

Microsoft SharePoint 2010 Products Upgrade Planning

Upgrade requirements

Before you can upgrade to Microsoft® SharePoint® Server 2010 or SharePoint® Foundation 2010, you must meet the following requirements:

A Hardware requirement: 64-bit

SharePoint 2010 Products are 64-bit applications and can only run on a 64-bit edition of the Windows Server® 2008 operating system. You must have hardware that supports the use of a 64-bit operating system.

If you are planning an in-place upgrade, your previous version installation must be running in a 64-bit Windows Server 2008 environment.

If your previous version installation is currently in a 32-bit environment, you cannot do an in-place upgrade on the existing server or server farm. You must install SharePoint 2010 Products on a different server or farm that supports 64-bit applications, and then move your data to it by using database attach upgrade.

B Operating system requirement: Windows Server 2008

SharePoint 2010 Products must run on a 64-bit edition of Windows Server 2008 or Windows Server 2008 R2. If you are currently running Office SharePoint Server 2007 or Windows SharePoint Services 3.0 on Windows Server 2003 and intend to upgrade to SharePoint 2010 Products, you must plan to have a sufficient number of Windows Server licenses for the deployment.

C Database requirement: 64-bit SQL Server 2008 or SQL Server 2005 SP3

SharePoint 2010 Products require that their database servers run Microsoft SQL Server® 2005 or Microsoft SQL Server 2008, and the hardware must be 64-bit. If your current installation uses SQL Server 2000, you must plan to deploy SQL Server 2005 or SQL Server 2008 to support an upgrade to SharePoint 2010 Products.

A Migrate from 32-bit to 64-bit hardware

First migrate to a 64-bit environment, then upgrade to SharePoint 2010 Products

To more easily identify and address any issues in the migration and upgrade processes, we recommend that you do not combine the actions of upgrading to a 64-bit environment and upgrading to SharePoint 2010 Products. Because you must have a 64-bit environment to be able to upgrade in place to SharePoint 2010 Products, you must migrate to a 64-bit operating system before you upgrade. If you are performing a database attach upgrade, your new environment must be 64-bit.

Before you migrate to a 64-bit environment

- Update Office SharePoint Server 2007 or Windows SharePoint Services 3.0 to the same service pack or software update level on all computers in the source farm.
- Find out whether you need to recompile existing 32-bit applications and custom assemblies — for example, Web Parts and event receivers — to run in the 64-bit environment. (Some applications can run in both environments and do not need to be recompiled.) If the existing applications are third-party applications, check with the third-party vendor regarding 64-bit versions and compatibility.
- Verify that your 32-bit iFilters and extensions work in a 64-bit environment.

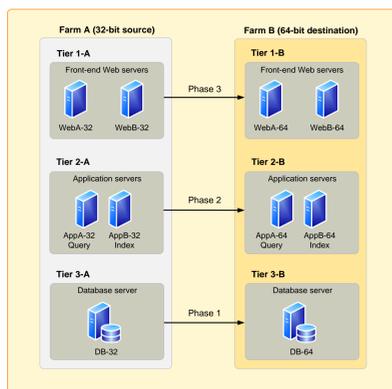
Detailed steps for migrating to a 64-bit environment

This model provides a brief overview of considerations and steps for migrating to a 64-bit environment. For more information about planning and performing a migration to a 64-bit environment, see the article "Migrate an existing server farm to a 64-bit environment (Office SharePoint Server 2007)" and "Migrate an existing server farm to a 64-bit environment (Windows SharePoint Services 3.0)" on TechNet.

Migration sequence

Migrate and test the farm servers in separate phases for each tier in the farm in the following sequence:

- Tier 3-A: Migrate the existing database server to the new database server. This tier is done first to mitigate any potential performance issues that might occur if a 64-bit system queries or writes to a 32-bit database. The following options are available:
 - Use the same host server name and name of the instance of SQL Server on the destination server that you used on the source server.
 - Change the host server name or name of the instance of SQL Server on the destination server.
- Tier 2-A: Test the new database server, and then migrate the existing application servers to the new farm.
- Tier 1-A: Test the application servers, and then add the 64-bit front-end Web servers to the new farm.



