This is a sample chapter from:

Implementing and Administering Microsoft Project Server 2010

ISBN: 9781934240090

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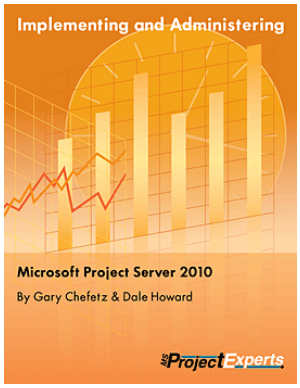
MODULE 04: INSTALLING MICROSOFT PROJECT SERVER 2010 (BETA)



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Published and distributed by Chefetz LLC dba MSProjectExperts, 90 John Street Suite 404, New York, NY 10038 (736) 636-1688 http://www.msprojectexperts.com.

Module Number 04

Installing Project Server 2010

Learning Objectives

After completing this module, you will be able to:

- Identify hardware and software requirements for a Project Server 2010 installation
- Understand service accounts required for installation and operation
- Configure SQL Server and Analysis Services for SharePoint Server and Project Server
- Install SharePoint Server and Project Server

Inside Module 04

Installing Project Server 2010 Overview

Installing Project Server and SharePoint Server has traditionally been a very tedious task with numerous prerequisite steps and downloads as well as server tweaks and configurations. With the introduction of 2010, Microsoft removed dozens of small manual steps from the process, providing a much more streamlined and automated installation experience. A Project Server implementer's life gets markedly better in 2010.

One major difference between installing Project Server 2007 and Project Server 2010 is that the automated installation routine now performs most of the server prerequisite configuration and component gathering and implementation for you. You heard that right: provided that you have an available Internet connection, the new *Microsoft SharePoint Products and Technologies 2010 Preparation Tool* not only configures the application server for you, it reaches out to Microsoft download sites to gather all of the additional software bits you previously needed to hunt down yourself, and then it installs them for you. Included are such things as the appropriate version of the *.NET Framework, PowerShell*, the new *Windows Identity Foundation* (Geneva Framework), *Office Communication Server* and *SQL Server* components from the *SQL Server Feature Pack,* to name only a few of the chores removed from your plate.

The second big change to the Project Server 2010 installation is that Project Server now slips into the SharePoint envelope as a service. This marks the completion of the SharePoint integration journey that began with the introduction of Project Server 2002. During the 2002/2003 product years, Project Server and SharePoint started dating. By the time 2007 rolled out, dating turned into living together, and with the 2010 release Project Server and SharePoint server are officially married. Once you run the SharePoint Products Configuration wizard for your Project Server/SharePoint Server installation, you now manage Project Server and Project Server 2010 sites just like you'd manage any other SharePoint application. You no longer need a shoehorn for the process, and gone are Shared Service Providers as a more streamlined management experience emerges as well!

One of the most significant impacts of this arrangement is that all Project Server reporting is now handled by Excel Services in SharePoint Server, leveraging PerformancePoint Services and the Business Intelligence Center. In fact, it seems likely that the desire to leverage this powerful facility, offered only with the SharePoint Server Enterprise SKU, is the driving factor behind the inter-SKU dependency. While the Project Server installation is now a relative cinch, Project Server implementers and administrators need to be much more conversant with managing SharePoint than ever before, and must now become very competent with the new version of Excel Services, which underlies all Project Server reporting capabilities. You still have to spend time configuring the SharePoint environment after you install the software.

Finally, one last major change for Project Server implementers and administrators is the new integration with Exchange Server to synchronize Project Server tasks with tasks in Outlook. By eliminating the Outlook add-in, Microsoft is removing a big pain for administrators who must keep it working out in desktop world. From the continuously annoying active-X installation failures to other strange behaviors in deployment, I doubt many will be sad to see this one go. Configuring the new integration with Exchange Server could best be described as similar to the chore of configuring Active Directory sync for the first time, and similar in its requirements for administrative attention as well.

Preparing to Install SharePoint Server and Project Server 2010

To install SharePoint Server 2010 and Project Server 2010 successfully, you must either be a Domain Administrator, or enlist the support of a Domain Administrator to create an AD account for the Farm Administrator as well as other service accounts and Active Directory groups for your implementation. You must be a SQL Server administrator in order to perform the SQL Server and SQL Analysis Services configuration tasks required for installation, and you must be a local administrator on your target installation Server(s). Finally, you must either be an Exchange Server

administrator or enlist the support of your Exchange Server administrator to configure Exchange Server for Project Server integration.

Meet or Exceed Minimum Hardware Requirements

Because Project Server 2010 is built on SharePoint Server 2010, your system must meet the minimum requirements for SharePoint Server. The following guidelines are Microsoft's published minimum standard, but are not likely to provide optimal performance for implementations with many users. Assuming that you are planning on installing SQL Server on a separate server, your new Project Server machine must have a 64-bit, dual processors running at 3 GHz or above, 4 GB of RAM, and at least 80 GB of disk space. MSProjectExperts strongly recommends that you deploy a server with dual quad-core processors, 8 GB or RAM or more, and 200 GB of disk space at RAID 1.

Meet or Exceed Minimum Software Requirements

Like its hardware requirements, Project Server 2010 software requirements are also driven by its SharePoint Server host.

Application Server Requirements

Your server must have Windows Server 2008 installed with Service Pack 2 and all critical updates. You can use Windows Server 2008 Standard, Enterprise, or Datacenter editions. MSProjectExperts recommends that you use Windows Server 2008 R2 as your platform of choice for the production release of Project Server 2010. Keep in mind that you cannot install SharePoint Server to a Windows Server 2008 core installation. As in previous editions of Project Server, your host server must have the Application Server and Web Server roles enabled. Unlike previous editions, you do not have to configure these roles in advance, as the new *Microsoft SharePoint Products and Technologies 2010 Preparation Tool* configures these roles for you. You must install SharePoint Server Enterprise Edition prior to installing Project Server 2010. Project Server 2010 also requires that you install the *SQL Server 2008 Native Client* and the *SQL Server 2008 Analysis Management Objects (AMO)* on the server running Project Server 2010 to support reporting connectivity. The SharePoint Preparation Tool installs the *SQL Server 2008 Native Client* removing this chore from your plate. MSProjectExperts recommends that you install the *SQL Server 2008 Analysis Management Objects (AMO)* as part of your server preparation, but you can opt to install this after you install SharePoint Server and Project Server; however, you cannot build an OLAP cube until you install both. Always install the *SQL Server 2008 Native Client* before installing the *SQL Server 2008 Analysis Management Objects*.

Project Server requires the 2008 versions of the SQL Feature Pack objects regardless of whether you are running SQL Server 2005 or SQL Server 2008,

Warning: In order to install the SharePoint Server 2010 BETA and Project Server 2010 on Windows Server 2008 R2, you must apply the patch specified in Microsoft Knowledgebase article KB(971382).

SQL Server Requirements

Project Server 2010 supports installations using SQL Server 2005 patched with Service Pack 3 and Service Pack 3 Cumulative Update 4 released on June 15, 2009. It also supports installations using SQL Server 2008 patched to RTM

Cumulative Update 5, released on May 18, 2009. Both Project Server and SharePoint Server connect only to the SQL Server database engine; tools from other manufacturers, such as Oracle, are not supported. Project Server is dependent on SQL Analysis Services, SQL Reporting Services, SQL Management tools, SQL Connectivity components and the SQL Server Agent Service. You must also install the *SQL Server 2008 Native Client* on the computer running *SQL Analysis Services* when you install *SQL Analysis Services* on a separate server.

Desktop Requirements

Project Web Access requires Internet Explorer 7.0 or higher running on Windows Vista or higher. You must have IE installed on your Project Server 2010 machine to complete the installation, and all client systems that connect to Project Web Access must meet this requirement as well.

Prepare the Security Environment

Both SharePoint Server 2010 and Project Server 2010 require domain user accounts to run a variety of server-based services. You must prepare your service accounts before you begin your installation. Depending on the size of your implementation and your organization's security and account policies, you may choose to create one or more physical accounts for your deployment that fulfill one or more logical account roles.

Create Service Accounts

You must prepare your service accounts before you begin your installation. The account roles used in a SharePoint Server 2010 environment with Project Server 2010 deployed are numerous. For secure farm environments and organizations that require compliance with Windows security best practices, following the principle of least privilege involves creating separate physical service accounts for each of the logical account roles for potentially all of the following account roles:

- **SQL Server Process Account Role:** The system uses the account assigned to this account role to run the various services that are part of Microsoft SQL Server. This includes SQL Server itself, the SQL Server Agent, Analysis Services, and Reporting Services. Depending on your organization's requirements, you may use multiple accounts to fulfill this role (e.g. DOMAIN\Sql_Svc for SQL, DOMAIN\SSAS_Svc for Analysis Services, and DOMAIN\SSRS_Svc for Reporting Services). This account must be a domain account and the physical account allocated to this account role should be unique within the deployment for security purposes. You can create separate accounts for SQL Server and Analysis Services. The Analysis Services service account will require db_datareader access to all Project Server reporting databases for which it builds cubes.
- **Server Farm Account Role:** The system uses the account assigned to this account role to access the SharePoint Configuration database and as the Application Pool identity for the SharePoint Central Administration site. This is also the account under which the Windows SharePoint Services Timer service runs. This account receives membership in the Logins, db_Creator, SecurityAdmin, and db_owner SQL Server security roles during the configuration of the SharePoint farm. Microsoft's documentation also refers to this account role as the Database Access Account.

Warning: You cannot use a local Windows account for the Server Farm account role. You must install SharePoint Server 2010 into a domain environment.

If you want to build a Virtual machine environment for development or demo purposes, you must enable the Active Directory Role on your server.

- **Application Pool Process Account Role:** The system uses the account assigned to this account role as the Application Pool identity for a Web application and for accessing the content database associated with that particular Web application. The account must be a domain account, but it does not need to be a member of any particular security group. You should consider providing each Web application you plan to create with its own Application Pool Process Account Role.

Application pools are an Internet Information Services feature that enables you to run Web applications in an isolated process from other Web applications. This isolation construct prevents a crash in one application from affecting other applicaitons running on the same server farm.

- **Site Collection Owner Account Role:** The account assigned to this account role has administrative rights over the Windows SharePoint Services site collection you create to host a SharePoint site. First, you create a Web application, which is essentially an extended Web site, to host the SharePoint site. Then, you create a new Windows SharePoint Services site collection. You enter this account when you specify a primary site collection owner. This account should be a domain user. In all likelihood, you will want to use either your personal account or the standardized administrator account provided by your organization for this purpose.

A site collection is a group of Microsoft Windows SharePoint Services sites that are sub-sites of a single top-level site.

- **Project Server Instance Administrator Role:** During the installation, you must specify the initial administrator for the instance of Microsoft Project Server 2010 that you are installing. This account must be a valid domain user. In all likelihood, you will want to use either your personal account or the standardized administrator account provided by your organization for this purpose.
- **SharePoint Search Service Account Role:** The SharePoint Search Services runs as the account assigned to this account role. The account also receives read/write access to the content databases for all Web applications, read access to the SharePoint Configuration database, and read/write access to the SharePoint Search database.
- **SharePoint Search Content Access Account Role:** The SharePoint Content Access Service uses the account assigned to this account role to access content within the SharePoint farm. The account should be a domain account, and you may use the same account used for the SharePoint Search Service Account Role for this account role. For security purposes, this account should not have permission to modify any content within the farm.
- **Excel Services Account Role:** The account under which Excel Services runs.
- **Project Server Application Account Role:** The application service account for the Project Server 2010 Service running on SharePoint Server.
- **Secure Store Service Account Role:** The account under which the Secure Store Service runs.

- **PerformancePoint Services Service Account Role:** The account under which PerformancePoint Services runs
- **Secure Store Target Application Role:** The account that the *Target Application* for the Secure Store instance for the Business Intelligence Center uses to access data for the *Report Viewers* group in the Business Intelligence Center.
- **State Services Account Role:** The account under which the State Services runs.

For single-front-end-server farm environments, MSProjectExperts recommends that you create a single Active Directory account to use for all account roles except the SQL Server Process Accounts and the Target Application for the Secure Store Service.

Create Domain Global Groups for Reporting

Project Server 2010 reporting requires two domain groups: one group that provides security privileges for Report Authors, users who have the right to create and edit reports in Project Server 2010; and one group for Report Viewers, users who can access the reports in the Project Server 2010 Report Center. You use these groups when configuring Excel Services.

Prepare SQL Server for SharePoint Server and Project Server

This procedure assumes that you previously installed Microsoft SQL Server 2005 or 2008 along with its respective version of Analysis Services. After installing the SQL engine, you must configure or verify a number of settings, and Microsoft recommends best-practice for performance settings that you should strongly consider adopting as well.

For Project Server 2010 to work correctly, SQL Server must be configured to allow remote connections using TCP/IP. This is the default configuration for SQL Server, but you should verify this configuration prior to installing Project Server.

BETA Warning: A bug in the BETA version causes reporting to fail if you use a named instance of SQL Server. To work around this, you can use Cliconfg to create an alias to your named instance if you do not have any other services on the front end server pointed to the base server. Enabling the alias sends all traffic from the front end server to the named instance.

Configure SQL Network Settings for SQL Server 2005 (SQL 2008 users skip to next section)

To configure the network settings for SQL Server 2005 complete the following steps:

1. Click Start ➢ All Programs ➢ Microsoft SQL Server 2005 ➢ Configuration Tools ➢ SQL Server Surface Area Configuration. The system displays the SQL Server 2005 Surface Area Configuration dialog shown in Figure 4 - 1.

Figure 4 - 1: SQL Server 2005 Surface Area Configuration dialog

2. In the SQL Server 2005 Surface Area Configuration dialog, click the *Surface Area Configuration for Services and Connections* link. The system displays the Surface Area Configuration for Services and Connections dialog for the local machine as shown in Figure 4 - 2.

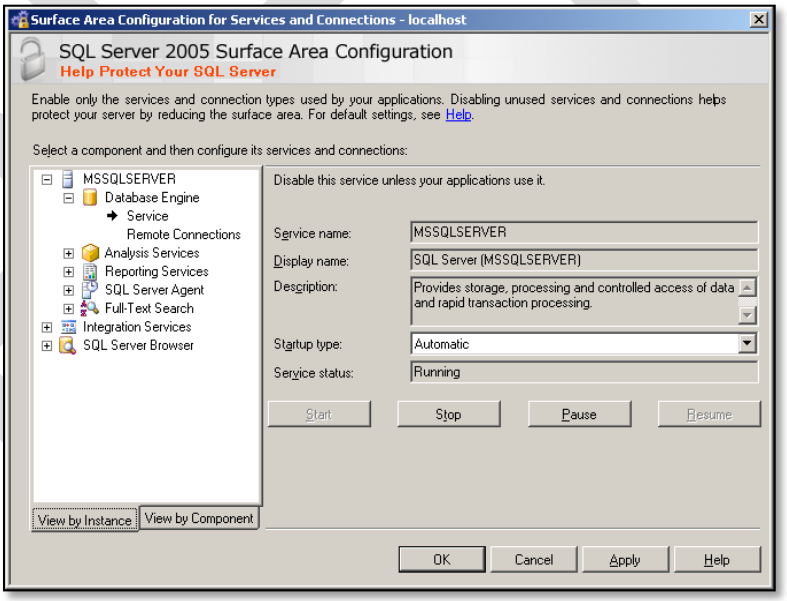

Figure 4 - 2: SQL Server 2005 Surface Area Configuration for Services and Connections dialog

2. In the tree view pane on the left, expand the node for your instance of SQL Server, expand the Database Engine node, and then click *Remote Connections*.

3. The system changes the dialog display to reflect your selection as shown in Figure 4 - 3. Select the *Local and Remote Connections* option, then select the *Using both TCP/IP and named pipes* sub option, and then click the *OK* button.

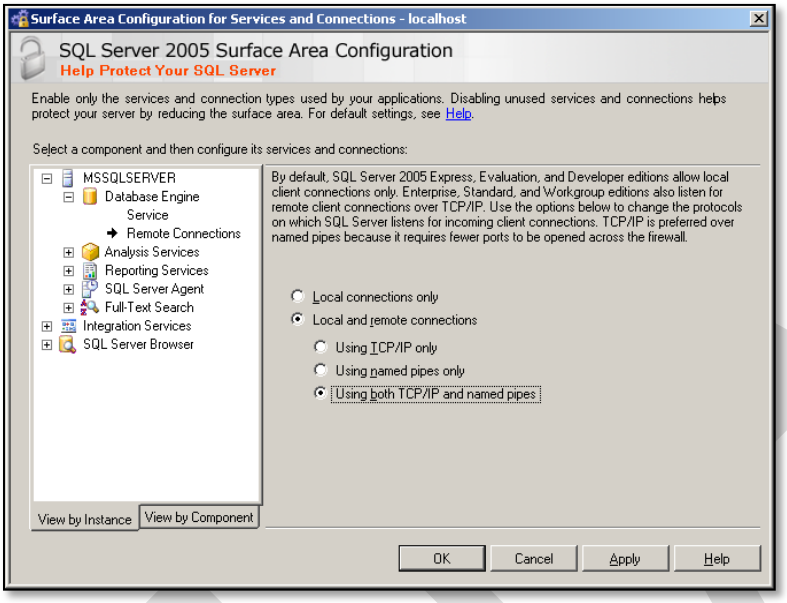

Figure 4 - 3: Using both TCP/IP and named pipes

The system displays the Connection Settings Change Alert dialog shown in Figure 4 - 4.

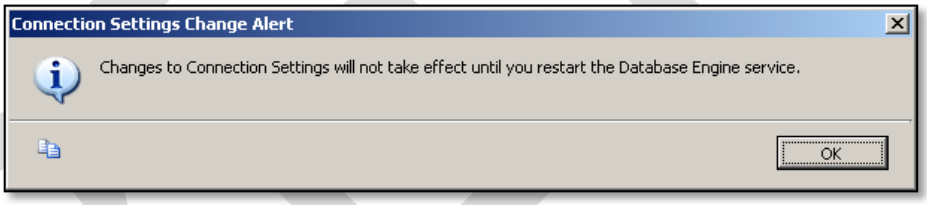

Figure 4 - 4: Connection Settings Change Alert dialog

4. Click the *OK* button in the Connection Settings Change Alert dialog and close the Surface Area Configuration for Services and Connections window.
5. To respond to the alert dialog and restart your SQL Server instance, click Start ➢ All Programs ➢ Microsoft SQL Server 2005 ➢ SQL Server Management Server.
6. If the system prompts you to select a connection, select the appropriate server and click the *Connect* button in the Connect to Server dialog shown in Figure 4 - 5.

Figure 4 - 5: Connect to Server dialog

7. After you click the *Connect* button in the Connect to Server dialog, the system displays the Microsoft SQL Server Management Studio window shown in Figure 4 - 6. Right-click on the server name and select the *Restart* item on the shortcut menu.

