
(This is an alpha version of Benjamin Day Consulting, Inc.’s installation labs.)

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Lab 01:  Install Windows 2008 (x86)

The first step of a Team Foundation Server 2010 installation is always installing the operating system. In this case, we’ll be installing Windows 2008 32-bit edition.

- Insert your Windows 2008 x86 installation disk in to the drive
- Start the machine

Install the Operating System

After a short amount of time, you should see the Install Windows screen.

- Set Language to install to English
- Set Time and currency format to English (United States)
- Set Keyboard or input method to US
• Click **Next**

You’ll now see the following screen.

![Windows Server 2008 Installation Screen]

• Click **Install Now** to begin the installation
You’ll now be prompted to choose your desired operating system edition. For this installation, we’ll choose **Windows 2008 Standard (X86)**.

- Select **Windows 2008 Standard (Full Edition) X86**
- Click **Next**
Now you’ll choose the type of installation you want to do. Since we’re doing a completely fresh installation of Windows 2008, we only have the option to do a **Custom (advanced)** installation.

- Click **Custom (advanced)**
Choose the disk (or disk partition) where you want to install Windows 2008. The image below represents a fresh server with a single, unformatted disk.

- Choose the disk partition where you want to install Windows 2008.
- Click Next
After clicking Next, the installation will start. After a number of minutes and a reboot or two, you’ll eventually see the following screen prompting you to set the administrator password for the new installation of Windows 2008.

- Click OK
Enter the password you want for the Administrator username and the password confirmation.

- Enter your password
- Enter your password confirmation
- Click the next arrow
You should see the **Your password has been changed** notification.

- Click **OK**
After clicking **OK**, you will be automatically logged in to your new Windows Server 2008 instance.
Patch the Operating System via Windows Update

The next step of the operating system installation is to run **Windows Update**.

- Click **Start** to bring up the start menu
- Locate and click **Windows Update**
The first time that you run Windows Update, you’ll be prompted to configure the automatic update settings. Our recommendation is to turn on automatic updating for Windows and for any other products that plug in to Windows Update.

- Click **Turn on now** to configure this server to automatically update

You may be prompted to **install new Windows Update software**.

- Click **Install now**
After installing the Windows Update update, Windows Update will perform an update scan. (Whoa! One sentence and 4 occurrences of the word “update”!)

Before we install the updates, let’s configure this server to accept updates for other products.

- Click Get updates for more products
Internet Explorer should start and take you to the Microsoft Update page.

- Check I accept the Terms of Use.
- Click Install
You should now be back at the Windows Update page and an update scan should be running. Under **You receive updates**: you should see the value **For Windows and other products from Microsoft Update** as shown below.

When the update scan completes, you should see a screen that’s similar to the one in the image below.

- Click **Install updates** to start the update download and installation
If you see any license terms dialogs, accept the terms and click Finish (or Next).

- Click I accept the license terms
- Click Finish
Add the Server to an Active Directory Domain
Now that the operating system is installed and all the patches have been applied, it’s time to join the server to our Active Directory domain.

First you need to start the Windows **Server Manager** tool.

- Click the **Start** button
- In the search box, type **Server Manager**
- In the **Programs** search results in the upper left, click **Server Manager**
In **Server Manager** in the **Server Summary** section, you’ll notice that your computer name is something ugly that the installer automatically generated. In the image below, it’s WIN-BYJ22DLCD93. The server is also not connected to an Active Directory domain. Joining Active Directory helps us to streamline the management of users and permissions. This isn’t mandatory (only recommended) for simple Team Foundation Server installations *unless* you want to run **Virtual Lab Manager**. If you want to use Virtual Lab Manager, you need to run TFS in Active Director domain mode.

Let’s change the server name and join it to a domain.

- Click **Change System Properties**
You should now see the **System Properties** dialog.

- Click **Change...**
You should now see the **Computer Name/Domain Changes** dialog. This dialog let you specify the name of the server and the name of the domain that this server belongs to. For the purpose of this guide, we’ll set the server name to **TFS2010Beta2** and use a domain named **BENDAY**.

- Set **Computer name** to the name of your TFS machine. (Example: **TFS2010Beta2**)
- Under **Member of**, choose **Domain**
- Set the value for **Domain** to the name of your Active Directory domain. (Example: **BENDAY**)
- Click **OK**
You’ll be prompted for the credentials to join the Active Directory domain.

- Enter the **user name** and **password** for the domain
- Click **OK**

You’ll be prompted to reboot your server.

- Click **OK**
You should now be back at the **System Properties** dialog.

- Click **Close**

- Click **Restart Now**

When the server reboots, it will be part of the domain. From this point forward, you should log in to this server using your domain credentials.
Lab 02: Install Team Foundation Server 2010

This lab will walk you through the process of installing Team Foundation Server 2010 in a single-server configuration on Windows 2008.

**Pre-requisite: Internet Information Server (IIS)**

The first step is to configure the pre-requisites for Internet Information Server (IIS).

- Go to the Start menu and search for “Server Manager”
- Click on the icon to run **Server Manager**

You should now see the Server Manager application.

- In the right-side panel, locate the **Roles Summary** section
• Click the **Add Roles** button as highlighted above

You should now see the **Add Roles Wizard** window.

