

# Chapter 3 – Installing Foundation 2013 onto Windows Server

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## Terms

This Windows SharePoint Services Operations Guide (WSSOPS) from the Computer Information Agency is provided as is. Every effort has been made by the author to ensure that information provided is correct however this cannot be guaranteed.

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## Chapter 3 – Installing Foundation 2013 onto Windows Server

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### 3.1 Scope

This chapter will examine the process of installing Microsoft SharePoint Foundation 2013 onto a new domain connected standalone Windows server.

### 3.2 Prerequisites

There are a number of requirements on any system onto which you plan to install Windows SharePoint Foundation 2013. These minimum requirements are:

- Domain connected Windows Server 2008 R2 Service Pack 1
- Dot Net Framework Version 4.5
- Internet Information Services (IIS) configured with ASP .NET
- Microsoft SQL Server 2008 R2 SP1

#### *Data storage location*

SharePoint Server has the ability to store data in a number of locations, including Microsoft SQL Server 2008 R2 Express Edition that comes with SharePoint Foundation 2013. The planned location of your SharePoint Server data will have an impact on the installation method you are able to choose. For further information about these options and impacts please see – **Chapter 8 - Database Operations**.

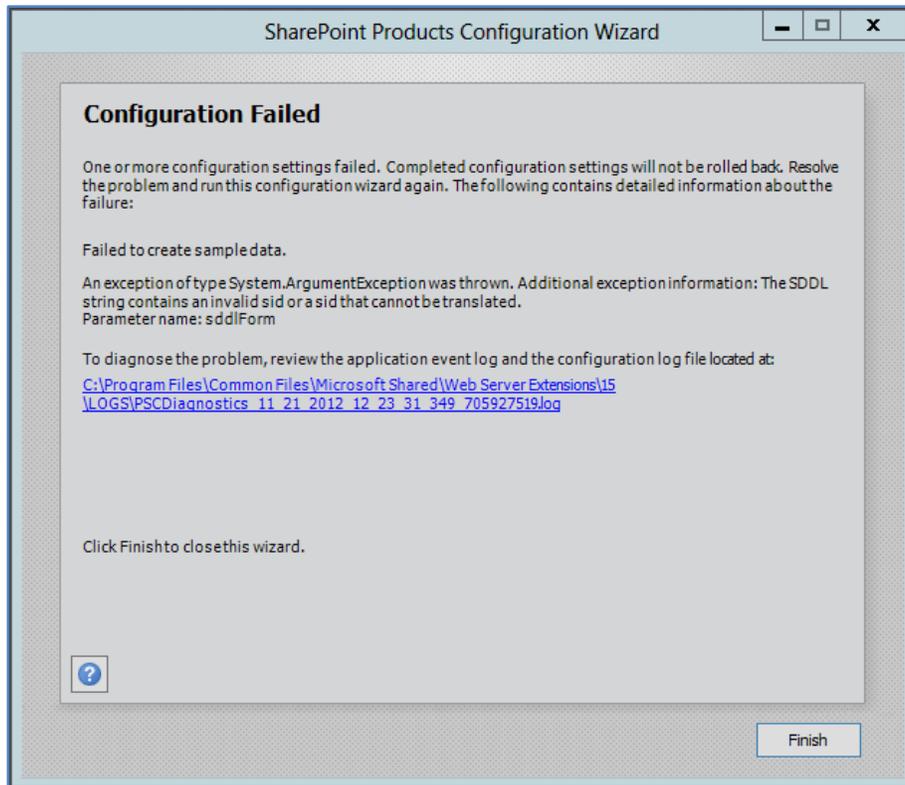
If SharePoint Foundation 2013 installs Microsoft SQL Server 2008 R2 Express Edition the default location for the SharePoint content databases will be `c:\program files\Microsoft SQL Server\MSSQL10_50.SharePoint\MSSQL\Data`.

Once these requirements have been met it is also advisable to ensure that the machine on which you wish to install SharePoint Foundation 2013 is updated with all the latest patches and service packs. It is also advisable to do a reboot of the system prior to a SharePoint Foundation 2013 installation to ensure a clean run up environment.

### 3.3 Installation

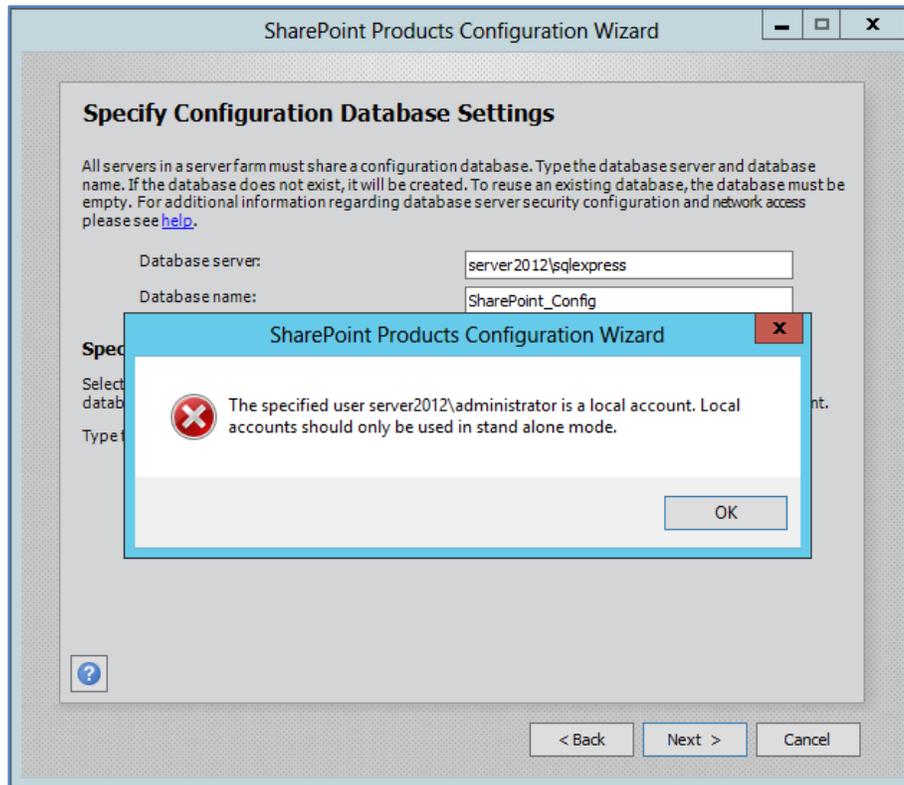
SharePoint Foundation 2013 is not supported on a server that is not connected to a domain or on a domain controller machine. Trying to install the software in this configuration will result in the following errors during the Configuration wizard.

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And these errors if doing a Complete installation.

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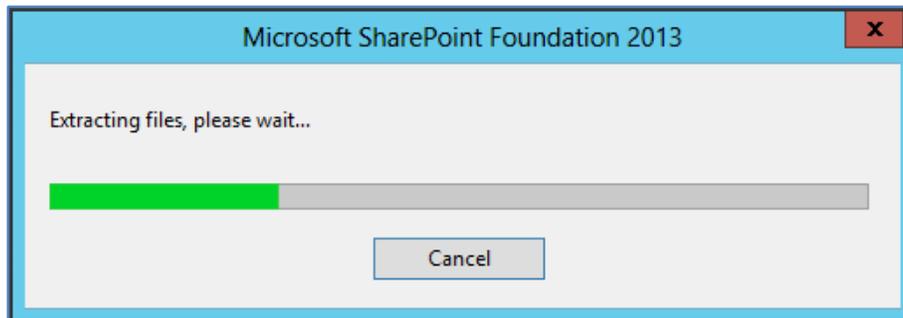
To allow successful default installation that is supported the SharePoint Foundation 2013 server must be a domain connected member server.

We'll cover the following installations:

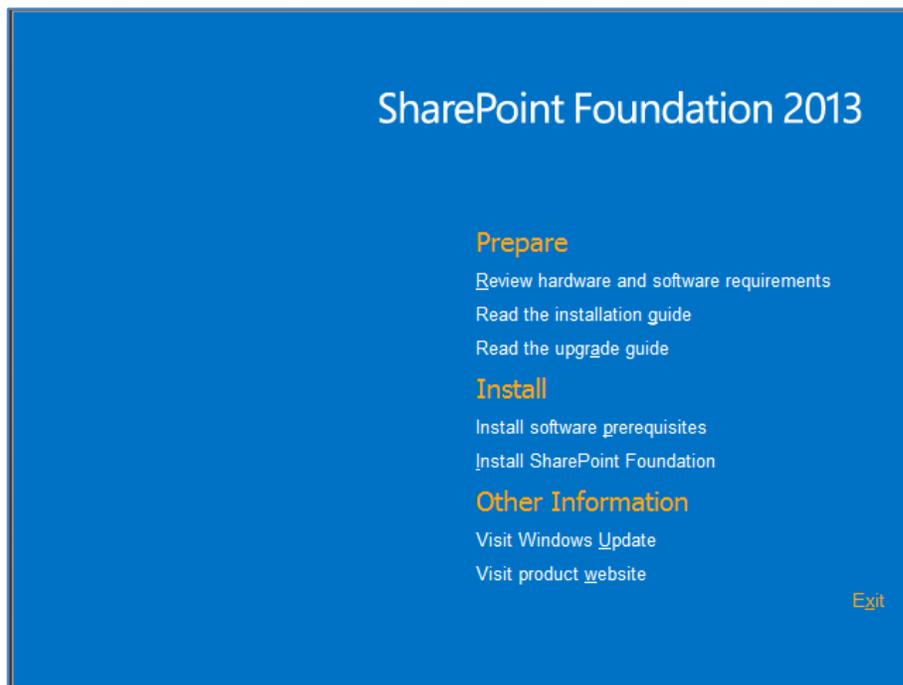
- Standalone
- Complete

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After meeting all the server prerequisites and downloading the SharePoint Foundation 2013 software from the Microsoft web site and logging into the Windows Server as an administrator, commence the installation by **double clicking** on the *sharepoint.exe* file.



The files will automatically be extracted the installation will commence.

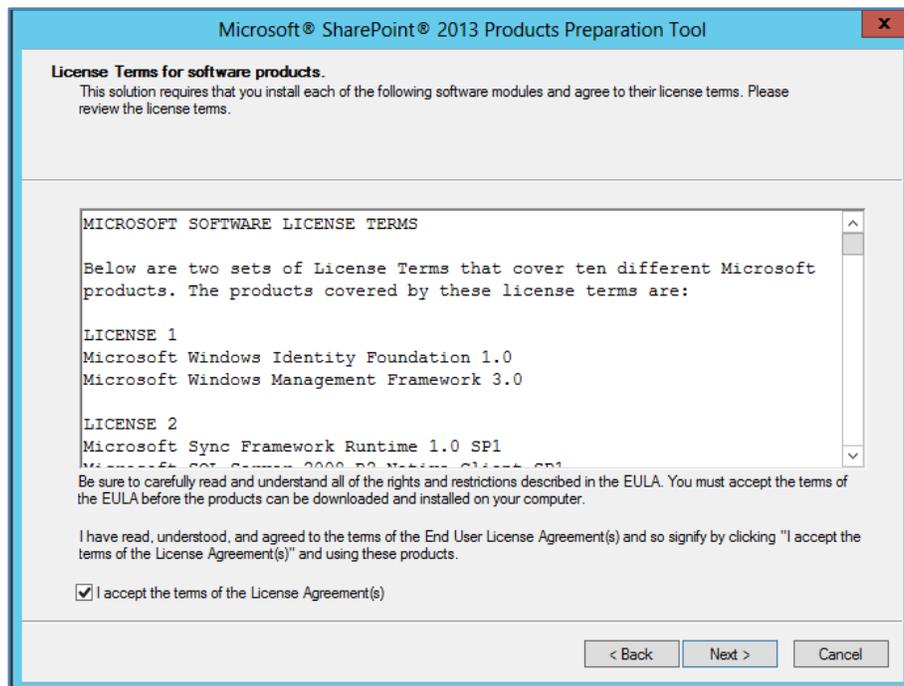


Click on the option **Install software prerequisites** under the *Install* heading.

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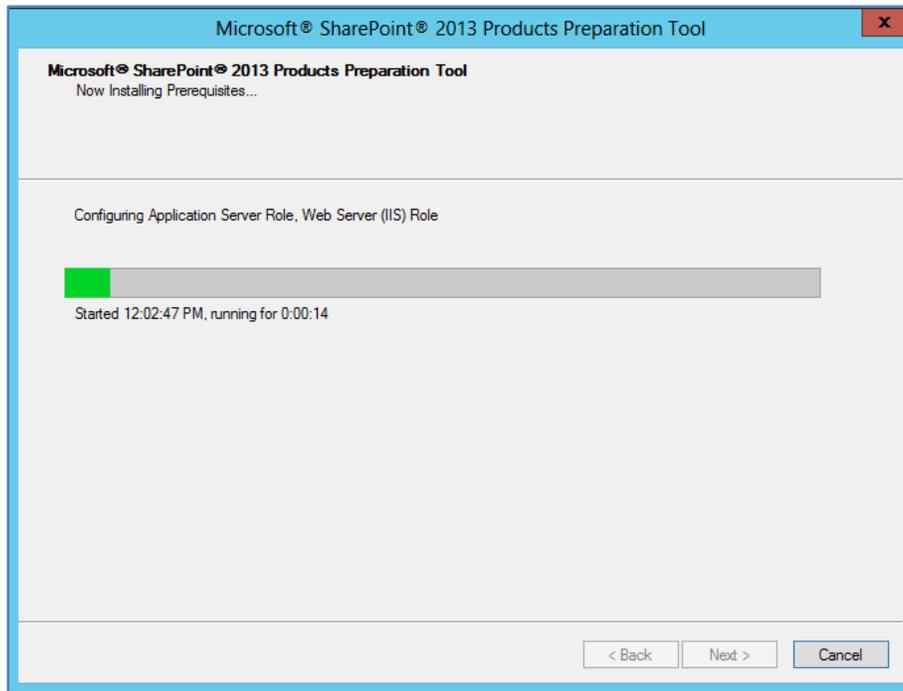


Click **Next** to continue.