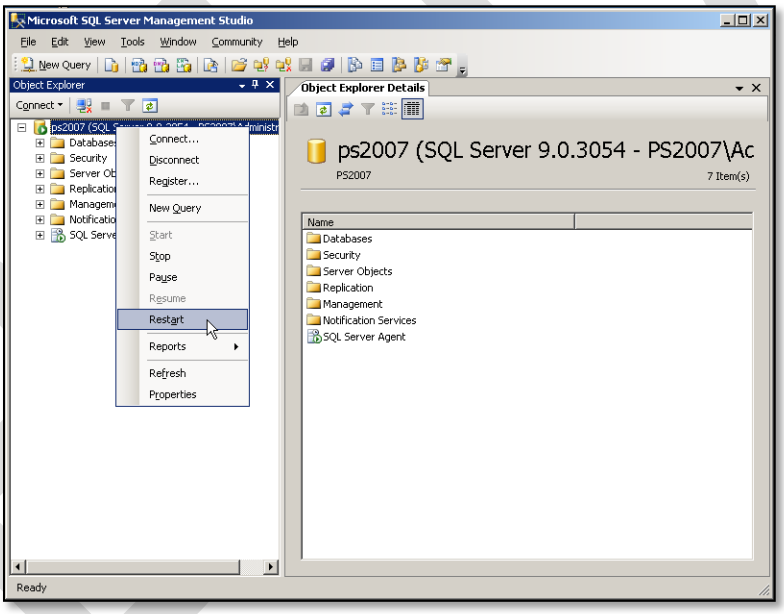

Figure 4 - 6: Restart the MSSQLSERVER service

8. When the system prompts for verification as shown in Figure 4 - 7, click the *Yes* button to restart the service.

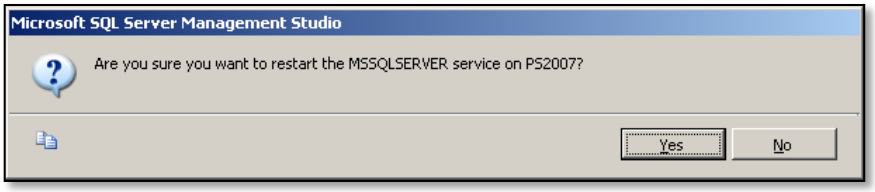

Figure 4 - 7: Restart the MSSQLSERVER service confirmation

The system reports its progress displaying the Service Control dialog shown in Figure 4 - 8.

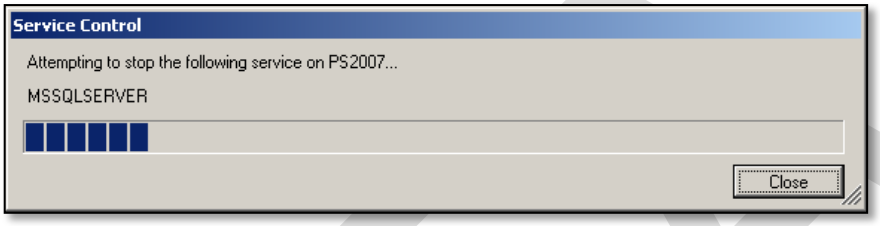

Figure 4 - 8: Restart the MSSQLSERVER service progress Service Control dialog

Configure SQL Network Settings for SQL Server 2008

To configure the network settings for SQL Server 2008 complete the following steps:

1. From the computer console click the *Start* button ➢ All Programs ➢ Microsoft SQL Server 2008
2. Expand Configuration Tools and select *SQL Server Configuration Manager* from the menu as shown in Figure 4 - 9 below.

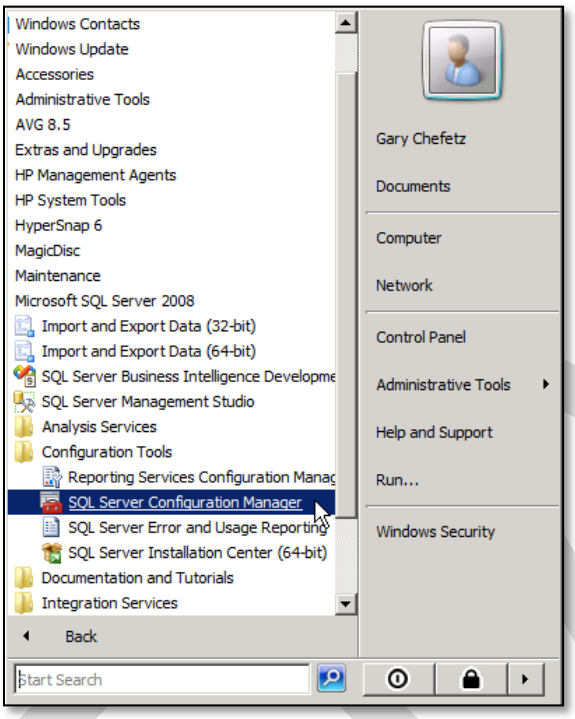

Figure 4 - 9: Launch SQL Configuration Manager from the *All Programs* menu

The system displays the *SQL Configuration Manager*

1. In the left pane, expand SQL Server Network Configuration, and then select the target SQL Server instance for your Project Server databases.
2. Verify that the *TCP/IP* option is enabled in the right frame.

Your SQL Configuration Manager should appear as shown in Figure 4 - 10.

Although the Named Pipes transport setting is not enabled in the example, you can enable this transport without affecting Project Server 2010

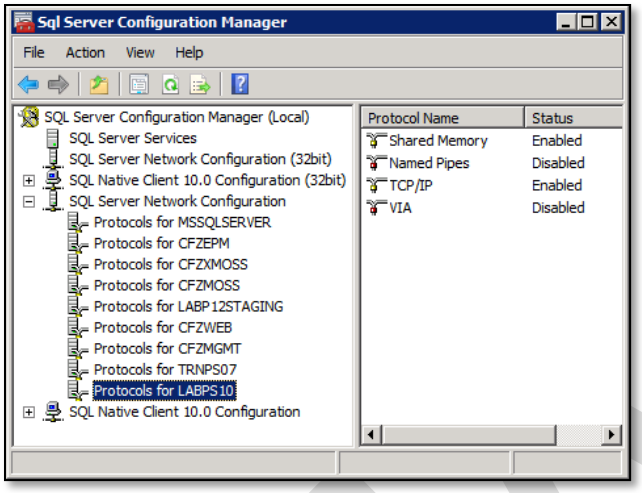

Figure 4 - 10: SQL Server 2008 Configuration Manager Showing TCP/IP Enabled

Add a SQL Server Login for the Farm Administrator Account

Project Server 2010 requires that the Farm Administrator Role Account has a SQL Server login with *public*, *dbcerator*, and *sysadmin* roles in SQL Server. To create a SQL Server login and add the roles for the login, complete the following steps:

1. Open SQL Server Management Studio.
2. Connect to the database engine for your Project Server 2010 target instance as shown in Figure 4 - 11.

The screen shot examples that follow are based on SQL Server Managent Studio for SQL Server 2008.

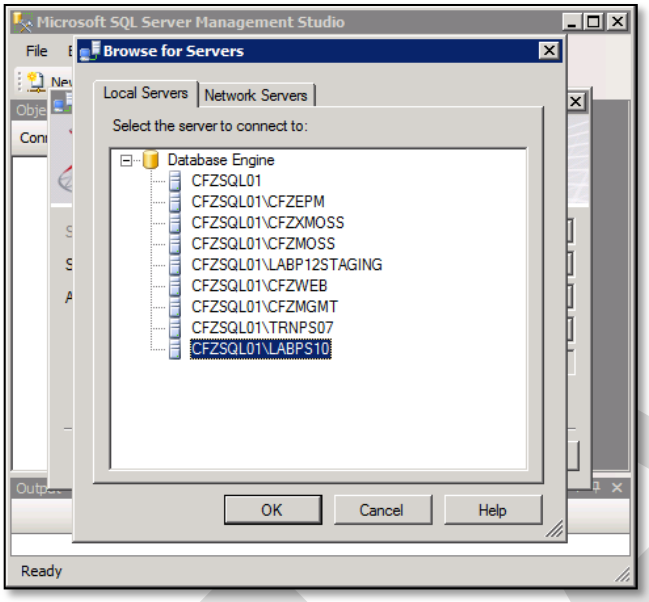

Figure 4 - 11: Connect to SQL Server instance for Project Server 2010 installation

3. Expand the Security node, then right-click on *Logins* and select the *New Login* option as shown in Figure 4 - 12.

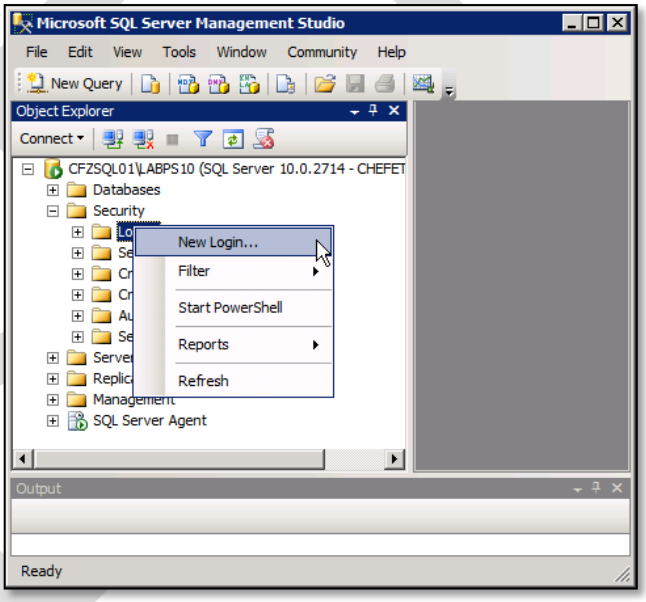

Figure 4 - 12: Select *New Login*

The system displays the *New Login* page shown in Figure 4 - 13.

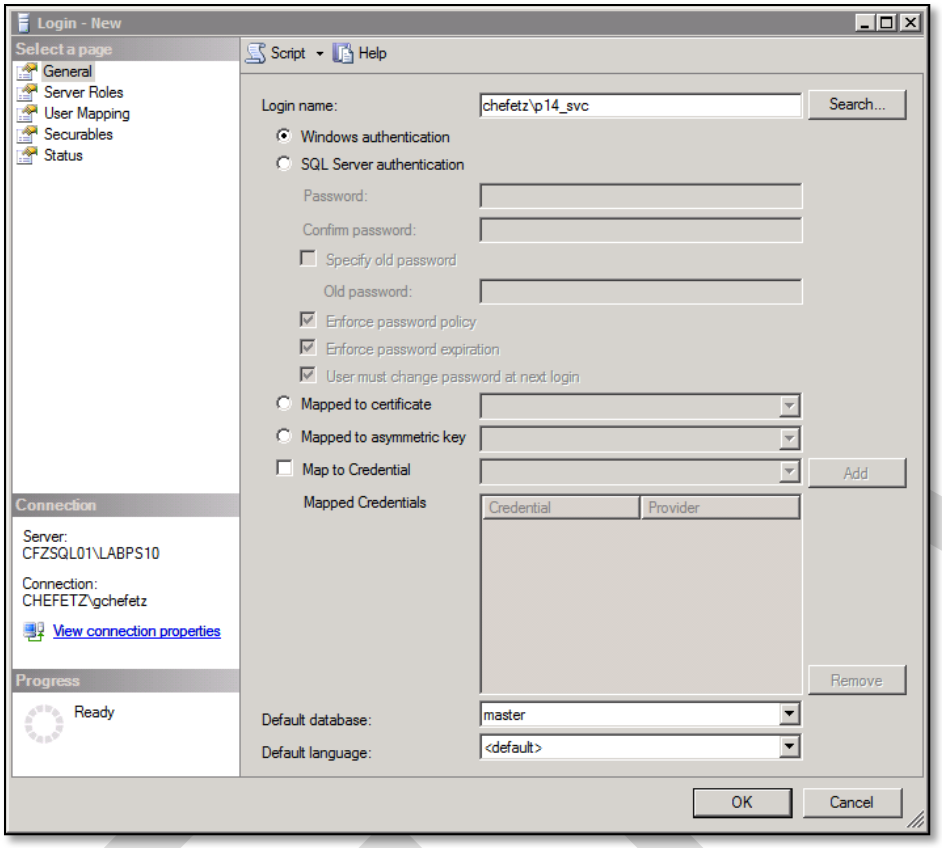

Figure 4 - 13: SQL Management Studio *New Login* Page

4. Enter the domain account you created for the Farm Administrator in the *Login Name* field.

From the *Select a page* list on the left, select Server Roles. The system displays the *Server Roles* page as shown in Figure 4 - 14.

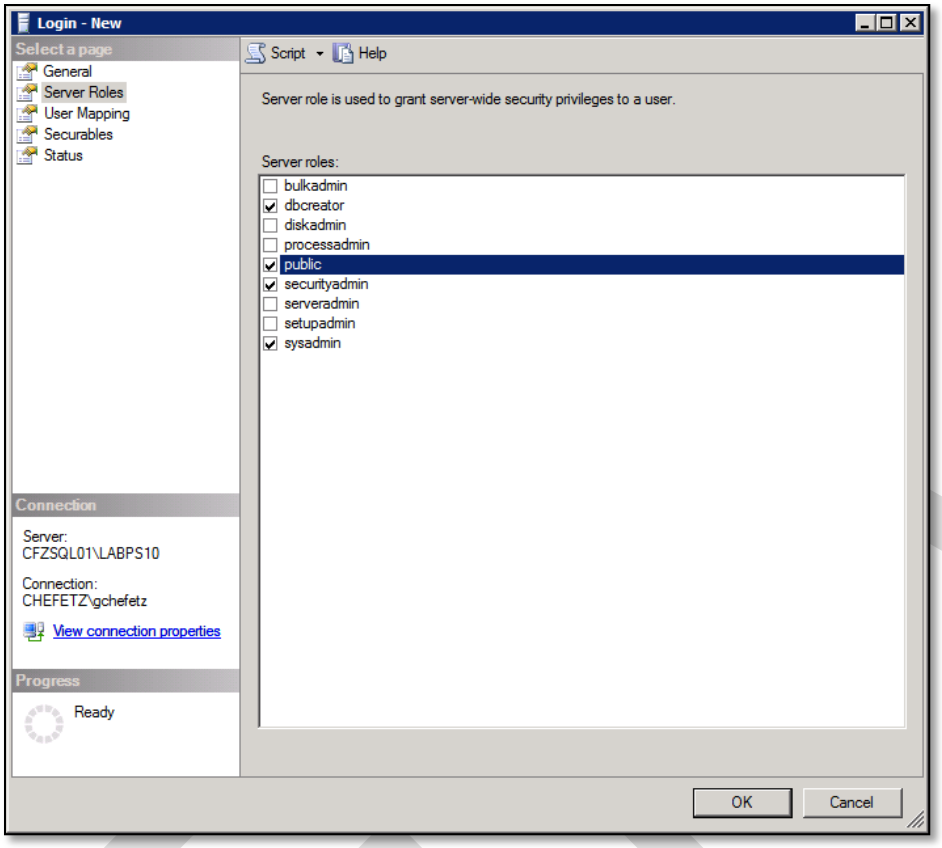

Figure 4 - 14: SQL Management Studio *Server Roles* page for the New Login

5. In the Server roles list, select the *dbcreator*, *securityadmin*, and *sysadmin* check boxes. The *public* roles checkbox is selected by default. Leave this setting selected.
6. Click the *OK* button to continue.

Enable the Common Language Runtime

Enabling the *Common Language Runtime* (CLR) for SQL Server improves Project Server 2010 performance by 30% on average, according to Microsoft. To enable the common language runtime, click on the *New Query* button in the *SQL Server Management Studio* window and copy the following query into the *SQL Query* pane as shown in Figure 4 - 15.

```
sp_configure clr enabled, 1;
go
reconfigure;
go
```

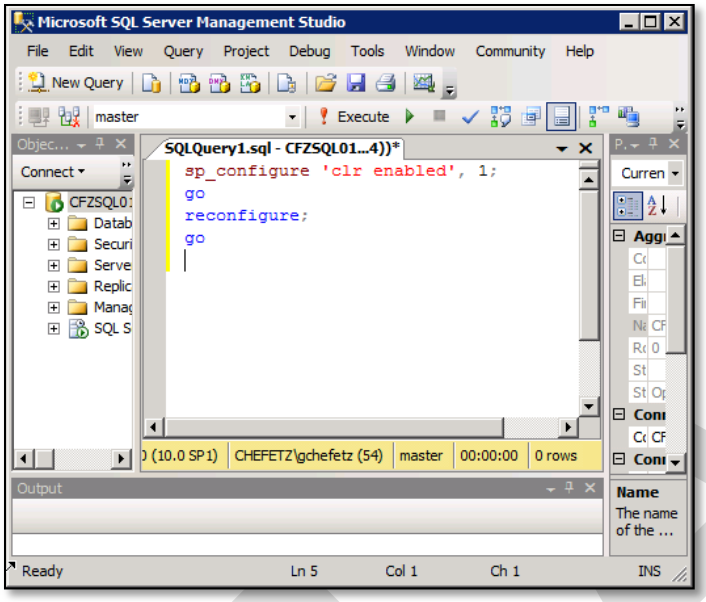

Figure 4 - 15: New Query Window to Enable CLR

Click the *Execute* button to execute the query and enable the CLR. After executing the query the output section should report a success message like the one shown in Code Sample below. Note that the Query includes the RECONFIGURE statement, and it is not necessary to run this again.

```
Configuration option 'clr enabled' changed from 0 to 1. Run the RECONFIGURE state-
ment to install.
```

Set SQL Server Database Collation

Your SQL Server collation must be configured for case-insensitive. In a default English language version, the default collation (SQL_Latin1_General_CP1_CI_AS) is compliant with this requirement. If you are not working with a default English SQL Server installation, you may need to change your SQL Server database collation to case-insensitive, accent-sensitive, Kana-sensitive, and width-sensitive.

Prepare SQL Server Analysis Services for Project Server

You must complete two simple configuration steps to prepare your SQL Analysis Services server for Project Server 2010: 1) Add the Farm Administrator Role account to the *OLAP Users Local Group* on the server, and 2) Configure the Farm Administrator Role account permissions in SQL Server Analysis services.

To add the Farm Administrator account to the OLAP Users Local Group, complete the following steps:

1. Log in to the computer running Analysis Services and select *Administrative Tools* from the *Start* menu and select *Computer Management* from the submenu.
2. On the Computer Management page, in the left pane under System Tools, expand Local Users and Groups. Click to expand the *Groups* folder and locate the OLAP Users Local Group for your Analysis Services instance as shown for SQL Analysis Services 2008 in Figure 4 - 16 .

