

# How to move a SharePoint Server 2007 32-bit environment to a 64-bit environment on Windows Server 2008.



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This 'How to' guide will take you through moving your Microsoft Office SharePoint Server 2007 farm from a 32-bit environment on Windows Server 2003 to a Office SharePoint Server 2007 64-bit environment on Windows Server 2008.

## Scenario

The scenario that this whitepaper addresses is where an organization currently runs a 32-bit SharePoint Server farm on Windows Server 2003 and they wish to move to a 64-bit platform for the SharePoint farm. With the release of Windows Server 2008<sup>1</sup>, the organization wishes to combine the introduction of new 64-bit server hardware with the Windows Server 2008 operating system. Although there are no new SharePoint features exposed by running SharePoint Server or Windows SharePoint Services (WSS) 3.0 on Server 2008, Server 2008 does itself as described briefly below.

**Warning:** You can run a SharePoint farm with some servers running 32-bit SharePoint Server and others running 64-bit server. However, you must ensure all servers that have the same role run use the same version of SharePoint Server. For example, all the Web servers could run the 32-bit version of SharePoint Server and the application servers could run 64-bit SharePoint Server. You should not have some Web servers running the 32-bit version of SharePoint Server and others running the 64-bit version in production as a business as usual state. For a very short period, as described in this white paper it is required however there should be no live user connections whilst the co existence is there.

For more information on 32 bit and 64 bit farm roles see this TechNet article  
<http://technet2.microsoft.com/Office/en-us/library/031b0634-bf99-4c23-8ebf-9d58b6a8e6ce1033.aspx?mfr=true>

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<sup>1</sup> Server 2008 is currently at version Release Candidate (RC) 1 and in reality at this time we would not recommend any organization of using this whitepaper to introduce this beta version of the operating system into production. However you can use this whitepaper to investigate and test you current environment in a SharePoint Server 64-bit environment on Server 2008. When the Release to Manufacturing (RTM) version of Server 2008 is release, we plan to release an updated copy of this document.

Of course, there are several methods of achieving this move, this whitepaper investigates one method, that of, joining the new 64-bit hardware running Server 2008 to the existing farm.

### Windows Server 2008 Improvements

There are many improvements in Windows Server 2008 and SharePoint 2007 plus future versions will benefit from these improvements. Some of the core improvements include:

- IIS 7.0 – Better performance and management of Web Services
- Powershell command line scripting
- Better Security Management built into the OS
- Virtualization with Hyper V
- Performance improvements in the TCP/IP stack
- Improved Monitoring tools and wizards.

Microsoft will soon be releasing a whitepaper outlining the improvements and benefits to Windows Server 2008 in a lot more detail.

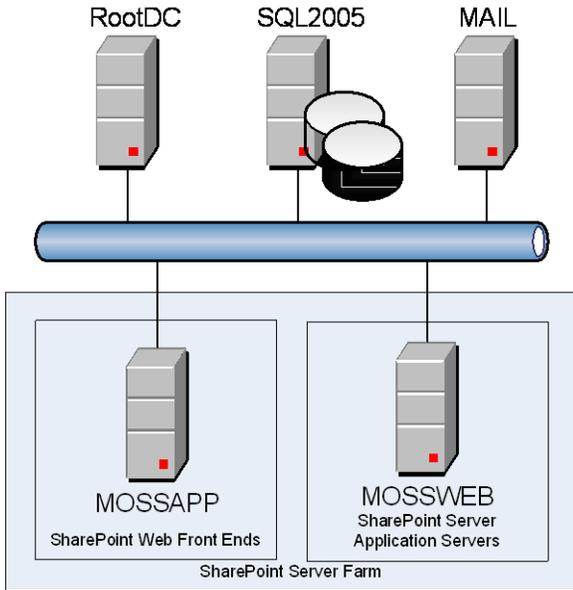
### Configuration

The server topology that this guide uses as its starting point is as follows:

