Installing and configuring Microsoft Exchange 2013 CU1

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Contents

Initial network configuration:

Server name	Role	IP	Windows Version
Miami site			
MiaDC01	DC, GC, DNS, Operations Master	10.10.10.11/24	Windows Server 2008 R2 Enterprise
MiaDC02	DC, GC, DNS	10.10.10.12/24	Windows Server 2008 R2 Enterprise
MiaCAS01	Exchange 2013 CAS	10.10.10.21/24 and	Windows Server 2008 R2 Enterprise with SP1
MiaCAS02	Exchange 2013 CAS	10.10.10.23/24 and	Windows Server 2008 R2 Enterprise with SP1
Miami.ps-united.com	Load balancer	10.10.10.25/24 and	
MiaMBX01	Exchange 2013 Mailbox Server	10.10.10.31/24 and 172.16.0.11/8 (replication)	Windows Server 2008 R2 Enterprise with SP1
MiaMBX02	Exchange 2013 Mailbox Server	10.10.10.33/24 and 172.16.0.12/8 (replication)	Windows Server 2008 R2 Enterprise with SP1
PSUnitedDAG		10.10.10.35/24	
MiaClient01	Test client	10.10.10.41/24	Windows 7 Professional with SP1 and Office 2010
Sydney site			
SydDC01	DC, GC, DNS	10.10.20.11/24	Windows Server 2008 R2 Enterprise
SydDC01	DC, GC, DNS	10.10.20.12/24	Windows Server 2008 R2 Enterprise
SydCAS01	Exchange 2013 CAS	10.10.20.13/24	Windows Server 2008 R2 Enterprise with SP1
SydMBX01	Exchange 2013 Mailbox Server	10.10.20.15/24 and	Windows Server 2008 R2 Enterprise with SP1
MiaClient02	Test client	10.10.20.21/24	Windows 7 Professional with SP1 and Office 2010

Windows Server 2008 forest and domain functional level
Internal domain name: ps-united.com
External domain name: ps-united.com

External and Internal Exchange FQDNs:

OWA for Miami	Miami.ps-united.com
OWA for Sydney	sydney.ps-united.com
Autodiscover URL	autodiscover.ps-united.com

Prerequsites

For Hyper-V based virtual machines

On the Domain Controllers (DNS servers) for proper DNS resolution you need to run the following commands otherwise the replication will failing between the sites using Hyper-V virtual switches

dnscmd /Config /EnableEDnsProbes 0

On all servers change the Network Card settings under Computer Management and disable the following:

IPv4 Large Send Offload
Checksum Offload

Exchange Server Prerequisites

- .NET 4.5 Framework
- Windows Management Framework 3.0
- Desktop Experience Windows Server feature
- KB 2619324 – for Outlook Anywhere feature
- Microsoft Security Advisory update for secure assembly loading
- Microsoft Unified Communications Manager API 4.0, Core runtime 64-bit
- KB 974405
- Ms Office Filter Packs 2010 version 2
- Ms Office Filter Packs 2010 version 2 – SP1

Preparing the schema and domain

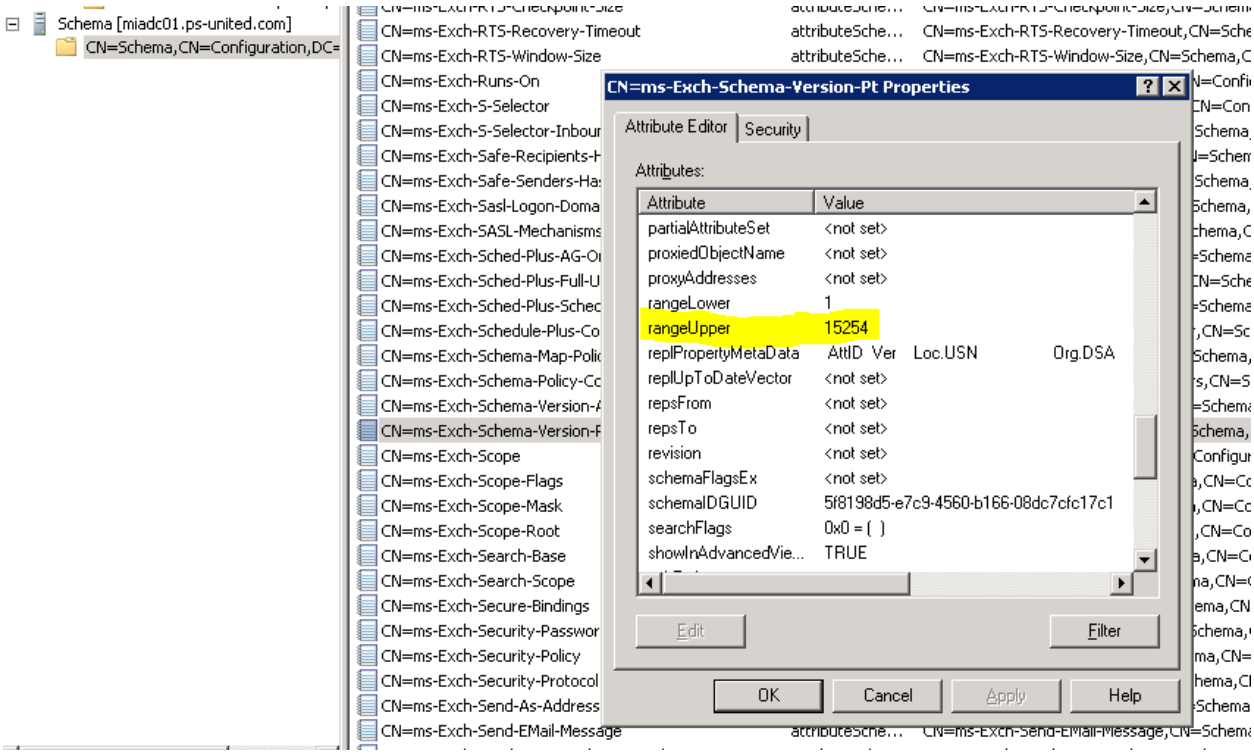
On the first server add the RSAT windows feature using ***Add-WindowsFeature RSAT-ADDS*** command in PowerShell (on Windows Server 2012 use **Install-WindowsFeature**). Outcome

```
PS C:\Users\administrator.PS-UNITED> Add-WindowsFeature RSAT-ADDS
WARNING: [Installation] Succeeded: [.NET Framework 3.5.1 Features] .NET Framework 3.5.1. You must restart this
server to finish the installation process.
WARNING: [Installation] Succeeded: [Remote Server Administration Tools] AD DS Snap-Ins and Command-Line
Tools. You must restart this server to finish the installation process.
WARNING: [Installation] Succeeded: [Remote Server Administration Tools] Server for NIS Tools. You must restart
this server to finish the installation process.
WARNING: [Installation] Succeeded: [Remote Server Administration Tools] Active Directory module for Windows
PowerShell.  You must restart this server to finish the installation process.
WARNING: [Installation] Succeeded: [Remote Server Administration Tools] Active Directory Administrative Center.
You must restart this server to finish the installation process.

Success Restart Needed Exit Code Feature Result
------- -------------- --------- --------------
True    Yes            Succes... {.NET Framework 3.5.1, AD DS Snap-Ins and ...

PS C:\Users\administrator.PS-UNITED>
```

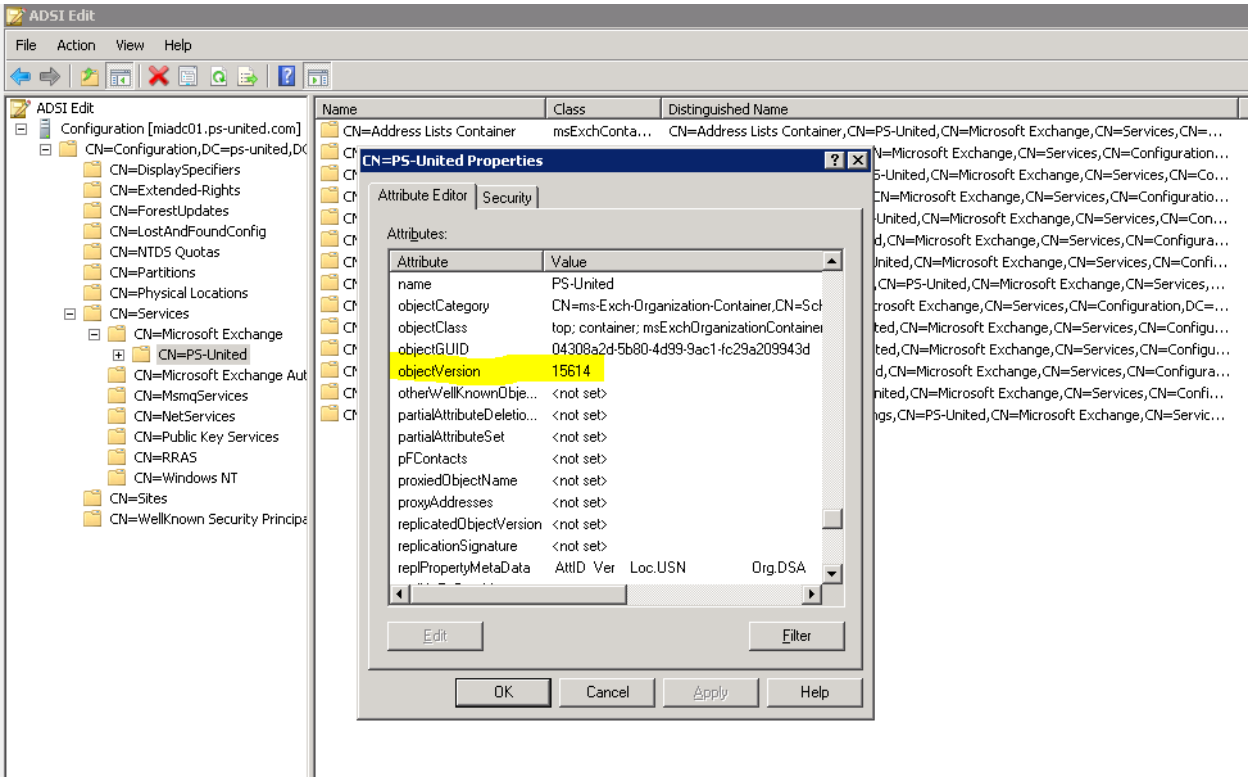
After the server restarted prepare the Schema and Domain for Exchange 2013. To do run the **setup /PrepareSchema */IAcceptExchangeServerLicenseTerms*** then ***setup /PrepareAD /OrganizationName: "Your Organization name" /IAcceptExchangeServerLicenseTerms*** command.

Verifying the new schema version

To verify the Schema update, check the **ms-Exch-Schema-Verision-Pt** in ADSIEdit. The rangeUpper values should be 15254



To verify that the Domain schema has been updated, check the **objectVersion** property in Active Directory using ADSIEdit. The **objectVersion** is in the CN=<*your organization*>,CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=<*domain*> container. In Exchange 2013 CU1 it has to be 15614,



If you have more than one domain now you need to run the **setup /PrepareDomain** in the domains other than where you ran the **setup \PrepareAD** (PreapreAD prepares the local domain)

Installing CAS server

Command line instalation

Run the ***Import-Module*** **ServerManager** in PowerShell then install the following server roles and features. You can install the required Windows Server roles and features with the following command or select Automatic installation when you install the CAS server role.

Add-WindowsFeature Desktop-Experience, NET-Framework, NET-HTTP-Activation, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Web-Server, WAS-Process-Model, Web-Asp-Net, Web-Basic-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing, Web-Dyn-Compression, Web-Http-Errors, Web-Http-Logging, Web-Http-Redirect, Web-Http-Tracing, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Lgcy-Mgmt-Console, Web-Metabase, Web-Mgmt-Console, Web-Mgmt-Service, Web-Net-Ext, Web-Request-Monitor, Web-Server, Web-Stat-Compression, Web-Static-Content, Web-Windows-Auth, Web-WMI

On Server 2012 use the following

Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt, RSAT-Clustering-PowerShell, Web-Mgmt-Console, WAS-Process-Model, Web-Asp-Net45, Web-Basic-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing, Web-Dyn-Compression, Web-Http-Errors, Web-Http-Logging, Web-Http-Redirect, Web-Http-Tracing, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Lgcy-Mgmt-Console, Web-Metabase, Web-Mgmt-Console, Web-Mgmt-Service, Web-Net-Ext45, Web-Request-Monitor, Web-Server, Web-Stat-Compression, Web-Static-Content, Web-Windows-Auth, Web-WMI, Windows-Identity-Foundation

The following will install the Client Access role along with the Management Tools with the necessary Windows Features (if you missed to run above)

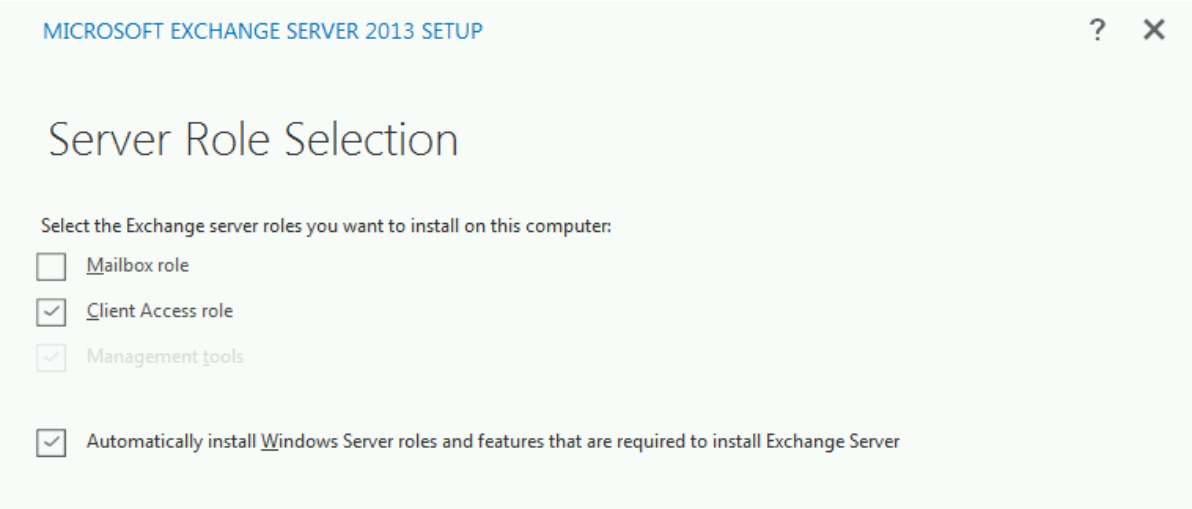
Setup.exe /m:Install /Roles:ca,mt /IAcceptExchangeServerLicenseTerms /InstallWindowsComponents

```
PS C:\Exchange\Installation_files> .\setup.exe /mode:Install /role:CA,MT /IAcceptExchangeServerLicenseTerms /InstallWind
owsComponents

Welcome to Microsoft Exchange Server 2013 Cumulative Update 1 Unattended Setup
Copying Files...
File copy complete. Setup will now collect additional information needed for installation.
Languages
Management tools
Client Access role: Front End Transport service
Client Access role: Client Access Front End service

Performing Microsoft Exchange Server Prerequisite Check

    Configuring Prerequisites                                                    COMPLETED
    Prerequisite Analysis                                                        COMPLETED

Configuring Microsoft Exchange Server

    Preparing Setup                                                              COMPLETED
    Stopping Services                                                            COMPLETED
    Copying Exchange Files                                                       COMPLETED
    Language Files                                                               COMPLETED
    Restoring Services                                                           COMPLETED
    Language Configuration                                                       COMPLETED
    Exchange Management Tools                                                    COMPLETED
    Client Access role: Front End Transport service                              COMPLETED
    Client Access role: Client Access Front End service                          COMPLETED
    Finalizing Setup                                                             COMPLETED

The 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.
PS C:\Exchange\Installation_files>
```

