



## Deployment guide for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

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### Abstract

This book provides deployment instructions for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0. The audiences for this book include application specialists, line-of-business application specialists, and IT administrators who are ready to deploy Duet Enterprise 2.0.

The content in this book is a copy of selected content in the [Duet Enterprise 2.0 technical library](#) as of the publication date. For the most current content, see the technical library on the web.



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# Contents

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Contents .....	iii
Getting help.....	vi
Plan to deploy Duet Enterprise for SharePoint and SAP Server 2.0 .....	1
Table: Deployment reference for Duet Enterprise 2.0.....	2
Endpoint URL requirements .....	3
Certificate requirements .....	3
Active Directory account requirements .....	3
Table: Domain accounts required to install Duet Enterprise 2.0 .....	4
Hardware and software requirements for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0 .....	5
Basic hardware and software requirements.....	5
Topology requirements.....	5
Browser requirements.....	5
Office client application requirements .....	6
Service application requirements.....	6
Prepare the environment for Duet Enterprise for SharePoint and SAP Server 2.0.....	7
Before you begin.....	7
Create a new web application for Duet Enterprise 2.0 .....	8
Extend the web application in Duet Enterprise 2.0 .....	9
Create and manage the SharePoint SSL certificate .....	9
Create the SharePointSSL certificate.....	10
Bind the SharePointSSL certificate to the extended web application .....	10
Export the SharePointSSL.cer certificate .....	11
Share the SharePointSSL.cer certificate with the SAP administrator .....	12
Install Duet Enterprise for SharePoint and SAP Server 2.0.....	13
Before you begin.....	14
Stage 1: Install binary files in Duet Enterprise for SharePoint and SAP Server 2.0.....	15
Install Duet Enterprise 2.0 binary files.....	15
Optional setup parameters .....	15
Verification .....	16
Stage 2: Install, configure, and register Duet Enterprise for Microsoft SharePoint and SAP Server 2.0 .....	17

---

Install, configure, and register Duet Enterprise 2.0 .....	17
Stage 3: Create a master key for Duet Enterprise for SharePoint and SAP Server 2.0.....	19
Create a master key.....	19
Stage 4: Manage DuetRoot certificate in Duet Enterprise for SharePoint and SAP Server 2.0	
.....	20
Create or obtain the DuetRoot.pfx certificate.....	20
Create the DuetRoot.pfx self-signed certificate.....	20
Obtain the DuetRoot.pfx certificate from a Certificate Authority .....	21
Key Usage Extension Name .....	21
Configure the DuetRoot.pfx certificate .....	22
Export the DuetRoot.pfx certificate as DuetRoot.cer .....	22
Share the DuetRoot.cer with the SAP administrator.....	22
Stage 5: Configure a trust relationship between SharePoint and SAP .....	24
Configure a trust relationship between SharePoint and SAP environments.....	24
Import models in Duet Enterprise for SharePoint and SAP Server 2.0.....	25
Import BDC models and set Metadata Store permissions .....	25
Import the Reporting model .....	26
Import the Workflow model .....	26
Import and configure the RoleSync model .....	27
Configure the publishing URL and account.....	28
Set Metadata Store permissions .....	29
Configuration check for Duet Enterprise for SharePoint and SAP Server 2.0 .....	31
Run the Duet Enterprise Configuration Check.....	31
Configure solutions in Duet Enterprise for SharePoint and SAP Server 2.0.....	33
Create a new site collection.....	33
Deploy a solution .....	34
Configure the Reporting solution in Duet Enterprise for SharePoint and SAP Server 2.0 .....	35
Enable the Reporting solution on the site collection .....	35
Create a new subsite and activate the Reporting solution.....	36
Configure the Workflow solution in Duet Enterprise for SharePoint and SAP Server 2.0.....	37
Create a subsite and activate the Workflow solution .....	37
Activate the Duet Enterprise Workflow feature on the subsite.....	38
Verify the Workflow solution .....	38
Configure an SAP workflow task type.....	38
Grant users access.....	40
Publish the workflow .....	40

---

Configure the RoleSync solution in Duet Enterprise for SharePoint and SAP Server 2.0 .....	42
Before you begin.....	43
Activate the Duet Enterprise Claim Provider feature .....	43
Identify the SharePoint Timer Service Account .....	43
Grant permissions to the Metadata Store .....	44
Ensure the Timer account has full control and verify name of User Profile service application .....	44
Provide the SharePoint Timer service account.....	45
Synchronize SAP roles with the SharePoint user profile store .....	45
Verification step .....	46
Grant an SAP role permissions to a site .....	47
Uninstall Duet Enterprise for SharePoint and SAP Server 2.0 .....	48
Uninstall all solutions .....	48
Uninstall all solutions .....	48
Restart IIS and SharePoint services.....	50

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## Getting help

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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 email message to the Microsoft Office System and Servers content team at:

*[itspdocs@microsoft.com](mailto:itspdocs@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>

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# Plan to deploy Duet Enterprise for SharePoint and SAP Server 2.0

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**Summary:** Learn how to plan a deployment of Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* *Duet Enterprise for Microsoft SharePoint and SAP Server 2.0*

This article describes the planning that you should do before you begin an installation of Duet Enterprise for Microsoft SharePoint and SAP Server 2.0. The procedures and information presented in this article are listed in the order in which they must be used. All hardware and software must comply with the information found in [Hardware and software requirements for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0](#).

The installation and configuration process will require several hours to complete. You will need to work with your SAP administrator who will provide you with a SAPSSL.cer certificate and the endpoint URLs. You will provide the SAP administrator with two certificates: SharePointSSL.cer and DuetRoot.cer and the publishing URL of your extended SharePoint site. We recommend that you schedule time when both the SharePoint administrator and the SAP administrator are available. In addition to the items listed in this article, you need to review all hardware and software requirements for Duet Enterprise 2.0 and also for all Windows, SQL Server, and SharePoint Server computers that are used for this deployment.

The overall installation and configuration process will proceed in the following order:

- [Hardware and software requirements for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0](#)
- [Prepare the environment for Duet Enterprise for SharePoint and SAP Server 2.0](#)
- [Install Duet Enterprise for SharePoint and SAP Server 2.0](#)
- [Import models in Duet Enterprise for SharePoint and SAP Server 2.0](#)
- [Configuration check for Duet Enterprise for SharePoint and SAP Server 2.0](#)

We recommend that you obtain and record this information before you begin your deployment. We have provided the following deployment reference table that lists the names of the accounts and service applications described in the Duet Enterprise 2.0 install and configure process.

The **Name as documented** column in this table contains the names of the items you are tracking while deploying Duet Enterprise. These are the names that are referred to throughout this guide. The Name used column is for your use to record the names of these items.

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**Table: Deployment reference for Duet Enterprise 2.0**

Name as documented	Name used
Secure Store Service Application	
EndPoint URL: MetadataURL	
EndPoint URL: LsiUrl	
Business Data Connectivity Service Application	
User Profile Service Application	
Certificate: SharePoint SSL	
Certificate : SAP SSL	
Certificate : Duet Root	
Security Account: Duet Admin	
Security Account: DuetPublisher	
Web Application Name	
Web Application URL	
Web Application (Extended) URL	
Web Application (Extended) Zone	
Site Collection: sites/DuetEnterprise2	
Site Collection: Team site Template	
Site: DuetReportingandWorkflow	
Site: Team site Template	

In this article:

- [Endpoint URL requirements](#)
- [Certificate requirements](#)
- [Active Directory account requirements](#)



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## Endpoint URL requirements

Endpoint URLs are URL links that point the SharePoint Server system to specific endpoints in the SAP system and are bound to each imported Business Data Connectivity (BDC) model. These URLs must be obtained from the SAP administrator for each BDC model that you import. There are two URLs for each model:

- **LsiUrl** This is the service URL with which SAP exposes data for a particular feature.
- **MetadataURL** This will be automatically be picked up by the LsiUrl when the command is run.

## Certificate requirements


You need three certificates to help secure Duet Enterprise 2.0 communications between clients and the server and between the servers running SharePoint and SAP. These certificates are created during the Duet Enterprise 2.0 installation process on both the SharePoint and SAP systems.

- **DuetRoot.pfx** Created when you configure a root certificate by using the **DuetConfig.exe - createselfsignedcertificate** command. This certificate is used to create user certificates that are sent to SAP along with end-user requests. The process for creating this certificate must be completed in the following order:
  1. Create the certificate as a .pfx file.
  2. Configure the certificate. This includes storing it in the Secure Store Service Application.
  3. Export the certificate as a .cer file. This is necessary because the SAP system needs the certificate with the public key only.
  4. Share the .cer file with the SAP administrator. The SAP administrator will create a trust relationship for this certificate.
- **SharePointSSL.cer** Secures server requests for calls from SAP to SharePoint. This certificate is created on the SharePoint system by using Internet Information Services (IIS) Manager, exported by using the Microsoft Management Console, and shared with the SAP administrator to be trusted in the SAP system.
- **SAPSSL.cer** Secures server requests for calls from SharePoint to SAP. This certificate is created on the SAP system and shared with the SharePoint administrator to be trusted in the SharePoint system.

## Active Directory account requirements

Two Active Directory Domain Services (AD DS) accounts are required to install Duet Enterprise 2.0, as shown in the following table.