• Click **Next**
You should now see a list of roles.

- Locate **Web Server (IIS)** and **check** the checkbox

When you check the checkbox, you should see the following dialog.

- **Click** **Add Required Features**

You should now be back on the **Select Server Roles** dialog again.

- **Click** **Next**
You should now be on the **Web Server (IIS)** role description page.

• **Click Next**

You should now be on the **Select Role Services** page of the wizard. TFS requires that IIS has the **HTTP Redirection, ASP.NET, Windows Authentication**, and **IIS 6 Management Compatibility** role services installed.

• Under **Application Development**, locate **ASP.NET** and click on the box to select the role
Clicking on the ASP.NET role will pop up a new dialog asking if you’d like to **Add role services required for ASP.NET**.

- Click **Add Required Role Services** to add the dependent services for the ASP.NET role.

Team Foundation Server also requires the **HTTP Redirection** role service.

- Under **Common HTTP Features**, locate and select **HTTP Redirection**.
Since TFS makes heavy use of Windows Authentication, the **Windows Authentication** role service is also required.

- Under **Security**, locate and select the **Windows Authentication** role service.

The final required role service for IIS is **IIS 6 Management Compatibility**.

- Under **Management Tools**, locate and select the **IIS 6 Management Compatibility** node.

After you’ve selected **IIS 6 Management Compatibility**, all the child services should also be selected (checked). Verify that **IIS 6 Metabase Compatibility**, **IIS 6 WMI Compatibility**, **IIS 6 Scripting Tools**, **IIS 6 Management Console** are all checked as shown above in the image.

- Click **Next**
After clicking next, you should now see the **Confirm Installation Selections** page of the wizard.

- Click **Install** to begin the installation
When the installation has finished, you should be on the **Installation Results** screen and you should see the **Installation succeeded** label as highlighted in the image below.

- Click **Close**
Pre-requisite: SQL Server 2008


- Insert your SQL Server 2008 installation DVD or ISO image and run setup.exe as prompted by the auto-run.

You may get a Microsoft SQL Server 2008 Setup dialog that prompts you to install some pre-requisites for SQL Server.

- If prompted, click OK to install the pre-requisites
- If prompted to install any other pre-requisites, follow the on-screen directions and reboot as needed/prompted.
When the installer has loaded, you should see the **SQL Server Installation Center** dialog.

- Click the **Installation** link as shown above
• Click **New SQL Server stand-alone installation or add features to an existing installation**
The installer will now do some checks to see if SQL Server 2008 can be successfully installed on your server.

When it has finished running the checks, you should see that the operation completed with no failed items.

- Click OK
You should be on the **Product Key** page.

- **Enter your product key**
- **Click Next**

You should now be on the **License Terms** page.

- **Check** the **I accept the license terms** checkbox
- **Click Next**

After accepting the license terms, you should see the **Setup Support Files** page.

- **Click Install**
You should now see a new page called **Setup Support Rules**.

![Setup Support Rules](image)

After this page runs, you should see that all the operations passed and no operations failed.

- Click **Next**
You should now be on the **Feature Selection** page. This is where we select the individual components of SQL Server that we want to install. TFS2010 needs the following features to be installed: **Database Engine Services, Full Text Search, Reporting Services, and Analysis Services.**

- Select **Database Engine Services**
- Select **Full-Text Search**
- Select **Analysis Services**
- Select **Reporting Services**
- Select **Client Tools Connectivity**
- Select **Management Tools – Basic**
- Select **Management Tools – Complete**
- Click **Next**
The next screen prompts us to configure the SQL Server *Instance Configuration*.

- Click **Next**
The next screen is the **Disk Space Requirements** screen.

- **Click Next**
The next page configures the service accounts for the various SQL Server services. We want all of them to run as **NT AUTHORITY\NETWORK SERVICE**.

- Click **Use the same account for all SQL Server services**

  ![Use the same account for all SQL Server services](image)

  These services will be configured automatically where possible to use a low privilege account. On some older Windows versions the user will need to specify a low privilege account. For more information, click Help.

  ![Service Accounts](image)

<table>
<thead>
<tr>
<th>Service</th>
<th>Account Name</th>
<th>Password</th>
<th>Startup Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL Server Agent</td>
<td>NT AUTHORITY\NETWORK SERVICE</td>
<td></td>
<td>Automatic</td>
</tr>
<tr>
<td>SQL Server Database Engine</td>
<td>NT AUTHORITY\NETWORK SERVICE</td>
<td></td>
<td>Automatic</td>
</tr>
<tr>
<td>SQL Server Analysis Services</td>
<td>NT AUTHORITY\NETWORK SERVICE</td>
<td></td>
<td>Automatic</td>
</tr>
<tr>
<td>SQL Server Reporting Services</td>
<td>NT AUTHORITY\NETWORK SERVICE</td>
<td></td>
<td>Automatic</td>
</tr>
</tbody>
</table>

- From the **Account Name** drop down list, choose **NT AUTHORITY\NETWORK SERVICE**
- Click **OK**
After clicking OK, you should be back on the services page. We need to set all of the services except for **SQL Full-text Filter Daemon Launcher** to start automatically on startup.