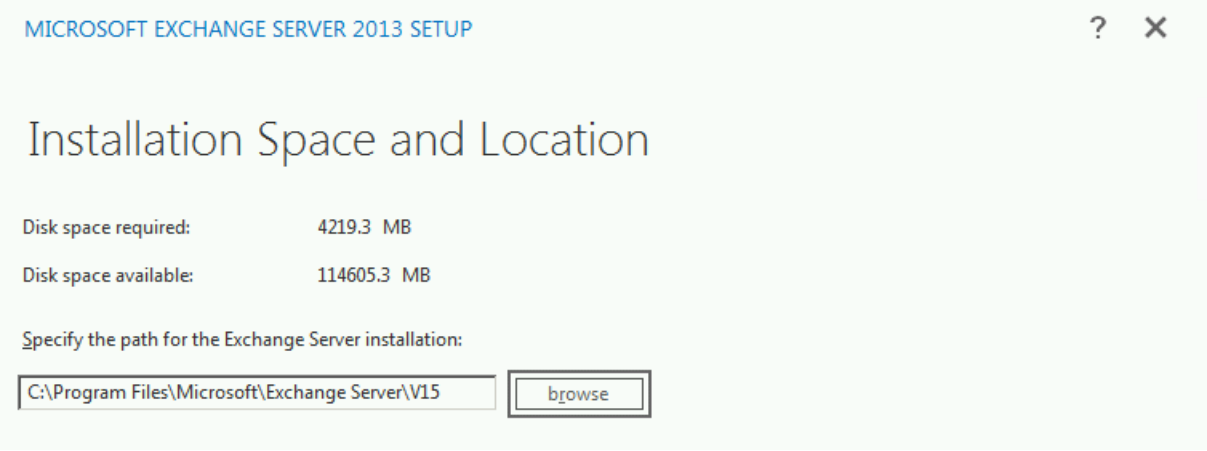
Graphical installation

For the GUI installation start setup.exe and follow the wizard

- Select the Client access role



- Confirm the target installation directory

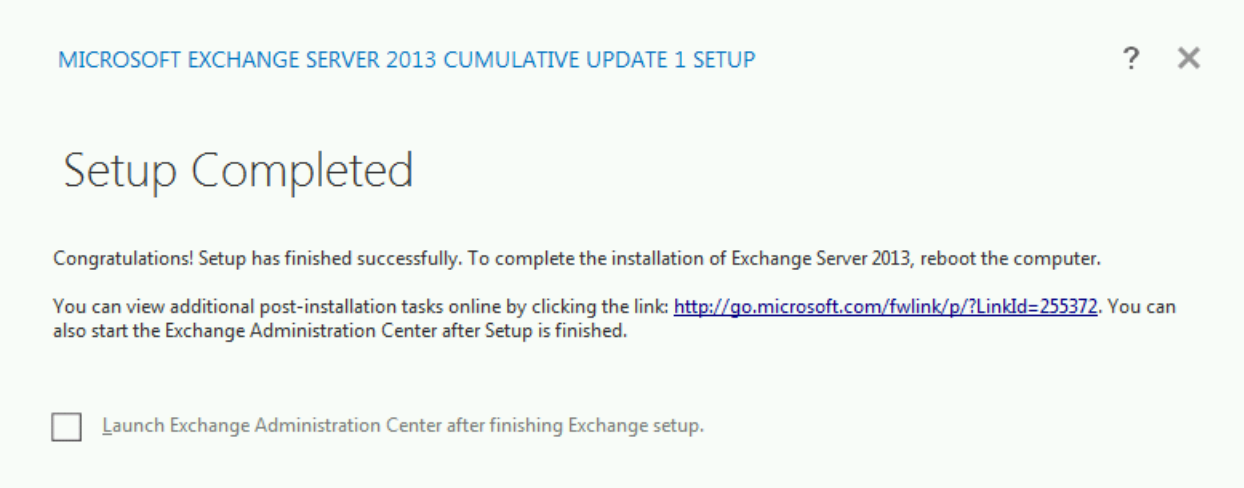


- If this server is the first Exchange server in the organization set the organization name

- Understanding the split permission security model
  Shared permissions This model allows administrators using the Exchange management tools to create security principals in Active Directory. It doesn't separate the management of Exchange and Active Directory objects from within the Exchange management tools.
  Split permissions Split permissions enable organization to assign specific permissions and related tasks to specific groups within the organization. Exchange 2013 gives you the option of implementing split permissions in two different ways:
  - **RBAC split permissions** Permissions are controlled by Role Based Access Control (RBAC). Only Exchange servers, services, and those who are members of the appropriate role groups can create security principals.
  - **Active Directory split permissions** Permissions to create security principals in the Active Directory domain partition are completely removed from any Exchange user, service, or server. No option is provided in RBAC to create security principals.

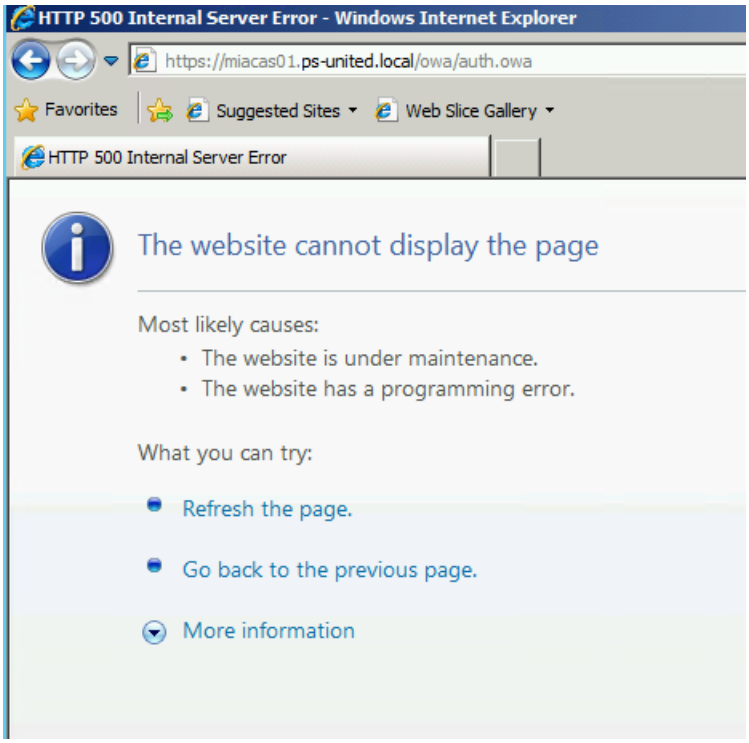
More information:
http://technet.microsoft.com/en-US/library/dd638106(v=exchg.150).aspx

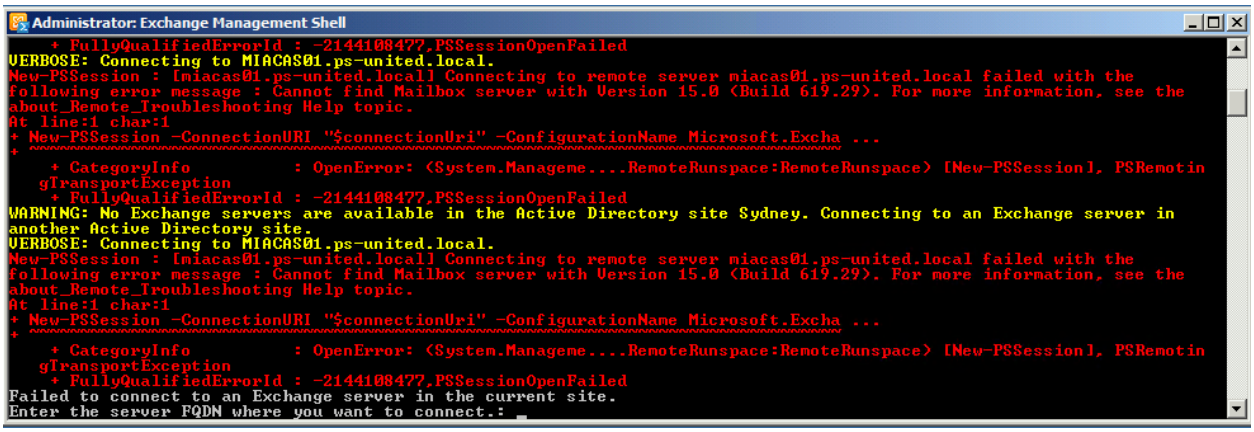
- Exchange Client access role is installing



Accessing to the new ECP

If you try to open the ECP or Exchange Powershell you will receive error because at least one server with Mailbox role have to be in the Exchange organization.





The reason for this is the CAS server in Exchange 2013 is no longer perform any data rendering and provides only authentication and proxy functions. As a result of this the CAS server is now stateless and does not need session affinity from load balancer. The session regardless of the originating point goes to the same place to the Mailbox server which hosting the active database copy.

HTTP, POP, IMAP request is passed as part of the HTTP package so any of the CAS server can authenticate at any time. For OWA (Form Based Authentication) a cookie used for authnetication and the cookie was encrypted with a per server session key so if another CAS received a request it could not decrypt the session. This has been changed and now Exchange 2013 using the certificate installed on the CAS server which means as long as all the CAS servers share the same certificate any member of the CAS array can decrypt the cookie.

Mailbox Role Installation

Command line installation

Run the ***Import-Module*** **ServerManager** in PowerShell then install the following server roles and features. You can install the required Windows Server roles and features with the following command or select Automatic installation when you install the CAS server role.

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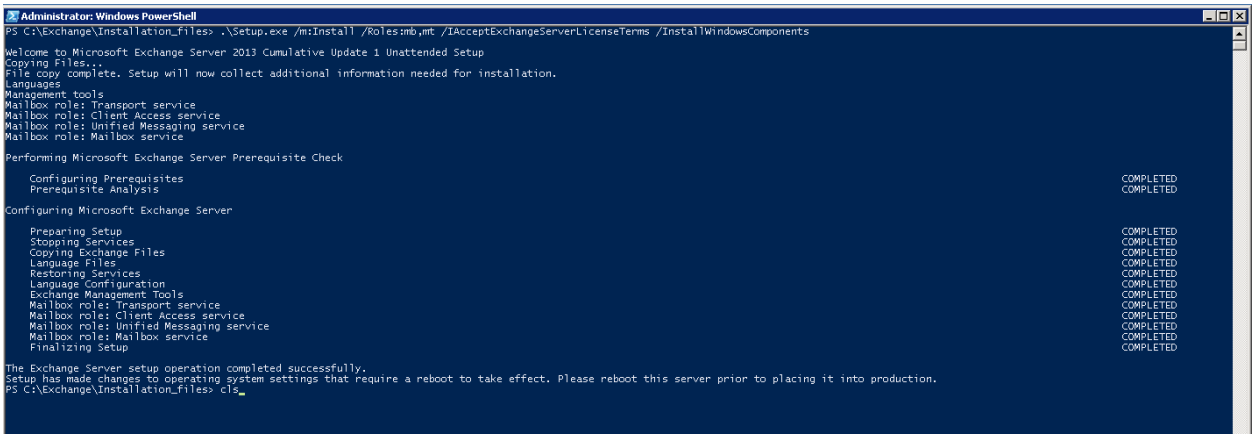
On Server 2012 use the following

Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt, RSAT-Clustering-PowerShell, Web-Mgmt-Console, WAS-Process-Model, Web-Asp-Net45, Web-Basic-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing, Web-Dyn-Compression, Web-Http-Errors, Web-Http-Logging, Web-Http-Redirect, Web-Http-Tracing, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Lgcy-Mgmt-Console, Web-Metabase, Web-Mgmt-Console, Web-Mgmt-Service, Web-Net-Ext45, Web-Request-Monitor, Web-Server, Web-Stat-Compression, Web-Static-Content, Web-Windows-Auth, Web-WMI, Windows-Identity-Foundation

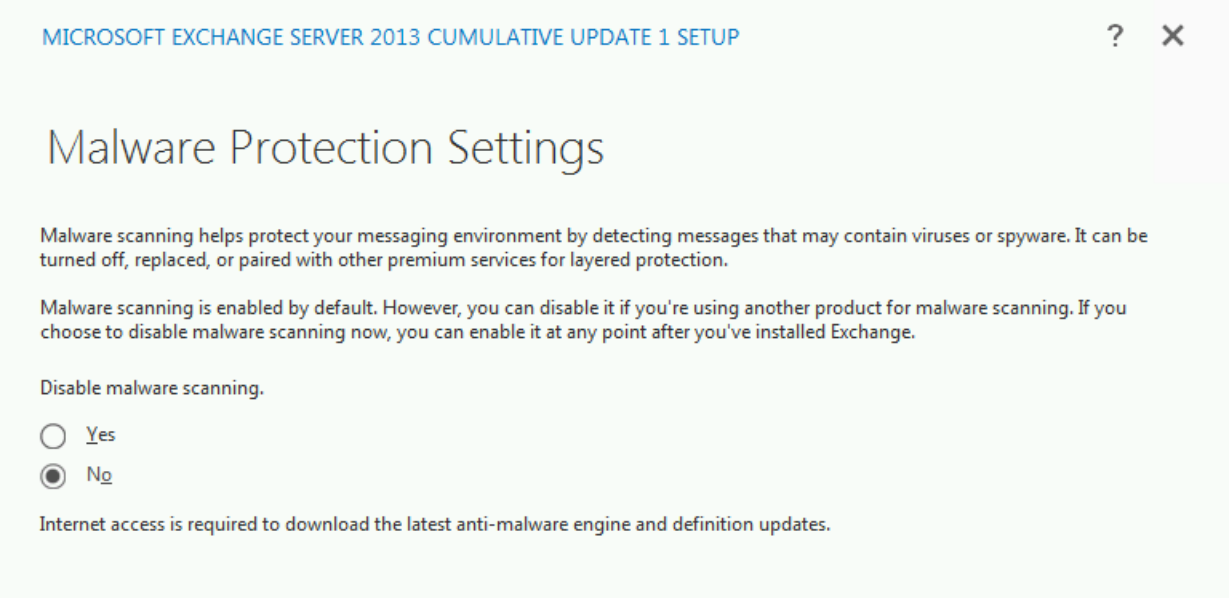
The following will install the Client Access role along with the Management Tools with the necessary Windows Features (if you missed to run above)

