# Install Team Foundation Server 2012: the ultimate guide for installing TFS

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#### Introduction

Use this guide to install Team Foundation Service 2012.

You'll find step by step instructions for the most popular installation tasks, focusing on TFS installations that use all the latest Microsoft server products, like Windows Server 2012, SQL Server 2012, and Office SharePoint Server 2013.

If you want to install Team Foundation Server with the least amount of preliminary work, use the basic configuration, which comes with SQL Server Express and requires the least amount of set up. The TFS installation wizard can configure everything for you in about 10 minutes, and you can ignore most of the instruction in this book. You won't get a report server or SharePoint, which means no HTML reports for your software projects, and no website to trade Office documents and collaborate, but you will have basic bug tracking, version control, and a web site on the TFS server with team productivity features.

TIP: If you do use the basic configuration, consider installing it on a server operating system. If you install it on a server, you can always add a report server and SharePoint later, if you find your team needs them. If you install TFS on a client OS, adding these features is blocked, and you would have to first migrate TFS to a server OS.

# TFS hardware and software requirements

Before you install Team Foundation Server, make sure your system meets the operating system requirements described in this section. New for this release, you must use a 64-bit server operating system to install Team Foundation Server. We support 32-bit client operating systems, but no longer support 32-bit server operating systems. Team Foundation Server offers an option to install SharePoint Foundation 2010 as a companion program for managing team documents, but doing so will substantially increase your hardware requirements. See <a href="SharePoint Hardware Requirements">SharePoint Hardware Requirements</a> below.

You can also find information about hardware in this section, but these are just recommendations, not requirements. In general, the bigger your team, the greater your need for robust hardware. Eventually you might require more than one server to distribute the load.

**TIP:** Are you using a non-English version of TFS or a supported operating system? TFS supports various localized version of operating systems, but not all combinations are supported. <u>Double check the language requirements on MSDN</u>.

## Operating System Requirements

You can install Team Foundation Server on a server that is running one of the following operating systems:

#### Server operating systems:

64-bit version of Windows Server 2008 with SP2 64-bit versions of Windows Server 2008 R2 with SP11

64-bit versions of Windows Server 2012 <sup>2</sup>

**NOTE:** Team Foundation Server does not support the Server Core installation option of Windows Server 2008, Windows Server 2008 R2, or Windows Server 2012. What is Server Core?

#### Client operating systems:

64-bit or 32-bit versions of Windows 7 with SP1 (Windows 7 Home Premium with SP1, Windows 7 Professional with SP1, Windows 7 Enterprise with SP1, Windows 7 Ultimate with SP1)

64-bit or 32-bit versions of Windows 8

**NOTE**: Client operating systems do not support integration with SharePoint Products or reporting. If you want to use either of these features, you must install Team Foundation Server on a server operating system.

<sup>1</sup> If you are installing Team Foundation Server or SQL Server on Windows Server 2008 R2, you must have .NET Framework 3.5 installed. How to do this?

<sup>2</sup> TFS comes with SharePoint Foundation 2010, but Windows Server 2012 blocks the installation of that SharePoint. This guide walks you through a manual installation of SharePoint Server 2013 for TFS.

#### Hardware Recommendations

The following section includes hardware guidelines based on team size. These recommendations are meant for teams installing TFS without SharePoint Products. Small shops might want to run Team Foundation Server with the basic configuration, which requires only 1GB RAM and 8 GB of hard disk space.

#### Fewer than 250 user:

Use a single-server (Team Foundation Server and the Database Engine on the same server) with one single core processor at 2.13 GHz, 2 GB RAM, and one HDD disk at 7.2k rpm (125 GB).

#### Between 250 and 500 users:

Use a single server, with one dual core processor at 2.13 GHz, 4 GB RAM, and one HDD disk at 10k rpm (300 GB).

#### Between 500 and 2,200 users:

Use a dual-server (Team Foundation Server and the Database Engine on different servers).

The server which hosts TFS should have one dual core Intel Xeon processor at 2.13 GHz, 4GB RAM, and one HDD disk at 7.2k rpm (500 GB).

The server which hosts the Database engine should have one quad core Intel Xeon processor at 2.33 GHz, 8 GB RAM, and an SAS disk array at 10k rpm (2 TB)

#### Between 2,200 and 3,600 users:

Use a dual server.

The server which hosts TFS should have one quad core Intel Xeon processor at 2.13 GHz, 8 GB RAM, and one HDD disk at 7.2k rpm (500 GB).

The server which hosts the Database engine should have two quad core Intel Xeon processors at 2.33 GHz, 16 GB RAM, and an SAS disk array at 10k rpm (3 TB).

## SharePoint Hardware Requirements

If you install SharePoint Products, you will need more robust hardware than what is listed in the previous section. For example, SharePoint Foundation 2010, which Team Foundation Server can install for you, requires a 64-bit 4 core CPU and a base minimum of 4 GB of system memory. If you have only 4 GB, the Team Foundation installer will warn that you should have 10 GB, but you will be able to finish the install.

Go here for complete SharePoint hardware requirements:

SharePoint 2013 (SharePoint Foundation 2013/SharePoint Server 2013)
SharePoint Foundation 2010
SharePoint Server 2010
Windows SharePoint Services

Office SharePoint Server 1

<sup>1</sup> Although SharePoint supports Windows Server 2003, TFS 2012 does not. You can't install TFS SharePoint extensions on a server that does not meet the minimum TFS requirements listed on this page.

For a complete list of supported versions of SharePoint, go here: <u>SharePoint Products</u> Requirements for Team Foundation Server

#### Virtualization

Microsoft supports the virtualization of Team Foundation Server in supported virtualization environments. For more information, see the following pages on the Microsoft website:

Microsoft server software and supported virtualization environments

Support policy for Microsoft software running in non-Microsoft hardware virtualization

software

<u>Support partners for non-Microsoft hardware virtualization software</u> <u>Server Virtualization</u> (officially supported products)

## Compatibility and Team Foundation Server 2012

The links below provide guidance about browser compatibility, the numerous clients available for working with this version of TFS, and backwards compatibility with previous TFS clients, especially with regard to new features in this version of TFS.

<u>Supported web browsers</u>
<u>Supported TFS clients</u>
<u>Compatibility between Team Foundation Clients and Team Foundation Server</u>

TIP: Do you wonder which client to use for any given task? See <u>Choosing the Right Tool for the Task to Manage Projects</u>, <u>Collaborate</u>, <u>and Monitor Progress in Visual Studio ALM</u> (ALM team blog post)

## Next steps

With a grasp of the hardware and OS you'll use, get started by setting up SQL Server. You can use the same SQL Server instance you setup for TFS, for SharePoint as well.

#### SQL Server 2012 installation

We're going to install SQL Server 2012 enterprise edition, but you can use the same steps below for installing the standard edition. We'll install all the SQL Server 2012 features that TFS requires on the same server as TFS, but this isn't a requirement. TFS is very flexible with regard to SQL Server topologies. See One Server or Two?

TIP: You can also use an existing installation of SQL Server for TFS, but to do this you'll need the SQL Server administrator to grant you a lot of privilege. You must be a member of the sysadmin Server role in SQL Server to install and configure TFS. Why does TFS need so much privilege on the SQL Server? (Brian Harry blog post)

#### One Server or Two?

If you're only going to use one server for TFS, you can safely ignore this section.

If you plan to have more than 500 users accessing your TFS server, the recommendation is to put SQL Server on a second server. This splits the load between TFS and its configuration database. You could install all the SQL Server features TFS requires on that second server, or you could split the features up. Some teams like to put the report server on the TFS server, and the Database engine, Full text search, and Analysis services on the second server, splitting HTTP traffic from SQL Server traffic.

There are many different topology choices you could make. In general, TFS allows you to install SQL Server *instance features* (Database engine, Reporting Services, Analysis Services) on different servers. Here are some caveats for various SQL Server topologies to keep in mind:

- \* TFS requires the Database Engine and Full text search features on the same instance.
- \* TFS reporting is optional, but if you want reporting you must install Reporting Services and Analysis Services (each can go on its own server, if you want that topology). If you skip reporting, you don't have to setup Reporting Services or Analysis Services.
- \* If you don't install any SQL Server instances on the TFS server, you must at least install the SQL Server feature Client Tools Connectivity on TFS. If you have a SQL Server instance on the TFS server (either the Database Engine, Reporting Services or Analysis Services) you don't have to install Client Tools Connectivity.

If you want to install SQL Server features on different servers, run the SQL Server installation on each server where you want to install a feature. Use the same instructions below for each installation, but at step 9, only install the features that you require.

**TIP:** A multiple-server installation of TFS requires an Active Directory domain and domain accounts or the Network Service account. You cannot use local accounts for service accounts.

## Required Permissions

To perform these procedure, you must be a member of the **Windows Administrators** security group on the server on which you are installing SQL Server.

To manually configure a report server, you must also be a member of the **Windows Administrators** security group on the SQL Server that hosts the report server database, if this instance of SQL Server is not on your report server.

#### To install SQL Server for TFS

1) Insert the installation DVD for a supported version of SQL Server and launch setup.exe.

You can find more detailed information about <u>SQL Server Requirements for Team Foundation</u> <u>Server</u> on MSDN, but this instruction will guide you through most installations.

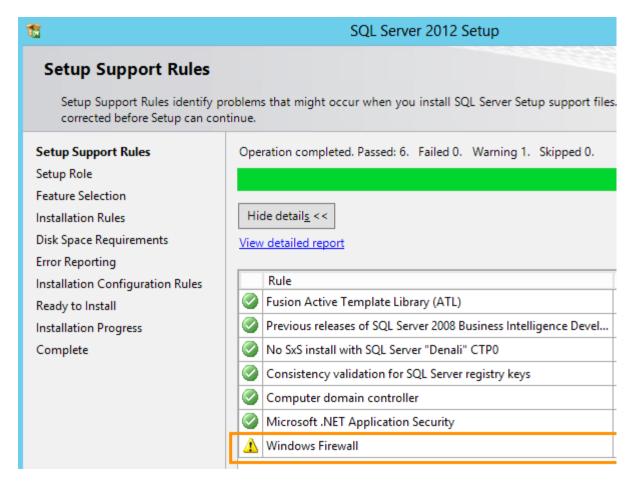
2) On the SQL Server Installation Center page, choose **Installation**, and then choose **New installation or add features to an existing installation**.



- 3) On the Setup Support Rules page, choose OK.
- 4) On the Product Key page, type your product key or specify a free edition and then choose **Next**.
- 5) On the License Terms page, accept the license agreement and choose Next.

If you're using these instructions to install SQL Server 2008 R2, on the Setup Support Files page, choose Install (SQL Server 2008 R2 only).

6) On the Setup Support Rules page, choose Next.



TIP: A Windows Firewall warning might appear, but you can safely ignore this warning if you're planning to install TFS on this server. TFS automatically adds an exception to Windows Firewall for SQL Server, if both servers (TFS and SQL Server) are installed on the same machine. If you're installing TFS on some other server, you'll want to open a port for SQL Server in Windows Firewall on this server.

For more information about SQL Server ports required for Team Foundation Server, see <u>Ports</u> Required for Installation of Team Foundation Server.

7) On the Setup Role page, choose SQL Server Feature Installation and then choose Next.



