT Event and trace logs to determine whether there are events or traces from the "Project Server Active Cache Save" category that relate to the failed queue jobs that you discovered on the Queue Management page, and troubleshoot accordingly.

# Project Winproj average time taken for project open

---

**Element ID / Rule Name:** Project\_Winproj\_Average\_Time\_Taken\_For\_Project\_Open

**Summary:** This counter tracks the average time taken (in seconds) for a project to open on a Microsoft Project Server application server that uses Project Professional 2010. Note that this counter tracks the time taken for a project to open on the server only — it does not include the communication overhead between the client application (in this case Microsoft Project Professional) and the Project Server application server. The average time taken for a project to open is calculated as follows:

Average time taken for project to open = Total time taken for all projects to open / total number of times projects were opened.



**Note:**

By default, this alert occurs if the average time taken is greater than 2 minutes.

**Cause:** Possible causes include the following:

- This alert typically occurs when the Project Server application server is overloaded.
- The SQL Server computer that hosts the databases for the Project Server application server is overloaded.

**Possible resolutions include the following:**

- Review other performance objects, such as Processor, Memory, and PhysicalDisk to determine the performance bottleneck, and upgrade the components that are causing the bottlenecks or consider adding more Project Server application servers to your farm to balance the load.
- If the Project Server application server is not overloaded, the SQL Server computer may be the bottleneck. Monitor the performance objects on the SQL Server computer, such as Processor, Memory, PhysicalDisk, and SQL-specific counters. If the problem is caused by too many applications that run on the same SQL Server computer, do one of the following:
  - Move the Project application to another SQL Server computer.
  - Move other applications from the SQL Server computer that Project Server is using to another SQL Server computer.
  - Set up a SQL cluster to improve the efficiency of SQL Server.

# Project user view was truncated

---

**Element ID / Rule Name:** Project\_User\_View\_Was\_Truncated

**Summary:** The Reporting Data Service creates views that make it easy for users to perform reporting and cube building against the Reporting database. These views, which are Microsoft SQL Server views, are limited to 1024 columns, also referred to as fields.

This alert occurs every time that the Reporting Data Service recreates the Reporting Database views (for example, when cubes are defined or when custom fields are created or deleted) if the reporting database is configured to use more than 1024 columns.

Organizations that bring multiple business divisions together into the same Microsoft Project Server site may have little or no overlap between custom fields. This can result in a Reporting database that exceeds 1024 columns.

**Cause:** A large number of custom fields, in combination with a large number of Project Server fields, can cause the Reporting database views to exceed the architectural limit of 1024 columns. To prevent this condition from causing the view creation process to fail, the Reporting Data Service stops adding custom fields when the limit is reached and provides a warning Windows NT Event to help system administrators who are unaware of this limit to diagnose “missing” data.

**Possible resolutions include the following:**

- Reduce the number of custom fields used by any particular Project Server site. One way to do this is by creating additional Project Server sites and moving some of the users to the new sites.
- Organizations that need more than 1024 fields for a particular site should consume the Reporting UserViewChanged event and create additional views that contain the additional data.

# Project Windows SharePoint Services format error

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**Element ID / Rule Name:** Project\_Windows\_SharePoint\_Services\_Format\_Error

**Summary:** The Reporting Data Service extracts Microsoft Project Issue, Risk, and Deliverable data from lists that are defined within each workspace (sites) on the Microsoft Project Server application servers in the farm. This alert occurs if an item in one of the lists contains data that cannot be stored in its associated Reporting database table. This typically is caused by the list data being in the wrong format or too large to store in the database table.

The resolution is to fix the underlying problem. The RDS pulls SharePoint Server data (Issues, Lists, Deliverables) into RDS. Use ULS to pinpoint the SharePoint Server list item causing the issue. Delete/re-create the item, or look for type mismatches/anomalies in the list item instance data.

**Cause:** An administrator or designer incorrectly modified the standard Project list templates. For example, the entry types or sizes were changed in a way that data that was stored in lists cannot be replicated to the Reporting database.



**Note:**

The Project Server SDK documentation indicates valid customizations that can be made to these standard list items.

**Possible resolutions include the following:**

- If the site template was incorrectly edited, you can do the following to resolve the problem:
  - Correct the site template.
  - Recreate the workspace using the corrected template.
  - Manually reload the data into the lists.
- If this procedure is not feasible, the affected lists should be deleted and a custom list that is used that supports the data format that you require. Note that if you choose this alternate resolution, you will not be able to replicate data from the custom list to the Reporting database.

# Project SQL user view refresh message was not queued

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**Element ID / Rule Name:** Project\_SQL\_User\_View\_Refresh\_Message\_Was\_Not\_Queued

**Summary:** The Reporting Data Service maintains a series of Microsoft SQL Server views that shield the reporting user or application and the Cube Building Service from the complexities of custom field and time-phased data storage. These views are updated when custom fields are added, changed, or deleted.

This event indicates that a queue service or application logic problem has stopped a request to regenerate a SQL view and, therefore, the view may now be out of date. For example, the view may contain a field that has been deleted or the view may be missing a new field that was created after the view was last created. SQL queries that are made against the Reporting database using this view may return stale or incorrect data.