**Table: Domain accounts required to install Duet Enterprise 2.0**

Account	Purpose	Requirements
DuetAdmin	<ul style="list-style-type: none"> <li>• Runs Setup.exe</li> <li>• Runs DuetConfig.exe commands</li> </ul>	<ul style="list-style-type: none"> <li>• A member of the Windows Administrators group on the computer that is running SharePoint Server 2013.</li> <li>• A member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.</li> <li>• Full Control permissions on the User Profile service application is required to configure RoleSync by using the <b>DuetConfig.exe - configurerolesync</b> command.</li> </ul>
DuetPublisher	Used by the SAP system to connect to the SharePoint system for pushing reports and workflow notifications.	<p>No permissions need to be set on the SharePoint Server 2013 farm for this account.</p> <p>You must give the name of this account to the SAP administrator.</p> <p> <b>Important:</b> This account cannot be the same as the SharePoint farm account or the Managed account assigned to the application pool of the web application using by Duet Enterprise.</p>

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# Hardware and software requirements for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

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**Summary:** Learn about the hardware and software required for a deployment of Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

This article describes hardware, software, user account, service account, services, and Duet Enterprise for Microsoft SharePoint and SAP Server 2.0-specific requirements.

In this article:

- [Basic hardware and software requirements](#)
- [Topology requirements](#)
- [Browser requirements](#)
- [Service application requirements](#)

## Basic hardware and software requirements

Duet Enterprise 2.0 requires SharePoint Server 2013. All other hardware and software requirements are the same as for SharePoint Server 2013. For more information, see [Hardware and software requirements \(SharePoint 2013 Preview\)](#).

## Topology requirements

All SharePoint farm topologies and architectures that are supported in SharePoint Server 2013 are supported by Duet Enterprise 2.0. These deployment procedures describe only the processes required to install Duet Enterprise 2.0 on a single computer. For more information, see [Design server farms and topologies \(SharePoint 2013 Preview\)](#).

## Browser requirements

Duet Enterprise 2.0 supports the same browsers as SharePoint Server 2013. For more information, see [Plan browser support \(SharePoint 2013 Preview\)](#).

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## Office client application requirements

Office client integration with Duet Enterprise 2.0 requires Office Professional Plus 2013. The installation of Office 2013 must not be a click-to-install version because Microsoft Business Connectivity Services does not support Click-to-Run.

## Service application requirements

The following SharePoint service applications must be configured and active in SharePoint Server 2013 before you install Duet Enterprise 2.0.

- **Business Data Connectivity service application** This service application lets you connect SharePoint Server 2013 solutions to sources of external data and to define external content types that are based on that external data.
- **State Service** This service application is used for the Duet Enterprise 2.0 Workflow solution.
- **Security Token Service Application** This service application is used for internal claims security.
- **Secure Store Service Application** This service application stores end-user's credentials in a client certificate used to authenticate the user on the SAP NetWeaver Gateway 2.0.
- **User Profile Service Application** This service application is required for the role synchronization feature of Duet Enterprise 2.0.

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# Prepare the environment for Duet Enterprise for SharePoint and SAP Server 2.0

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**Summary:** Learn how to prepare SharePoint Server 2013 to host Duet Enterprise 2.0 by creating a new Duet Enterprise web application, site collection, and host websites.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

This article describes how to prepare a SharePoint Server 2013 environment to host Duet Enterprise for Microsoft SharePoint and SAP Server 2.0. It includes all the necessary procedures provided in the order in which they must be performed. Where necessary, Duet Enterprise 2.0 specific steps are included. In all other cases, the procedures are the same as those for SharePoint Server 2013.

In this article:

- [Before you begin](#)
- [Create a new web application for Duet Enterprise 2.0](#)
- [Extend the web application in Duet Enterprise 2.0](#)
- [Create and manage the SharePoint SSL certificate](#)
- [Create the SharePointSSL certificate](#)
- [Bind the SharePointSSL certificate to the extended web application](#)
- [Export the SharePointSSL.cer certificate](#)
- [Share the SharePointSSL.cer certificate with the SAP administrator](#)

## Before you begin

Before you perform any of the following procedures, read the following Duet Enterprise 2.0 installation and configuration articles in the order listed. We recommend that you do not continue until you read these articles.

- [Deployment overview of Duet Enterprise for Microsoft SharePoint and SAP Server 2.0 Preview](#)
- [Plan to deploy Duet Enterprise for SharePoint and SAP Server 2.0](#)
- [Hardware and software requirements for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0](#)



**Note:**

Because SharePoint 2013 runs websites in Internet Information Services (IIS), administrators and users depend on the accessibility features that browsers provide. SharePoint 2013

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supports the accessibility features of supported browsers. For more information, see the following resources:

- [Plan browser support](#)
- [Accessibility for SharePoint Products](#)
- [Accessibility features in SharePoint 2013 Products](#)
- [Keyboard shortcuts](#)
- [Touch](#)

## Create a new web application for Duet Enterprise 2.0

Duet Enterprise 2.0 requires at least one web application. This web application is used to host one or more sites that surface information from SAP. Use the following procedure to create a new web application for Duet Enterprise 2.0.

### To create a new web application for Duet Enterprise 2.0

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group.
2. On the SharePoint Central Administration website, in the **Application Management** section, click **Manage Web applications**.
3. On the **Web Applications Management** page, on the ribbon, click **New**. The **Create new Web Application** window opens.
4. In the **Create New Web Application** window, in the **IIS Web Site section**, select the following:
  - Select **Create a new IIS website**.
  - Optionally type the name of the web site in the **Name** box or accept the default name. Record this name. You will need it later when create the alternate access mapping for this web application.
  - Leave **Port** default, and record the port number.
  - Leave **Host Header** default (blank).
  - Leave **Path** default.
5. In the **Security Configuration** section, select the following:
  - Leave **Allow Anonymous** default (**No**).
  - Leave **Use Secure Sockets Layer (SSL)** default (**No**).
6. In the **Public URL** section, record the URL in the **URL** box. You will need to know this URL when you create an alternate access mapping later.
7. In all other sections, leave all selections as the default.
8. Click **OK** to create the new web application. A progress window is displayed. When complete, the progress window closes and the **Application Created** page appears. Click **OK** to close the **Application Created** page. The web application that you created appears on the **Web Applications** page.

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## Extend the web application in Duet Enterprise 2.0

Use this procedure to extend the web application to create a SSL-enabled web application that will be used for secure transactions between the SharePoint system and the SAP system.

### To extend the web application in Duet Enterprise 2.0

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group.
2. In Central Administration, in the **Application Management** section, click **Manage Web applications**.
3. On the **Web Applications Management** page, select the new web application that you created. In the Ribbon, click **Extend**. The **Extend Web Application to Another IIS Web Site** window opens.
4. In the **IIS Web Site** section, leave all settings as the default.
5. In the **Security Configuration** section, for **Use Secure Sockets Layer (SSL)**, select **YES**.
6. In the **Claims Authentication Types** section, select **Basic authentication (credentials are sent in clear text)**.
7. In the **Public URL** section, the URL for this web application is shown in the URL box. Do the following:
  - a) Change the URL to the fully qualified domain name. This full URL should be in this format: `https://servername.domain.com:portnumber`
  - b) Record this URL and send it to the SAP administrator.
  - c) The SAP administrator will need this full URL when the configuring an RFC Destination to send workflows and reports from SAP to SharePoint.
  - d) In the **Zone** list, select the zone that you want to use for this port. You can choose any available zone, but we recommend that you choose the **Custom** zone because the name best describes the purpose of this zone.
8. Leave all other settings as the default, and then click **OK** to extend the web application.
9. The **Extend Web Application to Another IIS Web Site** window closes and the new web application is extended. No visual confirmation is provided.

## Create and manage the SharePoint SSL certificate

After extending the new web application that you created, you must create an SSL certificate and bind that certificate to the extended web application. This certificate is named the SharePointSSL.cer certificate. Once created and bound in to the extended web application in SharePoint, you will export it and share it with the SAP administrator who imports it into the SAP system. The procedures for this are as follows:

1. [Create the SharePointSSL certificate.](#)
2. [Bind the SharePointSSL certificate to the extended web application.](#)
3. [Export the SharePointSSL.cer certificate.](#)

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4. [Share the SharePointSSL.cer certificate with the SAP administrator.](#)

## Create the SharePointSSL certificate

This is the first of four SharePointSSL certificate management procedures. The SharePointSSL certificate is created by using IIS Manager (inetmgr). This certificate will be bound to the extended web application that you just created and used to help secure communications between the SharePoint and SAP systems.

### To create the SharePointSSL certificate

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group and a member of the Windows Administrators group on the server where this procedure is run.
2. Click **Start**, and then click **Run**.
3. In the **Run** text box, type: **inetmgr**, and then click **OK**. **Internet Information Services (IIS) Manager** opens.
4. Under **Connections**, expand the tree node next to the host computer.
5. Expand the **Sites** node and confirm that the new web application and the SSL-enabled extended web application are displayed under the **Sites** node.
6. In the **Connections** section, select the host computer. The **ASP.Net**, **IIS**, and **Management** sections display for this computer.
7. Double-click **Server Certificates**. The **Server Certificates** section is displayed.
8. In the **Actions** section, click **Create Self Signed Certificate**.
9. The **Create Self Signed Certificate wizard** opens.
10. In the **Specify a friendly name for the certificate** field, type **SharePointSSL**, and then click **OK**. The SharePointSSL.cer certificate is created and the Create Self Signed Certificate Wizard closes.
11. The SharePointSSL certificate is displayed in the **Server Certificates** section.

## Bind the SharePointSSL certificate to the extended web application

This is the second of four SharePointSSL certificate management procedures. The SharePointSSL certificate is bound to the extended web application that you created by using IIS Manager (inetmgr).

### To bind the SharePointSSL certificate to the extended web application

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group and a member of the Windows Administrators group on the server where this procedure is run.
2. In IIS Manager, in the **Connections** section, select the extended web application that you created, and then in the **Actions** section, click **Bindings**.



