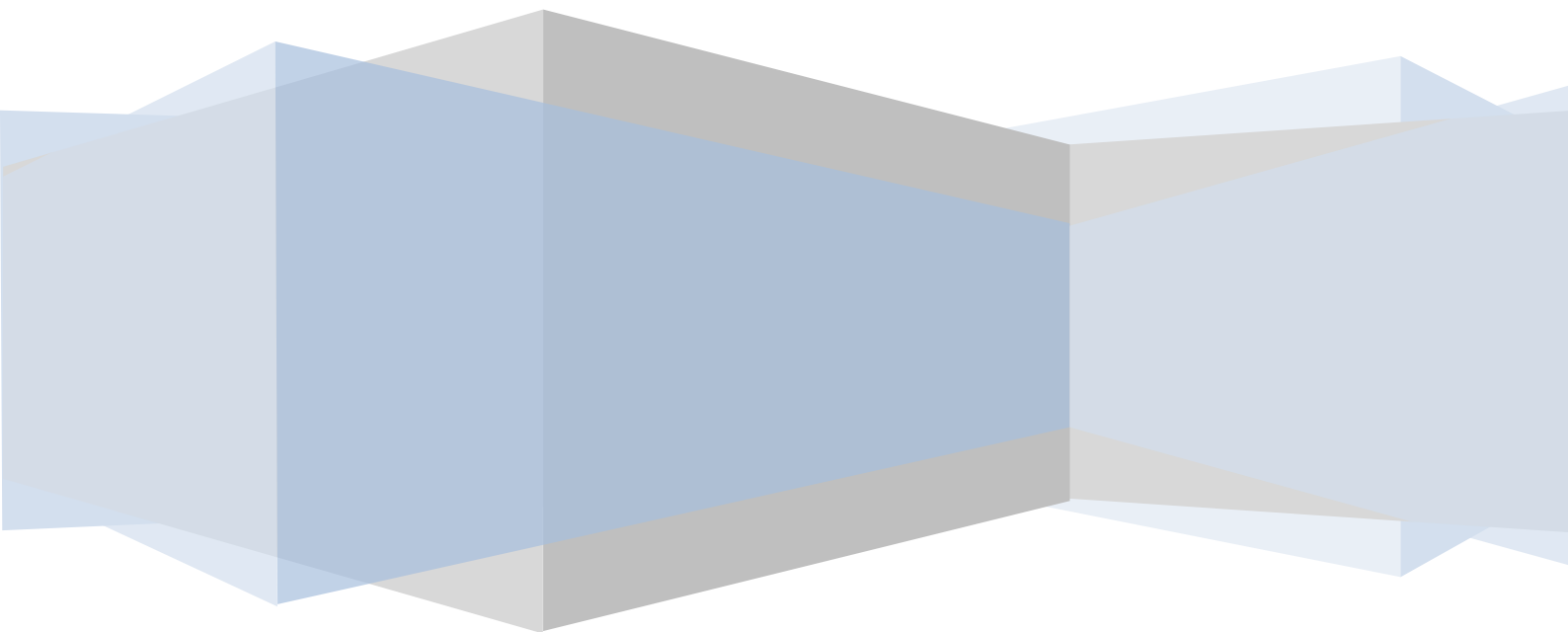


# **Rapid transition guide from Exchange 2003 to Exchange 2010**

Things that you need before and after you move to Exchange Server 2010

**Milind Naphade**





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## Introduction

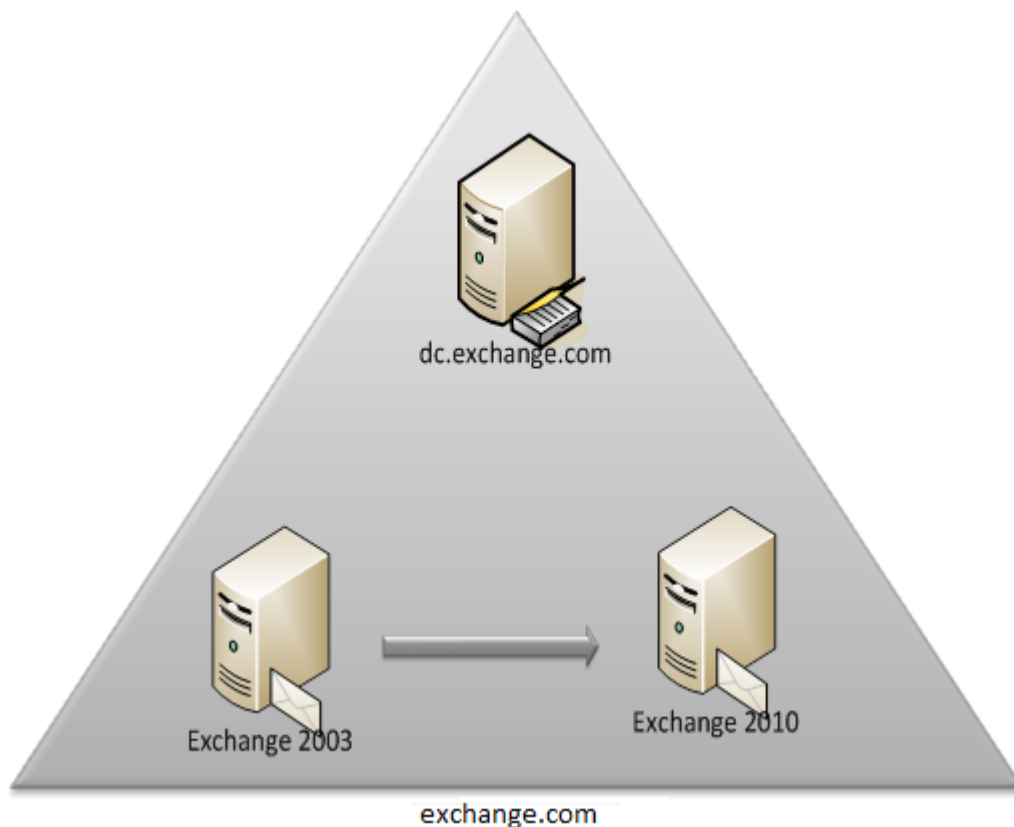
This guide will walk you through the most important considerations and steps that you need to perform before, during, and after the deployment of Exchange 2010 server.

This guide is written for the IT administrators of an existing Exchange 2003 organization which contains small to medium scale deployments.

This guide mainly focuses on a typical transition of Exchange 2003 to Exchange 2010 environment which includes the transition of Exchange 2003 backend and front end servers to Exchange 2010 mailbox server role, client access server role and hub transport server role installed using the typical installation method. This guide does not discuss about implementation of Unified Messaging Server Role.

It is presumed that the readers of this guide has good understanding of Exchange 2003 and Exchange 2010 functionality or have hands on experience on both. If you are new to Exchange Server 2010; it is highly recommended that you stop by and read the recommended articles in **Recommended Articles** section of this guide. To prevent complexities while following the steps shown in this guide, configuration for complex Exchange deployments have intentionally been omitted.

To keep this document simple and compact we have used command line mode to setup Exchange Server 2010.



# Check Existing Topologies

To avoid any installation hassles or a run through a series of errors during installation; it is highly recommended to perform an assessment of your existing AD and Exchange topology even before you start planning for Exchange 2010 servers. Exchange 2010 is packed with many new features and they require some additional resources on your existing network which includes little more additional software as well as the some new hardware.

A small but very important point that you should know is, Exchange 2010 cannot be installed in co-existence with Exchange 2000 servers. To upgrade to Exchange 2010 you must move entire of your Exchange 2000 organization to Exchange Server 2003 organization

## Network Prerequisites:

### Active Directory Servers:

Table 1: Active Directory Prerequisites

Component	Requirement
<b>Schema master</b>	<p>The schema master must be running any of the following:</p> <ul style="list-style-type: none"><li>• Windows Server 2003 Standard Edition with Service Pack 1 (SP1) or later (32-bit or 64-bit)</li><li>• Windows Server 2003 Enterprise Edition with SP1 or later (32-bit or 64-bit)</li><li>• Windows Server 2008 Standard or Enterprise (32-bit or 64-bit)</li><li>• Windows Server 2008 R2 Standard or Enterprise</li></ul>
<b>Global catalog server</b>	<p>Each Active Directory site where you plan to install Exchange 2010, you must have at least one global catalog server running any of the following:</p> <ul style="list-style-type: none"><li>• Windows Server 2003 Standard Edition with SP1 or later (32-bit or 64-bit)</li><li>• Windows Server 2003 Enterprise Edition with SP1 or later (32-bit or 64-bit)</li><li>• Windows Server 2008 Standard or Enterprise (32-bit or 64-bit)</li><li>• Windows Server 2008 R2 Standard or Enterprise</li></ul>
<b>Domain controller</b>	<p>Each Active Directory site where you plan to install Exchange 2010, you must have at least one writeable domain controller running any of the following:</p> <ul style="list-style-type: none"><li>• Windows Server 2003 Standard Edition with SP1 or later (32-bit or 64-bit)</li><li>• Windows Server 2003 Enterprise Edition with SP1 or later (32-bit or 64-bit)</li><li>• Windows Server 2008 Standard or Enterprise (32-bit or 64-bit)</li><li>• Windows Server 2008 R2 Standard or Enterprise</li></ul>

\*AD replication plays a very important role during Exchange installation so there should be no problems in replication.

## Exchange 2003 Servers:

Table 2: Exchange 2003 Prerequisites

Component	Requirement
<b>Service Pack Level</b>	All Exchange Servers running Exchange 2003 must be SP2 or higher see, <a href="#">Build numbers and release dates for Exchange Server</a>
<b>Mode of operation</b>	Exchange 2003 organization must be running in Native Mode. That means there should not be any Exchange 5.5 servers in the organization. If you have any of them you must migrate to Exchange 2003.
<b>Routing</b>	Link state routing must be suppressed. <a href="#">Suppress Link State Updates</a>

## Prepare for Exchange 2010 Servers

### Preparing Hardware

Microsoft decided using 64 bit architecture for Exchange server since the release of Exchange 2007. Microsoft Exchange Server 2010 also follows the same stream and is available only in 64 bit. Considering this fact there may be a need of purchasing new hardware to run a 64 bit operating system to support Exchange 2010. Table below illustrates the minimum, recommended and supported hardware configurations for processor and memory for Exchange 2010.

Exchange is a transaction based application and demands more memory, CPU and disk configuration. Based on your Exchange server user load you can choose the suitable CPU for your Exchange servers. Table 3 contains the minimum, maximum and recommended configuration of CPUs for each server role. To choose a correct CPU for your needs you can consult the CPU manufacturer's website. Intel and AMD CPUs both are supported.

Table 3: Processor selection

Server role	Minimum	Maximum	Recommended
<b>Edge Transport</b>	1 x processor core	12 x processor cores	4 x processor cores
<b>Hub Transport</b>	1 x processor core	12 x processor cores	4 x processor cores
<b>Client Access</b>	2 x processor core	12 x processor cores	8 x processor cores
<b>Unified Messaging</b>	2 x processor core	12 x processor cores	4 x processor cores
<b>Mailbox</b>	2 x processor core	12 x processor cores	8 x processor cores
<b>Multiple server roles (combinations of Hub Transport, Client Access, and Mailbox server roles)</b>	2 x processor core	16 x processor cores	8 x processor cores

\* It is presumed that you already have the 1:4 AD-Exchange ratios maintained. For more information on planning AD for Exchange Server see, [Guidance on Active Directory design for Exchange Server 2007](#)

As stated above, Exchange is a transaction based application and requires more memory to carry out the operations. It follows a simple rule, more the memory better the performance. Table 4 consists of recommendations for memory as it plays very important role in the end user experience. To achieve better performance Microsoft recommends the following ratio of memory to processor per server role.

**Table 4: Memory selection**

Server role ratio	Recommended processor core ratio	Memory Per core
<b>Mailbox:Hub</b>	7:1 (no antivirus scanning on Hub)	1 GB for each core on HT
	5:1 (with antivirus scanning on Hub)	
<b>Mailbox:Client Access</b>	4:3	2 GB for each core on CAS
<b>Not applicable for Edge</b>	Refer Table 3	1 GB for each core

## Preparing Software to install Exchange Server 2010

Though Windows 2003 has a 64 bit version available, Microsoft seems to have left it behind as an OS platform for Exchange 2010. The only operating systems those can be used for installing Exchange Server 2010 are Windows Server 2008 SP2 and Windows Server 2008 R2. Selecting an operating system may totally depend on individual organization’s policy however it is recommended to use Windows Server 2008 R2. As per the benchmark testing results and considering other performance factors; Windows Server 2008 R2 works as a better platform than Windows Server 2008 SP2.