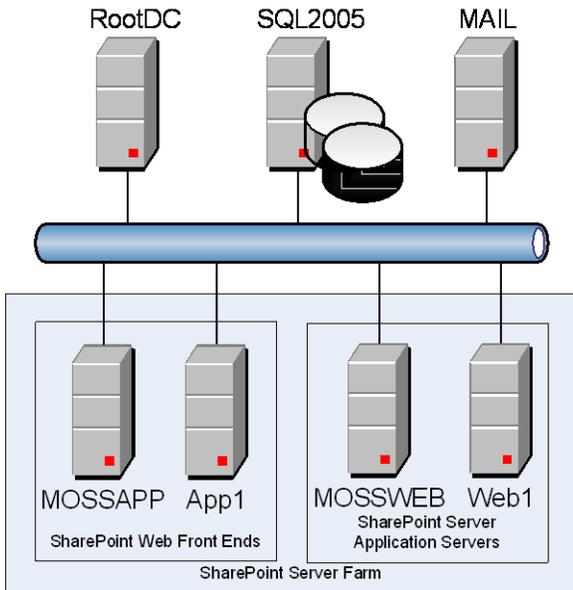
Server Name	Role	Products Installed
ROOTDC	Domain Controller DNS Server	Windows Server 2003 SP1 (32-bit)
MAIL	Mail Server	Windows Server 2003 SP1 (32-bit) Exchange 2003 Enterprise
SQL2005	Database server	Windows Server 2003 SP1 (32-bit) SQL 2005 SP1
MOSSWeb1	SharePoint Server (Web Front-End with Query Search service, Document Conversion services started)	Windows Server 2003 SP1 (32-bit) SharePoint Server Enterprise
MOSSAPP	SharePoint Server (Application server with Index Search service and Excel services started).	Windows Server 2003 SP1 (32-bit) SharePoint Server Enterprise
Web1	SharePoint Server (Web Front-End with Query Search service, Document Conversion services started)	Windows Server 2008 RC1 (64-bit)
App1	SharePoint Server (Application server with Index Search service and Excel services started).	Windows Server 2008 RC1 (64-bit)
XPCLIENT	Client	Windows XP Pro (32-bit) with Office 2007 Enterprise

This paper uses the internal domain name configured for the Active Directory is trainsbydave.com. You will need to replace trainsbydave.com with your own testing domain name.

The diagram below shows the environment at the start of the process:



The first step in the process will be to join the 64-bit SharePoint Server servers to the farm, after which the environment will be similar to the diagram below.



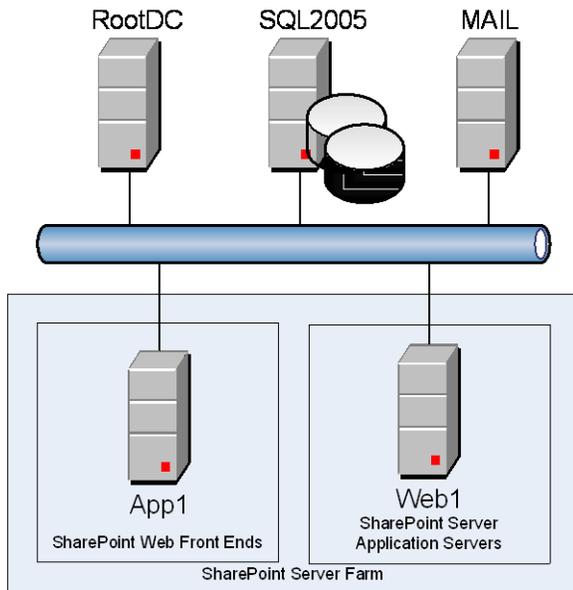
The next step is to ensure that the Web applications are distributed according to the following table:

<b>Web Application</b>	<b>Initial Location</b>	<b>Planned Location</b>	<b>Description</b>
My Site	MOSSWEB	Web1	Hosted the My Site site collections for this environment.
Corp	MOSSWEB	Web1	Top-level site created from the Collaboration portal site template that can be accessed using both corp.trainsbydave.com and corp. To achieve this, an Alternative Access Mapping (AAM) was configured through the Central Administration Web site and a host heading setting was configured through the Internet Information Server (IIS) Manager. Document conversion configured using MOSSWEB.
Extranet	MOSSWEB	Web1	Top-level site created from the Team site template
Archive	MOSSWEB	Web1	Top-level site created from the Record Center site template. Record Center Connection was configured using the Central Administration Web site.
SharePoint Central Administration v3	MOSSAPP	App1	Site Collection created when SharePoint Server first installed.
SSP1	MOSSAPP	App1	Web application used to host the SSP Administration site collection.

By joining the new 64-bit servers to the farm, SharePoint Server will create the Web applications on the new servers for you; however, you will need to check that they are working correctly. Any components that you have manually installed in the servers you will have to install yourself. You should check with your third party suppliers and your developers that the component works correctly in a 64-bit environment. Some of the components that fall into this category are, installation of antivirus products, backup products, iFilters, amendments to noise words and thesaurus files, alternate access mappings, as well as any Web Parts, Features and Site Definitions that you did not install as SharePoint Solutions.

Then the final step is to remove the 32-bit servers from the SharePoint farm, so that by the end of this White paper, the Web applications that were running on MOSSWEB should be running on Web1 and those that were running on MOSSAPP should be running on App1.

The diagram below shows the environment we aim to get to by the end of this white paper.



