SharePoint 2007

Module 1

Agenda

- SharePoint SKU's and Licensing
- Pre-SharePoint Installation Issues
- Overview of Upgrading from 2003 to 2007

The Great SharePoint Story

- Where did SharePoint come from?
  - V1 – STS and SPS 2001
  - V2 – WSS v2 and SPS 2003
  - V3 – WSS v3 and MOSS 2007
- There is no such thing as SharePoint 2007
  - However, people often say the term out loud
  - Term represents related technologies not a product

Windows SharePoint Service 3.0 (WSS)

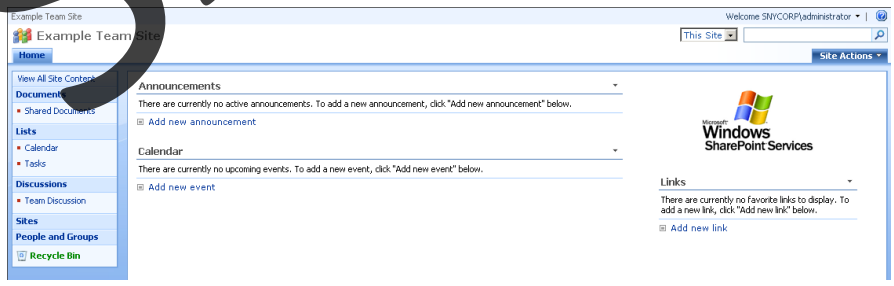
- WSS often referred to as a “free” product
  - Licensed as part of Windows 2003 Server (Win2K3)
  - Win2K3 CAL applies to sites running on WSS
- WSS is platform for building web-based solutions
  - Storage and Web Presentation
  - Authorization/User management
  - Interface to the Windows Workflow Foundation
  - APIs and Web Services that can be extended
  - Collaboration Tools and features

Collaboration with WSS

- WSS provides Collaboration Tools
  - Collaboration templates for lists and libraries
  - Provides basis for collaboration across teams
- Team Site can be designed with…
  - Document Libraries (file sharing)
  - Lists (calendars, contacts, links)
  - Surveys, discussion forms
  - Web 2.0 (RSS, wikis, blogs)

Demo: WSS v3 Team Site

- Walkthrough of a basic collaboration site



MOSS 2007

- Microsoft Office SharePoint Server 2007
- Requires both a per server license and CALs
- Usage:
  - Organization and aggregation (Intranet site)
  - Publishing controlled sites (Internet site)
- Has reusable, centrally managed services

Reusable Services

- The Shared Services Provider (SSP) allows…
  - Service to be shared across
    - Web Applications
    - SharePoint Farms
- Think of a parent-child relationship.
- MOSS Only Feature

SSP Services Available

- Services such as:
  - Search
  - Profiles and Audiences
  - My Sites
  - Excel Services
  - BDC

Where did MOSS come from?

- A collaboration of several Microsoft technologies
  - WSS (collaboration)
  - SPS 2003 (aggregation)
  - CMS 2002 (web publishing)
- Opens doors for standardizing on one technology

Several options to choose from

- Two Main Choices
  - MOSS 2007 Standard
  - MOSS 2007 Enterprise

MOSS 2007 Standard

- Some key features
  - Portal template for building your intranet
  - User Profiles, Social networking and My Sites
  - Site Directory for organizing sites in the enterprise
  - Rollup web parts for aggregating info
  - Enterprise search
  - Publishing features
  - Built in workflows
  - Records Management

MOSS 2007 Enterprise

- Everything from standard edition plus
  - BDC
  - Forms Server
  - Excel Services
  - More web parts

Forms Server 2007

- Can be bought separate of MOSS
- Licensed per server + CALs
- Unlimited Internet edition available

MOSS 2007 Internet Edition

- Same features as MOSS Enterprise.
- Allows unlimited NON EMPLOYEE access
- Licensed per server, no CALs

Demo: Walkthrough MOSS sites

- Check out typical collaboration environment
- Check out public websites
  - www.sharepoint911.com
  - www.sqlpass.org
  - www.paulmitchell.com
  - www.hedkandi.com
  - www.ocps.net
  - www.directenergy.com