**Cause:** The request to regenerate a SQL view, also referred to as a user view refresh message, could not be added to the Microsoft Project Server queue due to queue service availability issues, database issues with the Draft database, or an application logic problem with the Reporting Data Service.

**Possible resolutions include the following:**

- Force the Project Server application server to attempt to queue the user view refresh message, change the property of an enterprise custom field definition, and then change it back. For example, change the name of an enterprise custom field from "My Enterprise Custom Field" to "My Enterprise Custom Fields," save the changes, and then change the field name back to "My Enterprise Custom Field." This forces the Project Server application server to attempt to queue the user view refresh message again.



**Note:**

The custom field definition must be of the same entity type as the custom field that is causing the issue. For example, if a Task custom field has prevented the User View Refresh message from being queued, you must modify a property of a Task custom field.

# Project Server event service could not be found

---

**Element ID / Rule Name:** Project\_Server\_Event\_Service\_Could\_Not\_Be\_Found

**Summary:** Project Server events are handled by the application servers in the farm. A Windows NT service called Microsoft Project Server Eventing fires the event handlers. This service is responsible for locating, loading, and running the appropriate third-party event handlers. If the Microsoft Project Server Eventing Service is unavailable, then no registered event handlers can be executed.

**Cause:** Possible causes include the following:

- The Microsoft Project Server Eventing Service is not started and running.



**Note:**

The Windows SharePoint Services Timer service periodically checks whether the Microsoft Project Server Eventing Service is running, and attempts to start it if they are necessary.

- The Microsoft Project Server Eventing Service uses the same credentials as the Service Application for the Project Server Interface application. This means that if those credentials are invalid (for example the password has expired), this event may occur.

**Possible resolutions include the following:**

- If it is stopped, restart the Microsoft Project Server Eventing Service.
- If the Microsoft Project Server Eventing Service is not stopped, verify that the credentials for the account that is used by this service are valid and then restart the service.

# Project Server event handler could not be found

---

**Element ID / Rule Name:** Project\_Server\_Event\_Handler\_Could\_Not\_Be\_Found

**Summary:** Administrators can register event handlers for Microsoft Project Server 2010 by using the Events page in Microsoft Project Web App. To register an event handler, the event handler assembly must be physically present on all application servers in the farm. If the event handler cannot be located, it cannot be loaded and executed.

**Cause:** An administrator might have deleted the event handler or moved it to a different location. To avoid errors, the registration information in Project Web App must be updated when an administrator deletes or moves an event handler. The system looks for the registered event handler when a server side event occurs.

**Possible resolutions include the following:**

- Perform the following steps:
  - Verify the existence of the event handler assembly on all application servers in the farm.
  - Use the Events page in Project Web App to update the event handler registration with the correct location of the event handler assembly.

# Project Reporting server side event has failed

---

**Element ID / Rule Name:** Project\_Reporting\_Server\_Side\_Event\_Has\_Failed

**Summary:** The Microsoft Project Server application server has a custom event handler infrastructure that enables developers to write code, such as a custom server-side event handler, to extend the capabilities of the application server and to enforce data-based business rules that are connected to the project management process.

This alert indicates that a custom server-side event handler running within the Reporting Data Service component has failed.

**Cause:** A problem, such as faulty logic or an unhandled exception, may have occurred in the custom event handler code or in the application server eventing infrastructure.

**Possible resolutions include the following:**

- Verify the health of the Project Server Eventing Service that is running on the Project Server application server and troubleshoot accordingly. If no problem is found with this service, do one of the following:
  - Remove the custom event handler to prevent this error from occurring.
  - Review the Windows NT Event log for errors from the event handler and troubleshoot accordingly. In some cases, you may need to debug the code for the server-side event handler to uncover the root cause of the failure.

# Project Queue System restarting due to unexpected error

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**Element ID / Rule Name:** Project\_Queue\_System\_Restarting\_Due\_To\_Unexpected\_Error

**Summary:** The Queue System has been forced to restart due to an unexpected error.

**Cause:** The Project Queue System can restart due to any of the following reasons:

- A queue job failure
- Misconfiguration of the queue

**Possible resolutions include the following:**

- View the ULS logs to see the specific error.
- If a queue job is continually failing, cancel the job and restart the queue.

# Project queue jobs percentage failed per hour

---

**Element ID / Rule Name:** Project\_Queue\_Jobs\_Percentage\_Jobs\_Failed\_Per\_Day

**Summary:** This rule indicates the percentage of jobs that failed in the queue of a specific Project Server application server over the past hour.

This alert is based on the same performance counter as the "ProjectServer:QueueJobs: % Jobs Failed / Day" rule, but it helps to show spikes in the number of jobs that have failed over a shorter period of time so you can choose to investigate possible causes before customers become aware of a potential problem. This percentage is calculated as follows:

$\% \text{ jobs failed} = \text{Total number of jobs that failed during the past hour} / \text{Total number of jobs processed during the past hour}.$

**Cause:** Causes may vary.

**Possible resolutions include the following:**

- Perform the following steps to determine the problem and troubleshoot accordingly.
  - a. View errors in Microsoft Project Web App:
    - i. Log on to Project Web App as an administrator.
    - ii. In the Quick Launch, click **Server Settings**.
    - iii. On the Server Settings page, in the **Queue** section, click **Manage Queue**.
    - iv. On the Manage Queue Jobs page, find the jobs that have the job state of **Failed and blocking** or **Failed and not blocking correlation**.
    - v. View more information about the failed jobs by clicking the error IDs that appear in the **Error** column of the failed jobs.
  - b. View errors in the Windows NT Event log
    - View the Windows NT Event log on the Project Server application server on which this alert occurred to determine whether any errors occurred at approximately the same time as this alert that may have caused the problem.
  - c. View trace logs
    - View the trace logs on the Project Server application server on which this alert occurred to determine whether any errors occurred at approximately the same time as this alert that may have caused the problem.