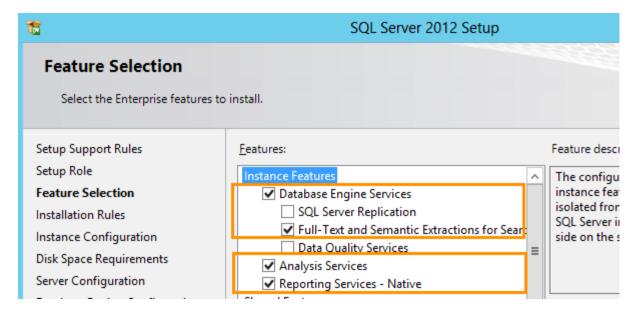
8) On the Feature Selection page, select the check boxes for one or more of the following components, depending on the topology you intend to use, and then choose **Next**:

**Database Engine Services** (required for Team Foundation Server)

**Full-Text and Semantic Extractions for Search** or Full-Text Search <sup>1</sup> (required for Team Foundation Server)

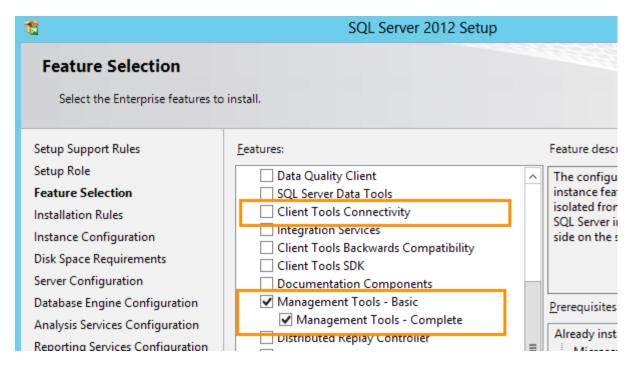
**Analysis Services** (required for reporting)

**Reporting Services - Native** or Reporting Services <sup>1</sup> (required for reporting)

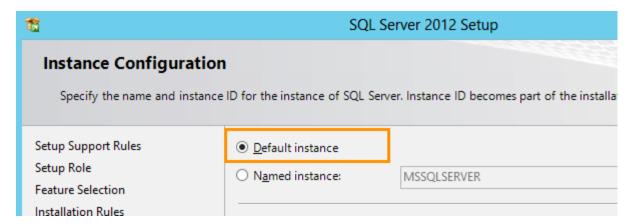


Scroll the features list down to see these settings:

**Client Tools Connectivity** (required if no other SQL Server components are installed on the server that is running Team Foundation Server.) **Management Tools** - Basic <sup>2</sup>

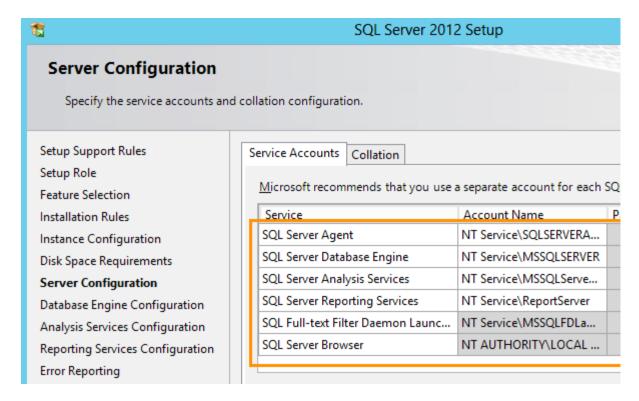


- 9) On the Installation Rules page, choose Next.
- 10) On the Instance Configuration page, choose **Default instance**. If you choose Named instance, type the name of the instance. Choose **Next**.



- 11) On the Disk Space Requirements page, choose Next.
- 12) On the Server Configuration page, do one of the following:

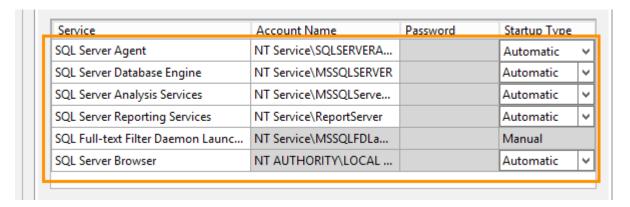
For SQL Server 2012, you can accept the defaults or enter the name of a domain account or NT AUTHORITY\NETWORK SERVICE in Account Name for every service.



For SQL Server 2008 R2, choose Use the same account for all SQL Server services,<sup>3</sup> or enter the name of a domain account or NT AUTHORITY\NETWORK SERVICE in Account Name for every service.

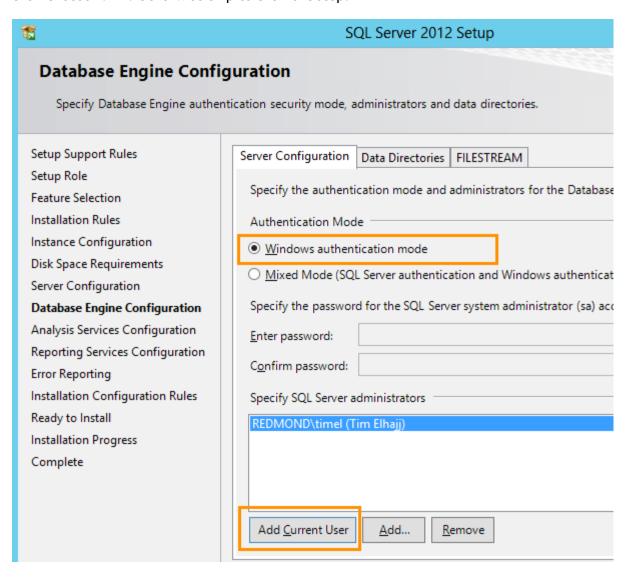
No matter which version of SQL Server you use, if you specify a domain account, type its password in Password. If you use NT AUTHORITY\NETWORK SERVICE, leave Password blank.

13) In the Startup Type column, verify that Automatic appears for all services that you can edit, and then click **Next**.

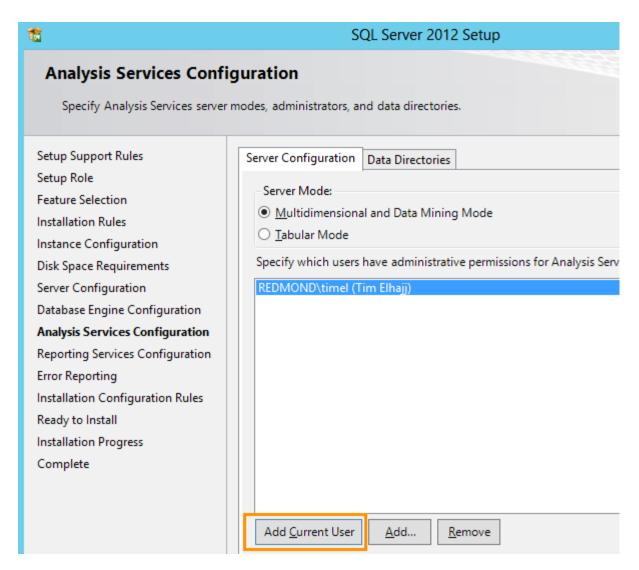


**NOTE:** Are you using a non-English version of SQL Server? The default collation settings for U.S. English meet the requirements for Team Foundation Server. If you're not using English, you can set collation settings for the Database Engine on this page. For more information, see <u>SQL Server Collation Requirements for Team Foundation Server</u>.

14) If you selected the Database Engine Services check box in step 9, on the Database Engine Configuration page, choose **Windows authentication mode**, choose **Add Current User**, and then choose **Next**. Otherwise skip to the next step.

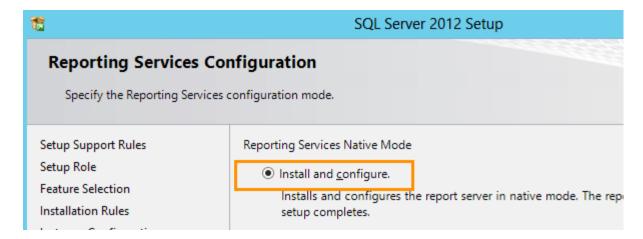


15) If you selected the Analysis Services check box in step 9, on the Analysis Services Configuration page, choose **Add Current User**, and then choose **Next**. Otherwise skip to the next step.



16) If you selected the Reporting Services check box in step 9, on the Reporting Services Configuration page, choose **Install and configure** (SQL Server 2012) or **Install the native mode default configuration** (SQL Server 2008 R2).

If those options are unavailable, choose **Install only** (SQL Server 2012) or **Install, but do not configure the report server** (SQL Server 2008 R2) and then choose **Next**.

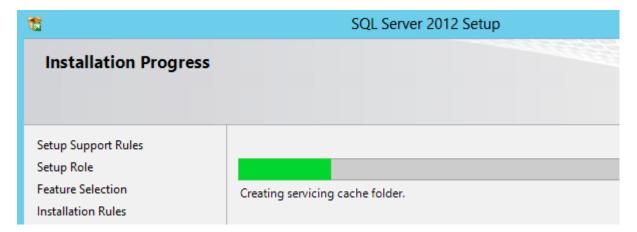


If you had to choose **Install only** or **Install but do not configure the report server**, you may be planning to have the report server and Team Foundation Server on different servers. This is a supported topology, but you will have to manually configure the report server after you finish installing SQL Server. Use these instructions: <u>Configure Report Server Manually</u>

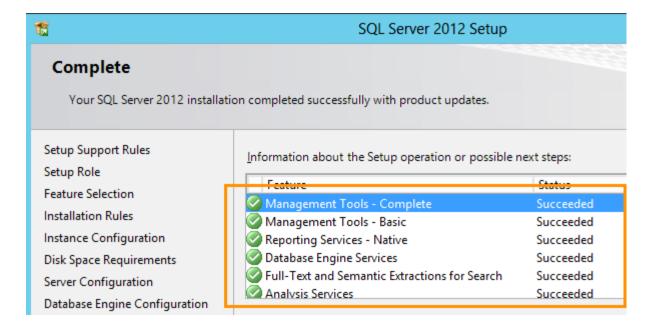
**NOTE**: You should not click **Reporting Service SharePoint Integrated Mode** (SQL Server 2012)or **Install the SharePoint integrated mode default configuration**. Team Foundation Server does not support this configuration mode.

- 17) (Optional) On the Error and Usage Reporting page, specify whether to send information about errors and then choose **Next**.
- 18) On the Installation Configuration Rules page, choose Next.
- 19) On the Ready to Install page, review the list of components to be installed, and then choose **Install**.

The Installation Progress page shows the status of each component.



20) On the Complete page, choose Close.



# Next Steps

With SQL Server 2012 installed, you can move onto to SharePoint installation in the <u>next</u> <u>chapter</u>. If you don't want to set up SharePoint, you can go right to the <u>TFS installation</u> chapter.

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- <sup>1</sup> In SQL Server 2012, feature names are slightly different than those in SQL Server 2008 R2. This procedure lists feature names from both versions, but you only need to install the feature appropriate for the version of SQL Server you are installing.
- <sup>2</sup> To install Team Foundation Server, you do not need to install Management Tools (Basic or Complete) on the same computer as SQL Server or TFS. However, you will need the SQL Server Management Studio management tool to verify your installation of SQL Server.
- <sup>3</sup> If you click Use the same account for all SQL Server services (SQL Server 2008 R2 only), you may still have to manually enter account information for some services.

## SharePoint Server 2013 installation

We're going to install SharePoint Server 2013 on the same server as TFS and SQL Server.

We're going to install SharePoint after we install SQL Server, so that we can use the same Database Engine instance we installed for TFS for our SharePoint deployment (although using the same SQL Server instance for both SharePoint and TFS is certainly not a requirement).

In most single-server TFS installations, you would simply use the TFS installer to setup SharePoint. However, TFS 2012 comes with SharePoint Foundation 2010, which is not compatible with Windows Server 2012. So we're going to have to manually install a version of SharePoint compatible with Windows Server 2012.

TIP: Installing SharePoint on the same server as TFS isn't a requirement. TFS is very flexible with regard to the topology of your SharePoint installation. See <a href="What If I Already HaveSharePoint">What If I Already HaveSharePoint</a>?