Click the option **I accept the terms of the License Agreement(s)** and press the **Next** button to continue.

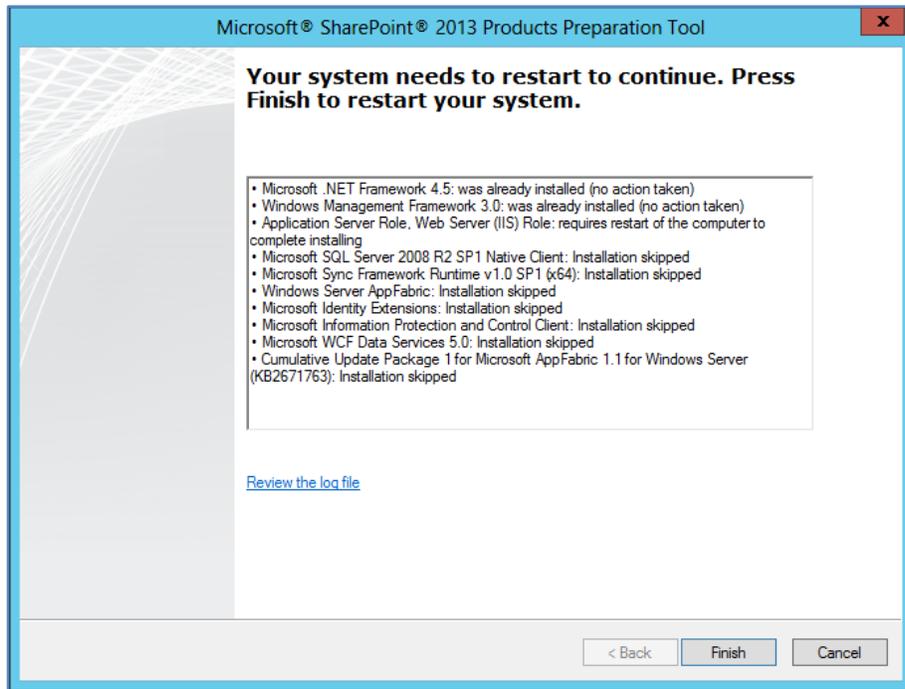
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If the software is not installed on the server it will automatically be downloaded and installed. It is important to note during the installation of these prerequisites a number of reboots may be required. This will generally happen automatically and the number will depend on what software is already installed on your machine.

When the process is complete the server may need to be rebooted before proceeding. When the reboot is complete the installation process will continue until you see a screen like:

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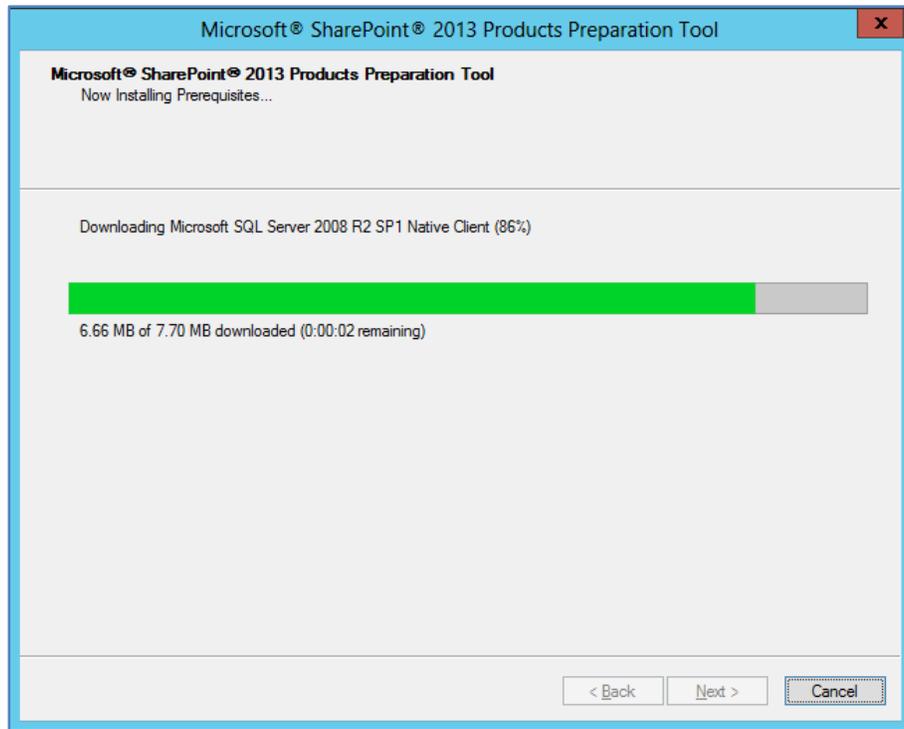


When you press **Finish** the server will automatically reboot and apply any updates.

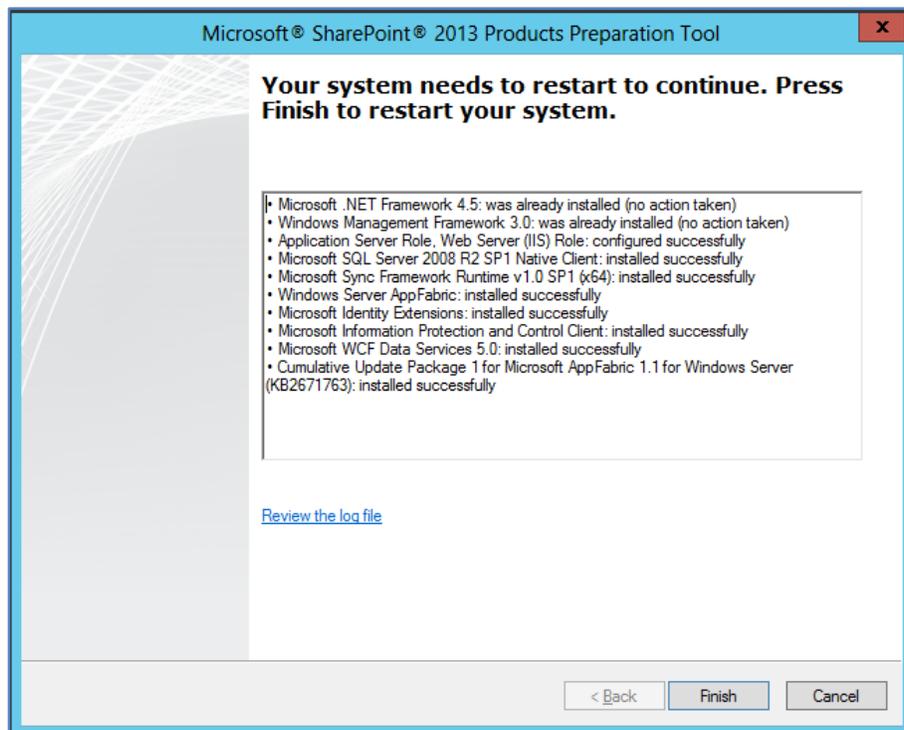


After logging back into the system the installation will continue during which time you will probably see additional software downloaded and installed.

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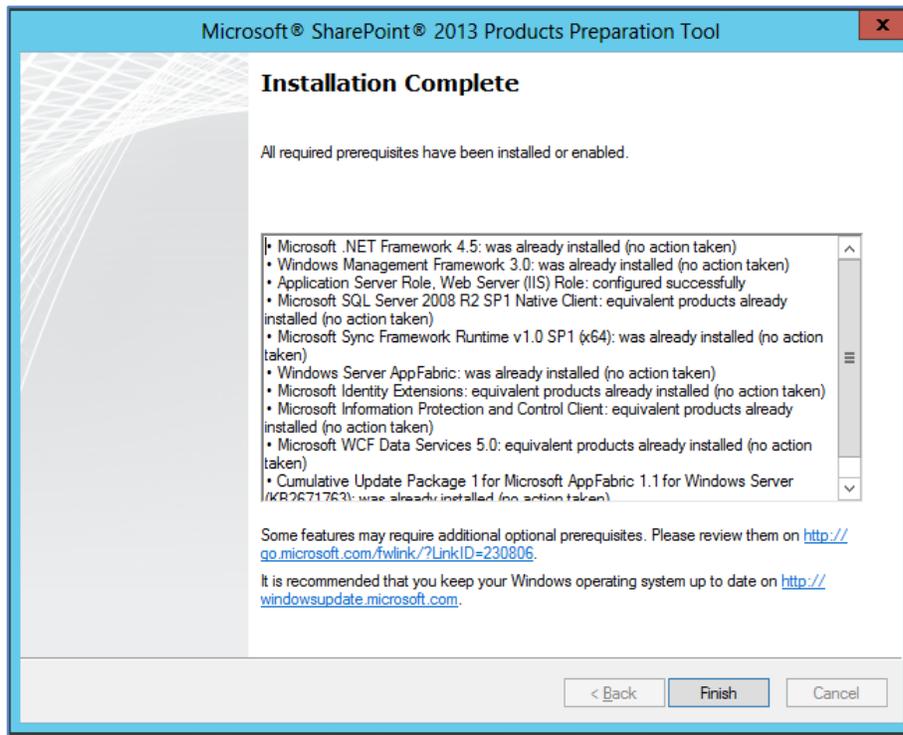


After this, the server may need to reboot again.



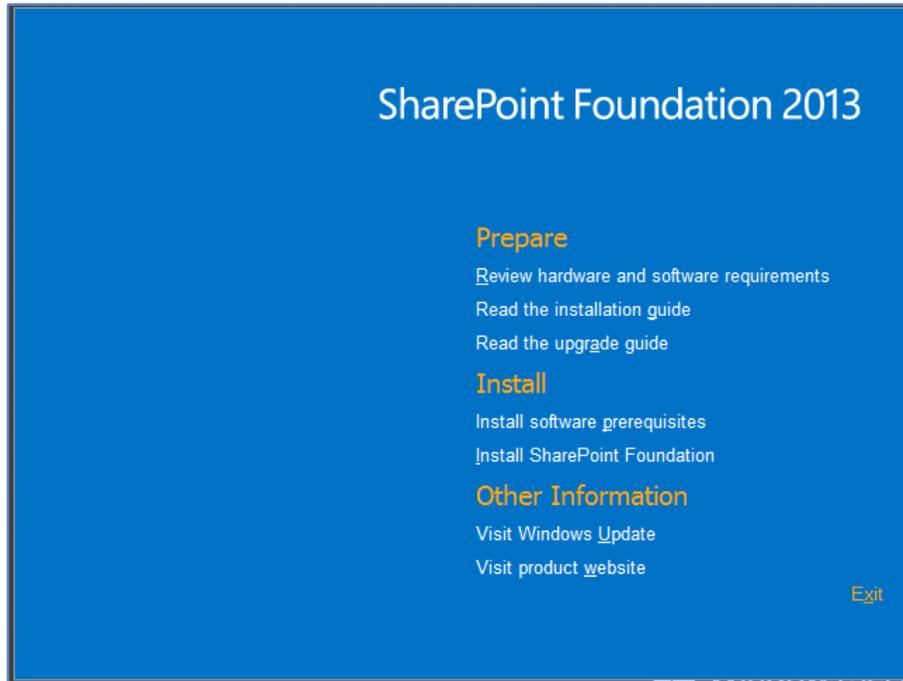
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After rebooting and logging in to the server again the installation will continue. After it has finally completed you should see the following:

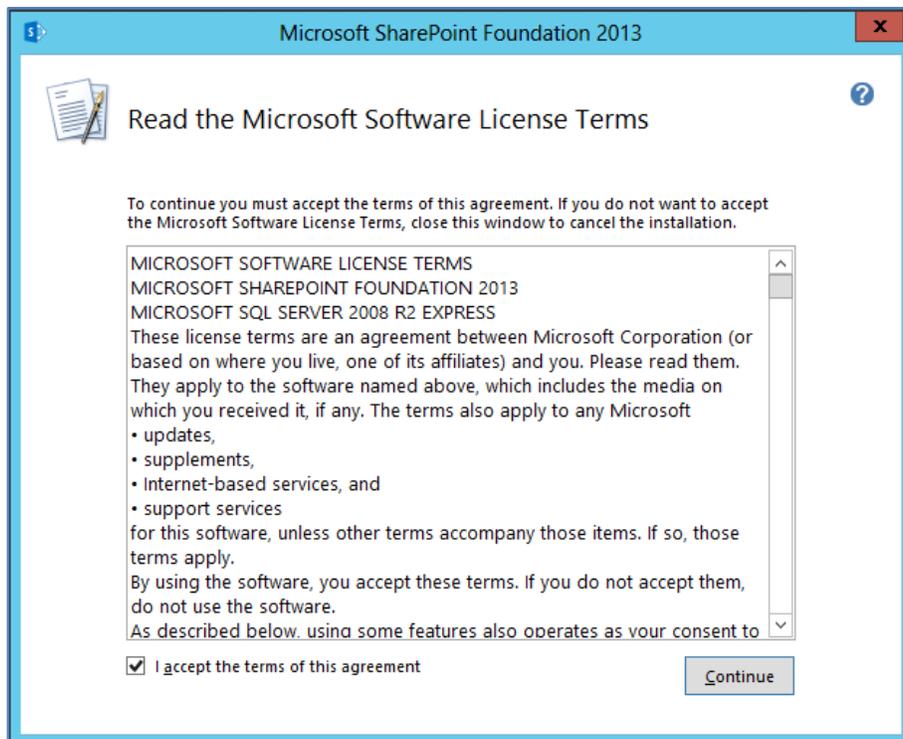


Note, any items that have been skipped or errors that have occurred as these may prevent SharePoint Foundation 2013 installing.