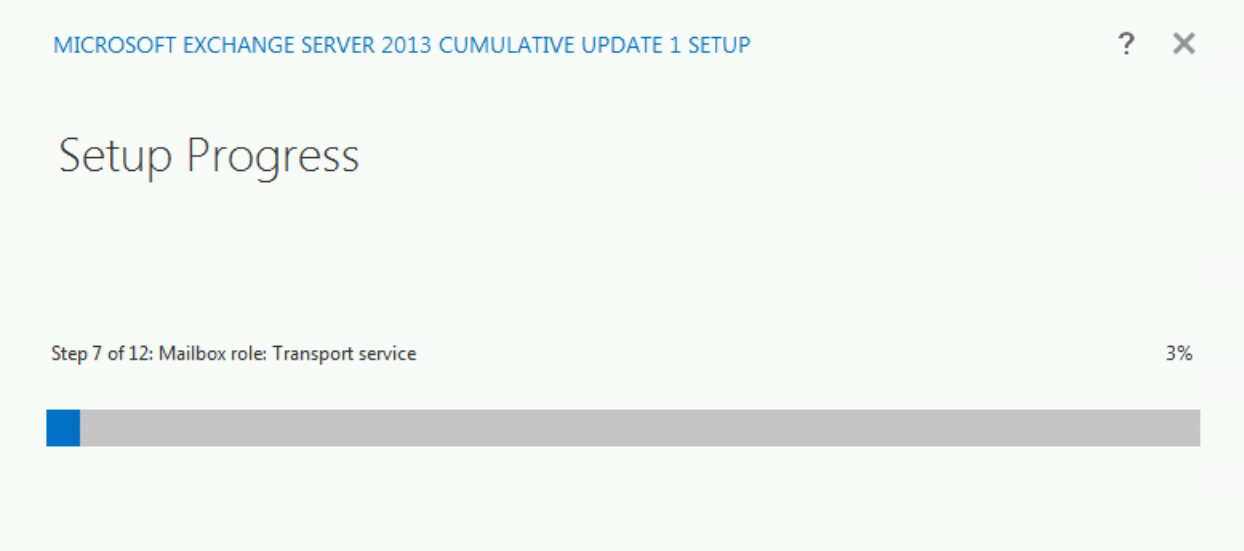
Setup.exe /m:Install /Roles:mb,mt /IAcceptExchangeServerLicenseTerms /InstallWindowsComponents



Graphical Installation

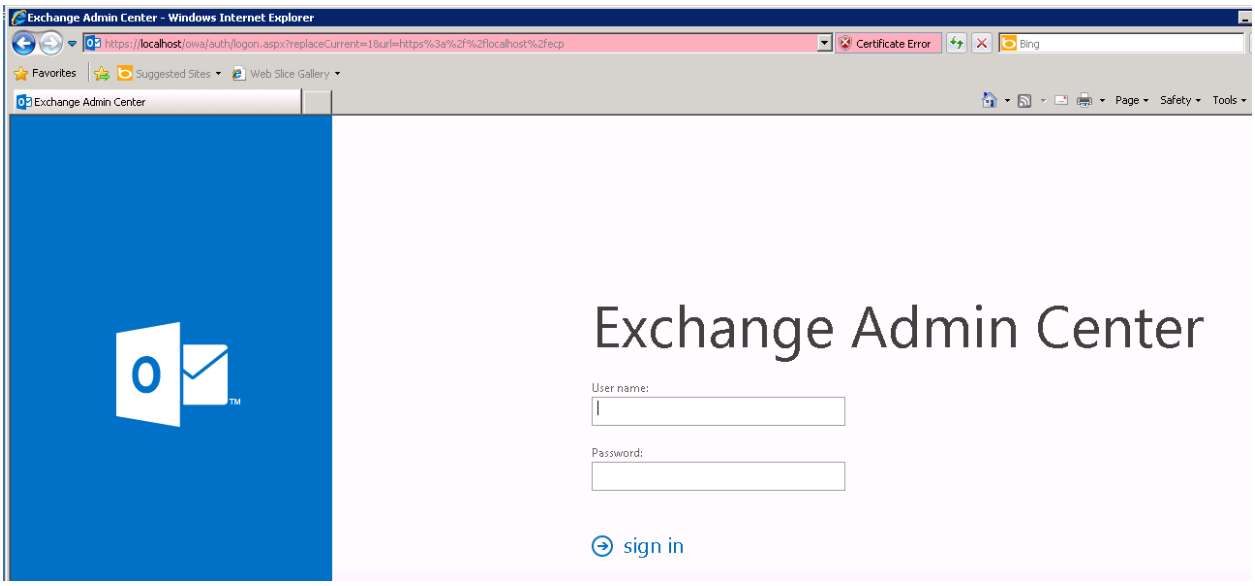
For the GUI installation start setup.exe and follow the wizard, the setup is similar like the Client Access role installation the only difference is the Malware Protection setting.



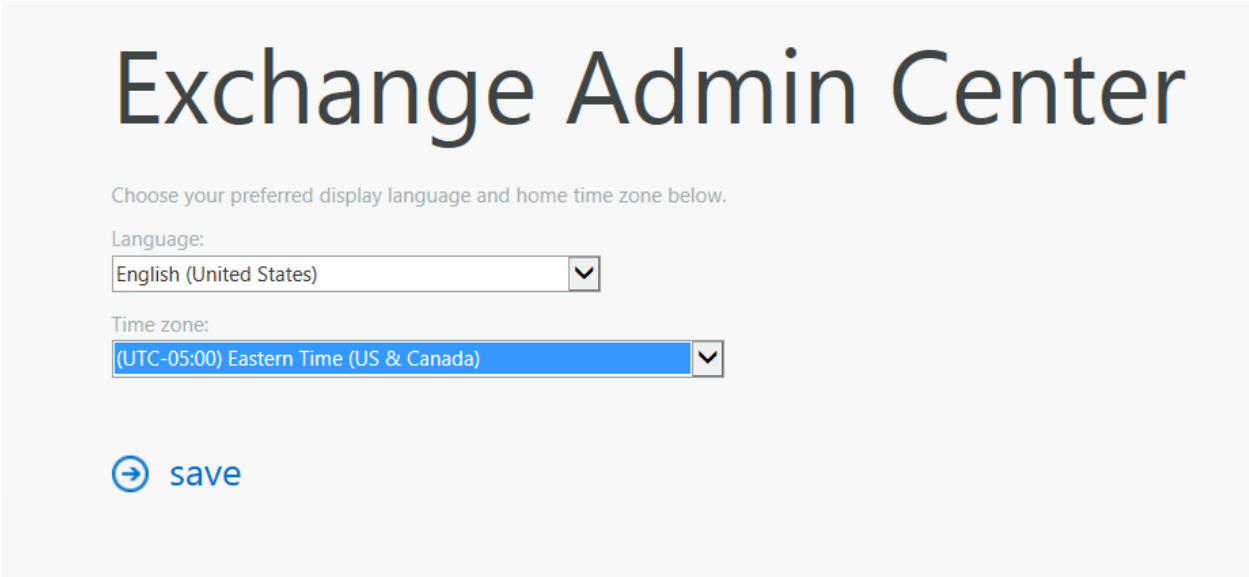


Exchange ECP

After you installed at least one server with Client Access and Mailbox role you can access to the new ECP using Internet Explorer from the CAS server using https://localhost.ecp link. Ignore the certificate warning.



Logon as Administrator, set the time zone and ou can start configuring the new Exchange 2013 organization.



Configuring CAS server

Creating the CAS Array

CAS Array is gone in Exchange 2013 thanks for the new CAS stateless feature we don't need to configure it anymore. MAPI connection is gone, all traffic use RPC over HTTPS, however we can still use load balancer to handle the traffic between the CAS servers, but the load balancer does not have to use persitent connection.

```
Machine: MiaCAS01.ps-united.com
[PS] C:\Windows\system32>New-ClientAccessArray
New-ClientAccessArray : The term 'New-ClientAccessArray' is not recognized as the name of a cmdlet, function, script
file, or operable program. Check the spelling of the name, or if a path was included, verify that the path is correct
and try again.
At line:1 char:1
+ New-ClientAccessArray
+ ~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : ObjectNotFound: (New-ClientAccessArray:String) [], CommandNotFoundException
    + FullyQualifiedErrorId : CommandNotFoundException

[PS] C:\Windows\system32>_
```

Configuring OWA, OA and mobile connections

Using PowerShell to configure Virtual Directories URL and permissions

Set-OABVirtualDirectory -Identity "MiaCAS01\OAB (Default Web Site)" -ExternalUrl https://miami.ps-united.com/OAB -RequireSSL:$true

Set-OABVirtualDirectory -Identity "MiaCAS01\OAB (Default Web Site)" -InternalUrl https://miami.ps-united.com/OAB -RequireSSL:$true

Set-WebServicesVirtualDirectory -Identity "MiaCAS01\EWS (Default Web Site)" -ExternalUrl https://miami.ps-united.com/EWS/Exchange.asmx -BasicAuthentication:$True -WindowsAuthentication:$True

Set-WebServicesVirtualDirectory -Identity "MiaCAS01\EWS (Default Web Site)" -InternalUrl https://miami.ps-united.com/EWS/Exchange.asmx -BasicAuthentication:$True

Set-OWAVirtualDirectory -Identity "MiaCAS01\OWA (Default Web Site)" -InternalUrl https://miami.ps-united.com/OWA -LogonFormat 'UserName' -FormsAuthentication $True –DefaultDomain 'ps-united.com'

Set-OWAVirtualDirectory -Identity "MiaCAS01\OWA (Default Web Site)" -ExternalUrl https://miami.ps-united.com/OWA -FormsAuthentication $True –DefaultDomain 'ps-united.com'

Set-AutodiscoverVirtualDirectory -Identity 'MiaCAS01\AutoDiscover (Default Web Site)' -WindowsAuthentication $true –BasicAuthentication $True

Set-ActiveSyncVirtualDirectory -Identity 'MiaCAS01\Microsoft-Server-ActiveSync (Default Web Site)' -InternalUrl https://miami.ps-united.com/Microsoft-Server-ActiveSync

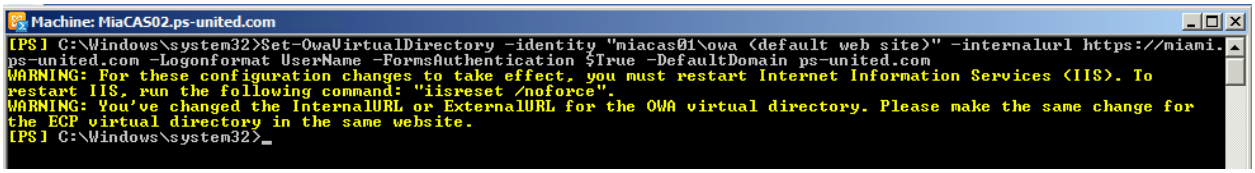
Set-ActiveSyncVirtualDirectory -Identity 'MiaCAS01\Microsoft-Server-ActiveSync (Default Web Site)' -ExternalUrl https://miami.ps-united.com/Microsoft-Server-ActiveSync

Set-EcpVirtualDirectory -Identity "MiaCAS01\ECP (Default Web Site)" -InternalUrl https://miami.ps-united.com/ECP -FormsAuthentication $True

Set-EcpVirtualDirectory -Identity "MiaCAS01\ECP (Default Web Site)" -ExternalUrl https://miami.ps-united.com/ECP

Set-OutlookAnywhere –Identity 'MIACAS01\Rpc (Default Web Site)' -ExternalHostname miami.ps-united.com –InternalHostname miami.ps-united.com -ExternalClientAuthenticationMethod Ntlm -ExternalClientsRequireSsl:$true –InternalClientAuthenticationMethod Ntlm -InternalClientsRequireSsl:$true –IISAuthentication Ntlm –SSLOffloading:$false

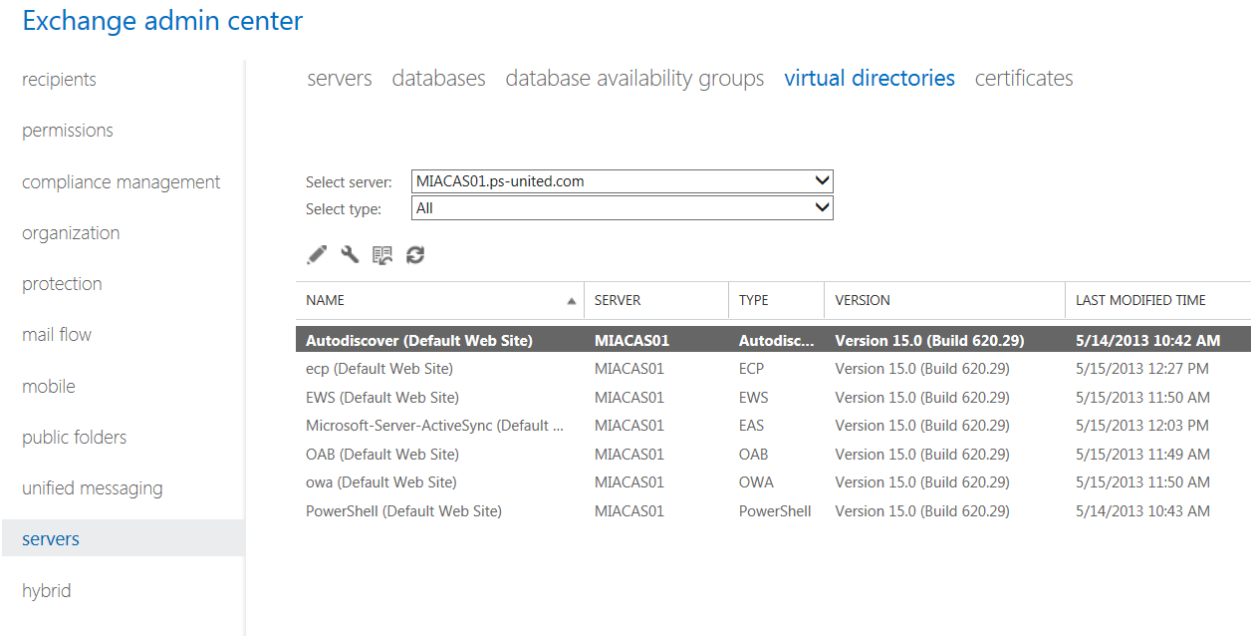
Set-ClientAccessServer –identity MiaCAS01 –AutodiscoverServiceInternalUri "httsp://autodiscover.ps-united.com/autodiscover/autodiscover.xml"



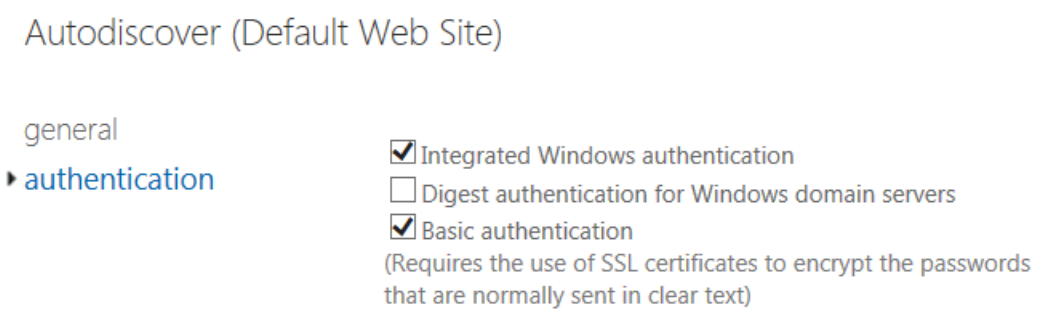
After you configured all the Virtual Directories run iisreset /noforce on the CAS server.