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3. The **Site Bindings** window opens. Select the **https** row, and then click **Edit**.
  4. In the **Edit Site Binding** window, in the **SSL certificate** section, in the drop-down list, select **SharePointSSL**, click **OK**, and then click **Close**.
  5. The SharePointSSL certificate is now bound to the extended web application.

## Export the SharePointSSL.cer certificate

This is the third of four SharePointSSL certificate management procedures. The SharePointSSL.cer certificate is exported so that it can be shared with the SAP administrator. This process is completed by using IIS Manager.

### To export the SharePointSSL.cer certificate

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group and a member of the Windows Administrators group on the server where this procedure is run.
2. Open the Microsoft Management Console (MMC) by clicking **Start**, select **Run**, and then type **MMC** in the **Run** box.
3. The MMC opens as Console 1.
4. Select **File**, and then click **Add/Remove Snap-in**. The **Add or Remove Snap-ins** window opens.
5. In the **Add or Remove Snap-ins** window, select **Certificates**, and then click **Add**.
6. In the **Certificates Snap-in** window, select **Computer account**, and then click **Next**.
7. In the **Select Computer** window, leave all settings default, and then click **Finish**. The **Certificates Snap-in** window closes and certificates are displayed in the **Add or remove Snap-ins** window in the **Selected Snap-ins** section.
8. Click **OK**. The **Add or Remove Snap-ins** window closes and **Certificates (Local Computer)** are displayed in the MMC tree.
9. In the MMC tree, expand **Certificates (Local Computer)**.
10. Expand the **Personal** node, and then select **Certificates**. The SharePointSSL certificate will be displayed as a self-signed certificate where the **Issued To** and **Issued By** fields are the same and both display the name of the host computer as seen in IIS Manager. Also, the name in the **Friendly name** column will be SharePointSSL, which is the name you assigned to this certificate when you created it.
11. Right-click the SharePointSSL certificate that displays the same **Issued To** and **Issued By** information, point to **All Tasks**, and then click **Export**.
12. The Certificate Export Wizard opens.
13. Click **Next**. The **Export Private Key** page is displayed. Leave all settings as the default.
14. Click **Next**. The **Export File Format** page is displayed. Leave all settings as the default.
15. Click **Next**. The **File to Export** page is displayed. Select **Browse** to select a location to export the file. The **Save As** dialog opens. Choose somewhere easy to access and remember.

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16. In the **Save As** dialog after you have selected a location, in the **File name** field, type **SharePoint SSL**, and then click **Save**. The **Save As** dialog closes and the **Certificate Export Wizard, File to Export** page is displayed with the path and name of the certificate populated in the **File name** field.
  17. Click **Next**. The Completing the Certificate Export Wizard displays and lists all the information that was selected during the export process.
  18. Click **Finish** to export the SharePointSSL.cer certificate. The **Certificate Export Wizard success** dialog box displays the following message: The export was successful.
  19. Click **OK**. The Certificate Export Wizard closes. You have exported the SharePointSSL.cer certificate to the location that you chose.

## Share the SharePointSSL.cer certificate with the SAP administrator

This is the final of four SharePointSSL certificate management procedures. The SharePointSSL.cer certificate is now created, bound, and exported from the SharePoint system. It must now be given to the SAP administrator who will use SAP trust manager to trust the certificate in the SAP system.

1. Either share the location where the SharePointSSL.cer certificate is on the host computer file system, or transfer the file to an SAP host computer according to the SAP administrator's instructions.
2. When the SharePointSSL.cer is successfully transferred to the SAP administrator, you are ready to continue with the installation Duet Enterprise 2.0 on your host computer.

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# Install Duet Enterprise for SharePoint and SAP Server 2.0

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**Summary:** Learn how to install and configure Duet Enterprise 2.0 on servers running SharePoint Server 2013.

*Applies to:* [Duet Enterprise for Microsoft SharePoint and SAP Server 2.0](#)

The articles in this section describe how to install and configure Duet Enterprise for Microsoft SharePoint and SAP Server 2.0 on servers that are running SharePoint Server 2013. Additional configuration is required in the SAP environment to create a complete and functioning deployment of Duet Enterprise 2.0. For information about the steps that are required to configure Duet Enterprise 2.0 in the SAP environment, see [Duet Enterprise SAP Deployment Guide](#) on the SAP Support Portal website.

 **Note:**

Duet Enterprise 2.0 is currently not available for download and will be available for download at a later date.

The process to install Duet Enterprise 2.0 has five stages. These five stages use a combination of the user interface in the SharePoint Central Administration website and the Windows command line. Each of the five stages of the Duet Enterprise 2.0 deployment has specific steps that must be performed.

In this section:

- [Stage 1: Install binary files in Duet Enterprise for SharePoint and SAP Server 2.0](#) The Duet Enterprise 2.0 binary files are copied from the installation source to the host computer by the SharePoint administrator.
- [Stage 2: Install, configure, and register Duet Enterprise for Microsoft SharePoint and SAP Server 2.0](#) Duet Enterprise 2.0 is installed and configured by using the **DuetConfig.exe -install** command.
- [Stage 3: Create a master key for Duet Enterprise for SharePoint and SAP Server 2.0](#) A master key is created in the Secure Store Service application for use with Duet Enterprise 2.0.
- [Stage 4: Manage DuetRoot certificate in Duet Enterprise for SharePoint and SAP Server 2.0](#) The SharePoint administrator creates, configures, exports, and shares the DuetRoot certificate with the SAP administrator.
- [Stage 5: Configure a trust relationship between SharePoint and SAP](#) The SharePoint administrator performs additional security configuration between the SharePoint and SAP systems.



**Important:**

These procedures must be completed in the order listed.

## Before you begin

Make sure that you have all the needed information from your SAP administrator before you begin these procedures. This includes the following:

- LsiUrl - Links the SAP system to the SharePoint system. A separate LsiUrl is required for importing each model.
- MetadataURL - Links the SAP system to the SharePoint system. Required for importing models.
- All user accounts created in Active Directory and ready to use in the SharePoint system.
- All services and service accounts turned on and created.
- All web applications created and extended for Duet Enterprise 2.0.
- The SharePointSSL certificate created, bound, exported, and shared with the SAP administrator.
- The SAPSSL certificate created, trusted (on the SAP system), exported, and shared with the SharePoint administrator.

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# Stage 1: Install binary files in Duet Enterprise for SharePoint and SAP Server 2.0

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**Summary:** Learn how to install binary files in Duet Enterprise 2.0, the first stage in an installation of Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

This article describes the procedure to install binary files in Duet Enterprise for Microsoft SharePoint and SAP Server 2.0. This is stage one in an installation of Duet Enterprise 2.0.

## Install Duet Enterprise 2.0 binary files

Use this procedure to copy files from an installation point to the front-end web server that will host Duet Enterprise 2.0.


### To install Duet Enterprise 2.0 binary files

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013.
2. As administrator, open a Windows Command Prompt window.
3. At the command prompt, type **cd:\directory\**, where *directory* is the local or network location of the Duet Enterprise setup files.
4. From the installation location of the Duet Enterprise 2.0 files, type the following command, and then press ENTER:

**setup.exe /install**

The following table describes optional parameters:

### Optional setup parameters

Parameter	Use
<code>/installpath=&lt;drive:\path&gt;</code>	<p>Install Duet Enterprise to a different path. For example:</p> <pre>Setup.exe /installpath=d:\</pre> <p> <b>Note:</b> By default, Duet Enterprise files are</p>

Parameter	Use
	installed to the <system>\Program Files\Duet Enterprise\2.0 folder.
/AcceptEULA	Accept the terms of the license agreement.
/quiet	Suppresses error and success messages.
/logdir=<log file path>	Path to the Duet Enterprise related log files.
/?	Displays Help.

5. If you did not use the /AcceptEULA parameter, the **Duet Enterprise 2.0 for Microsoft SharePoint and SAP license agreement** is displayed. If this page is displayed, on the **Duet Enterprise 2.0 for Microsoft SharePoint and SAP license agreement** page, select the **I accept the terms in the license agreement** check box, and then click **Install**. Otherwise, skip to step 6.
6. When complete, you receive the following message: **Duet Enterprise setup completed successfully**.
7. The Duet Enterprise 2.0 binary files are now copied to the host computer.

## Verification

Verify that the following files and folders are created in the default directory path C:\Program Files\DuetEnterprise\2.0.

- BDC Models (Folder)
- Solutions (Folder)
- DuetConfig.exe
- DuetConfig.Intl.dll
- OBA.Server.Logging.Resources.dll

---

# Stage 2: Install, configure, and register Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to install, configure, and register Duet Enterprise 2.0, the second stage in an installation of Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

This article describes the installation and configuration of Duet Enterprise for Microsoft SharePoint and SAP Server 2.0. After this procedure is complete, additional configuration is necessary.

## Install, configure, and register Duet Enterprise 2.0

Use this procedure to perform a basic deployment configuration of Duet Enterprise 2.0 and to create a target application in the default Secure Store Service service application. This procedure assumes that you are still logged on to the same host computer with the same administrative account that you chose to use for all processes and services. Before you perform the following procedure, verify that the account that you will use to run DuetConfig.exe is both a member of the Farm Administrators SharePoint group and is granted Full Control permissions on the User Profile service application.