Click the **Finish** button to proceed.

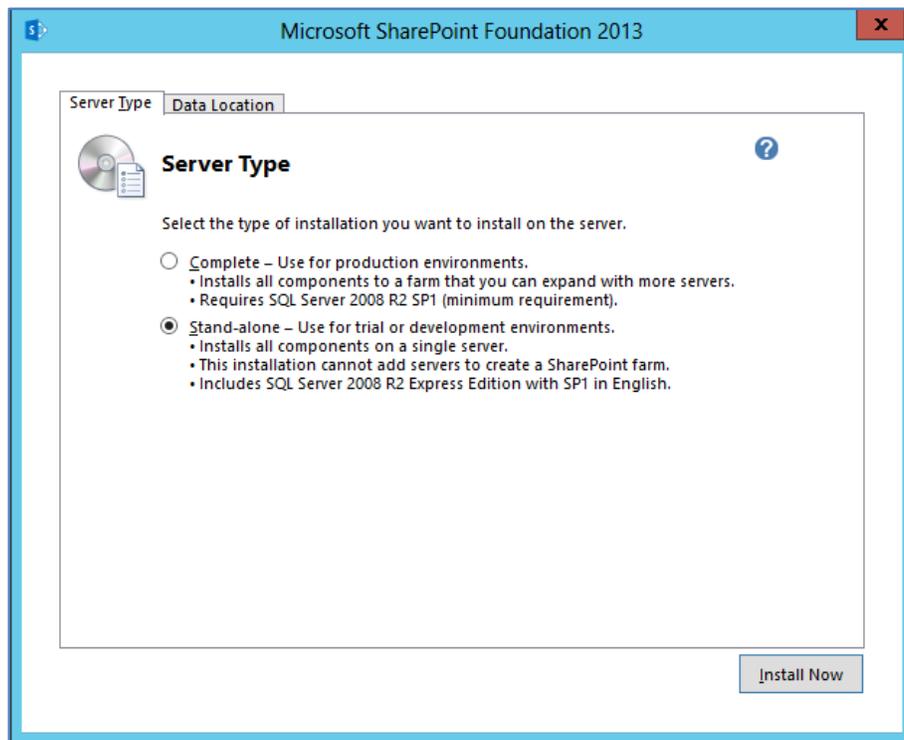


You may need to re-run the installation program and return to the initial menu. Now press the option **Install SharePoint Foundation** to install the software.



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The first window to be displayed will be the *Microsoft Software License Terms*. After reviewing this, check the - **I accept the terms of this agreement** in the lower left of the window and press the **Continue** button.



The next window to be displayed will ask you for the type of installation you wish. It is important to pause here and consider the options that are presented and the ramifications they may have for your installation.

### *Installation type*

- a. **Stand-alone** – Selecting this option will install SharePoint Foundation 2013 onto your server using the standard defaults. You will NOT be prompted about things like file locations, database locations or whether you wish to only create a web front end. Selecting this option will automatically complete the following tasks:
  - a. Install SharePoint Server programs to *c:\program files\common files\Microsoft Shared\web server extensions\15*
  - b. Install Microsoft SQL Server 2008 R2 Express Edition as the SharePoint Server storage option and install this automatically to *c:\program files\Microsoft SQL Server\*. You will be able to upgrade from this version at a later stage if required.

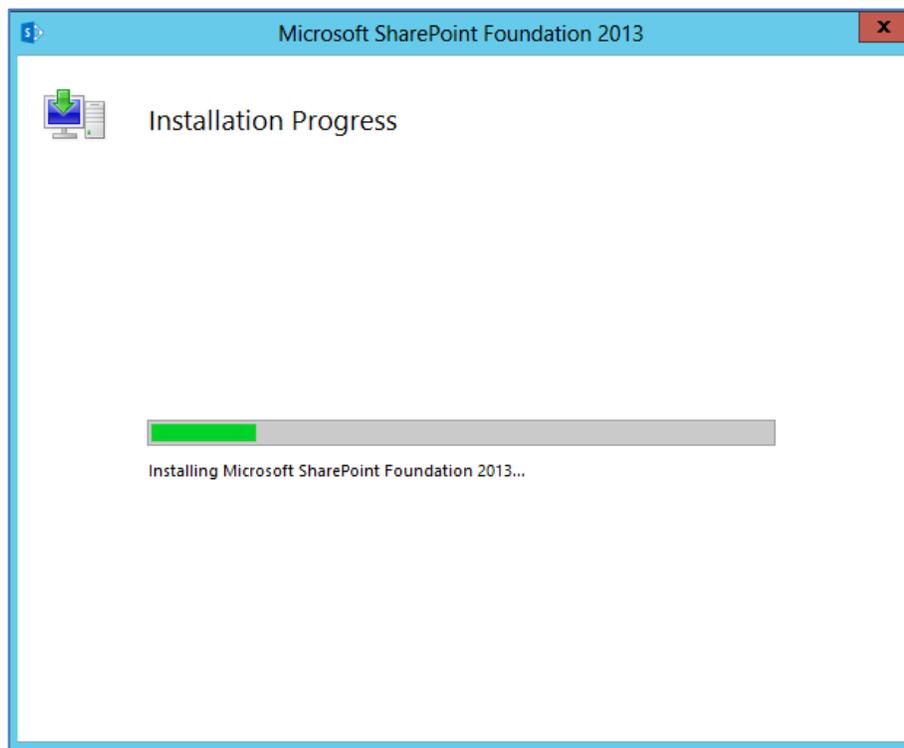
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- c. Locate the SharePoint content database in `c:\program files\Microsoft SQL Server\MSSQL10_50.SharePoint\MSSQL\Data`.
- d. Configure a SharePoint Server web site on port 80.
- e. Configure a SharePoint Server team site collection.
- f. SharePoint Server will be configured for a single stand alone server. You will be unable to create a SharePoint farm later if required.

Note that using the Standalone option you are unable to change any of the selections mentioned above.

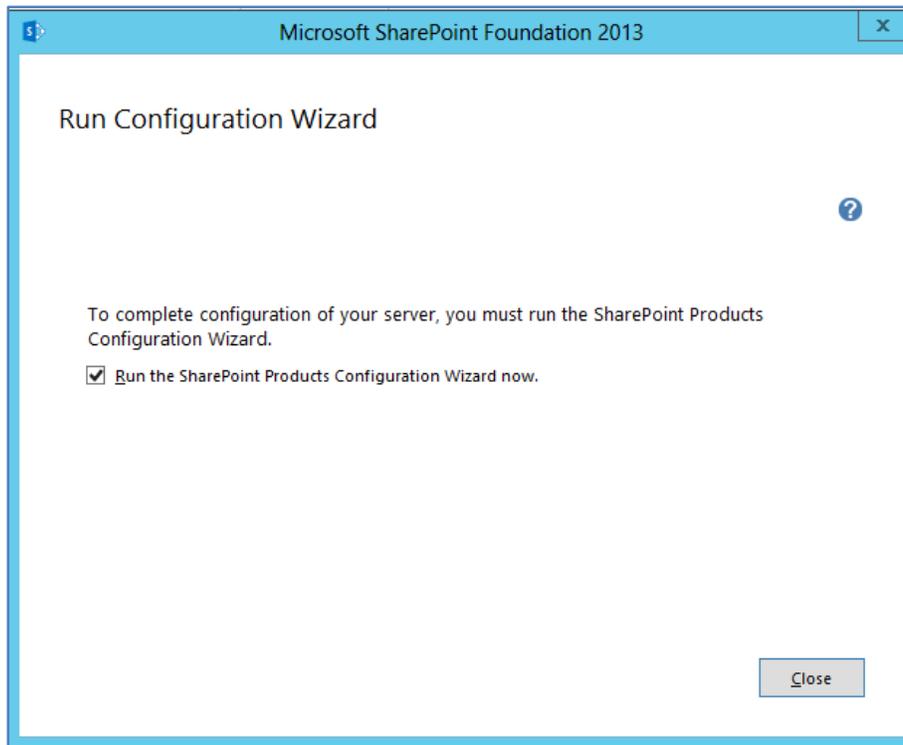
- b. **Complete** – Selecting this option will provide you will the full range of options with your SharePoint Foundation 2013 installation. However, it is important to note that you will have to complete ALL of the configuration steps and selections (including the creation of a SharePoint Foundation 2013 site collection) manually.

*Stand alone*



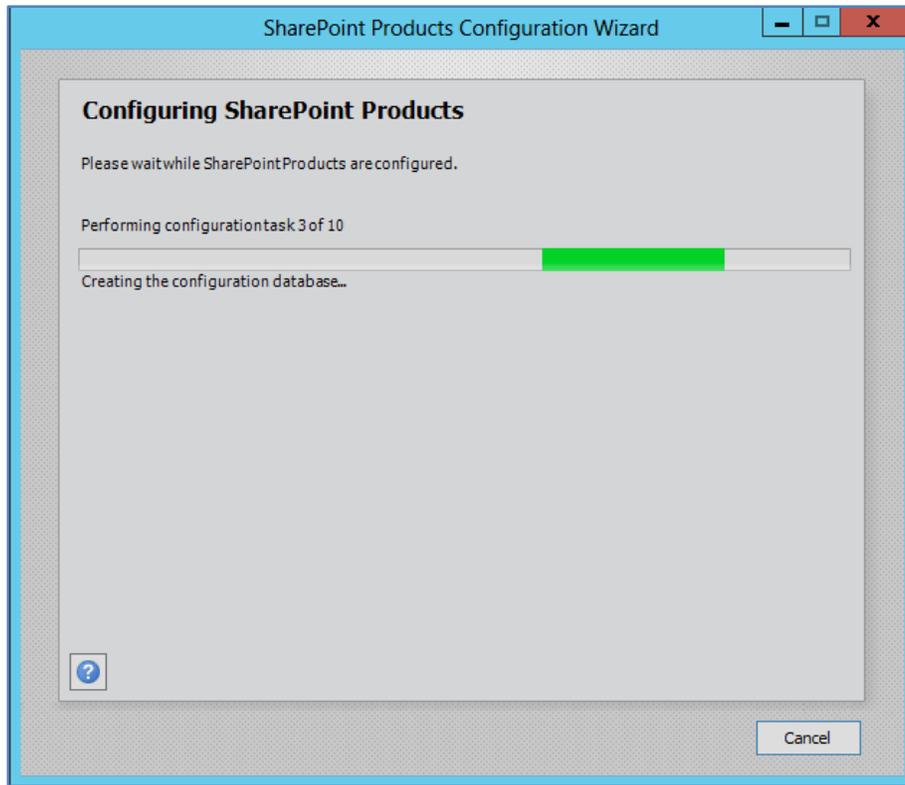
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The SharePoint binary files will be copied to the local server. There is no option to cancel this process until it is complete.



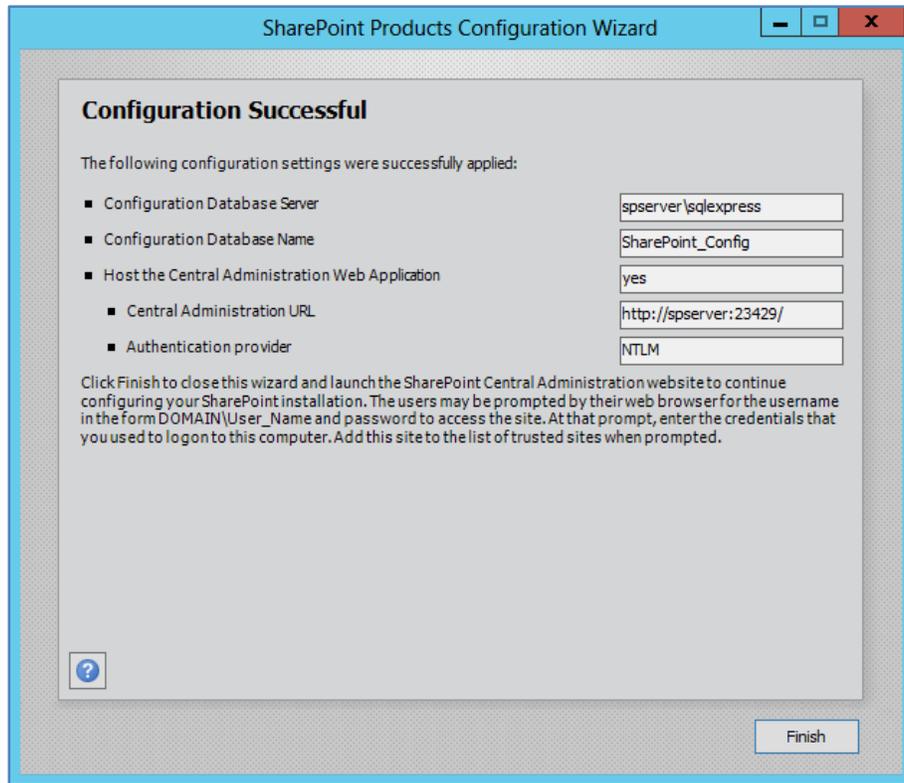
At the end of this process you will be prompted to run the configuration wizard. Simply leave the **Run the SharePoint Products Configuration Wizard now** option checked and press the **Close** button.