#### Do I Even Need SharePoint?

Maybe. SharePoint is a collaboration website product that offers deep integration with Office productivity products like Word, Outlook and Excel. Although it's not a TFS requirement, some teams do find its features useful. SharePoint is different from the Team Web Access site that comes with TFS. Team Web Access is a web site that mirrors Visual Studio features and offers functionality for certain specialized team collaborations that have to do with creating software projects. You get Team Web Access by default when you install TFS.

You don't need to add SharePoint to your initial TFS installation. You can always install TFS first, add SharePoint later, and then manually hook up each of your TFS team projects to SharePoint.

#### What Will I Need?

Assuming you still want SharePoint in your TFS deployment, you'll need a single domain account to act as the TFS Report Reader account. TFS uses this account to generate reports (And even if you don't set up SharePoint, you'll need a report reader account to generate reports). We're going to use the report reader account for reports, but we'll also put it to use as the Farm Administrator account for our SharePoint installation, just as TFS would do during the standard install of TFS on Windows Server 2008 or R2.

**TIP:** Don't put the report reader account in the Windows Administrators security group. It just needs the **Allow log on locally** permission, which all domain accounts have by default.

#### Free SharePoint vs. Paid-For SharePoint

For each version of SharePoint, Microsoft delivers a free version and a paid-for version with additional functionality. TFS always comes with one of the free versions. However, TFS supports both versions and the instructions for installing either on Windows Server 2012 are very similar.

If you use SharePoint Server, as we are going to in this guide, you must make a few additional SharePoint configurations after you install SharePoint (and before you install TFS) to enable TFS dashboard functionality on the SharePoint site. If you install the free version of SharePoint, you can skip the dashboard configurations. You'll still get some dashboard functionality, but not as much as if you had the enterprise edition of SharePoint Server 2013.

## What If I Already Have SharePoint?

If your existing SharePoint installation meets the TFS requirements for SharePoint, you can certainly use your existing installation of SharePoint for TFS. Make sure it meets the SharePoint requirements for TFS.

TIP: You can use a remote SharePoint installation—an instance of SharePoint that is not installed on the TFS server—but to do this you'll need to install the TFS extensions for SharePoint on the SharePoint server. See <a href="How to: Install Remote SharePoint Products for Team Foundation Server">How to: Install Remote SharePoint Products for Team Foundation Server</a> on MSDN.

## Required Permissions

To perform this procedure, you must be a member of the **Windows Administrators** security group on the computer where you install SharePoint Products and where you host its databases.

#### To install SharePoint 2013 Products for TFS

Whatever SharePoint 2013 product you're installing, you should first run the SharePoint 2013 Products preparation tool. After you prepare the server, install SharePoint, and then do the post installation configuration tasks appropriate for the product you just installed.

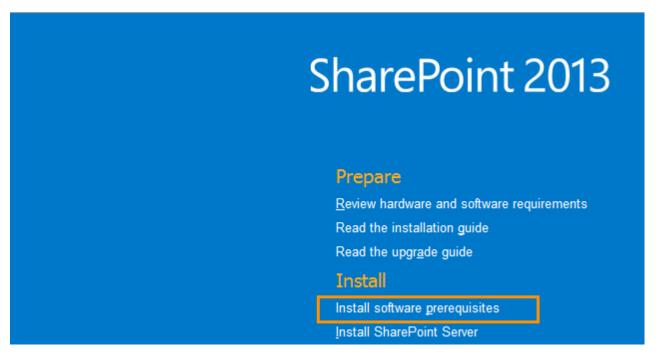
Remember that you'll need a single domain account to act as the TFS Report Reader account to install SharePoint Server 2013. See What Will I Need?

## Run the preparation tool

1) Insert the SharePoint Server 2013 DVD and launch default.hta, or <u>download SharePoint Foundation 2013</u> and run sharepoint.exe.

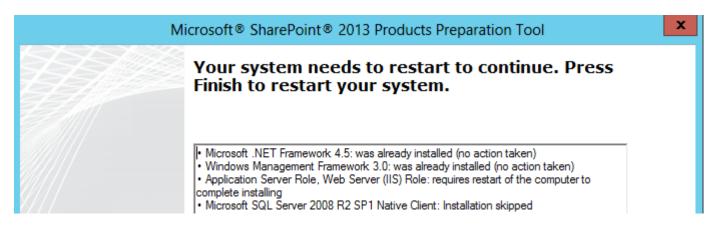
You can find more detailed information about <u>SharePoint requirements for Team Foundation</u> <u>Server</u> on MSDN, but this instruction will guide you through typical installations on Windows Server 2012.

2) Choose Install software prerequisites.



- 3) On the Welcome page, choose Next.
- 4) On the license agreement page, accept the terms of the license and choose Next.

Depending on the state of your computer, the installer might prompt you to restart the machine. Follow any instructions.



Upon resume after a restart, you may have to run the SharePoint Products prep tool again, if it doesn't start automatically. Keep running it (performing the previous four steps for manual restarts) until you get a success message.

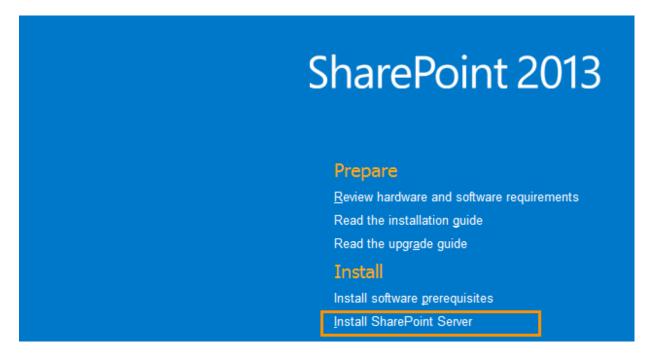
5) At completion, choose Finish.

#### Run the SharePoint installation

Once the SharePoint Products Perpetration tool completes, you might have to launch the SharePoint installer again, especially if you had to restart your computer.

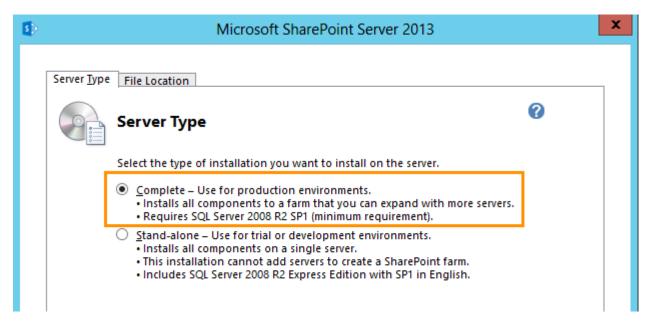
Remember that you'll need a single domain account to act as the TFS Report Reader account to complete this section. See <a href="What Will I Need?">What Will I Need?</a>

- 1) Insert the SharePoint Server 2013 DVD and launch default.hta, or run sharepoint.exe (for SharePoint Foundation installations).
- 2) Choose Install SharePoint Server this time (or Install SharePoint Foundation).



If you are installing SharePoint Server, type your product key, and choose **Continue**.

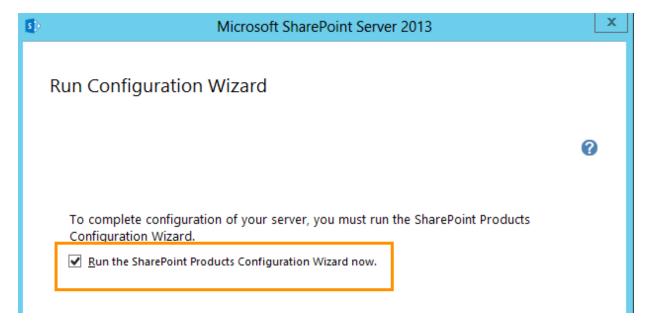
- 3) On the Read the Microsoft Software License Terms page, read the agreement. If it is acceptable, select the I accept the terms of this agreement check box, and then choose Continue.
- 4) On Server Type tab, choose **Complete**.



#### 5) Choose Install Now.

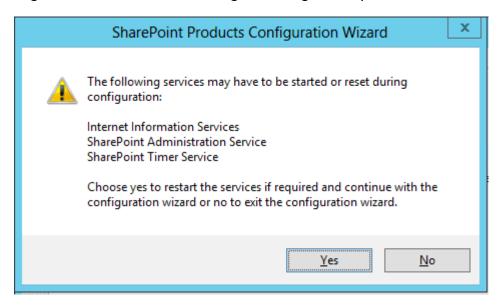
When the installation wizard finishes, a dialog box appears that prompts you to complete the configuration of your server.

6) In that dialog box, verify that the Run the SharePoint Products and Technologies Configuration Wizard now check box is selected.

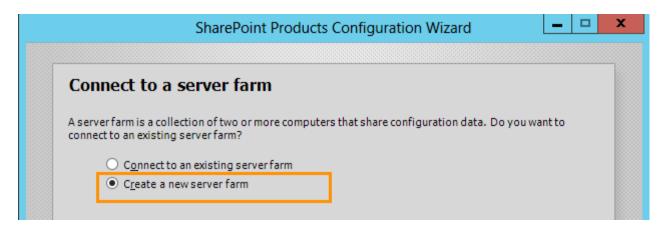


- 7) Choose **Close** to start the configuration wizard.
- 8) On the Welcome page, choose Next.

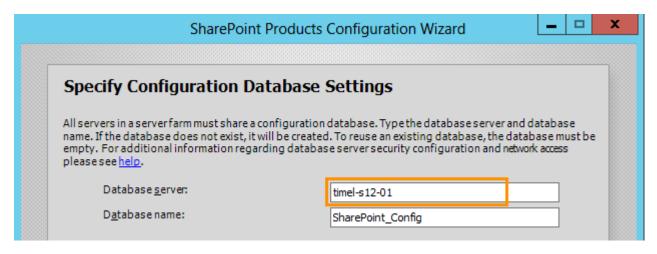
**NOTE:** A warning about restarting certain services will appear. Choose **Yes**. Some services might need to be restarted during the configuration phase.



9) On the Connect to a server farm page, choose **Create a new server farm**, and then choose **Next**.

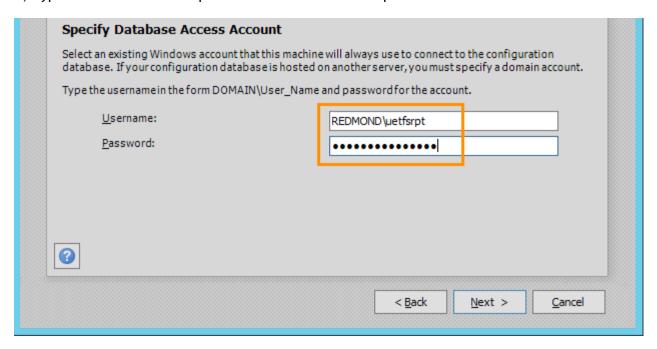


- 10) On the Specify Configuration Database Settings page, perform the following steps and then choose **Next**:
- A) Type the name of the server that is running SQL Server. Accept the default value for database name.



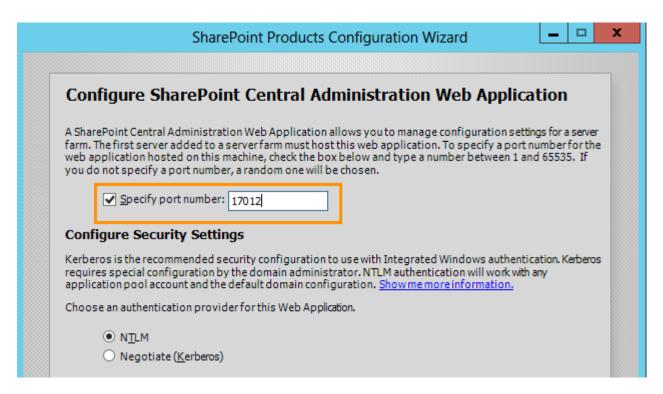
TIP: If you used a named instance in step 11 of SQL Server install, type the named instance here. For example, timel-s12-01\InstanceName.