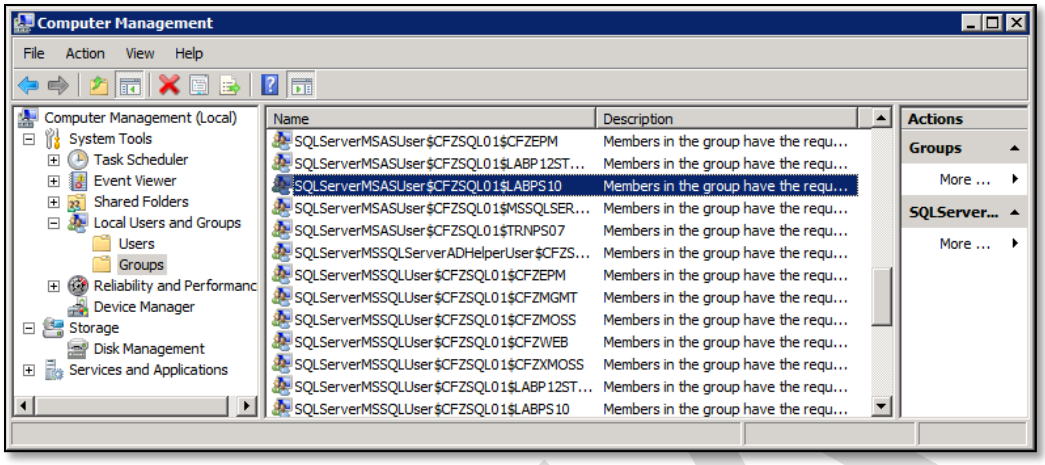

Figure 4 - 16: Located Local OLAP Users Group for SQL Analysis Services 2008

The group names are in the following possible formats:

SQLServer2005MSOLAPUser$<SERVERNAME>$MSSQLSERVERINSTANCE (SQL Server 2005) or SQLServerMSASUser$<SERVERNAME>$MSSQLSERVERINSTANCE (SQL Server 2008).

3. Double-click on the group name to open the *Group Properties* Page shown in Figure 4 - 17.

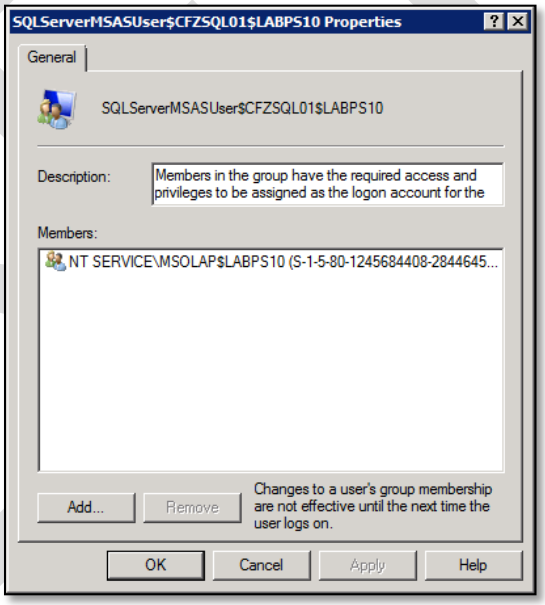

Figure 4 - 17: Local OLAP User Group Properties Page

4. On the properties page, click the *Add* button. The system displays the *Select Users, Computers, or Groups* page shown in Figure 4 - 18.

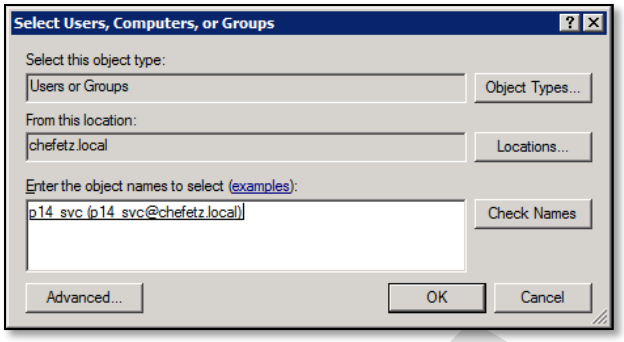

Figure 4 - 18: Select Users, Computers, or Groups page

5. On the *Select Users, Computers, or Groups* page, enter the name of your Farm Administrator account. You may click the *Check Names* button to verify your entry, or click the *OK* button to accept your entry. The account now appears in the *Members* section of the *Group Properties* page shown previously in Figure 4 - 17 above. Click the *OK* button to close the *Group Properties* page and then close the *Computer Management* page to continue.

To add the Farm Administrator as an Analysis Services server administrator complete the following steps:

1. Open SQL Server Management Studio. In the *Connect to Server* window, select or browse to connect to the SQL Server Analysis Services instance for your Project Sever 2010 deployment.
2. In Microsoft SQL Server Management Studio *Object Explorer*, right-click your SQL Server 2005 Analysis Services instance name, and then click *Properties* from the pop-up menu. The system displays the *Analysis Services Properties* page. From the *Select a page* pane, click Security. Your *Analysis Server Properties* page should look like the one shown in Figure 4 - 19.

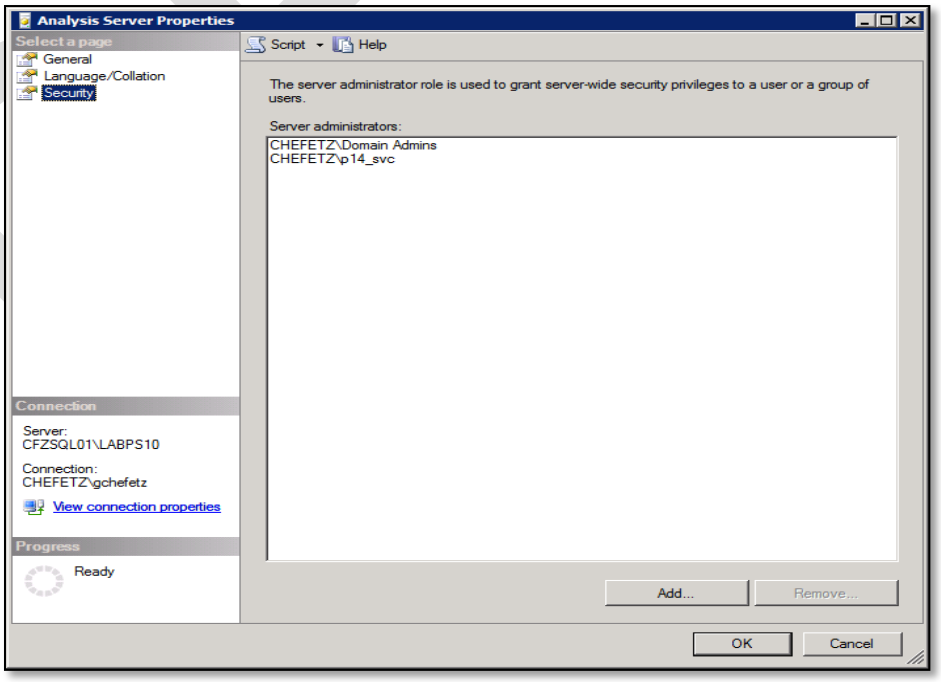

Figure 4 - 19: Analysis Server Properties Page with Security Selected

3. Click the *Add* button. The system displays the *Select Users or Groups* page as shown in Figure 4 - 20.

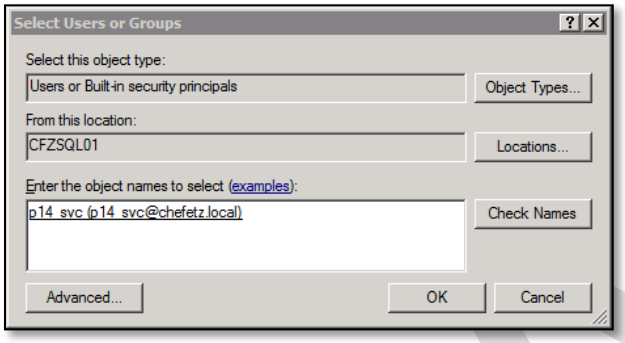

Figure 4 - 20: Select Users or Groups page

4. On the *Select Users or Groups* page, type the name of the Farm Administrator account.
5. Click the *OK* button to add the Farm Administrator account to the *Server Administrators* list.
6. Click the *OK* button on the *Analysis Server Properties* page to exit the operation.

Prepare Your Server for Project Server Installation

There are a couple of small tasks left to complete before you begin the actual SharePoint Server 2010 and Project Server 2010 software installation.

Configure Proxy Server Bypass

If you have a proxy server in your environment, it may be necessary for you to configure the proxy server settings on the server to bypass the proxy server for local addresses. To change these settings, follow these steps:

1. In Internet Explorer, click Tools ➢ Internet Options.
3. Select the Connections tab and in the Local Area Network (LAN) Settings area click the *LAN Settings* button.
3. In the Proxy Server area, select the *Use a proxy server for your LAN* and *Bypass proxy server for local addresses* checkboxes.
4. Click the *OK* button to close the Local Area Network (LAN) Settings dialog.
5. Click the *OK* button again to close the Internet Options dialog.

Disable Internet Explorer Enhanced Security Settings

Use the following procedure to disable Internet Explorer Enhanced Security settings on your server:

1. Click Start ➢ Programs ➢ Administrative Tools ➢ Server Manager.
2. In the Server Manager window, expand the *Server Summary* in the navigation tree on the right.
3. In *Security Information* section, click the *Configure IE ESC* link. The system opens the *Internet Explorer Enhanced Security Configuration* dialog.

4. In the *Administrators* section, click the *Off* radio button to disable the Internet Explorer Enhanced Security settings.
5. Click the *OK* button to complete your configuration.

Add the Farm Administrator Role Account to the Local Admin Group

Before you begin installing SharePoint Server 2010 and Project Server 2010, you must add the Farm Administrator account to the *Local Administrators* group on the computer where you will install SharePoint Server and Project Server.

To add a local administrator, complete the following steps:

1. Log in to the computer where you will be installing SharePoint Server 2010 with local administrator credentials.
2. Click *Start* ➢ *Administrative Tools* ➢ *Computer Management*.
3. Expand the *Local Users and Groups* node and click on the *Groups* folder.
4. Double-click the *Administrators* group to open the *Administrators Properties* dialog.
5. Click the *Add* button in the *Administrators Properties* dialog to open the *Select Computers, Users or Groups* dialog.
6. Type the name of the Farm Administrator account in the *Enter the object names to select* window.
7. Click the *OK* button. The Farm Administrator account now appears in the *Members* list.
8. Click the *OK* button to close the *Administrators Properties* dialog.

Remove Prior Version of Windows PowerShell (For BETA Only)

When you run the *SharePoint Server 2010 Preparation Tool*, the Windows PowerShell V2 (CTP3) installation may fail if Windows PowerShell V1 is already installed on the system. If you are running Windows Server 2008, chances are that Windows PowerShell V1 is installed. To avoid having to rerun the *SharePoint Server 2010 Preparation Tool*, or manually implement PowerShell V2, determine whether PowerShell V1 is installed, and remove it following these steps:

1. From Administrative Tools, launch Server Manager and select Features from the tree in the left-hand pane. Your *Server Manager* window should appear as shown in Figure 4 - 21.

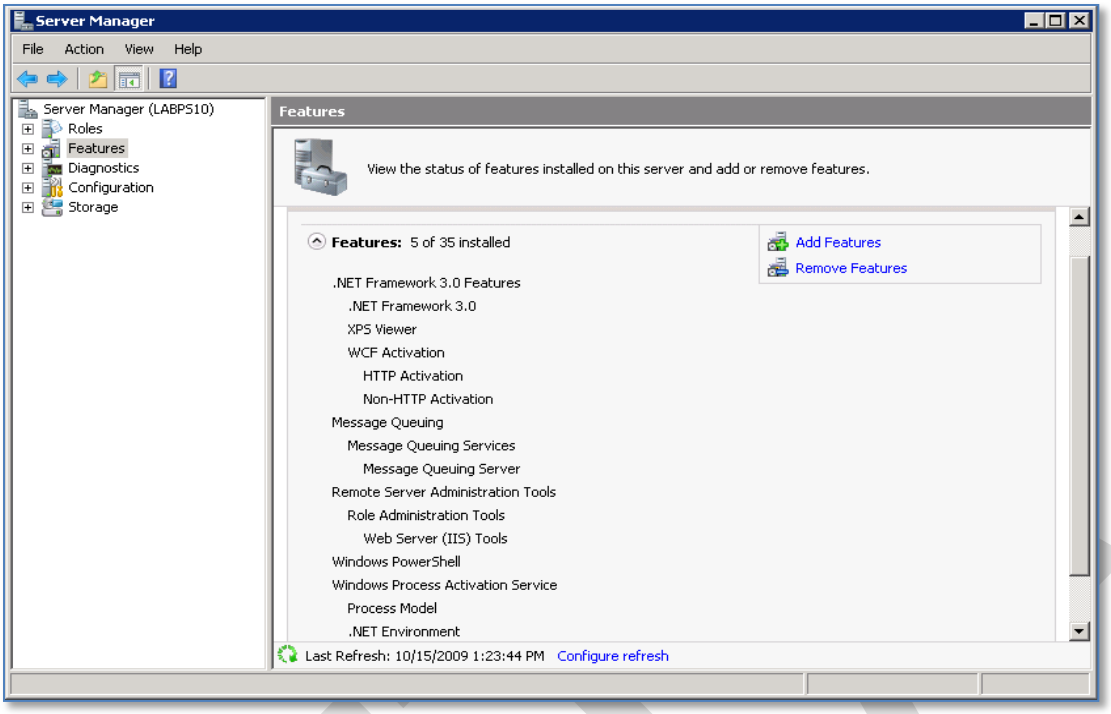

Figure 4 - 21: Server Manager with Features selected

2. From the *Features* pane on the right determine whether Windows PowerShell appears in the list of installed features. If you see an entry for Windows PowerShell proceed to the next step; otherwise, close *Server Manager* and jump ahead to the next Main Topic, Install SharePoint Server 2010.

The only no way to determine the installed version of PowerShell is through Control Panel, Programs and Features. If the version displayed in the installed programs list is not clearly marked version 2, then you have version one installed. Therefore, msProjectExperts recommends that you remove version one of PowerShell version prior to running the *SharePoint Server 2010 preparation tool.* Sever Manager, as shown in the Figure above, does not report the version number of Powershell in the features list.

3. Select the *Remove Features* link at the upper right hand corner of the main pane. The system displays the *Select Features* page shown in Figure 4 - 22.

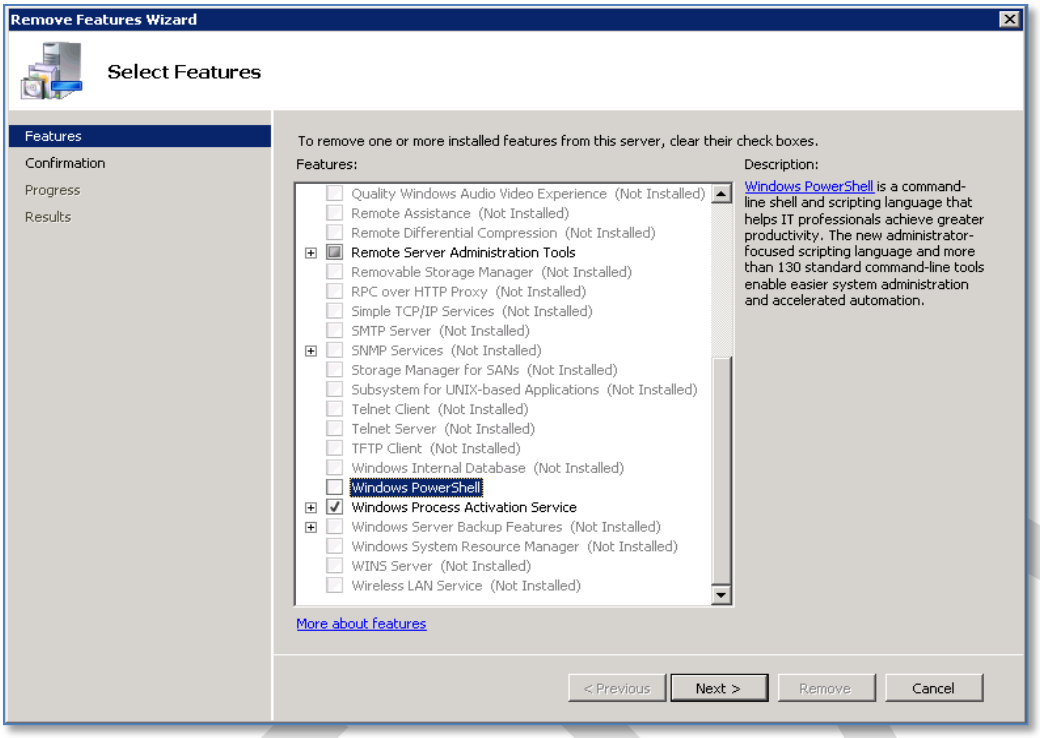

Figure 4 - 22: Select Features Page with Windows PowerShell highlighted

4. Deselect the checkbox for *Windows PowerShell* selection and click the *Next* button. The system displays the *Confirm Removal Selections* page shown in Figure 4 - 23.

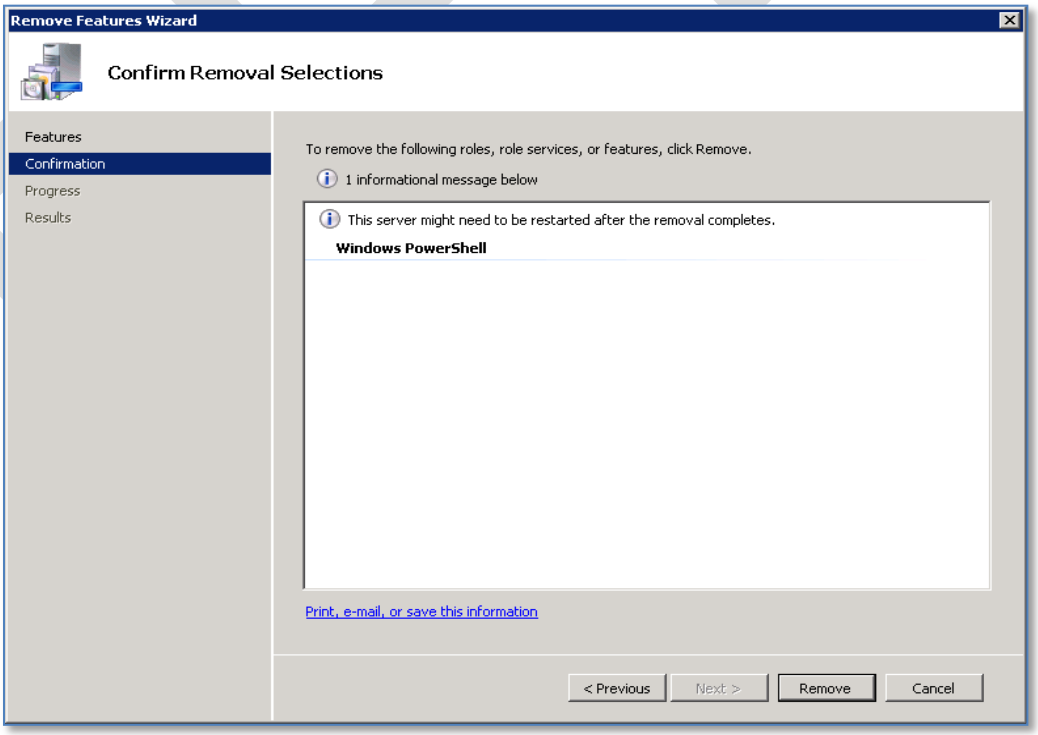

Figure 4 - 23: Remove Features Wizard Confirm Removal Selections page

5. Click the *Remove* button and the system progresses to the *Remove Features Wizard Removal Progress* window shown in Figure 4 - 24.