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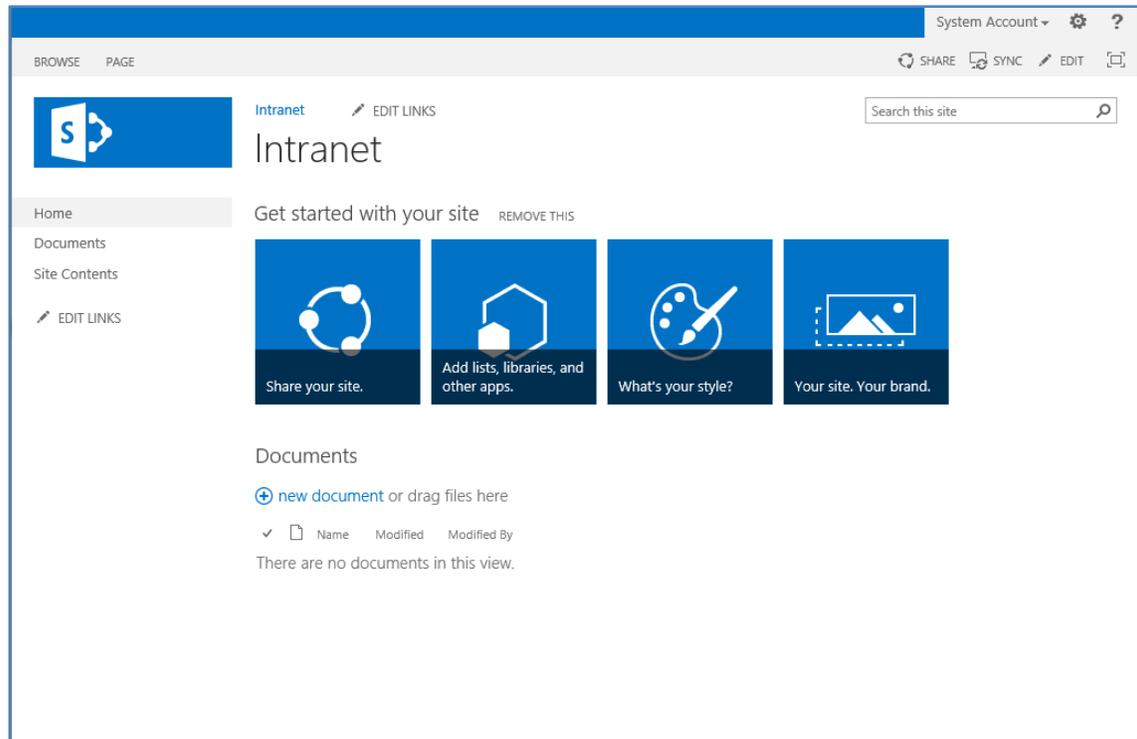
The configuration wizard will now run through ten or so stages to complete the configuration on the server. During this process there is no option to enter further information and the only option available is to press the **Cancel** button to halt the process.

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Once the wizard has completed all the steps you will see the above summary screen indicating that the configuration was successful. Press the **Finish** button to continue.

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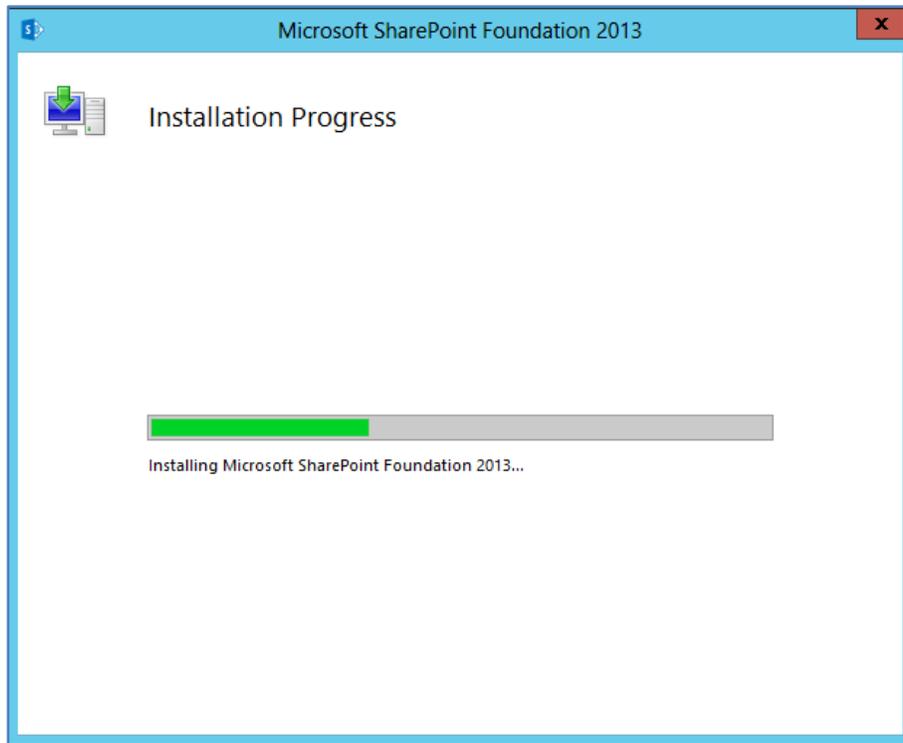


Your default site should now appear like shown above after a few moments.

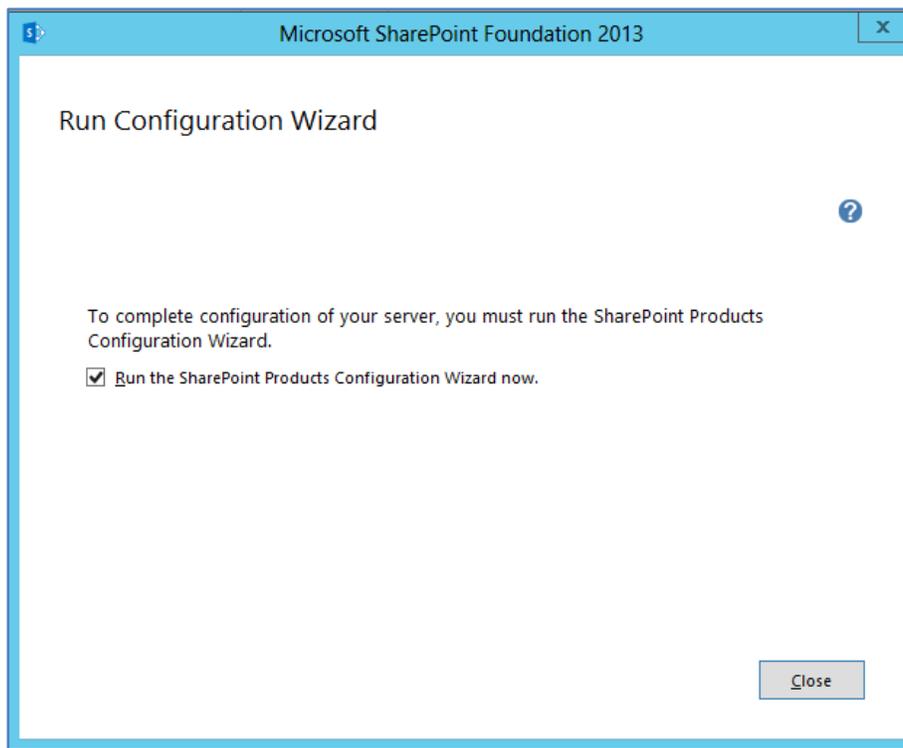
### *Complete installation*

Prior to commencing this installation you will need a suitable version of SQL installed on the SharePoint server into which the SharePoint content can be saved. The Complete installation process will not automatically install an SQL version for you.

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The SharePoint binary files will be copied to the local server. There is no option to cancel this process until it is complete.

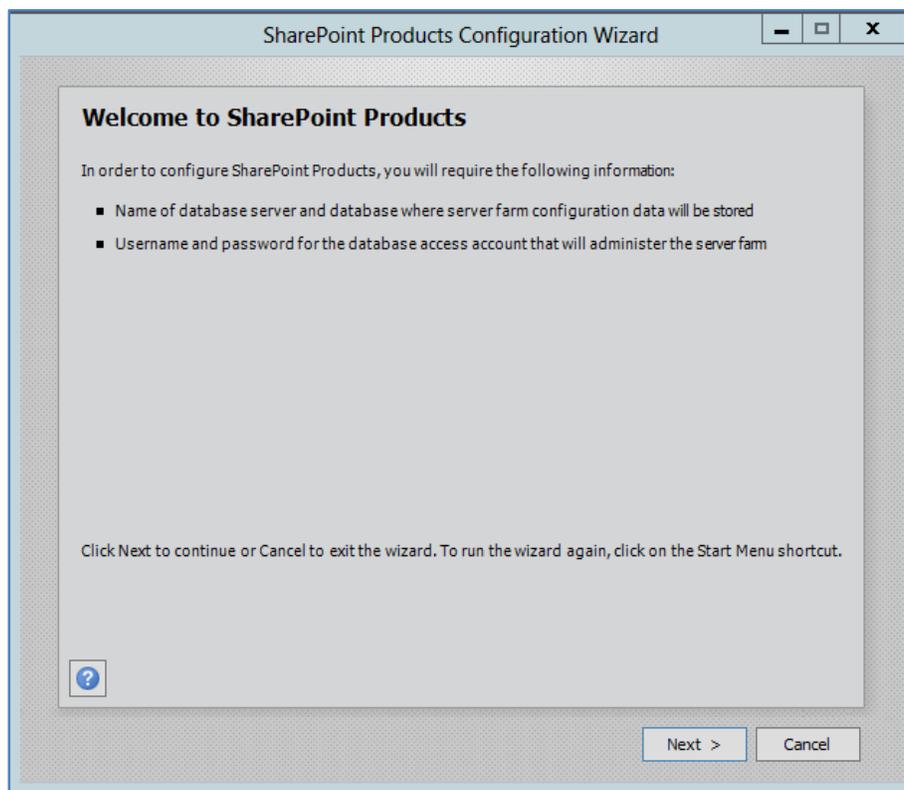


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Once the file installation process is complete you will be prompted to run the *Configuration Wizard* as shown above.

If you leave the *Run the SharePoint Products and Technologies Configuration Wizard now* option checked and press the **Close** button the wizard will commence. If you uncheck this option and press the **Close** button the wizard will not run and you need to run it at a later stage to configure SharePoint Foundation 2013.

It is generally recommended that you leave the option checked and press the **Close** button to run the *SharePoint Products and Technologies Configuration Wizard*.



If you left the option check the *SharePoint Products and Technologies Configuration Wizard* will commence.

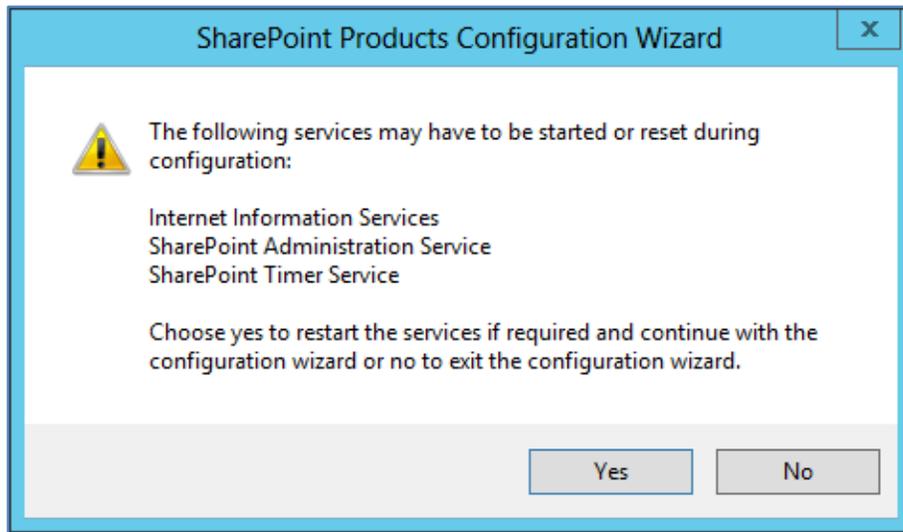
If you are not doing a Standalone installation then the window warns you that to complete the wizard you require:

- Name of database server and database where server farm configuration will be stored. You must have this database in place prior to proceeding.

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- Username and password for the database access account that will administer the server farm.

Press the **Next** button to continue.