Non SharePoint Servers

- Windows Server 2003
- SQL Server 2000 or 2005
- Email Server

Windows Server 2003

- Install on W2K3 SP1 or later
  - Works fine with R2
- All editions of server are supported.
  - Web edition require separate SQL Server
- Other pieces
  - .NET 3.0
  - IIS (common files, WWW, & SMTP)
  - AD required for multi server deployment
    NT 4 domain does not work

Windows Server 2008

- Supported as long as you are running SP1 for SharePoint
  - This means you will have to slipstream the install
- http://blogs.msdn.com/sharepoint/archive/2008/01/16/windows-server-2008-and-sharepoint-resources.aspx

Server Hardware Requirements

- From Microsoft: (Single Server MOSS Minimums)
  - 2.5 GHZ, 1 GB RAM
- In reality:
  - Dual processors with 4 GB of RAM
  - Gigabit network between servers in farm
- More details in Module 10

32 bit vs. 64 bit

- Both are supported and available
- 32 bit is generally faster
- Farm - Same role, same architecture
- New hardware?
  - Buy 64 bit hardware
  - V.next will only be 64 bit
- Use 64 bit if needed to support > 4GB of RAM
- Some 3rd party doesn't support 64bit

Why is SQL Server so important?

- Stores content in SQL databases.
- SQL Server 2000 SP3a or SQL Server 2005 sp1
- Basic install installs DB engine
  - MOSS - SQL Express 2005 - 4 GB database limit
  - WSS – Windows Internal Database – No limits

Email Servers

- Outgoing email – Any SMTP Server
  - Common issues:
    `Port 25 is blocked (some AV products do this)`
    `Relaying is prohibited on the email server`
- Incoming email
  - Receive email and route to document libraries
  - Requires: Installing SMTP service on SP server
  - Integrates nicely with Exchange Server

Need to move up from v2?

- There are 3 major options for upgrading
  - In place, gradual, and db migration
- Upgrade difficulty is based on
  - Use of FrontPage to modify pages (unghosting)
  - # of custom site definitions
  - Amount of data

Lab 02: Setup and Configuration of SharePoint

Lab Overview: In this lab you will be starting with a Windows 2003 Server with SP2. The name of server is LitwareServer.TPG.local. It has been configured with the Active Directory and DNS roles. The server also has SQL Server 2005 with SP2 installed. All Windows updates as of 10/11/2007 have been installed.

The goal of this lab is to successfully install and configure Microsoft Office SharePoint Server 2007 Enterprise Edition. You will need to first install the .NET 3.0 Framework. You will also need to define all of the active directory user accounts necessary, create the appropriate DNS entries for your web applications, and run various commands to configure Kerberos authentication. Once you have successfully prepared your environment you will then install SharePoint and configure the necessary services. Finally you will create a Shared Services Provider. This will have your server ready to create your first portal in the next lab. Lots of work ahead of you so let's start.

Exercise 1: Determine the accounts you will need.

For this lab you will be using the **Least-privilege administration requirements when using domain user accounts** method. For details of the method see the end of the lab. The most important thing to know about this method is you will be using a different account for each service and application pool as you configure MOSS. Below you will find the list of accounts you will need for this lab and a suggested account name followed by a brief explanation of anything special about this account. You will be creating the accounts in AD.

1) Setup Account – **SP_Admin** – This is the account that you will log into the MOSS server to do the install and when you wish to administer the server. This account will need to be a local administrator on the MOSS server and be given the securityadmin and dbcreator roles from within SQL Server.
2) Farm Account – **SP_Farm** – This is the account that your farm will connect to the SQL Server as. It should only be a domain user. When you tell MOSS to use this account it will automatically set the account up as a dbcreator, securityadmin, and db_owner for all SharePoint databases.
3) WSS Search Service – **SP_WSSSearch** – This account is a domain user. SharePoint will automatically assign it read access to the configuration database and the content database for central administration.
4) WSS Search Crawl – **SP_WSSCrawl –** This account is a domain user. SharePoint will automatically grant this account Full read to the farm.
5) MOSS Search – **SP_MossSearch –** This account is a domain user. SharePoint will grant access to read the configuration database and read access to all content databases hosted in the farm. This will become you default content access account for crawling.
6) SSP App Pool – **SP_SSPAppPool** – This account is a domain user. SharePoint automatically gives this account db_owner for the SSP content database, read & write to all content databases associated with its SSP, read access to the configuration database, and read access to the central administration database.
7) SSP Service – **SP_SSPService** – This account is a domain user. Same permissions as the SSP App Pool
8) MY App Pool – **SP_MyAppPool –** This account is a domain user. This account will be used as the identity for the My Sites application pool. It will be granted db_owner to that content database, read