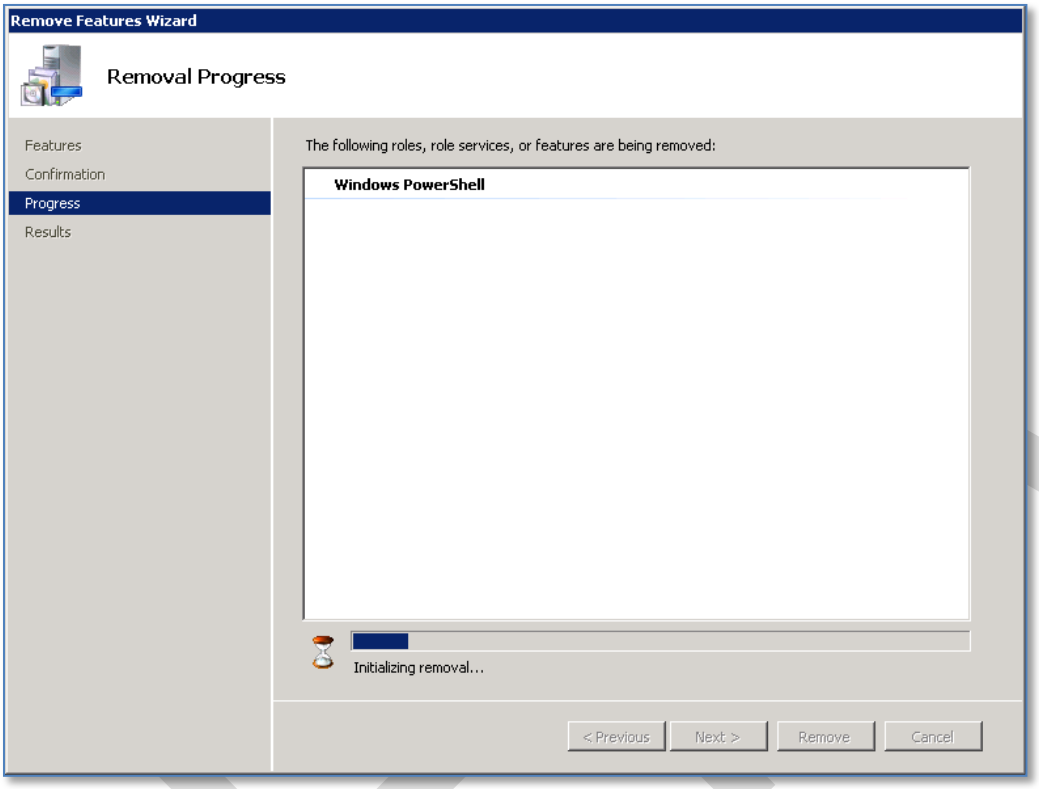

Figure 4 - 24: Remove Features Wizard Removal Progress window

6. When the removal process completes, the system displays the *Removal Results* page shown in Figure 4 - 25.

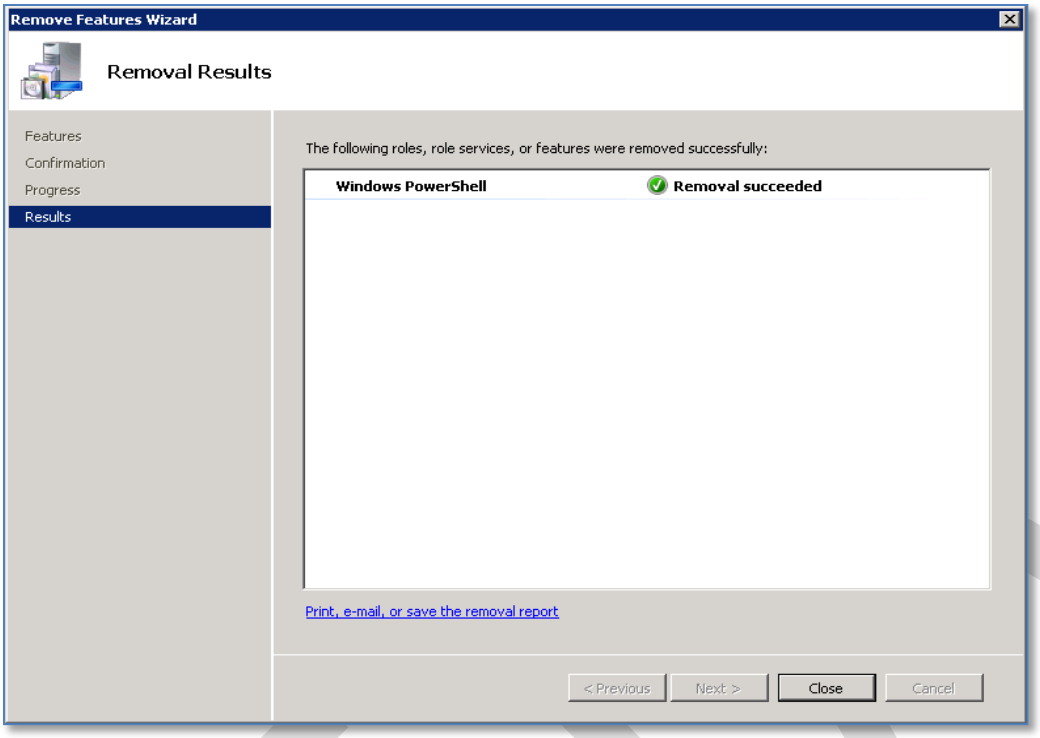

Figure 4 - 25: Removal Results Page of the Remove Features Wizard

7. Click the *Close* button to complete the wizard.
8. Reboot the system to finalize changes.

Installing SharePoint Server 2010 and Project Server 2010

Now that you have added the Farm Administrator account to the local Administrators group, log off the server and log on again using the Farm Administrator account. Remain logged on using that account as you complete the rest of the installation and configuration. When installing Project Server 2007 with either Windows SharePoint Services 2007 or Office SharePoint Server 2007, at this point of the installation process you had to gather and install a series of prerequisite software components manually. The SharePoint 2010 product series introduces the *SharePoint 2010 Preparation Tool* that you can launch from the SharePoint Server 2010 setup wizard to gather and install the prerequisites automatically. This is one of the big improvements to the installation experience that I mentioned in the introduction of this module. To use this feature, you must have an Internet connection available. The instructions in the rest of this section assume that you are using the *SharePoint 2010 Preparation Tool*. You can elect to install each of these manually.

Install Software Prerequisites

Installing SharePoint Server 2010 consists of two primary steps, installing the prerequisites and installing the server software. To install prerequisites using the *SharePoint Server 2010 Preparation Tool*, follow the steps below. The tool not only installs all necessary software components, it also configures the *Application Server* and *Web Server* server roles. When you are ready to begin your installation, launch the SharePoint Server 2010 executable package. The system displays the *SharePoint Server 2010* installation launcher shown in Figure 4 - 26.

Figure 4 - 26: SharePoint Server 2010 Installation Launcher

Notice that the *Installation Launcher* contains links to documentation including a document outlining hardware and software requirements, and an installation guide and an upgrade guide accessible from the *Prepare* selections at the top. To install software prerequisites automatically, select *Install software prerequisites* from the *Install* section of the page. The system displays the *Welcome Page* for the *SharePoint Products and Technologies 2010 Preparation Tool* as shown in Figure 4 - 27.

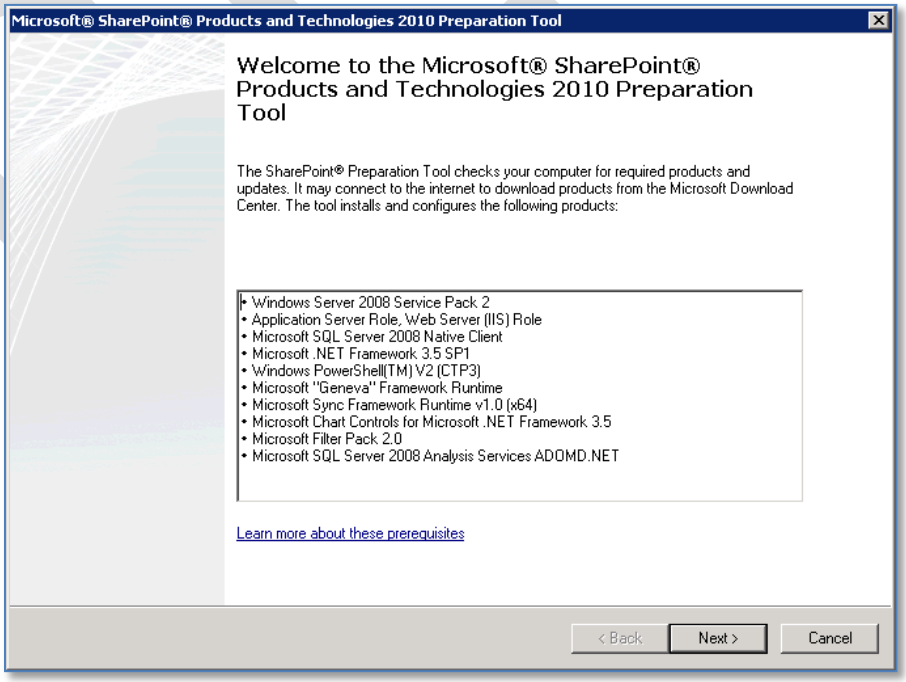

Figure 4 - 27: SharePoint Products and Technologies 2010 Preparation Tool Welcome Page

The page lists the prerequisite software components to install. Click the *Next* button to begin the automatic prerequisite installation process. The system displays the *SharePoint Products and Technologies 2010 Preparation Tool* End User License Agreement shown in Figure 4 - 28.

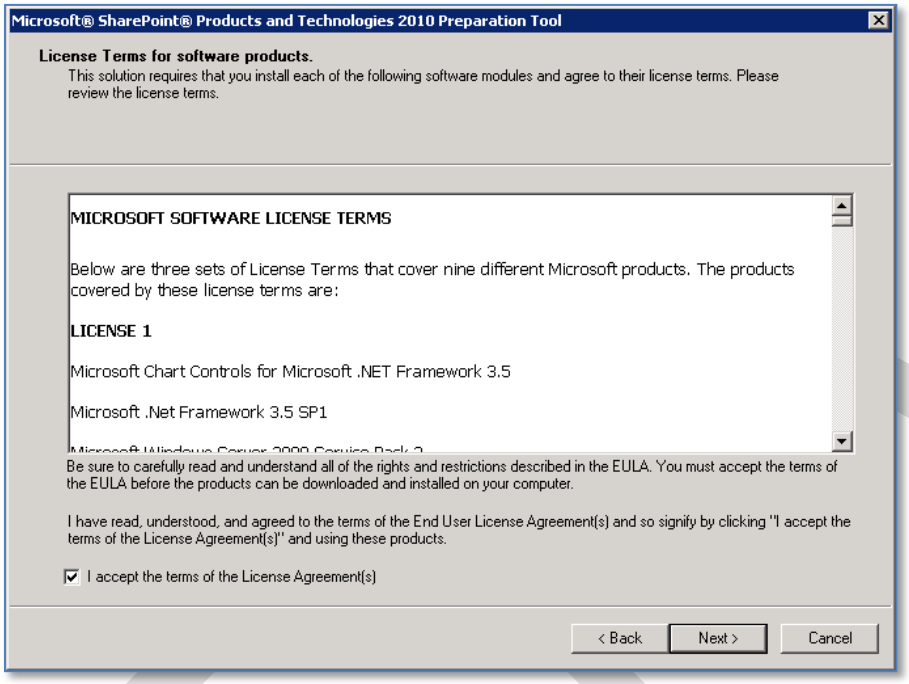

Figure 4 - 28: SharePoint Products and Technologies 2010 Preparation Tool EULA

Warning: The SharePoint Products and Technologies Preparation Tool will report an installation error if Windows PowerShell V1 is installed. Follow the directions in the previous topical section to determine whether Windows PowerShell is installed and remove it prior to taking the next step.

On the *License Terms for software products* page, read the license agreement. In order to continue you must accept the terms; to accept select the *I accept the terms of the License Agreement(s)* check box. Click the *Next* button to continue. The system displays the progress page shown in Figure 4-29.

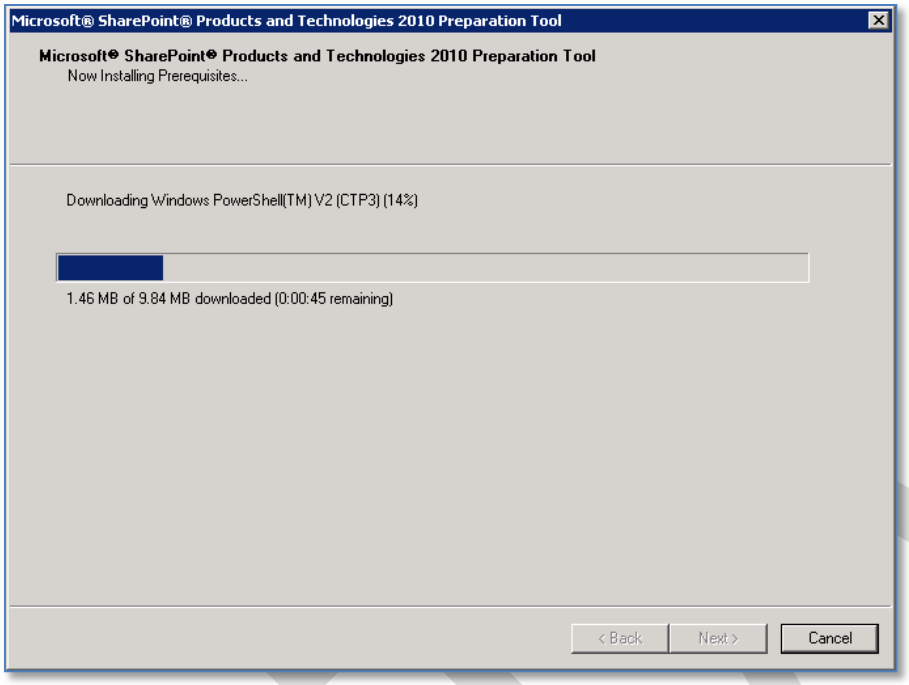

Figure 4 - 29: SharePoint Products and Technologies 2010 Preparation Tool Progress Page

The system proceeds to download and install prerequisite software components. When the process completes, the system displays a results page as shown in Figure 4 - 30.

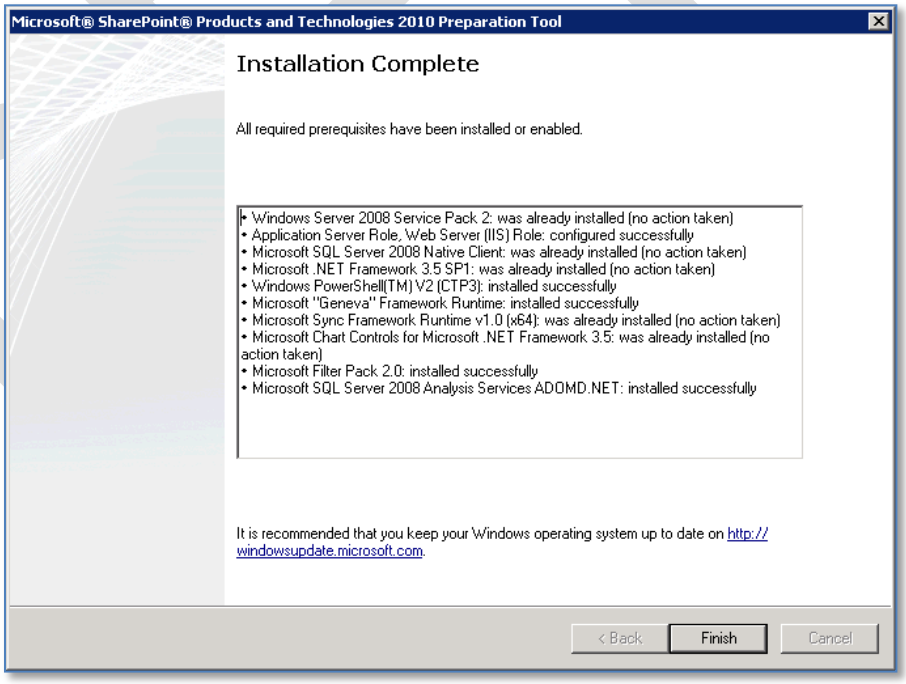

Figure 4 - 30: Installation Complete Confirmation Page

6. When the wizard finishes, click the *Finish* button.

7. If the system prompts you, restart the computer.

Install SharePoint Server 2010 Software

After you complete the software prerequisite installation either manually or by using the wizard, you are ready to start the SharePoint Server 2010 installation. To install the SharePoint Server 2010 software, launch the installation package. If you are installing from a DVD, your system may auto-run the *SharePoint Server 2010* installation launcher shown previously in Figure 4-26. Complete the following steps:

1. Click *Install SharePoint Server*. The system may briefly display a loading splash page before displaying the *Enter Your Product Key* page shown in Figure 4 - 31.