Note that you can phase the transition to 64-bit over time, by rotating in new 64-bit servers and rotating out old 32-bit servers.

B Upgrade or migrate to Windows Server 2008

First upgrade or migrate to Windows Server 2008, then upgrade to SharePoint 2010 Products

To more easily identify and address any issues in the migration and upgrade processes, we recommend that you do not combine the actions of upgrading or migrating to Windows Server 2008 or Windows Server 2008 R2 and upgrading to SharePoint 2010 Products. You can combine migrating to 64-bit hardware with migrating to Windows Server 2008.

- If you are already running 64-bit hardware, you can upgrade from Windows Server 2003 to Windows Server 2008.

Detailed steps are available that describe how to perform an in-place upgrade to Windows Server 2008

This poster provides a brief overview of considerations and steps for upgrading to Windows Server 2008. For more information about how to perform an in-place upgrade to Windows Server 2008, see the article "Upgrading to Windows Server 2008 for Windows SharePoint Services 3.0 with SP1" on TechNet (<http://go.microsoft.com/fwlink/?LinkId=155575>).

- If you are migrating to 64-bit hardware, take the opportunity to also migrate to Windows Server 2008.

Detailed steps are available that describe how to install on Windows Server 2008

This poster provides a brief overview of considerations and steps for migrating to Windows Server 2008. For more information about installing, see the articles "Deploy a simple farm on the Windows Server 2008 operating system (Office SharePoint Server)" and "Deploy a simple farm on the Windows Server 2008 operating system (Windows SharePoint Services)" on TechNet.

C Upgrade or migrate to SQL Server 2008 or SQL Server 2005 SP3 on 64-bit hardware

First migrate to SQL Server 2008 or SQL Server 2005 SP3 (64-bit), then upgrade to SharePoint 2010 Products

To more easily identify and address any issues in the migration and upgrade processes, we recommend that you do not combine the actions of migrating to SQL Server 2008 or SQL Server 2005 SP3 with cumulative update 3 and upgrading to SharePoint 2010 Products. You can combine migrating to SQL Server 2008 or SQL Server 2005 SP3 with the overall process of migrating to 64-bit hardware.

- If you are combining the migration to SQL Server 2008 or SQL Server 2005 SP3 on 64-bit hardware with an overall migration to a 64-bit environment, follow the guidance about migrating to a 64-bit environment.

For more information about how to migrate all databases, see "Move all databases (Office SharePoint Server 2007)" and "Move all databases (Windows SharePoint Services 3.0)" on TechNet.

- If you already have 64-bit hardware, but need to upgrade to SQL Server 2008 or SQL Server 2005 SP3, follow the guidance in the SQL Server documentation.

Upgrade process

Upgrading to SharePoint 2010 Products includes many steps that must be performed during the appropriate phase of the upgrade process.

1 Before upgrade

Before you attempt an upgrade, perform the following steps:

- Run the pre-upgrade checker to identify and fix potential upgrade issues in your environment.
- Choose an upgrade approach: in-place, database attach, or a hybrid of the two.
- Identify all customizations in your environment.
- Optional: Restructure your content or farms.
- Back up all databases by using SQL Server tools before you begin the upgrade process.
- Test your upgrade process on a virtual or physical test farm, and address any issues that you find.

Caution: These steps include only a high-level overview of the process. To perform an actual upgrade of your environment, follow the recommendations and procedures in the [SharePoint Server 2010 Upgrade Guide](#) and the [SharePoint Foundation 2010 Upgrade Guide](#).

2 During upgrade

After you finish the pre-upgrade steps and have tested the upgrade process for your environment and addressed any issues, you are ready to upgrade the production environment.

For an in-place upgrade, perform the following steps:

- Run Setup to install SharePoint 2010 Products on all servers in your farm.
- Install any language packs required for your farm.
- Run the SharePoint Products Configuration Wizard to begin the upgrade process.
- Optional: Use Visual Upgrade to convert site collections to the SharePoint 2010 Products look.