Apart from selecting the correct operating system; Exchange needs some additional software prerequisites to be installed on each server. Table 5, 6 and 7 contain the required software components to be installed in different scenarios respectively before an Exchange 2010 server can be installed.

**Table 5: Supported Operating Systems**

Component	Requirement
<b>Operating system on a computer that has a 64-bit processor</b>	One of the following: <ul style="list-style-type: none"> <li>64-bit edition of Windows Server 2008 Standard with Service Pack 2 (SP2)</li> <li>64-bit edition of Windows Server 2008 Enterprise with SP2</li> <li>64-bit edition of Windows Server 2008 R2 Standard</li> <li>64-bit edition of Windows Server 2008 R2 Enterprise</li> </ul>
<b>Operating system for installing the Exchange management tools on a computer that has a 64-bit processor</b>	One of the following: <ul style="list-style-type: none"> <li>Windows Vista with SP2 for management tools only installation</li> <li>64-bit edition of Windows Server 2008 Standard with SP2</li> <li>64-bit edition of Windows Server 2008 Enterprise with SP2</li> <li>64-bit edition of Windows Server 2008 R2 Standard</li> <li>64-bit edition of Windows Server 2008 R2 Enterprise</li> <li>Windows 7</li> </ul>

If Windows Server 2008 SP2 is used as a platform OS for all your Exchange 2010 server and a typical installation to be performed (contains installation of HT, CAS and MBX server roles by default) then following software components need to be installed on the server;

**Table 6: Windows Server 2008 SP2 components**

Component	Requirement
<b>Microsoft .Net Framework</b>	<ul style="list-style-type: none"> <li>.Net Framework 3.5 SP1.</li> <li>.NET Framework 3.5 Family Update for Windows Vista x64, and Windows Server 2008 x64 updates.</li> </ul>
<b>Windows Management Framework</b>	<ul style="list-style-type: none"> <li>WinRM 2.0</li> <li>Powershell V2.</li> </ul>
<b>Hub and MBX role specific</b>	<ul style="list-style-type: none"> <li>Microsoft Filter Pack</li> </ul>
<b>Service Configuration</b>	<ul style="list-style-type: none"> <li>Net.Tcp Port Sharing Service in automatic start up type.</li> </ul> <p><b>sc config NetTcpPortSharing start= auto ServerManagerCmd -ip Exchange-Typical.xml –Restart</b></p>
<b>Built in OS Components</b>	<p>Open an elevated command prompt, navigate to the Scripts folder on the Exchange 2010 installation media and use one of the following commands to install the necessary operating system components</p> <p><b>sc config NetTcpPortSharing start= auto ServerManagerCmd -ip Exchange-Typical.xml -Restart</b></p>

\* For more information on installing role specific built in OS components, see [Install the Windows Server 2008 SP2 operating system prerequisites](#)

Microsoft has deprecated the use of ServerMangerCmd.exe for installing the OS components via command prompt and the utility may not be supported in Windows Server 2008 R2. There are few more architectural changes in Windows Server 2008 R2 which also affect the way prerequisites for Exchange is installed on a Windows Server 2008 R2.

Compared to installation of software prerequisites on a Windows Server 2008 SP2 server box it is little different with a Windows Server 2008 R2 box. Table below illustrates the requirements and the ways to install each component using PowerShell.

**Table 7:Windows Server 2008 R2 components**

Component	Requirement
<b>Hub and MBX role specific</b>	<ul style="list-style-type: none"> <li>Microsoft Filter Pack</li> </ul>
<b>Service Configuration</b>	<ul style="list-style-type: none"> <li>Net.Tcp Port Sharing Service in automatic start up type.</li> </ul> <p><b>sc config NetTcpPortSharing start= auto ServerManagerCmd -ip Exchange-Typical.xml –Restart</b></p>
<b>Built in OS Components</b>	<p>Open Powershell on Windows Server 2008 R2 and follow step by step:</p> <ol style="list-style-type: none"> <li><b>Import-Module ServerManager</b></li> <li><b>Add-WindowsFeature NET-Framework,RSAT-ADDS,Web-Server,Web-Basic-Auth,Web-Windows-Auth,Web-Metabase,Web-Net-Ext,Web-Lgcy-Mgmt-Console,WAS-Process-Model,RSAT-Web-Server,Web-ISAPI-Ext,Web-Digest-Auth,Web-Dyn-Compression,NET-HTTP-Activation,RPC-Over-HTTP-Proxy -Restart</b></li> </ol>

\* For more information on installing role specific built in OS components, see [Install the Windows Server 2008 R2 operating system prerequisites](#)

## Downloads:

- Microsoft .NET Framework 3.5 SP1.
- Microsoft .NET Framework 3.5 Family Update for Windows Vista x64, and Windows Server 2008 x64.
- An update for the .NET Framework 3.5 Service Pack 1 is available.
- Windows Management Framework.
- 2007 Office System Converter: Microsoft Filter Pack.

## Installing Exchange Server 2010 in Co-Existence with Exchange Server 2003

Now that all preparation for hardware and OS selection including installation of required OS components is done the next step is to start installation of Exchange Server 2010 in co-existence with Exchange Server 2003. Installation consists of following phases:

Preparing Active Directory

Installing Exchange 2010 Server role(s)

Configuring each server role

### Preparing Active Directory

Microsoft Exchange 2000 Server was the first version of Exchange which used Active Directory Database to store its configuration information in it. Later version followed the same technology. Exchange 2010 needs preparation of Active Directory Forest and Domain as it is mandatory for any other version of Exchange. During the Active Directory preparation phase Exchange 2010 inserts its schema extensions into Active Directory Schema Partition and creates the Exchange related objects in Active Directory Configuration partition as well as in the Domain Partition. Active Directory replication should be examined for any replication problems even before starting the Active Directory Preparation. Table below shows what you need before you run the Active Directory preparation.

**Table 8: Prerequisites for AD preparation**

Component	Requirement
Permissions	<ul style="list-style-type: none"><li>• Schema Admins, Enterprise Admins, Exchange Full Administrator</li></ul>
Schema Master	<ul style="list-style-type: none"><li>• Available and contactable from the Exchange server.</li><li>• Should be running the OS mentioned in <a href="#">Table 1</a></li></ul>

After making sure that the account used to run the Exchange 2010 Schema preparation has all required permissions and Active Directory servers meet the minimum requirement criteria the Active Directory preparation can be started.

1. Insert the Exchange Server 2010 installation media into the CD Drive.
2. Open the command prompt window and locate the path to setup.com file on the installation media.  
*Drive:\setup.com*
3. Type **setup.com /PrepareLegacyExchangePermissions** or **setup.com /pl** and press enter. For more information on Preparing Legacy Exchange Permissions see, [Prepare Legacy Exchange Permissions](#) Command

will display the following output.

```
Administrator: Windows PowerShell
PS C:\Exchange> .\setup.com /PrepareLegacyExchangePermissions

Welcome to Microsoft Exchange Server 2010 Unattended Setup

By continuing the installation process, you agree to the license terms of
Microsoft Exchange Server 2010. If you don't accept these license terms,
please cancel the installation. To review these license terms, please go to
http://go.microsoft.com/fwlink/?LinkId=150127&clcid=0x409/

Press any key to cancel setup.....
No key presses were detected. Setup will continue.
Preparing Exchange Setup

    Copying Setup Files ..... COMPLETED
No server roles will be installed
Performing Microsoft Exchange Server Prerequisite Check

    Organization Checks ..... COMPLETED
Configuring Microsoft Exchange Server

    Updating legacy permissions ..... COMPLETED
The Microsoft Exchange Server setup operation completed successfully.
```

- Next step is to prepare the Active Directory Schema. Follow step 2 and type **setup.com /PrepareSchema**. For more information on Preparing Schema see, [Prepare Active Directory and Domains](#). Command will display following output.

```
Administrator: Windows PowerShell
PS C:\Exchange> .\setup.com /PrepareSchema

Welcome to Microsoft Exchange Server 2010 Unattended Setup

By continuing the installation process, you agree to the license terms of
Microsoft Exchange Server 2010. If you don't accept these license terms,
please cancel the installation. To review these license terms, please go to
http://go.microsoft.com/fwlink/?LinkId=150127&clcid=0x409/

Press any key to cancel setup.....
No key presses were detected. Setup will continue.
Preparing Exchange Setup

    Copying Setup Files ..... COMPLETED
No server roles will be installed
Performing Microsoft Exchange Server Prerequisite Check

    Organization Checks ..... COMPLETED
Configuring Microsoft Exchange Server

    Extending Active Directory schema
    Progress ..... COMPLETED
The Microsoft Exchange Server setup operation completed successfully.
PS C:\Exchange>
```

**Note:**

If you have skipped the step 2 and directly ran /PrepareSchema switch yet the Exchange setup will prepare the legacy Exchange permissions. The only benefit that running these commands separately is that it gives granular control to manage the minimum permissions required to prepare active directory. If your active directory consists of more than one domain then your options for preparing AD will change accordingly. Read [Prepare Active Directory and Domains](#) for more information.

## Installing Exchange Server 2010

Once the Active Directory Forest and Domains are prepared you can simply go ahead and install the first Exchange Server 2010 server. Installing Exchange Server 2010 can be installed using the setup.com switches or the GUI directly. One of the benefits of using setup.com is you can automate your Exchange installation and don't need to provide manual inputs during the setup.

### Command line (cmd.exe) on Windows 2008 R2 –

```
Setup.com /mode:Install /roles:CA,HT,MB /EnableLegacyOutlook  
/LegacyRoutingServer:Exchange2003.Exchange.com  
/ExternalCASServerDomain:mail.Exchange.com
```

Above command line installs Client Access Server role, Mailbox Server role, Hub Transport Server role and Management tools. If you have latest updates downloaded and want setup to install them during the installation itself, you can copy your Exchange installation media to a local or network location and put the updates in the Updates folder.

If everything goes fine the command will display the following output step by step or will stop with an error or a warning message.

### Copy Exchange files to Temp location

```
Welcome to Microsoft Exchange Server 2010 Unattended Setup  
  
By continuing the installation process, you agree to the license terms of Microsoft  
Exchange Server 2010. If you don't accept these license terms, please cancel the  
installation. To review these license terms, please go to  
http://go.microsoft.com/fwlink/?LinkId=150127&clcid=0x409/  
  
Press any key to cancel setup.....  
No key presses were detected. Setup will continue.  
Preparing Exchange Setup  
  
    Copying Setup Files                      ..... COMPLETED  
  
The following server roles will be installed  
    Languages  
    Management Tools  
    Hub Transport Role  
    Client Access Role  
    Mailbox Role  
  
Performing Microsoft Exchange Server Prerequisite Check  
  
    Organization Checks                      ..... COMPLETED
```

### Prerequisites check with the help of exbpacmd.exe

```
Performing Microsoft Exchange Server Prerequisite Check  
  
    Organization Checks                      ..... COMPLETED  
Setup is going to prepare the organization for Exchange 2010 by using 'Setup  
/PrepareAD'. No Exchange 2007 server roles have been detected in this topology. After  
this operation, you will not be able to install any Exchange 2007 server roles.  
    Language Pack Checks                    ..... COMPLETED  
    Hub Transport Role Checks                ..... COMPLETED
```

```

Client Access Role Checks ..... COMPLETED
Mailbox Role Checks ..... COMPLETED
If Microsoft Outlook 2003 is in use, you should replicate the free/busy folder on this
server to every other free/busy server in the organization. This step should be
performed once Setup completes.

```

## Installation of Exchange Server 2010

### Configuring Microsoft Exchange Server

```

Organization Preparation ..... COMPLETED
Preparing Setup ..... COMPLETED
Stopping Services ..... COMPLETED
Copying Exchange Files ..... COMPLETED
Language Files ..... COMPLETED
Restoring Services ..... COMPLETED
Languages ..... COMPLETED
Exchange Management Tools ..... COMPLETED
Hub Transport Server Role ..... COMPLETED
Client Access Server Role ..... COMPLETED
Mailbox Server Role ..... COMPLETED
Finalizing Setup ..... COMPLETED

```

The Microsoft Exchange Server setup operation completed successfully. Setup has made changes to operating system settings that require a reboot to take effect. Please reboot this server prior to placing it into production.