### To install, configure, and register Duet Enterprise 2.0

1. Log on to the host server as a member of the Farm Administrators group.
2. Click **Start**, click **All Programs**, and then click **Accessories**.
3. Right-click the command prompt, and then click **Run as administrator**.
4. At the command prompt, navigate to the folder that contains the DuetConfig.exe file. By default, this is the C:\Program files\Duet Enterprise\2.0\ folder.
5. At the command prompt, type the following command, and then press ENTER:  
**DuetConfig -install**
6. When DuetConfig.exe is complete, at the command prompt, you receive the following messages:
  - **Successfully registered the diagnostic service**
  - **Successfully installed all features**
  - **Successfully registered health rules**
  - **Successfully installed help files**
  - **Successfully configured Duet Enterprise**

- 
7. The Duet Enterprise 2.0 files are now configured and you are ready to create a master key.



---

# Stage 3: Create a master key for Duet Enterprise for SharePoint and SAP Server 2.0

---

Published: July 16, 2012

**Summary:** Learn how to create a master key for the Secure Store Service application in Duet Enterprise 2.0, the third stage in an installation of Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

This article describes the procedure to create a master key for the Secure Store Service application in Duet Enterprise for Microsoft SharePoint and SAP Server 2.0.

A master key allows secure communications between SharePoint Server 2013 and SAP. Specifically, the communication is between the Secure Store Service application and the SAP NetWeaver server.

For more information about how to create a master key and configure the Secure Store, see [Configure Secure Store](#) in [Configure the Secure Store Service in SharePoint 2013 Preview](#).

## Create a master key

A master key is required to successfully configure the DuetRoot.pfx certificate. Use this procedure to generate a new master key.

### To create a master key

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.
2. On the SharePoint Central Administration website, click **Application Management**.
3. On the **Application Management** page, click **Manage service applications**.
4. On the **Manage Service Applications** page, scroll down the list of service applications, and then select **Secure Store service application**.
5. On the **Secure Store Service Application** page, click **Generate New Key**. The **Generate New Key** window opens.
6. Type a pass phrase in the **Pass Phrase** and **Confirm Pass Phrase** boxes, and then click **OK**. Record this pass phrase.
7. A new master key is created.

---

# Stage 4: Manage DuetRoot certificate in Duet Enterprise for SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to manage the DuetRoot certificates in Duet Enterprise 2.0, the fourth stage in an installation of Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* *Duet Enterprise for Microsoft SharePoint and SAP Server 2.0*

This article describes the procedure to manage the root authority certificates in Duet Enterprise for Microsoft SharePoint and SAP Server 2.0.

## Note:

You can name these certificates whatever you like, but to help guide you through these procedures, we recommend that you name them DuetRoot.pfx and DuetRoot.cer.

In this article:

- [Create or obtain the DuetRoot.pfx certificate](#)
- [Configure the DuetRoot.pfx certificate](#)
- [Export the DuetRoot.pfx certificate as DuetRoot.cer](#)
- [Share the DuetRoot.cer with the SAP administrator](#)

## Create or obtain the DuetRoot.pfx certificate

You can either create a self-signed DuetRoot.pfx certificate or obtain one from a Certificate Authority.

Do one of the following:

- [Create the DuetRoot.pfx self-signed certificate.](#)
- [Obtain the DuetRoot.pfx certificate from a Certificate Authority.](#)

### Create the DuetRoot.pfx self-signed certificate

Create a self-signed root certificate by using the **DuetConfig.exe -CreateSelfSignedCertificate** command. Use this procedure if you want to create a self-signed certificate. This procedure creates a self-signed certificate that is issued by the Duet Root Certificate Authority.

#### To create the DuetRoot.pfx self-signed certificate

1. As administrator, open a Windows Command Prompt window.

2. At the command prompt, navigate to the folder that contains the DuetConfig.exe file. By default, this is the C:\Program files\Duet Enterprise\2.0\ folder.
3. At the command prompt, type the following command, and then press ENTER:  
**DuetConfig - CreateSelfSignedCertificate -Path c:\DuetRoot.pfx -Password**  
 (If no password is given here, you are prompted to enter one after you press ENTER. If that occurs, enter a password and press ENTER again.) Record this password.
4. At the command prompt, you receive the following message: **Certificate "c:\DuetRoot.pfx" has been generated successfully.**
5. The Duet Enterprise Root certificate is now created and is ready to be configured for use with the Secure Store Service service application.
6. You are now ready configure the DuetRoot.pfx certificate and create a target application with it in the Secure Store Service service application.
7. Skip to the [Configure the DuetRoot.pfx certificate](#) section below.

## Obtain the DuetRoot.pfx certificate from a Certificate Authority

If you obtain a certificate from a Certificate Authority for use as the DuetRoot.pfx certificate, it must contain the following:

- Basic Constraints Extension. This extension is used to indicate that the certificate is a certificate authority.
- Usage Extensions. These extensions define the purpose of the public key that is contained in the certificate. The following table describes the key usage extensions.

Key Usage Extension Name	Description
KeyCertSign	The key can be used to sign certificates.
DataEncipherment	The key can be used for data encryption.
KeyEncipherment	The key can be used for key encryption.
NonRepudiation	The key can be used for authentication.
DigitalSignature	The key can be used as a digital signature.

 **Note:**

The following procedures in this article assume that the file name of the certificate is DuetRoot.pfx.

---

## Configure the DuetRoot.pfx certificate

Use this procedure to configure the DuetRoot.pfx certificate and create a target application in the Secure Store Service service application.

### To configure the DuetRoot.pfx certificate

1. As administrator, open a Windows Command Prompt window.
2. At the command prompt, navigate to the folder that contains the DuetConfig.exe file. By default, this is the C:\Program files\Duet Enterprise\2.0\ folder.
3. At the command prompt, type the following command, and then press ENTER:  
**DuetConfig.exe -ConfigureRootCertificate -SecureStoreServiceApplicationName <Name of Secure Store Service Application> -Path <Root Certificate file path> [Password you used when you created the DuetRoot.pfx file]**
4. At the command prompt, you receive the following message: **Duet Root certificate has been configured in SecureStore with target application name DuetApp.**
5. For verification, navigate to the Secure Store Service service application page and confirm that the target application DuetApp is shown.

## Export the DuetRoot.pfx certificate as DuetRoot.cer

Use this procedure to export the client certificate that you created and configured. After exporting the DuetRoot.pfx certificate as DuetRoot.cer, you must give it to the SAP administrator.

### To export the client certificate

1. As administrator, open a Windows Command Prompt window.
2. At the command prompt, navigate to the folder that contains the DuetConfig.exe file. By default, this is the C:\Program files\Duet Enterprise\2.0\ folder.
3. At the command prompt, type the following command, and then press ENTER:  
**DuetConfig -ExportRootCertificate -Path c:\DuetRoot.cer**
4. At the command prompt, you receive the following message: **Root certificate for Duet is exported successfully to file c:\DuetRoot.cer.**

## Share the DuetRoot.cer with the SAP administrator

When the DuetRoot.cer certificate is successfully exported, you need to share it with the SAP administrator.

### Note:

In the path C:\ there are two DuetRoot certificates. One is listed as type: Security Certificate and one is listed as type: Personal Information. The DuetRoot.pfx is listed as type: Personal Information and the DuetRoot.cer is listed as type: Security Certificate. You will give the DuetRoot.cer certificate that is listed as type: Security Certificate to the SAP administrator.

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Give the DuetRoot.cer certificate (type: Security Certificate) file to the SAP administrator.

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# Stage 5: Configure a trust relationship between SharePoint and SAP

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Published: July 16, 2012

**Summary:** Learn how to configure a trust relationship between SharePoint and SAP for Duet Enterprise 2.0, the fifth stage in an installation of Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

This article describes how to configure a trust relationship between SharePoint and SAP for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0.

## Configure a trust relationship between SharePoint and SAP environments

For the SSL-enabled web application to accept information from the SAP environment, you must establish a trust relationship with the SAPSSL certificate that is provided by the SAP administrator.

### To configure a trust relationship between SharePoint and SAP environments

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.
2. On the SharePoint Central Administration website, click **Security**.
3. In the **General Security** section, click **Manage trust**.
4. On the ribbon, click **New**.
5. In the **Establish Trust Relationship** window, in the **Name** box, type a name for this trust relationship.
6. In the **Root Authority Certificate** box, use the **Browse** button to select the certificate (SAPSSL.cer) that was provided by the SAP administrator for establishing the SSL connection.
7. Leave all other settings as the default, and then click **OK**. The **Establish Trust Relationship** window closes and the new trust relationship is displayed on the **Trust Relationships** page. You are now ready to import the Workflow, Reporting, and RoleSync models.

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# Import models in Duet Enterprise for SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to import BDC models in a deployment of Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

Before importing any Business Data Connectivity (BDC) models, you will need the LsiUrl and MetadataUrl from the SAP administrator for each of the following BDC models to use when DuetConfig.exe is run and the models are imported. You must configure a Duet publishing URL and account. You must grant users permissions on the BDC models that you import before they can access the SAP data that those models represent.

In this article:

- [Import BDC models and set Metadata Store permissions](#)
- [Import the Reporting model](#)
- [Import the Workflow model](#)
- [Import and configure the RoleSync model](#)
- [Configure the publishing URL and account](#)
- [Set Metadata Store permissions](#)

## Import BDC models and set Metadata Store permissions

The following models are provided with Duet Enterprise 2.0 and are installed in this default directory path: C:\Program Files\Duet Enterprise\2.0\BDC Models. This directory contains other models that are installed by default and are not used as part of this deployment.

- Workflow
- UserSubscription
- Reporting
- RoleSync

Each of these models must be imported individually because the procedures to import them are not the same. Use the following procedures to import each of the Reporting, Workflow, and RoleSync BDC models.