access to the config and central administration databases, and read access to the associated SSP database.

9) Portal App Pool – **SP_PortalAppPool –** This account is a domain user. This account will be used as the identity for the portal application pool in the Module 3 lab. It will be granted db_owner to that content database, read access to the config and central administration databases, and read access to the associated SSP database.

Exercise 2: Choosing our Web Application Settings

1) In this portion of the module we need to determine what URLs we will be using for our web applications.

   A) Central Administration – **http://Litwareserver:5555** – This is the site you will use to administer your farm. It will be created during the installation process.

   B) Shared Services Provider – **http://ssp.tpg.local** – This site is used to host the reusable shared services in the farm.

   C) My Site host Web Application – **http://my.tpg.local** – This site will be the host for our users personal sites. A powerful feature of MOSS.

   D) Portal Web Application – **http://portal.tpg.**local – This will be our main site for the users. Our intranet if you will.

2) Log into your server

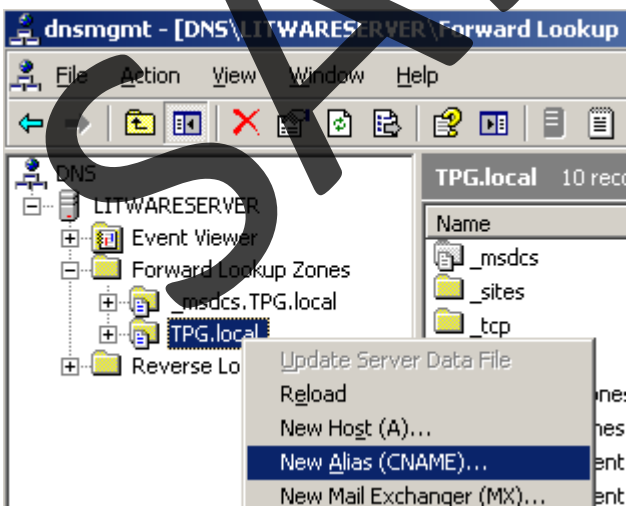
   A) Press the **right ALT** key and **delete** at the login prompt

   B) Username is **Administrator** and the password is **pass@word1**

3) Now we will need to setup these host headers in DNS.

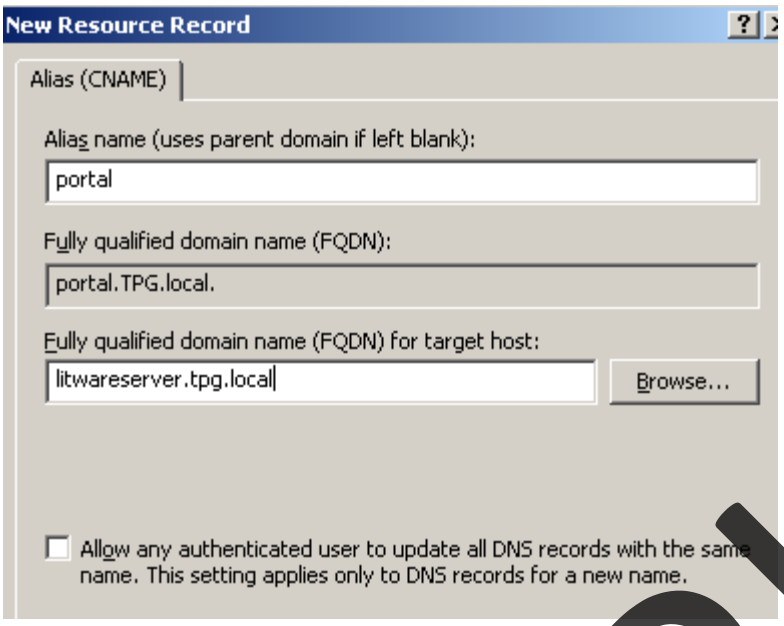
   A) Click Start > Administrative Tools > **DNS**