### Important

Exchange setup makes registry as well as WMI changes and requires a reboot of the server where it is installed. To ensure the functionality you should reboot the server before performing any other operation on it.

## Verifying the Exchange Server 2010 Installation

After rebooting the server the next step is to verify the Exchange server installation.

To verify that the Exchange installation was successful either or all of below steps can be used.

- Open Exchange Management Shell (EMS) and run Get-ExchangeServer cmdlet. Under normal circumstances and if the Exchange setup was successful it should return the values as below:

Name	Site	ServerRole	Edition	AdminDisplayVersion
EXCHANGE2003		None	Enterprise	Version 6.5 (Bui...
EXCHANGE2010	Exchange.com/Conf...	Mailbox,...	Standard...	Version 14.0 (Bu...

- Review the Application log. During installation Exchange setup logs entries in Application log. Make sure that the log doesn't contain any warnings or error related to setup.
- Review setup log file. You can find the setup log at `<system drive>\ExchangeSetupLogs\ExchangeSetup.log`

## Enter the Product Key

Exchange Server 2010 will allow you to use the trial version of 120 days however it is highly recommended that you enter the product licence key as soon as possible and before the server is placed in production.

To enter the product key you can use EMS and EMC both. To enter the product key using EMC follow below steps:

- In the console tree, navigate to **Server Configuration**.
- In the action pane, click **Enter Product Key Group**.
- On the **Enter Product Key** page, enter the product key, and then click **Enter**.
- On the **Completion** page, review the following, and then click **Finish** to close the wizard.

To enter the product key using EMS you can simply open the EMS on the Exchange server and run the following command:

```
Set-ExchangeServer -Identity ExServer01 -ProductKey xxxxx-xxxxx-xxxxx-xxxxx-xxxxx
```

### Important

- You need to restart the Exchange Information Store service to apply this change.
- Depending upon the product key you enter Exchange will determine which edition this key is for.

After you have updated the product key for each server that you have installed, next step is to go with step by step configuration per server role.

## Configure Exchange Server 2010

### Register Filter Pack IFilters with Exchange 2010

Exchange Search uses IFilters to index text content in different file formats. Microsoft Filter Pack includes filters for Microsoft Office 2007 file formats. Installation of the Filter Pack is a pre-requisite for Exchange 2010. The following file name extensions are supported by the filter pack: .docm, .docx, .one, .pptm, .pptx, .vdx, .vsd, .vss, .vst, .vsx, .vtx, .xlsb, .xlsm, .xlsx, .zip.

To register IFilters with Microsoft Exchange Server 2010 please refer Technet article [Register Filter Pack IFilters with Exchange 2010](#)

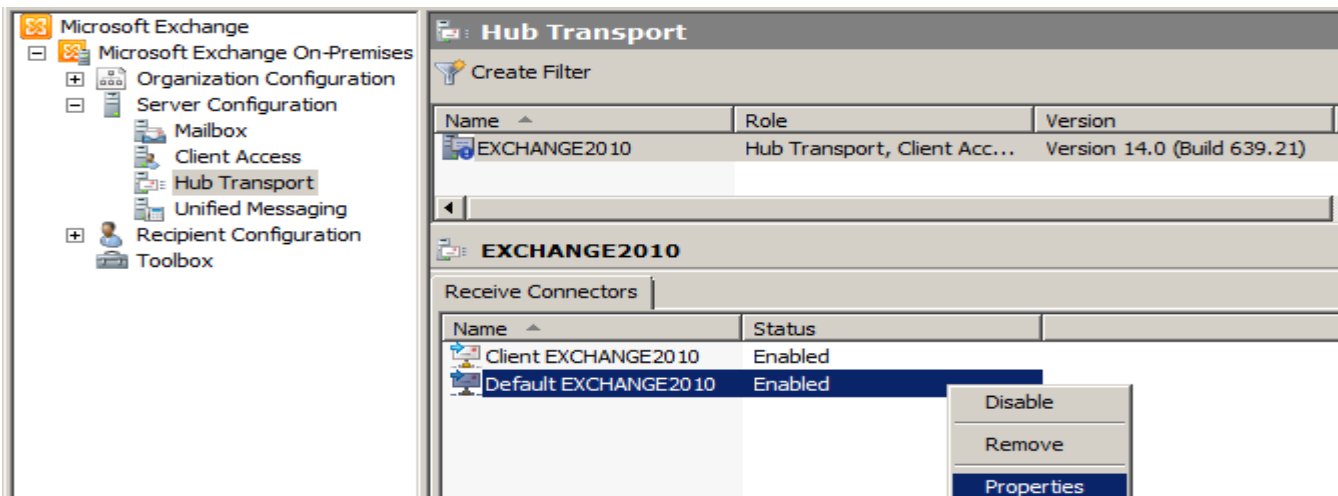
## Configure Hub Transport Server Role Settings

During the Exchange server 2010 installation Exchange 2010 pulls most of the configuration information from an existing Exchange organization which includes authoritative recipient policies as well. During installation Exchange 2010 will create a default receive connector which listens on port 25 and receives emails from all IP addresses. This allows the inbound mail flow. Yet, there are things to need to be configured manually.

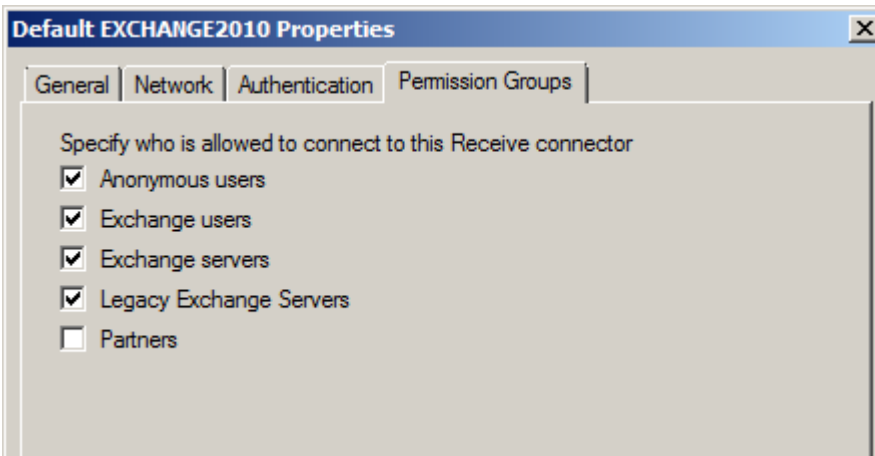
## Configure Receive Connector

Default receive connector needs to be modified before it can receive emails from internet. To modify the settings on default receive connector

- Open EMC and navigate to **Hub Transport** under the **Server Configuration** node.
- Right click on **Default ServerName** connector and select **Properties**.



- Select Permissions Groups tab and check **Anonymous users** permissions group



### Important

Receive connector configured to accept messages from all remote IP addresses through port 25. This connector typically accepts connections from all IP address ranges. The usage type for this connector is Internal. This connector only accepts mail from other Exchange servers that are part of the same Exchange organization. By default, this connector doesn't accept anonymous submissions. See, [Understanding Receive Connectors](#) and [Allow Anonymous Relay on a Receive Connector](#)

## Configure Send Connector

Exchange 2010 does not create a send connector by default and by extension is incapable of sending an email through any hub transport server role in its default configuration. If the organization contains a Hub Transport server role that already has a send connector configured the other Hub Transport server roles can use this connector to send emails to internet. However, if this is the first Exchange 2010 Hub Transport server role in the organization then you must configure the send connector. To configure the send connector you can use EMS and EMC both. To configure a send connector follow the below steps:

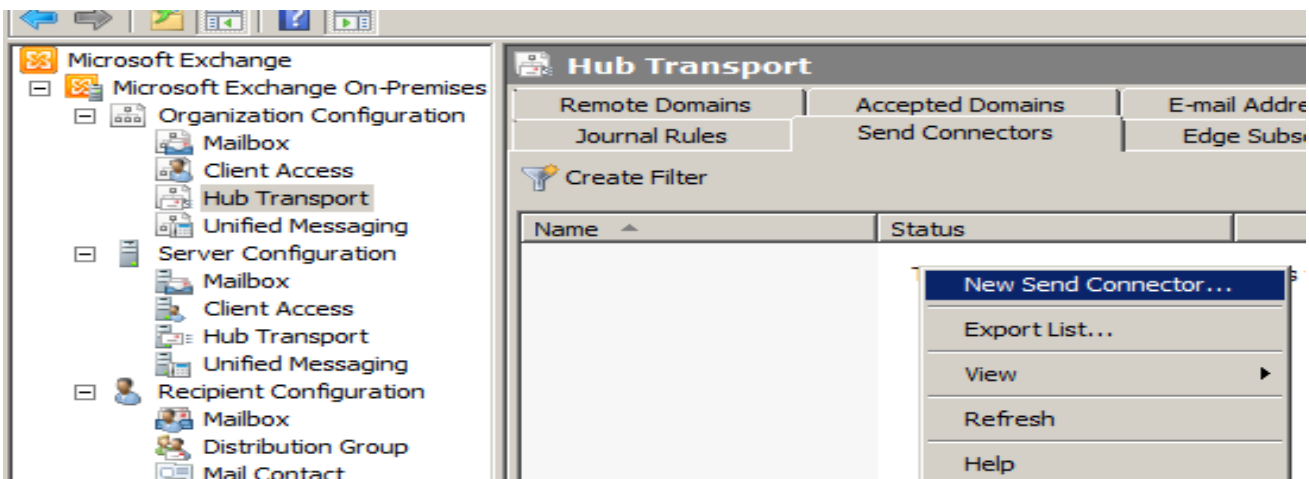
To configure a Send Connector using EMS:

```
New-SendConnector -Name "Internet Connector" -Usage Custom -AddressSpace "*" -DNSRoutingEnabled $True -MaxMessageSize 20MB
```

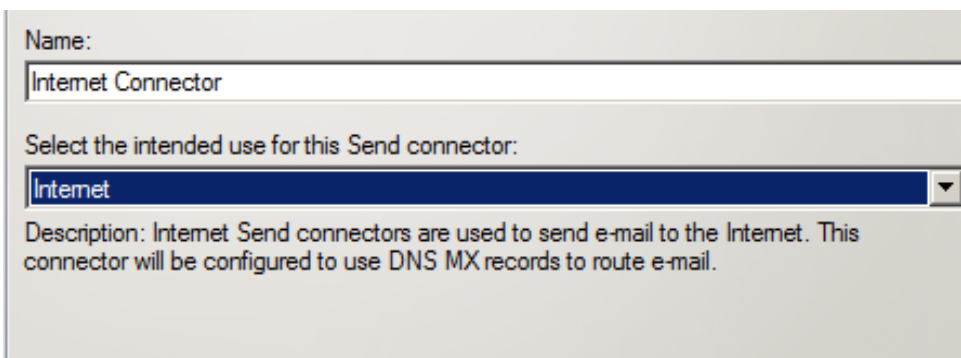
To understand the cmdlet New-SendConnector please refer, [New-SendConnector: Exchange 2010 Help](#)

To configure a Send Connector using EMC:

- Open EMC and navigate to **Hub Transport** under the **Organizational Configuration** node.
- Select **Send Connectors** tab.
- Right click in the result pane of EMC and select **New Send Connector...**

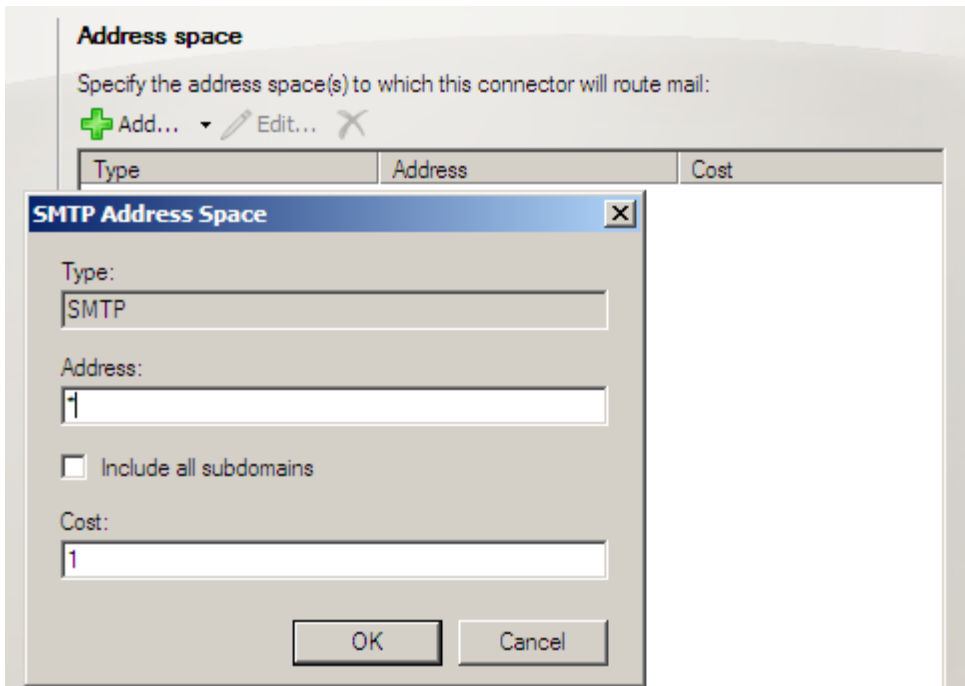


- The above step will bring up the New Send Connector Wizard. Enter a meaningful name for the connector and select **Internet** from the drop down Menu.