## Disclaimer

**Although this paper details moving a Windows Server 2003 SharePoint Server 2007 32-bit farm to a Windows Server 2008 SharePoint Server 2007 64-bit farm there will still be additional reconfiguration you may need to complete depending on your environment. This white paper will try to point out other tasks you need to complete, however you must fully audit and test your own solution. This document assumes that you have fully documented and backed up your SharePoint Server 2007 environment and when you have created the 64-bit environment that you are able to maintain and support such an environment. Combined Knowledge will take no responsibility if you follow this whitepaper on your production server.**

**Troubleshooting – See the section at the end of the document**

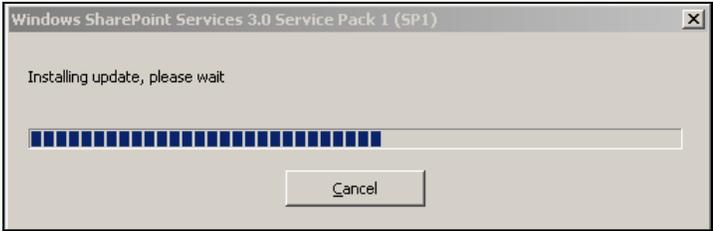
**Step 1 – Download and install Windows SharePoint Services (WSS) 3.0 Service Pack 1 (SP1) and SharePoint Server SP1.**

On the MOSSWEB and MOSSAPP install first WSS SP1 and then SharePoint Server SP1 as follows:

- 1. Download both the 32-bit and 64-bit WSS SP1 from <http://www.microsoft.com/downloads/details.aspx?FamilyID=4191a531-a2e9-45e4-b71e-5b0b17108bd2&DisplayLang=en>.
- 2. Download both the 32-bit and 64-bit SharePoint Server SP1 from <http://www.microsoft.com/downloads/details.aspx?FamilyID=ad59175c-ad6a-4027-8c2f-db25322f791b&DisplayLang=en>.

**Note:** If you have installed any service packs you will also need to download the relevant WSS and SharePoint Server language pack service packs.

- 3. On MOSSAPP:
  - a. Double-click **WSSv3SP1-KB936988-x86-fullfile-en-us.exe** to install WSS SP1 binaries, if prompted do not start the SharePoint Product and Technologies Configuration Wizard.



- b. Double-click **officeserver2007sp1-kb936984-x86-fullfile-en-us.exe** to install SharePoint Server SP1 binaries, if prompted do not start the SharePoint Product and Technologies Configuration Wizard.



- 4. Repeat the above step on MOSSWEB.
- 5. On MOSSAPP:
  - a. Start the SharePoint Products and Technologies Configuration Wizard (**Start -> All Programs -> Microsoft Office Server -> SharePoint Product and Technologies Configuration Wizard**).

- b. Follow the prompts to complete the installation, such as clicking **Yes** to restart the services.



- c. Click **Finish** to close the SharePoint Products and Technologies Configuration Wizard.
6. Repeat the above step on MOSSWEB and any other SharePoint Servers you may have on your farm.
  7. Open Central Administration Web site (**Start -> All Programs -> Microsoft Office Server -> SharePoint 3.0 Central Administration**).
  8. Click the **Operations** tab and then under **Topology and Services** click **Servers in farm**. The *Servers in Farm* page is displayed and all SharePoint servers (MOSSAPP and MOSSWEB) should have a version of 12.0.0.6219.

**Note:** You can check that SharePoint Server SP1 is installed from the Add or Remove Programs dialog window. Select **Show updates** check box, and *SharePoint Server SP1* is listed under *Microsoft Office SharePoint Server 2007*.



Under **Microsoft Office SharePoint Server 2007**, click **Click here for support information**; you should see the version number 12.0.0.6219<sup>2</sup>. The information listed in the Add and Remove Programs dialog window only indicate that you have run the two service packs they do not indicate that you have run the SharePoint Products and Technologies Configuration Wizard.