3 After upgrade

After you run the upgrade, take the following steps to identify and fix any issues:

- Review the log files to check for issues and to verify that upgrade finished.
- Review upgraded sites and fix any issues.
- Optional: Use Visual Upgrade to convert site collections to the SharePoint 2010 Products look.
- Optional: Restructure your content or farms.

1 Before upgrade

Run the pre-upgrade checker to identify and fix issues

The pre-upgrade checker is a command-line tool that you run in the previous version environment to find any potential issues for upgrade and to review recommendations and best practices.

```
STSADM.EXE -o preupgradecheck  
[[-rulefiles "rule file name"] | [-listrulefiles]]  
[-localonly]
```

By using the pre-upgrade checker, you can find information like the following:

- A list of all servers and components in the farm, and whether the servers meet requirements for upgrading (64-bit, Windows Server 2008).
- The alternate access mapping URLs that are being used in the farm.
- A list of all site definitions, site templates, features, and language packs that are installed in the farm.
- Whether there are customizations in the farm that are not supported (such as database schema modifications).
- Whether there are any database or site orphans in the farm.
- Whether there are missing or invalid configuration settings in the farm (such as a missing Web.config file, invalid host names, or invalid service accounts).
- Whether the databases meet requirements for upgrade — for example, databases are set to read/write, and any databases and site collections that are stored in Windows® Internal Database are not larger than 4 GB.

Detailed information about using the pre-upgrade checker

The pre-upgrade checker is available in Office SharePoint Server 2007 or Windows SharePoint Services 3.0 with Service Pack 2 (SP2). For more information about how to use the pre-upgrade checker, see the following articles on TechNet:

- "Preupgradecheck: Stsadm operation (Office SharePoint Server)" and "Preupgradecheck: Stsadm operation (Windows SharePoint Services 3.0)."
- "Pre-upgrade scanning and reporting for future releases (Office SharePoint Server)" and "Pre-upgrade scanning and reporting for future releases (Windows SharePoint Services 3.0)."

Choose an upgrade approach

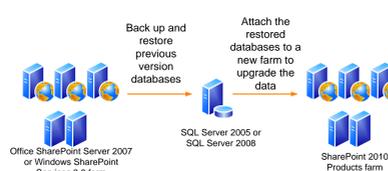
In-place upgrade approach

Upgrade occurs on the same computer on which Office SharePoint Server 2007 or Windows SharePoint Services 3.0 is installed.



Database attach upgrade to a new farm approach

Content and SSP (Office SharePoint Server only) databases are backed up on SQL Server. A new SharePoint Server 2010 farm is created, and then the databases are attached to the new farm to upgrade the data.



Hybrid approach

You can combine aspects of an in-place and database attach upgrade to get better upgrade performance and mitigate downtime.

For more information about all of these upgrade approaches, see the [Upgrade Approaches](#) model.

2 During upgrade

The order of steps varies depending on the upgrade approach you choose. For details about each upgrade approach, see the [Upgrade Approaches](#) model.

In-place upgrade

- Run Setup to install SharePoint 2010 Products on all servers in your farm. Start with the server that is hosting the SharePoint Central Administration Web site. Do not run the SharePoint Products Configuration Wizard until you have run Setup on all front-end Web servers and application servers in the farm.
- Install any language packs that are required for your farm.
- Run the SharePoint Products Configuration Wizard to begin the upgrade process. Again, start with the server that is hosting Central Administration. Pause at the page that notifies you to run the wizard on other servers in the farm. Run the wizard on all front-end Web servers and application servers in the farm, pausing at the same page on each server. When all servers are at the same point in the wizard, complete the wizard on the first server in the farm. This begins the upgrade process for all data in the farm. When the upgrade is complete on the first server in the farm, continue the SharePoint Products Configuration Wizard on the remaining servers.
- Optional: Use Visual Upgrade to convert site collections to the SharePoint 2010 Products look.

Database attach upgrade

- Create a new SharePoint 2010 Products farm.
- Back up the databases on the previous version farm.
- Attach the databases to the new farm to begin the upgrade process.