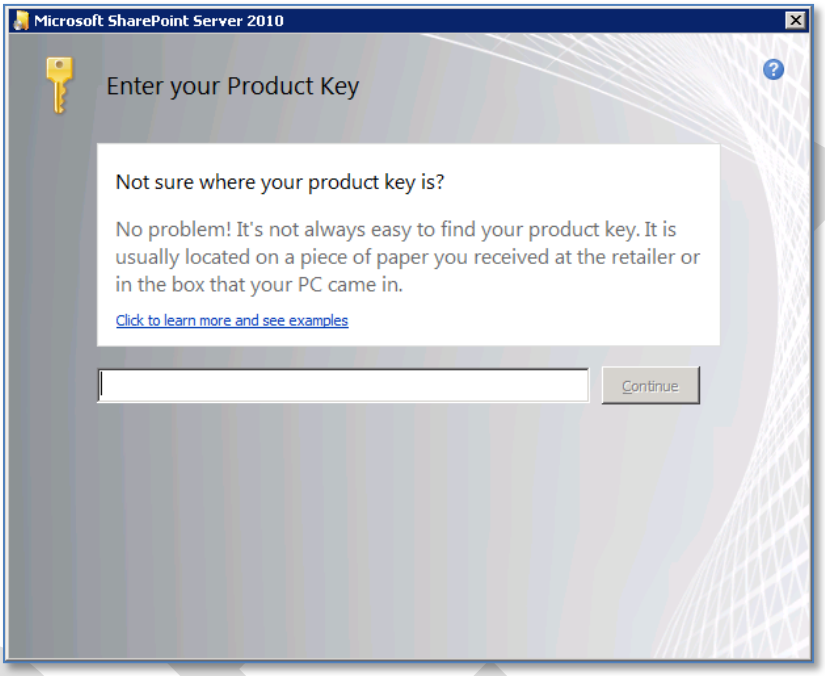

Figure 4 - 31: Enter Your Product Key Page

2. Enter your product key on the page and click the *Continue* button after the system validates your key. The system displays the *Read the Microsoft Software License Terms* page shown in Figure 4 - 32.

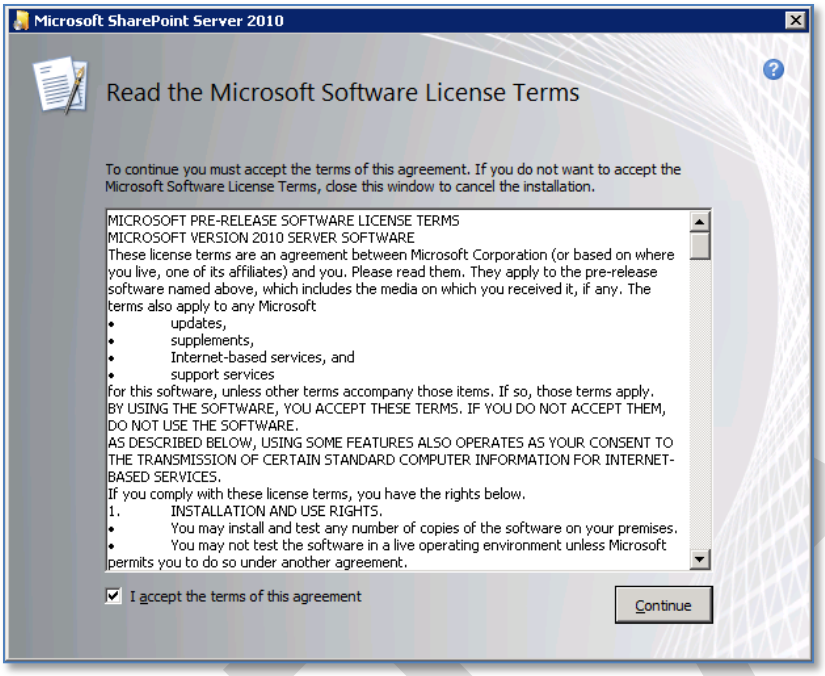

Figure 4 - 32: Read the Microsoft Software License Terms Page

3. Read the license terms. In order to continue you must accept the terms; to accept select the *I accept the terms of this agreement* check box, and then click the *Continue* button. The system displays the *Choose the installation you want* page shown in Figure 4 - 33.

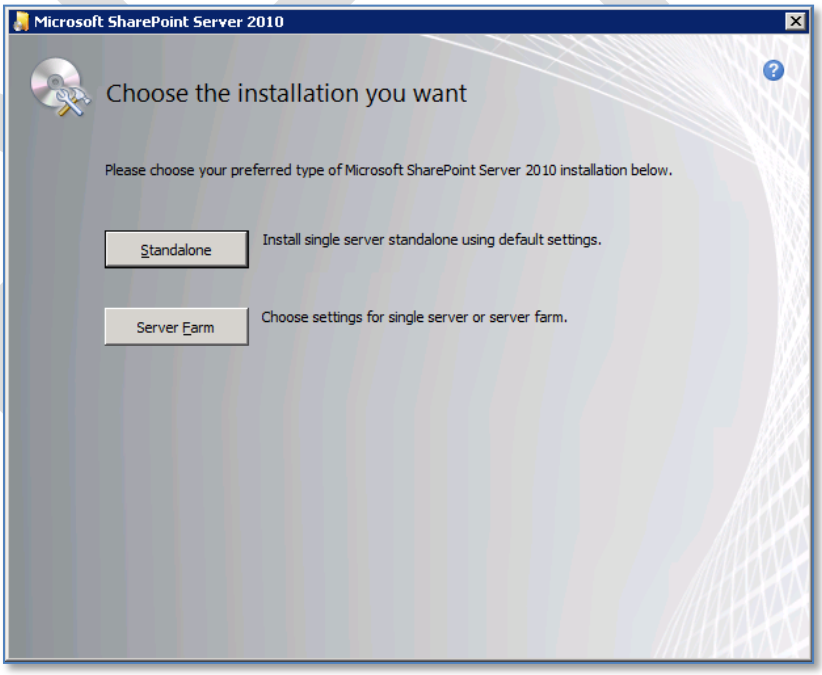

Figure 4 - 33: Choose the Installation You Want Page

4. On the *Choose the installation you want* page, click the *Server Farm* button. The system displays the *Server Type* page shown in Figure 4 - 34.

Standalone installations of SharePoint Server 2010 and Project Server 2010 use SQL Express only, which limits you to a 4 gigabyte database, and does not support the use of Analysis Services for reporting . The functionality supported by this type of installation is limited. This book focuses on full enterprise installations and does not cover standalone installations. To learn more about this type of installation, visit http://technet.microsoft.com

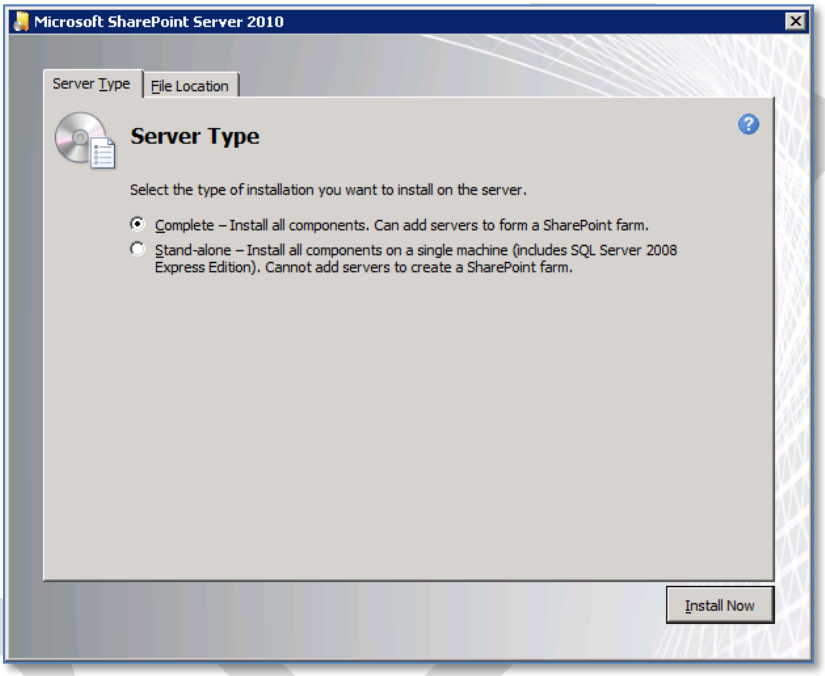

Figure 4 - 34: Server Type Page

5. On the *Server Type* page, select the *Complete* option and then click on the *File Location* tab. The system displays the *Choose a file location* page shown in Figure 4 - 35.

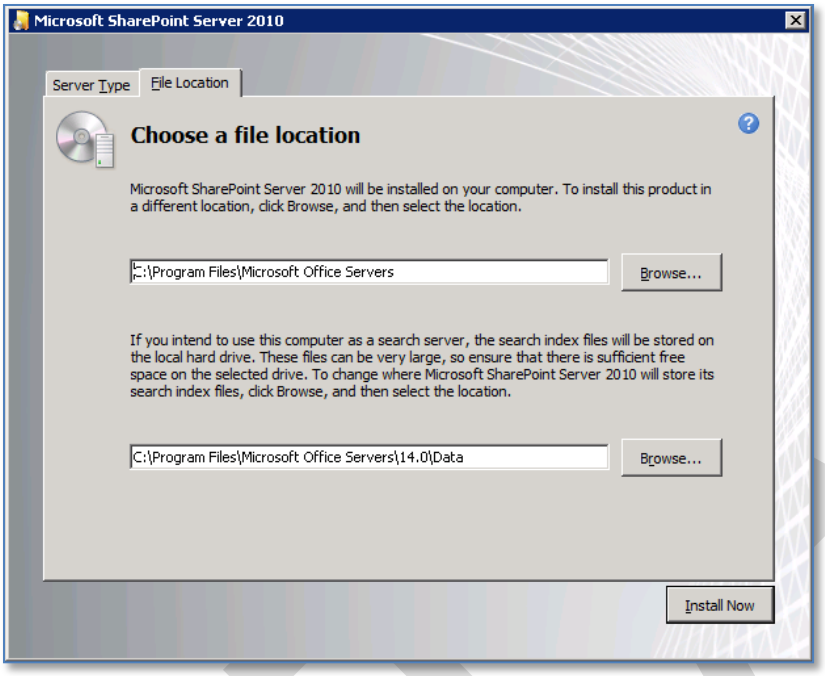

Figure 4 - 35: Choose a File Location Page

6. On the *Choose a file location* page you can accept the default file locations for programs and Search Server files or specify alternate file locations. When you complete these selections, click the *Install Now* button to continue. The system displays the *Installation Progress* page shown in Figure 4 - 36.

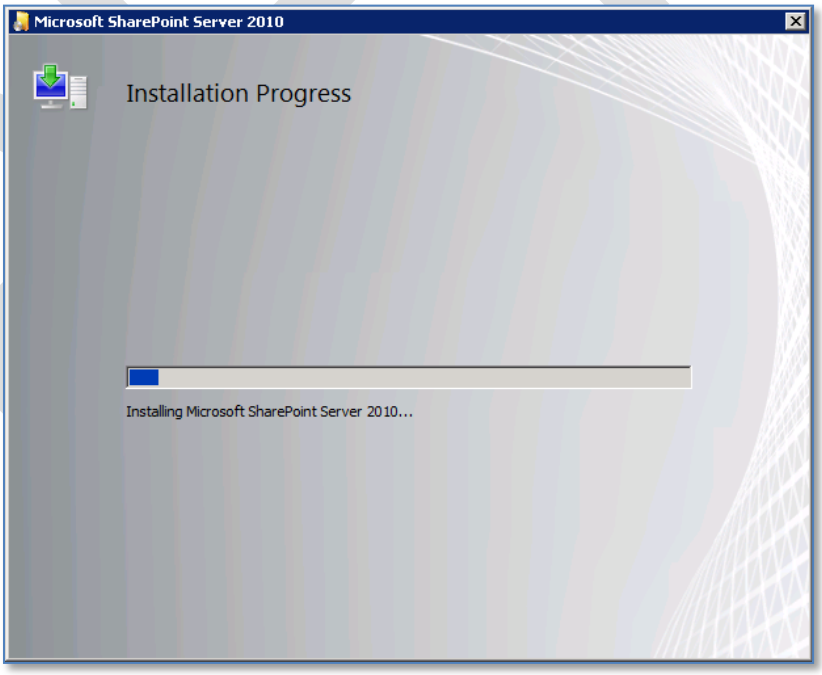

Figure 4 - 36: Installation Progress Page

7. When the wizard completes the SharePoint Server 2010 installation, the system displays the *Run Configuration Wizard* page to launch the *SharePoint Products and Technologies Configuration Wizard* as shown in Figure 4 - 37.

The SharePoint Server 2010 installation may take five to ten minutes to complete.

Figure 4 - 37: Run Configuration Wizard page

8. Deselect the *Run the SharePoint Products and Technologies Configuration Wizard now* check box and click the *Close* button to continue.

Rather than running the *SharePoint Products and Technologies Configuration Wizard* twice, once after the base SharePoint Server installation and then again after installing the Project Server software, you will run the wizard only after completing the Project Server software installation.

9. Click the *Exit* link on the SharePoint Server 2010 installation page to Exit.

Install Project Server 2010

The next step is to install the Project Server 2010 software. Use the following procedure to install the Project Server software:

1. On the Project Server 2010 DVD, run default.hta, which may launch automatically when you load the disc, or launch the installation executable from a file source to open the setup menu shown in Figure 4 - 38.

Figure 4 - 38: Project Server 2010 Setup Menu

2. Select the *Install Project Server* link from the *Install* section of the page. The system displays the *Enter your Product Key* page shown in Figure 4 - 39.

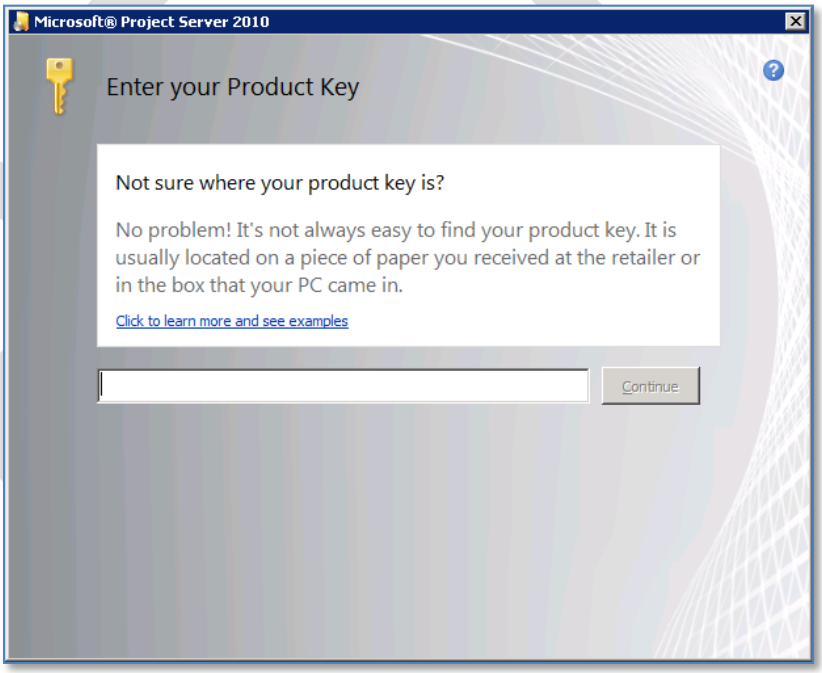

Figure 4 - 39: Project Server Enter your Product Key Page

3. Enter your license key in the *Enter your Product Key* page and click the *Continue* button when the software validates you license entry. Click the *Continue* button to advance to the *Read the Microsoft Software License Terms* page shown in Figure 4 - 40.

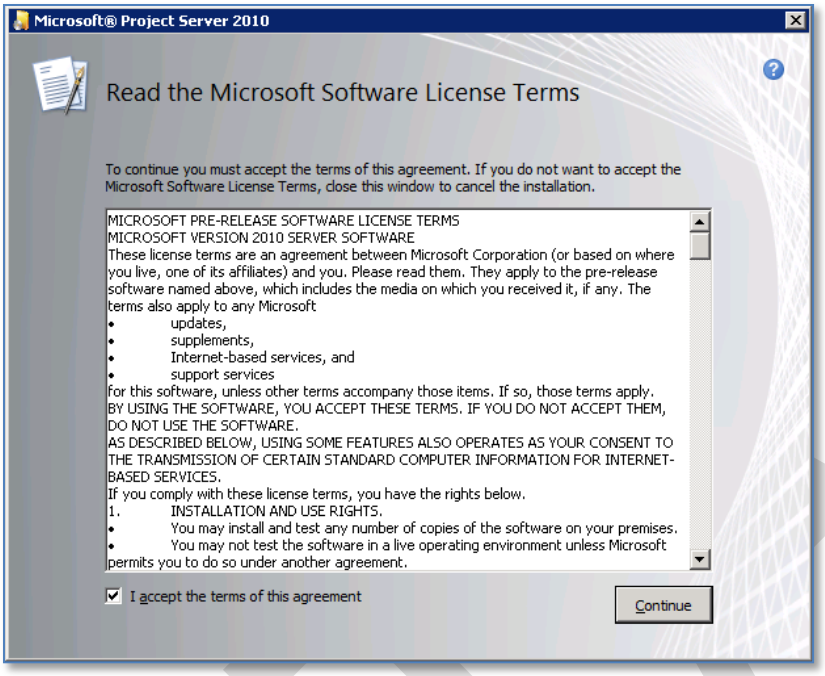

Figure 4 - 40: Project Server End User License Agreement

4. On the *Read the Microsoft Software License Terms* page, read the license terms. In order to continue you must accept the terms; to accept the End User License Agreement, select the *I accept the terms of this agreement* check box. Then click the *Continue* button to proceed to the *Choose a file location* page shown in Figure 4 - 41.

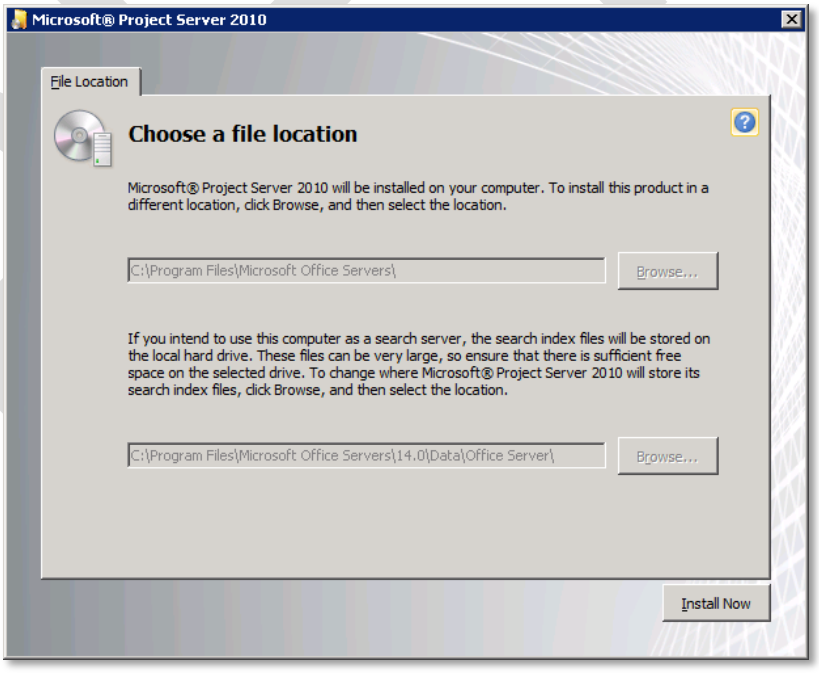

Figure 4 - 41: Choose a File Location Page

5. Note that the file locations on the *Choose a file location* page are grayed out. Your Project Server program files install to the same directory as SharePoint Server. Click the *Install Now* button to continue. The system displays the *Installation Progress* page shown in Figure 4 - 42.