## Step 2 – Slipstream WSS SP1 and SharePoint Server SP1 onto your SharePoint Server installation files<sup>3</sup>.

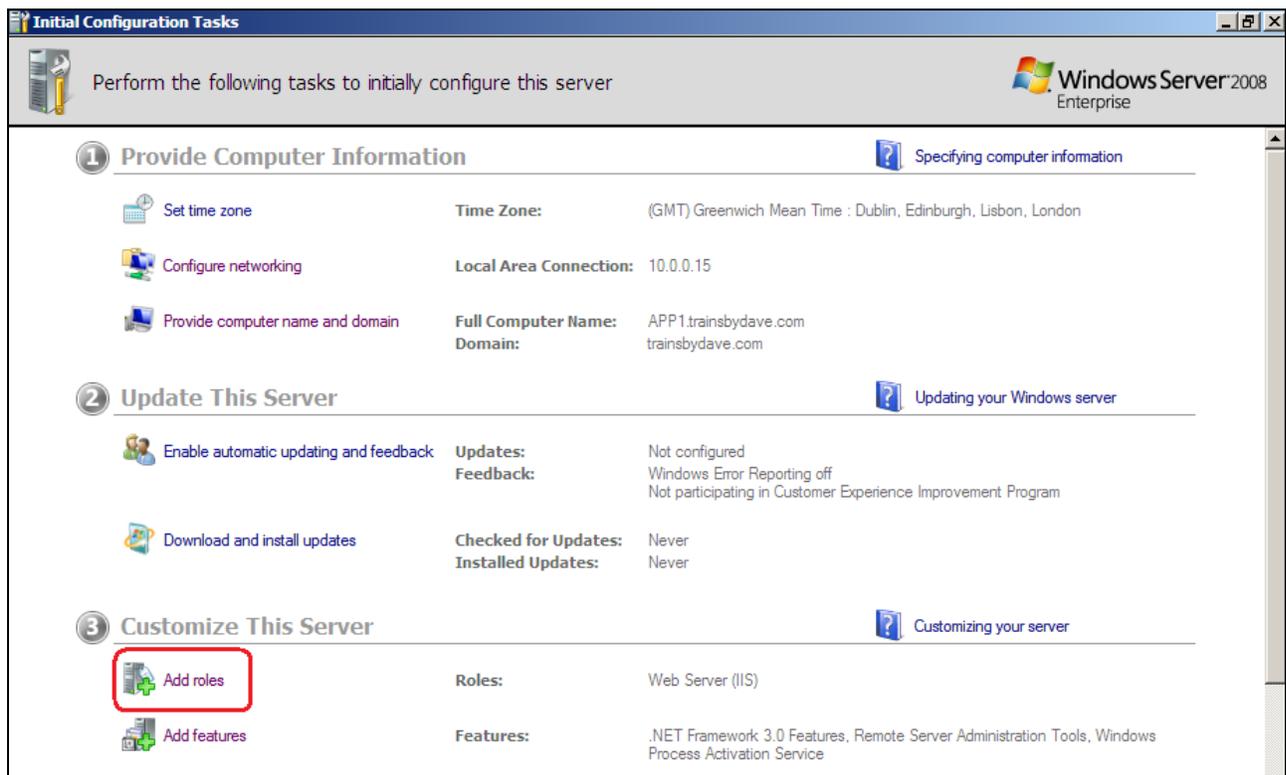
\*\* For a how to guide on Slipstreaming SP1 files into your SharePoint Binaries follow this blog post <http://mindsharpblogs.com/ben/archive/2007/12/16/3837.aspx> \*\*

## Step 3 – Install Windows Server 2008 on two 64-bit servers named App1 and Web1 and join the domain.

For more detailed steps on installing Windows Server 2008 RC1 see this TechNet article on Microsoft Tech centre for Server 2008 : <http://technet2.microsoft.com/windowsserver2008/en/library/bab0f1a1-54aa-4cef-9164-139e8bcc44751033.mspx?mfr=true>

## Step 4 – Configure Windows Server 2008 Roles and Features on App1 and Web1<sup>4</sup>.

1. From the **Initial Configuration Tools** window, under **Customize This Server**, click **Add Roles**.



<sup>2</sup> More information on SharePoint version numbers can be found at <http://mindsharpblogs.com/penny/articles/481.aspx>.

<sup>3</sup> Thanks to Ben Curry of Mindsharp for information on how to slipstream SharePoint Server service packs, <http://mindsharpblogs.com/ben/archive/2007/12/16/3837.aspx>.

<sup>4</sup> Thanks to Bill Baer for information on installing Windows SharePoint Services 3.0 on Windows Server 2008, <http://blogs.technet.com/wbaer/archive/2007/10/30/installing-windows-sharepoint-services-3-0-on-windows-server-2008.aspx>.

**\*\* You can also access the Roles and Features Configuration screen through Administrative Tools – Server Manager. \*\***

2. Follow the onscreen prompts and select Web Server (IIS) from the list of available roles.
3. Select the following Web Server (IIS) role services:
  - Web Server
    - Common HTTP Features
      - Static Content
      - Default Document
      - Directory Browsing
      - HTTP Errors
  - Application Development
    - ASP.NET
    - .NET Extensibility
    - ISAPI Extensions
    - ISAPI Filters
  - Health and Diagnostics
    - HTTP Logging
    - Logging Tools
    - Request Monitor
    - Tracing
  - Security
    - Basic Authentication
    - Windows Authentication
    - Digest Authentication
    - Request Filtering
  - Performance
    - Static Content Compression
    - Dynamic Content Compression
  - Management Tools
    - IIS Management Console
  - IIS 6 Management Compatibility
    - IIS 6 Metabase Compatibility
4. Under **Features Summary**, select **Add Features**.
5. Select **.NET Framework 3.0 Features** and click **Next**.
6. Follow the onscreen prompts to complete the installation.

**Note:** You can return to the Server Manager at any time to add additional roles, for example Network Load Balance.

## Step 5 – Install SharePoint Server binaries on App1 and Web 1.

From your slipstreamed SharePoint binary folder launch setup.exe and follow these steps to install the product.



The next screen will give you the chance to select which type of installation you wish to commit. The Basic installation is used for those who:

- Need to install everything on a single server
- Do not need to grow into a multi-server farm
- Need a quick, easy deployment during installation with lead administrative effort

The Advanced option is selected by those who wish to install MOSS 2007 selecting some of the customizable features. In this illustration, we'll select the Advanced option and follow that route.