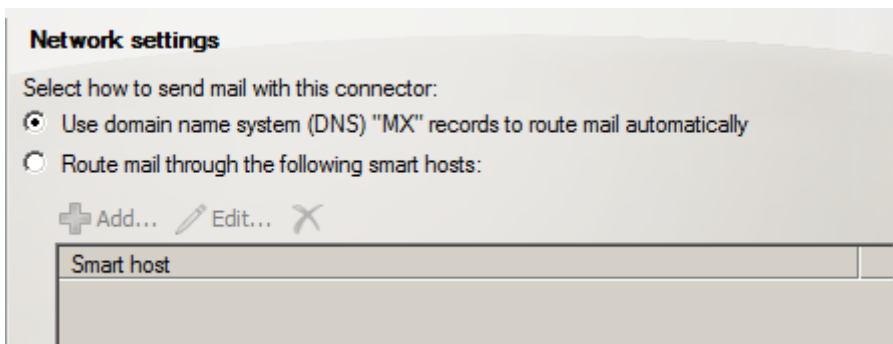
- Click **Next** to continue.

- Click the Add button and add an SMTP address space of \* to route all mail to external domains over this Send Connector.

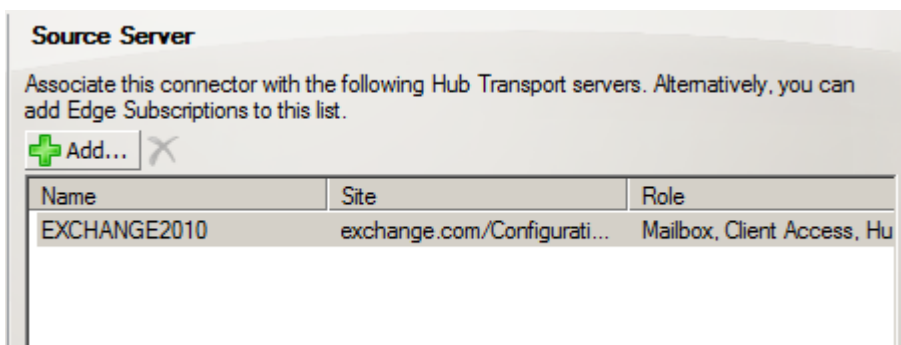


- Click **OK** and then **Next** to continue.

If you route your outgoing mail via an ISP smart host or email security service choose that option and enter the IP address or DNS name of the smart host. You can add more than one smart host if necessary. Otherwise leave it configured to use DNS to route mail directly to the destination.



- Click **Next** to continue.



The Hub Transport server is automatically included as a source server for the Send Connector.

- Click **Next** to continue.
- Then **New** to create the Send Connector with the chosen settings.
- When the Send Connector has been created successfully click **Finish**.

## Configure Firewall Rules to allow outbound/inbound SMTP communication from HT server.

After you have finished creating and configuring the SMTP send connector on the Hub Transport Server role, the next step is to tell your network firewall that this sever will be sending outbound SMTP traffic.

It would be really tough to explain the configuration part for each firewall device or the software firewall that you may have in your network but if you are using ISA or TMG as a firewall you can refer,

[Configuring SMTP routes](#) – applies to TMG 2010.

### Important

If you are using a device firewall in your network please consult the firewall documentation for configuring the SMTP ports and routes.

## Configure Client Access Server Role

Next step is to configure the CAS server role. CAS server role has replaced the concept of Front End servers in Exchange Server 2003 so this server role will be responsible for serving requests originated from Exchange clients like Outlook Web App and Office Outlook as well the delivery of offline address book and Outlook Anywhere connectivity to the outlook clients.

Outlook connecting to any mailbox connects to the mailbox server via the Exchange server 2010 CAS server role. However, there are no specific configurations needed for this connectivity. Yet, other clients need specific configurations on the CAS server role to provide the connectivity. Below sub topics explain the steps to configure these connectivity options.

### Configure Outlook Web App

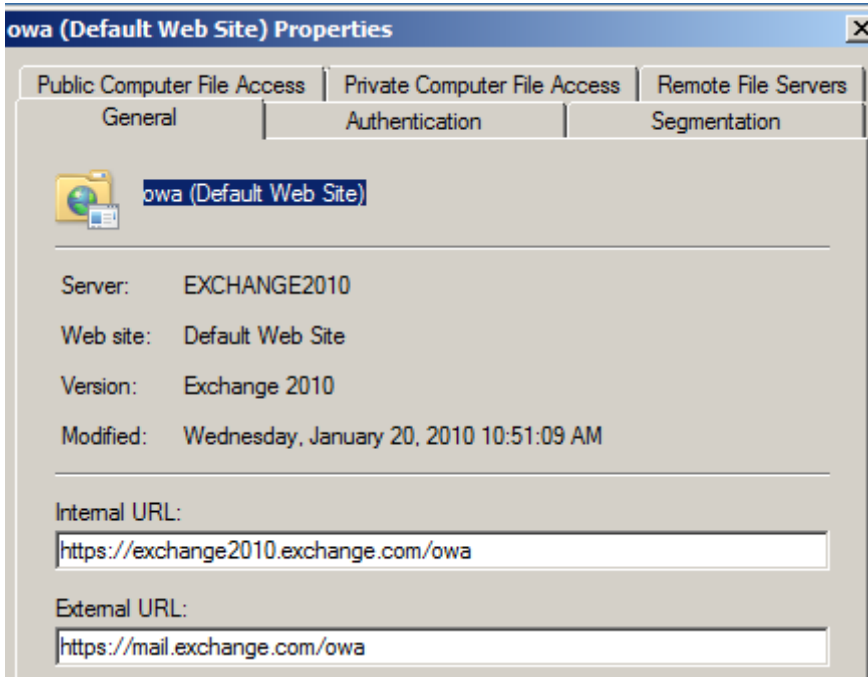
To configure your outlook web app settings you can use EMS:

```
Set-OwaVirtualDirectory -Identity "EXCHANGE2010\owa (Default Web Site)" -ExternalUrl "https://mail.Exchange.com/owa" -InternalUrl "https://Exchange2010.Exchange.com/owa"
```

Above cmdlet will set the properties of OWA virtual directory. This cmdlet will configure the internal URL for OWA access as <https://Exchange2010.Exchange.com> and external URL as <https://mail.Exchange.com>

To do this using GUI/EMC:

- Open EMC, locate and expand **Server Configuration** in navigation pane.
- Select **Client Access** from the list.
- In the result pane select the Exchange 2010 server name.
- Select **Outlook Web App** from the work pane, right click and select properties.



- Enter the valid configuration information in Internal URL and External URL text boxes.
- Click Ok.

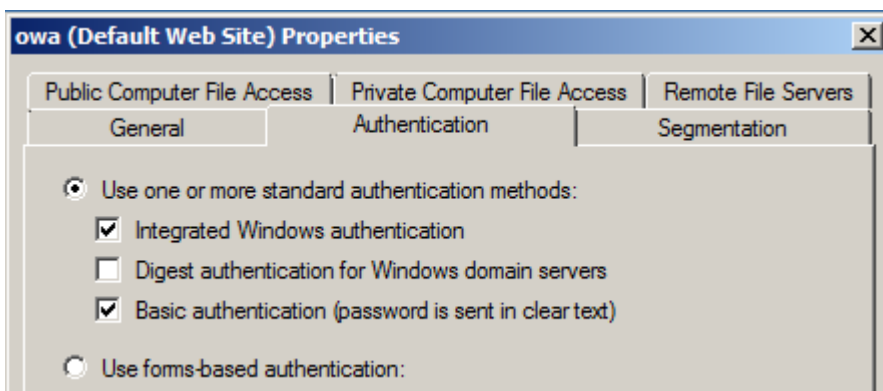
If you are publishing your Outlook Web App through ISA server or TMG 2010 you need to enable additional logon methods.

To enable additional logon methods using EMS:

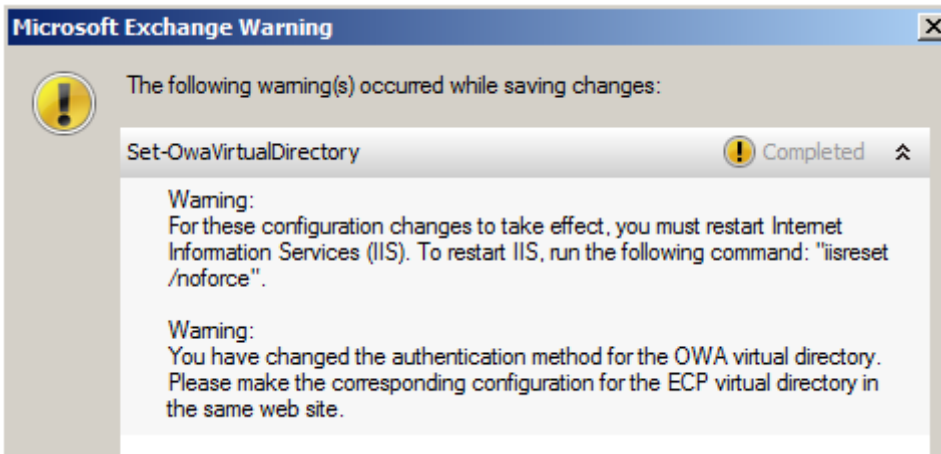
```
Set-OwaVirtualDirectory -Identity "EXCHANGE2010\owa (Default Web Site-  
BasicAuthentication:$True -WindowsAuthentication:$True
```

To do this using GUI/EMC:

- Open EMC, locate and expand **Server Configuration** in navigation pane.
- Select **Client Access** from the list.
- In the result pane select the Exchange 2010 server name.
- Select **Outlook Web App** from the work pane, right click and select properties.
- Click on **Authentication** tab.



- Select **Integrated Windows authentication** and **Basic Authentication**
- Press Ok and another pop up will appear.



- Do not restart the IIS yet, simply click Ok. You can restart IIS once you are done with all other configurations on the CAS server role.

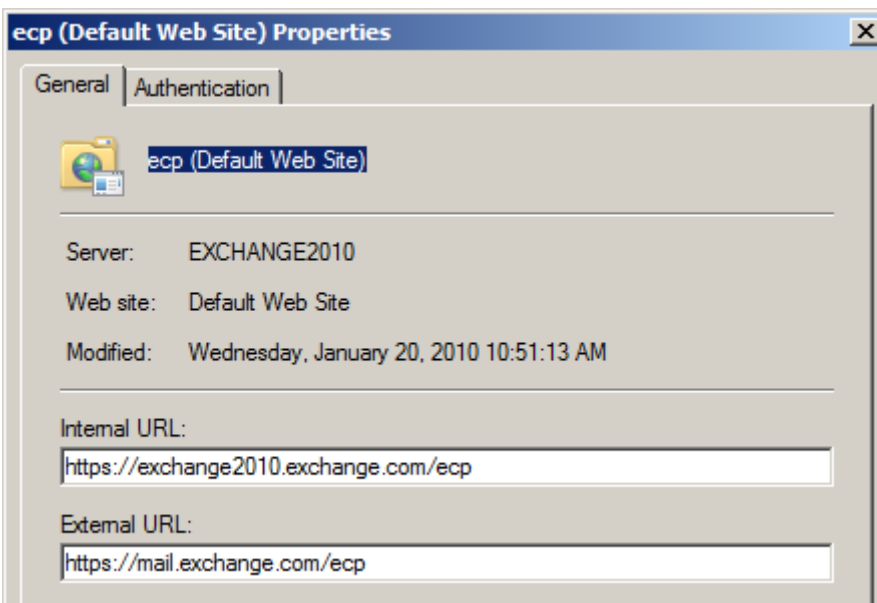
### Configure Exchange Control Panel (ECP)

The URL and authentication settings changes on OWA virtual directory should also be made on ECP virtual directory too.