**Note:**

All the queue traces related to the Project Server queue are appended with "[QUEUE]".

# Project queue jobs percentage jobs failed per day

---

**Element ID / Rule Name:** Project\_Queue\_Jobs\_Percentage\_Jobs\_Failed\_Per\_Day

**Summary:** This rule indicates the percentage of jobs that failed in the queue of a specific Project Server application server. This percentage helps you quantify the overall health of your system. This percentage is calculated as follows:

$\% \text{ jobs failed} = \text{Total number of jobs that failed} / \text{Total number of jobs processed}.$



**Note:**

The total number of jobs processed is calculated from the time the Microsoft Project Server Queuing Service was started. This means that, if an administrator stops and restarts the Project Server Queuing Service, this value is reset to zero.



**Note:**

The total number of jobs that failed is equal to the number of jobs that are in the "Failed and blocking" or "Failed and not blocking correlation" states.

**Cause:** Causes may vary.

**Possible resolutions include the following:**

Perform the following steps to determine the problem and troubleshoot accordingly.

1. View errors in the Microsoft Project Web App:
  - a. Log on to Project Web App as an administrator.
  - b. In the Quick Launch, click **Server Settings**.
  - c. On the Server Settings page, in the **Queue** section, click **Manage Queue**.
  - d. On the Manage Queue Jobs page, find the jobs that have the job state of **Failed and blocking** or **Failed and not blocking correlation**.
  - e. View more information about the failed jobs by clicking the error IDs that appear in the Error column of the failed jobs.
2. View errors in the Windows NT Event log
  - View the Windows NT Event log on the Project Server application server on which this alert occurred to determine if any errors occurred at approximately the same time as this alert that may have caused the problem.
3. View trace logs
  - View the trace logs on the Project Server application server on which this alert occurred to determine whether any errors occurred at approximately the same time as this alert that may have caused the problem.

## Project queue jobs percentage jobs failed per day



### **Note:**

All the queue traces related to the Project Server queue are appended with "[QUEUE]".

# Conformance statement A-level (Project Server 2010)

Conformance statement for Microsoft Project Server 2010 in regards to [Web Content Accessibility Guidelines 2.0](http://www.w3.org/TR/WCAG20/) (<http://www.w3.org/TR/WCAG20/>).

## Conformance statement for configuration and administration experience at A-level

| Claim                                                                                                                                                      | Details                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Date of the claim</b>                                                                                                                                   | May 12th, 2010                                                                                                                                                                                                                 |
| <b>Guidelines title, version, and URI</b>                                                                                                                  | <a href="http://www.w3.org/TR/2008/REC-WCAG20-20081211/">Web Content Accessibility Guidelines 2.0</a><br>( <a href="http://www.w3.org/TR/2008/REC-WCAG20-20081211/">http://www.w3.org/TR/2008/REC-WCAG20-20081211/</a> )       |
| <b>Conformance level satisfied: (Level A, AA or AAA)</b>                                                                                                   | A                                                                                                                                                                                                                              |
| <b>A concise description of the Web pages, such as a list of URIs for which the claim is made, including whether subdomains are included in the claim.</b> | Default content included with Project Server 2010 and Administration and Configuration features of Project Server 2010. For other product features, see <a href="#">Conformance statement AA-level (Project Server 2010)</a> . |
| <b>A list of the Web content technologies relied upon.</b>                                                                                                 | HTML<br>JavaScript<br>CSS                                                                                                                                                                                                      |
| <b>Additional Web content technologies used, but not relied upon.</b>                                                                                      | ARIA<br>Silverlight<br>RSS<br>PNG<br>GIF<br>JPEG                                                                                                                                                                               |
| <b>A list of success criteria beyond the level of conformance claimed that have been met. This</b>                                                         | Conforms to 1.4.9 Images of Text (No Exception) - AAA.                                                                                                                                                                         |

## Conformance statement A-level (Project Server 2010)

| Claim                                                                                                     | Details                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>information should be provided in a form that users can use, preferably machine-readable metadata.</b> | Conforms to 2.1.3 Keyboard (No Exception) - AAA.<br>Conforms to 2.2.3 No Timing (No Exception) - AAA.<br>Conforms to 2.3.2 Three Flashes - AAA.<br>Conforms to 2.4.8 Location - AAA.<br>Conforms to 3.3.6 Error Prevention (All) - AAA. |

This conformance statement pertains to Project Server 2010.

Customization of the product voids this conformance statement from Microsoft. Customers may make independent conformance statements if they have conducted due diligence to meet all relevant requirements for their customization.