B) Type the name for the report reader account and its password.



**TIP:** You can use the same account here that you will use for the report reader account. Even if you use the report reader account here, the account you use to run the wizard will also be added to the SharePoint Farm administrators group.

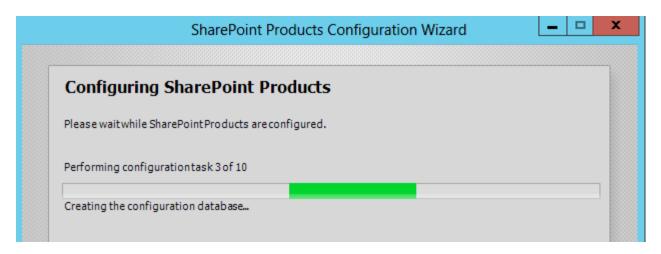
- 11) Type a password in **Passphrase**, confirm the password by typing it again in **Confirm Passphrase**, and then choose **Next**.
- 12) On the Configure SharePoint Central Administration Web Application page, select the Specify port number check box, and type 17012.



You can use the randomly generated port number, but Team Foundation Server has always used 17012 as the port for the SharePoint Products administration site.

- 13) Choose NTLM and then Next.
- 14) Review the information, and then choose Next.

Configuration begins.



15) Choose Finish.

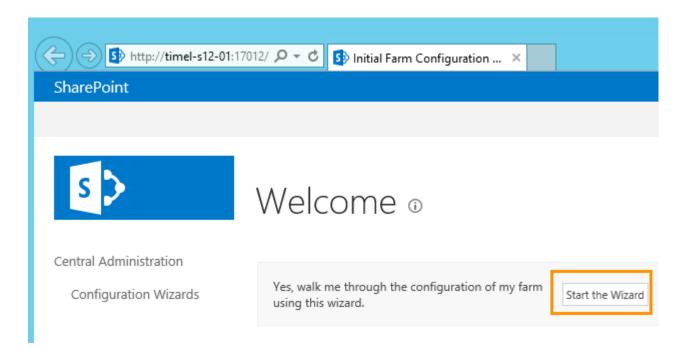
SharePoint Prod	ucts Configuration W	izard 🗕 🗆 🔾	×
Configuration Successful			
The following configuration settings were successfully applied:			
■ Configuration Database Server		timel-s12-01	
■ Configuration Database Name		SharePoint_Config	
■ Host the Central Administration Web Applica	tion	yes	
<ul> <li>Central Administration URL</li> </ul>		http://timel-s12-01:17012/	
<ul> <li>Authentication provider</li> </ul>		NTLM	
Click Finish to close this wizard and launch the SharePoint Central Administration website to continue configuring your SharePoint installation. The users may be prompted by their web browser for the usernar in the form DOMAIN\User_Name and password to access the site. At that prompt, enter the credentials the you used to logon to this computer. Add this site to the list of trusted sites when prompted.			

Once the installation routine finishes, it launches the SharePoint administration site, open to the initial configuration wizard.

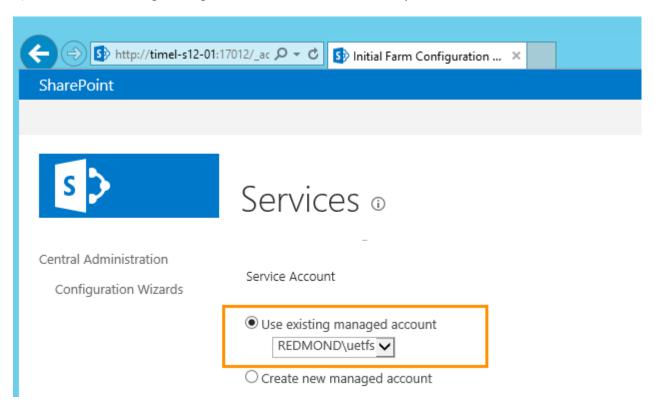
# Run the SharePoint Configuration wizards

No matter which version of SharePoint you install, you must run the SharePoint Configuration wizard. Special instructions appear in step 3 if you're installing the Enterprise edition of SharePoint Server 2013.

1) Choose Start the Wizard.



2) Select **Use existing managed account** and choose the report reader account.



3) If you're installing SharePoint Server Enterprise edition, as we are, then you'll need to select Excel Services and Secure Store Service.

TIP: Secure Store Service is optional, but you should select it.

If you're installing the Standard edition of SharePoint Server 2013 or SharePoint Foundation, none of the listed services are required, but you must run the wizard to succeed with your TFS installation. Even if you select no services, SharePoint will configure a site collection and some other services.

Select any services you want to set up. Unselect any you don't want set up.

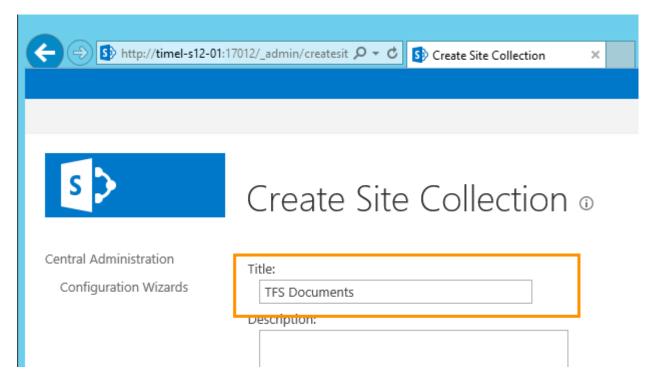
SharePoint selects all of them by default.

TIP: Remember that you can always come back later to run the configuration wizards, but you have to run it once after the SharePoint installation to succeed with your TFS installation.

#### 4) Choose Next.

The SharePoint configuration begins and takes a few minutes, depending on the number of services you're configuring. At some point during the configuration, SharePoint will prompt you to create a site collection.

#### 5) Type a Title and choose **Next**.



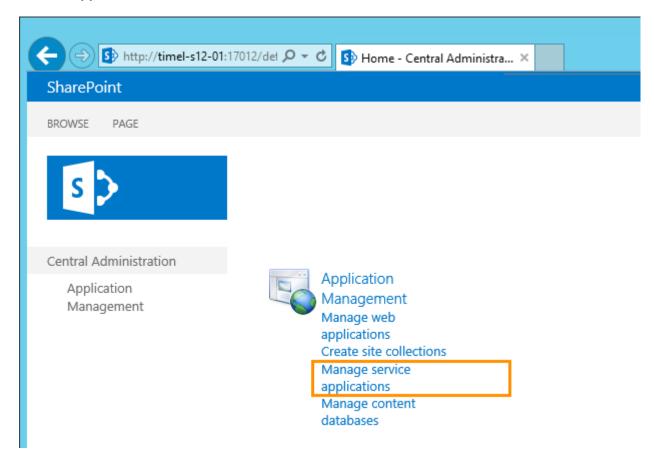
#### 6) Choose Finish.

If you're installing SharePoint Foundation or the standard edition of SharePoint Server, you can skip forward to <u>TFS installation</u>. If you're installing SharePoint Server 2013, as we are, then configure Excel Services and Secure Store Service in the following sections.

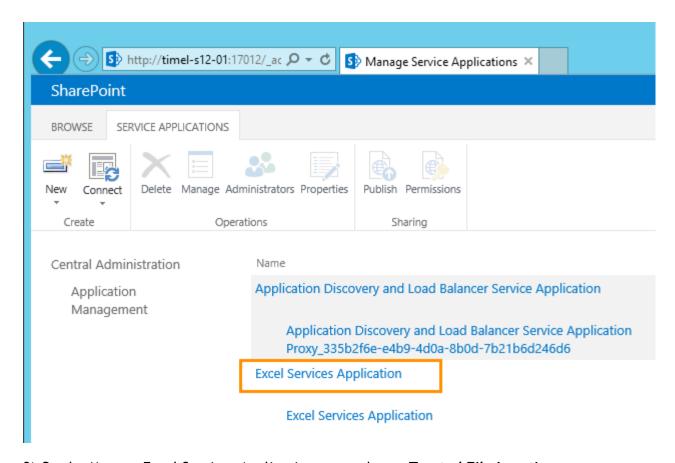
# Configure Excel Services (SharePoint Server 2013 only)

For TFS reports to operate correctly, you must also configure a trusted file location for Excel Services.

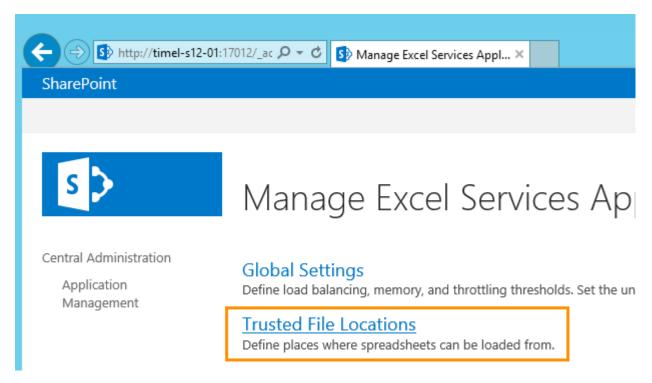
1) In SharePoint Central Administration, under Application Management, choose **Manage** service applications.



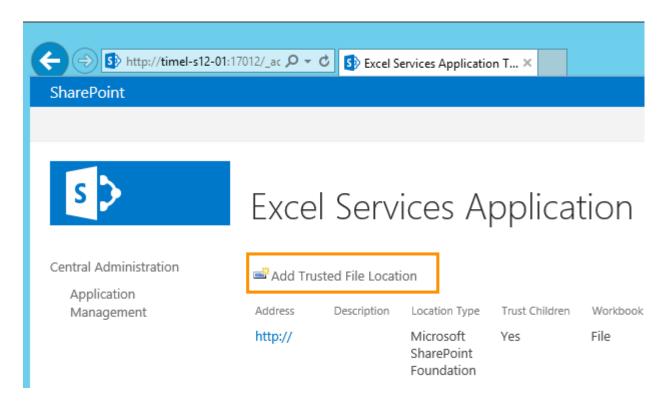
2) On the Manage Service Applications page, choose Excel Services Application.



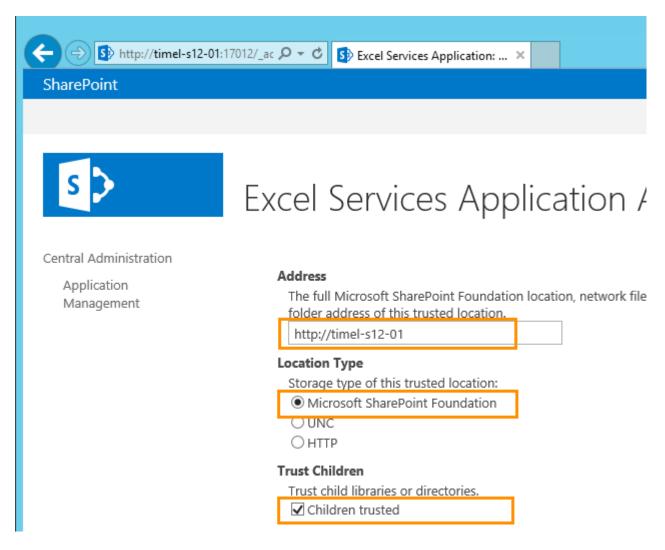
3) On the Manage Excel Services Application page, choose **Trusted File Locations**.