To change the ECP virtual directory settings using EMS:

```
Set-EcpVirtualDirectory -Identity "EXCHANGE2010\ecp (Default Web Site)" -ExternalUrl "https://mail.Exchange.com/ecp" -InternalUrl "https://Exchange2010.Exchange.com/ecp"
```

- Open EMC, locate and expand **Server Configuration** in navigation pane.
- Select **Client Access** from the list.
- In the result pane select the Exchange 2010 server name.
- Select **Exchange Control Panel** from the work pane, right click and select properties.



- Enter the valid configuration information in Internal URL and External URL text boxes.
- Click Ok.

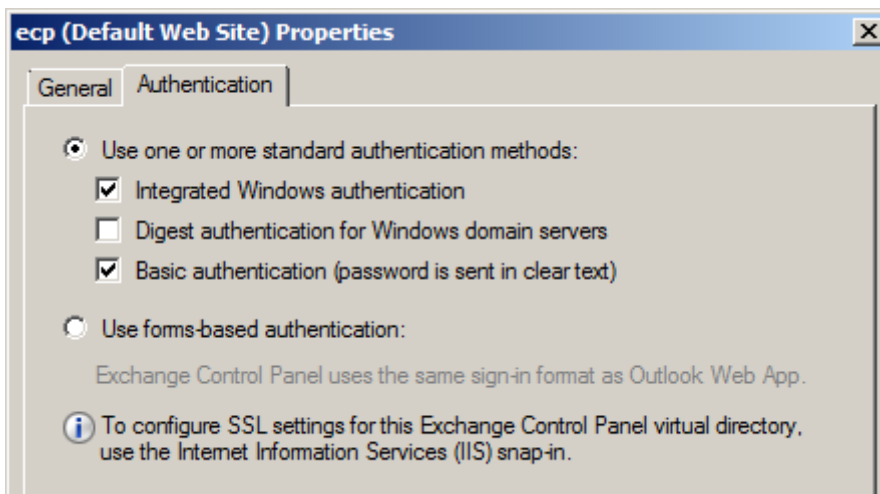
As the authentication settings on the OWA virtual directory were changed to use the Integrated Windows Authentication and Basic Authentication settings on ECP virtual directory should also be changed.

To change the authentication settings on ECP virtual directory using EMS:

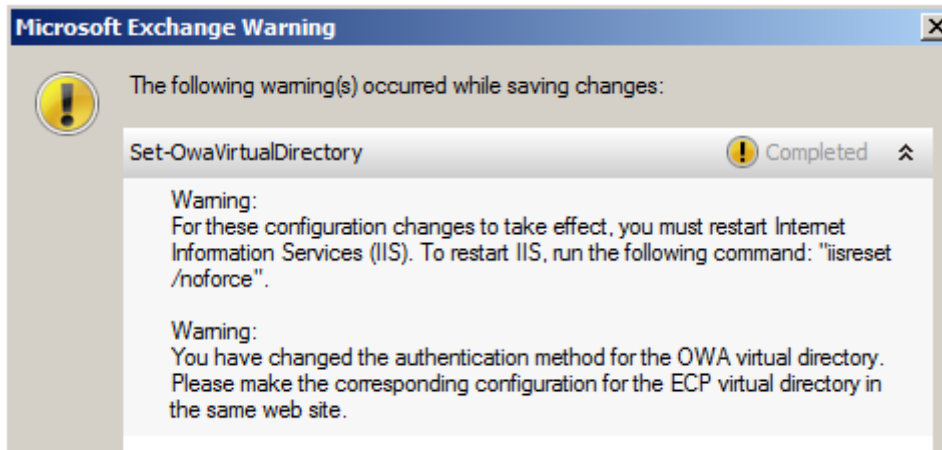
```
Set-EcpVirtualDirectory -Identity "EXCHANGE2010\ecp (Default Web Site-  
BasicAuthentication:$True -WindowsAuthentication:$True
```

To do this using GUI/EMC:

- Open EMC, locate and expand **Server Configuration** in navigation pane.
- Select **Client Access** from the list.
- In the result pane select the Exchange 2010 server name.
- Select **Exchange Control Panel** from the work pane, right click and select properties.
- Click on **Authentication** tab.



- Select **Integrated Windows authentication** and **Basic Authentication**
- Press Ok and another pop up will appear.



- Do not restart the IIS yet, simply click Ok. You can restart IIS once you are done with all other configurations on the CAS server role.

## Configure Microsoft Exchange ActiveSync

Like OWA virtual directory needs the external and internal URL settings the EAS virtual directory should also be configured. The only key difference between both is OWA virtual directory needs additional authentication settings to be configured where EAS virtual directory can only be configured to use Basic Authentication.

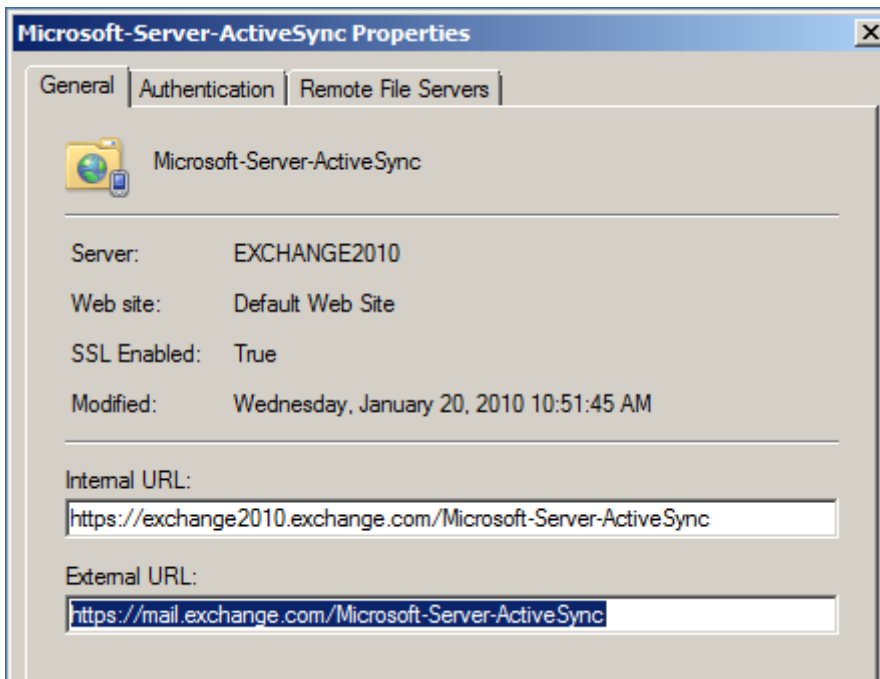
Again, the settings are configurable using EMS and EMC both.

To change the EAS virtual directory settings using EMS:

```
Set-ActiveSyncVirtualDirectory -Identity "EXCHANGE2010\Microsoft-Server-ActiveSync (Default Web Site)" -InternalUrl "https://Exchange2010.Exchange.com/Microsoft-Server-ActiveSync" -ExternalUrl "https://mail.Exchange.com/Microsoft-Server-ActiveSync"
```

To do this using GUI/EMC:

- Open EMC, locate and expand **Server Configuration** in navigation pane.
- Select **Client Access** from the list.
- In the result pane select the Exchange 2010 server name.
- Select **Exchange ActiveSync** from the work pane, right click and select properties.



## Configure Offline Address Book Distribution

Next step is to configure the Offline Address Book distribution settings.

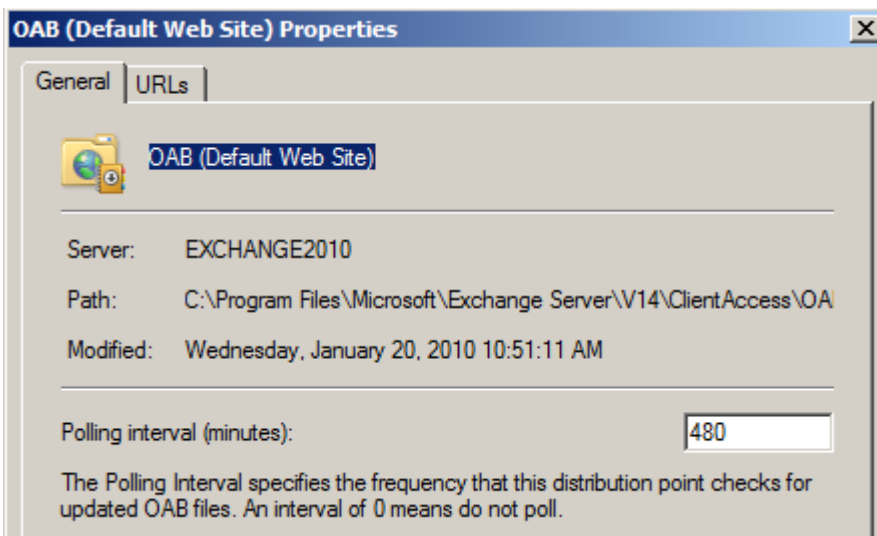
Configure the polling interval if you want to change it from default 480 minutes to your desired time. Exchange 2010 CAS server role will update the OAB every eight hours by default. Polling Interval is the duration that Exchange 2010 CAS uses to update the OAB per the defined value in minutes. If this setting needs to be changed depending upon your organizational requirements you can edit this entry on **General** tab of the properties of OAB.

To configure Offline Address Book Distribution properties using EMS:

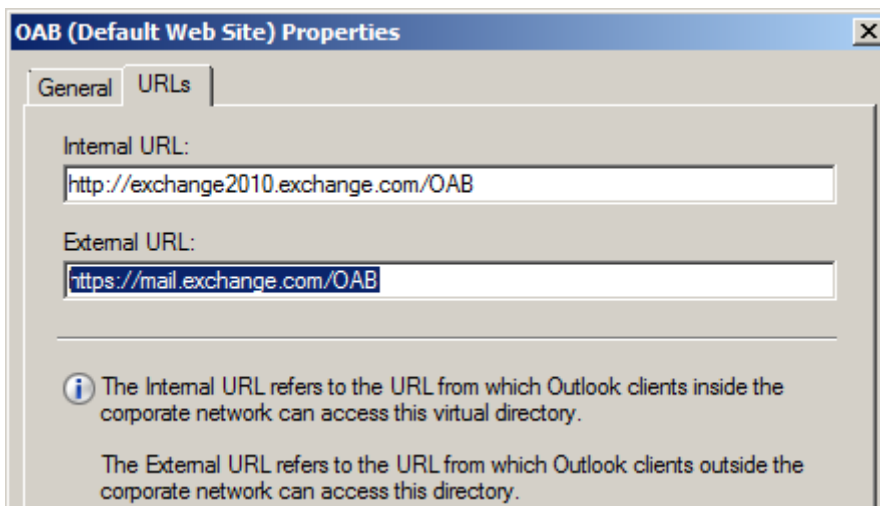
```
Set-OabVirtualDirectory -Identity "EXCHANGE2010\OAB (Default Web Site)" -PollInterval 720 -InternalUrl "http://Exchange2010.Exchange.com/OAB" -ExternalUrl "https://mail.Exchange.com/OAB"
```

To do this using GUI/EMC:

- Open EMC, locate and expand **Server Configuration** in navigation pane.
- Select **Client Access** from the list.
- In the result pane select the Exchange 2010 server name.
- Select **Offline Address Book Distribution** from the work pane, right click and select properties.



- Click URLs tab



## Configure Outlook Anywhere

RPC over HTTPS functionality of Exchange 2003 is replaced by Exchange Outlook Anywhere in Exchange 2010. If you have users using RPC/HTTPS the Outlook Anywhere will be replacing it and need to be enabled either using EMS or EMC.