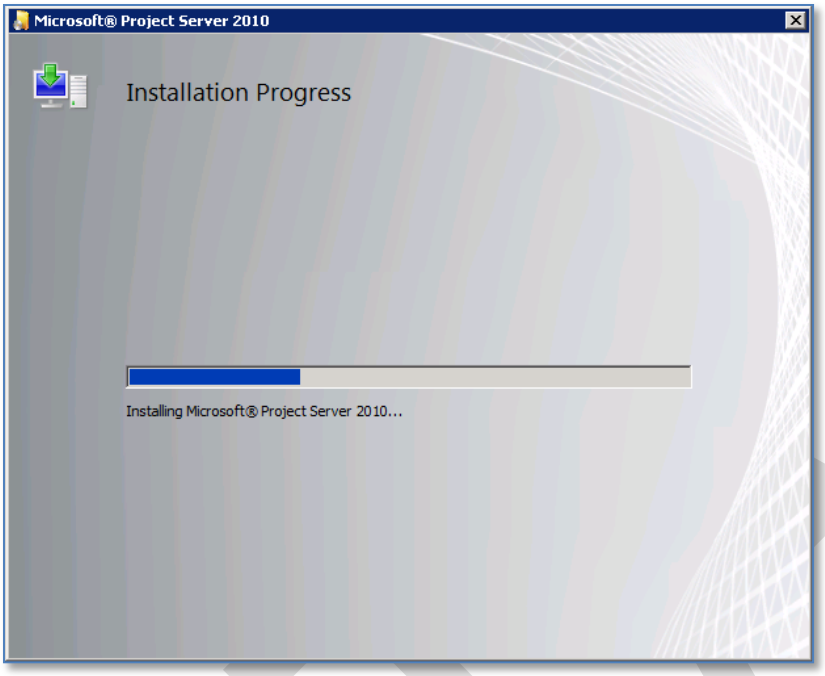

Figure 4 - 42: Installation Progress Page

6. When the system completes the installation in several minutes, the system displays the *Run Configuration Wizard* page as shown in Figure 4 - 43.

Figure 4 - 43: Run Configuration Wizard Page

Run SharePoint Products Configuration Wizard

From the *Run Configuration Wizard* page shown in the previous figure, select the *Run the SharePoint Products and Technologies Configuration Wizard now* check box and click the Close button to continue. The system displays the *Welcome to SharePoint Products* page shown in Figure 4 - 44.

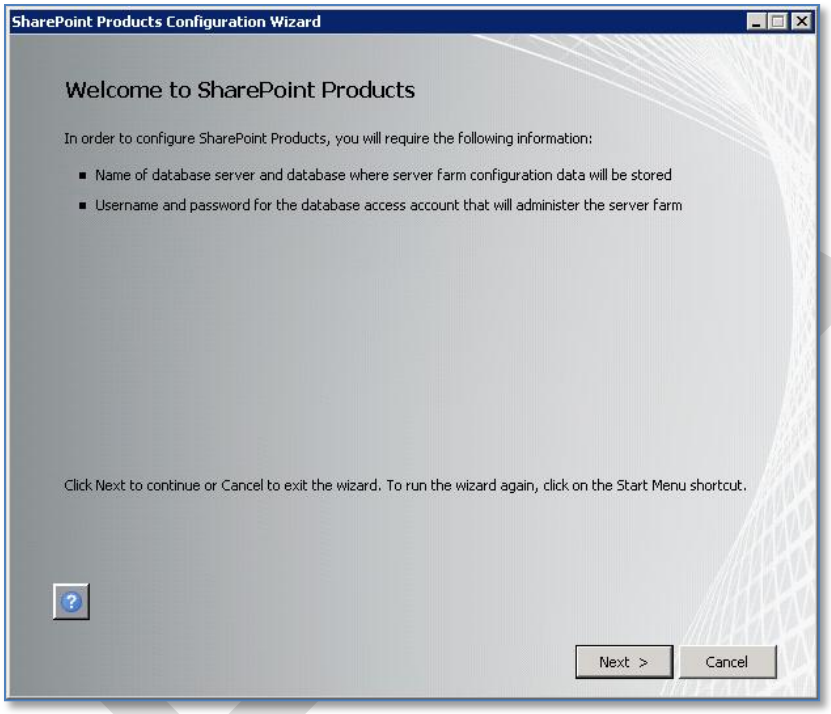

Figure 4 - 44: Welcome to SharePoint Products Page

7. On the *Welcome to SharePoint Products* page, click the *Next* button. The system displays a confirmation dialog showing a list of services that may need to be restarted as shown in Figure 4 - 45.

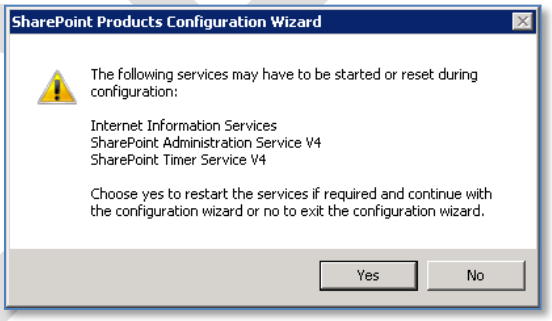

Figure 4 - 45: Service Restart Warning

8. Click the *Yes* button in the dialog to continue. The system displays the *Connect to a server farm* page shown in Figure 4 - 46.

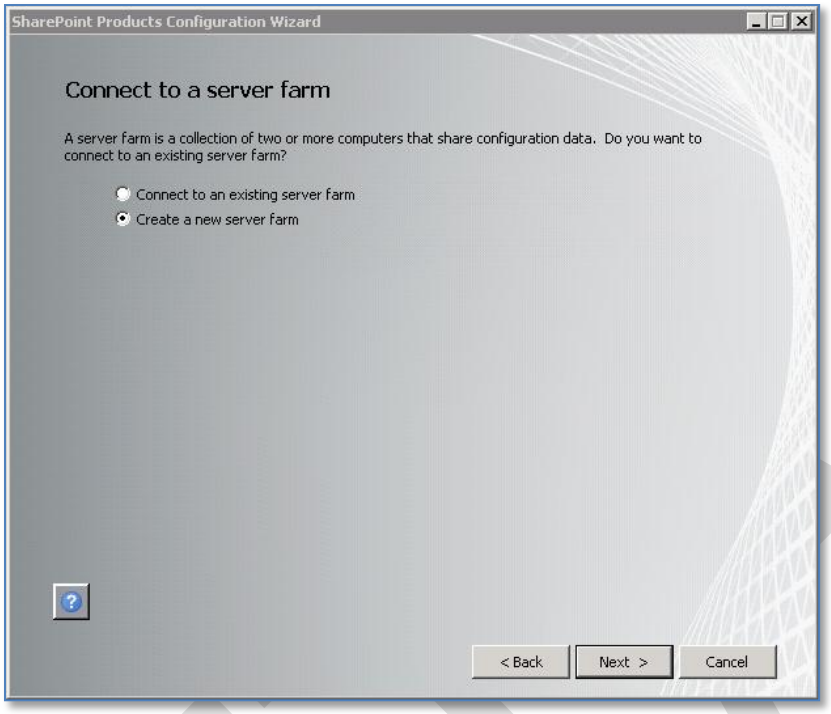

Figure 4 - 46: Connect to a Server Farm Page

9. On the *Connect to a server farm* page, select the *Create a new server farm* option, and then click the *Next* button to continue. The system displays the *Specify Configuration Database Settings* page shown in Figure 4 - 47.

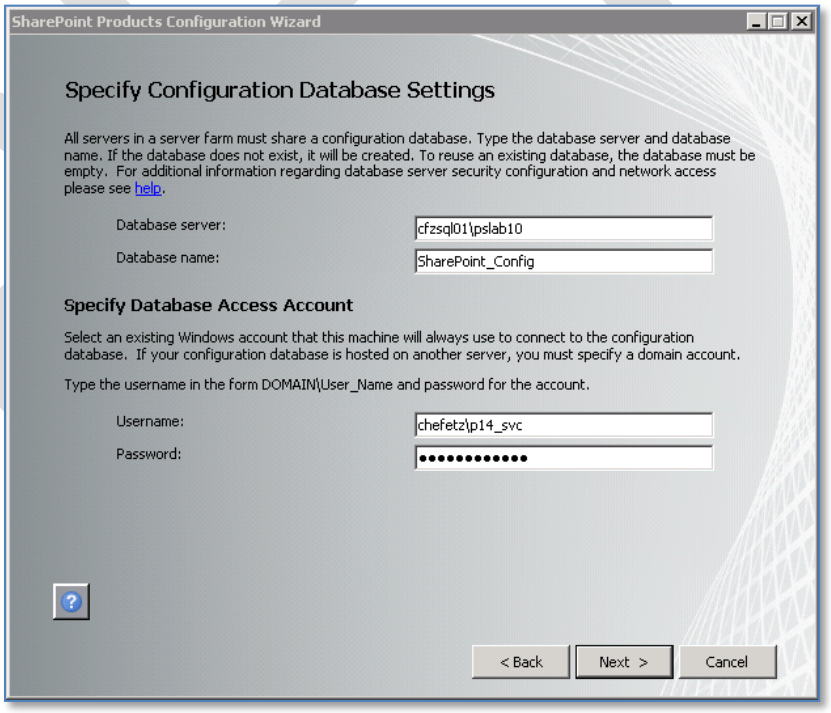

Figure 4 - 47: Specify Configuration Database Settings Page

10. On the *Specify Configuration Database Settings* page enter your database server name in the *Database server* field. Accept or change the default name for the SharePoint_Config database in the *Database name* field. Type the

user name and password for the Database access account role in the *Username* and *Password* fields. You can use the Farm Administrator account for this purpose. When you complete your entries, click the *Next* button to continue. The system displays the *Specify Farm Security Settings* page shown in Figure 4 - 48.

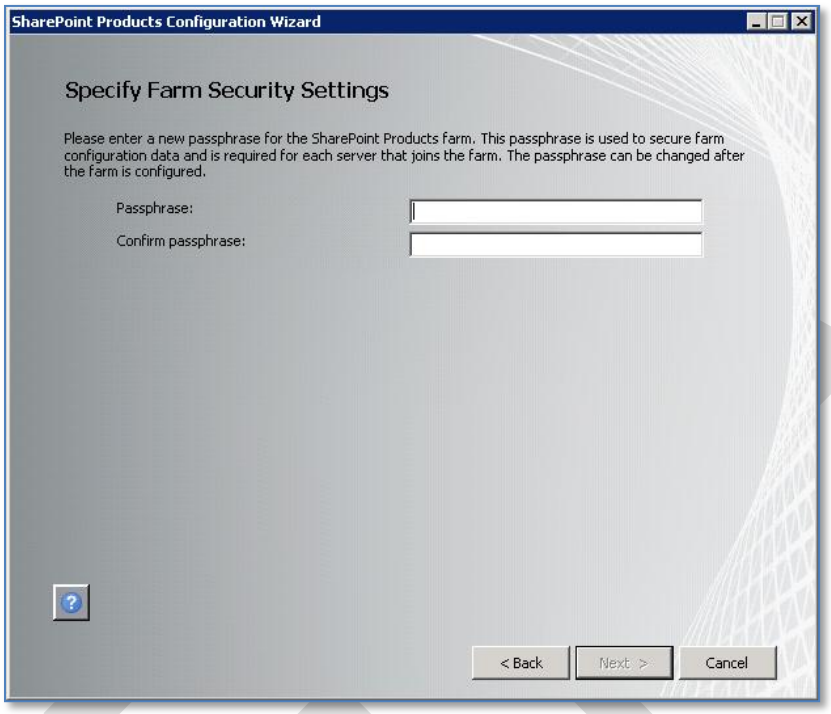

Figure 4 - 48: Specify Farm Security Settings Page

11. On the *Specify Farm Security Settings* page, enter and confirm a passphrase for the farm, and then click the *Next* button to proceed to the *Configure SharePoint Central Administration Web Application* page shown in Figure 4 - 49.

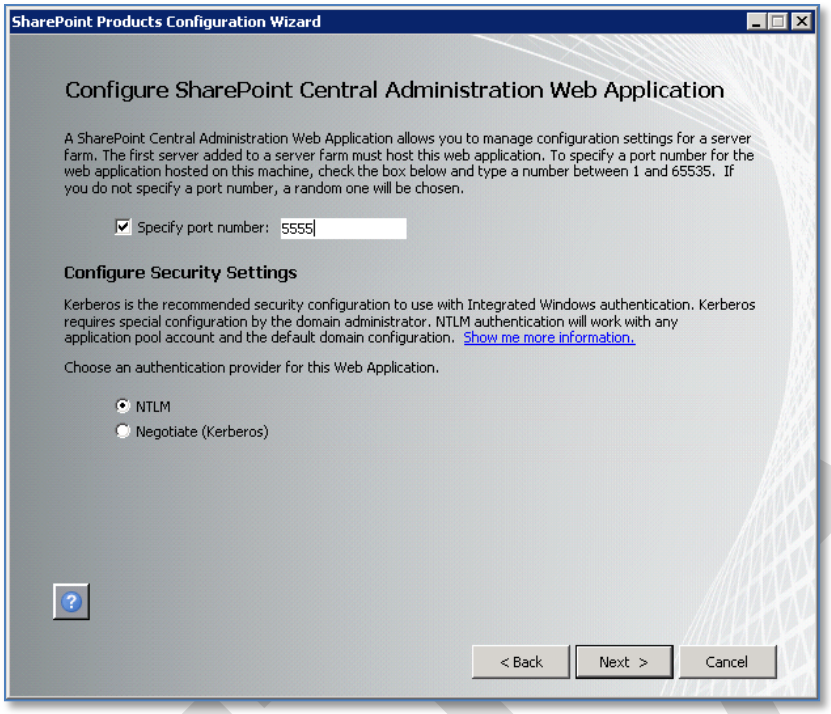

Figure 4 - 49: Configure SharePoint Central Administration Web Application Page

12. On the *Configure SharePoint Central Administration Web Application* page, enter a port number for your new Central Administration site or accept the default randomly generated port number. Under *Configure Security Settings*, select *NTLM* or *Negotiate (Kerberos)*. Click the *Next* button to continue to the *Completing the SharePoint Products Configuration Wizard* page shown in Figure 4 - 50.

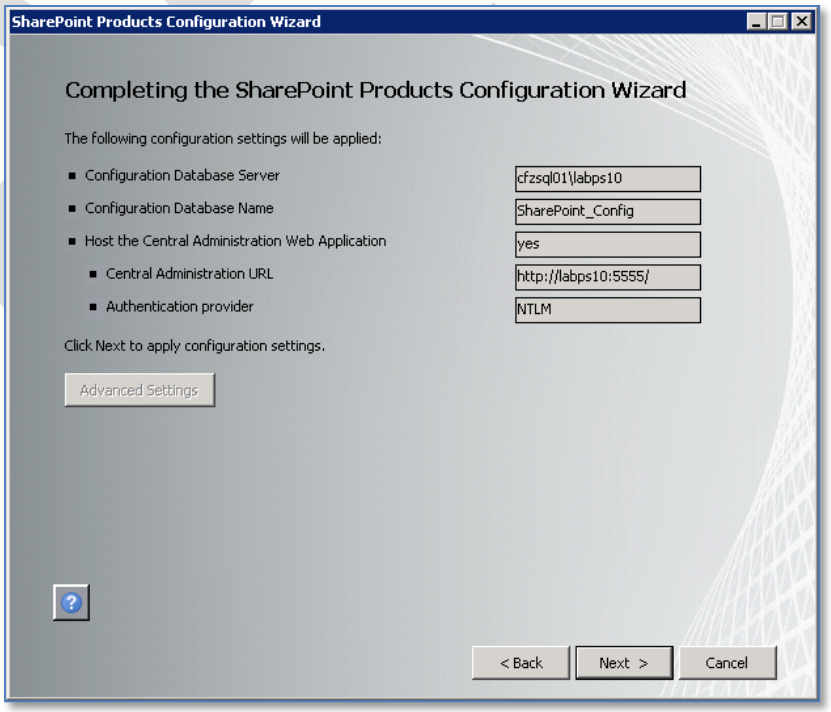

Figure 4 - 50: Completing the SharePoint Products Configuration Wizard Page

13. Confirm your entries on the *Completing the SharePoint Products Configuration Wizard* page. Correct any mistakes by using the *Back* button to navigate to the page that requires updating. Confirm the information displayed by clicking the *Next* button to continue. The system displays the *Configuring SharePoint Products* progress page shown in Figure 4 - 51.

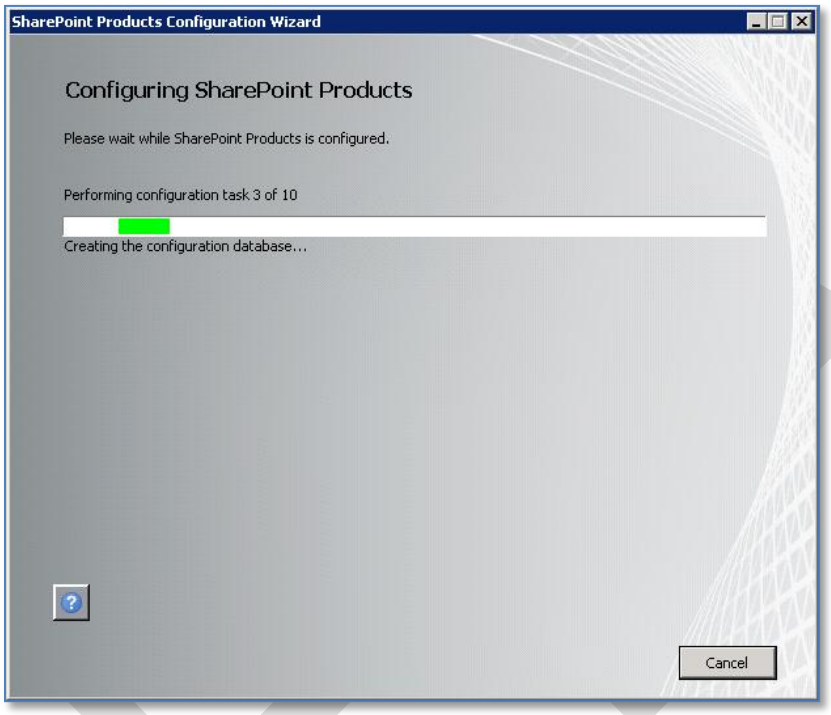

Figure 4 - 51: Configuring SharePoint Products Progress Page

This process may run for five to ten minutes before reaching completion.