   B) Expand Litwareserver > Forward Lookup Zones > **TPG.local** then right click on TPG.local and choose **New Alias (CNAME)**



   C) For Alias name enter **Portal**

   D) For FQDN enter **litwareserver.tpg.local**



E) Click **OK**

4) Repeat Step 5 for **My** and **SSP** as the alias name. The FQDN should stay the same for all 3.

5) Close **DNS management**

Exercise 3: Creating the necessary service and install accounts.

1) Click Start > Administrative Tools > **Active Directory Users and Computers**

2) Expand TPG.local

3) Click on the **Users** container

4) Click **Create a new user**

   A) First Name: **SharePoint**

   B) Last Name: **Setup Account**

   C) User logon name: **SP_Admin**

   D) Click **Next**

   E) Password: **pass@word1**

   F) Uncheck **User must change password at next logon**

   G) Click **Next**

   H) Click **Finish**

5) Repeat step 4 for all of the users. Make their last name describe the account. Use the same password for all accounts.

   A) **SP_Farm**

   B) **SP_WssSearch**

   C) **SP_WssCrawl**

D) **SP_MossSearch**

E) **SP_SspAppPool**

F) **SP_SspService**

G) **SP_MyAppPool**

H) **SP_PortalAppPool**

6) Now give administrator privileges to the SP_Admin account

A) Double click on user **SharePoint Setup Account**

B) Click **Member Of** tab

C) Click **Add**

D) Enter **Domain Admins**

E) Click **OK** and **OK**

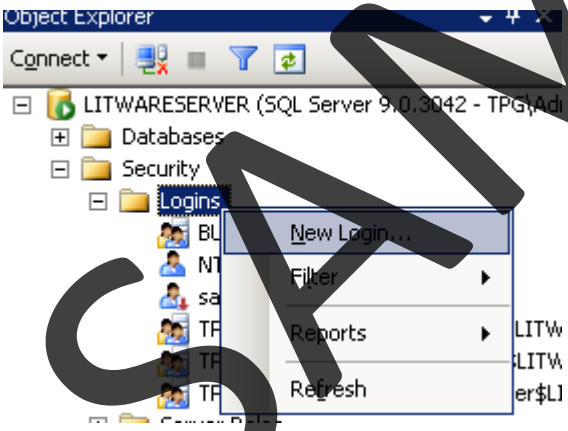
NOTE: Normally this account would NOT be a domain administrator. In our environment our MOSS Server is also a domain controller and domain controllers do not have a local administrators group. So we must make this account a domain administrator.

7) Now give SP_Admin its necessary SQL Roles

A) Click Start > All Programs > Microsoft SQL Server 2005 > **SQL Server Management Studio**

B) At the connect to server screen click **Connect**

C) Expand **Security** and then right click on **Logins** and click **New Login..**



D) For login name enter **TPG\SP_Admin**

E) Click **Server Roles** from the left column

F) Select **dbcreator** and **securityadmin**

G) Click **OK**

H) Close **SQL Management Studio**

NOTE: Technically this account is in the builtin\administrators group because we made it a domain administrator. You went through this step for completeness as normally in a farm install the setup account should not be a built in administrator of the SQL Server.

Exercise 4: Configuring our farm for using Kerberos Authentication.

This is optional in your environment back at the office. Kerberos authentication will allow you to avoid the dreaded double hop problem. (A nice explanation here http://blogs.msdn.com/knowledgecast/archive/2007/01/31/the-double-hop-problem.aspx) If you are going to use Excel Services or the built in RSS feeds/viewer this is almost a requirement. It is also a more efficient authentication process. If you have decided to configure Kerberos it can be a bit tricky so take this portion slow and steady. And of course for the lab you are going to do these steps. **Be very careful about typos.** It will accept any SPN you enter and you will not realize you have errors until later.