After clicking on the Advanced button, you'll find that the selections default to Standalone (Figure 4). However, we'll choose Complete. The meaning of the three options is as follows:

- Complete: Enables all of the options for one server to offer the entire range of MOSS 2007 services and features to the network. You can scale out this deployment, start and stop services on this server and use a [SQL](#) server to host your databases.
- Web Front End: Enables only those options that allow the server to run as a web front end server. What this means is that server is merely the entry and exit point (or one of them among the other WFE servers) for the farm. The actual servers that users will consume will be hosted on other servers (presumably). This cannot be the first choice of a farm unless you plan on installing other servers in the farm to offer the services and features that users will want to consume.

- Stand-Alone: Similar to complete, this option enables all of the services and features for the MOSS 2007 farm, but assumes that there is no [SQL](#) server, so the MSDE engine is installed locally on this server. You cannot scale out this server into a larger MOSS 2007 farm.



Choose Complete and then click **Install Now**.

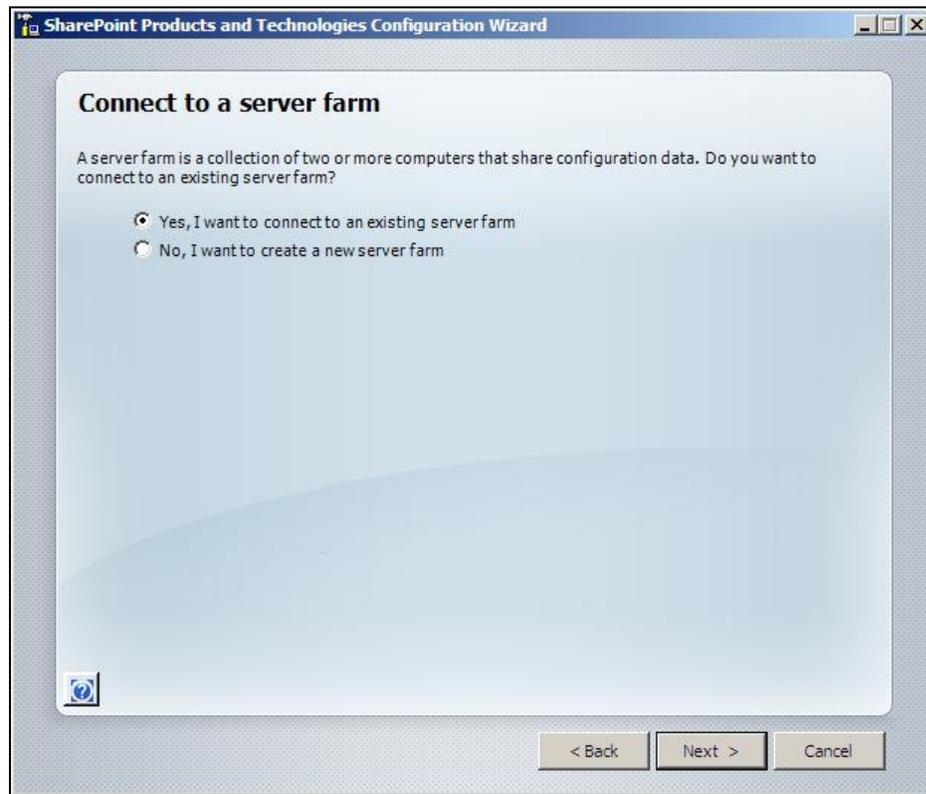


Click Close to start the SharePoint configuration Wizard

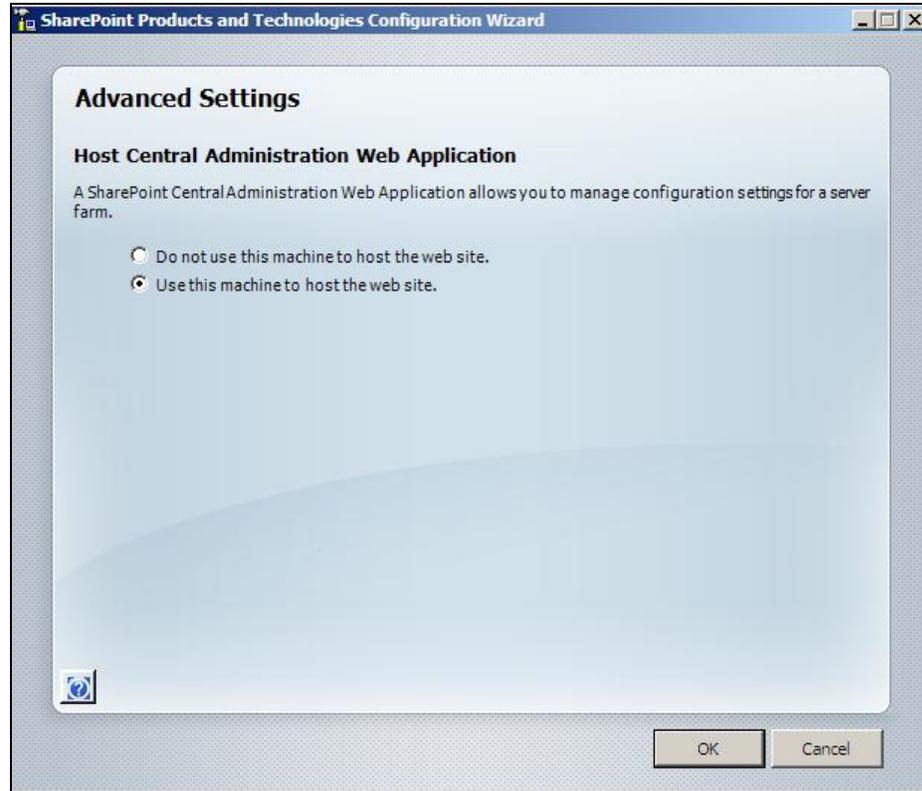
For more information on installing SharePoint binaries visit this TechNet Article :  
<http://technet2.microsoft.com/Office/en-us/library/26c07867-0150-463d-b21a-a6d42aecf05a1033.mspx?mfr=true>