- Set **Startup Type** to **Automatic** for the following services:
  - SQL Server Agent
  - SQL Server Database Engine
  - SQL Server Analysis Services
  - Sql Server Reporting Services
  - SQL Server Browser
- Click **Next**
On the **Database Engine Configuration** screen, you need to set up the basic permissions for the SQL Server administrators.

- Select **Windows authentication mode**
- Click **Add Current User**

The current user name should now appear in the list of SQL Server administrators.

- Click **Next**

You should now be on the **Analysis Services Configuration** page.

- Click **Add Current User** to add your user account to the Analysis Services administrators group
- Click **Next**
You should now be on the **Reporting Services Configuration** page of the wizard.

- Choose **Install the native mode default configuration**
- Click **Next**
On the **Error and Usage Reporting** page, you can optionally choose to send usage information to Microsoft.

- Choose the values as you wish
- Click **Next**

You should now be on another **Installation Rules** page where the installer will perform another round of checks to see if your configuration options will be valid. You should see that all checks have passed and none have failed or created warnings.

- Click **Next**
You should now be on a screen titled **Ready to Install** with a summary of your configuration options.

- Click **Install** to begin the installation
After running for a while, your installation should complete with all products installing successfully.

- Click Next
You should now be on the final page of the installer. If you’re curious, you can click on the link to view the installation log.

- Click Close to exit the installer
After exiting the installer menu, you should be at the **SQL Server Installation Center** main menu.

- Click the X button in the upper right to exit the installer

You’ve finished installing SQL Server.

- Reboot your server
Pre-requisite: Configure Permissions for Sharepoint Dashboard User

If you want to use the Sharepoint Team Foundation Server Dashboards feature, you need to give the Sharepoint service account user permissions to access the database. SharePoint will be installed as part of the TFS and, when we do the TFS installation, we’ll use the WSSSERVICE username.

To begin, you need to open SQL Server Management Studio.

- Click to the Start menu, type SQL Management Studio in the search box (see arrow above), click the SQL Server Management Studio icon in the results list (highlighted above) to start SQL Server Management Studio
When SQL Server Management Studio starts up, you’ll be prompted to log in to the server.

- Set the **Server type** value to **Database Engine**
- Set the **Server name** value to **(local)**
- Set the **Authentication** value to **Windows Authentication**
- Click **Connect** to connect to SQL Server

You should now be connected to SQL Server 2008 and your screen should look like the following image.
Now you’ll add the login for SharePoint to SQL Server’s security system.

- Expand the **Security** folder
- **Right-click** the **Logins** folder and choose **New Login...**
You should now be on the **Login – New** dialog.

- **Type** the fully qualified name for your SharePoint service user in the **Login name** box. The format of the username is `domain_name\username`. So, if your domain is MyDomain and the user is WSSSERVICE, you’ll enter `MyDomain\WSSSERVICE`.
- **Click OK**
- **Close SQL Server Management Studio**
Install Team Foundation Server 2010

You’re now ready to actually install Team Foundation Server 2010.

- Insert your Team Foundation Server 2010 installation DVD into the drive or mount ISO image
- Open the DVD using **Windows Explorer**

You should see the root of the DVD in Windows Explorer with folders for Team Explorer, the 64-bit version of TFS, and the 32-bit version of TFS.

- If you’re installing on a 64-bit operating system, open the **TFS-x64** directory
- If you’re installing on a 32-bit operating system, open the **TFS-x86** directory
• Locate **setup.exe** in the installation directory
• **Double-click** **setup.exe**
You should now see the **Microsoft Team Foundation Server 2010** installation welcome page.

- Click **Next**
• Read the license terms
• Select I have read and accept the license terms
• Click Next

You should now be on the Options page.

• Check Team Foundation Server
• Click Install
The installer should now be running.

At the end of the installation, you’ll be prompted to restart your server.

- Click **Restart Now**
When the server has finished rebooting, log in to resume the installation. When the installation completes, you should see the screen below with a message saying it was installed successfully.
Configure Team Foundation Server
At this point, the TFS application bits are installed on the server. Now we need to run the configuration tool to make TFS run. At the bottom of the ‘installation completed’ screen, you’ll see a checkbox labeled Launch Team Foundation Server Configuration Tool.

- Verify that Launch Team Foundation Server Configuration Tool is checked
- Click Finish to start the Team Foundation Server Configuration tool

You’ll see the Visual Studio Team Foundation Server 2010 splash screen.
You should now see the Team Foundation Server Configuration tool window. On the left side of the configuration tool window, you should see 5 different configuration options: Basic, Standard Single Server, Advanced, Application-Tier Only, and Upgrade. We’re going to do a Standard Single Server which means that all the components of TFS run on a single machine.

- Choose Standard Single Server
- Click Start Wizard
You should now be on the **Welcome to the Team Foundation Server Default Configuration Wizard.**

- **Click Next**
At this point, you should be on the screen that sets the service account information for SharePoint and Reporting services.

- Set the **User Account** value to the fully-qualified username for the **TFSREPORTS** account. The fully-qualified name is `domain_name\TFSREPORTS`.
- Set the **Password** value to the password for the TFSREPORTS account
- Click the **Test** link to verify that the username and password combination that you have entered is valid
- Click **Next**
You should now be on the **Confirm the Configuration Settings Before Proceeding** screen.