Please consult with Assistive Technology (AT) vendors for compatibility specifications of specific AT products. AT products that are compatible with all the rely-upon-technologies are expected to be functional with the product.

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Revised 07/22/2010.

Microsoft regularly updates its websites and provides new information about the accessibility of products as that information becomes available.

# Conformance statement AA-level (Project Server 2010)

Conformance statement for Microsoft Project Server 2010 in regards to [Web Content Accessibility Guidelines 2.0](http://www.w3.org/TR/WCAG20/) (<http://www.w3.org/TR/WCAG20/>).

## Conformance statement for core reader, author, and contributor experience at AA-level

| Claim                                                                                                                                                      | Details                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Date of the claim</b>                                                                                                                                   | May 12th, 2010                                                                                                                                                                                                           |
| <b>Guidelines title, version, and URI</b>                                                                                                                  | <a href="http://www.w3.org/TR/2008/REC-WCAG20-20081211/">Web Content Accessibility Guidelines 2.0</a><br>( <a href="http://www.w3.org/TR/2008/REC-WCAG20-20081211/">http://www.w3.org/TR/2008/REC-WCAG20-20081211/</a> ) |
| <b>Conformance level satisfied: (Level A, AA or AAA)</b>                                                                                                   | AA                                                                                                                                                                                                                       |
| <b>A concise description of the Web pages, such as a list of URIs for which the claim is made, including whether subdomains are included in the claim.</b> | All default content included with Project Server 2010 and Web application features of Project Server 2010 except where limited by <a href="#">Conformance statement A-level (Project Server 2010)</a> .                  |
| <b>A list of the Web content technologies relied upon.</b>                                                                                                 | HTML<br>JavaScript<br>CSS                                                                                                                                                                                                |
| <b>Additional Web content technologies used, but not relied upon.</b>                                                                                      | ARIA<br>Silverlight<br>RSS<br>PNG<br>GIF<br>JPEG                                                                                                                                                                         |
| <b>A list of success criteria beyond the level of conformance claimed that have been met. This information should be provided in a form that</b>           | Conforms to 1.4.9 Images of Text (No Exception) - AAA.<br>Conforms to 2.1.3 Keyboard (No Exception) -                                                                                                                    |

## Conformance statement AA-level (Project Server 2010)

| Claim                                                       | Details                                                                                                                                                                                     |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>users can use, preferably machine-readable metadata.</b> | AAA.<br>Conforms to 2.2.3 No Timing (No Exception) - AAA.<br>Conforms to 2.3.2 Three Flashes - AAA.<br>Conforms to 2.4.8 Location - AAA.<br>Conforms to 3.3.6 Error Prevention (All) - AAA. |

This conformance statement pertains to Project Server 2010.

Customization of the product voids this conformance statement from Microsoft. Customers may make independent conformance statements if they have conducted due diligence to meet all relevant requirements for their customization.

Please consult with Assistive Technology (AT) vendors for compatibility specifications of specific AT products. AT products that are compatible with all the rely-upon-technologies are expected to be functional with the product.

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Revised 07/22/2010.

Microsoft regularly updates its websites and provides new information about the accessibility of products as that information becomes available.

# Video demos and training for Project Server 2010

The following list contains links to all video demos and training that are available for Microsoft Project Server 2010.

## Overview

| Title                                                                                                                                                                                          | Description                                                                                                                                                                                                                                                | Related topics |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <a href="#">Ignite Training - Introduction to Project Server and Project Professional</a>                                                                                                      | This module of Project Server 2010 Ignite Training provides an overview of what Project Server 2010 is and what key investments have been made in this release.                                                                                            |                |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197311">Microsoft Project Server 2010 Demo</a><br>(http://go.microsoft.com/fwlink/?LinkId=197311)                                              | Seth Patton, Senior Director of Microsoft Project, walks through a demonstration of Project Server 2010.                                                                                                                                                   |                |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197312">Project 2010 Overview</a><br>(http://go.microsoft.com/fwlink/?LinkId=197312)                                                           | This Project Conference keynote address by Keshav Puttaswamy covers the key investment areas of unified project and portfolio management, simple and intuitive user experience, enhanced collaboration and reporting, and scalable and connected platform. |                |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197313">TechNet Webcast: Overview of Microsoft Project Server 2010 for IT Professionals</a><br>(http://go.microsoft.com/fwlink/?LinkId=197313) | This Webcast is an overview of Project Server 2010 features, requirements, and deployment considerations that IT professionals need to know about the product.                                                                                             |                |