1) Using setspn.exe to create the ServicePrincipalNames necessary.
   A) Open a **command prompt**
   B) **Cd** to **c:\program files\resource kit**
   C) Run the command for setting the SPN for the FQDN of the server and the Farm Account
      ```
      setspn.exe –A http/litwareserver.TPG.local tpg\SP_Farm
      ```
   D) Run the command for setting the SPN for the Netbios Name of the server and the Farm Account
      ```
      setspn.exe –A http/litwareserver tpg\SP_Farm
      ```
   E) Run the command for setting the SPN for MY web app and app pool account
      ```
      setspn.exe –A http/my.tpg.local tpg\SP_MyAppPool
      ```
   F) Run the command for setting the SPN for the host name and the MY app pool account
      ```
      setspn.exe –A http/my tpg\SP_MyAppPool
      ```
   G) Run the command for setting the SPN for the Portal web app and app pool account
      ```
      setspn.exe –A http/portal.tpg.local tpg\SP_PortalAppPool
      ```
   H) Run the command for setting the SPN for the host name and the Portal app pool account
      ```
      setspn.exe –A http/portal tpg\SP_PortalAppPool
      ```
   I) Run the command for setting the SPN for the SSP web app and app pool account
      ```
      setspn.exe –A http/ssp.tpg.local tpg\SP_SspAppPool
      ```
   J) Run the command for setting the SPN for the host name and the SSP app pool account
      ```
      setspn.exe –A http/ssp tpg\SP_SspAppPool
      ```
   K) Close the command prompt by typing **exit**
2) Now return to AD Users and Computers and define which accounts are trusted for delegation. In a real environment you would need to run the following steps on the following items.
   I) All SharePoint Servers
   II) SQL Server
   III) SP_Farm
   IV) SP_MyAppPool
   V) SP_SspAppPool
   VI) SP_PortalAppPool
   A) Find **SP_Farm**, right click and choose **properties**
   B) Click the **Delegation** tab
   C) Select **Trust this user/computer for delegation to any service (Kerberos)**
   D) Click **OK**

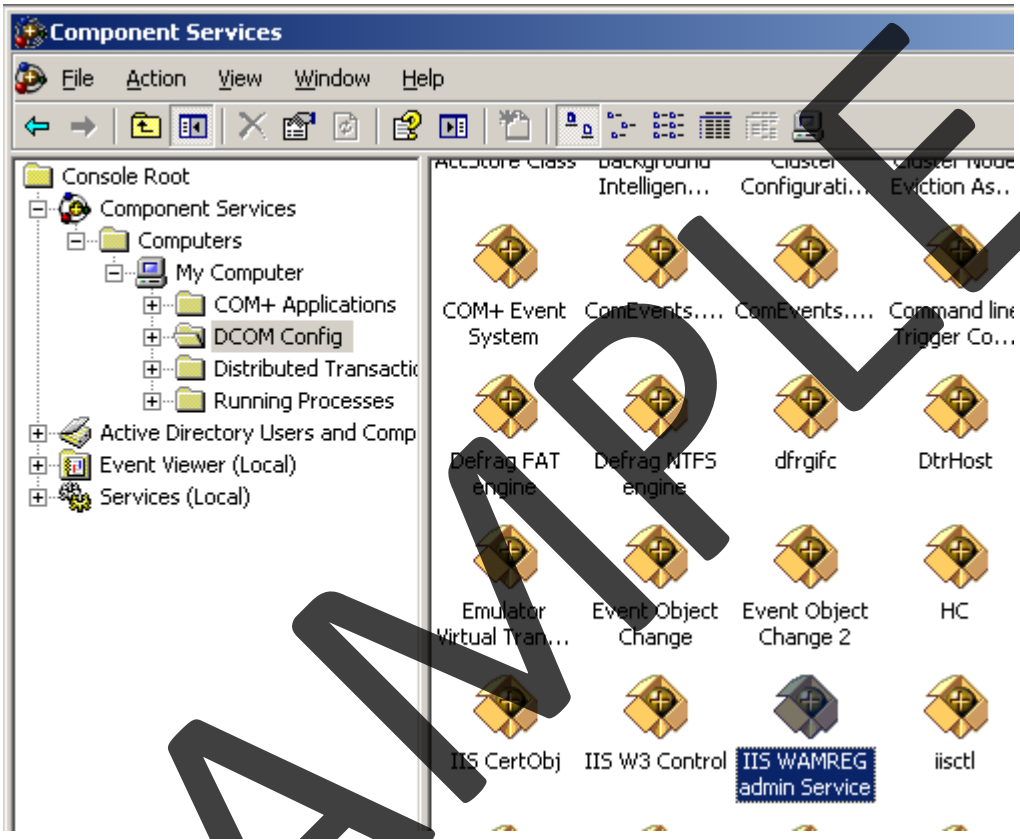
E) Repeat A-D for all of above accounts(III – VI).