To enable Outlook Anywhere using EMS:

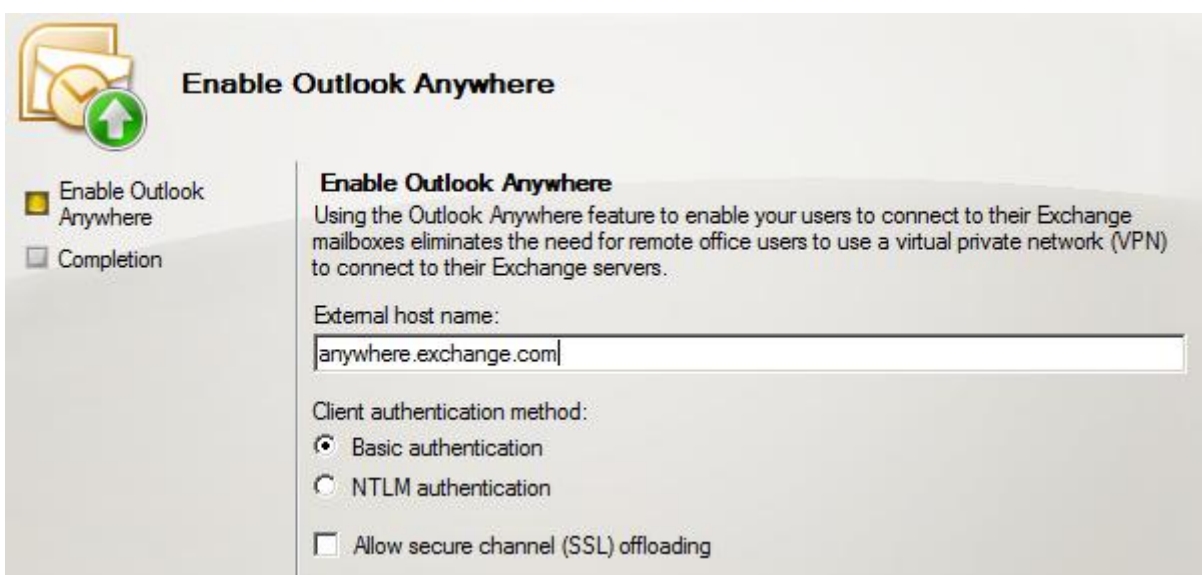
```
Enable-OutlookAnywhere -Server 'EXCHANGE2010' -ExternalHostname 'anywhere.Exchange.com' -DefaultAuthenticationMethod 'Basic' -SSLOffloading $false
```

To enable Outlook Anywhere using EMC:

- Open EMC, locate and expand **Server Configuration** in navigation pane.
- Select **Client Access** from the list.
- In the Result Pane select the Exchange 2010 server name.
- Select **Enable Outlook Anywhere** from the action pane, right click and select properties.



- Enter the external host name information in the box as shown below and click enable.



## Important

There are other settings to be done depending upon your requirement. Please refer following resources to configure the rest of the setting as per your need.

[ISA 2006 SP1 Configuration with Exchange 2010](#)  
[Configure Public and Private Computer File Access](#)  
[Configure Segmentation in Outlook Web App](#)  
[Understanding Security for Outlook Web App](#)

## Request, Download and Configure a SAN Certificate

Exchange 2010 creates a self-signed SAN certificate and assigns it to the services like IMAP, POP, IIS, and SMTP. The only drawback of this self-signed certificate is that it contains the server's FQDN and NetBIOS names only. To avoid any certificate related errors and use it over the internet without any problems it is highly recommended that you request and assign a certificate from a Certification Authority that can be contacted from anywhere in the world and trusted by client.

To request a new certificate from a trusted CA use following format:

### Step 1: Generate a Request

```
$Data = New-ExchangeCertificate -FriendlyName 'Exchange Cert' -GenerateRequest -PrivateKeyExportable $true -KeySize '2048' -SubjectName 'C=IN,S="MH",L="PN",O="Exchange Messaging",OU="Enterprise Messaging",CN=mail.Exchange.com' -DomainName 'Exchange2010.Exchange.com','mail.Exchange.com','Exchange.com','autodiscover.Exchange.com','anywhere.Exchange.com' -Server 'EXCHANGE2010'
```

### Step 2: Export the data into a certificate request file

```
Set-Content -Path C:\Certreq.req -Value $Data
```

Use this request file for submission to the CA and download the certificate. Save the certificate to a convenient location.

### Step 3: Import the certificate, enable and assign to services.

```
Import-ExchangeCertificate -FileData ([Byte[]]$(Get-Content -Path "C:\Users\Administrator.EXCHANGE\Desktop\Exchangecert.pfx" -Encoding byte -ReadCount 0)) -Password:(Get-Credential).password
```

To request a new certificate from a trusted CA you can also use New Exchange Certificate Wizard. For more information on how to use New Exchange Certificate Wizard please see,

[Exchange 2010 EMC and Certificates Management Part – 1](#)

[Exchange 2010 EMC and Certificates Management Part – 2](#)

## Important

You may encounter the errors related to missing private key during import of the certificate please see, [Missing Private Key on Exchange Certificate](#)

## Configure Mailbox Server Role

Mailbox Server Role is typically the last server role to be configured. When the mailbox server role is installed, two information stores will be created depending upon the settings you choose at the time of installation. Normally, if you have chosen to use a public folder database for legacy clients, Free/Busy publishing, or any other reason than just to publish Free/Busy information, then a mailbox database and a public folder database will be created automatically.

These databases are configured to use the installation directory by default. To obtain better performance and tolerance, it is recommended that you use a separate disk configuration for databases and log files. Please keep in mind that the store architecture in Exchange 2010 has been changed. Storage Groups, the concept is totally gone, and Information Store as an individual and unique entity in the entire organization are introduced.

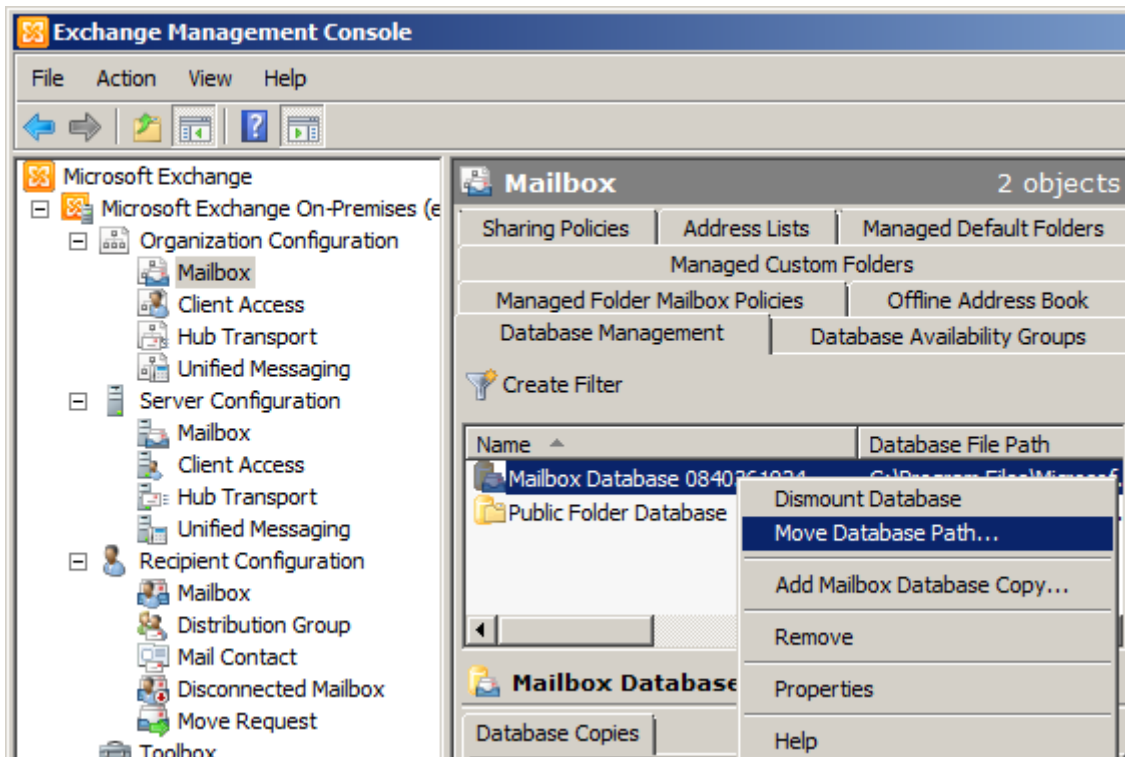
### Move the Exchange 2010 Database and Logs Locations:

Move Exchange Database files to new location using EMS:

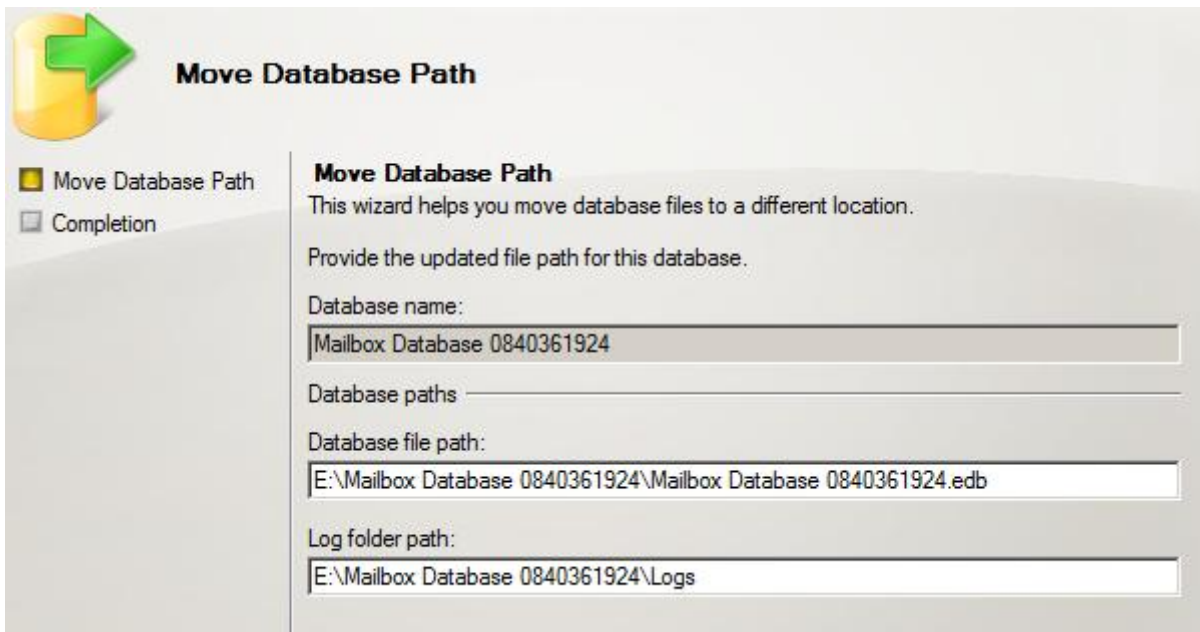
```
Move-DatabasePath -Identity 'Mailbox Database 0840361924' -EdbFilePath 'E:\Mailbox Database 0840361924\Mailbox Database 0840361924.edb' -LogFolderPath 'E:\Mailbox Database 0840361924\Logs'
```

Move Exchange Database files to new location using EMC:

- Open EMC, locate and expand **Organization Configuration** in the navigation pane.
- Select **Mailbox** from the list.
- In the Result Pane, select the **Database Management** tab from the result pane.
- Right-click and select **Move Database Path**.



- Enter the new location for database file and log files and click **Move** button.



**Move Database Path**

Move Database Path  
 Completion

**Move Database Path**  
This wizard helps you move database files to a different location.  
Provide the updated file path for this database.

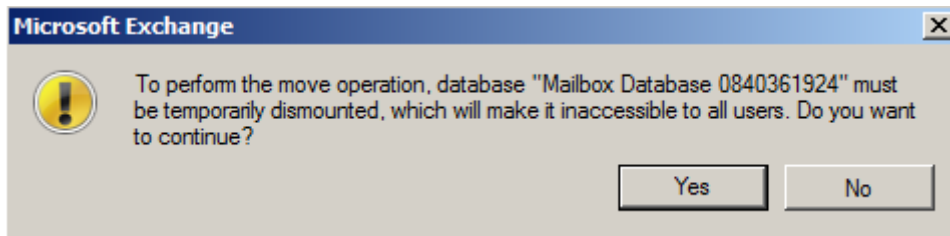
Database name:  
Mailbox Database 0840361924

Database paths

Database file path:  
E:\Mailbox Database 0840361924\Mailbox Database 0840361924.edb

Log folder path:  
E:\Mailbox Database 0840361924\Logs

- Select **Yes** from the pop up warning.