---

## Import the Reporting model

The Reporting BDC model is imported into Duet Enterprise 2.0 by using the **DuetConfig.exe -importbdc** command. It requires both an LsiUrl and MetadataUrl to import successfully. Use the following procedure to import the Reporting BDC model.

### To import the Reporting model

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.
2. As administrator, open the Windows command prompt.
3. At the command prompt, type the default path of the DuetConfig.exe file: **cd /d C:\Program Files\Duet Enterprise\2.0.**
4. At the command prompt, type the following command, and then press ENTER:  
**Duetconfig.exe -importbdc -featurename Reporting -BdcServiceApplication <BDC Service Application> -lsiurl <LsiUrl> -metadataUrl <MetadataUrl>**

Where:

- *<BDC Service Application>* equals the BDC Service application name.
  - *<LsiUrl>* is the LsiUrl URL that is provided to you by the SAP administrator that matches the BDC model that you want to import.
  - (optional) *<MetadataUrl>* is the metadata URL that is provided to you by the SAP administrator that matches the BDC model that you want to import.
5. When complete, at the command prompt, you receive the following message: **The specified BDC model was successfully imported.**

## Import the Workflow model

The Workflow BDC model is imported into Duet Enterprise 2.0 by using the **DuetConfig.exe -importbdc** command. It requires both an LsiUrl and MetadataUrl to import successfully. It also requires an additional parameter named UserSubLsiUrl. This UserSubLsiUrl is used for the UserSubscription model, an additional model only imported together with the workflow model. The UserSubscription model allows users to subscribe to workflow tasks on individual Duet Enterprise 2.0 workflow sites. Use the following procedure to import the Workflow and UserSubscription BDC models.

### To import the Workflow model

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.
2. As administrator, open the Windows command prompt.



---

3. At the command prompt, type the default path of the DuetConfig.exe file: **cd /d C:\Program Files\Duet Enterprise\2.0.**

4. At the command prompt, type the following command, and then press ENTER:  
**Duetconfig.exe -importbdc -featurename <FeatureName>Workflow -BdcServiceApplication <BDC Service Application> -lsiurl <LsiUrl> -usersubLisurl <UserSubLsiUrl> -metadataUrl <MetadataUrl>**

Where:

- *<BDC Service Application>* equals the BDC Service application name.
  - *<LsiUrl>* is the LsiUrl URL that is provided to you by the SAP administrator that matches the BDC model that you want to import.
  - *<UserSubLsiUrl>* is the UserSubLsiUrl URL that is provided to you by the SAP administrator.
  - *<MetadataUrl>* is the metadata URL that is provided to you by the SAP administrator that matches the BDC model that you want to import. The URL is appended to the end of the MetadataUrl provided by the SAP administrator.
5. When complete, at the command prompt, you receive the following message: **The specified BDC model was successfully imported.**

## Import and configure the RoleSync model

The RoleSync BDC model is imported into Duet Enterprise 2.0 by using the **DuetConfig.exe -importbdc** command. It requires both an LsiUrl and MetadataUrl to import successfully. Use the following procedure to import the RoleSync BDC model. After the model is imported, it must be configured to start the required timer jobs.

### To import the RoleSync model

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.
2. As administrator, open the Windows command prompt.
3. At the command prompt, type the default path of the DuetConfig.exe file: **cd /d C:\Program Files\Duet Enterprise\2.0.**
4. At the command prompt, type the following command, and then press ENTER:  
**Duetconfig.exe -importbdc -featurename RoleSync -BdcServiceApplication <BDC Service Application> -lsiurl <LsiUrl> -metadataUrl <MetadataUrl>**

Where:

- *<BDC Service Application>* equals the BDC Service application name.
- *<LsiUrl>* is the LsiUrl URL that is provided to you by the SAP administrator that matches the BDC model that you want to import.

- 
- *<MetadataUrl>* is the metadata URL that is provided to you by the SAP administrator that matches the BDC model that you want to import. The URL is appended to the end of the MetadataUrl provided by the SAP administrator.
5. When complete, at the command prompt, you receive the following message: **The specified BDC model was successfully imported.**

### To configure RoleSync

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.
2. As administrator, open the Windows command prompt.
3. At the command prompt, type the default path of the DuetConfig.exe file: **cd /d C:\Program Files\Duet Enterprise\2.0.**
4. At the command prompt, type the following command, and then press ENTER:  
**DuetConfig.exe -ConfigureRoleSync -UserProfileServiceApplicationName <"User Profile Service Application Name">**

Where *<"User Profile Service Application Name">* equals the name of the User Profile service application.

5. At the command prompt, you receive the following message: **The specified Profile Synchronization Job was successfully configured.**
6. The timer job for RoleSync is now created.

## Configure the publishing URL and account

Use this procedure to configure the properties required to enable the SAP system to publish reports and workflows to a specific web application that you want to enable for use with Duet Enterprise 2.0. To complete this procedure, you must know the following:

- The URL of the web application that you are configuring.
- The port number of the extended port on the web application that you are configuring.
- The account that the SAP system will use to publish reports and workflows to the web application that you are configuring.

### To configure the publishing URL and account

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are configuring Duet Enterprise 2.0.
2. As administrator, open the Windows command prompt.

- 
3. At the command prompt, type the default path of the DuetConfig.exe file: **cd /d C:\Program Files\Duet Enterprise\2.0.**
  4. At the command prompt, type the following command, and then press ENTER:  
**duetconfig.exe -configurewebapp <Web Application URL> -PublishingUrl <PublishingUrl> - PublisherAccount <domain\username>**

Where:

- *<Web Application URL>* equals the http:// URL of the new web applications that you created.
- *<PublishingUrl>* equals the https://servername:portnumber of the extended web application that the SharePointSSL.cer certificate is bound to.



**Tip:**

Because you extended this web application using a fully qualified domain (FQDN) name, you will need use the FQDN form of the URL here.

- *<domain\username>* equals the domain and user name of the DuetPublisher account.



**Important:**

This account cannot be the same as the SharePoint Farm account or the Managed account assigned to the application pool of the web application using by Duet Enterprise.

5. At the command prompt, you receive the following message: **Successfully configured Duet functionality on the Web Application https://WebApplicaitonURL.**

## Set Metadata Store permissions

Before you can verify the successful configuration and connection between the SharePoint and SAP systems, you must configure Metadata Store permissions.

### To set Metadata Store permissions

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.
2. On the SharePoint Central Administration website, click Application Management.
3. In the **Service Applications** section, click **Manage service applications**.
4. On the **Service applications** page, click the link for the Business Data Connectivity Service Application that you are using for Duet Enterprise. By default, the name of the link is **BDC Service** but this name can be changed by an administrator.
5. On the **BDC models** page, in the **View** section, in the **External Content Types** drop-down list, select BDC Models. The following four imported models are displayed:
  - OBA.Server.Reporting
  - OBA.Server.RoleSync

- 
- OBA.Server.UserSubscription
  - OBA.Server.Workflow
6. On the **BDC Models** page, use **Set Object Permissions** and **Set Metadata Store Permissions** to set both object and Metadata Store permissions for all models. All users who access these models will need individual permissions to access content from these BDC models.
    - Set Object Permissions: Execute, Selectable in Client, Edit, and Set Permissions. (For the publisher account only all permissions are required. For all other accounts, you can choose one or more permissions.)
    - Set Metadata Store Permissions: Execute, Selectable in Client, Edit, and Set Permissions. Make sure to select the Propagate permissions to all BDC models, External Systems and External Content Types in the BDC Metadata Store. Doing so will overwrite existing permissions. (For the publisher account, only all permissions are required. For all other accounts, you can choose one or more permissions).
  7. You might have to run IIS reset to allow these permissions to take effect immediately.
  8. When both the object and Metadata Store permissions are set, you can run Duet Enterprise Configuration Check and validate that all required communication and security checks are working and functional.

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# Configuration check for Duet Enterprise for SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to perform a Duet Enterprise Configuration Check in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

This article describes how to verify the Duet Enterprise Configuration Check in Duet Enterprise for Microsoft SharePoint and SAP Server 2.0.

## Run the Duet Enterprise Configuration Check

Use this procedure to verify the configuration of Duet Enterprise 2.0 and to show the status of all imported models and features.

### To run the Duet Enterprise Configuration Check

1. Verify that you have the following administrative credentials: Windows Administrators group on the front-end web server that is running SharePoint Server 2013 to complete this procedure. You must also be a member of the Farm Administrators group on the SharePoint Server farm on which you are installing Duet Enterprise 2.0.
2. As administrator, open a Windows Command Prompt window.
3. At the command prompt, ensure that the directory is the default install location for Duet Enterprise 2.0: C:\Program Files\Duet Enterprise\2.0.
4. At the command prompt, type the following command, and then press ENTER:  
**duetconfig.exe -CheckConfiguration**
5. At the command prompt, you receive the following message: **Please wait while the check configuration result is retrieved and written to the output file. This operation can take several minutes to complete....**  
The CheckConfiguration result is written to  
C:\Users\*<useraccount>*\AppData\Local\Temp\1\CheckConfigurationResult.xml, where  
*<useraccount>* equals the name of the publisher account specified when you configured the publishing URL and account.
6. To view this file, browse to the location shown at the command prompt, and then open the CheckConfigurationResult.xml file in your XML-compatible web browser. You will need to allow all scripts to run.
7. On the **Duet Enterprise Configuration Check** page, the following information is displayed:

- 
- **Overall Status** This displays the overall status of all security connections, models, and features. If all of these are working correctly, the status column will display **Success**.
  - **Farm-Scoped Features** This displays the status of RoleSync, Validate Root Authority Certificate, and Security. If all of these are working correctly, the status column will show **Success** for each. Note that RoleSync will show as failed until it is run for the first time. This is expected and does not indicate a problem. Running RoleSync one time will change this fail to success.
  - **Web Application-Scoped Features** This displays the status of Publishing Settings, Reporting, and Workflow. If all of these are working correctly, the status column will show **Success** for each.
8. If any of these features, models, or items show as **Failed** in the status column, you can get more information about the failure by clicking **Diagnostic Checks** in the failed component section.
  9. The Duet Enterprise 2.0 core installation and configuration is now completed. Additional configuration is required to enable the features of the four imported Business Data Connectivity (BDC) models: Reporting, Workflow, UserSubscription, and RoleSync. For more information, see [Configure solutions in Duet Enterprise for SharePoint and SAP Server 2.0](#).