- Click **Next** to start the configuration validation process
The configuration process should now be running system checks to see if the configuration will succeed. At the end of the process, you should see that all six pieces of the check pass. You may see a warning about SharePoint and IIS AppPools. You can safely ignore this warning if you don’t have any web sites running on the TFS machine.

- Click **Configure** to start the configuration
You should see the **Configuration Progress** dialog.
When the configuration process completes, you should see that all items have completed successfully.

- Click **Next**
• Click Close
• Click Close
You should now be on the **Team Foundation Server Administration Console**.

Team Foundation Server 2010 has been successfully installed.
Lab 03: Install Microsoft Office & Microsoft Project

In order to use the integration between Team Foundation Server and Microsoft Office & Microsoft Project, you need to install these products before you install Team Explorer. With Team System 2010, Team Explorer is installed as part of the Visual Studio Ultimate 2010 installer so this means we need to install Office and Project before we install Ultimate.

TFS allows you to edit Work Items with Microsoft Excel and Microsoft Project.

Install Microsoft Office

- Insert your Microsoft Office installer CD into your DVD drive
- Click Run SETUP.EXE
You’ll be prompted for your Office license key.

- Enter your **Product Key**
- Click **Continue**
• Read the license terms
• Check I accept the terms of this agreement
• Click Continue
You should now be on the **Choose the installation you want** dialog. At this point, you can either click **Install Now** or click **Customize** and edit the features that will be installed. For this guide, we’ll be editing the installed features so that we only install the features required for the TFS integration.

- Click **Customize** to edit the installation options
We only need Microsoft Office Excel and Microsoft Office Word. We’ll now turn off the features we don’t need.
To disable a feature, you’ll **click on the icon** to the left of the feature name (indicated below by the arrow) and then choose **Not Available** from the menu.

- Set the following features to **Not Available**:
  - Microsoft Office Access
  - Microsoft Office Groove
  - Microsoft Office InfoPath
  - Microsoft Office OneNote
  - Microsoft Office Outlook
  - Microsoft Office PowerPoint
  - Microsoft Office Publisher
  - Microsoft Office Visio Viewer

- Click **Install Now**
Installing Microsoft Office Ultimate 2007...
• Click **Close**

Office is now installed.
Install Microsoft Project

Now you’ll install Microsoft Project.

- Insert your **Microsoft Project** installer CD

![AutoPlay window showing the option to run SETUP.EXE](image)

- Click **Run SETUP.EXE**
You should now be on the **Enter your Product Key** dialog.

- Enter your **Product Key** for **Microsoft Project 2007**
- Click **Continue**
• Read the license terms
• Check I accept the terms of this agreement
• Click Continue
• Click **Install Now**
Installation Progress

Installing Microsoft Office Project Professional 2007...
• Click Close

Microsoft Office Project Professional 2007 is now installed.

**Check Windows Update for Patches**

Now that Project and Office have been installed, you should go to Windows Update and check for updates for your computer.
Lab 04:  Install Visual Studio Ultimate 2010

This lab will walk you through the process of installing Visual Studio Ultimate 2010 on your machine.

Pre-requisites
If you want integration between Team Foundation Server and Microsoft Office, make sure that have installed and patched Microsoft Office before starting the installation of Ultimate.

Install Visual Studio Ultimate 2010

- Insert your installation disk for Visual Studio Ultimate 2010 in to your DVD drive
- Click Run autorun.exe
You should now see the Microsoft Visual Studio 2010 Setup dialog.

- Click Install Microsoft Visual Studio 2010 link to run the installer
The installer will now run some pre-setup tasks.

- Click **Next**
• Read the license terms
• Select I have read and accept the license terms option
• Click Next
You should now be on the **Select features to install** page.

- Select **Full**
- Click **Install**
The installation should now be running.
You should now be on the Finish Page.

- Click Finish to exit this installer and return to the setup main menu
• Click **Exit**

Visual Studio Ultimate 2010 is now installed.
Lab 05: Install Team Build 2010 Service

This lab will walk you through installing the Team Build service.

Prerequisites
This lab assumes that you have a running Team Foundation Server 2010 instance. The lab also assumes that you have installed Visual Studio Ultimate on the build machine.

Install Team Build

- Insert your Team Foundation Server 2010 installation DVD into the drive or mount ISO image
- Open the DVD using Windows Explorer

You should see the root of the DVD in Windows Explorer with folders for Team Explorer, the 64-bit version of TFS, and the 32-bit version of TFS.

- If you’re installing on a 64-bit operating system, open the TFS-x64 directory
- If you’re installing on a 32-bit operating system, open the TFS-x86 directory
• Locate setup.exe in the installation directory
• Double-click setup.exe

You should now see the Microsoft Team Foundation Server 2010 installation welcome page.
Welcome to the Microsoft Team Foundation Server 2010 Beta 2 installation wizard.

This wizard guides you through installing this program and all required components.

Help Improve Setup
You can submit information about your Visual Studio setup experiences to Microsoft. To participate, check the box below.

- Yes, send information about my setup experiences to Microsoft Corporation.
- For more information, click Privacy Statement

Loading completed. Click Next to continue.

- Click Next
On the **Options** page, you’ll choose the **Build Service**.

- Select **Build Service**
- If Team Foundation Server is already installed, click **Update**
- If Team Foundation Server is not installed on this machine, click either **Install**
When the installation is done, you’ll see the following screen.