F) Close **Active Directory Users and Computers**

3) Make some changes to Component Services

A) Click Start > Administrative Tools > **Component Services**

B) Drill down to component services > computers > my computer > DCOM Config > **IIS WAMREG admin Service**



C) Right click **IIS WAMREG admin Service** then click **properties**

D) Click the **Security** tab

E) **Launch and activation permissions** > click **edit**

F) Click **Add**

G) Add **sp_farm; SP_SspAppPool; SP_MyAppPool; SP_PortalAppPool**

H) Click **OK**

I) Set **Local Launch and Local Activation** to all for all **4 accounts**

J) Click **OK** twice

K) Close **Component Services**

This saves you from an annoying DCOM error message in the event log later on.

Exercise 5: Install .NET Framework 3.0

1) Switch to the SP_Admin user
   A) Click Start > **Log Off**
   B) Click **Log Off**
   C) Press **right ALT** and **Delete**
   D) Change the username to **SP_Admin**
   E) Use the password **pass@word1**
2) Navigate to **c:_Student Files\Module 2**
3) Run **dotnetfx3.exe**
4) Click **Run**
5) Read the EULA and then check **I have read and ACCEPT the terms..** and click **Install**
6) Click the **icon in the tray** so you can watch the progress (usually takes 4 minutes)
7) Click **Exit** when the install completes

Exercise 6: Slipstreaming Service Pack 1

Microsoft has released SP1 for SharePoint as of December 2007. This means that for fresh installs going forward you have two options. Either you can do the RTM install and then after completing installation run the service pack separately or you can update the install files to include SP1. In this exercise you will update the install files using the slipstream method.

If you would like more information on how to install SP1 please check out Shane Young's blog.
http://msmvps.com/blogs/shane/archive/2007/12/14/how-to-install-wss-and-moss-sp1.aspx

1) Open a **command prompt**
2) Change directories to the location of the patches
   A) Type the command below and press **enter**

```
cd "C:\_student files\service packs"
```

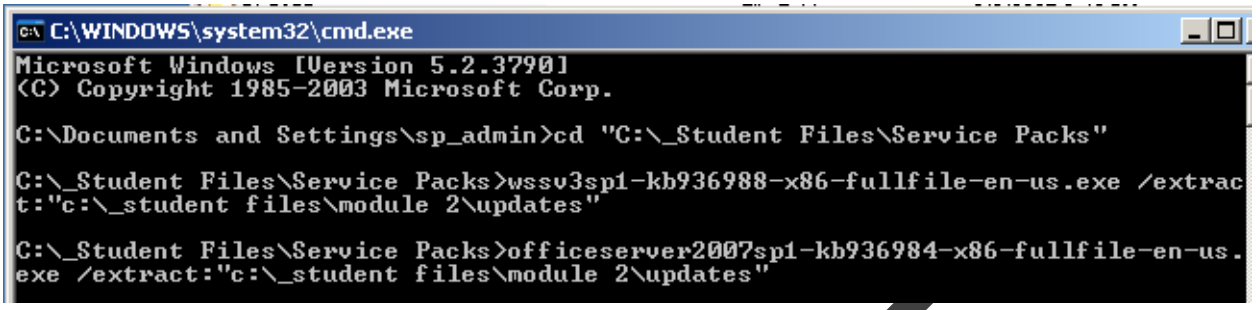
3) Extract WSS SP1
   A) Type the command below and press **enter**

```
wssv3sp1-kb936988-x86-fullfile-en-us.exe /extract:"C:\_Student files\module
2\updates"
```