4) Choose Add Trusted File Location.

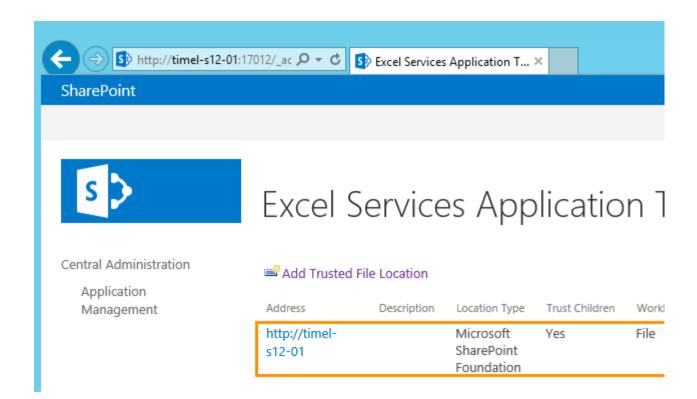


5) In Address, enter the URL of the root of the SharePoint site. This is the web application that the SharePoint configuration wizards created on port 80.



- 6) In Location Type, choose Microsoft SharePoint Foundation.
- 7) In Trust Children, select the **Children trusted** check box.
- 8) In the External Data section, under Allow External Data, choose **Trusted data connection** libraries and embedded.
- 9) (Optional) Clear the Refresh warning enabled check box.
- 10) In Maximum Concurrent Queries Per Session, change the number to 20 and choose **OK**.

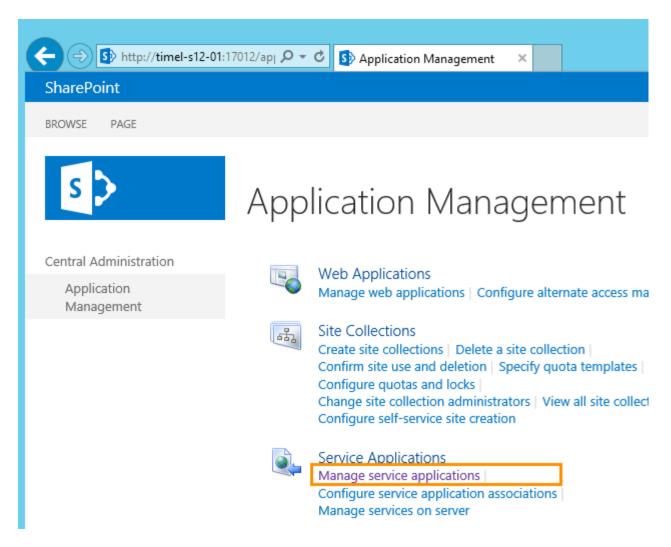
The trusted file location you just created appears in the Excel Services trusted file location list.



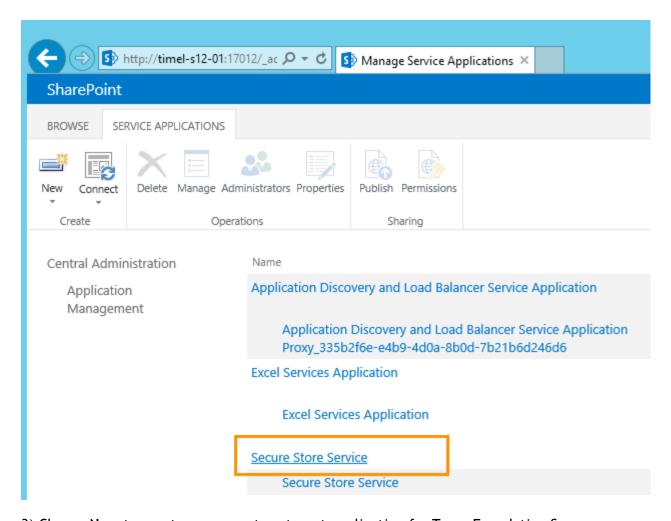
Configure Secure Store Service (SharePoint Server 2013 only - optional)

To configure the secure store service, you must create a target application for the secure store.

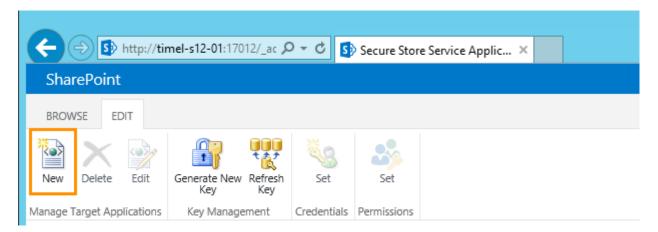
1) In SharePoint Central Administration, under Application Management, choose Manage service applications.



2) On the Manage Service Applications page, choose Secure Store Service.



3) Choose **New** to create a secure store target application for Team Foundation Server.

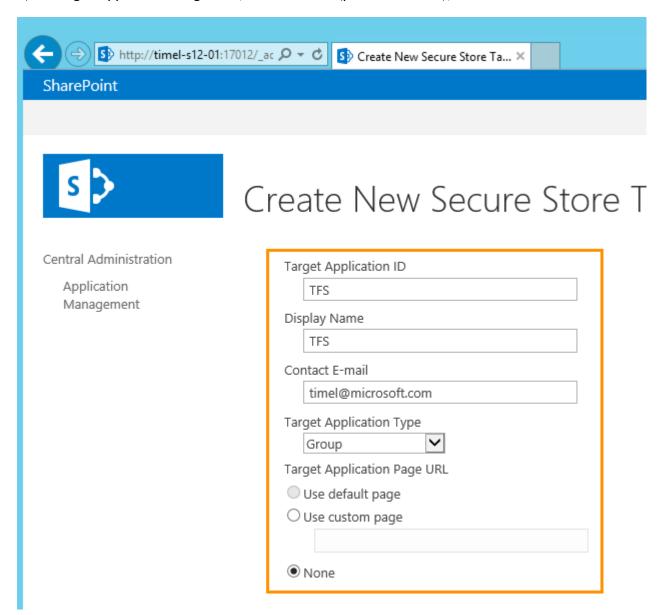


**TIP:** If you have not created a key, SharePoint Products prompts you to create one by choosing **Generate New Key.** Without a key, you cannot create a target application for the secure store.

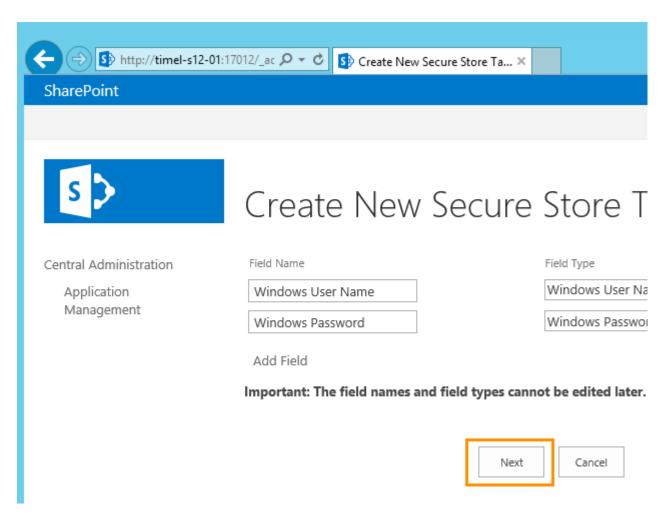
4) On the Create New Secure Store Target Application page, in **Target Application ID** and **Display Name**, enter TFS (pictured below).

**TIP:** You do not have to use TFS for Target Application ID or Display Name, but take note of whatever you use here, because you will need it to configure Team Foundation Server later.

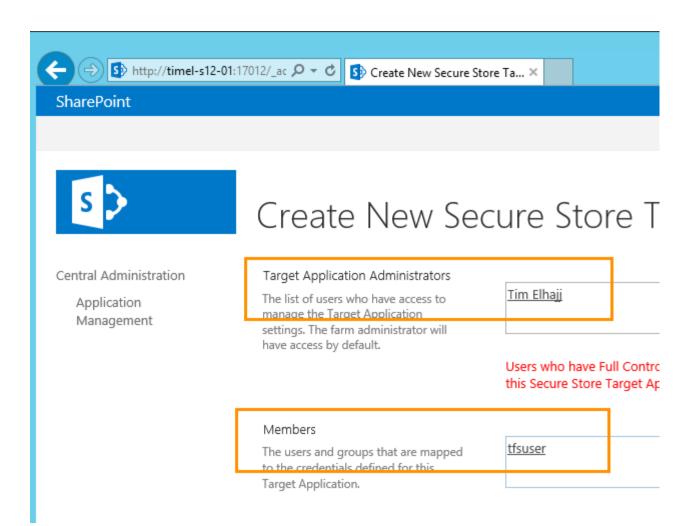
- 5) In Contact E-mail, type the e-mail address of the person or group you want email messages about this application to be sent to (pictured below).
- 6) In the Target Application Type list, choose **Group** (pictured below).
- 7) In Target Application Page URL, choose **None** (pictured below), and then choose **Next**.



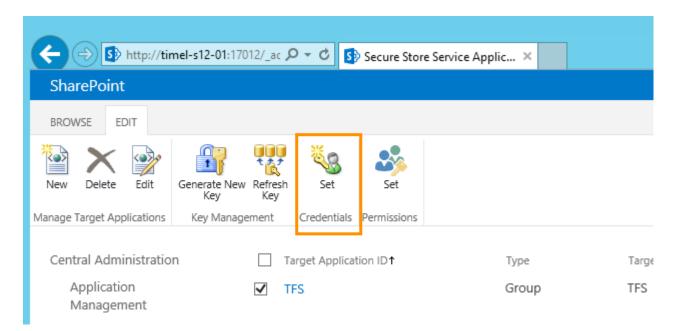
8) In Specify the credential fields for your Secure Store Target Application, choose **Next** to accept the default settings for the credential fields.



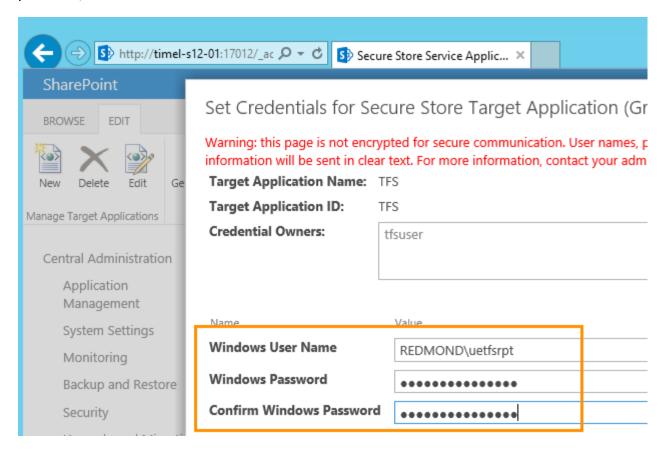
- 9) In **Target Application Administrators**, type the administrative account for the application.
- 10) In **Members**, enter the global security group from the domain that contains all the users to whom you want to grant access to dashboards and reports in Team Foundation Server, and then choose **OK**.



11) On the Secure Store Service Application page, select the check box for the target application that you just created (named TFS if you used the naming guidance that was provided earlier in this topic), and then choose **Set Credentials** in the ribbon.



12) In the Set Credentials for Secure Store Target Application (Group) dialog box, enter the name and password of the report reader account for Team Foundation Server, confirm the password, and then choose **OK**.



# Next steps

With SharePoint Server 2013 installed, you're ready to move to the chapter on  $\underline{\text{TFS}}$  installation.