## Restart Services

At this point you can restart all required services. In previous steps there are two services need to be restarted.

### Restart IIS

Open command prompt and type:

```
IISReset /NoForce
```

### Restart Exchange Information Store Service

Open command prompt and type:

```
Net Stop MExchangeIS && Net Start MExchangeIS
```

# Moving Settings and Data to Exchange 2010

In this phase of transition you move all the organization settings from Exchange 2003 to Exchange 2010 server. This also includes the movement of mailboxes and public folders from Exchange 2003 servers to Exchange 2010 servers.


## Move Data

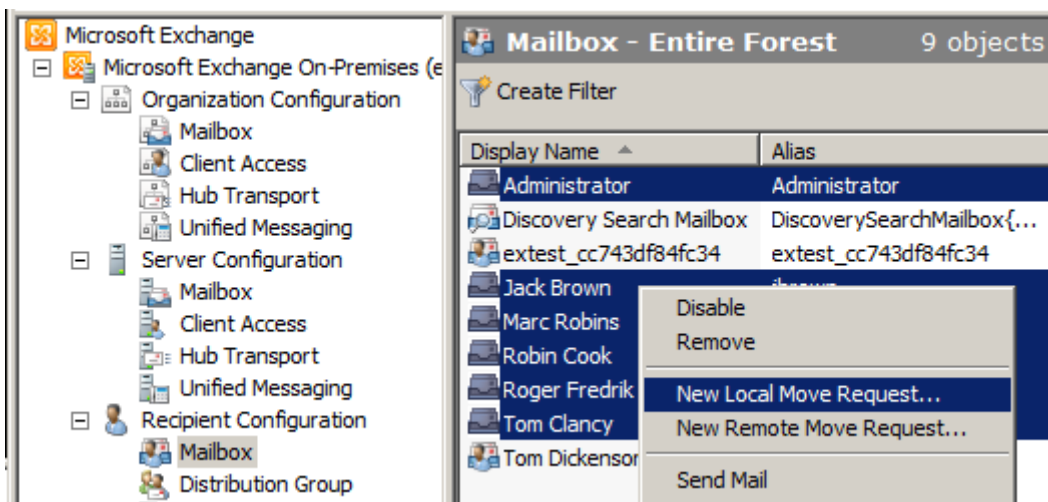
Moving data includes moving mailboxes and public folders from existing servers to Exchange Server 2010.

### Move Mailboxes

Moving mailboxes from Exchange 2003 to Exchange 2010 should be done using Exchange 2010 management tools. You can use either of the management tools of Exchange 2010 to complete the operation. Since we are moving all the mailboxes from Exchange 2003 there is no special requirement of using filters in powershell command. You can simplify your work by using EMC itself.

To move mailboxes using EMC:

- Open EMC, locate and expand **Recipient Configuration** in navigation pane.
- Select **Mailbox** from the list.
- In the result pane select the Legacy Mailboxes you want to move from Exchange 2003. Legacy mailboxes have a special icon as 
- Right click on selected mailboxes and select **New Local Move Request...**



- Select the database on Exchange Server 2010 where these mailboxes are to be moved.
- Click **Next** button.

**New Local Move Request**

**Introduction**  
This wizard moves selected mailboxes to a different database.  
A new move request will be placed for the following mailboxes:

Display Name	Database	Organizational Unit
Administrator	EXCHANGE2003\First Stor...	exchange.com/Users
Jack Brown	EXCHANGE2003\First Stor...	exchange.com/Transition
Marc Robins	EXCHANGE2003\First Stor...	exchange.com/Transition
Robin Cook	EXCHANGE2003\First Stor...	exchange.com/Transition
Roger Fredrik	EXCHANGE2003\First Stor...	exchange.com/Transition
Tom Clancy	EXCHANGE2003\First Stor...	exchange.com/Transition

Target mailbox database:  
Mailbox Database 0840361924 Browse...

- Select the Move Options from this page and click Next.

**New Local Move Request**

**Move Options**  
Specify how you want to manage corrupted messages in a mailbox.

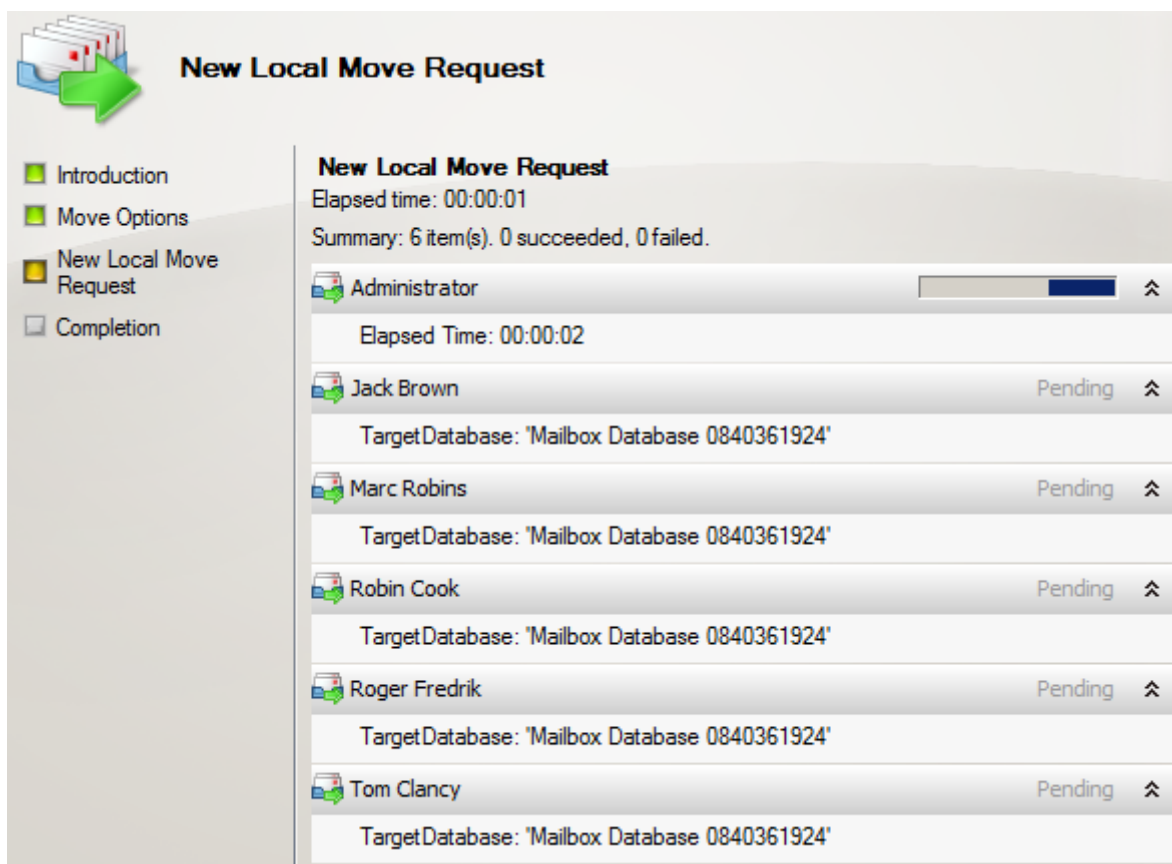
If corrupted messages are found:

- Skip the mailbox.
- Skip the corrupted messages.

Maximum number of messages to skip:

If the maximum number of corrupted messages is exceeded, the mailbox will not be moved.

- Previous step will begin movement of selected mailboxes from Exchange 2003 to Exchange 2010 server. Watch for the progress of mailbox move.



## Move Public Folders

Since launch of Exchange 2007 Microsoft has taken a deprecating stance for public folders yet they are not gone from Exchange 2010 as well. Though Exchange 2010 can still have public folders; the management tools for PFs have limited functionality for management purposes.

To move public folders from Exchange 2003 to Exchange 2010 you can use Exchange System Manager, ExFolders.exe, and Exchange 2010 Management Shell Scripts.

Open EMS and jump to path *drive:|Program Files|Microsoft|Exchange Server|V14|Scripts* and run the script **AddReplicaToPFRecursive.ps1**.

This will add replica of public folders on Exchange Server 2003 to Exchange Server 2010. This is the simplest way to add replica of all PFs to Exchange 2010 PF database.

```
C:\Program Files\Microsoft\Exchange Server\V14\Scripts>.\AddReplicaToPFRecursive.ps1 -TopPublicFolder "\" -ServerToAdd "Exchange2010"
```

Once the replica is added the next step is to move the replica from Exchange 2003 to Exchange 2010. To do this, jump to scripts directory and run following command.

```
C:\Program Files\Microsoft\Exchange Server\V14\Scripts>.\MoveAllReplicas.ps1 -Server "Exchange2003" -NewServer "Exchange2010"
```

## Note

After adding replica to new server PFs may take 24-48 hours to complete the replication depending upon the PF database size on source database.

## Move Organization Settings

Organization level settings in Exchange 2003 include settings related to OAB, Address Lists, etc.

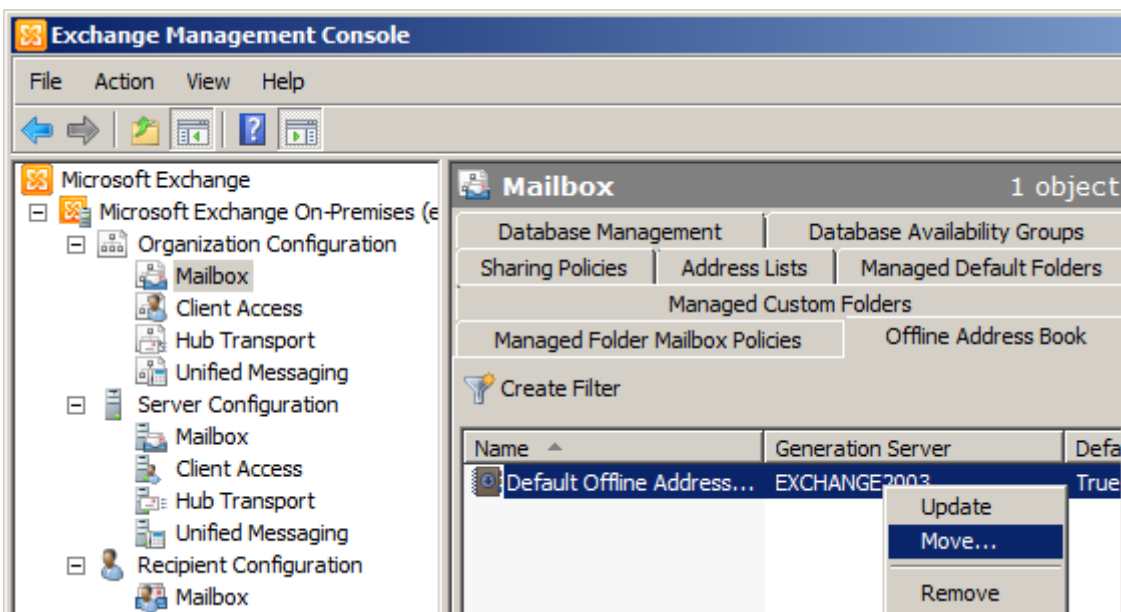
### Move OAB Generation Server

To move OAB using EMS:

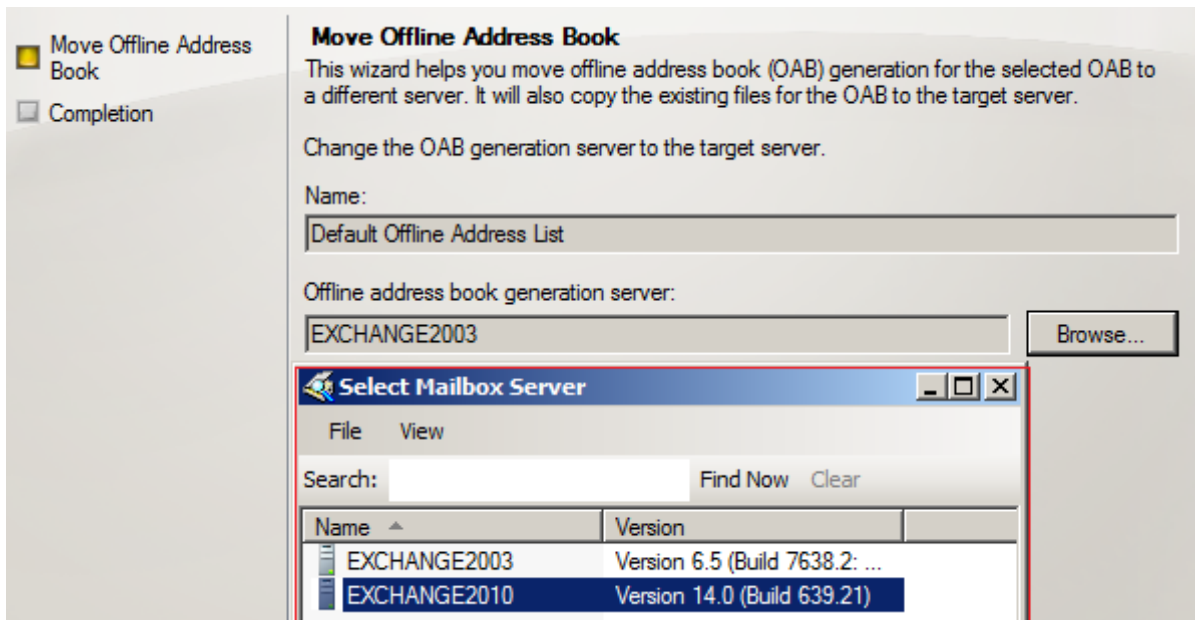
```
Move-OfflineAddressBook -Identity '\Default Offline Address List' -Server  
'EXCHANGE2010'
```

To move OAB using EMC:

- Open EMC, locate and expand **Organization Configuration** in navigation pane.
- Select **Mailbox** from the list.
- In the Result Pane select the **Offline Address Book** tab from result pane.
- Right click and select **Move...**



- Select the Offline address book generation server name as the new Exchange 2010 Server by clicking on Browse button.
- Click Next and Finish.