## Planning

| Title                                                                                                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                        | Related topics                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <a href="#">Ignite Training - Planning, Design, and Deployment</a>                                                                                                 | This module of Project Server 2010 Ignite Training discusses the new service architecture for this release, what topologies are supported, Project Server 2010 and Microsoft SharePoint Server 2010 scenarios, and an overview of deployment considerations.                                                                                                                       |                                                                         |
| <a href="#">Ensuring Implementation Success by Focusing on Culture and Readying the Organization for Change</a><br>(http://go.microsoft.com/fwlink/?LinkId=197314) | This executive session features Betsy Guthrie, Project Manager and Change Agent at Autodesk, the leading developer of state-of-the-art 2-D and 3-D applications. She shares her adoption strategies used to successfully deploy an enterprise Project Server 2010 and SharePoint Server 2010 implementation at one of the largest software development organizations in the world. |                                                                         |
| <a href="#">Project Server Security Part 1 – Permissions</a>                                                                                                       | This video presents an overview of Project Server 2010 security.                                                                                                                                                                                                                                                                                                                   | <a href="#">Plan groups, categories, and RBS in Project Server 2010</a> |
| <a href="#">Project Server Security Part 2 – Groups</a>                                                                                                            | This video explains groups in Project Server 2010.                                                                                                                                                                                                                                                                                                                                 | <a href="#">Plan groups, categories, and RBS in Project Server 2010</a> |
| <a href="#">Project Server Security Part 3 – Categories</a>                                                                                                        | This video explains categories in Project                                                                                                                                                                                                                                                                                                                                          | <a href="#">Plan groups, categories, and RBS in Project</a>             |

## Video demos and training for Project Server 2010

| Title                                                | Description                                                                        | Related topics                                                          |
|------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
|                                                      | Server 2010.                                                                       | <a href="#">Server 2010</a>                                             |
| <a href="#">Project Server Security Part 4 – RBS</a> | This video explains the Resource Breakdown Structure (RBS) in Project Server 2010. | <a href="#">Plan groups, categories, and RBS in Project Server 2010</a> |

## Deployment

| Title                                                                  | Description                                                                                                                                                                                                                                                  | Related topics                                            |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <a href="#">Planning, Design, and Deployment</a>                       | This module of Project Server 2010 Ignite Training discusses the new service architecture for this release, what topologies are supported, Project Server 2010 and Microsoft SharePoint Server 2010 scenarios, and an overview of deployment considerations. |                                                           |
| <a href="#">Deploy Project Server – Single Application Server Farm</a> | This video demonstrates how to install Project Server 2010 on a farm with a single application server.                                                                                                                                                       | <a href="#">Install and configure Project Server 2010</a> |
| <a href="#">Deploy Project Server – Multi Application Server Farm</a>  | This video demonstrates how to install Project Server 2010 on a farm with multiple application servers and/or Web servers.                                                                                                                                   | <a href="#">Install and configure Project Server 2010</a> |
| <a href="#">Create Project Web App Site</a>                            | This video demonstrates how to create and configure a Microsoft Project Web App site.                                                                                                                                                                        | <a href="#">Create a PWA site (Project Server 2010)</a>   |

## Video demos and training for Project Server 2010

| Title                                                                                                              | Description                                                                                                                                                                                               | Related topics                                                                                        |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <a href="#">Add an Application Server to a Project Server Farm</a>                                                 | This video demonstrates how to add an application server to a Project Server 2010 farm.                                                                                                                   | <a href="#">Add an application server to a farm (Project Server 2010)</a>                             |
| <a href="#">Deploying and Administering Project Server 2010</a><br>(http://go.microsoft.com/fwlink/?LinkId=197315) | This session from the Project Conference covers how to deploy Project Server 2010 and how to administer Project Server effectively using some of the new capabilities such as departmental custom fields. |                                                                                                       |
| <a href="#">Deploy Project Server 2010 to a test environment – Hyper-V quick start</a>                             | This video demonstrates how to configure Hyper-V for use with a Project Server 2010 test environment.                                                                                                     | <a href="#">Hyper-V quick start for creating a Project Server 2010 test environment</a>               |
| <a href="#">Deploy Project Server 2010 to a test environment – Setting up a domain controller</a>                  | This video demonstrates how to set up a domain controller for a Hyper-V based Project Server 2010 test environment.                                                                                       | <a href="#">Set up a domain controller for a Project Server 2010 test environment</a>                 |
| <a href="#">Deploy Project Server 2010 to a test environment – Adding a virtual machine to the virtual domain</a>  | This video demonstrates how to add a virtual machine to the virtual domain in a Hyper-V based Project Server 2010 test environment.                                                                       | <a href="#">Add a virtual machine to the virtual domain in a Project Server 2010 test environment</a> |
| <a href="#">Deploy Project Server 2010 to a test environment – Setting up SQL Server</a>                           | This video demonstrates how to configure SQL Server for a Hyper-v based Project Server 2010 test environment.                                                                                             | <a href="#">Set up SQL Server for a Project Server 2010 test environment</a>                          |
| <a href="#">Deploy Project Server 2010 to a test environment – Install SharePoint Server 2010</a>                  | This video demonstrates how to install SharePoint Server 2010 on a Hyper-V                                                                                                                                | <a href="#">Install SharePoint Server 2010 on a Project Server 2010 test environment</a>              |

## Video demos and training for Project Server 2010

| Title                                                                                                        | Description                                                                                                                         | Related topics                                                                  |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
|                                                                                                              | based Project Server 2010 test environment.                                                                                         |                                                                                 |
| <a href="#">Deploy Project Server 2010 to a test environment – Installing and configuring Project Server</a> | This video demonstrates how to install and configure Project Server 2010 in a Hyper-V based test environment.                       | <a href="#">Install and configure Project Server 2010 in a test environment</a> |
| <a href="#">Deploy Project Server 2010 to a test environment – Creating a PWA site</a>                       | This video demonstrates how to create and configure a Project Web App site in a Hyper-V based Project Server 2010 test environment. | <a href="#">Create a PWA site in a Project Server 2010 test environment</a>     |
| <a href="#">Deploy Project Server 2010 to a test environment – Configuring reporting</a>                     | This video demonstrates how to configure reporting in a Hyper-V based Project Server 2010 test environment.                         | <a href="#">Configure reporting for a Project Server 2010 test environment</a>  |