   B) Read the EULA, check **Click here to accept…**, and click **Continue**
4) Extract MOSS SP1
   A) Type the command below and press **enter**

```
OfficeServer2007sp1-kb936984-x86-fullfile-en-us.exe /extract:"C:\_Student
files\module 2\updates"
```

B) Read the EULA, check **Click here to accept…**, and click **Continue**



Exercise 7: Install MOSS 2007 Enterprise Trial Edition

Finally. After all of this prep work it is finally time to get your hands dirty and install MOSS.

1) Navigate to **c:_Student Files\Module 2**
2) Run **setup.exe**
3) Enter the trial key **F2JBW-4PDJC-HKXTJ-YCKRP-T2J9D** (This is a 180 day trial key)
4) Click **Continue**
5) Read the EULA, check **I Accept**, and click **Continue**
6) Choose **Advanced** (Common Mistake is choosing Basic here)
7) Choose **Complete** (Common Mistake is choosing stand-alone)
8) Choose **Install Now** (5 Minutes or so)
9) Click **Close**
10) Configuration Wizard should automatically open, at the welcome screen click **Next**
11) At the popup click **Yes**
12) Click **No, I want to create a new server farm**
13) Click **Next**
14) Specify Configuration Database Settings
    A) Database server: **LitwareServer**
    B) Database name: **SharePoint_Config** (default)
    C) Username: **tpg\SP_Farm**
    D) Password: **pass@word1**
    E) Click **Next**
15) Configure SharePoint Central Administration Web Application
    A) Specify port number: **5555**
    B) Choose **Negotiate (Kerberos)**
    C) Click **Next**
16) Click **Yes** at the warning

17) Confirm your settings and click **Next** (6 minutes)

18) At Configuration Successful click **Finish**

End of Lab

Least-privilege administration requirements when using domain user accounts

From:
http://technet2.microsoft.com/Office/en-us/library/f07768d4-ca37-447a-a056-1a67d93ef5401033.mspx?mfr=true

Server farm-level accounts

Account	Server farm standard requirements	Least-privilege using domain user accounts requirements
SQL Server service account	Use either a Local System account or a domain user account. If a domain user account is used, this account uses Kerberos authentication by default, which requires additional configuration in your network environment. If SQL Server uses a service principal name (SPN) that is not valid (that is, that does not exist in the Active Directory directory service environment), Kerberos authentication fails, and then NTLM is used. If SQL Server uses an SPN that is valid but is not assigned to the appropriate container in Active Directory, authentication fails, resulting in a "Cannot generate SSPI context" error message. Authentication will always try to use the first SPN it finds, so ensure that there are no SPNs assigned to inappropriate containers in Active Directory. If you plan to back up to or restore from an external resource, permissions to the external resource must be granted to the appropriate account. If you use a domain user account for the SQL Server service account, grant permissions to that domain user account. However, if you use the Network Service or the Local System account, grant permissions to the external resource to the machine account (*domain_name\SQL_hostname$*).	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account.

Setup user account	• Domain user account.
	• Member of the Administrators group on each server on which Setup is run.
	• SQL Server login on the computer running SQL Server.
	• Member of the following SQL Server security roles:
	  • **securityadmin** fixed server role
	  • **dbcreator** fixed server role
	If you run Stsadm commands that affect a database, this account must be a member of the **db_owner** fixed database role for the database.
		Server farm standard requirements with the following additions or exceptions:
		• Use a separate domain user account.
		• This account should NOT be a member of the Administrators group on the computer running SQL Server.

Server farm account	• Domain user account. • If the server farm is a child farm with Web applications that consume shared services from a parent farm, this account must be a member of the **db_owner** fixed database role on the configuration database of the parent farm. Additional permissions are automatically granted for this account on Web servers and application servers that are joined to a server farm.	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account.