Configuring Virtual Directories via GUI

- Open the ECP and navigate to **Virtual Directories** under **Servers** option



- Open Autodiscover and navigate to **Authentication** and select **Integrated Windows authentication** and **Basic authentication**



- Configure all virtual directory as shown below

Autodiscover (Default Web Site)
Internal Url: N/A
External Url: N/A
Authentication: Integrated Windows authentication and Basic authentication

ecp (Default Web Site)
Internal Url: https://miami.ps-united.com/ECP
External Url: https://miami.ps-united.com/ECP
Authentication: Use forms-based authnetication

EWS (Default Web Site)
Internal Url: https://miami.ps-united.com/EWS/Exchange.asmx
External Url: https://miami.ps-united.com/EWS/Exchange.asmx
Authentication: Integrated Windows authentication and Basic authentication

Microsoft-Server-ActiveSync (Default Web Site)
Internal Url: https://miami.ps-united.com/Microsoft-Server-ActiveSync
External Url: https://miami.ps-united.com/Microsoft-Server-ActiveSync
Authentication: Basic Authentication (Ignore client certificates)

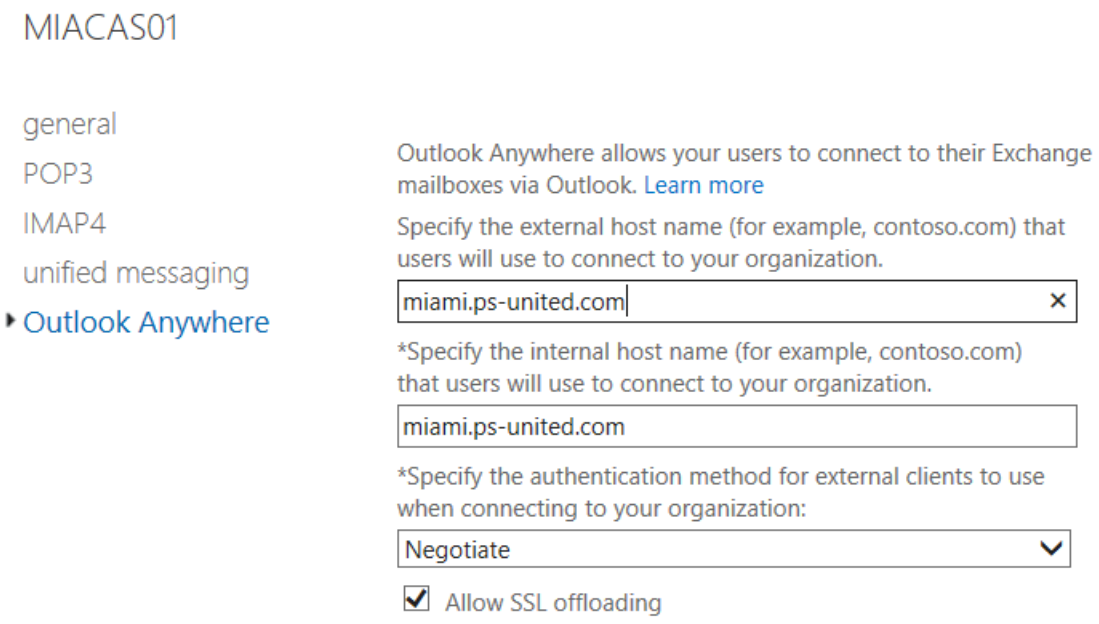
OAB (Default Web Site)
Internal Url: https://miami.ps-united.com/OAB
External Url: https://miami.ps-united.com/OAB
Authentication: N/A

owa (Default Web Site)
Internal Url: https://miami.ps-united.com/OWA
External Url: https://miami.ps-united.com/OWA
Authentication: Use forms-based authnetication (user name only) & select the logon domain

PowerShell (Default Web Site)
Internal Url: http://miacas01.ps-united.com/powershell
External Url: $NULL
Authentication: $NULL

Configuring Outlook Anywhere

- Open ECP and navigate to **Servers** and select MiaCAS01. In the new windows select **Outlook Anywhere** and set the Internal/External Url to miami.ps-united.com

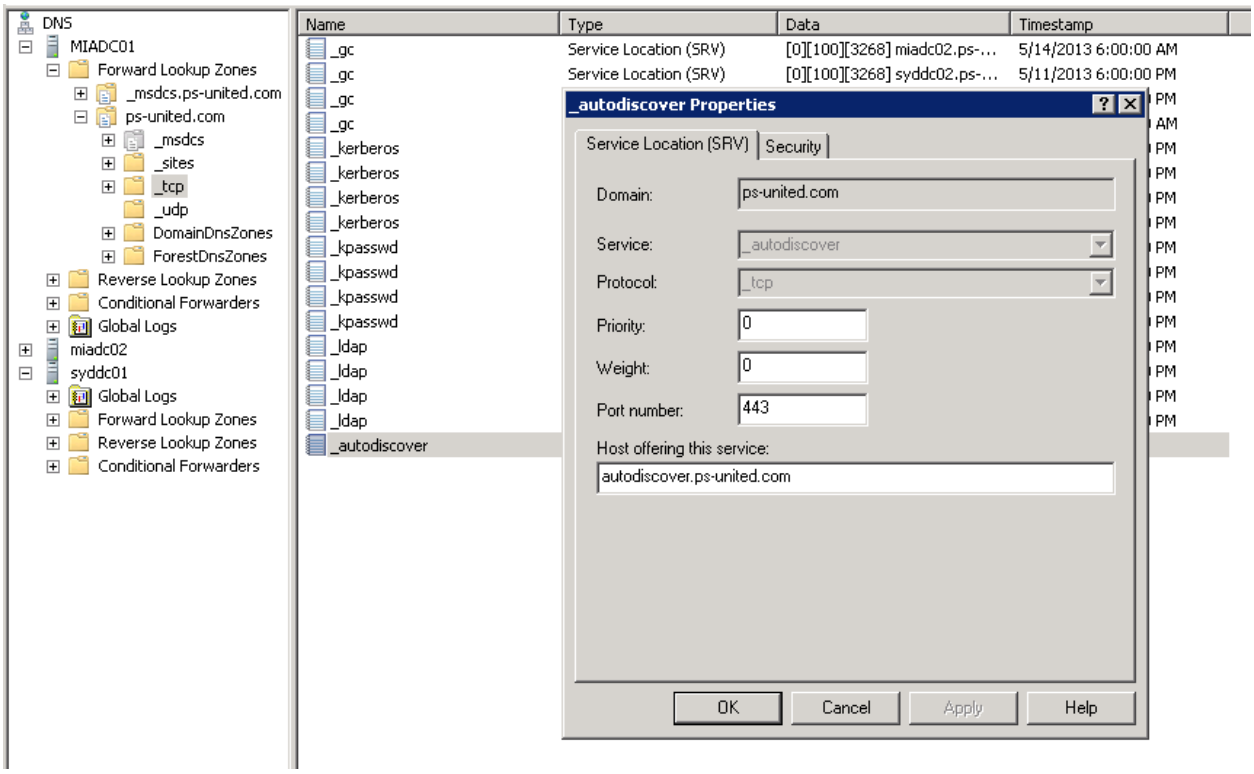


Configure internal Autodiscover

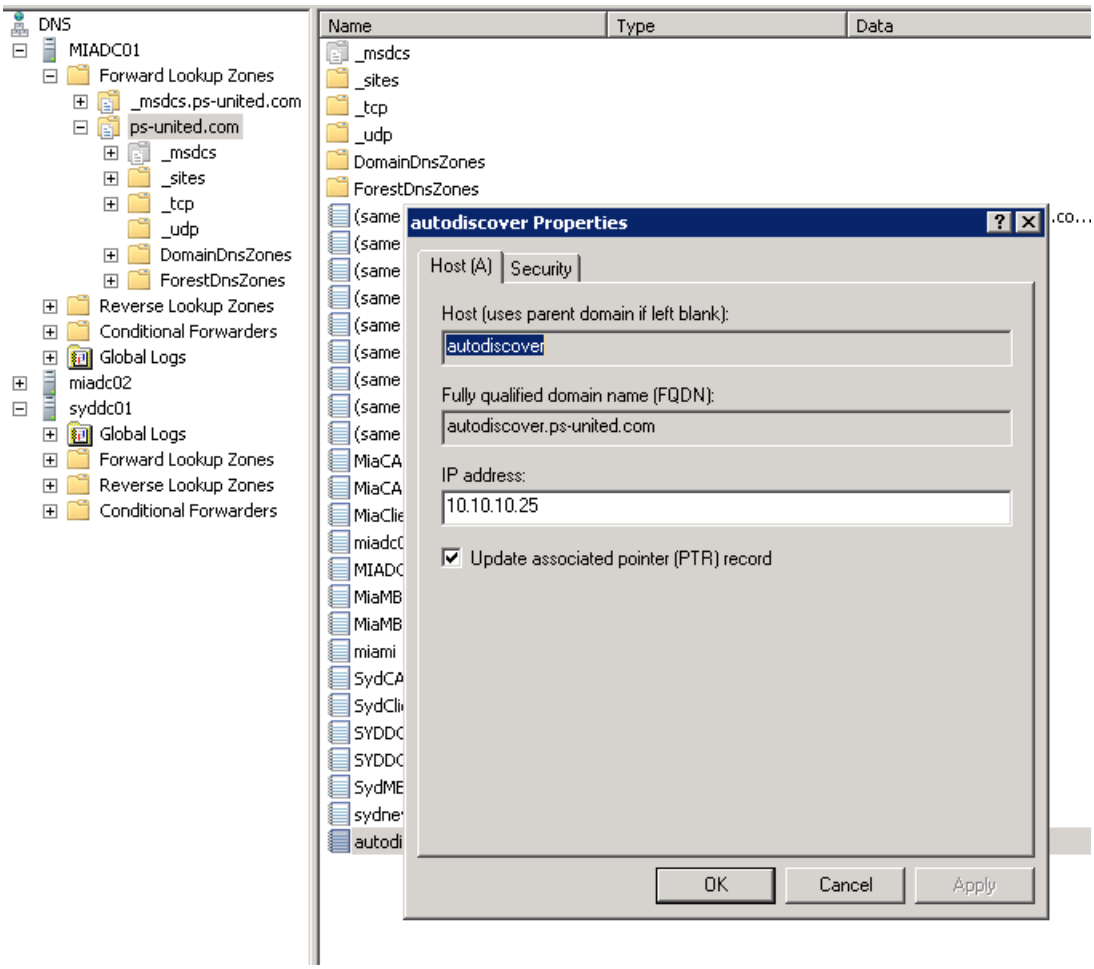
This step applies only if your local domain has a different FQDN the external one for example contoso.local vs contoso.com or you don't want the clients to look up external DNS servers to locate the Autodiscover service.

- Go to you DNS server and create a new SRV record as shown below

Services:	_autodiscover
Protocol:	_tcp
Poer number:	443
Host offering this service:	Autodiscover.ps-united.com

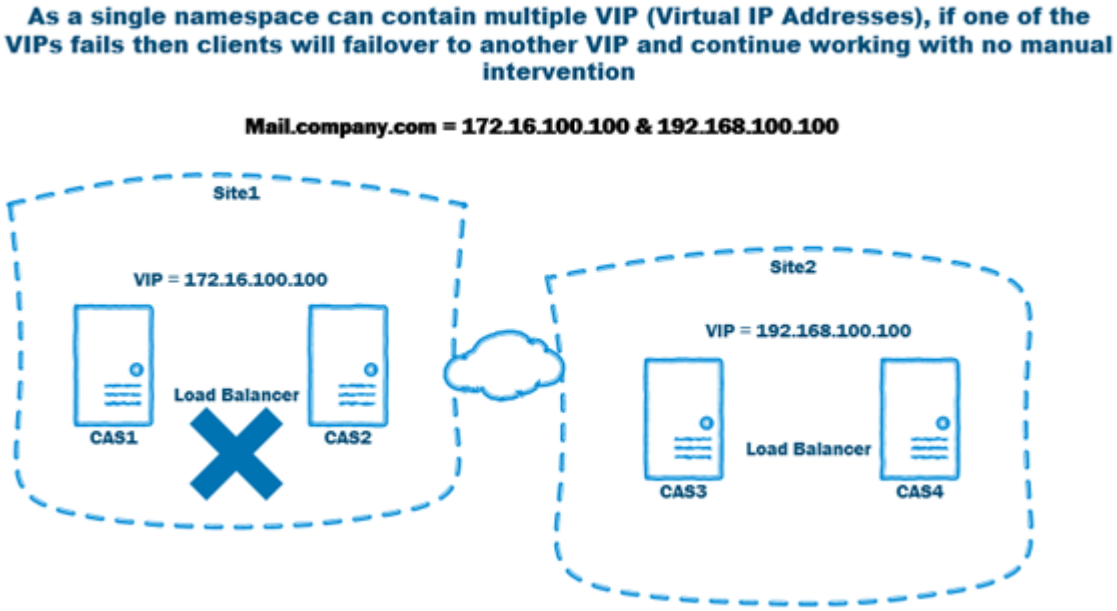


- Create a new A record for Autodiscover.ps-united.com pointing to 10.10.10.25 (Load Balancer)


DNS
MIADC01
Forward Lookup Zones
_msdcs.ps-united.com
ps-united.com
_msdcs
_sites
_tcp
_udp
DomainDnsZones
ForestDnsZones
Reverse Lookup Zones
Conditional Forwarders
Global Logs
miadc02
syddc01
Global Logs
Forward Lookup Zones
Reverse Lookup Zones
Conditional Forwarders
Name
Type
Data
_msdcs
_sites
_tcp
_udp
DomainDnsZones
ForestDnsZones
autodiscover Properties
Host (A)
Security
Host (uses parent domain if left blank):
autodiscover
Fully qualified domain name (FQDN):
autodiscover.ps-united.com
IP address:
10.10.10.25
Update associated pointer (PTR) record
OK
Cancel
Apply

Site resilience

In Exchange 2013 you can have multiple virtual IP assigned to one single namespace. In the event of a CAS server failure the clients will automatically fail over to the next working site (IP) address.