### Team Foundation Server installation

If you have SQL Server and SharePoint on the same server, and you intend to put TFS on that same server, then you might be able to use the TFS standard installation wizard. It's designed to streamline the number of decisions you have to make during TSF installation. You have to have SQL Server set up on the default instance. We won't cover the steps for installing TFS using the standard wizard in this book because it's only a few screens. We will cover the advanced wizard. If you're okay with the default TFS options, by all means use the standard wizard. If you use the advanced wizard and don't change any of the default settings, you will end up with the exact same TFS installation as if you had used the standard wizard.

If you want more control over installation options, use the advanced configuration.

#### What Will I Need?

Whether you use standard or advanced TFS install wizards, you'll need (at least) a single domain account for the report reader account. TFS uses this account to generate reports. If you installed SharePoint, we used this same account for the Farm Admin account in SharePoint.

TIP: The report reader account only needs the Allow log on locally permission, which all domain accounts have by default.

## Why Use Advanced?

If you want to change the default installation options for Team Foundation Server, use the advanced configuration, which lets you configure Team Foundation Server on multiple servers and change many other options.

Why use advanced? The standard installation might not fit your needs. You might want to customize a single server installation or install Team Foundation Server and its configuration database on different servers. Perhaps you already have SQL Server or SharePoint Products running in your organization and you'd like to use one of these installations to host team projects or the data for Team Foundation Server. If you use the optional features that require prerequisite server software, these installations can also be hosted on different servers. If you use multiple servers, you can distribute the load between Team Foundation Server and the configuration database, or you can ensure that prerequisite server software for features such as reporting or the portal site is running on capable hardware.

Don't confuse the multiple server installation with the robust scale-out features that Team Foundation Server offers. These scale-out features include the ability to create a Team Foundation Server farm and add a team project collection to an instance of SQL Server that was not part of the original deployment of Team Foundation Server. However, these scale-out features are not part of this scenario. This scenario offers you guidance for an initial deployment of Team Foundation Server that takes advantage of configurable installation options, such as installing TFS on more than one server. For more information about how to add an application-tier server to your deployment of Team Foundation Server, see How to: Create a Team Foundation Server Farm (High Availability).

**TIP:** A multiple-server installation requires an Active Directory domain and domain accounts or the Network Service account. You cannot use local accounts for service accounts.

## Required permissions

To install TFS, you must be a member of the Windows Administrators security group.

To run any of the TFS configure wizards, you must be a member of the Windows Administrators security group on the server on which you will install Team Foundation Server. If you plan to configure reporting, you must also be a member of the Windows Administrators security group on the server that is running SQL Server Reporting Services. If you plan to configure SharePoint Products, you must be a member of the Farm Administrators group on the SharePoint Products administration site. If you did not install the Database Engine that will host the configuration database or a database administrator manages the instance of SQL Server that you are using, you must be a member of sysadmin Server role in SQL Server.

**TIP**: If you or your database administrator want a better understanding of the required SQL Server permissions, see the following page on the Microsoft website: Why does TFS need so much privilege on the SQL Server? (Brian Harry blog post)

#### To run the Team Foundation Server installer

- 1) Insert the Team Foundation Server DVD in the drive and launch the tfs\_server.exe.
- 2) On the license terms dialog box, accept the license terms and then choose Install Now.

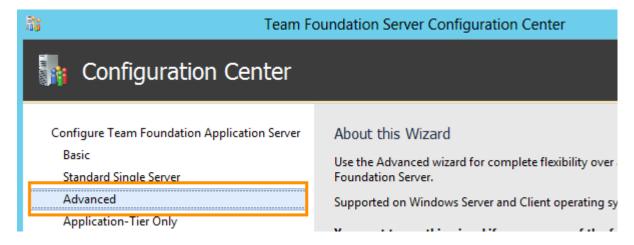


If you want to install Team Foundation Server to a specific location in the file system, choose the browse button (...) next to the default install location.

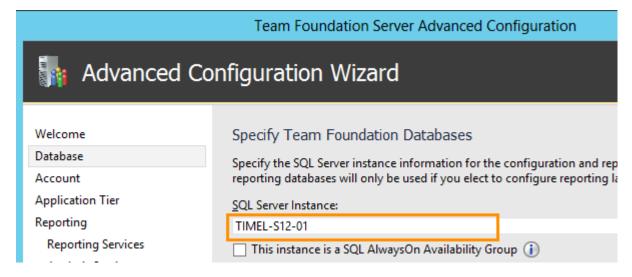
After TFS installs, some installations prompt you to enter a license key or accept a trial license.

To configure Team Foundation Server using the advanced configuration

1) In the Team Foundation Server Configuration tool, choose **Advanced**, and then choose **Start Wizard**.



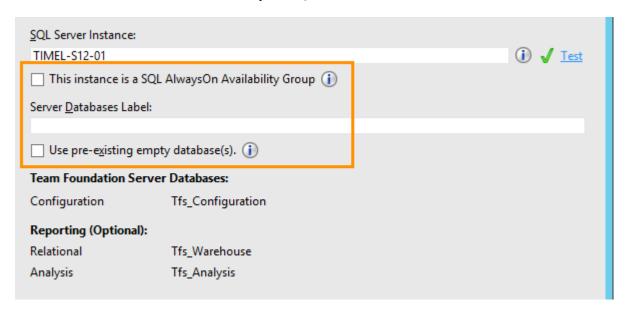
- 2) Read the Welcome screen, and then choose **Next**.
- 3) In SQL Server Instance, type the name of the server that is running SQL Server or the named instance that will host the configuration databases, and choose **Next**.



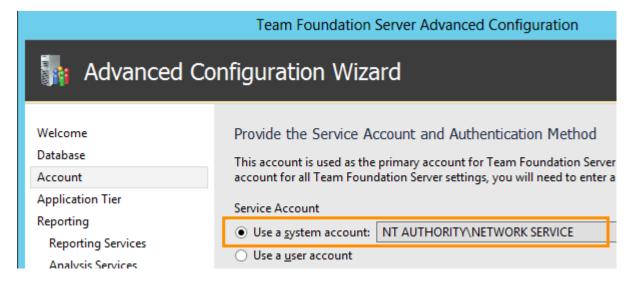
You can also perform any of these optional steps:

- \* Select This instance is a SQL AwlaysOn Availability Group to specify that the SQL Server instance is an Availability Group Listener (AGL) and its availability group will host the TFS databases created during set up. See <u>Use SQL Server 2012 Always On Availability Groups with Team Foundation Server</u>.
- \* In Server Database Label, type a label string, which is then embedded into all three of the default database names. This technique enables you to use a single instance of SQL Server to host multiple configuration databases.
- \* Select the **Use pre-existing empty database(s)** check box, and then specify databases that are hosted on the server that is named in SQL Server Instance. You must create names for these databases by using the default naming structure, with or without a label. You can find the default naming structure under Team Foundation Server Databases.

\* Choose **Test** to test the connectivity to SQL Server.



4) Under Service Account, choose Use a system account to use a built-in account.



Otherwise, choose **Use a user account** to use a domain or local account. If you are using a user account, you must type the password. To test the user account and password combination, you can optionally choose Test. Network Service is the default value for this service account.

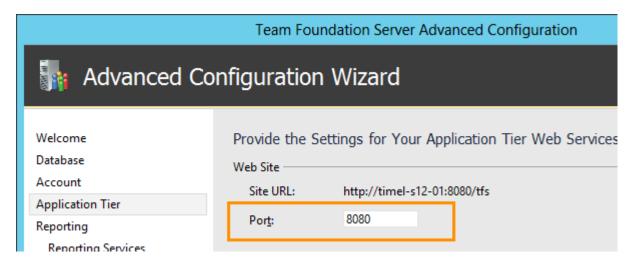
If your report server and SharePoint servers are not installed on the same server as TFS, you should <u>add this account to the Farm Administrators group</u> (for SharePoint) and the <u>content manager group on the report server</u>. If you're installing TFS on the same server as the report server and SharePoint, this account is added to these groups automatically.

5) Under Authentication Method, choose NTLM.



Otherwise choose **Negotiate** (**Kerberos**) and then choose **Next**. If you choose NTLM, NTLM authentication is used. This option is the default setting. If you choose Negotiate (Kerberos), Kerberos authentication is attempted first. If that attempt fails, NTLM authentication is used.

6) Under **Web Site**, you can use the default value in **Port**. This the port number used to connect to Team Foundation Server. The default value is 8080.



7) Under **IIS Virtual Directory**, you can use the default value of tfs or optionally type a virtual directory name.



8) Under **Web Site**, note the Team Foundation Server site URL, which is dynamically assembled based on your input in Web Site and IIS Virtual Directory. Clients use this URL to connect to Team Foundation Server. Choose **Next**.

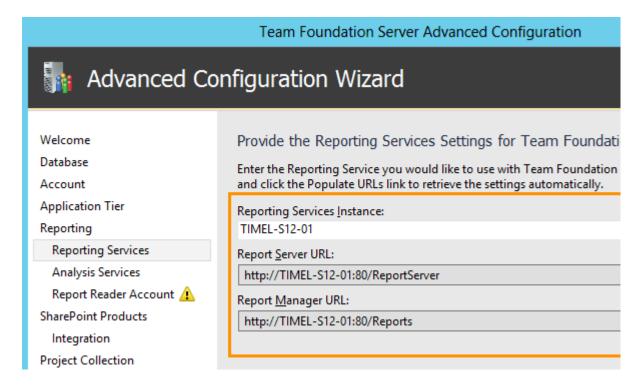


On a client operating system, you must skip to step 11. You can't add a portal or reporting (steps 9 and 10) on a client operating system.

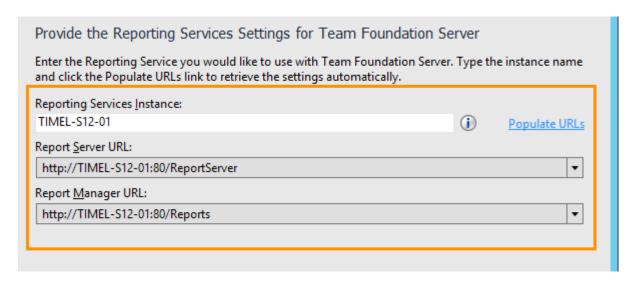
9) Select the Configure Reporting for use with Team Foundation Server check box to use reporting, or clear the check box to skip reporting, and then choose Next.



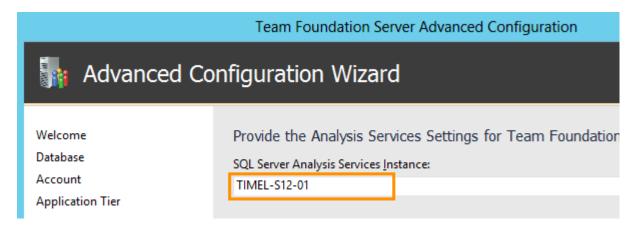
A) Type the name of the server that is running SQL Server Reporting Services in **Reporting Services Instance** and choose **Populate URLs**. The URLs for the report server and its management site appear in the drop-down lists for Report Server URL and Report Manager URL.



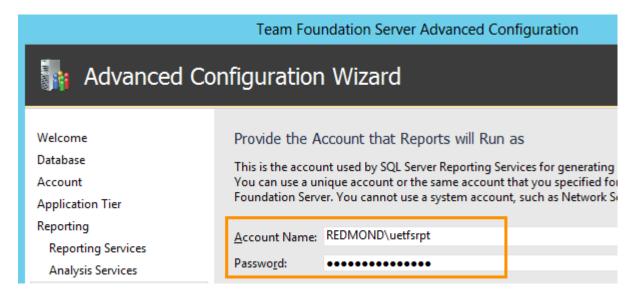
B) Ensure the values displayed are the URLs that you want to use for Team Foundation Server and choose **Next**.