Account	Server farm standard requirements	Least-privilege using domain user accounts requirements
	This account is automatically added as a SQL Server login on the computer running SQL Server and added to the following SQL Server security roles: • **dbcreator** fixed server role • **securityadmin** fixed server role • **db_owner** fixed database role for all databases in the server farm.	• NOT a member of the Administrators group on any server in the server farm, including the computer running SQL Server. • This account does not require permissions to SQL Server before creating the configuration database.

SSP accounts

Account	Server farm standard requirements	Least-privilege using domain user accounts requirements
SSP application pool account	No manual configuration is necessary. The following are automatically configured: • Membership in the **db_owner** role for the SSP content database. • Access to read from and write to the SSP content database. • Access to read from and write to content databases for Web applications that are associated with the SSP. • Access to read from the configuration database. • Access to read from the Central Administration content database. • Additional permissions to front-end Web servers and application servers are automatically granted.	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account. • For security isolation, use a separate service account for each SSP.
SSP service account	• Use a domain user account. • No manual configuration is necessary. The same permissions as the SSP application pool account are automatically granted. • This account should not be a member of the Administrators group on any computer in the server farm.	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account.
Office SharePoint Server Search Service account	• Must be a domain user account. • Must not be a member of the Farm Administrators group. The following are automatically configured: • Access to read from the configuration database	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account.
Default content access account	• Must be a domain user account.	Server farm standard requirements with the following additions or exceptions:

Account	Server farm standard requirements	Least-privilege using domain user accounts requirements
	• Must not be a member of the Farm Administrators group. • Read access to external or secure content sources that you want to crawl by using this account. • For sites that are not a part of the server farm, this account must explicitly be granted Full Read permissions on the Web applications that host the sites. The following are automatically configured: • Full Read permissions are automatically granted to content databases hosted by the server farm.	• Use a separate domain user account. • By default, in a server farm environment, the Office SharePoint Server Search service account is used until a different account is specified. After completing Setup and running the configuration wizard, change this account to a domain user account. • Do not grant the default content access account access to the directory service. For added security, use a different default content access account for each SSP.
Content access account	• Read access to external or secure content sources that this account is configured to access. • For Web sites that are not a part of the server farm, this account must explicitly be granted Full Read permissions on the Web applications that host the sites.	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account.
Profile import default access account	• Read access to the directory service. • If Enable Server Side Incremental is selected for an Active Directory connection and the environment is Windows 2000 Server, the account must have the Replicate Changes permission in Active Directory. This permission is not required for Windows Server 2003 Active Directory environments. • Manage User Profiles personalization services permission. • View permissions on entities used in Business Data Catalog import connections.	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account. • This account can be the same account as the default content access account, or you can use a separate account. • Read access to the directory service. • Manage User Profiles personalization services permission. • This account should not be a member of the Administrators group on any computer in the server farm.
Excel Services unattended service account	Must be a domain user account.	Must be a domain user account.

Windows SharePoint Services Search accounts

Account	Server farm standard requirements	Least-privilege using domain user accounts requirements
Windows SharePoint Services Search service account	• Must be a domain user account. • Must not be a member of the Farm Administrators group. The following are automatically configured:	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account.

Account	Server farm standard requirements	Least-privilege using domain user accounts requirements
	• Access to read from the configuration database and the SharePoint_Admin Content database. • Membership in the **db_owner** role for the Windows SharePoint Services Search database.	
Windows SharePoint Services Search content access account	• Same requirements as the Windows SharePoint Services Search service account. The following are automatically configured: • Added to the Web application Full Read policy for the farm.	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account.

Additional application pool identity accounts

Account	Server farm standard requirements	Least-privilege using domain user accounts requirements
Application pool identity	No manual configuration is necessary. The following are automatically configured: • Membership in the **db_owner** role for content databases and search databases associated with the Web application. • Access to read from the configuration and the SharePoint_AdminContent databases. • Access to read from and write to the associated SSP database. • Additional permissions for this account to front-end Web servers and application servers are automatically granted.	Server farm standard requirements with the following additions or exceptions: • Use a separate domain user account for each application pool. • This account should not be a member of the Administrators group on any computer in the server farm.