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# Configure solutions in Duet Enterprise for SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to configure and deploy solutions in Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

Solutions for Duet Enterprise for Microsoft SharePoint and SAP Server 2.0 are configured at two levels: the site collection level and the subsite level. Before any solutions can be deployed, a new site collection must be created and then individual subsites must be created for each solution. Use the following procedure to create a new site collection, which will be later configured and new subsites created to host the individual Duet Enterprise 2.0 features of Reporting and Workflow.

## Create a new site collection

This site collection will serve as the foundation for all subsites that will be created to host individual Duet Enterprise 2.0 features, such as Reporting and Workflow.

### To create a new site collection

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group and a member of the Windows Administrators group on the server that is running the SharePoint Central Administration website.
2. In Central Administration, on the **Application Management** page, in the **Site Collections** section, click **Create Site Collections**.
3. On the **Create a Site Collection** page, in the **Title and description** section, in the **Title** field, enter a name for this new site collection. Record this name.
4. In the **Template Selection** section, select **Team site**.
5. In the **Primary Site Collection Administrator** section, in the **User Name** field, enter an account. Record this account.
6. Leave all other settings as the default.
7. Click **OK**. The new site collection is created by using the blank template.
8. Browse to the newly created site collection by entering the URL into your web browser address field. It should resemble the following: `http://servername:portnumber`.
9. The new site collection is displayed as a team site.

---

## Deploy a solution

Use the following procedures to deploy a Reporting, Workflow, or RoleSync solution for Duet Enterprise 2.0:

- [Configure the Reporting solution in Duet Enterprise for SharePoint and SAP Server 2.0](#)
- [Configure the Workflow solution in Duet Enterprise for SharePoint and SAP Server 2.0](#)
- [Configure the RoleSync solution in Duet Enterprise for SharePoint and SAP Server 2.0](#)



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# Configure the Reporting solution in Duet Enterprise for SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to configure the Reporting solution in Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

The Reporting solution in Duet Enterprise for Microsoft SharePoint and SAP Server 2.0 must be configured before it can be used by administrators or users. In earlier procedures, you have imported the Reporting Business Data Connectivity (BDC) model and have confirmed that it is functioning correctly. The following procedures enable site collection and site-level features so that the Reporting solution can be used.

In this article:

- [Enable the Reporting solution on the site collection](#)
- [Create a new subsite and activate the Reporting solution](#)

## Enable the Reporting solution on the site collection

Duet Enterprise reporting requires the Duet Enterprise Reports Content Types feature to be enabled in the site collection. This feature is enabled for all subsites in the site collection.

### To enable the Reporting solution on the site collection

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group and a member of the Windows Administrators group on the server that is running the SharePoint Central Administration website.
2. Browse to the newly created site collection by entering the URL into your web browser address field. It should resemble the following: `http://servername:portnumber`.
3. The new site collection is displayed as a blank site.
4. On the ribbon, select the **Settings** icon (the **Settings** icon resembles a gear), and then select **Site Settings**.
5. On the **Site Settings** page, in the **Site Collection Administration** section, select **Site Collection Features**.
6. On the **Site Settings - Site Collection Features** page, scroll down the list to find **Duet Enterprise Reports Content Types**.
7. Click **Activate** next to **Duet Enterprise Reports Content Types**. The Duet Enterprise Reports Content Types feature is activated and is displayed as **Active**.

- 
8. The Duet Enterprise Reports Content Types feature is now enabled on the site collection you created.

## Create a new subsite and activate the Reporting solution

After you have created a new site collection, you must create a new subsite to host Duet Enterprise Reporting and its features.

### To create a new subsite and activate the Reporting solution

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group and a member of the Windows Administrators group on the server that is running the SharePoint Central Administration website.
2. Browse to the new site collection that you created.
3. Select **Site Contents**.
4. On the **Site Contents - New SharePoint Site** page, in the **Title and Description** section, in the **Title** field, type **Reporting**.
5. In the **Template Selection** section, on the **Collaboration** tab, select **Blank Site**.
6. In the **Navigation Inheritance** section, under **Use the top link bar from the parent site?**, select **Yes**.
7. Click **Create**. The new blank subsite is created to host Duet Enterprise Reporting.
8. The new reporting subsite is displayed.
9. On the subsite page, on the ribbon, select the **Settings** icon (the **Settings** icon resembles a gear), and then select **Site Settings**.
10. On the **Site Settings** page, in the **Site Actions** section, select **Manage site features**.
11. Scroll down the list to find **Duet Enterprise Reporting**.
12. Click **Activate** next to **Duet Enterprise Reporting**. The Duet Enterprise Reporting feature is activated and is displayed as **Active**.
13. The Duet Enterprise Reporting feature is now active on the new subsite and its features are available for viewing and use.
14. You can view these features by viewing the added items to the left navigation on the subsite. The newly added features are displayed as the following:
  - **Report Settings** Shows the available report types and templates. This can be used to run reports.
  - **Reports** Shows the current reports.

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# Configure the Workflow solution in Duet Enterprise for SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to configure the Workflow solution in Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

The Workflow solution in Duet Enterprise for Microsoft SharePoint and SAP Server 2.0 allows SAP workflows to be transferred to the SharePoint system and trigger alerts and messaging inside SharePoint sites and sent via email messages to users. The Workflow solution is configured on a new subsite that you will create. This new workflow subsite will host all of the different SAP task types.

In this article:

- [Create a subsite and activate the Workflow solution](#)
- [Verify the Workflow solution](#)

## Create a subsite and activate the Workflow solution

Use the following procedure to create a subsite to host the Workflow feature in Duet Enterprise 2.0.

### To create a subsite for Workflow

1. Verify that you have the following administrative credentials: Farm Administrators SharePoint group and a member of the Windows Administrators group on the server that is running the SharePoint Central Administration website.
2. Browse to the new site collection that you created.
3. In the Quick Launch, click **Site Contents**.
4. On the **Site Contents** page, in the **Subsites** section, click **new subsite**.
5. On the **Site Contents - New SharePoint Site** page, in the **Title and Description** section, in the **Title** field, type **Workflow**.
6. In the **Web Site Address** section, in the **URL name** field, type **Workflow**.
7. In the **Template Selection** section, on the **Collaboration** tab, select **Team site**.
8. Optionally, in the **Navigation Inheritance** section, under **Use the top link bar from the parent site?**, select **Yes**.
9. Click **Create**. The new blank subsite is created to host the Duet Enterprise Workflow.
10. The new workflow site is created and is displayed.

---

## Activate the Duet Enterprise Workflow feature on the subsite

1. On the new workflow site, in the ribbon, select the **Settings** icon (the **Settings** icon resembles a gear), and then select **Site Settings**.
2. On the **Site Settings** page, in the **Site Actions** section, select **Manage site features**.
3. Scroll down the list to find **Duet Enterprise - SAP Workflow**.
4. Click **Activate** next **Duet Enterprise - SAP Workflow**. The Duet Enterprise - SAP Workflow feature is activated and is displayed as **Active**.
5. On the new workflow site, in the ribbon, select the **Settings** icon (the **Settings** icon resembles a gear), and then select **Site Settings**.
6. On the **Site Settings** page, a new section is displayed named **SAP Workflow Configuration** that has the following links.
  - Grant users access to SAP workflow tasks.
  - Configure new SAP workflow task type.
  - Import a preconfigured SAP Workflow template.
  - Diagnose configuration problems.Duet Enterprise 2.0 Workflow is now configured on the subsite and its features are available for viewing and use.

## Verify the Workflow solution

To verify that workflows can be received from the SAP system, you must do the following:

- Configure at least one SAP workflow task type.
- Grant at least one user access to the task type.
- Publish the workflow that is associated with the task type that you created.

## Configure an SAP workflow task type

When you configure a new SAP workflow task type, you specify the SAP task type and the possible outcomes that the task can have. SharePoint Server creates a new workspace for the task type. The workspace hosts all the tasks for a workflow task type.



### Tip:

You can configure multiple task types per workflow site, but you cannot use the same task types on other workflow sites.

Duet Enterprise 2.0 includes a site template that you can use to configure a new SAP workflow task type. Alternatively, a site designer can use SharePoint Designer 2013 to customize a workflow for individual business requirements. For example, a site designer might specify that each page on workflow site include a Related Reports Web Part.

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 **Note:**

Do not create a workflow task workspace for the same SAP workflow task type and same language on multiple root workflow sites. This is not supported in Duet Enterprise 2.0.

### To configure a new SAP workflow task type

1. From the root workflow site, select **Settings**, and then select **Site Settings**.
2. On the **Site Settings** page, locate the **SAP Workflow Configuration** group, and then click **Configure new SAP Workflow task type** to open the properties page for the workflow site.
3. On the **New SAP Workflow Task Type** page, enter a description for this new site.
4. In the **Template Selection** group, in the **Select a template** panel, click the **Duet Enterprise** tab. Then, select **SAP Workflow Site**, or the name of the custom template that you want to use.
5. In the **Task Name** group, in the **Task name** text box, enter the name of the SAP task type.