- Check Launch Team Foundation Server Configuration Tool
- Click Finish
You should now see the Team Foundation Server Configuration Tool.

- In the left pane, choose Team Build Configuration
- Click Start Wizard
• Click Next
You should now be on the **Select a Team Project Collection** screen. This screen is asking you which Team Project Collection you want to associate with this build server.

- Click the **Browse...** button
At this point, the **Select a Team Foundation Server** drop down is probably empty. We need to connect to a **Team Foundation Server**.

- Click the **Servers...** button
You should see the Add/Remove Team Foundation Server dialog.

- Click the Add button
The **Add Team Foundation Server** dialog should be visible.

- In the **Name or URL of Team Foundation Server** box, type the name of your TFS machine.
- Click the **OK** button.
You should be back on the **Add/Remove Team Foundation Server** dialog and your TFS instance should be visible in the **Team Foundation Server list**.

- Click **Close**
Now that you’ve added the reference to your TFS instance, the **Team Project Collection** dialog should now have the information about your team project collections.

- In the **Directory** box, select **DefaultCollection**
- Click **Connect**
The path to the team project collection you just selected should now be visible in the **Which team project collection are you configuring build services for** box.

- Click **Next**
You should now see the **How would you like to configure Build Services on this machine** page.

- Choose **Default build services**
- Set **Maximum number of builds to run concurrently on this machine** to 1 (recommended)
- Click **Next**
This dialog specifies what user account the Team Build service should run as.

- Under **Run the Build Service as**, choose **NT AUTHORITY\NETWORK SERVICE**
- Click **Next**
You should now be on the setting confirmation page.

- Click Next
The installer will now run a series of checks to verify that the Build Service installation will succeed. You should see that all check have passed.

- Click the **Configure** button
The configuration process will run and then show you the status of the installation tasks. All tasks should complete successfully.

- Click Next
On the final page of the installation wizard, you should see that it has been configured successfully.

- Click Close
You should be back at the Team Foundation Server Configuration main page.

- Click **Close** to exit the installation wizard
After closing the installation wizard, the **Team Foundation Administration Console** should start automatically. From here, you can view the configuration settings for your TFS instance.

- In the left pane, choose **Team Foundation Build**

You should see the information about the Team Build server that you just installed.
Lab 06: Connect to Team Foundation Server from Visual Studio 2010

When you want to connect to Team Foundation Server from Visual Studio, you do it using Team Explorer. If you installed Visual Studio 2010 Ultimate, Team Explorer is automatically installed.

Open Team Explorer

- Open Visual Studio 2010 Ultimate
• From the **Team** menu, choose **Connect to Team Foundation Server**…

You should now see the **Connect to Team Project** dialog.

• **Click Servers**…
You should now be on the **Add/Remove Team Foundation Server** dialog.

![Add/Remove Team Foundation Server dialog]

- Click **Add...**

You should see the **Add Team Foundation Server** dialog. This allows you to specify the TFS instance and TFS Team Project Collection that you want to connect to.

![Add Team Foundation Server dialog]
• Enter the name of your TFS machine in the Name or URL of Team Foundation Server box.
• Click OK

You should now be back at the Add/Remove Team Foundation Server dialog and you should see your TFS machine in the Team Foundation Server list.

• Click Close
You should now be back at the **Connect to Team Project** dialog.

- Click **Connect**

You should now see the **Team Explorer** window with your TFS instance inside of it.
Lab 07: Create a Team Project

In Team Foundation Server, Team Projects are the container that hold and organize all of the artifacts related to a software development initiative. In this lab, you’ll create a Team Project on your Team Foundation Server.

Create the Team Project

- Open Visual Studio
- Go to Team Explorer

You should see your Team Foundation Server in the Team Explorer window. You can create a Team Project by right-clicking on the node for your TFS instance. In the image below, the TFS node says tfs2010beta2\DefaultCollection.
• Right-click the TFS server node and choose **New Team Project**
You should now see the first page of the **New Team Project** wizard.

![New Team Project Wizard](image.png)

- Enter a name for your Team Project in the **What is the name of the team project** box. (Example: **TFS Labs**)
- Click **Next**
You should now be on the **Select a Process Template** dialog. This page lets you specify the team project **Process Template** that will be used to create and organize your team project.

From the **Which process template should be used to create the team project** drop down list, choose **MSF for Agile Software Development v5.0 – Beta 2**

- Click **Next**
One of the things that the team project wizard does is to create a SharePoint site for the team project. The **Team Site Settings** wizard page lets you customize the SharePoint settings.

- Choose **Create a new SharePoint site**
- Click **Next**
You should now see the **Specify Source Control Settings** page.

- Choose **Create an empty source control folder**
- Click **Next**
• Click Finish
You should now see the **Team Project Creation Status** page and the creation process should be running.

```
Status: Work item type categories created

The Team Project Wizard is now creating your new team project. This may take several minutes.
```
After a few minutes, the creation wizard should complete and you should see the **Team Project Created** window. From here, you can optionally choose to open the project template process guidance.