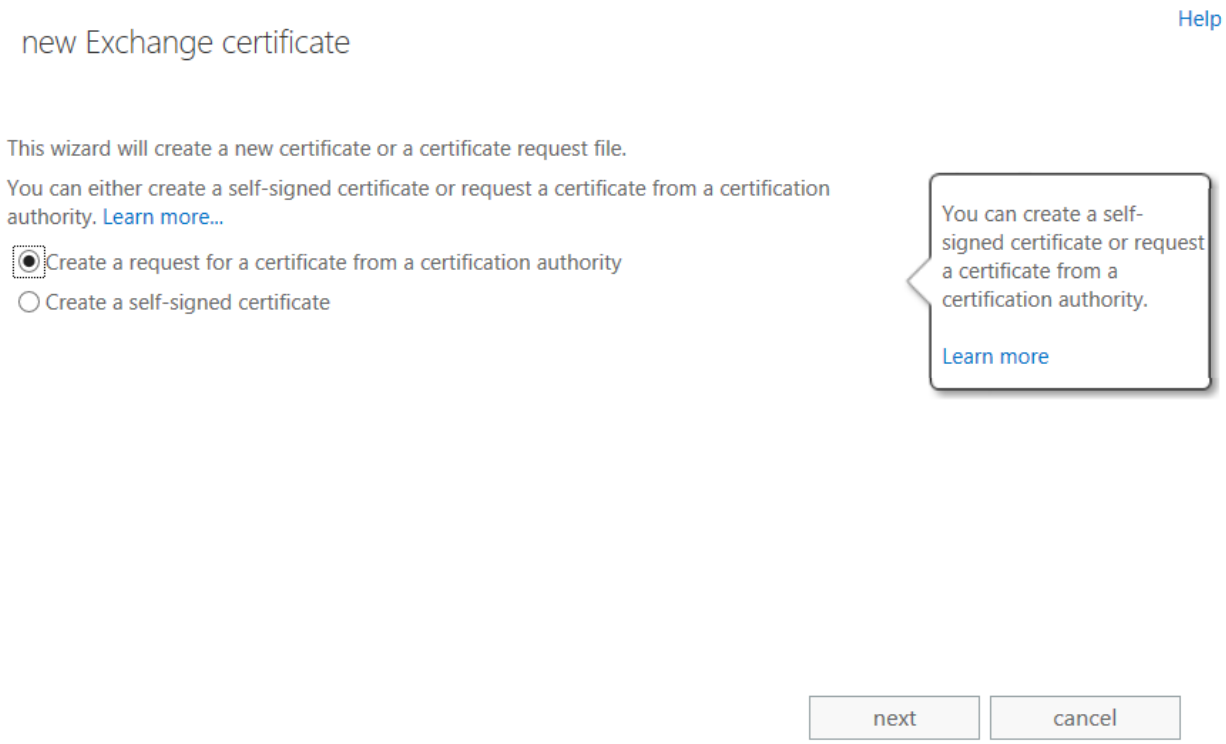


Installing Certificate

Create the certificate request

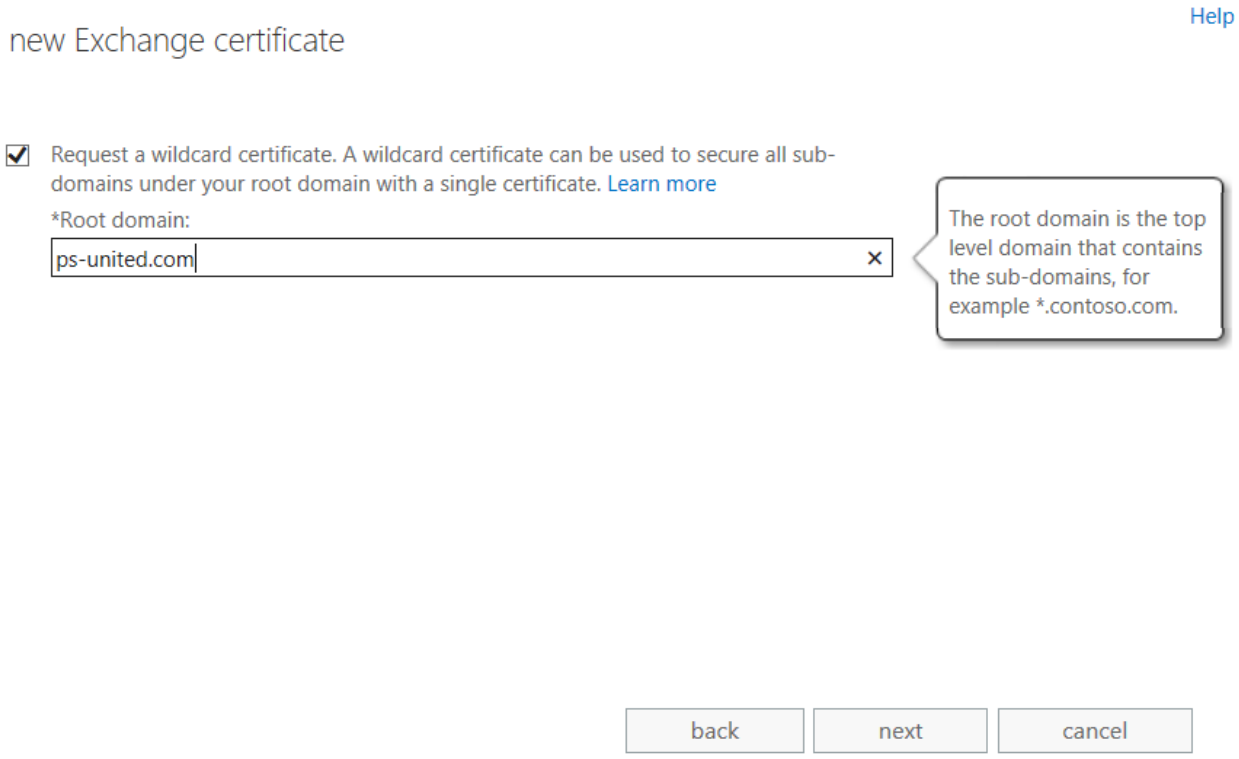
Create a wildcard certificate

- Open ECP and select **Certificates** under **Server** menu and start the new certificate wizard.
- Select **Create a request for a certificate from a certification authority**

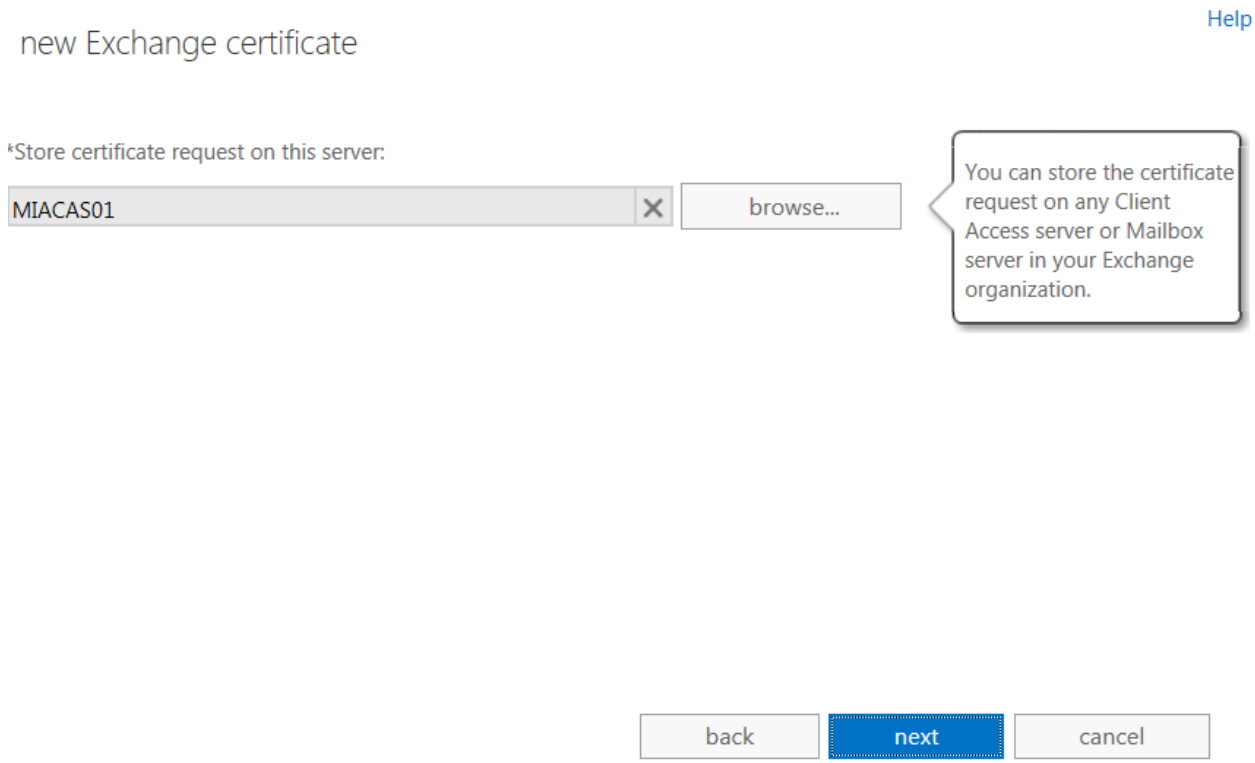


- Give a friendly name of your certificate, you will see this name on the main certifications page

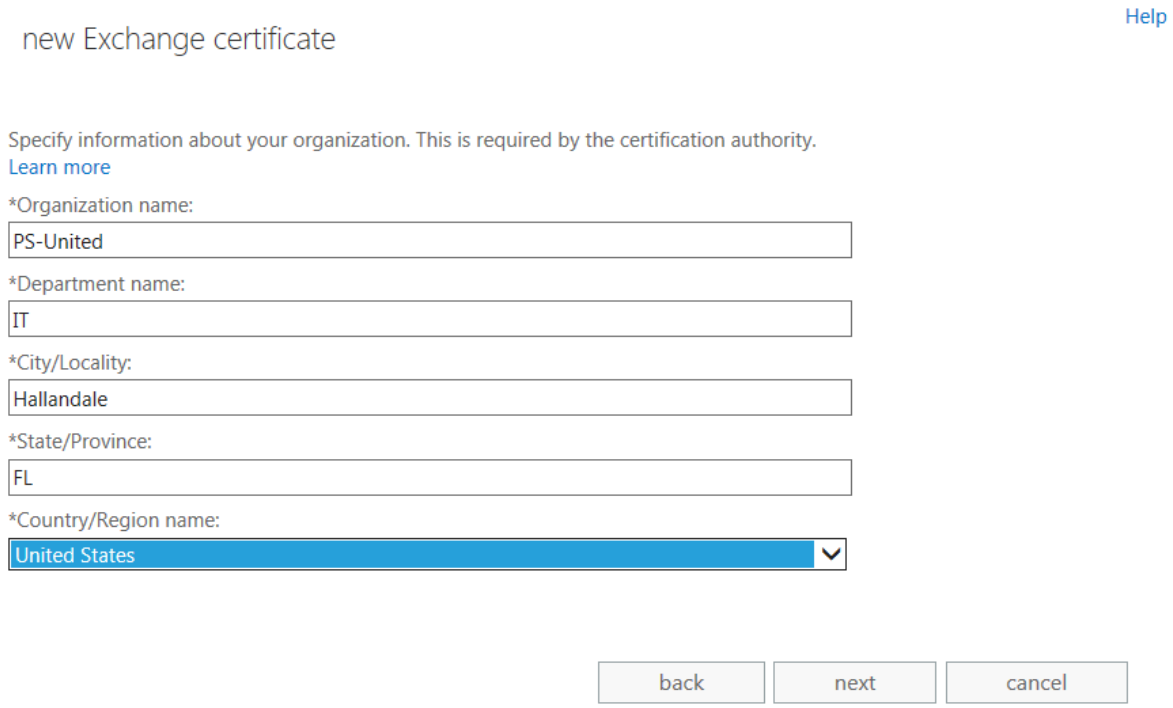
- Request a wildcard certificate, the root domain should be ps-united.com



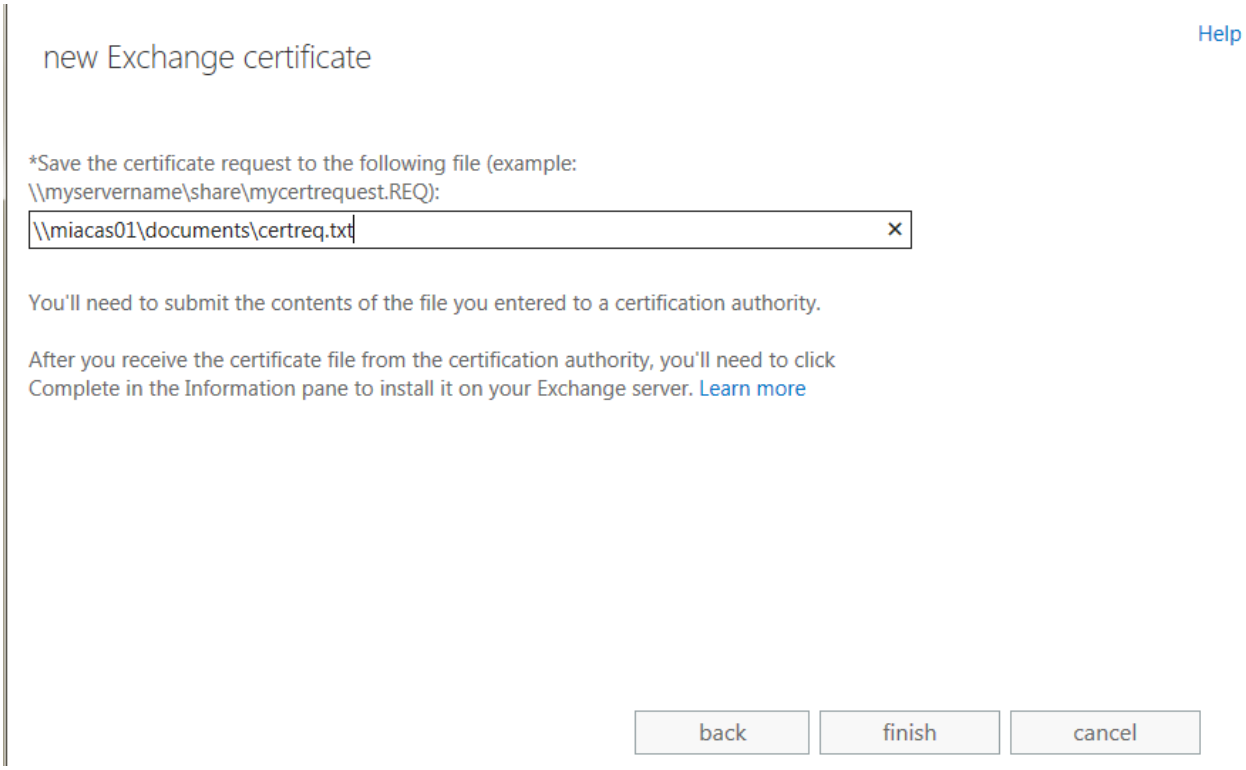
- Select the server where you want to store your certificate request