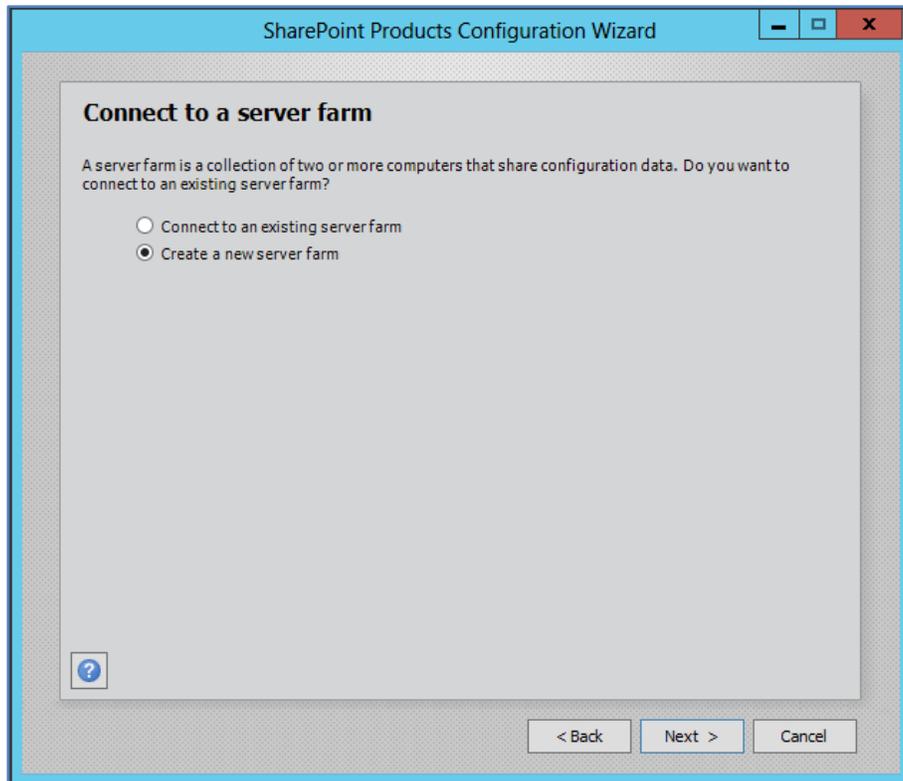


You will now be warned that a number of services on the server will be started or reset. These services are:

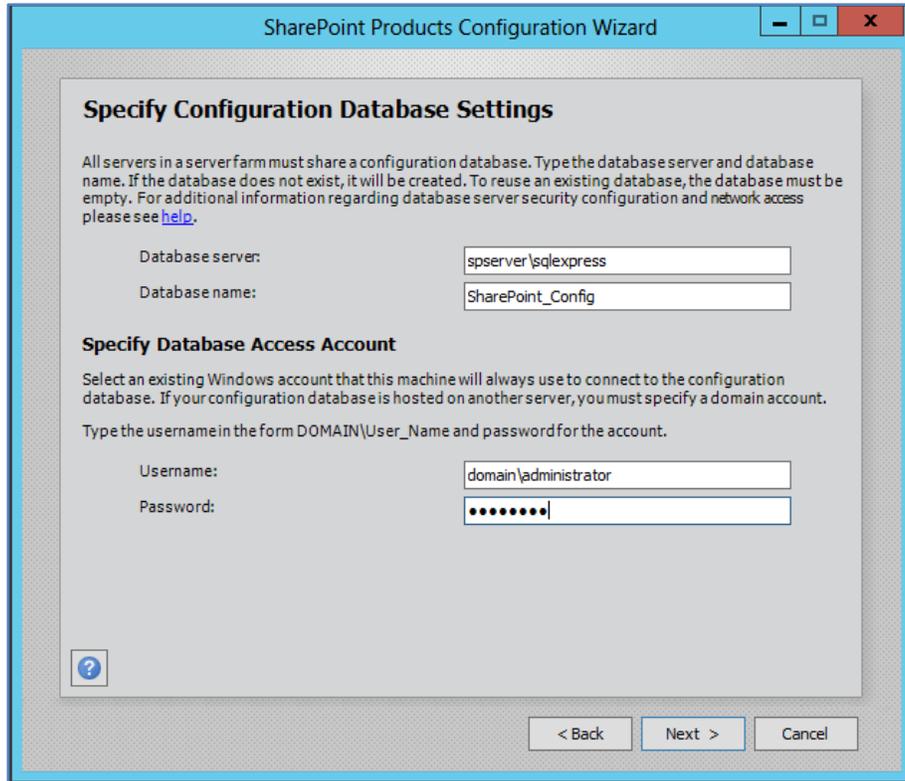
- Internet Information Services
- SharePoint Administration Service
- SharePoint Timer Service

Note that any users making use of these services on the Windows Server will have their processes interrupted during this process. If you do not wish this to happen press the **No** button to abort the process.

Press the **Yes** button to proceed.



If you did not select a Standalone installation you are now presented with the option to either connect to an existing SharePoint server 'SharePoint farm' or create a new server farm. In this case, because this is a new installation, select – **Create a new server farm** and press the **Next** button to continue.



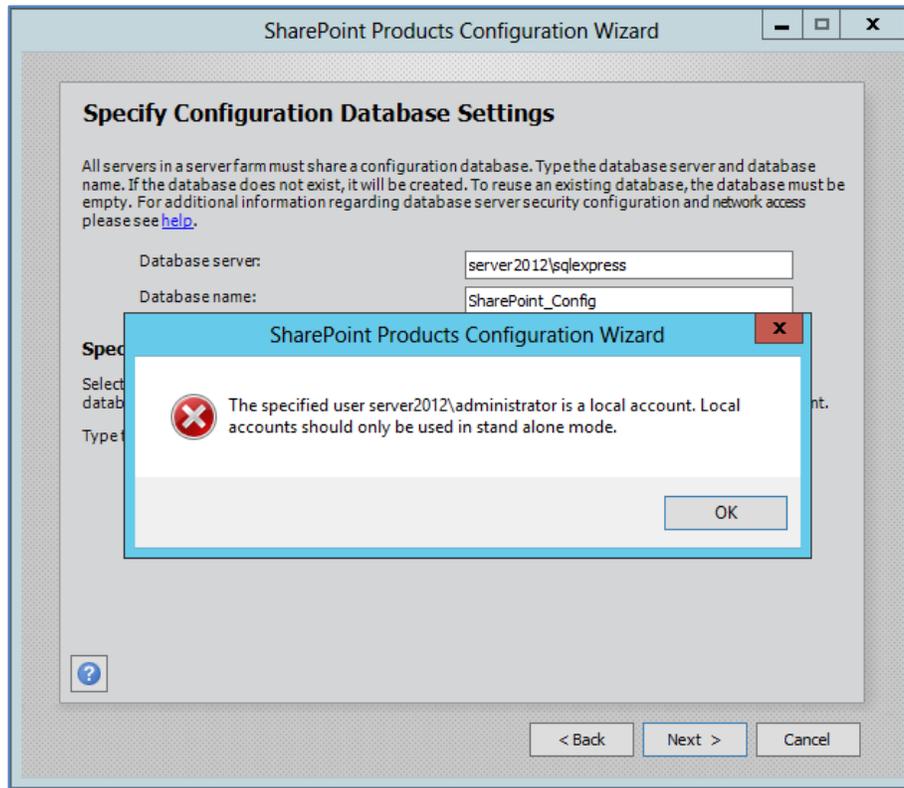
The screenshot shows the 'SharePoint Products Configuration Wizard' window. The title bar reads 'SharePoint Products Configuration Wizard'. The main content area is titled 'Specify Configuration Database Settings'. Below this title, there is a paragraph of text: 'All servers in a server farm must share a configuration database. Type the database server and database name. If the database does not exist, it will be created. To reuse an existing database, the database must be empty. For additional information regarding database server security configuration and network access please see [help](#).' Below this text are two input fields: 'Database server:' with the value 'spserver\sqlexpress' and 'Database name:' with the value 'SharePoint\_Config'. Below these fields is another section titled 'Specify Database Access Account'. This section contains a paragraph: 'Select an existing Windows account that this machine will always use to connect to the configuration database. If your configuration database is hosted on another server, you must specify a domain account. Type the username in the form DOMAIN\User\_Name and password for the account.' Below this text are two input fields: 'Username:' with the value 'domain\administrator' and 'Password:' with a masked password represented by ten dots. At the bottom of the wizard, there are three buttons: '< Back', 'Next >', and 'Cancel'. A help icon (a question mark in a square) is located in the bottom left corner of the main content area.

Because you selected the option to create new farm (Complete installation) you will now be prompted for the location of your database server. The *Server Farm Installation* option selected previously does not automatically install the Microsoft SQL Server 2008 R2 Express Edition and thus you will need to already have a compatible database server available on your network. Typically, this database server will be Microsoft SQL Server (2008 Express, Express R2, Workgroup, Standard, etc). For more information about the SharePoint Foundation 2013 database options see - **Chapter 8 – Database Operations**.

Note that you may be required to enter your database server name as `<SERVER>\<INSTANCE>` and the database access account as `<domain>\<username>`.

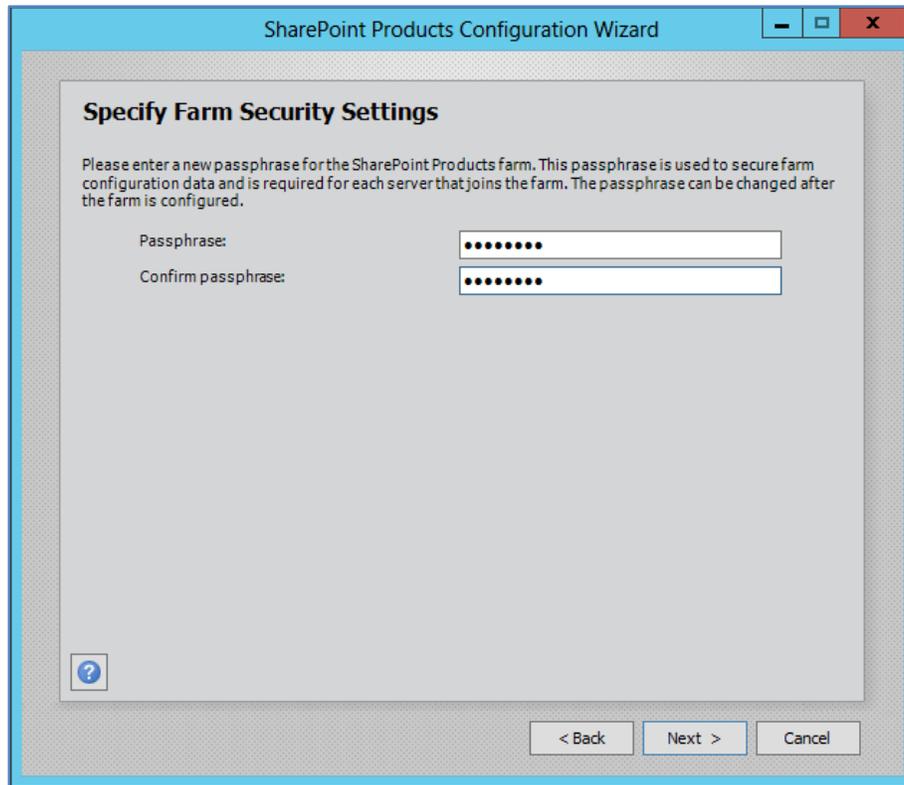
When these options are complete, press the **Next** button to continue.

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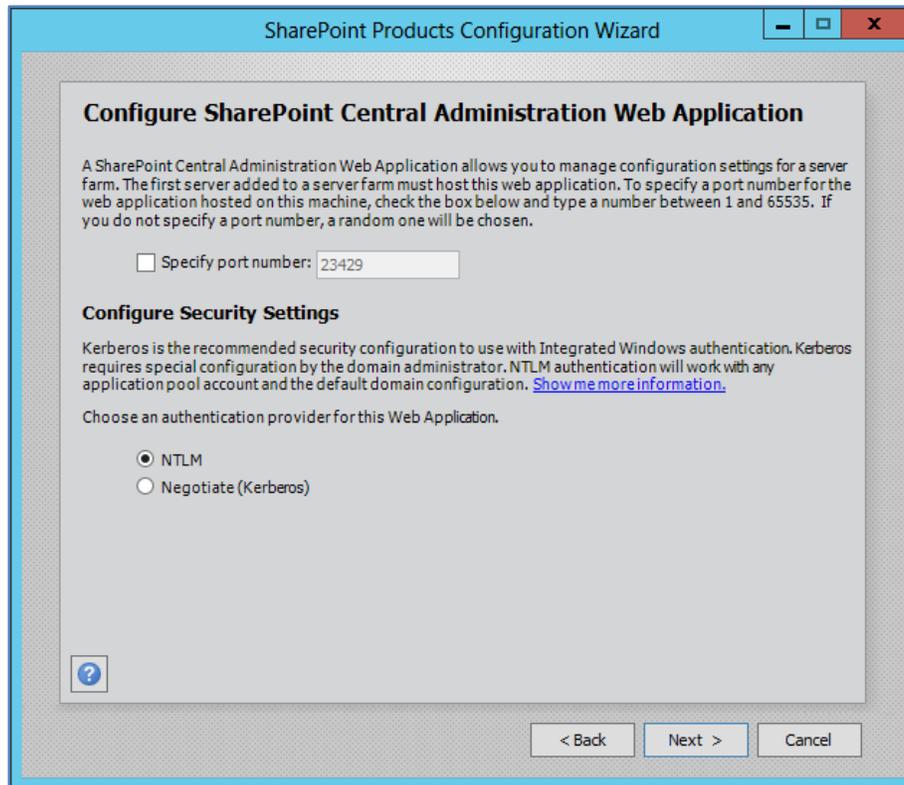
If you attempt to install onto a server that is not part of a domain you will see the above screen informing you that local user accounts can only be used in stand-alone mode. You are also prevented from proceeding further.

Once the server is on a domain and you have completed the required fields, press the **Next** button to continue.



You will now be prompted to enter a passphrase. This passphrase is used by SharePoint Foundation 2013 to allow the different components and servers in a farm to communicate securely.

Enter the desired passphrase, ensuring that it meets your security policy and press the **Next** button to continue. Note you may change this password later if desired.