### Step 6 – Run SharePoint Products and Technologies Wizard on App1 and then Web1.

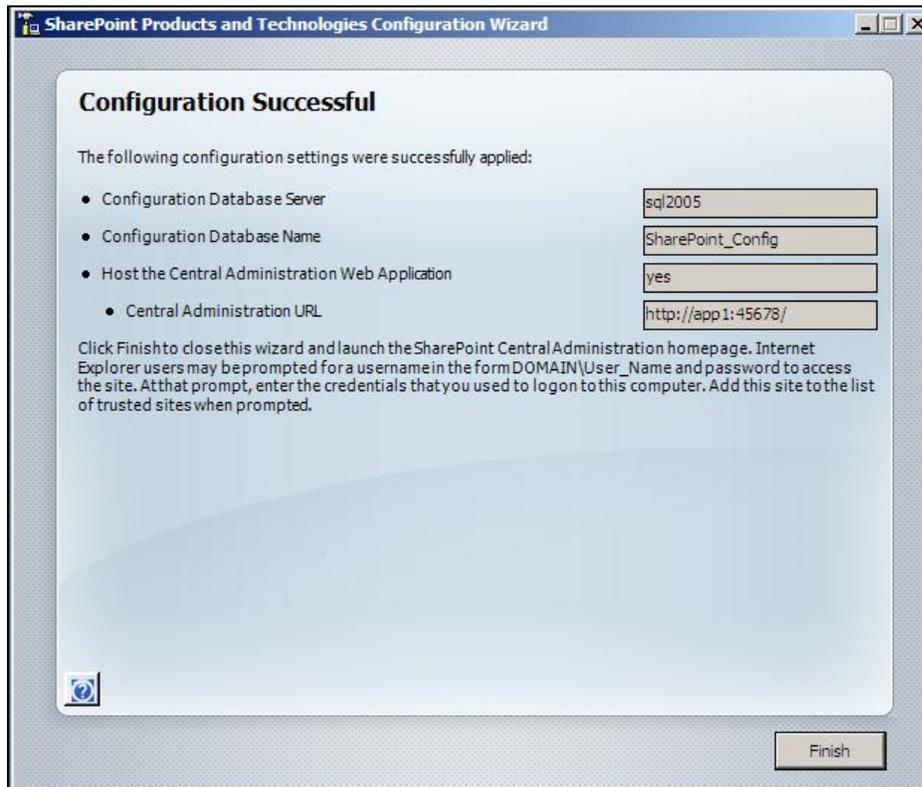
1. On App1:
  - a. Start the SharePoint Products and Technologies Configuration Wizard (**Start -> All Programs -> Microsoft Office Server -> SharePoint Product and Technologies Configuration Wizard**).
  - b. On the **Connect to server farm** window, select **Yes, I want to connect to an existing server farm** radio button.



- c. Click **Next**.
- d. Click **Advanced Settings**.
- e. If you want this server to host a Central Administration Web Site On the **Advanced Settings** window, select the **Use this machine to host the web site** radio button.



- f. Click **OK**.
- g. The *Configuration Successful* window is displayed.



- h. Click **Finish**.

2. Open Central Administration Web site (**Start -> All Programs -> Microsoft Office Server -> SharePoint 3.0 Central Administration**).
3. Click the **Operations** tab and then under **Topology and Services** click **Servers in farm**. The *Servers in Farm* page is displayed and should look similar to the following screenshot.