## Upgrade Address Lists

There is a major change in the way Address Lists were handled by Exchange 2003 and the way Exchange 2010 handles them. The most important thing that needs to be kept in mind before upgrading the Address Lists to the Exchange 2010 server is to know that Exchange 2010 does not support the LDAP filters. The LDAP filters must be converted to OPATH filters before the Address Lists can be moved. If you have custom LDAP filters implemented to configure Address Lists make sure that you prepare the corresponding OPATH filters as well. For more information on converting LDAP filters to OPATH please do refer, [Need help converting your LDAP filters to OPATH?](#) And [Upgrade Custom LDAP Filters to OPATH Filters](#). Also, there is no GUI interface for upgrading or moving the Address Lists to Exchange 2010. This movement/upgrade has to be done using EMS.

To move Address lists using EMS:

To upgrade All Users default address list

```
Set-AddressList "All Users" -IncludedRecipients MailboxUsers
```

To upgrade All Groups default address list

```
Set-AddressList "All Groups" -IncludedRecipients MailGroups
```

To upgrade All Contacts default address list

```
Set-AddressList "All Contacts" -IncludedRecipients MailContacts
```

To upgrade Public Folders default address list

```
Set-AddressList "PublicFolders" -RecipientFilter { RecipientType -eq 'PublicFolder' }
```

To upgrade Default Global Address List

```
Set-GlobalAddressList "Default Global Address List" -RecipientFilter {(Alias -ne $null -and (ObjectClass -eq 'user' -or ObjectClass -eq 'contact' -or ObjectClass -eq 'msExchSystemMailbox' -or ObjectClass -eq 'msExchDynamicDistributionList' -or ObjectClass -eq 'group' -or ObjectClass -eq 'publicFolder'))}
```

## Upgrade Email Address Policies

Again, upgrading Email Address Policies to Exchange 2010 includes the conversion to OPATH filters. Just like upgrading address lists the Email Address Policies can also be upgraded.

To upgrade Default Email Address Policies

```
Set-EmailAddressPolicy "Default Policy" -IncludedRecipients AllRecipients
```

To upgrade a custom Email Address Policy

```
Set-EmailAddressPolicy -Identity "South East Offices" -ConditionalStateorProvince "Georgia", "Alabama", "Louisiana", "Texas"
```

### Note

It is highly recommended that you read following articles before upgrading the address lists and recipient policies.

[Need help converting your LDAP filters to OPATH?](#)

[Upgrade Custom LDAP Filters to OPATH Filters](#)

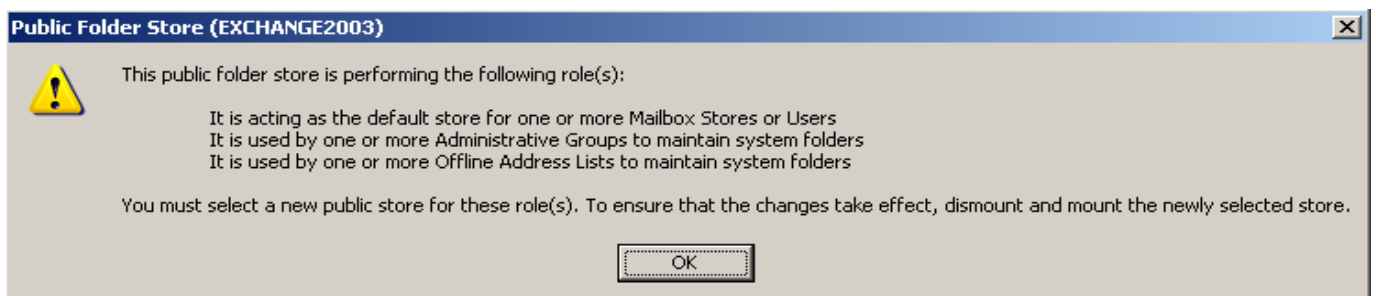
[Creating Filters in Recipient Commands](#)

## Removing Exchange Server 2003

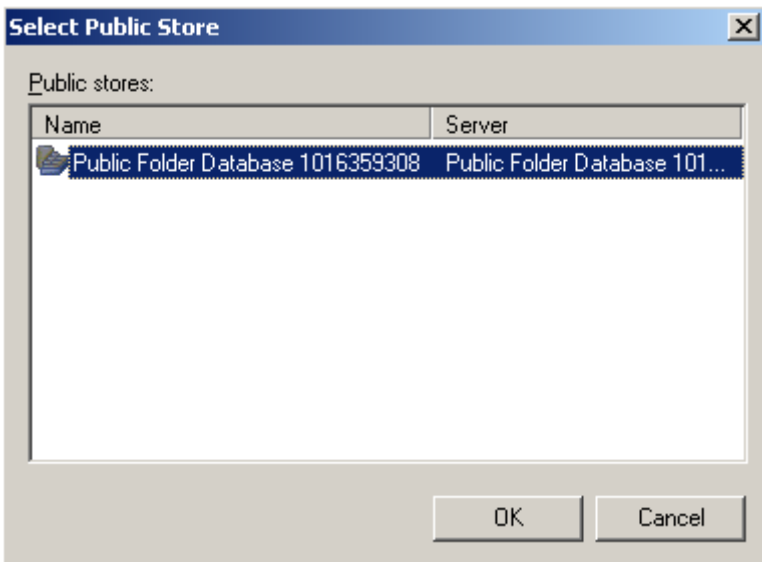
Removal of Exchange 2003 servers from Exchange org is the last and final step. Before you remove Exchange 2003 Server you may want to shut down the server for few days to observe any kind of failures or errors reported by end users. Once you have made sure that everything has been migrated successfully, you can go ahead start removing Exchange 2003 servers.

## Removing Mailbox and Public Folder Databases

- Open ESM on Exchange Server 2003.
- Navigate to Exchange 2003 server and remove mailbox databases and public folder databases along with the storage groups.
- When you delete the public folder database you may be prompted to use another database for storing the system folders.



- Click OK and select the PF database on Exchange Server 2010 click OK again.



## Remove Routing Group Connector

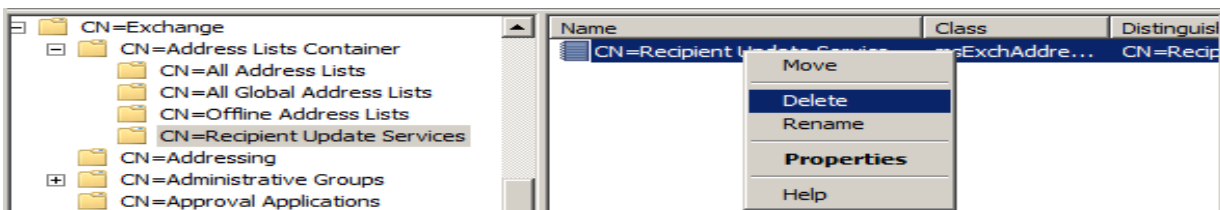
Open EMS on Exchange 2010 and run following command

```
Get-RoutingGroupConnector | Remove-outingGroupConnector -confirm:$false
```

## Remove Recipient Update Service

To delete the RUS from Exchange 2003:

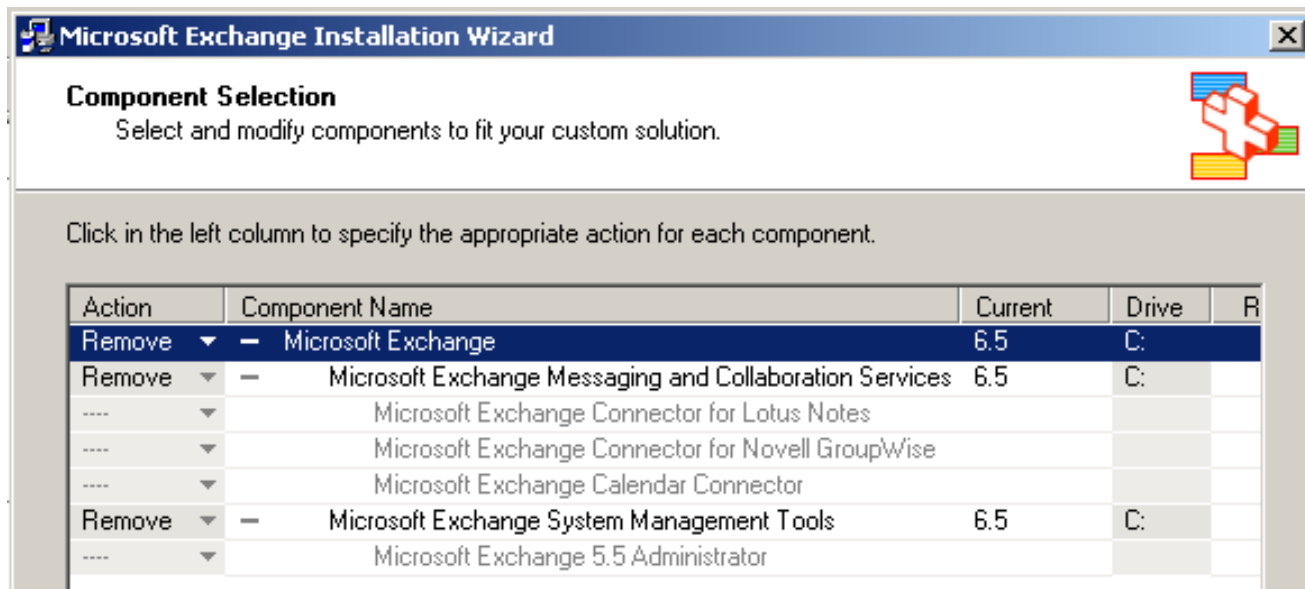
- Open ADSIEDIT.msc using Start → Run. ADSIEDIT is available with Windows Support Tools.
- Navigate to **CN=Recipient Update Service (Enterprise Configuration),CN=Recipient Update Services,CN=Address Lists Container,CN=Exchange,CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=Exchange,DC=com**
- Select the RUS and Delete it. Remember, Domain RUS and Enterprise RUS both should be deleted.



## Uninstall Exchange Server 2003

To remove Exchange 2003 use the installation media. The Add/Remove programs will not allow uninstalling Exchange 2003 from the box.

Insert the Exchange 2003 installation media and run the setup from disk. Select Remove from the list of actions during setup.



After the setup completes restart the server.

## Recommended Articles

[Understanding Role Based Access Control](#)

[Understanding Permissions Coexistence with Exchange 2003](#)

[Understanding File and Data Access for Outlook Web App](#)

[Understanding the Autodiscover Service](#)

[Allow Anonymous Relay on a Receive Connector](#)

[Configure Outlook Web App Virtual Directories to Use SSL](#)

[Change the Location of the Queue Database](#)

## Special Thanks

**Paul Cunningham** – For providing consent to use his Turbo Transition Guide structure for writing this Guide.