C) Type the name of the server that is running SQL Server Analysis Services in SQL Analysis Services Instance and choose **Next**. To test the connectivity to SQL Server, you can optionally choose **Test**.

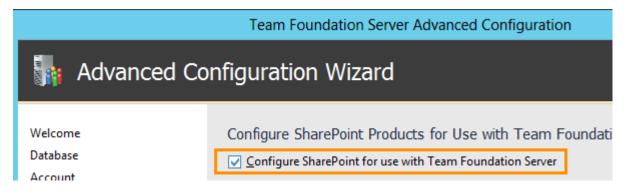


D) Type the name and password of the report reader account and choose Next.

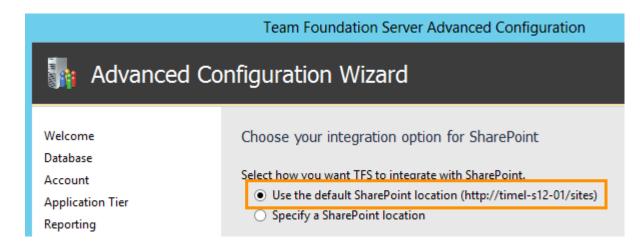


If you specified a user account for the service account of Team Foundation Server in step 4, you must select the Use a different account than the Team Foundation Server service account for the report reader account check box to use a different account. To test the user account and password combination, you can optionally choose **Test**.

10) Select the Configure SharePoint Products for use with Team Foundation Server check box to use SharePoint Products, or clear the check box to skip SharePoint Products. Choose Next.



If you selected the check box to configure SharePoint Products, you get a screen with two options. Choose **Use the default SharePoint location** if you've installed and configured SharePoint on the server where you're installing TFS and choose **Next**.

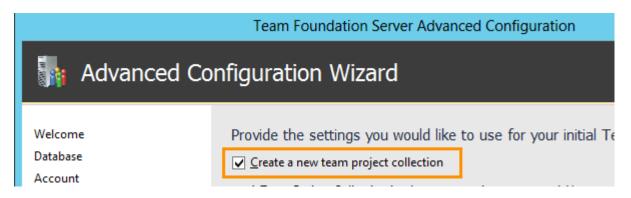


#### Other possible options for SharePoint:

If you've installed SharePoint on a remote server, you can click **Specify a SharePoint location**. On the next screen you'll enter the Site and Administration URLs for SharePoint farm you want to integrate with TFS. You'll want to read the section on setting up a remote SharePoint site for TFS. See, What If I Already Have SharePoint?

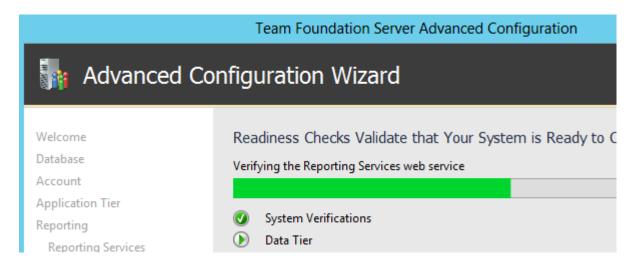
TIP: If you're installing on Windows Server 2008 or R2, you get an option to install SharePoint Foundation 2010. Once the installation completes, type a user account and password for the service account for SharePoint Foundation 2010. If you specified a user account for the service account of Team Foundation Server in step 4, you must select the Use a different account than the Team Foundation Server service account for the SharePoint farm check box to use a different account.

11) Select the Create a new team project collection check box to create a collection, or clear that check box to skip that step. If you create a collection, accept the default values, or type a new name and description. Choose **Next**.

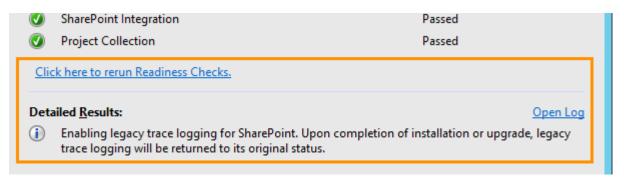


12) On the Review page, review the settings, and choose **Next**.

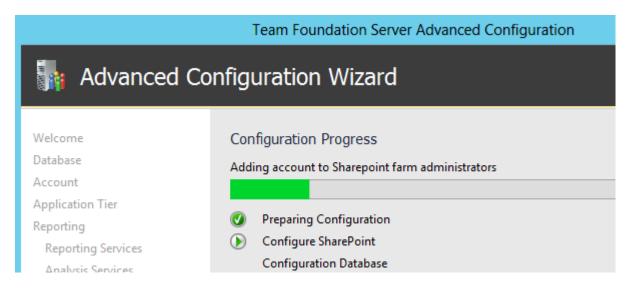
The wizard validates your configuration.



If you run into a problem, you can use the detailed results to identify the issue. If you can fix it, click the link to run the checks again.

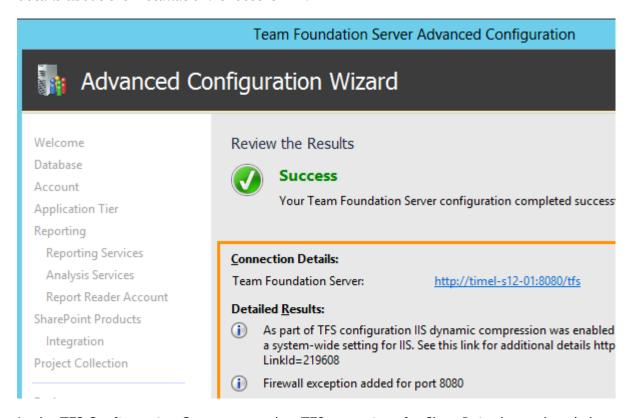


13) After you pass all the checks, choose **Configure**. The wizard applies configuration settings. This process might take several minutes.

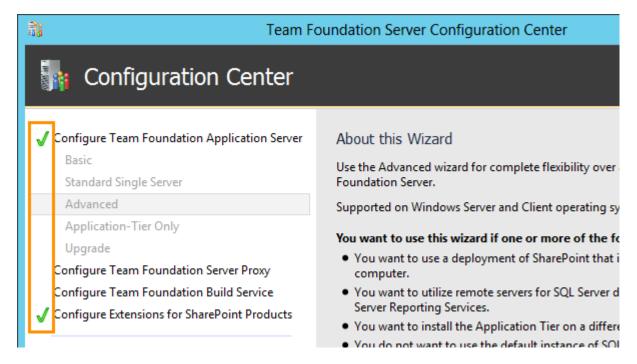


14) At the success screen, choose **Next**.

15) Review the results of the success screen, including the connection URL for TFS and any details about the installation. Choose **Close**.



In the TFS Configuration Center, note that TFS extensions for SharePoint have already been installed, if you installed TFS and SharePoint on the same server.



After you close the TFS Configuration Center, the Team Foundation Server Administration Console appears.

## Next Steps

After you install and configure TFS, set up the build service.

## Team Foundation Build Service configuration

If you want to automate builds of your software projects, you can install Team Foundation Build Service from the Team Foundation Server product DVD and create a build machine. Once you have the build machine set up, you'll want to create a build definition in Visual Studio with instructions about which code projects to compile and many other configurations. But first, you must set up the build machine.

#### Where to Install It?

The most important thing to concern yourself with during installation is selecting the right hardware to get the best performance (recommendations are linked below). If your team is building Windows apps, you'll need to install the build service on Windows 8. See this topic on the Microsoft website: <u>Build and Test a Windows Store App Using Team Foundation Build</u>. All of the settings you choose during the initial configuration of Team Foundation Build Service can be changed after installation, so don't worry too much about making a wrong choice. For a comprehensive explanation of Team Foundation Build Service architecture and all possible topologies, see this topic on the Microsoft website: <u>Scale Out Your Build System</u>.

Although you can install Team Foundation Build Service on the same computer as Team Foundation Server, you probably shouldn't. You don't want to hurt the performance of Team Foundation Server or increase its attack surface when builds are running.

## System Requirements

The operating system requirements for Team Build match the requirements for TFS, and the hardware requirements match those of the operating system on which you install it. That said, you can optimize the performance of your build machine by installing Team Foundation Build Service on hardware adequate for the way your team intends to automate builds. See <a href="Hardware Recommendations">Hardware Recommendations</a> on this MSDN topic.

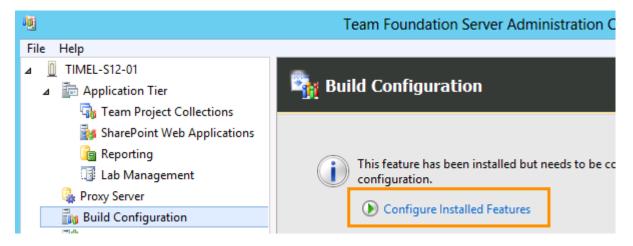
## Required permissions

You must be a member of both the Windows **Administrators** security group on the server on which you are configuring Team Foundation Build Service and the **Project Collection Administrators** group on TFS.

TIP: If you installed TFS, you're already a member of Project Collection Administrators.

#### To run the Team Foundation Server installer

TIP: The build service is installed with TFS. If you want to set up the build service on the same server as where you installed TFS, you can skip this procedure, open the TFS Administration Console, select Build Configuration, and then choose Configure Installed Features.

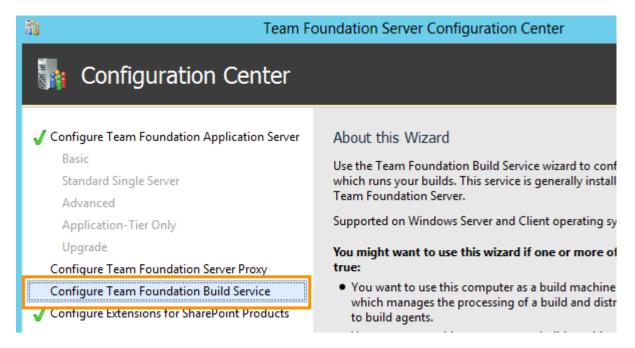


- 1) Insert the Team Foundation Server DVD in the drive and launch the tfs\_server.exe.
- 2) On the license terms dialog box, accept the license terms and then choose Install Now.

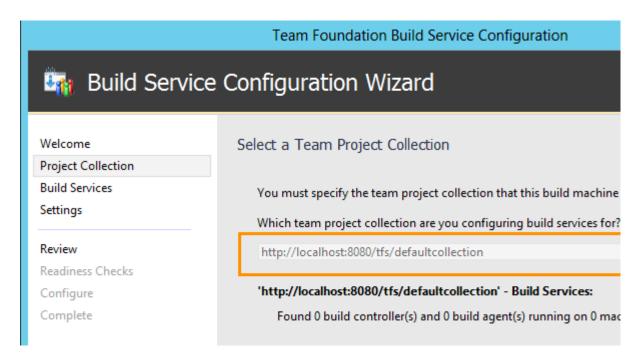
If you want to install Team Foundation Server to a specific location in the file system, choose the browse button (...) next to the default install location.