Central Administration > Operations > Servers in Farm

## Servers in Farm

**Farm Information**

Version: 12.0.0.6219  
 Configuration database server: sql2005  
 Configuration database name: SharePoint\_Config

Server	Services Running	Version	Remove Server
APP1	Central Administration Windows SharePoint Services Incoming E-Mail Windows SharePoint Services Web Application	12.0.0.6219	Remove Server
MOSSAPP	Central Administration Excel Calculation Services Office SharePoint Server Search Windows SharePoint Services Incoming E-Mail Windows SharePoint Services Web Application	12.0.0.6219	Remove Server
MOSSWEB	Document Conversions Load Balancer Service Office SharePoint Server Search Windows SharePoint Services Incoming E-Mail Windows SharePoint Services Search Windows SharePoint Services Web Application	12.0.0.6219	Remove Server
rootdc	Windows SharePoint Services Outgoing E-Mail		Remove Server
sql2005	Windows SharePoint Services Database		Remove Server

4. On Web1 and on any other servers you may wish to join the farm, repeat step 1 and install the Central Administration web site on servers as required.

**Note:** For resiliency purposes, you could install the Central Administration Web site on at least two SharePoint servers in your farm.

**Step 7 – On Web1 using IIS Manager add host header for corp.**

**Step 8 – Alter DNS entries for MySite, Corp and Extranet.**

**Step 9 – Move the Search and Excel Calculation Services from MOSSAPP to APP1.**

1. Stop the Search services on MOSSAPP.
  - a. Open Central Administration web site, if it is not already open, click **Operations** tab and then click **Services on Server**.
  - b. On the **Services on Server** page, check that you are on the right server, if not click the down arrow to the right of the server name and click **Change Server**. The *Select Server* dialog window open, click **MOSSAPP**.
  - c. Under **Status** to the right of **Excel Calculation Services** click **Stop**.

- d. Click **OK** to the Windows Internet Explorer dialog box that opens.
- e. Stop the **Office SharePoint Server Search** service.
- f. On the *Disable Office SharePoint Server Search* page click **OK**.
- g. Stop the **Windows SharePoint Services Search** if you started this service on this server, clicking OK to the Windows Internet Explorer dialog box.

The Services on Server: MOSSAPP should look similar to the following screen shot.

Central Administration > Operations > Services on Server

## Services on Server: MOSSAPP

**Complete all steps below**

Server: **MOSSAPP**

Select server role to display services you will need to start in the table below.

- Single Server or Web Server for small server farms All services run on this server
- Web Server for medium server farms Web application and Search Query services run on this server
- Search Indexing Search Indexing service runs on this server
- Excel Calculation Excel Calculation service runs on this server
- Custom Services you choose run on this server

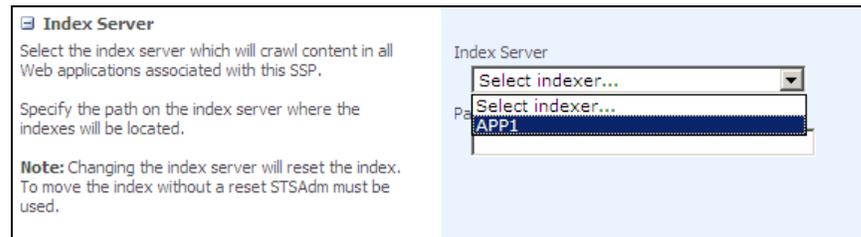
Start services in the table below:

View: **Configurable**

Service	Comment	Status	Action
Document Conversions Launcher Service		Stopped	Start
Document Conversions Load Balancer Service		Stopped	Start
Excel Calculation Services	Required on Farm, not running	Stopped	Start
Office SharePoint Server Search	Required on Farm, not running	Stopping	Start
Windows SharePoint Services Search	Required on Farm, not running	Stopped	Start
Windows SharePoint Services Web Application		Started	Stop

2. Stop the services on MOSSWEB following a similar procedure as detailed in the previous step.
3. Start Search Indexing services on App1.
  - a. On the **Services on Server** page, click the down arrow to the right of the server name and click **Change Server**.
  - b. The *Select Server* dialog window open, click **App1**.
  - c. Under **Status** to the right of **Office SharePoint Search** click **Start**.  
The *Configure Office SharePoint Server Search Service Settings on server APP1* page is displayed.
  - d. In the **Query and Indexing** section, select **Use this server for indexing**.
  - e. In the Farm Search Service Account section, type the userid and password of the Search service account.
  - f. Click **Start**.  
The *Services on Server: App1* page is displayed.
4. Start Search Querying service on Web1.
  - a. On the **Services on Server** page, click the down arrow to the right of the server name and click **Change Server**.
  - b. The *Select Server* dialog window open, click **Web1**.
  - c. Under **Status** to the right of **Office SharePoint Search** click **Start**.  
The *Configure Office SharePoint Server Search Service Settings on server APP1* page is displayed.

- d. In the **Query and Indexing** section, select **Use this server for servicing search queries**.
- e. In the **Index Server** section, select **APP1** from the Index Server drop down list.



- f. Click **Start**.  
The *Services on Server: Web1* page is displayed.