- Check **Launch the process guidance for more information about running the team project**
- Click **Close**
You should now see your Visual Studio window and you should see the new team project in the Team Explorer window.
In the left side of the window, you should see the process guidance website for **MSF for Agile Software Development v5.0.**

![Process Guidance Website](image)

You’ve successfully created your team project.
Lab 08: Configure Hyper-V

The Virtual Lab Manager role relies on System Center Virtual Machine Manager and the Hyper-V virtualization stack to do its work. This guide will walk you through the process of enabling Hyper-V on a Windows 2008 server.

Add the Hyper-V Role

- Go to the Start menu and search for “Server Manager”
- Click on the icon to run Server Manager

You should now see the Server Manager application.

- In the right-side panel, locate the Roles Summary section
• Click the **Add Roles** button as highlighted above

You should now see the **Add Roles Wizard** window.

• Click **Next**
You should now see a list of available roles.

- Check the **Hyper-V** role
- Click **Next**
• Click **Next**
You should now see the **Create Virtual Networks** dialog and there should be a list of the network cards on your server. If your server has more than one network card, Microsoft recommends that you use one network card for virtual machines and one network card for accessing the physical server. If you only have one network card, select this network card.

- Select the network card that you’d like to use as the host for virtual machines
- Click **Next**
You should now see the **Confirm Installation Selections** page.

- Click **Install**
The installation should now be running.
When the installation completes, you’ll see the **Installation Results** page.

**Click Close**

You may be prompted to restart the server after installing Hyper-V.

**If prompted, click Yes to restart the server**
When the reboot as completed, **log in** to your server. The Hyper-V installation will resume automatically.
When the resumed installation completes, you should see the **Installation Results** window.

- Click **Close**

The Hyper-V role is now installed on this server.
Lab 09: Install System Center Virtual Machine Manager and Team Foundation Server Virtual Lab Manager

The Virtual Lab Manager role relies on System Center Virtual Machine Manager (VMM) and the Hyper-V virtualization stack to do its work. This guide will walk you through the process of enabling VMM on a Windows 2008 server.

Install System Center Virtual Machine Manager Server

- Insert the System Center Virtual Machine Manager installation disk in to the server’s drive

You should see the AutoPlay dialog.

- Click Run setup.exe
You should see the System Center Virtual Machine Manager 2008 R2 welcome screen.
On the welcome page, under the heading **Setup**, you’ll see the various installation options. We’re going to install a stand-alone instance of VMM Server.

- Click **VMM Server**
After a short wait, the installer will put you on the License Terms page.

- Select *I accept the terms of this agreement*
- Click **Next**
The Microsoft Update settings page allows you to hook VMM in to Windows Update for patches and service packs.

- Choose **Use Microsoft Update when I check for updates (recommended)**
- Click **Next**
• Choose Yes, I am willing to participate in the Customer Experience Improvement Program
• Click Next
• Enter your **User name**
• Enter your **Company** name
• Click **Next**
The installer will run some checks to make sure that the installation can proceed. The dialog should indicate that Hardware and Software requirements have been met.

- Click Next
Specify the location where you want to install the VMM program bits.

- Specify the **Program files location**
- Click **Next**
VMM uses SQL Server to manage all its settings and data. At this point, you have the option to install a new instance of SQL Server Express 2005 SP3 on this server or to hook VMM in to an existing instance of SQL Server. For the sake of simplicity, we’ll have the installer set up a new instance of **SQL Server 2005 Express Edition SP3**.

- Choose *Install SQL Server 2005 Express Edition SP3*
- Click *Next*
You should now be on the **Library Share Settings** dialog. This configures the Windows network share that will host the virtual machine library and store the virtual machine images.

To this point, we’ve accepted the default values in the installer and this has meant that the paths the installer has used are all on our System drive (aka. “C drive”). Since virtual machines are usually quite large, you might want to store them on a separate drive from the system disk. If this is the case, you’ll need to modify the **Share location** value.

- Choose **Create a new library share**
- Set **Share name** to **MSSCVMMMLibrary**
- (Optional) Set **Share location** path
- Set **Share description** to **Virtual Machine Manager Library Files**
- Click **Next**
You should now be on the **Installation Settings** dialog.

- Keep the **default values**
- Click **Next**
You should now be on the **Summary of Settings** page.

- Click **Install**
The installation should now be running.
When the installation has completed, you should see all the individual components have checks next to them.

- Check **Check for the latest Virtual Machine Manager updates**
- Click **Close**
Install the System Center Virtual Machine Manager Administrator Console

As you can probably guess from the title, System Center Virtual Machine Manager allows you to manage virtual machines. In order to proceed, we need to install this application.

- Run \setup.exe\ on the System Center Virtual Machine Manager 2008 R2 DVD

- Click the VMM Administrator Console button
• Choose **I accept the terms of this agreement**
• Click **Next**
• Click Next
You should now be on the **Prerequisites Check** and the hardware and software requirements check should have passed.

- Click **Next**
• Click **Next**
• Click **Next**
• Click **Install**
The installer should now be running.
When the installation completes, you’ll see the screen below.

- Check **Open the VMM Administrator Console when the wizard closes**
- Click **Close**
Connect to the VMM Administrator Console

After you click close on the installer, the VMM Administrator Console should open and you should see the Connect to Server dialog.