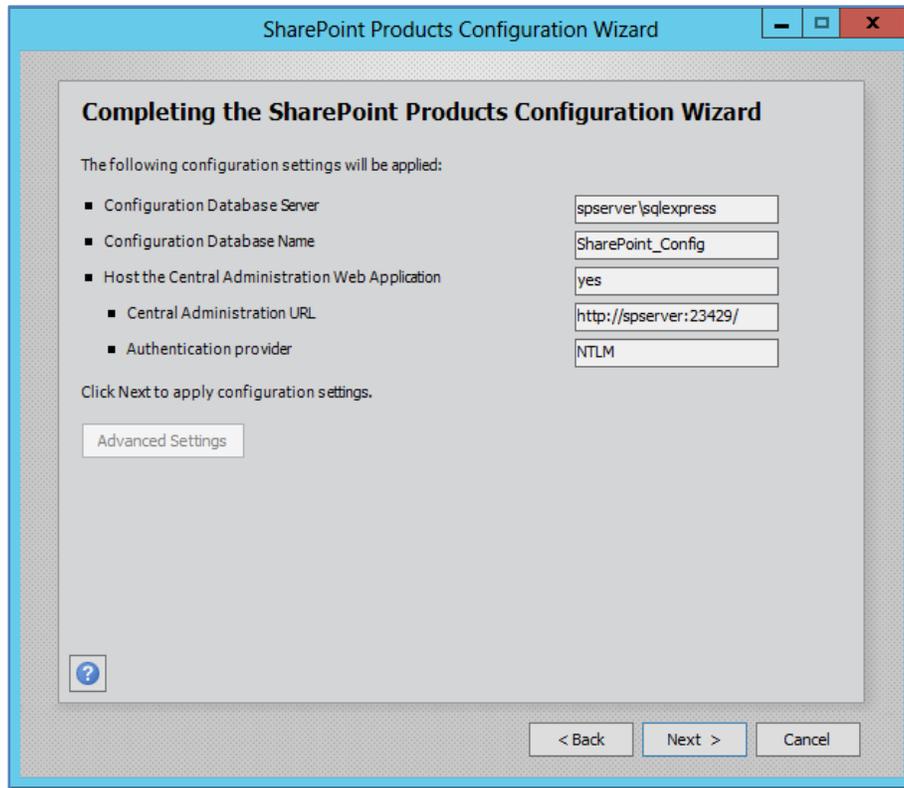


Now you will be prompted to set the SharePoint Central Administration Web Site port number if you want. By default, the installation will choose a random port. This configuration will ensure that the SharePoint Central Administration site doesn't conflict with an existing web site (especially the default web site on port 80). It is recommended that you leave this option unchecked so the installation can select a free random port.

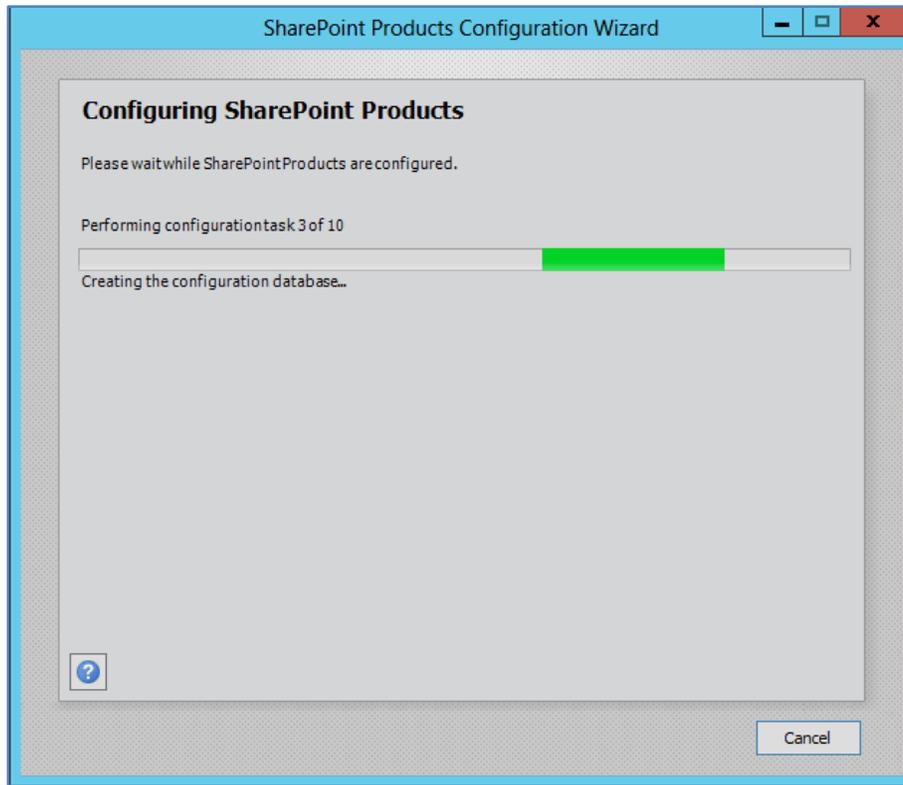
You are also prompted for the authentication provider required for SharePoint server security. This provider is referenced by SharePoint Server to determine who has access to the information in SharePoint Server. It is possible to change this at a later stage, however initially, it is recommended that it be left as NTLM.

When this is complete press the **Next** button to continue.

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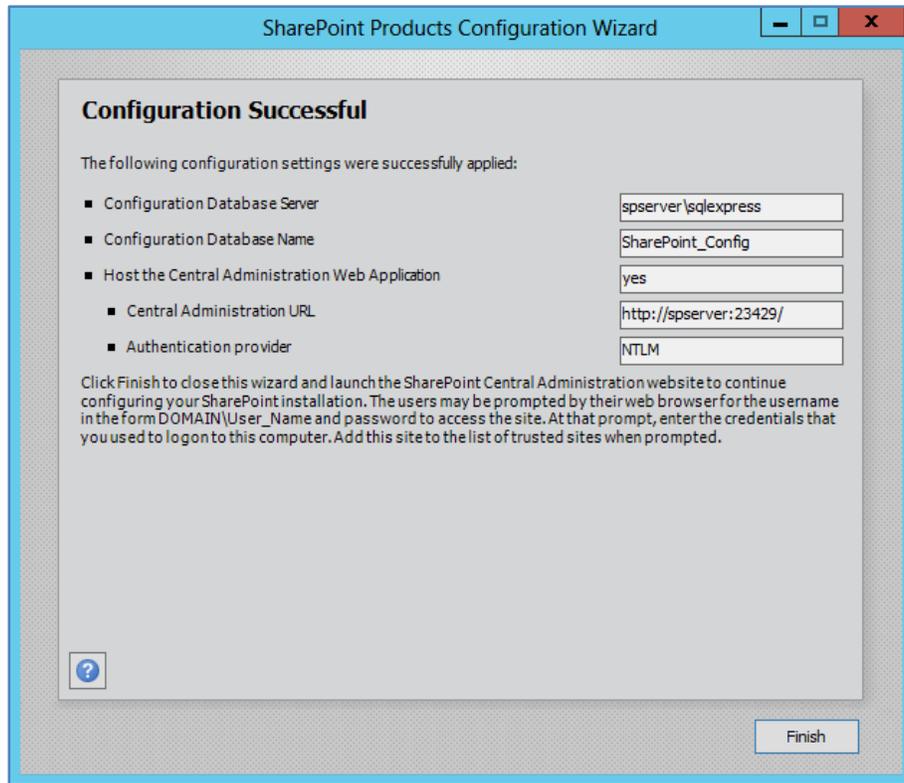


You are now finally presented with a summary of your installation choices. After reviewing these press the **Next** button to continue.

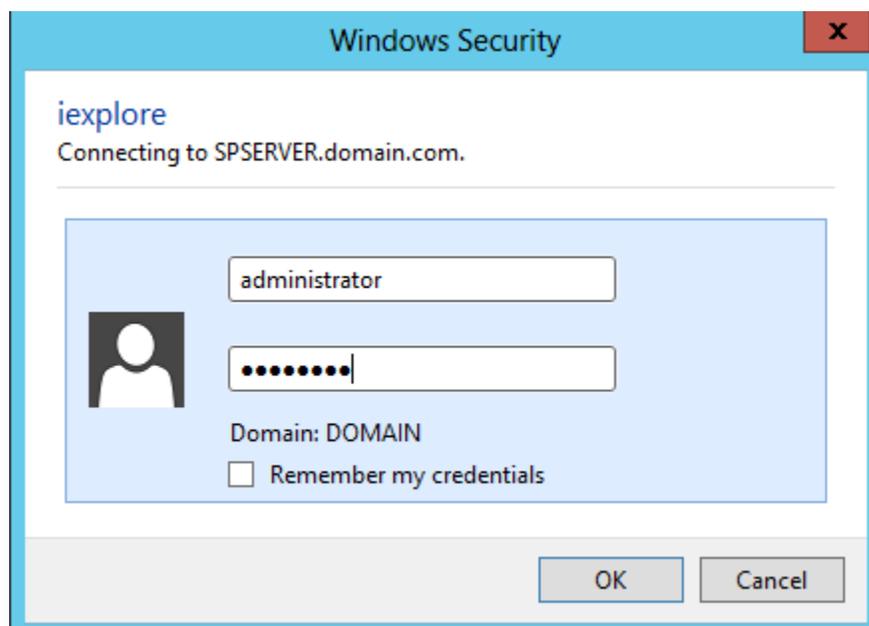


The configuration wizard will now run through ten or so stages to complete the configuration on the server. During this process there is no option to enter further information and the only option available is to press the **Cancel** button to halt the process.

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Once the wizard has completed all the steps you will see the above summary screen indicating that the configuration was successful. Press the **Finish** button to continue.



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Help Make SharePoint Better

Do you want to help make SharePoint better?

You can help make SharePoint better by signing up for the Customer Experience Improvement Program and automatically sending error reports to Microsoft.

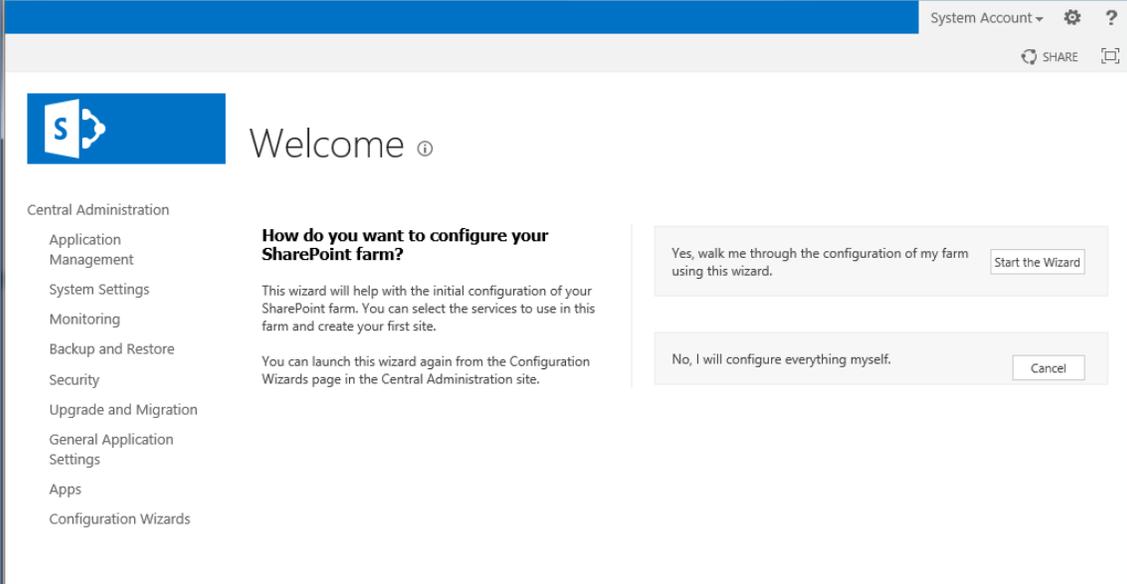
**Sign up for the Customer Experience Improvement Program and automatically upload error reports to Microsoft**

Yes, I am willing to participate (Recommended).

No, I don't wish to participate.

[More Information](#)

You will now be taken to the SharePoint Central administration site and prompted to whether you wish to participate in the Customer Experience Program. You may also be prompted to login to access the site prior to it opening. Make your selection and press **OK**.