5. Start Full crawl.
6. Test by searching for a keyword.

#### **Step 10 – Activate services on all SharePoint Servers appropriate to their role.**

1. Start Excel services on App1.
2. Start Document Conversion services on Web1 and configure -- \*\*\* problems.

#### **Step 11 – Configure App1 so that is recognized as hosting the Central Administration and SSP Web sites by adding AAMs.**

1. On the *Central Administration* Web site, click the **Operations** tab and then under **Global Configuration** click **Alternate access mappings**.
2. On the *Alternate Access Mappings* page, click **Edit Public URLs**.  
The *Edit Public Zone URLs* page is displayed.
3. On the *Alternate Access Mapping Collection* page, click the down arrow to the right of **Alternate Access Mapping Collection**, and click **Change Alternate Access Mapping Collection**.
4. In the *Select An Alternate Access Mapping Collection* dialog box, click **Central Administration**.  
The dialog box closes.
5. In the **Public URL** section, copy the URL in the **Default** text box to the **Custom** text box and then change the server name in the **Default** text box from **MOSSAPP** to **App1**.

Central Administration > Operations > Alternate Access Mappings > Edit Public Zone URLs

## Edit Public Zone URLs

**Alternate Access Mapping Collection**  
Select an Alternate Access Mapping Collection.

Alternate Access Mapping Collection: **Central Administration** ▼

**Public URLs**  
Enter the public URL protocol, host, and port to use for this resource in any or all of the zones listed. The Default Zone URL must be defined. It will be used if needed where the public URL for the zone is blank and for administrative actions such as the URLs in Quota e-mail.

Default

Intranet

Internet

Custom

Extranet

6. Click **Save**.  
The *Alternate Access Mapping* page is displayed.
7. Click the down arrow to the right of **Alternate Access Mapping Collection**, and click **Change Alternate Access Mapping Collection**.
8. In the *Select An Alternate Access Mapping Collection* dialog box, click **SSP1**.  
The dialog box closes.
9. In the **Public URL** section, copy the URL in the **Default** text box to the Custom text box and then change the server name in the Default text box from **MOSSAPP** to **App1**.
10. Click **Save**.  
The *Alternate Access Mapping* page is displayed.
11. Close the browser. (This is so that you do not use a cached page).
12. Open the Central Administration Web site (**Start -> All Programs -> Microsoft Office Server -> SharePoint 3.0 Central Administration**) and check in the address box of the browser that it opens from App1.
13. In the Quick Launch bar, under **Shared Services Administration**, click **SSP1** and check in the address box of the browser that the SSP admin site opens from App1.
14. In the breadcrumb click **Operations** and then under **Topology and Services** section, click **Servers in farm**.

15. The *Servers in Farm* page is displayed as should look similar to the following screenshot.

**Servers in Farm**

**Farm Information**

Version: 12.0.0.6219  
 Configuration database server: sql2005  
 Configuration database name: SharePoint\_Config

Server	Services Running	Version	Remove Server
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MOSSAPP	Central Administration Windows SharePoint Services Incoming E-Mail Windows SharePoint Services Web Application	12.0.0.6219	Remove Server
MOSSWEB	Document Conversions Load Balancer Service Windows SharePoint Services Incoming E-Mail Windows SharePoint Services Web Application	12.0.0.6219	Remove Server
rootdc	Windows SharePoint Services Outgoing E-Mail		Remove Server
sql2005	Windows SharePoint Services Database		Remove Server
WEB1	Document Conversions Load Balancer Service Office SharePoint Server Search Windows SharePoint Services Help Search Windows SharePoint Services Incoming E-Mail Windows SharePoint Services Web Application	12.0.0.6219	Remove Server

**Step 12 – Uninstall SharePoint Server from MOSSAPP and MOSSWEB.**

1. Open Add or Remove Programs (**Start -> Control Panel -> Add or Remove Programs**).
2. Under **Currently install programs** click **Microsoft Office SharePoint Server 2007** and then click **Remove**.  
The Microsoft Office SharePoint Server 2007 dialog box opens followed by a Setup Dialog box.
3. Click **Yes**.
4. Open the Central Administration Web site if it is not already open, and click the **Operations** tab and then under **Topology and Services** section, click **Servers in farm**.
5. The *Servers in Farm* page is displayed as should look similar to the following screenshot.

**Central Administration**

Home | **Operations** | Application Management | Site Actions

Central Administration > Operations > Servers in Farm

**Servers in Farm**

**Farm Information**

Version: 12.0.0.6219  
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sql2005	Windows SharePoint Services Database		Remove Server
WEB1	Document Conversions Load Balancer Service Office SharePoint Server Search Windows SharePoint Services Help Search Windows SharePoint Services Incoming E-Mail Windows SharePoint Services Web Application	12.0.0.6219	Remove Server

## References

- SharePoint Products and Technologies Service Pack 1 Resource Center  
<http://technet.microsoft.com/en-us/office/sharepointserver/bb735839.aspx>.

## Troubleshooting

At this time we had no major issues for troubleshooting but you should obviously test this scenario on test servers several times before doing it on live servers.

I hope you found this article useful, please do feel free to send me comments and keep checking our web site for more downloads on configuring some of the cool new features of Moss2007 and Windows Server 2008.

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