 **Note:**

The task name must match the name as it appears in the SAP system. For more information about task type names, contact your SAP Workflow administrator.

6. In the text box next to **Task display name**, enter the name that you want to appear on the site.
7. In the **Task Outcomes** group, in the **Possible task outcomes** pane, do the following:
  - a) In the **Text** box, enter the name of a possible outcome, such as **Approve** or **Reject**. The outcomes that you specify here will appear as buttons on the task form.
  - b) In the **Key** box, enter the numeric key of this outcome, such as 001 or 002.
  - c) Click **Add Outcome**.
  - d) Repeat steps a through c until you have finished entering possible outcomes.

 **Note:**

The site designer specifies a certain collection of valid outcomes (text and key values) during the initial setup process. The outcome name and key that you enter in this step must be one of these predefined outcomes. For more information about valid outcomes that you can use, contact your SAP workflow administrator.

8. In the **Extended business properties** text box, enter the names of any extended properties.

 **Note:**

A site designer or administrator can specify additional properties for an SAP workflow. To learn about any extended business properties that might be required for your site, contact your workflow administrator.

9. In the **External Content Type** group, in the **External content type** text box, enter **Workflow Task** for this task type. To verify the name of the external content type, click the check button. To select Workflow Task from a list of valid external content types, click the browse button to open the **External Content Type Picker** dialog box. Then, select **Workflow Task**, and then click **OK**.

- 
10. In the **Task Deletion** group, in the **days** text box, specify how long to keep a completed task in the task list before deleting the task. The default is 500 days.
  11. Click **Create** to create the new workflow task workspace site.
  12. When the **Site Created Successfully** message box appears, click **OK** to go to the new site page.  
Once the workflow task workspace is created, you can use the SharePoint Server user interface or SharePoint Designer to customize the site to suit your business needs.

## Grant users access

After you create an SAP workflow task type and its site, you are ready to add the users who will receive the tasks from the site. You can add users individually, or add a group of users by adding an appropriate SAP role.

When you grant users access to the SAP workflow task type, Duet Enterprise 2.0 confirms authorization for the requested user to access the SAP workflow elements.

### To grant users access to the SAP workflow task type

1. Navigate to the root workflow site.
2. Select **Settings**, and then select **Site Settings**.
3. On the **Site Settings** page, locate the **SAP Workflow Configuration** group, and then click **Grant user access to SAP workflow tasks**.
4. On the **User Subscription** page, click **new item**.
5. In the **Workflow task type** drop-down list, select the task that you want to grant access to.
6. In the **User/Role** text box, enter the user account of the user for whom you want to grant access. If you want to grant access to all users who have a certain SAP role, enter the name of the role. You can verify the entry that you made by clicking the **Check Names** button. To browse for a name or role, click the browse button.
7. Click **OK** to return to the **User Subscription** page.

## Publish the workflow

Each unique task in an SAP workflow is implemented as a separate SharePoint Server declarative workflow. You must publish the workflow to make it available to users on the workflow task workspace.

To perform the steps in the following procedure, you must be a site administrator for the workflow task workspace. You must also have SharePoint Designer 2013 installed on the computer from which you are accessing the workflow site.

### To publish the workflow

1. From the workflow task workspace site, click **Page**.
2. In the **Edit** group, click the **Edit Page** arrow to see more options, and then click **Edit in SharePoint Designer**. SharePoint Designer will connect to the workflow site automatically.

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In addition, it opens the workflow on a page that enables you to manage the settings for the workflow site.

3. In the **Navigation** panel, click **Workflows**.
4. In the **Workflows** pane, locate the **List Workflow** section and the name of the workflow that you want to publish.
5. Double-click the name of the workflow to open a page where you can manage settings for the workflow.
6. In the **Save** group on the ribbon, click **Publish**.

Now that you have concluded these steps, ask the SAP administrator to run a workflow that contains the task type that you configured and verify that the workflow is sent to your workflow site.

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# Configure the RoleSync solution in Duet Enterprise for SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to configure role synchronization (RoleSync) for Duet Enterprise 2.0.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

The Role Synchronization (RoleSync) solution provided with Duet Enterprise for Microsoft SharePoint and SAP Server 2.0 enables SharePoint administrators to synchronize the SAP roles property that is stored in the SAP profile store with SharePoint user profiles. After role synchronization is performed, users can use SharePoint People Picker to grant permissions on any securable object in SharePoint, such as sites, lists, and files. It also enhances the Reporting solution because shared reports can only be shared by using SAP roles and users can subscribe to shared reports.

This article assumes the following:

- An SAP administrator has created the SAP-user-to-SAP-role mapping in the SAP system.
- A SharePoint administrator has started the User Profile Service application and has created a Profile synchronization connection to the Active Directory Domain Services (AD DS) service that contains the user accounts that are used by the SharePoint Server farm. For information about how to complete these procedures, see [Configure profile synchronization \(SharePoint 2013 Preview\)](#).
- The SharePoint administrator has synchronized the AD DS service with the SharePoint user profile store. For more information, see [Manage profile synchronization \(SharePoint 2013 Preview\)](#).



**Note:**

The SharePoint user profiles to which you want to synchronize SAP roles must already exist before you perform role synchronization. SAP roles will only be synchronized with SharePoint user profiles that already exist. You can create these user profiles in the SharePoint user profile store manually but the recommended way for them to be created is to perform profile synchronization with AD DS.

In this article:

- [Before you begin](#)
- [Activate the Duet Enterprise Claim Provider feature](#)
- [Identify the SharePoint Timer Service Account](#)
- [Grant permissions to the Metadata Store](#)
- [Ensure the Timer account has full control and verify name of User Profile service application](#)
- [Provide the SharePoint Timer service account](#)
- [Synchronize SAP roles with the SharePoint user profile store](#)



- 
- [Verification step](#)
  - [Grant an SAP role permissions to a site](#)

## Before you begin

Before you configure role synchronization, the SAP administrator must have completed the following:

- Trusted the SSL certificate that you created earlier in [Prepare the environment for Duet Enterprise for SharePoint and SAP Server 2.0](#).

The SharePoint administrator must have completed the following:

- Import the RoleSync model. For more information, see [Import models in Duet Enterprise for SharePoint and SAP Server 2.0](#).

## Activate the Duet Enterprise Claim Provider feature

### Note:

You must be a member of the Farm Administrators group to complete this procedure.

### To enable the Duet Enterprise Claim Provider feature

1. On the SharePoint Central Administration website, on the Quick Launch, click **Central Administration**.
2. In the **System Settings** section, click **Manage farm features**.
3. In the **Duet Enterprise SAP Roles Claims Provider** row, click **Activate**.

The status column changes to **Active**. When active, the SAP roles are available in People Picker after the SharePoint Server 2013 user profile store is synchronized with the SAP profile store.

## Identify the SharePoint Timer Service Account

To perform the next three procedures, you must first know what user account is assigned to the SharePoint Timer Service.

### Note:

You must be a member of the Windows Administrator group to complete this procedure.

### To identify the SharePoint Timer Service account

1. Log on to a server in the SharePoint farm as a Windows Administrator.
2. Click **Start** and then click **Run**.
3. In the Run dialog box, in the **Open** box, enter **services.msc** and then click **OK**.
4. In the Services window, in the Name column, double-click **SharePoint Timer Service**.
5. Click the **Log On** tab.
6. Record the account name shown in the **This account** box.

---

## Grant permissions to the Metadata Store

### Note:

You must be a member of the Farm Administrators group to complete this procedure.

### To grant permissions to the Metadata Store

1. In Central Administration, on the Quick Launch, click **Application Management**.
2. In the **Service Applications** section, click **Manage service applications**.
3. In the **Name** column, click the link for the **Business Data Connectivity Service Application**.
4. In the **Permissions** group of the ribbon, click **Set Metadata Store Permissions**.
5. In the **Set Metadata Store Permissions** dialog box, in the top box, enter the user account that the timer job is running on..
6. Click **Add**.
7. In the **<user account>** section (bottom section), ensure that the **Execute** check box is selected.

Where <user account> us the name of the account you added in steps 1 through 6.

8. Click **OK**.

### Note:

If at least one user has not yet been granted the Set Permissions permission on the Metadata Store, you might receive the following error message: "At least one user/group in the Access Control List must have the Set Permissions right to avoid creating a non-manageable object." To resolve this issue, grant at least one user the Set Permissions permission on the Metadata Store.

## Ensure the Timer account has full control and verify name of User Profile service application

Use this procedure to ensure that the account assigned to the SharePoint Timer account has full control permissions to the default User Profile service application and the Business Data Connectivity service application in the SharePoint farm. The farm administrator who will configure profile synchronization, later in this article, must be granted this permission.

### Tip:

SharePoint Server 2013 supports multiple User Profile service applications. However, Duet Enterprise role synchronization works only with the default User Profile service application.

### Note:

You must be a member of the Farm Administrators group or an administrator of the User Profile service application to complete this procedure.

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## To ensure that Timer account has full control

1. In Central Administration, on the Quick Launch, click **Central Administration**.
2. In the **Application Management** section, click **Manage service applications**.
3. In the **Type** column, click the row that contains the default **User Profile Service Application** to select the row.
4. The name of the User Profile service application is listed in the **Name** column. Note the name of this service application because you will need it for a later procedure.
5. In the **Sharing** group of the ribbon, click **Permissions**.
6. In the **Connection Permissions** dialog box, ensure that the account used for the SharePoint Timer service is granted Full Control permissions.
7. Click **OK**.