## Upgrade and migration

| Title                                                   | Description                                                                                                                                                                                                                                                                                                                                               | Related topics |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <a href="#">Ignite Training - Upgrade and Migration</a> | This module of Project Server 2010 Ignite Training includes an overview of upgrade and migration and a look at specific upgrade scenarios, including Microsoft Office Project Server 2007 to Project Server 2010, Microsoft Office Project Server 2003 to Project Server 2010, and Microsoft Office Project Portfolio Server 2007 to Project Server 2010. |                |

## Video demos and training for Project Server 2010

| Title                                                                                                                                                                              | Description                                                                                                                                                                                                                                                                                        | Related topics |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <a href="http://go.microsoft.com/fwlink/?LinkId=197319">TechNet Webcast: Project Server 2010 - Upgrade and Migration</a><br>(http://go.microsoft.com/fwlink/?LinkId=197319)        | This Webcast discusses upgrade options from both Project Server 2003 and Office Project Server 2007 to Project Server 2010, including tools, processes, scenarios, best practices for upgrade and migration, SharePoint Server 2010 coexistence impacts, and full-farm versus split-farm upgrades. |                |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197320">TechNet Webcast: Project Server 2010 - Backwards Compatibility Mode</a><br>(http://go.microsoft.com/fwlink/?LinkId=197320) | This Webcast discusses Project Server 2010 Backward Compatibility Mode (BCM), a feature that makes it possible for Microsoft Office Project Professional 2007 to access Project Server 2010.                                                                                                       |                |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197321">Project Server 2003 to Project Server 2007 Migration Best Practices</a><br>(http://go.microsoft.com/fwlink/?LinkId=197321) | This session provides a wealth of best practices gathered and developed by Microsoft Consulting Services during many migration projects since 2007.                                                                                                                                                |                |

## Business Intelligence

| Title                                                      | Description                                                                                                                        | Related topics |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <a href="#">How reporting in Project Server 2010 works</a> | In this video, Microsoft Program Manager Treb Gatte provides an overview chalk talk about how Project Server 2010 reporting works, |                |

## Video demos and training for Project Server 2010

| Title                                                                                                                                                                                                | Description                                                                                                                                                                                                         | Related topics |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                                                                                                                                      | and how it makes use of SharePoint Server 2010 services.                                                                                                                                                            |                |
| <a href="#">Project Server 2010 Reporting Tour</a>                                                                                                                                                   | This video provides a tour of a functional Project Server 2010 Business Intelligence Center, including a look which SharePoint Server 2010 services are used and how the various services interact with each other. |                |
| <a href="#">Configure Reporting</a>                                                                                                                                                                  | This video demonstrates how to configure reporting for Project Server 2010                                                                                                                                          |                |
| <a href="#">Better Reporting Using Microsoft Business Intelligence Capabilities</a><br>( <a href="http://go.microsoft.com/fwlink/?LinkId=197322">http://go.microsoft.com/fwlink/?LinkId=197322</a> ) | In this video from the Project Conference in 2009, Microsoft Program Manager Treb Gatte describes the business intelligence capabilities available in Project Server 2010.                                          |                |
| <a href="#">Project Server 2010 Reporting Deep Dive</a><br>( <a href="http://go.microsoft.com/fwlink/?LinkId=197324">http://go.microsoft.com/fwlink/?LinkId=197324</a> )                             | This session demonstrates how to build reports, KPIs, and dashboards using the various Microsoft BI technologies that are part of Project Server 2010.                                                              |                |
| <a href="#">Ignite Training - Reporting Part 1</a>                                                                                                                                                   | This module from Project Server 2010 Ignite Training includes an introduction to the reporting infrastructure, including using Excel Services in Microsoft Office SharePoint Server 2007 to generate reports.       |                |
| <a href="#">Ignite Training - Reporting Part 2</a>                                                                                                                                                   | This module from Project Server 2010 Ignite Training                                                                                                                                                                |                |

## Video demos and training for Project Server 2010

| Title | Description                                                                                                                                                                                 | Related topics |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|       | includes a look at advanced reporting options, including PerformancePoint Services in Microsoft SharePoint Server 2010, Visio Services in Microsoft SharePoint Server 2010, and PowerPivot. |                |

## Demand management

| Title                                                                                                                                                                                                             | Description                                                                                                                                                                                  | Related topics |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <a href="#">Demand Management</a>                                                                                                                                                                                 | This module from Project Server 2010 Ignite Training includes an overview of demand management, a look at its components, and a review of the steps required to implement demand management. |                |
| <a href="http://go.microsoft.com/fwlink/?LinkID=197325">Demand Management Workflow Deep Dive</a><br>( <a href="http://go.microsoft.com/fwlink/?LinkID=197325">http://go.microsoft.com/fwlink/?LinkID=197325</a> ) | This session covers developer experience in creating a workflow, deployment of Project workflows, and administrator experience in creating Workflow Controlled Enterprise Project Types.     |                |