3 After upgrade

After upgrade, you need to verify that the upgrade finished, verify that the sites have been upgraded correctly, and identify and fix any issues. These steps are the same whether you are performing a test or production upgrade. For details about these steps, see the [Test Your Upgrade Process](#) model.

Review log files

Review the following log files to find any errors or warnings and address the issues before you allow users access to the upgraded sites:

- The SharePoint Products Configuration Wizard log file.
- The upgrade log file.

For more information about reviewing these log files, see the [Test Your Upgrade Process](#) model.

Review upgraded sites

Review the upgraded sites to make sure that all custom elements in the sites appear as expected. For more information, see the [Test Your Upgrade Process](#) model.

Additional resources

This model covers planning for an upgrade from Office SharePoint Server 2007 or Windows SharePoint Services 3.0 to SharePoint 2010 Products. For further information about how to upgrade to SharePoint 2010 Products, see the following models:

- [Upgrade Approaches](#) – Details and examples of upgrade approaches: in-place upgrade, database attach upgrade, or a hybrid of the two.
- [Test Your Upgrade Process](#) – Why and how to test the upgrade process before you upgrade your production environment.
- [Services Upgrade](#) – What steps you need to perform when upgrading shared services to SharePoint Server 2010.

For detailed information and steps for upgrading, see the following Resource Centers:

- [Upgrade and Migration for SharePoint Server 2010](#)
- [Upgrade and Migration for SharePoint Foundation 2010](#)

Identify all customizations

Use the pre-upgrade checker and a comparison tool such as WinDiff on a test farm to identify all customizations. For more information, see the [Test Your Upgrade Process](#) model.

Back up all databases

Use the SQL Server tools to back up all databases before you perform an upgrade. For more information, see the article "Back up and restore databases (Office SharePoint Server)" and "Back up and restore content databases (Windows SharePoint Services 3.0)" on TechNet.

Test the upgrade process

Before you perform an upgrade, be sure that you have tested the upgrade process and addressed any issues that you found during testing. For more information, see the [Test Your Upgrade Process](#) model.

Before or after upgrade: Restructure content and farms

Restructuring tools and techniques

Restructuring during upgrade is a common activity. There are third-party tools available to help you move documents, lists, and sites between site collections or server farms. There is also the [mergedb](#) operation for Ssadm to move entire site collections into a different database or the [import/export](#) and [backup/restore](#) commands to move site collections to a different farm.

- Choose [mergedb](#) when you need to rebalance the number of sites in your databases to increase upgrade performance for the databases.
- Choose [import/export](#) when you are restructuring the organization of your content. You can restructure content in either the previous version or your SharePoint 2010 Products farm.
- Choose site collection [backup/restore](#) to move individual site collections in either version.

Considerations for merging farms

If you are merging several farms (such as moving from several divisional farms to a central corporate farm, or from several smaller farms to a single large farm), you must determine your approach for the following:

- Currently, you have several URLs pointing to the different farms. Do you keep that structure, or do you merge URLs in addition to farms?
- For the best experience, Office SharePoint Server 2007 or Windows SharePoint Services 3.0 with the April 2009 cumulative update is recommended. This update, along with Service Pack 2, includes the ability to store alternate access mapping settings in each content database so that Web applications can exist on the same farm without merging URLs.

Use Visual Upgrade to convert site collections to the SharePoint 2010 Products look

A new feature that is available with upgrade allows the IT administrator or site owner to determine when and whether the new look for SharePoint 2010 Products will be used for a particular site collection. IT administrators can make a choice to either adopt the new look for all sites during upgrade, leave the choice to site owners after upgrade, or retain the old look for all sites.

If the IT administrator chooses to allow the site owners to decide, after a site has been upgraded by using an in-place upgrade, an option is available in the site user interface to preview the SharePoint 2010 Products look for the site.

- If the owner likes how the site looks and functions, the owner can finalize the visual upgrade.
- If the owner wants the site to retain the old look, the owner can revert to the previous version look.

By default, the previous version look is retained.