- Click Connect

You should now see the administrator console.
Add Hyper-V Host Machines to Virtual Machine Manager

Now that we have connected to VMM, let’s connect some Hyper-V host machines so that we can do some actual work. Since we’re doing a simple deployment of VMM and Virtual Lab Manager, we’re going to use the local machine as our only Hyper-V host. In a more typical production machine, you’ll have multiple Hyper-V hosts.

- In the lower left of the administrator window, click **Hosts**

This will bring up the **All Hosts** list in the center pane and you’ll see that there are no hosts currently configured.
On the right side of the window, you’ll see a panel labeled **Actions**.

- Click **Add host**
You should now see the **Select Host Location** dialog of the **Add Hosts** wizard.

- Choose **Windows Server-based host on an Active Directory domain**
- Enter the connection’s **User name** (example: administrator)
- Enter the connection’s **Password**
- Enter the connection’s **Domain** (example: BENDAY)
- Check **Host is in a trusted domain**
- Click **Next**
You should now be on the **Select Host Servers** page of the wizard.

- Enter the **Domain** for the host server (example: BENDAY)
- Enter the **Computer name** for the host server (example: vostro1520)
- Click **Add**
You should now see the server in the **Selected servers** list.

- Click **Next**
Click Yes

Click Next
You should now be on the **Host Properties** page of the wizard. This page allows you to specify where the Hyper-V machines should be stored on the host machine’s local disks.

- Under **Add the following path**, type the location on disk that you want to run the Hyper-V machines from. (Example: `f:\HyperV_VirtualMachines`)
- Verify that the path exists on disk
- Click **Add**
The path you entered should now be in the **Default virtual machine paths** list box.

- **Click Next**
You should now see the Summary page with the outline of what is about to be configured.

- Click Add Hosts
You should now see the **Jobs** window and the **Add virtual machine host** job should be running.
After a few minutes, the job should complete successfully.

- Close the Jobs window
(Optional) The New Host “Needs Attention”

You might see that your new host’s status is **Needs Attention**. This indicates that your server is missing some hotfixes.

- Double-click your new server
• Click on the **Status** tab

If you see the message that says **Virtualization server version: Upgrade Available**, you need to apply some hotfixes.
• Download the following hotfixes
  o Hyper-V Update for Windows Server 2008 x64 Edition (KB956589)
    http://bit.ly/4lOA8a
  o Update for Windows Server 2008 x64 Edition (KB956774)
    http://bit.ly/1wUI1n
• Install the hotfixes
• Reboot the server
• Log back in to the server
• Start **Virtual Machine Manager Administrator Console**

The new Hyper-V host status should be to **OK** now.
Add the Team Foundation Server Service Account to the VMM Administrators Role

Ok. So we have System Center Virtual Machine Manager installed and we have a Hyper-V host configured. Let’s start connecting VMM to **Team Foundation Server**.

The first step is to grant the TFS service user permissions to administer VMM. If you followed the instructions in the TFS installation lab, the TFS service account will be **NT Authority\NetworkService**.

1. In the lower left of the VMM Administrator, click **Administration**

2. In the upper left of the VMM Administrator, locate the **Administration** pane
3. Click **User Roles**
• In the **User Roles** panel, double-click **Administrator**

You should now see the **User Role Properties** dialog.

• Click the **Members** tab
• Click the **Add** button

You should now see the **Select Users, Computers, or Groups** dialog.

• **Under Enter the object names to select**, type the name of your TFS2010’s Service Account. This will probably be **TFSService**.

• **Click Check Names**

The service account’s user name should now be fully qualified as shown in the image below.

• **Click **OK** to exit this dialog**
You should now be back on the **User Role Properties** dialog and you should see the **TFSSERVICE** account in the list.

- Click **OK** to exit the dialog
Close **Virtual Machine Manager**.

Our System Center Virtual Machine Manager machine is ready to go. Next up: Team Foundation Server.
Configure Team Foundation Server to Use Lab Management

At the moment, our TFS machine doesn’t know anything about the System Center configuration that we’ll use for Lab Management. To start, we’ll need to install System Center Virtual Machine Manager on our TFS machine.

- Log on to the Team Foundation Server 2010 machine as a user with Administrator permissions
- Insert the System Center Virtual Machine Manager 2008 R2 DVD in to the DVD drive
- Run setup.exe on the System Center Virtual Machine Manager 2008 R2 DVD
You should now see the System Center welcome screen.

- Click the **VMM Administrator Console** button
• Choose **I accept the terms of this agreement**
• Click **Next**
• Click Next
You should now be on the **Prerequisites Check** and the hardware and software requirements check should have passed.

- Click **Next**
• Click Next
• Click Next
Click Install
The installer should now be running.
When the installation completes, you’ll see the screen below.

- Click Close

If Windows Update prompts you to install any patches, install them now.
Configure Team Foundation Server Lab Management

Now we need to open the Team Foundation Administration Console.

- Click **Start**
- Search for **Team Foundation Administration**
- Click **Team Foundation Administration Console** from the Programs search results
You should now see the **Team Foundation Server Administration Console**.

- In the left side pane, click **Lab Management**
You should now see the **Lab Management** page and see that the **SCVMM Settings** and **Network Isolation Settings** are both set to **Not Configured**.

- Click **Configure Lab Management**
You should now see the **Edit Lab Management Settings** dialog.