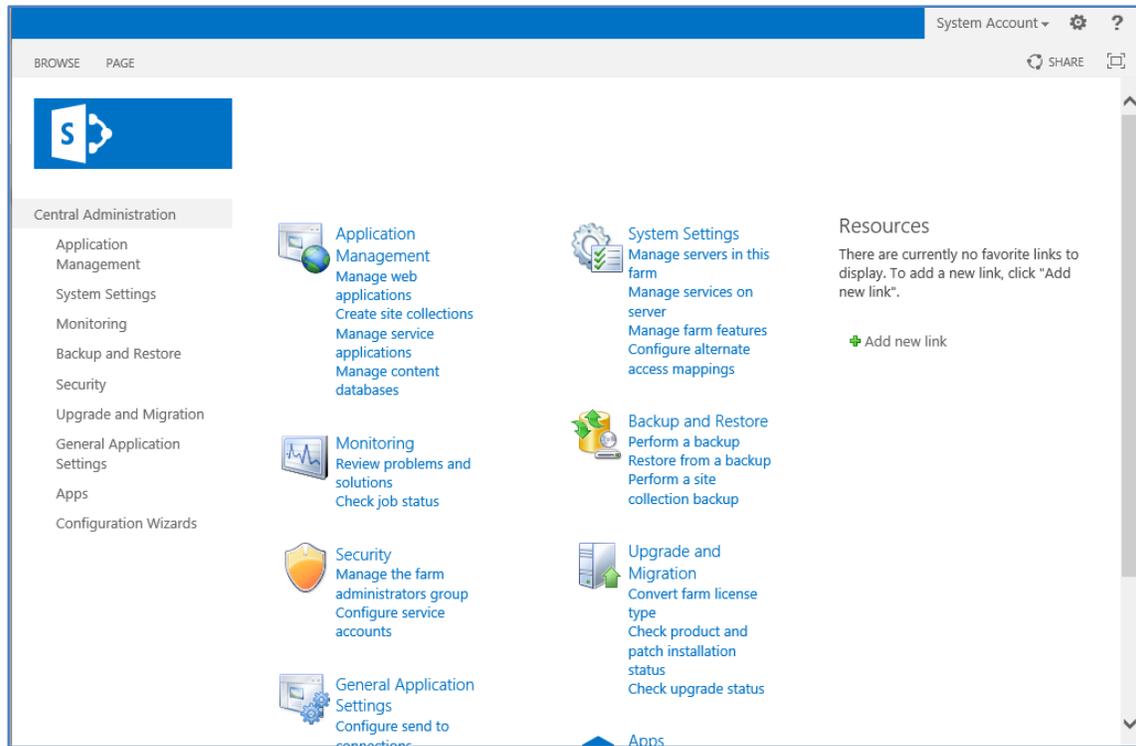


The screenshot shows the SharePoint Central Administration site. The top navigation bar includes 'System Account', a gear icon, and a question mark icon. Below the navigation bar, the SharePoint logo is on the left, and the word 'Welcome' is in the center. On the left side, there is a vertical menu with the following items: Central Administration, Application Management, System Settings, Monitoring, Backup and Restore, Security, Upgrade and Migration, General Application Settings, Apps, and Configuration Wizards. The main content area is titled 'How do you want to configure your SharePoint farm?'. It contains two paragraphs of text: 'This wizard will help with the initial configuration of your SharePoint farm. You can select the services to use in this farm and create your first site.' and 'You can launch this wizard again from the Configuration Wizards page in the Central Administration site.' To the right of the text are two buttons: 'Start the Wizard' and 'Cancel'.

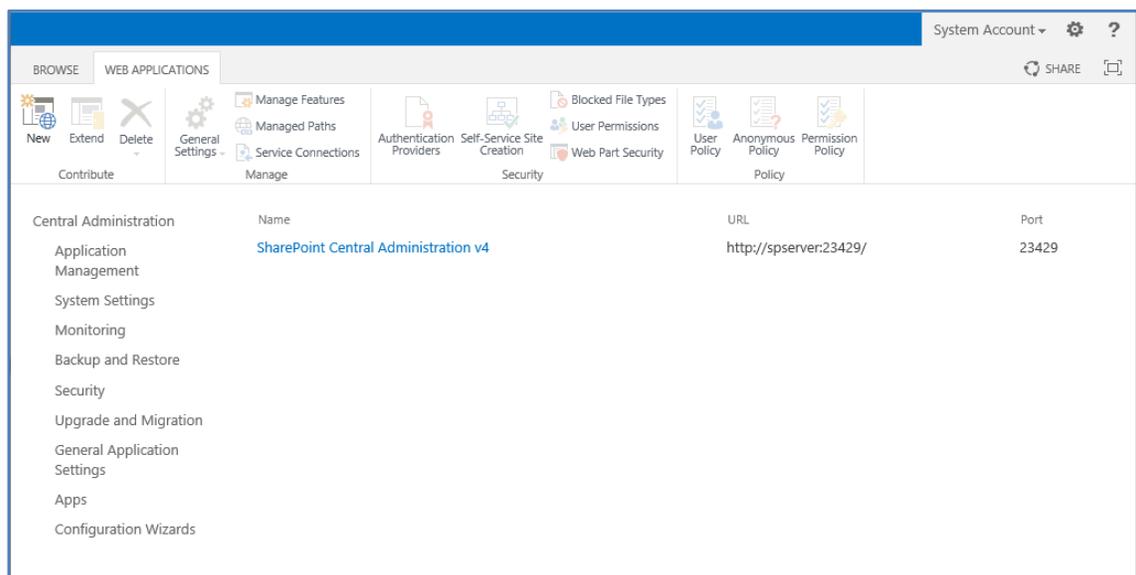
You will now be taken to the SharePoint Central administration site. The process will also start the SharePoint configuration wizard for you as shown above.

In most cases you will need to add the server URL to the safe sites to allow the scripts that run the wizard to function.

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To manually configure a SharePoint site select **Manage web applications** from the *Application Management* heading.



You should only see the Central Administration web site as shown above. Press the **New** button in the top left of the Ribbon Menu to create a new web application for the SharePoint site.

Create New Web Application

Warning: this page is not encrypted for secure communication. User names, passwords, and any other information will be sent in clear text. For more information, contact your administrator.

OK Cancel

**IIS Web Site**

Choose between using an existing IIS web site or create a new one to serve the Microsoft SharePoint Foundation application.

If you select an existing IIS web site, that web site must exist on all servers in the farm and have the same name, or this action will not succeed.

If you opt to create a new IIS web site, it will be automatically created on all servers in the farm. If an IIS setting that you wish to change is not shown here, you can use this option to create the basic site, then update it using the standard IIS tools.

Use an existing IIS web site

Default Web Site

Create a new IIS web site

Name

SharePoint - 80

Port

80

Host Header

Path

C:\inetpub\wwwroot\wss\VirtualDirectories\80

**Security Configuration**

Allow Anonymous

Yes

No

You now need to enter the new web application information. It is generally recommended that you create a new IIS web site.

Scroll down to enter more information.

### Create New Web Application

server using the IIS administration tools. Until this is done, the web application will be inaccessible from this IIS web site.

Use Secure Sockets Layer (SSL)

Yes  
 No

Claims Authentication Types

Choose the type of authentication you want to use for this zone.

Negotiate (Kerberos) is the recommended security configuration to use with Windows authentication. If this option is selected and Kerberos is not configured, NTLM will be used. For Kerberos, the application pool account needs to be Network Service or an account that has been configured by the domain administrator. NTLM authentication will work with any application pool account and with the default domain configuration.

Basic authentication method passes users' credentials over a network in an unencrypted form. If you select this option, ensure that Secure Sockets Layer (SSL) is enabled.

ASP.NET membership and role

Enable Windows Authentication

Integrated Windows authentication

NTLM

Basic authentication (credentials are sent in clear text)

Enable Forms Based Authentication (FBA)

ASP.NET Membership provider name

ASP.NET Role manager name

Trusted Identity provider

There are no trusted identity providers defined.

In most cases you want to leave the default information.

Scroll down for more choices.

**Create New Web Application**

**Sign In Page URL**

When Claims Based Authentication types are enabled, a URL for redirecting the user to the Sign In page is required.

[Learn about Sign In page redirection URL.](#)

Default Sign In Page

Custom Sign In Page

**Public URL**

The public URL is the domain name for all sites that users will access in this SharePoint Web application. This URL domain will be used in all links shown on pages within the web application. By default, it is set to the current servername and port.

<http://go.microsoft.com/fwlink/?LinkId=114854>

**URL**

**Zone**

Default

**Application Pool**

Choose the application pool to use for the new web application. This defines the account and credentials that will be used by this service.

You can choose an existing

Use existing application pool

Create new application pool

**Application pool name**

By default the URL for the site will be the name of the server.

Scroll down for more choices.

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**Create New Web Application**

This defines the account and credentials that will be used by this service.

You can choose an existing application pool or create a new one.

Create new application pool

Application pool name  
SharePoint - 80

Select a security account for this application pool

Predefined  
Network Service

Configurable  
DOMAIN\Administrator  
[Register new managed account](#)

**Database Name and Authentication**

Use of the default database server and database name is recommended for most cases. Refer to the administrator's guide for advanced scenarios where specifying database information is required.

Use of Windows authentication is strongly recommended. To use SQL authentication, specify the credentials which will be used to connect to the database.

Database Server  
spserver\squlexpress

Database Name  
WSS\_Content

Database authentication

Windows authentication (recommended)

SQL authentication

Account  
Password

Failover Server  
Failover Database Server

It is generally recommended that you create a new application pool to host the web service. You can also enter the database server and name if desired. By default the content database will be WSS\_CONTENT.

Scroll down for more options.

### Create New Web Application

**Failover Server**  
You can choose to associate a database with a specific failover server that is used in conjunction with SQL Server database mirroring.

**Failover Database Server**

**Service Application Connections**  
Choose the service applications that this Web application will be connected to. A Web application can be connected to the default set of service applications or to a custom set of service applications. You can change the set of service applications that a Web application is connected to at any time by using the Configure service application associations page in Central Administration.

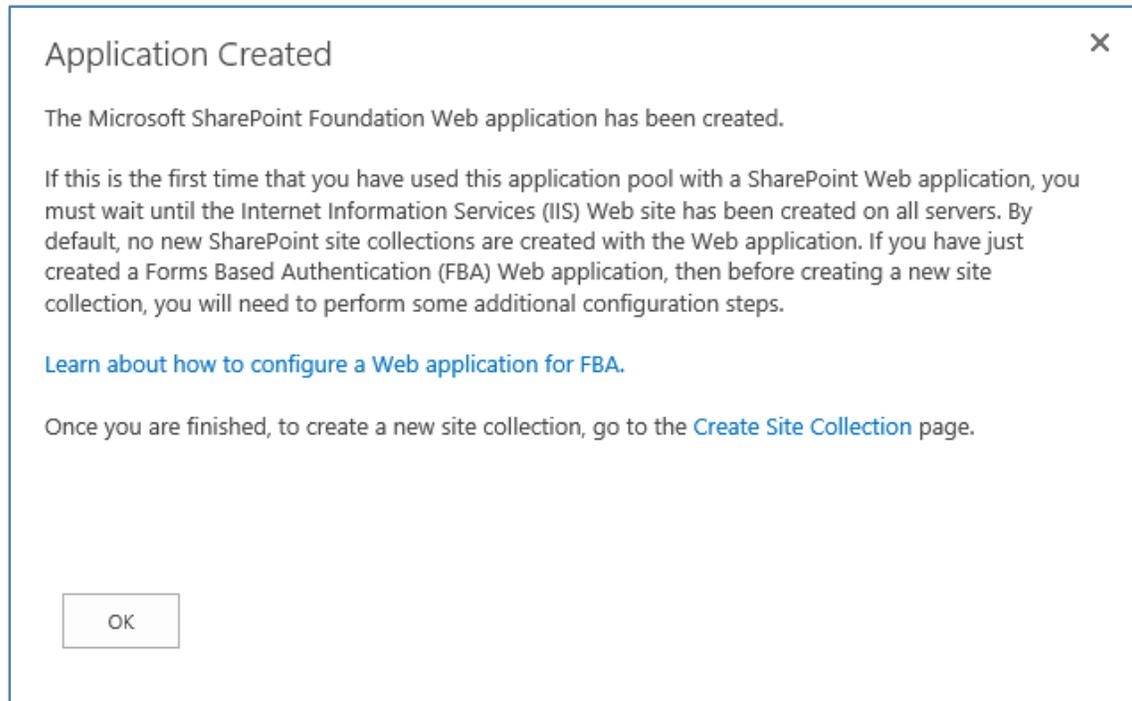
Edit the following group of connections:    
There are no items to show in this view.

**Customer Experience Improvement Program**  
Collect web site analytics about web pages on this web application. Please read the Administration guide before turning this on for web applications available over the public Internet.

**Enable Customer Experience Improvement Program**  
 Yes  
 No

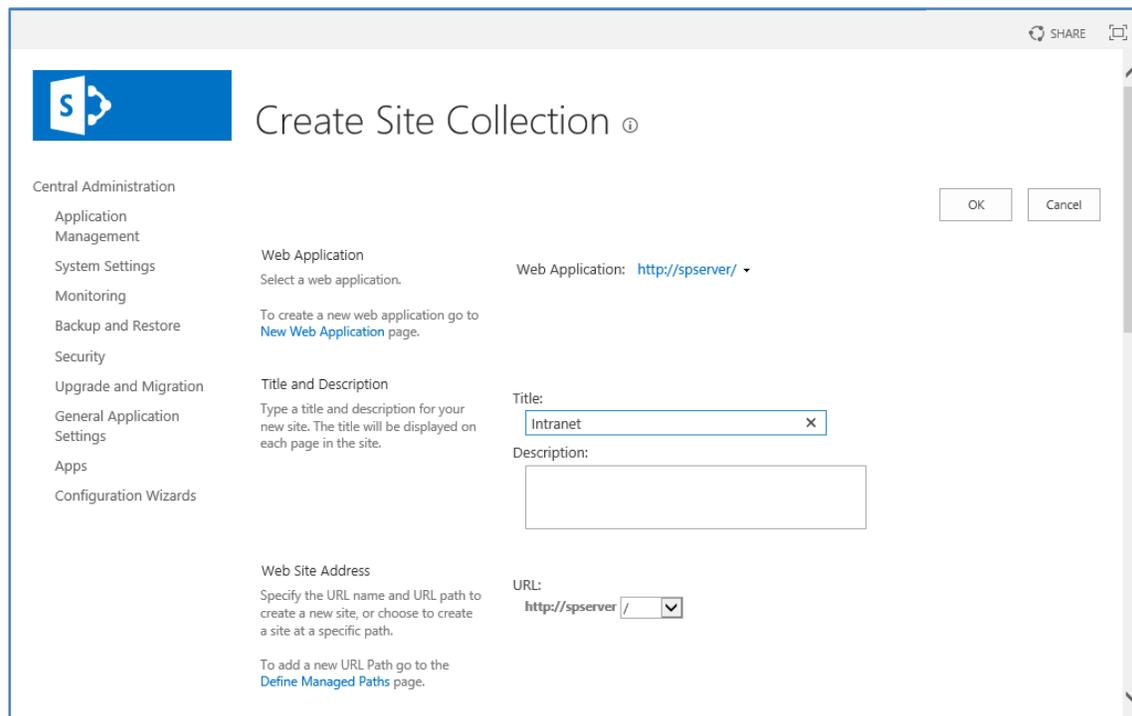
**Warning: In order for Customer Experience Improvement Program (CEIP) to collect data, both CEIP and browser CEIP, at the farm level, should be enabled.**

When complete, press the Save button to create the web application.