## Provide the SharePoint Timer service account

You must provide the SAP administrator with the user account that is assigned to the SharePoint Timer service, also known as the SPTimerV4 service. The SAP administrator must ensure that this account is mapped to an SAP user who is granted sufficient permissions on the SAP system to query the UserRoles assignments query.

### **Note:**

You must be a member of the Windows Administrators group to complete this procedure.

## To get the user account for the SharePoint Timer service

1. Log on to a front-end web server in the SharePoint Server 2013 farm as a member of the Administrators group.
2. Click **Start**, point to **Administrative Tools**, and then click **Services**.
3. In the **Name** column, right-click **SharePoint Timer**, and then click **Properties**.
4. In the **SharePoint Timer Service Properties** dialog box, on the **Log On** tab, note the account name that is listed in the **This account** text box.
5. Give this account name to the SAP administrator.
6. Click **Cancel** to close the **SharePoint Timer Service Properties** dialog box.

## Synchronize SAP roles with the SharePoint user profile store

### **Note:**

You must be a member of the Farm Administrators group to complete this procedure.

Before you start this procedure, do the following:

- Ensure that the SAP administrator has configured an OData endpoint.

- 
- Ask the SAP administrator to ensure that the "Synchronize roles to consumers" job has finished running on the SAP system.

The SAP administrator must run the "Synchronize roles to consumers" job periodically to synchronize the user roles on the SAP system with the SAP profile store on the server that is running SAP NetWeaver. We recommend that you do not synchronize the SAP user profile store with the SharePoint user profile store until the SAP administrator has completed the synchronization job. Otherwise, the synchronization job between the SAP profile store and the SharePoint user profile store can take much longer to complete. Note that the "Synchronize roles to consumers" job takes approximately 80 minutes to synchronize 100,000 users, while synchronizing the profile store in SAP NetWeaver to the SharePoint user profile store takes approximately 100 minutes to synchronize 100,000 users. If you plan to schedule these synchronization jobs, we recommend that you run them manually first to determine how much time each takes, on average, to run on your systems.

## To synchronize profiles

1. In Central Administration, on the Quick Launch, click **Monitoring**.
2. On the **Monitoring** page, in the **Timer Jobs** section, click **Review job definitions**.
3. On the **Job Definitions** page, in the **Title** column, click the **Duet Enterprise Profile Synchronization for <User Profile service application name>** link.

Where *<User Profile service application name>* is the name of the User Profile service application that you are using for role synchronization.



### Tip:

If you have only one User Profile service application, by default this name is Duet Enterprise Profile Synchronization for User Profile Service Application.

4. On the **Edit Timer Job** page, click **Run Now**.



### Note:

This timer job is scheduled to run one time per day but you can configure it to run less often if it causes a performance problem.

For more information about SharePoint timer jobs, see [View timer job status \(SharePoint 2013 Preview\)](#).

## Verification step

After role synchronization is complete, the SAP Roles property appears at the bottom of each SharePoint user profile page and displays the SAP roles that they are assigned to. These SAP roles will also be available in People Picker when granting permissions to securable objects, such as sites, list, and files. SAP roles will also be available when you run shared reports if you have configured the Reporting solution.

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## Grant an SAP role permissions to a site

After the SAP user profile store is synchronized with the SharePoint user profile store, you can perform this procedure to grant users permissions to a site based on their SAP roles. Note that only sites that are in a web application that uses claims-based authentication and that are associated with the User Profile service application that you used to configured role synchronization are supported.



### Tip:

Before you can use SAP roles to set permissions on a site, the site collection must already exist and SAP roles must have already been synchronized to the SharePoint user profile store. After you have granted an SAP role permissions to a site, the site collection must not be renamed or deleted.



### Note:

You must be a Site Owner to perform this procedure.

### To grant an SAP role permissions to a site

1. In a browser, go to the site for which you want to enable SAP roles.
2. Click the **Settings** icon, and then click **Site Settings**.



### Tip:

The **Settings** icon resembles a gear.

3. Under **Users and Permissions**, click **Site Permissions**.
4. In the **Grant** group of the ribbon, click **Grant Permissions**.
5. In the **Grant Permissions** dialog box, do the following:
  - a) Click **SHOW OPTIONS**.
  - b) Under **Select a group or permission level**, select the group or permission level to which you want to assign the SAP role.
  - c) In the top box, type part of the SAP role's name.



### Tip:

A drop-down list appears with all available SAP roles.

6. Either finish typing the name of the SAP role or select it from the drop-down list, and then click **Share**.

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# Uninstall Duet Enterprise for SharePoint and SAP Server 2.0

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Published: July 16, 2012

**Summary:** Learn how to uninstall Duet Enterprise 2.0 in a SharePoint Server 2013 environment.

*Applies to:* Duet Enterprise for Microsoft SharePoint and SAP Server 2.0

This article describes how to remove an installation of Duet Enterprise for Microsoft SharePoint and SAP Server 2.0. This includes removing all Duet Enterprise 2.0 solutions and all traces of Duet Enterprise components from the SharePoint Server 2013 farm.

The procedures provided in this article do not remove files that contain SAP data from the SharePoint Server farm. For example, SAP reports that have been delivered to document libraries are not removed. If you want those files to be removed as well, we recommend that you delete the SAP reports manually. For example, you can delete the document libraries that contain the SAP reports or delete the individual reports.

In this article:

- [Uninstall all solutions](#)
- [Restart IIS and SharePoint services](#)

## Uninstall all solutions

If you want to remove all Duet Enterprise 2.0 solutions from all web applications and also unregister all Duet Enterprise 2.0 components, there are two commands that you must use:

- **DuetConfig.exe -uninstall** This command removes all solutions from all web applications and unregisters all Duet Enterprise components, at the same time. This command needs to run on only one web server in the SharePoint Server farm.
- **setup /uninstall** This command removes all traces of Duet Enterprise. This command must be run on all web and application servers in the SharePoint Server farm.

## Uninstall all solutions

The following procedure explains how to uninstall all Duet Enterprise 2.0 solutions that you have deployed to a SharePoint Server farm and also how to remove all traces of Duet Enterprise 2.0 on each front-end web server and application server in the SharePoint Server farm.

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 **Note:**

You must be a member of the Farm Administrators group to uninstall Duet Enterprise 2.0 solutions from SharePoint Server 2013.

## To uninstall all solutions

1. Verify that you have the following administrative credentials:
  - You must be a member of the Farm Administrators group to uninstall Duet Enterprise 2.0 solutions from SharePoint Server 2013.
2. As administrator, open a Windows Command Prompt window on a front-end web server in the SharePoint Server 2013 farm, and then go to `<systemdrive>\Program Files\Duet Enterprise\2.0`.

This folder contains the DuetConfig.exe file.

3. At the command prompt, type the following command, and then press ENTER:  
**DuetConfig.exe -uninstall**

If this command is successful, you receive the following message: **Duet Enterprise unconfiguration succeeded.**

 **Note:**

This command removes all solutions from all web applications and unregisters all Duet Enterprise components at the same time.

4. Next, at the command prompt, go to the folder that contains the Setup.exe file for Duet Enterprise 2.0. If this file is not in the file system of the server that is running SharePoint Server 2013, you can locate this file on the DVD or ISO image from which Duet Enterprise 2.0 was installed.
5. Type the following command, and then press ENTER:  
**setup /uninstall**

If this command is successful, you receive the following message: **Duet Enterprise setup completed successfully. Press any key to continue....**

 **Note:**

You must repeat steps 4 and 5 on each front-end web server and application server in the SharePoint Server farm to completely remove all traces of Duet Enterprise 2.0.

When you run these commands, the server that is running SharePoint Server 2013 creates a job request for each, puts each in the job queue, and then starts them. This might take several minutes to complete depending on how busy the server is at the time when you run these commands.

6. To ensure that SharePoint Server 2013 will not use the old .dll files if the solution is reinstalled, you must restart Internet Information Services (IIS) and SharePoint services as shown in the next procedure.

---

## Restart IIS and SharePoint services

To ensure that solutions that have been uninstalled can no longer be run in the SharePoint Server farm, you must restart IIS, the SharePoint Administration service, and the SharePoint Timer service.

Restarting or stopping IIS causes all sessions connected to your web server (including Internet, FTP, SMTP, and NNTP) to be dropped. When you restart the Internet service, all sessions connected to your web server are dropped. All Internet sites are unavailable until Internet services are restarted. For this reason, avoid restarting the Internet Information Services service during peak usage.

### **Note:**

You must be a member of the Windows Administrators group on each front-end web server in the network load balancing rotation of the SharePoint Server farm to complete these procedures.

### **To restart IIS**

1. Log on to the front-end web server of the SharePoint Server farm as a member of the Windows Administrators group.
2. As administrator, open a Windows Command Prompt window.
3. At the command prompt, type the following command, and then press ENTER:  
**iisreset /restart**
4. If this command is successful, you receive the following message: **Internet services successfully restarted.**
5. If you have more than one front-end web server in the network load-balancing rotation for the SharePoint Server farm, repeat steps 1 through 4 for each remaining front-end web server.

### **To restart the SharePoint services**

1. Log on to the front-end web server of the SharePoint Server farm as a member of the Windows Administrators group.
2. Click **Start**, point to **Administrative Tools**, and then click **Services**.
3. In the **Name** column, right-click **SharePoint Administration**, and then click **Restart**.
4. In the **Name** column, right-click **SharePoint Timer Service**, and then click **Restart**.
5. If you have more than one front-end web server in the network load-balancing rotation for the SharePoint Server farm, repeat steps 1 through 4 for each remaining front-end web server.