- Under **SCVMM Server Name FQDN**, type the name of the server running **System Center Virtual Machine Manager**. (Example: vostro1520.benday.local)
- Click **Test** and verify that the test passes
- Under **Network Location**, enter the preferred location name specified for the Hyper-V hosts in System Center Virtual Machine Manager.
- Click the **Network Isolation** tab
• Click **Test** and verify that the test passes
• Click **OK** to exit the settings dialog
You should now be back at the administrator console and you should see that Lab Management is now configured.
Configure Team Project Collections for Lab Management

Now we need to configure the Team Project Collections that will use Lab Management.
In the right side of the console, you should see the list of Team Project Collections.

- Choose **DefaultCollection**
- Click the **Lab Management** tab
• **Click Configure Library Shares**
You should now see the **Library Shares** tab of the Lab Management settings dialog.

You should verify the status of the selected library shares; however, this could take several minutes or longer.

- Click the **Add** button
On the **Select Library Shares** dialog, you should see the list of library shares in System Center Virtual Machine Manager.

- Choose one or more library shares from the list
- Click **Add**
You should now be back on the Lab Management settings dialog and you should see the library shares that you chose listed in this dialog.

- For each library collection, set **Auto Provision** to **checked**
- Click **Verify**
After you click the Verify button, you should see the confirmation that the verification passed as shown in the image below.

- Click **Host Group** tab

```
You should verify the status of the selected library shares; however, this could take several minutes or longer.

Team Foundation Server successfully verified the library shares.
```

- Click **Add**
The **Select Host Groups** dialog should now be visible.

![Select Host Groups dialog](image)

- Choose **All Hosts**
- Click **Add**
For each selected host, set the **Auto Provision** value to **check**
- Click **Verify**
If you are prompted for the credentials to connect to the host collection, it means that the TFS Service Account hasn’t been granted administrator rights on one or more of the VM hosts. If you enter the credentials of an administrator, this dialog will attempt to fix this problem.

- Enter the **Username** for an Administrator (Example: benday\administrator)
- Enter the **Password**
- Click **OK**
If you’re curious, you can see what the Lab Administrator Credentials dialog did by logging in on the VM host machine(s) and checking out the members of the local Administrators group. You’ll see that TFSService is now a member of the Administrators group as shown below.

Back on the TFS2010 dialog, you should now be back on the Hosts tab and you should see that the verification process has passed as seen in the image below.
• Click OK to exit the dialog
On the Team Foundation Server Administration Console window, you should now see that the Library Shares and Host Groups items both contain values.

Lab Management is now configured.
**Verify Lab Management**

In order to verify the Lab Management configuration, you’ll need to create a new Team Project in the default project collection.

- Create a new Team Project in the DefaultCollection named **Lab Management Test**

During the Team Project creation process, you’ll see a status item of **Lab task completed**. This is the first positive sign that the configuration is working.
When the Team Project has been created, we need to log in to a machine that has **Microsoft Test and Lab Manager** installed. This product is part of the **Visual Studio 2010 Ultimate** installer.

- Log on to a machine with **Microsoft Test and Lab Manager** installed

- **Click Start**
- **Type Lab Manager** in the search box
- **Click Microsoft Test and Lab Manager** from the Programs results
You should now see the Test and Lab Manager splash screen.
You’ll be prompted to choose a Team Project. If your list of projects is blank as in the image below, you’ll need to connect to Team Foundation Server.

- Click Add server
• Type the name of your Team Foundation Server. (Example: tfs2010beta2)
• Click Add
You should now see your Team Foundation Server in the **Connect to Your Team Project** list.

Now you need to find the **Lab Management Test** project in the list.

- Expand the nodes until you see the **Lab Management Test** project
- Choose the **Lab Management Test** project
- Click **Connect Now**
Now that you’ve connected to TFS and a Team Project, you’ll land on the **Testing Center** page.

- Click **Lab Center**
• Click **Continue**
You should now be on the **Lab Center** window.
• Click on the Library tab
• Click Virtual Machines and Templates
• Click Import

You should now be on the Import virtual machine or template page.

• Next to the Path value, click Browse
• Select a virtual machine from the list
• Click Add

• Choose a Default role (example: Desktop Client)
• Click Next
You can specify machine properties.

- **Hardware profile**
  - OS profile
  - Machine tags

  **Memory:**
  - **512** MB

  Specify how much memory (8 MB - 64 GB) to allocate to the virtual machine.

  **CPU:**
  - 1 - 1.20 GHz Athlon MP

  **Total hard disk size:**
  - 322.00 KB

- Click **Next**

You should now be on the summary page.

- Click **Finish**
You’ve successfully imported a virtual machine in to Team Foundation Server. Let’s set up a new virtual environment.
• Click the **Lab** tab

Create the new virtual environment.

• Click the **New** menu and choose **New virtual environment**
• Set **Name** to **Blank Environment**
• Click **Next**

You should now be on the virtual environment’s **Machines** tab. In the right side of the window, you should see the virtual machine that you imported. We’re going to add this machine to the environment.

• **Double-click** the virtual machine
You should now see the virtual machine in the environment.

- Click Finish
You should now see that the environment is creating as shown in the images below.
After a few minutes, the environment should be created.

You’ve successfully installed and verified Lab Management.