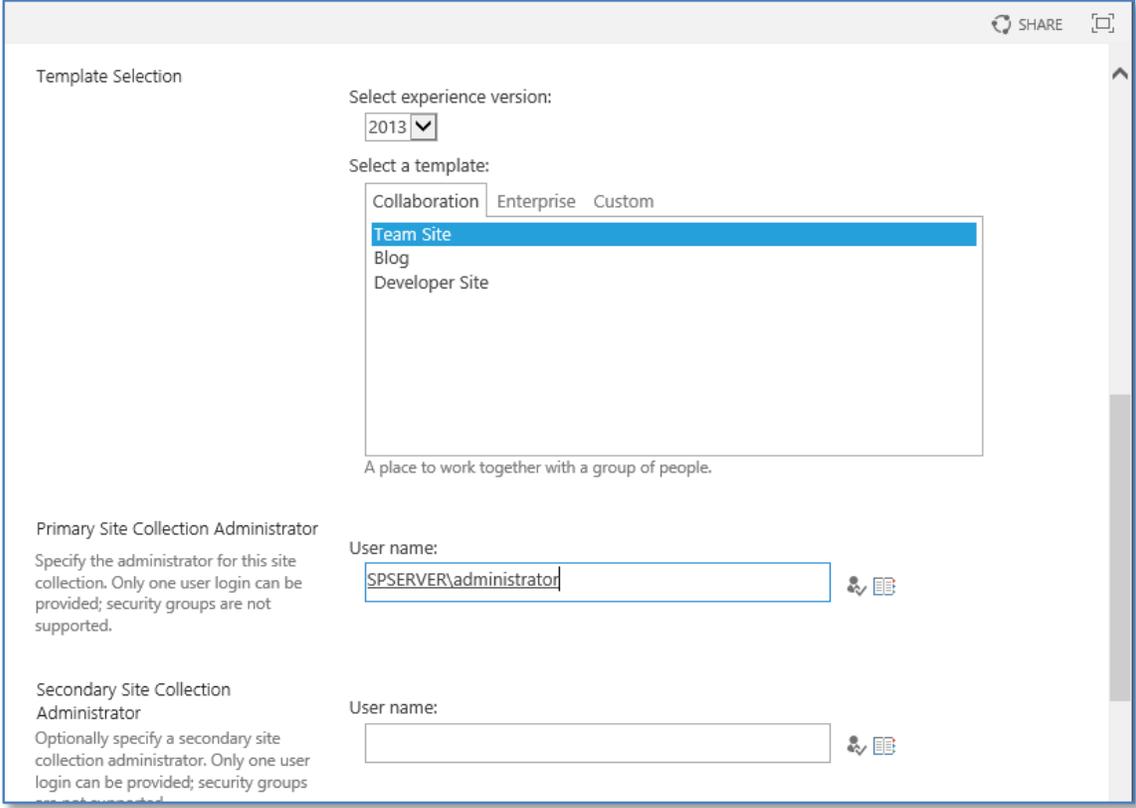
After a few moments the web application should be created and you should receive a confirmation message like that shown above.

Press the **Create Site Collection** link to continue.



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Enter a Title and Description, then scroll down for more options.

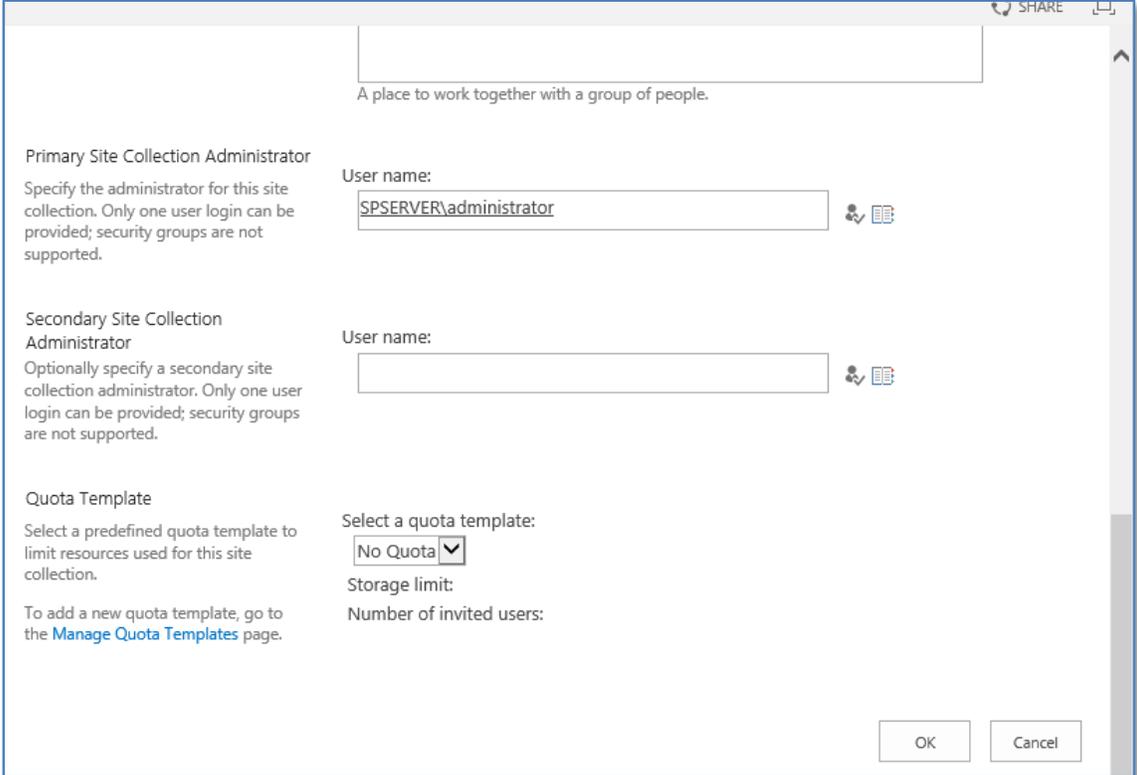


The screenshot shows the 'Template Selection' step of the SharePoint site creation wizard. At the top right, there are 'SHARE' and window control icons. The main content area is titled 'Template Selection'. It includes a 'Select experience version:' dropdown menu set to '2013'. Below that is a 'Select a template:' section with three tabs: 'Collaboration', 'Enterprise', and 'Custom'. The 'Collaboration' tab is active, showing a list of templates: 'Team Site' (highlighted in blue), 'Blog', and 'Developer Site'. Below the list is a description: 'A place to work together with a group of people.' Further down, there are two sections for administrators. The 'Primary Site Collection Administrator' section has a 'User name:' label and a text box containing 'SPSERVER\administrator', with a help icon to the right. The 'Secondary Site Collection Administrator' section has a 'User name:' label and an empty text box, also with a help icon to the right.

Select a site template and enter a *Primary* and *Secondary* (if required) site administrator.

Scroll down for more options.

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A place to work together with a group of people.

**Primary Site Collection Administrator**  
Specify the administrator for this site collection. Only one user login can be provided; security groups are not supported.

User name:  

**Secondary Site Collection Administrator**  
Optionally specify a secondary site collection administrator. Only one user login can be provided; security groups are not supported.

User name:  

**Quota Template**  
Select a predefined quota template to limit resources used for this site collection.  
To add a new quota template, go to the [Manage Quota Templates](#) page.

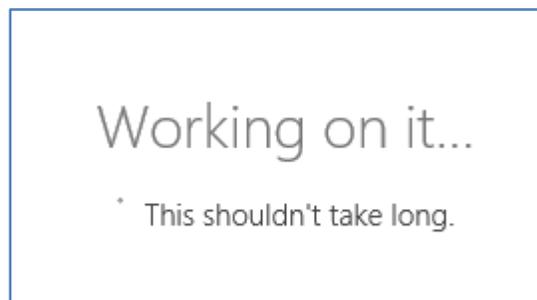
Select a quota template:  

Storage limit:  
Number of invited users:

OK Cancel

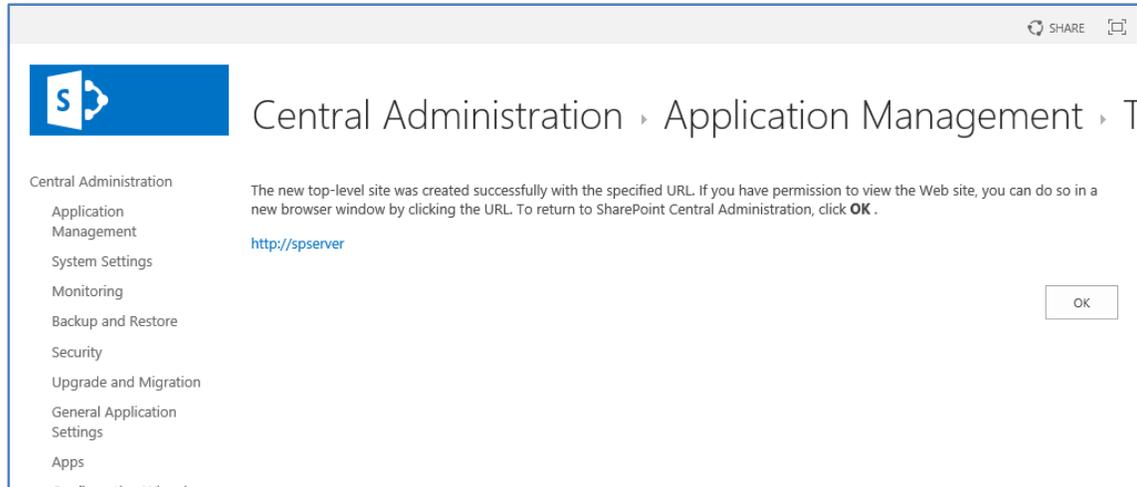
Set a *Quota template* if desired.

When complete press the **OK** button to continue.



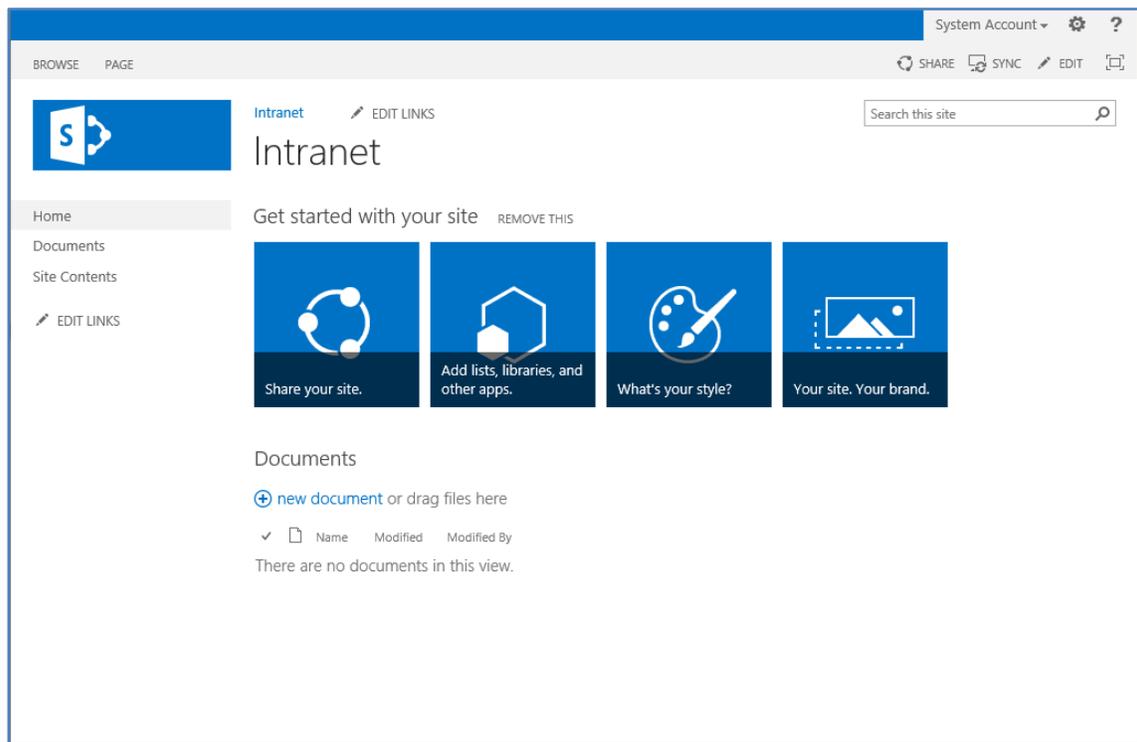
The site collection creation process will take a few moments.

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When the creation process is complete you should receive a confirmation message, like that shown above, that the top level SharePoint site has been created.

Press the hyperlink with URL address to view the site.



Your default site should now appear like shown above.

There are a number of additional services that needs to be configured but this will be covered in future updates to this chapter.

### 3.4 Conclusion

Prior to any installation you need to decide on what type of installation you wish to perform, advanced, default or stand alone. Each of these options presents a number of different options that can be selected during the installation process and can affect the future growth of your installation.

Please send your comments and feedback to [director@ciaops.com](mailto:director@ciaops.com).