- Fill out the required fileds accordingly

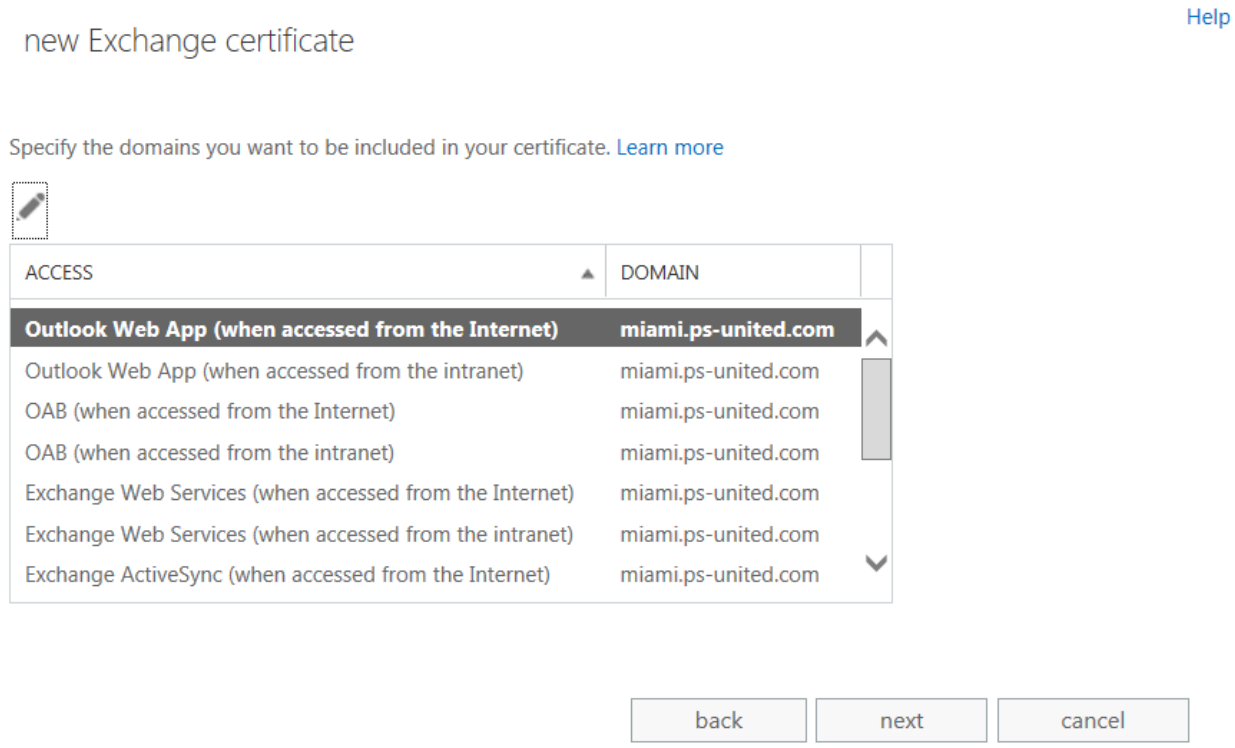


- Select a destination for the request file

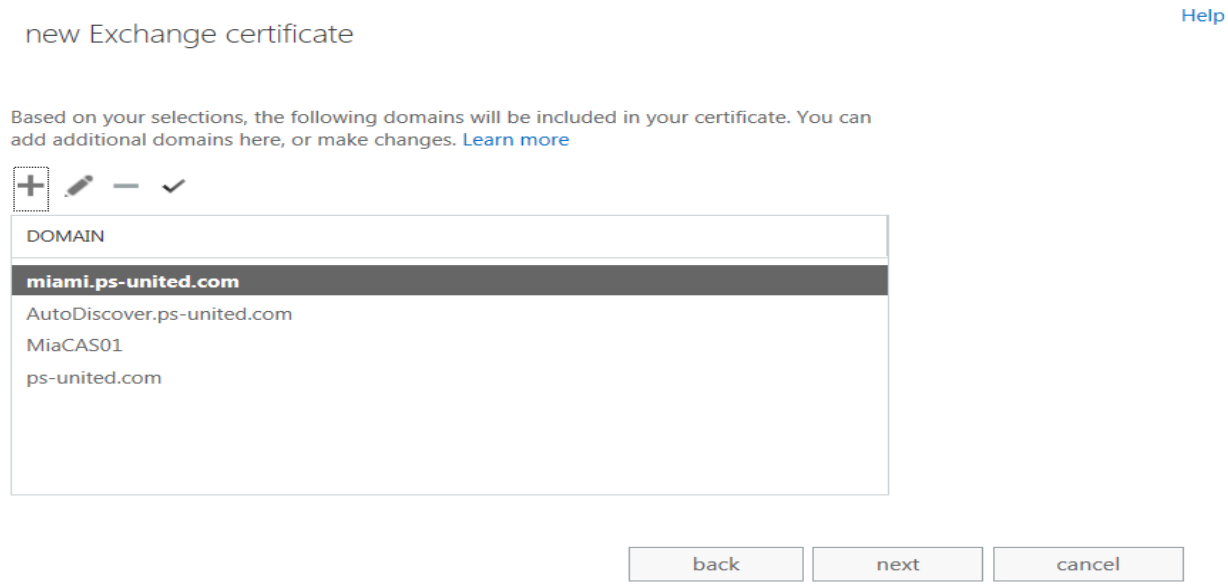


Create a SAN certificate

- If you choose not to use a wildcard certificate you will see the following screen after you have selected the server where you want to store the request. Here you can select which services you want to use with this certificate, this screen helps you to select the correct FQDNs for your SAN certificate



- On the next screen you can add or remove additional FQDN if you need it.

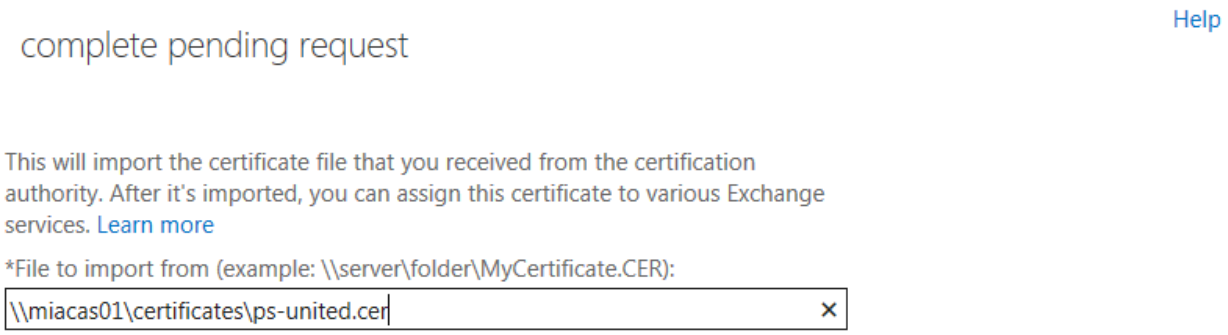


- All other steps are the same as the wildcard request

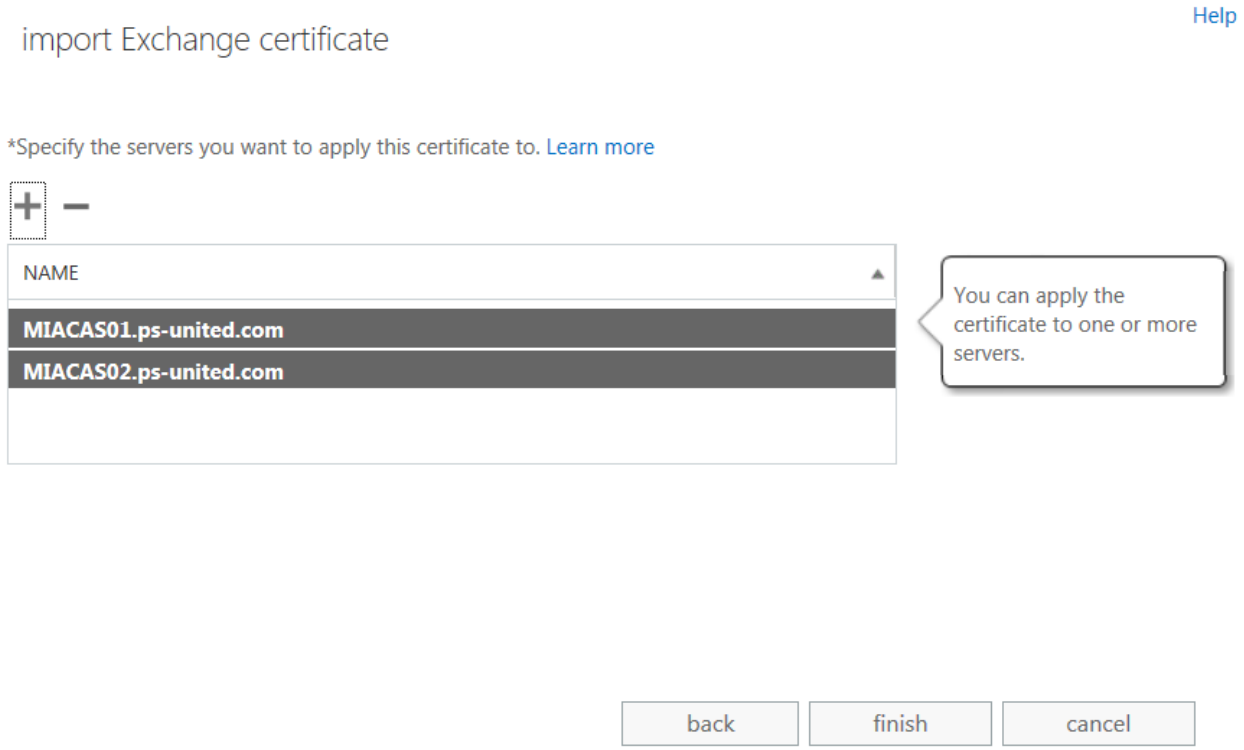
After you finished open the certificate request file and send to your certificate provider to issue the actual certificate.

Compete the certificate request and assign it to Exchange services

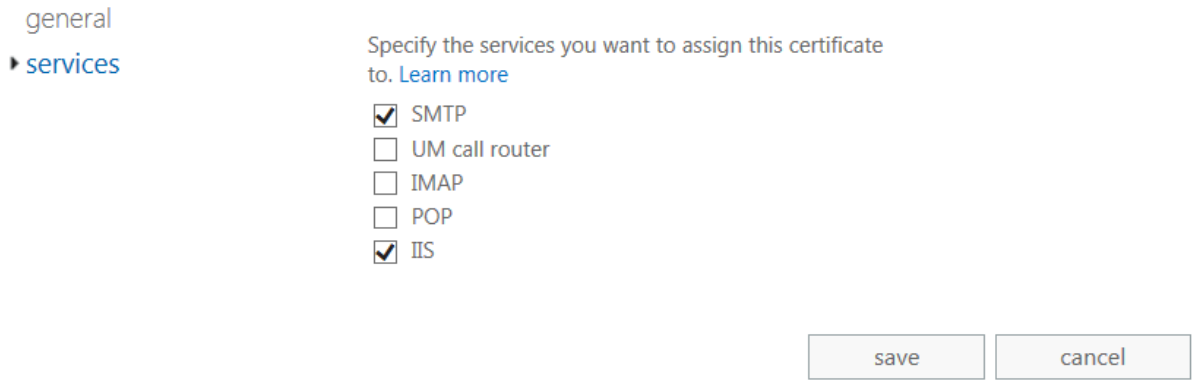
- After you have received your certificate from the Certificate Issuer select **Complete** from the right hand side menu.
- Type the UNC path for the .cer file



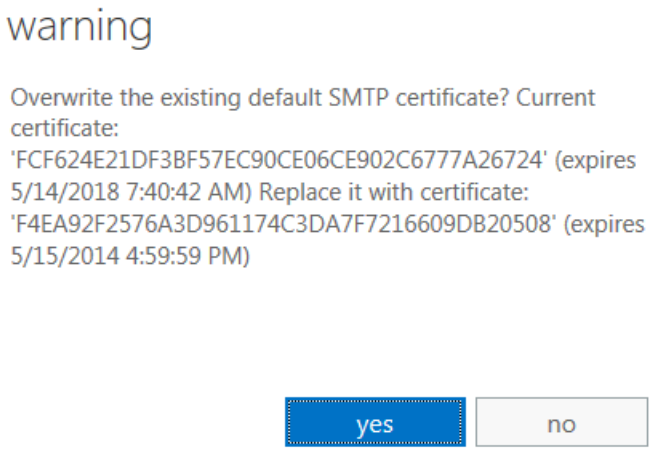
- Select the servers where you want to import (CAS servers) the certificate