## To configure Team Foundation Build Service

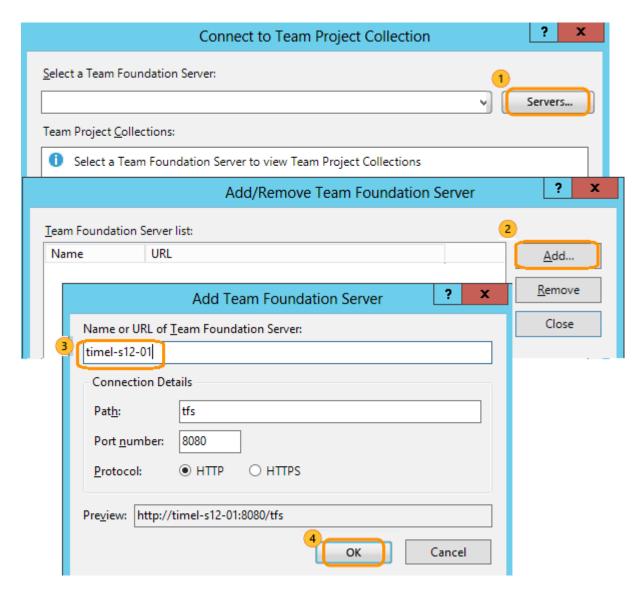
1) Choose Configure Team Foundation Build Service, and then choose **Start Wizard**. The Build Service Configuration wizard appears.



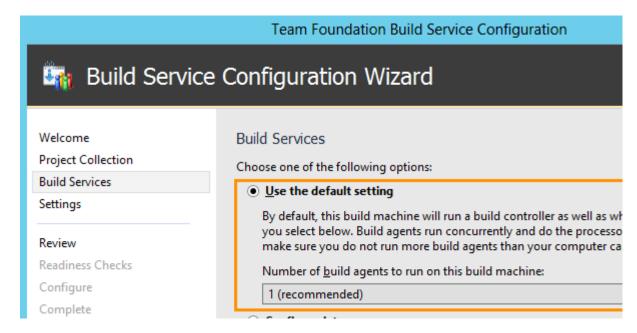
- 2) Read the Welcome screen, and then choose Next.
- 3) If you're configuring the build service on the server running TFS, the default collection is selected automatically. Choose **Next**.



Otherwise, choose Browse, and then choose the team project collection to which you want this build controller to connect.

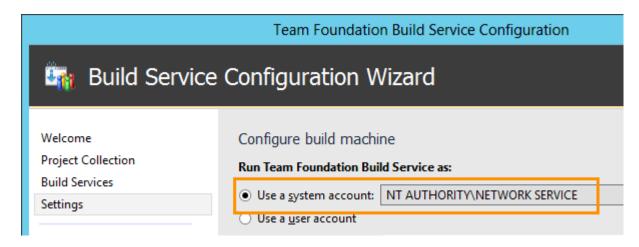


4) Choose Use the default setting, and specify the number of build agents. If you installed Team Foundation Build Service on the same server as Team Foundation Server, the default setting for Number of build agents to run on this build machine is 1 (recommended). Choose **Next**.



If you're not installing build service on a server that's running TFS or don't want to use the default settings, perform one of the following steps:

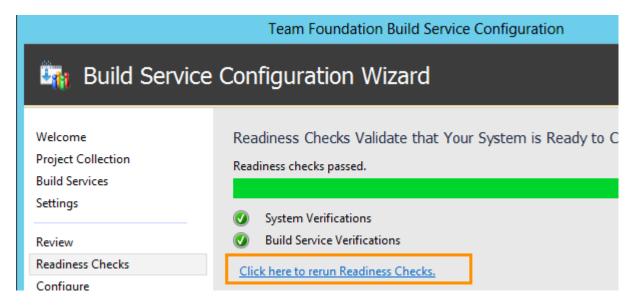
- \* Choose Scale out build services to run concurrent builds across multiple machines. If you choose this option, you have to specify the number of build agents for this machine and then add them to a new or existing build controller. If you installed Team Foundation Build Service on its own server, the default setting for Number of build agents to run on this build machine is equal to the number of processor cores on this server.
- \* Choose **Replace an existing build machine**, and then specify the build machine to replace. This option copies the existing configuration to the new build server.
- \* Choose **Configure later** to skip setting up any build controllers or agents on this instance of Team Foundation Build Service. If you choose this option, you must manually connect the build controller to Team Foundation Server before you can use this build machine.
- 5) Under Run Team Foundation Build Service as, **Choose Use a system account**, and then choose **NT Authority\Network Service**. Choose **Next**.



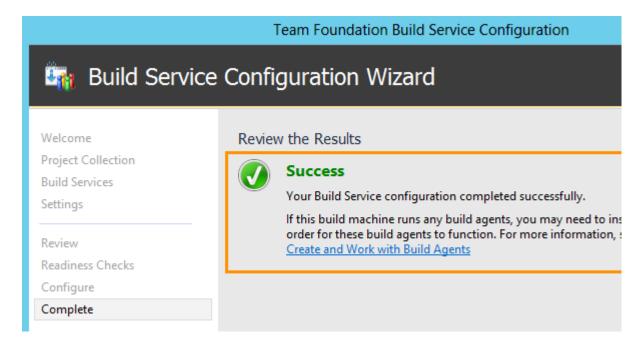
Otherwise, choose **Use a user account** to use a domain or local account, and then enter the account name and password. To test the user account and password, choose **Test**.

6) Review the information and then choose Next.

The wizard validates your configuration. If you run into a problem, you can use the detailed results to identify the issue. If you can fix it, click the link to run the checks again.



- 7) Choose **Configure**. The wizard applies configuration settings.
- 8) At the success screen, choose **Next**.
- 9) Review the results of the success screen, including any recommendations. Choose Close



# Next Steps

## Test your installation.

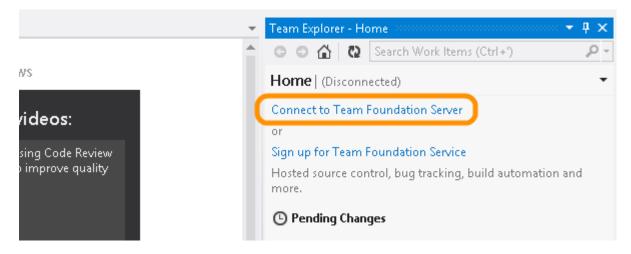
Use Visual Studio to connect to TFS and create a temporary team project. After the project is created, use Visual Studio to connect to the report server and SharePoint.

### Test the installation

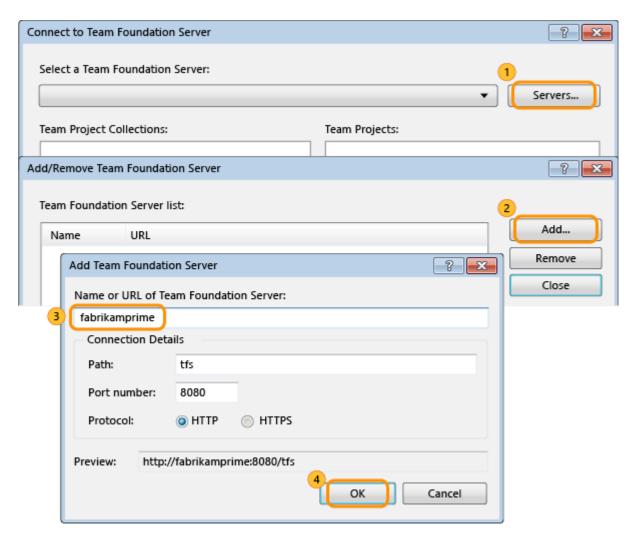
Create a team project and test that the integration between TFS, SharePoint and the report server works as it should. Use Visual Studio to connect to TFS and create a team project. Make sure to select the option to create a project portal on SharePoint. After the project is created, use Visual Studio to connect to the report server and SharePoint.

#### Connect Visual Studio to TFS

1) In Visual Studio, go to the Team Explorer home page to connect to your server.

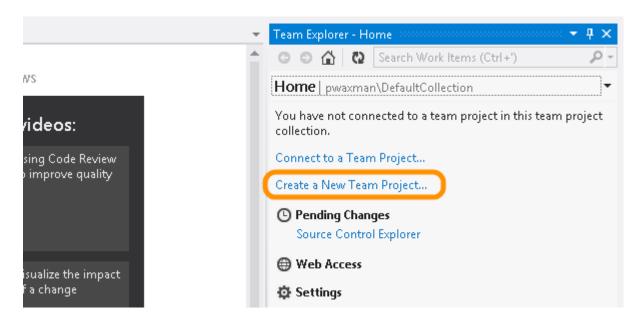


2) If your server isn't in the list of available servers, add it.

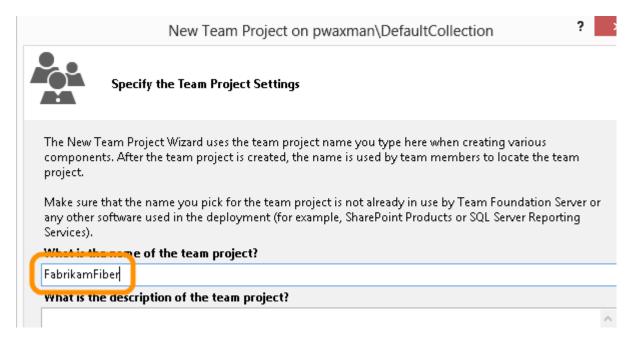


# Create your team project

1) Create the team project with Team Explorer.

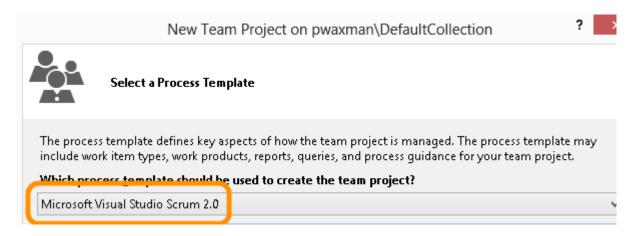


2) Give the team project a name.

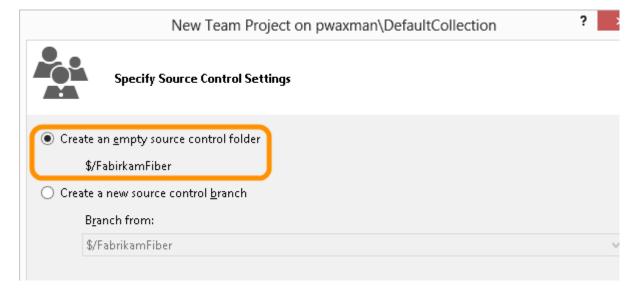


**NOTE**: You can't change the name of the team project once it's created.

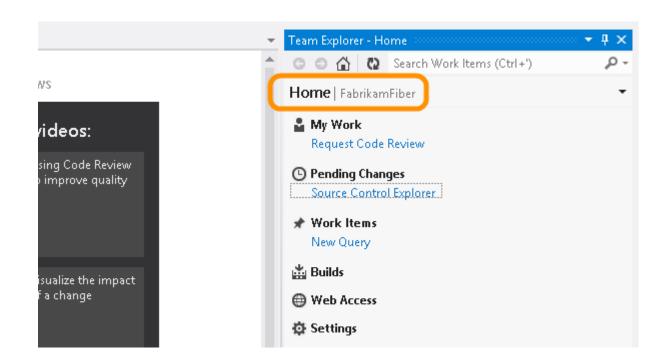
3) Select a process template.



4) Set up a new version control folder for the team project.



5) After your team project is created, you can see it in Team Explorer.



## Contact

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#### About the author



Tim Elhajj is a writer in Microsoft's Developer Division. He currently works on Team Foundation Server and ALM products. He has also worked on the Windows Server product.

He lives in Washington State with his wife, two high-school kids, random chickens, and a bunch of computers.

He graduated summa cum laude from Hunter College's School of Arts and Sciences in midtown Manhattan. Since moving West, he's worked at companies small and large: One company made software that ran in DOS, others provided public record retrieval or corporate expense accounting services. He's done his time in the contract agency trenches, and he's worked for big, recognizable companies like RealNetworks and Microsoft.

He currently holds an MCSE and an MCSA.