14. When the process completes, the system display the *Configuration Successful* page as shown in Figure 4 - 52.

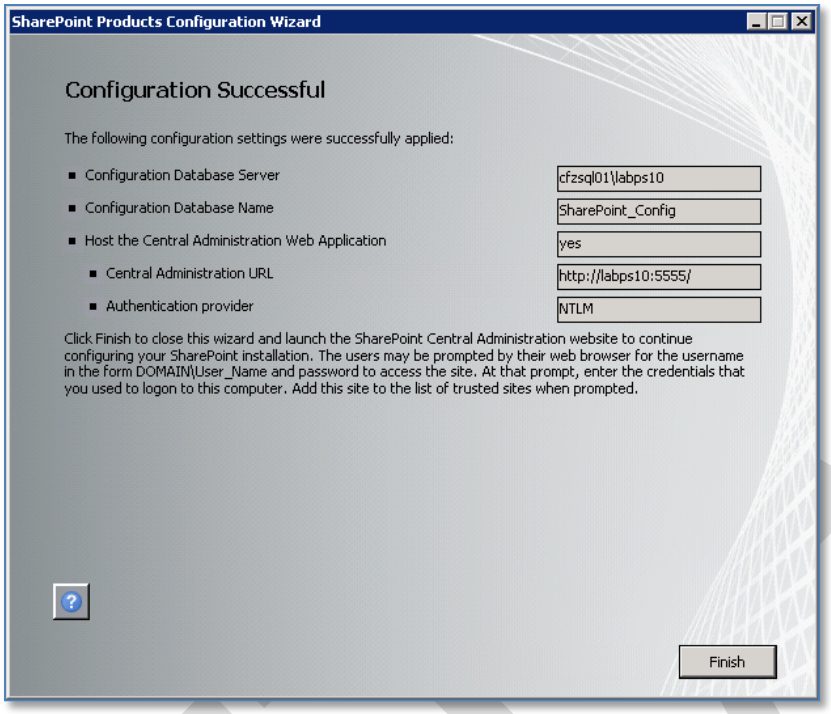

Figure 4 - 52: Configuration Successful Page

15. On the *Configuration Successful* page, click the *Finish* button to close the *SharePoint Products Configuration Wizard*. The system loads the new Central Administration site in a browser window as shown in Figure 4 - 53.

The system may take you directly to the first page of the Wizard

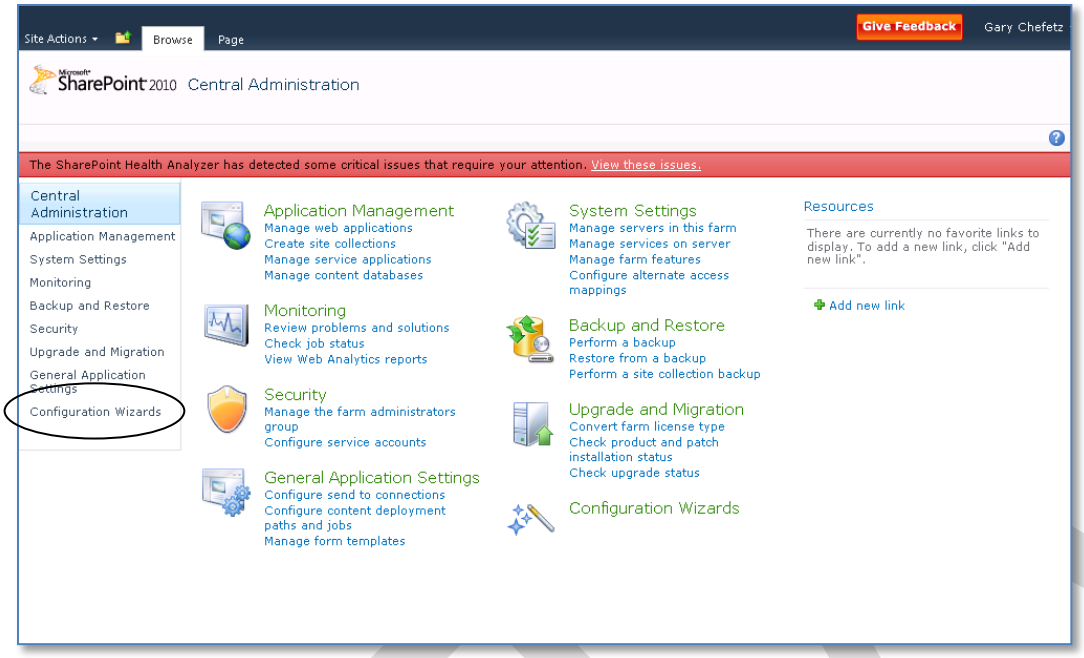

Figure 4 - 53: SharePoint 2010 Central Administration Homepage

Configure Your SharePoint Farm

By completing all of the previous steps in this module, you now have an empty SharePoint Server farm with Project Server available as a service application on the farm. Most importantly, you now have a Central Administration site from which you can create new standard and custom SharePoint Server 2010 site collections provisioning as many sites as you want with Project Server 2010 capabilities provided you stay within your practical system limits.

Select Services and Create a Site Collection

When the *SharePoint Products Configuration Wizard* completes, it is time to complete the SharePoint and server configurations required to start the project service and create your first Project Server application instance and site. You use the *SharePoint 2010 Farm Configuration Wizard* to perform the following tasks:

1. Select the *Configuration Wizards* link from the *Central Administration* menu of the *SharePoint 2010 Central Administration* screen shown in the previous figure. The system displays the *Configurations Wizards* page shown in Figure 4 - 54.

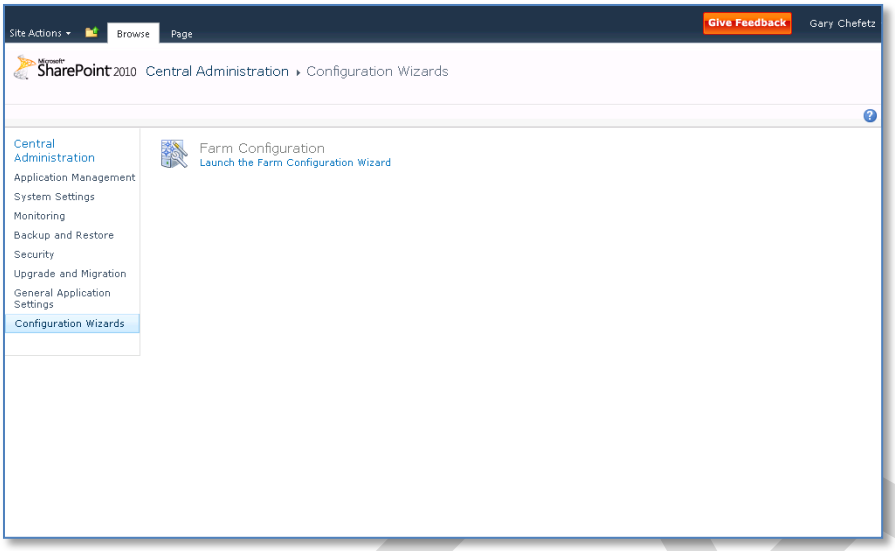

Figure 4 - 54: Configuration Wizards Page

2. Click on the *Launch the Farm Configuration Wizard* link. The system displays the *Configure your SharePoint farm* page shown in Figure 4 - 55.

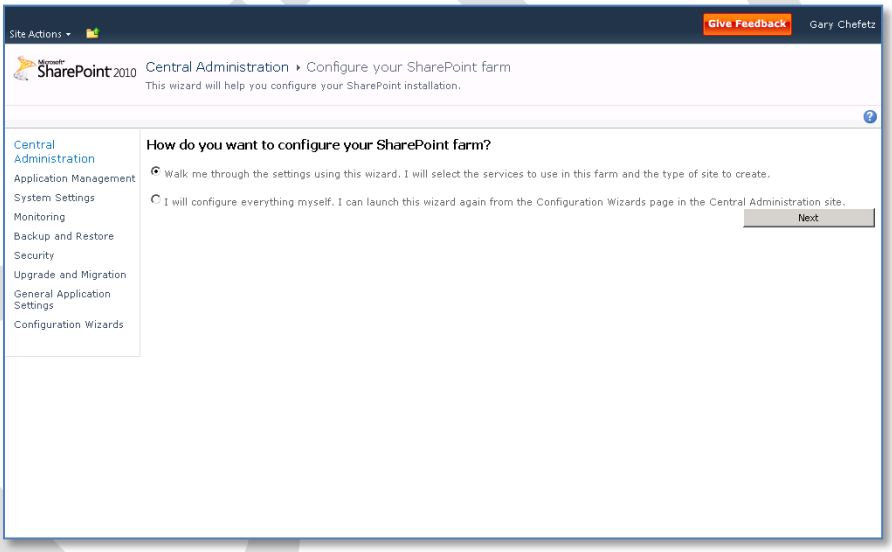

Figure 4 - 55: Configure Your SharePoint Farm Page

3. Leave the default option *Walk me through the settings using this wizard* selected, and then click the *Next* button to advance to the *Select the services you want to run in your farm* page shown in Figure 4 - 56.

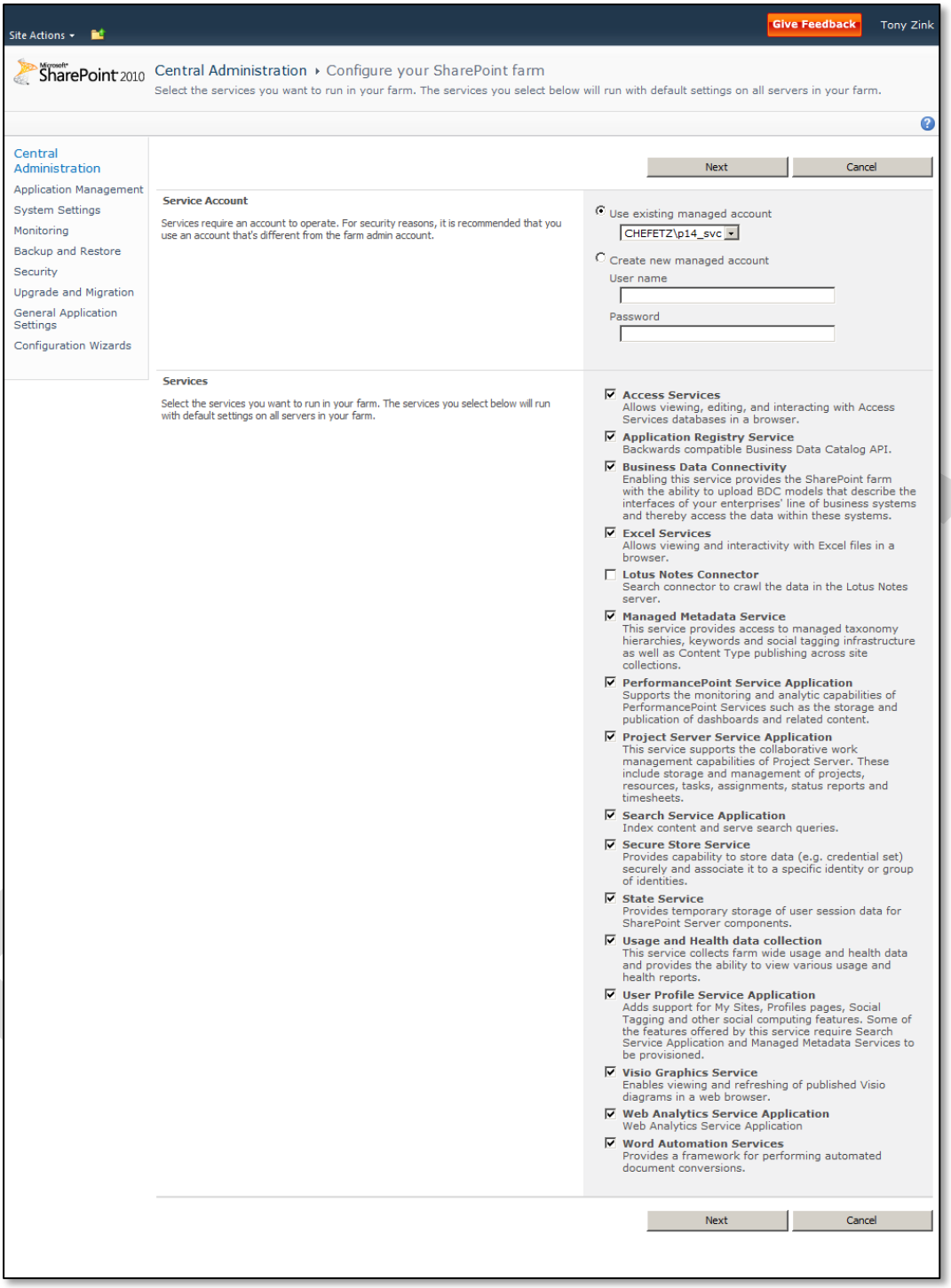

Figure 4 - 56: Select Services Page

4. In the *Service Account* section, select the *Use existing managed account* option, selecting the farm administrator account, unless you're using a more granular service account approach. In the *Services* section, select the services that you want to run for this instance. The services required for Project Server 2010 are *Excel Services*, *Project Server Service Application*, *Secure Store Service*, *PerformancePoint Service Application*, and *State Service*. Click the *Next* button to continue. You can choose to enable additional services based on the requirements you identified for your organization or server farm. The system displays a *Processing* page while it applies

your selections. This process may take several minutes to complete. Upon completion, the system displays the *Create Site Collection* page shown in Figure 4 - 57.

You can deselect all or as many of the other services that you do not want. Remember that each additional service requires additional server resources. To optimize system performance , activate only those services that you will actually use.

When you select services to activate in the Farm Configuration Wizard, the wizard not only starts the service on your farm, for all built-in SharePoint services, it also creates a service applicaiton for the service, or a running instance of the service. You can activate additional services later through SharePoint Central administration, but when you do this, you must take the separate step of creating the service application manually. Another method you can use to add services, along with a respective service applicaiton, is to re-run the Farm Configuration wizard.

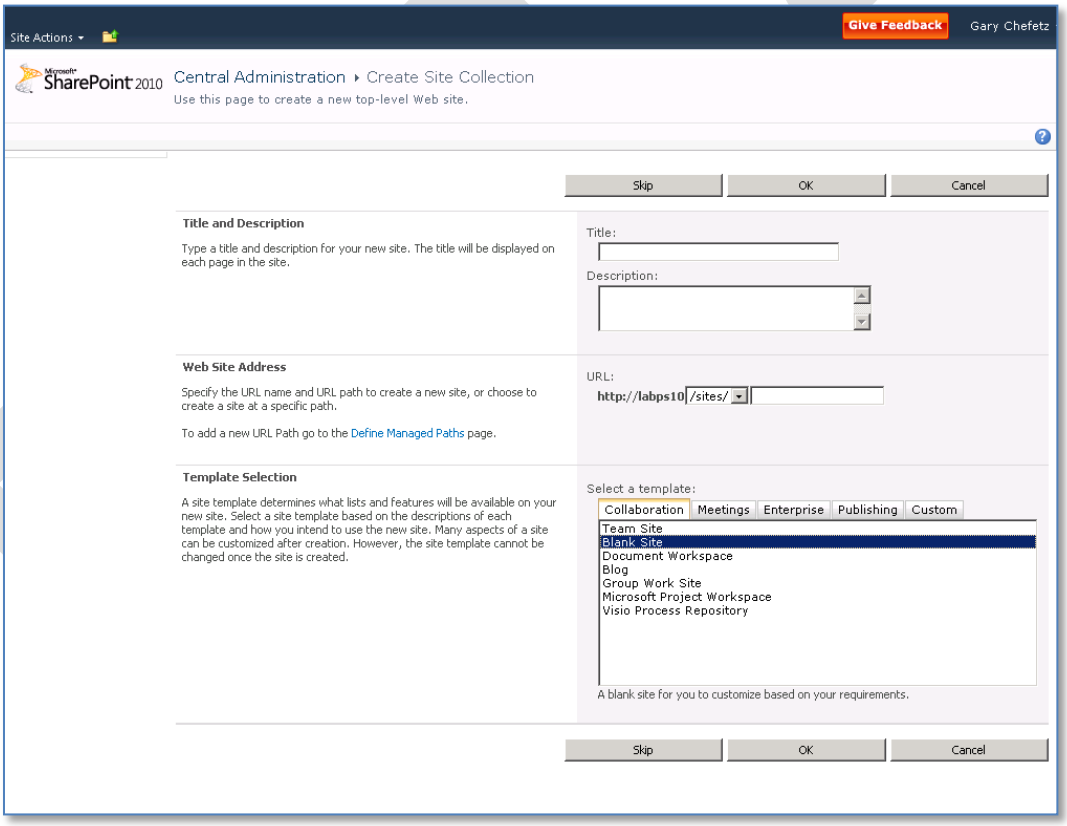

Figure 4 - 57: Create Site Collection Page

5. Next, you create a new top-level website for your Project Server site collection. Give your site a title and optionally a description. Determine your *Web Site Address*, select the *Blank Site* template in the template section and click the *OK* button to create the site collection top-level site. When the system completes the site creation, it displays the confirmation page shown in Figure 4 - 58.

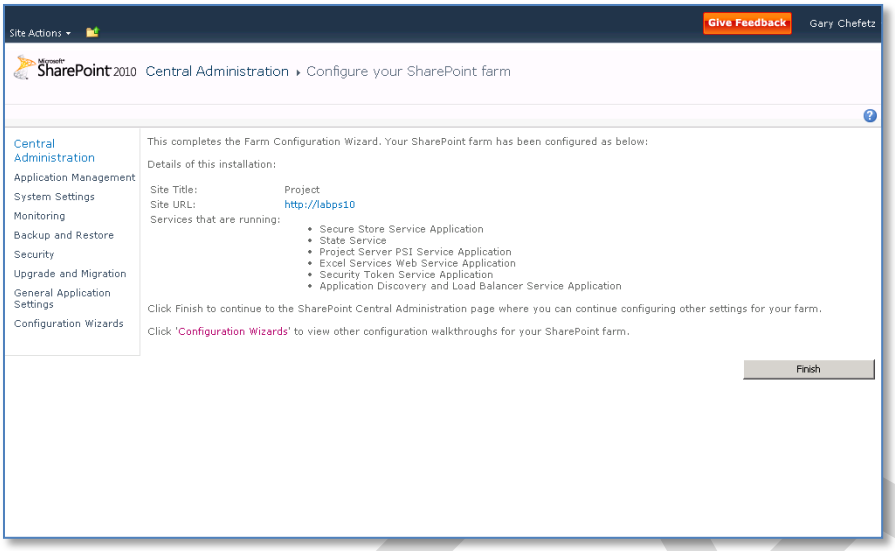

Figure 4 - 58: Confirmation Page

6. Click the *Finish* button to close the *Configure your SharePoint farm* wizard. The system returns to the Share-Point Central Administration homepage shown previously in Figure 4-53.