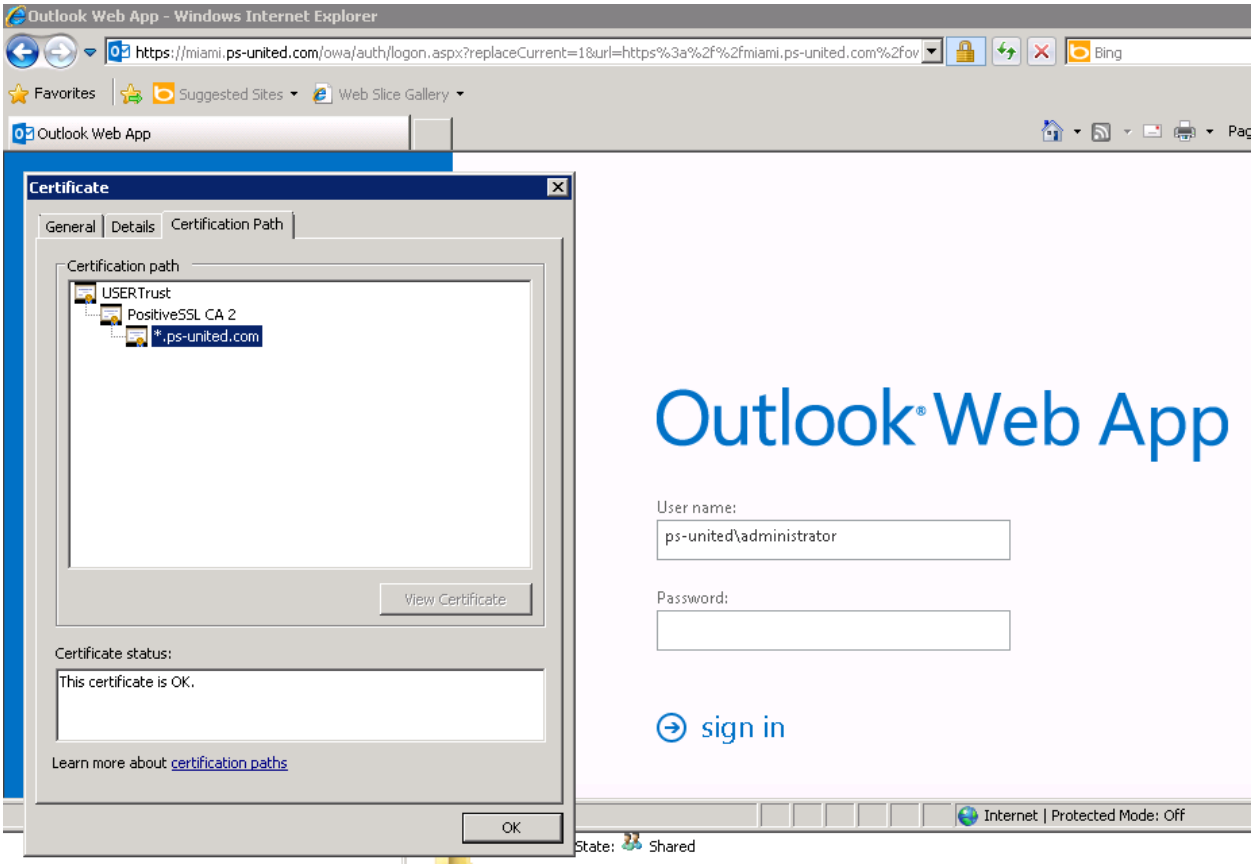
- After the import, open the imported certificate. On the first page you can double check the requested names, the issuer and the expiration date.
  Select Services and assign the certificate to SMTP and IIS



Acknowledge the warning

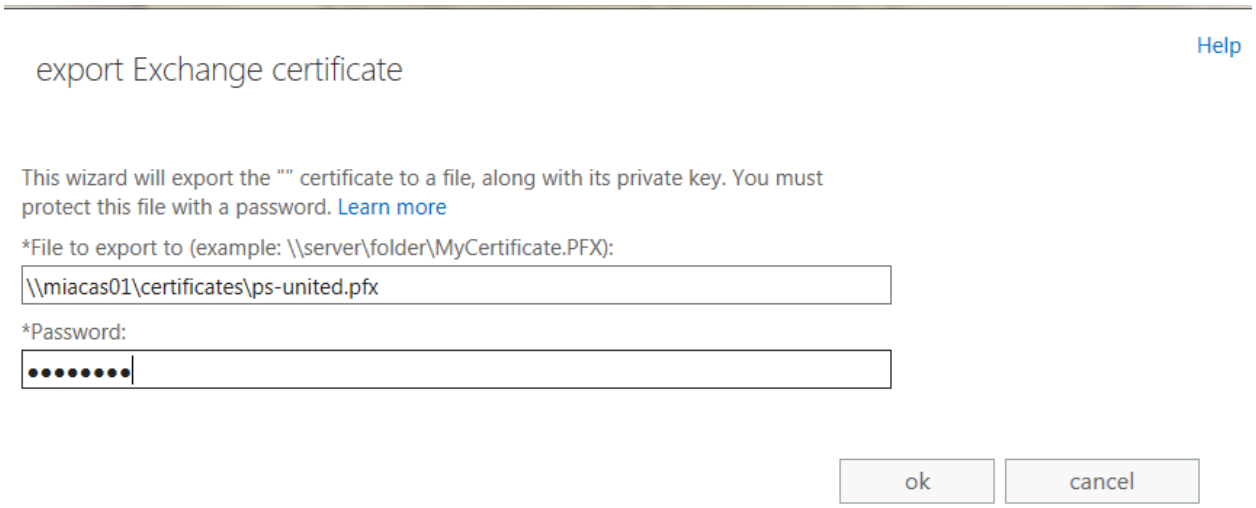


To check that the inport was successful open Internet Explorer and go to the website https://miami.ps-united.com/OWA and you should not get any certificate warning if you used a trusted 3rd party provider.

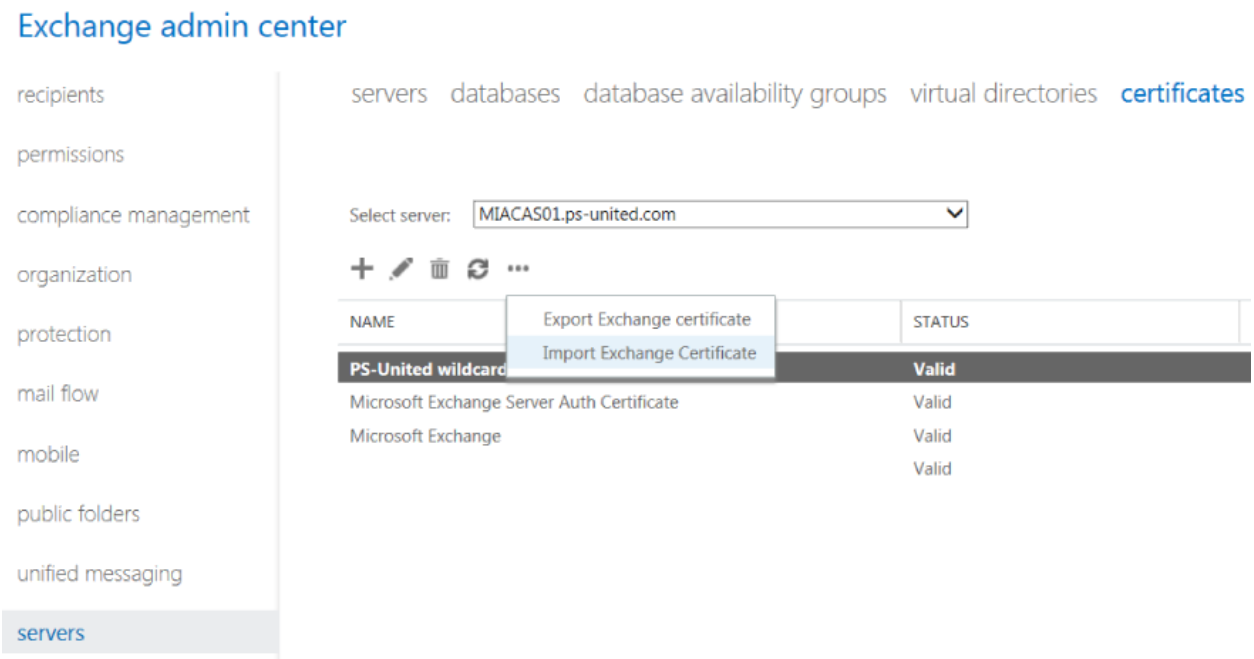


Assing the certificates to other CAS servers

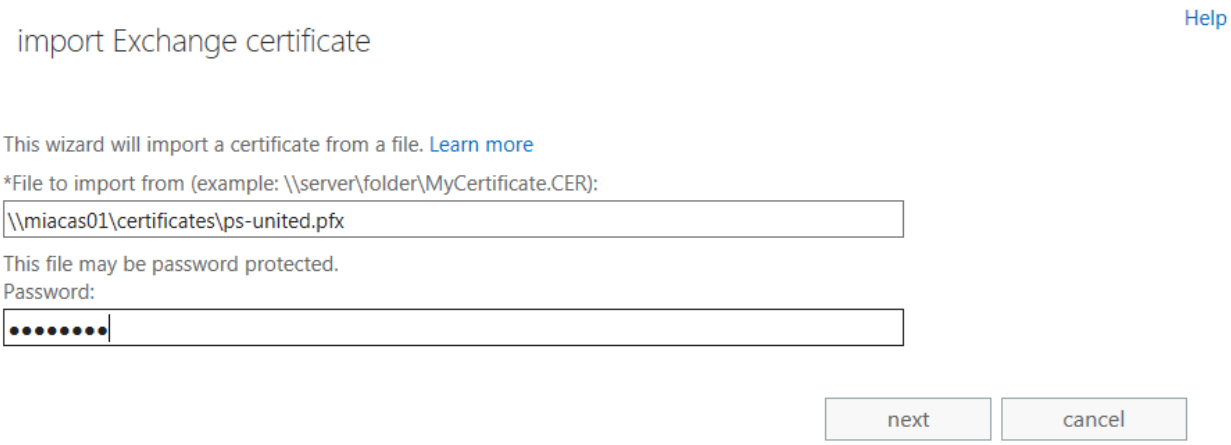
- Start the **Export Exchange Certificate** wizard and specify an UNC where you want to export the certificate



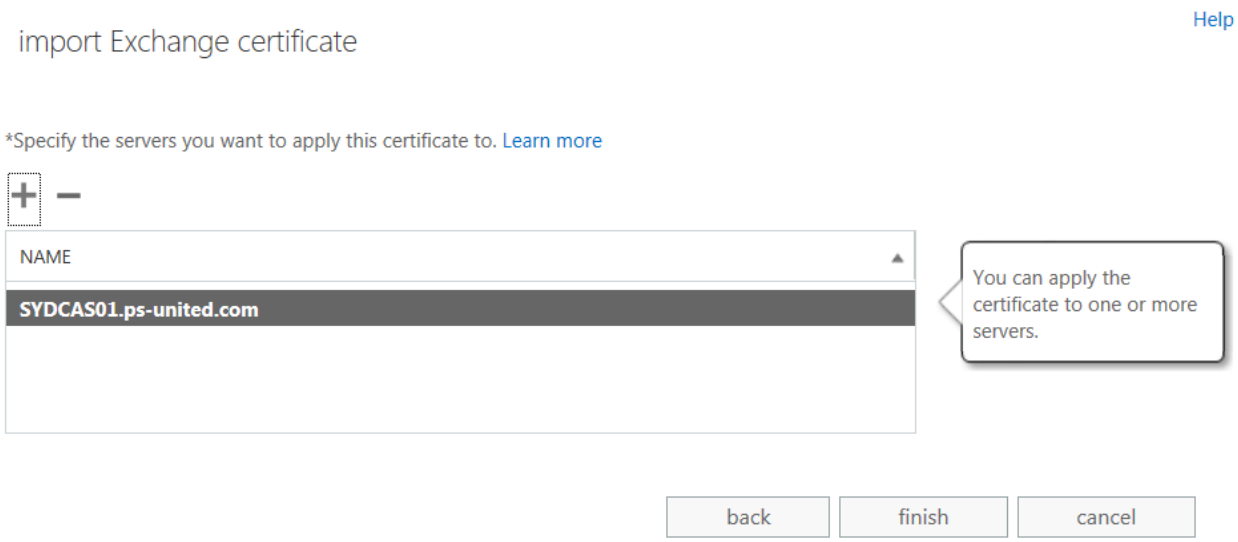
- Start the **Import Exchange Certificate** wizard



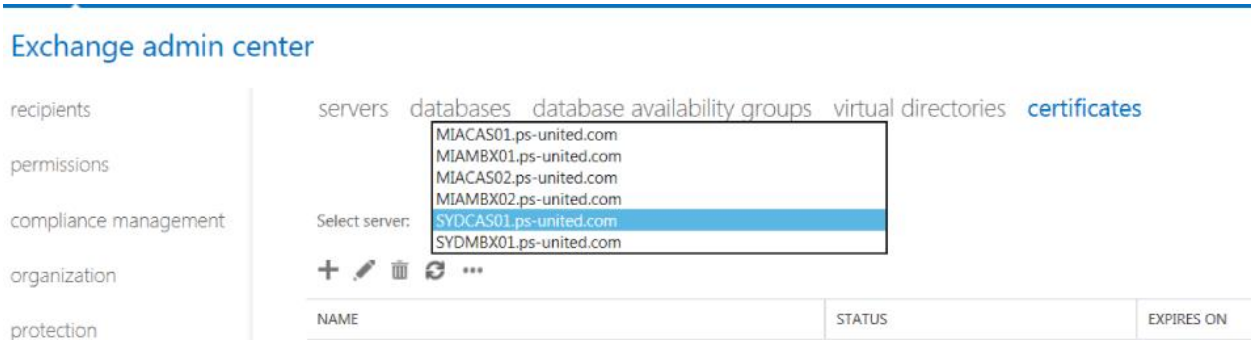
- Specify the UNC path for the .pfx file



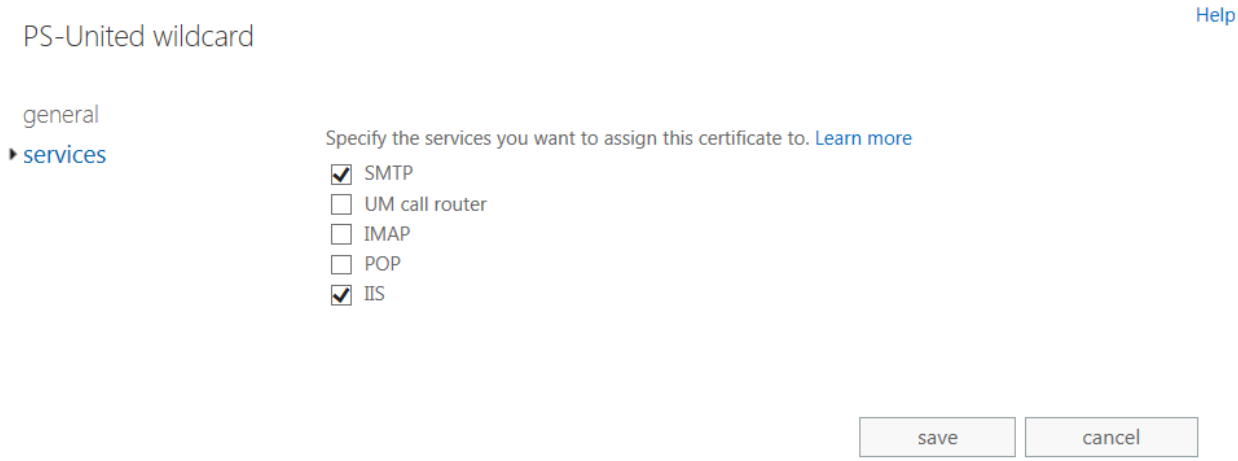
- Select the servers where you want to import the certificate