## Timesheet and statusing

| Title                                                     | Description                                                      | Related topics |
|-----------------------------------------------------------|------------------------------------------------------------------|----------------|
| <a href="#">Ignite Training - Timesheet and Statusing</a> | This module from Project Server 2010 Ignite Training includes an |                |

| Title | Description                                                                                    | Related topics |
|-------|------------------------------------------------------------------------------------------------|----------------|
|       | overview of timesheet and statusing configuration, reporting, and Exchange Server integration. |                |

## Portfolio management

| Title                                                                                                                                                                              | Description                                                                                                                                                         | Related topics |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <a href="#">Portfolio Strategy</a>                                                                                                                                                 | This module from Project Server 2010 Ignite Training includes an overview of business drivers and portfolio analyses.                                               |                |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197326">Portfolio Management</a><br>(http://go.microsoft.com/fwlink/?LinkId=197326)                                                | This Project Conference session covers the capabilities around business driver prioritization, portfolio optimization, and the new portfolio planning capabilities. |                |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197327">Strategic Portfolio and Resource Capacity Planning Using Simulation</a><br>(http://go.microsoft.com/fwlink/?LinkId=197327) | This presentation explores how simulation works with Project Server 2010, allowing EPM customers to understand their EPM data in a new, more dynamic way.           |                |

## Operations and administration

| Title                                            | Description                                                                                      | Related topics |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------|
| <a href="#">Ignite Training - Administration</a> | This module from Project Server 2010 Ignite Training includes a look at departments, delegation, |                |

| Title                                        | Description                                                                                                                                                                 | Related topics |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                              | Active Directory synchronization, and bulk updating project sites.                                                                                                          |                |
| <a href="#">Ignite Training - Operations</a> | This module from Project Server 2010 Ignite Training includes discussions around error logging, usage logging, health reports, password management, and Windows PowerShell. |                |

## Development and Extensibility

| Title                                                                                                                                                               | Description                                                                                                                                             | Related topics |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <a href="#">Developing Custom Solutions in PWA</a><br>( <a href="http://go.microsoft.com/fwlink/?LinkId=197328">http://go.microsoft.com/fwlink/?LinkId=197328</a> ) | This session focuses on extending current PWA features as well as using the new JavaScript based grid control to create features of your own.           |                |
| <a href="#">Development and Extensibility</a>                                                                                                                       | This module from Project Server 2010 Ignite Training includes an overview of Project Server 2010 and Microsoft Project Professional 2010 extensibility. |                |

## Using Project Server

| Title                                                                                                                                                                                  | Description                                        | Related topics |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------|
| <a href="#">Up to speed with Project Web App - Part 1: The basics</a><br>( <a href="http://go.microsoft.com/fwlink/?LinkId=197329">http://go.microsoft.com/fwlink/?LinkId=197329</a> ) | This video covers the basics of how to use Project |                |

## Video demos and training for Project Server 2010

| Title                                                                                                                                                                                           | Description                                                                                                        | Related topics                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
|                                                                                                                                                                                                 | Web App.                                                                                                           |                                                         |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197330">Up to speed with Project Web App - Part 2: Proposing and creating a new project</a><br>(http://go.microsoft.com/fwlink/?LinkId=197330)  | This video covers the process of creating a new project in Project Web App.                                        |                                                         |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197331">Up to speed with Project Web App - Part 3: Selecting projects for your portfolio</a><br>(http://go.microsoft.com/fwlink/?LinkId=197331) | This video covers the process of selecting projects for your portfolio.                                            |                                                         |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197332">Up to speed with Project Web App - Part 4: Plan your project</a><br>(http://go.microsoft.com/fwlink/?LinkId=197332)                     | This video covers techniques for planning your projects, including adding tasks and resources.                     |                                                         |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197333">Up to speed with Project Web App - Part 5: Manage your project</a><br>(http://go.microsoft.com/fwlink/?LinkId=197333)                   | This video covers techniques for managing a project that is currently underway, including working with timesheets. |                                                         |
| <a href="#">Create a custom enterprise project type</a>                                                                                                                                         | Watch this                                                                                                         | <a href="#">Create a custom enterprise project type</a> |