Set Read Permissions on the New Site

Now that you have created a new top-level site collection to contain your Project Server 2010 site instances, you must first give your users read permission to the new top level web site you created using the wizard. To accomplish this, you must navigate to the site. In the example above, I created the new top-level site at the server root. To navigate to the root site, enter "http://<servername>" in your browser. The system displays the homepage of your new site as shown in Figure 4 - 59.

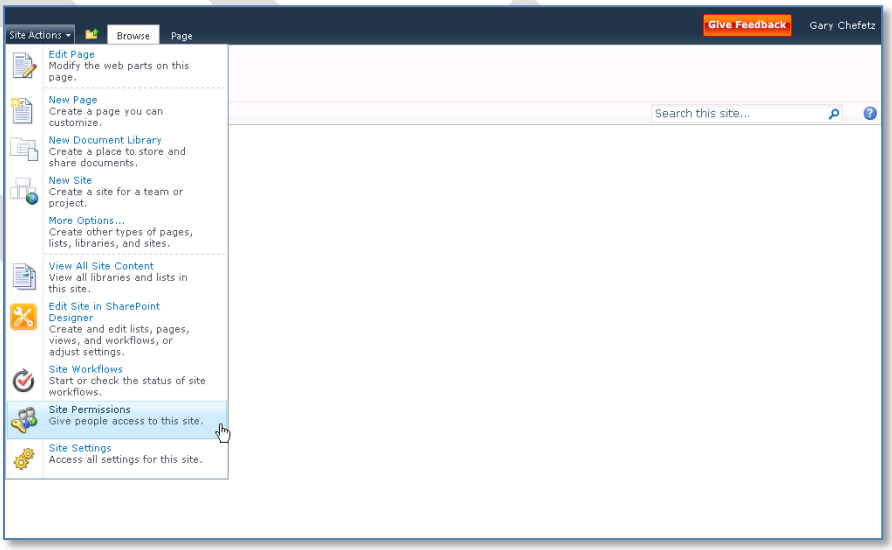

Figure 4 - 59: Top Level Site Homepage with Site Actions Menu Selected

1. On your root-site homepage, click on the *Site Actions* menu and select *Site Permissions*. The system displays the *Edit permissions* page shown in Figure 4 - 60.

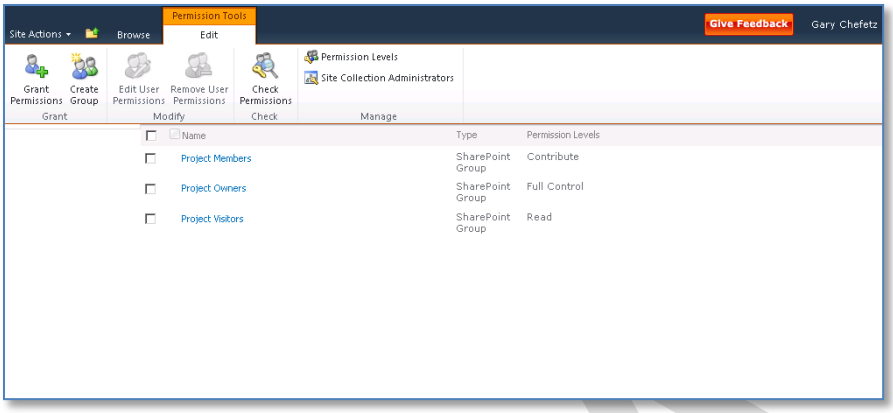

Figure 4 - 60: Edit Permissions Page

2. Click the *Grant Permissions* button on the ribbon menu. The system displays the *Grant Permissions* window shown in Figure 4 - 61.

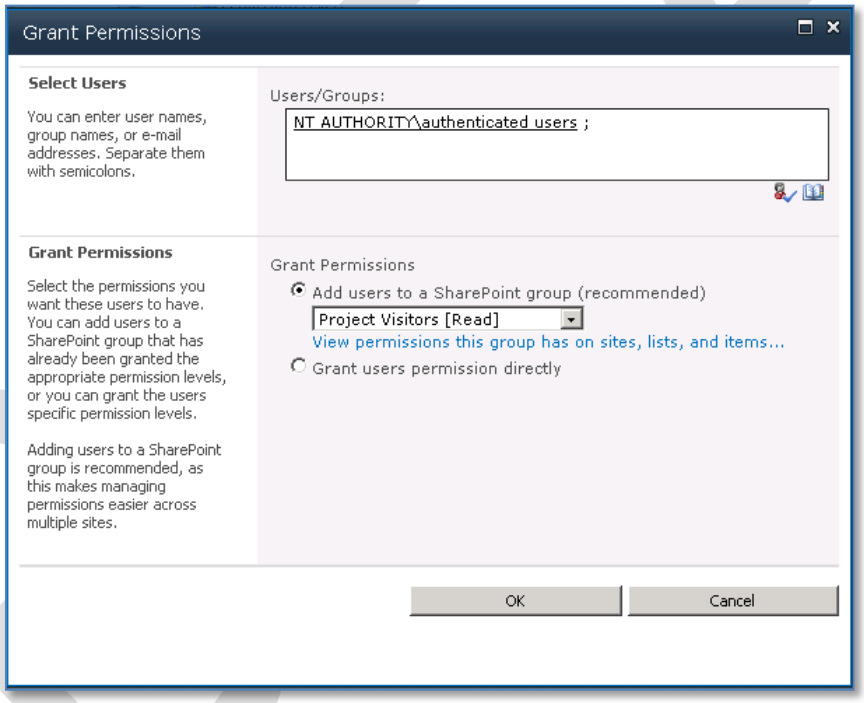

Figure 4 - 61: Grant Permissions Window

3. In the *Users/Groups* text box, type "NT AUTHORITY\authenticated users" without the quotes, and in the *Grant Permissions* selection list, select *Add users to a SharePoint group (recommended)*, choose the *Project Visitors (Read)* group for your top-level site, and click the *OK* button to continue. The system returns to the *Edit Permissions* page shown in the previous figure.

Create a Project Server 2010 Service Application

Now that you have a top-level site collection prepared to house your Project Web Access sites, it is time to create your first Project Web Access instance or *Project Server Service Application*. To create a new Project Web Access site, select *Application Management* from the SharePoint Central Administration homepage shown previously in Figure 4 - 53. The system displays the *Application Management* page shown in Figure 4 - 62.

If you are new to SharePoint and Project Server, keep in mind that Project Server 2010 is a SharePoint Server 2010 service application and it derives all of its platform capability from SharePoint Server, and is managed as an application through SharePoint Server. Pay close attention to the following steps and spend some time on each screen to get familiar with using the SharePoint Central Administration user interface.

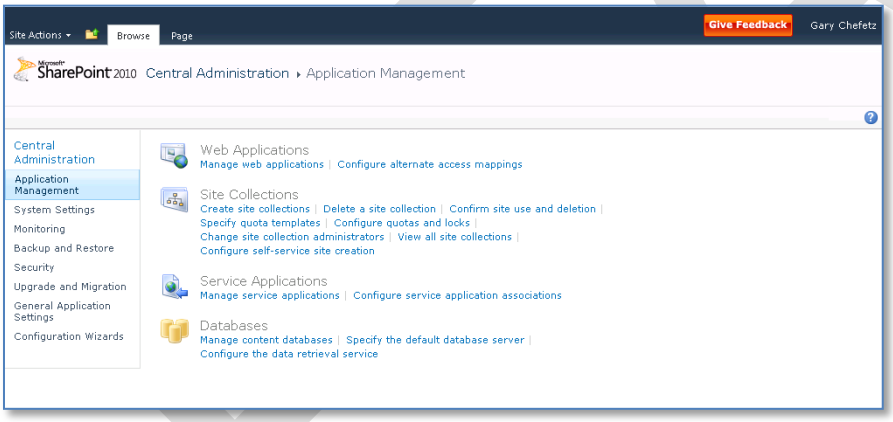

Figure 4 - 62: Application Management Page

To create a PWA site select the *Manage service applications* link in the *Service Applications* section. The system displays the *Service Applications* page shown in Figure 4 - 63.

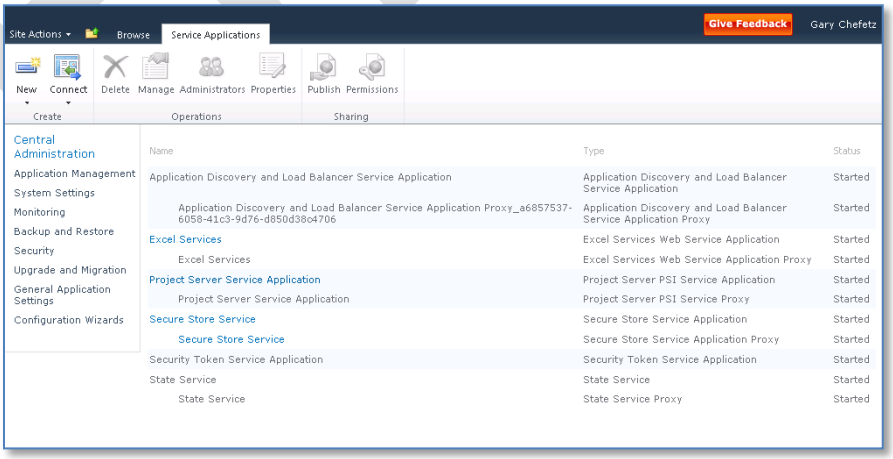

Figure 4 - 63: Service Applications Page

On the *Service Applications* page, select the *Project Server Service Application* link from the page or select the *Project Server Service Application* row to activate the *Operations* section icons on the ribbon and then click on the *Manage* button. The system displays the *Manage Project Web Access Sites* page shown in Figure 4 - 64. Complete the steps that follow to provision your new Project Web Access site.

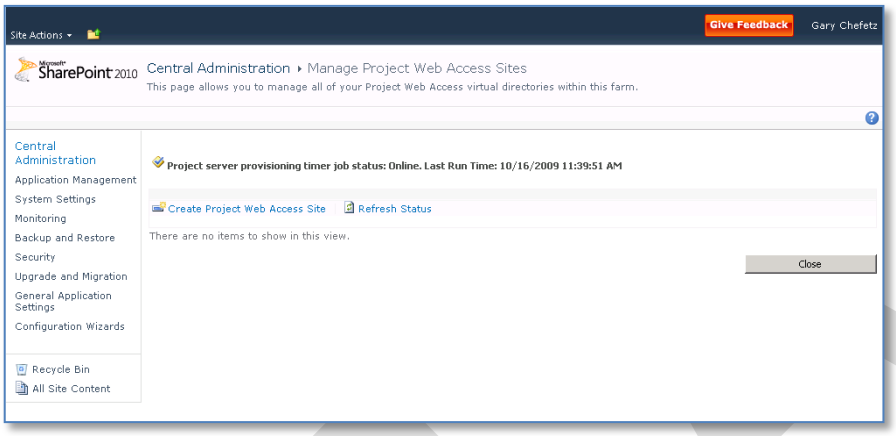

Figure 4 - 64: Manage Project Web Access Sites Page

1. On the *Manage Project Web Access Sites* page, click the *Create Project Web Access Site* link. The system displays the *Create Project Web Access Site* page shown in Figure 4 - 65.

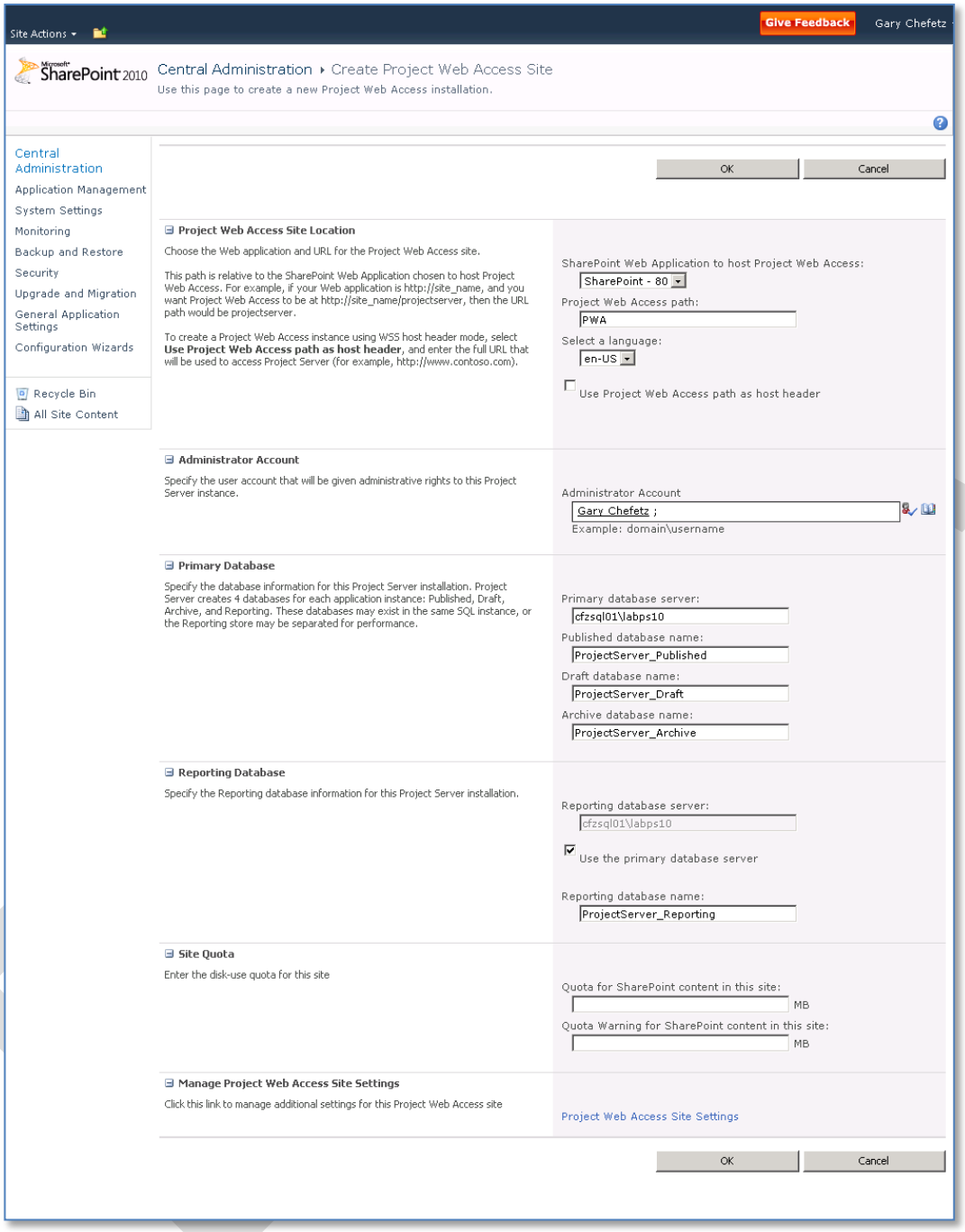

Figure 4 - 65: Create Project Web Access Site Page

2. Notice that in the *Project Web Access Site Location* section, the page defaults to the location of the new top-level site collection you created at the root. To create a site at http://<servername>/pwa, leave the defaults as is. To create a Project Web Access instance using WSS host header mode, select the *Use Project Web Access path as host header* option, and enter the full URL that you want to use for Project Server in the *Project Web Access Path* field (Example: http://www.mycompany.com). In the *Administrator Account* field, enter the user account that will be the first authorized Project Server administrator. This should default to your Farm Administrator service account if you remembered to logon using the Farm Administrator to perform the installation. The Farm Administrator service account must be a member of the Project Server administrators group.

Warning: The *Manage Project Web Access Site Settings* link displayed is not yet active, and will not be accessible until you complete the process to create a new Project Server site. Ignore this link.

3. In the *Primary Database* section, specify the database server that will contain the *Published*, *Draft*, and *Archive* databases for your Project Server in the *Primary database server* field, and then enter your database names for these or accept the defaults in each respective *Database name* field.

The database names that you select must be unique to the SQL Server instance that will house the databases. If you plan to provision more than one instance of Project Server 2010, adding a recognizable convention to the name that identifies the instance helps to identify the databases later.

4. If you want to deploy the Reporting database on a different instance of SQL Server, clear the *Use the primary database server* check box and enter the name of the SQL Server instance where you want the Reporting database deployed.
5. You may set optional site quotas in the *Site Quota* section. Click the *OK* button to start the site creation process. The system starts the PWA site creation process, which may take five to ten minutes to complete. When the site creation process completes, the URL will appear on the *Manage Project Web Access Sites* page with a *Provisioned* status as shown in Figure 4 - 66.

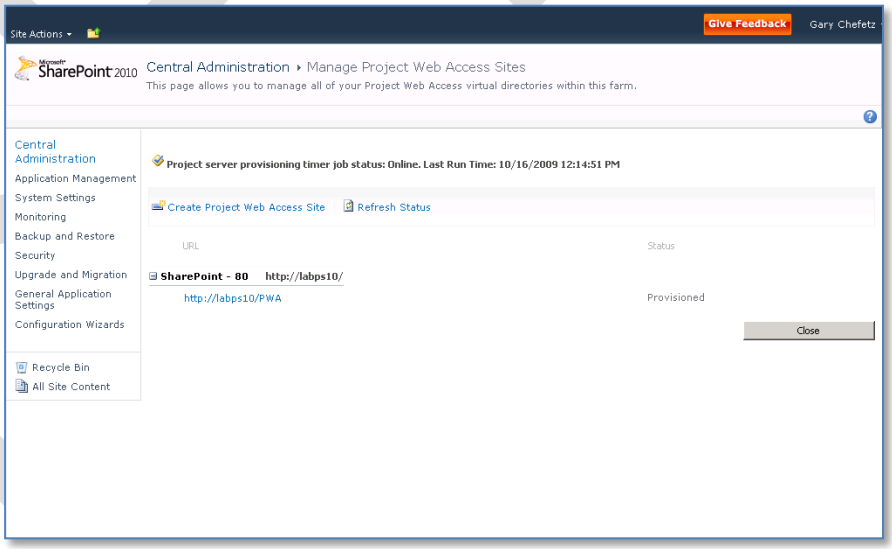

Figure 4 - 66: Manage Project Web Access Sites with One PWA Site Provisioned

You now have your first Project Server 2010 site; however you still have configuration work to do. The following module, Post Installation Steps, walks you through the process of configuring various services necessary to support all of the features your Project Server installation has to offer, and takes you through some basic functional tests to make sure that your Project Server site is ready to configure for your organization.