## Video demos and training for Project Server 2010

| Title                                                                                                                                                                                                                       | Description                                                                                                       | Related topics                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="http://go.microsoft.com/fwlink/?LinkId=197334">http://go.microsoft.com/fwlink/?LinkId=197334</a>                                                                                                                   | video to learn how a site administrator creates an enterprise project type.                                       | <a href="http://go.microsoft.com/fwlink/?LinkId=197343">http://go.microsoft.com/fwlink/?LinkId=197343</a>                                                                                                           |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197405">Create an analysis</a><br><a href="http://go.microsoft.com/fwlink/?LinkId=197405">http://go.microsoft.com/fwlink/?LinkId=197405</a>                                 | This video covers how to create an analysis of your proposal, including using business drivers and custom fields. | <a href="http://go.microsoft.com/fwlink/?LinkId=197344">Create analyses and prioritize projects</a><br><a href="http://go.microsoft.com/fwlink/?LinkId=197344">http://go.microsoft.com/fwlink/?LinkId=197344</a>    |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197336">Prioritize a project</a><br><a href="http://go.microsoft.com/fwlink/?LinkId=197336">http://go.microsoft.com/fwlink/?LinkId=197336</a>                               | This video covers how to prioritize the projects included in an analysis.                                         | <a href="http://go.microsoft.com/fwlink/?LinkId=197344">Create analyses and prioritize projects</a><br><a href="http://go.microsoft.com/fwlink/?LinkId=197344">http://go.microsoft.com/fwlink/?LinkId=197344</a>    |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197337">Create the approval process for a proposal, part 1</a><br><a href="http://go.microsoft.com/fwlink/?LinkId=197337">http://go.microsoft.com/fwlink/?LinkId=197337</a> | This video covers configuring an approval workflow for your projects.                                             | <a href="http://go.microsoft.com/fwlink/?LinkId=197345">Create the approval process for a proposal</a><br><a href="http://go.microsoft.com/fwlink/?LinkId=197345">http://go.microsoft.com/fwlink/?LinkId=197345</a> |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197338">Create the approval process for a proposal, part 2</a><br><a href="http://go.microsoft.com/fwlink/?LinkId=197338">http://go.microsoft.com/fwlink/?LinkId=197338</a> | This video covers creating and editing                                                                            | <a href="http://go.microsoft.com/fwlink/?LinkId=197345">Create the approval process for a proposal</a><br><a href="http://go.microsoft.com/fwlink/?LinkId=197345">http://go.microsoft.com/fwlink/?LinkId=197345</a> |

## Video demos and training for Project Server 2010

| Title                                                                                                                                                               | Description                                                                       | Related topics                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                     | a user in Project Web App.                                                        |                                                                                                                                                                     |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197339">Create the approval process for a proposal, part 3</a><br>(http://go.microsoft.com/fwlink/?LinkId=197339)   | This video covers creating and editing a group in Project Web App.                | <a href="http://go.microsoft.com/fwlink/?LinkId=197345">Create the approval process for a proposal</a><br>(http://go.microsoft.com/fwlink/?LinkId=197345)           |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197340">Define the phases and stages of a project life cycle</a><br>(http://go.microsoft.com/fwlink/?LinkId=197340) | This video covers creating phases and stages and connecting them into a workflow. | <a href="http://go.microsoft.com/fwlink/?LinkId=197346">Define the phases and stages of a project life cycle</a><br>(http://go.microsoft.com/fwlink/?LinkId=197346) |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197341">Create or edit a project or proposal, part 1</a><br>(http://go.microsoft.com/fwlink/?LinkId=197341)         | This video covers creating a new project or proposal in Project Web App.          | <a href="http://go.microsoft.com/fwlink/?LinkId=197347">Create or edit a project or proposal</a><br>(http://go.microsoft.com/fwlink/?LinkId=197347)                 |
| <a href="http://go.microsoft.com/fwlink/?LinkId=197342">Create or edit a project or proposal, part 2</a><br>(http://go.microsoft.com/fwlink/?LinkId=197342)         | This video covers editing a project or proposal in Project Web App.               | <a href="http://go.microsoft.com/fwlink/?LinkId=197347">Create or edit a project or proposal</a><br>(http://go.microsoft.com/fwlink/?LinkId=197347)                 |

## Cumulative Updates

| Title                                                                                                                                                                                                                                                                                   | Description                                                                                                                                                                                          | Related topics                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><a href="http://go.microsoft.com/fwlink/?LinkID=201581">TechNet Webcast: Information About Microsoft Project and Project Server Cumulative June 2010 Update</a><br/> <a href="http://go.microsoft.com/fwlink/?LinkID=201581">http://go.microsoft.com/fwlink/?LinkID=201581</a></p>   | <p>This webcast provides a brief overview of recently released Microsoft Project and Project Server Cumulative Updates (CU) as well as answering related questions about the Cumulative Updates.</p> | <p>The slide deck for this topic can be downloaded at:<br/> <a href="http://go.microsoft.com/fwlink/?LinkId=201593">http://go.microsoft.com/fwlink/?LinkId=201593</a></p> |
| <p><a href="http://go.microsoft.com/fwlink/?LinkId=201583">TechNet Webcast: Information About Microsoft Project and Project Server Cumulative August 2010 Update</a><br/> <a href="http://go.microsoft.com/fwlink/?LinkId=201583">http://go.microsoft.com/fwlink/?LinkId=201583</a></p> | <p>This webcast provides a brief overview of recently released Microsoft Project and Project</p>                                                                                                     | <p>The slide deck for this topic can be downloaded at:<br/> <a href="http://go.microsoft.com/fwlink/?LinkId=203367">http://go.microsoft.com/fwlink/?LinkId=203367</a></p> |

## Video demos and training for Project Server 2010

| Title | Description                                                                                         | Related topics |
|-------|-----------------------------------------------------------------------------------------------------|----------------|
|       | Server Cumulative Updates (CU) as well as answering related questions about the Cumulative Updates. |                |

### See Also

[Project 2010 Ignite training slide presentation](#)