- After the import select the server where you have imported the certificate



- Open the imported certificate and assign it to the appropiate services under the Services menu

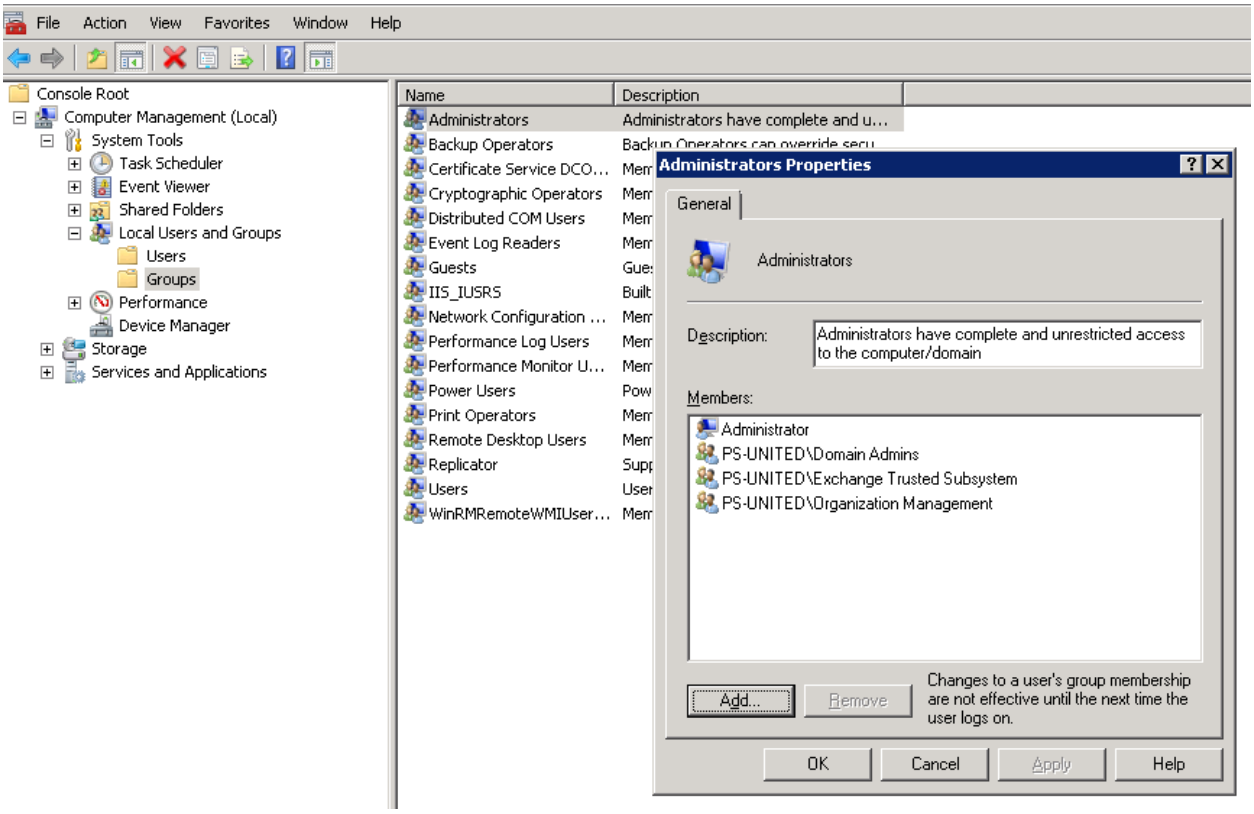


Configuring the Mailbox server

Create DAG

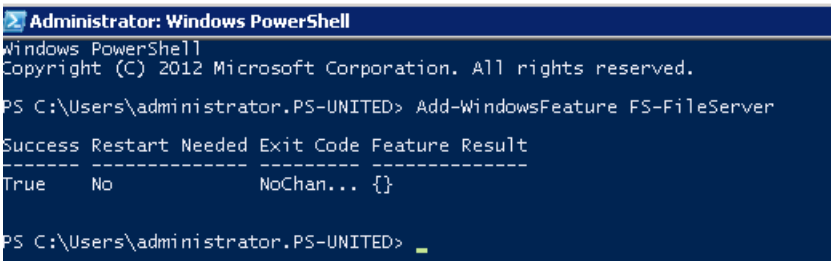
Configuring the file share witness

- On the selected File Share Witness computer the Exchange Trusted Subsystem group in Active Directory must be added to the local Administrators group

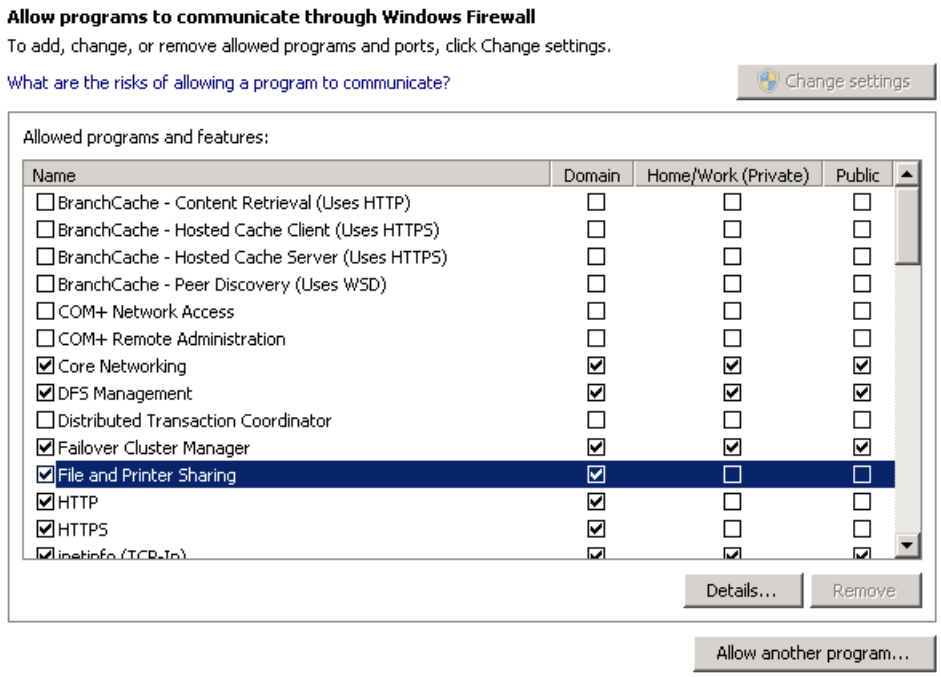


- Add Fileserver Feature using PowerShell

Add-WindowsFeature FS-FileServer



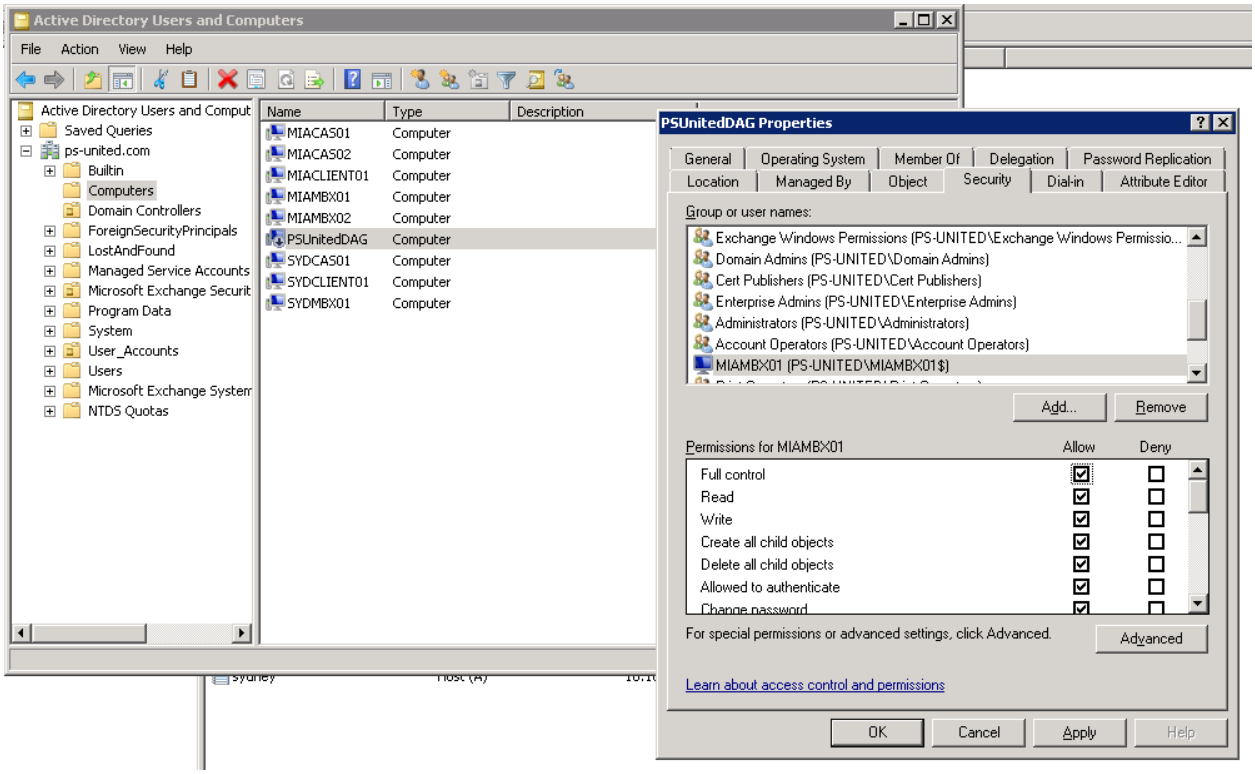
- Check Windows firewall and make sure the File and Printer Sharing is added and allowed through the firewall.



If the File Share Wittnes is another Exchange server it already has the corect permissions.

Create the Database Availability Group

- Create a new computer object in Active Directory and add your first DAG member with Full control under Security in the Properties of the computer Account.



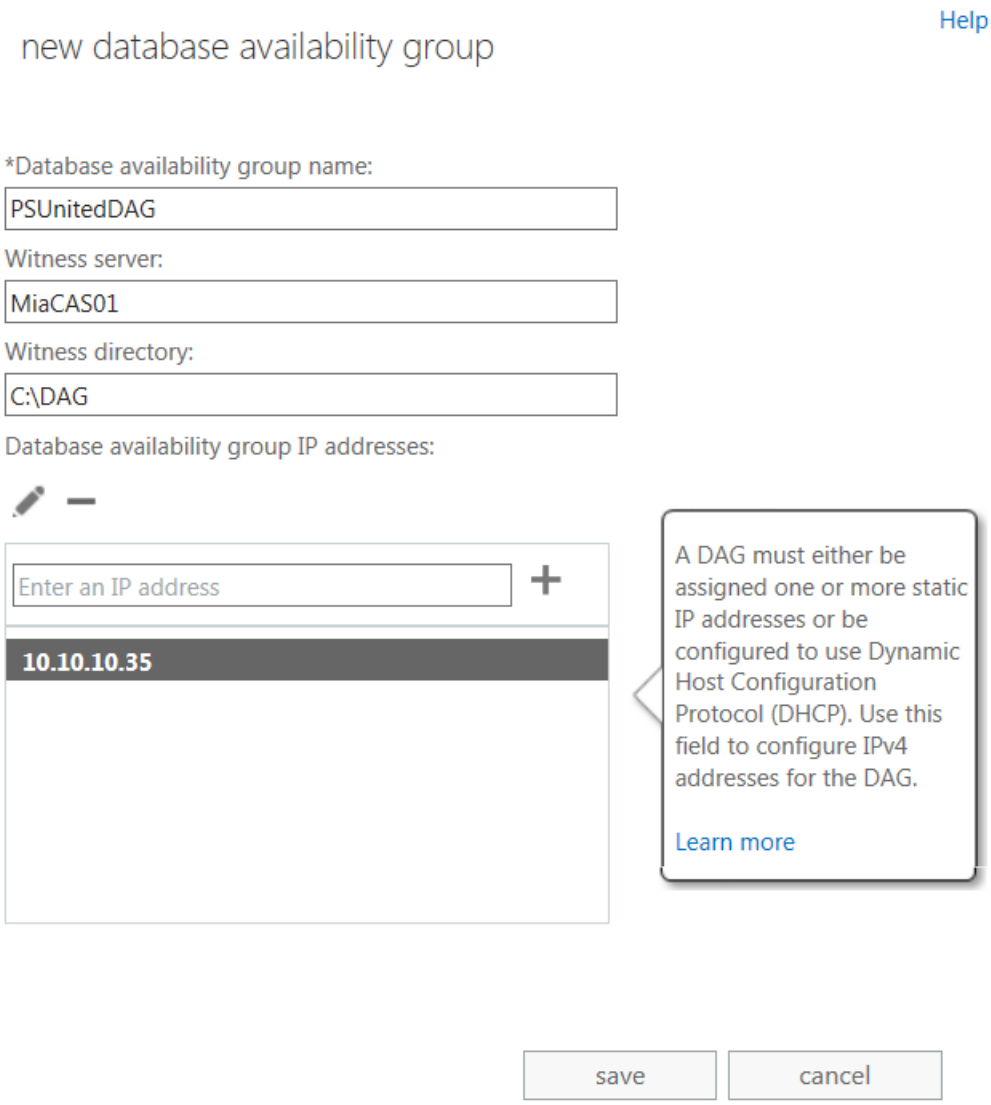
Create DAG Using Powershell

New-DatabaseAvailabilityGroup -Name PSUnitedDAG -WitnessServer MiaCAS01 -WitnessDirectory C:\DAG -DatabaseAvailabilityGroupIPAddresses 10.10.10.35

To doublecheck run the ***Get-DatabaseAvailabilityGroup***

Create DAG using ECP

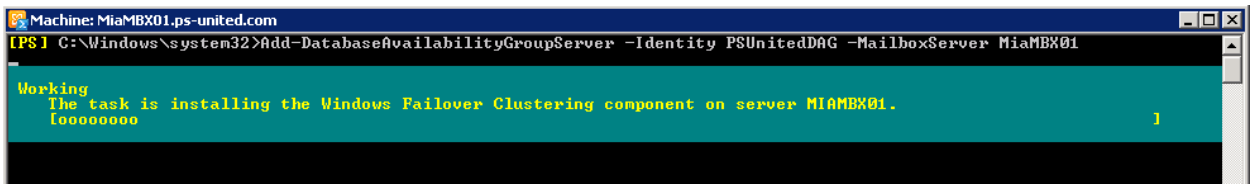
- Select **Database Availability Groups** under **Servers** and start the new DAG Wizard
- DAG name must be the computer name you have created (PSUnitedDAG)
- Type the File Share Witness computer name
- Type the Witness directory on MiaCAS01
- Specify the DAG IP, if you don't enter any IP it will use DHCP to acquire one



Add DAG members

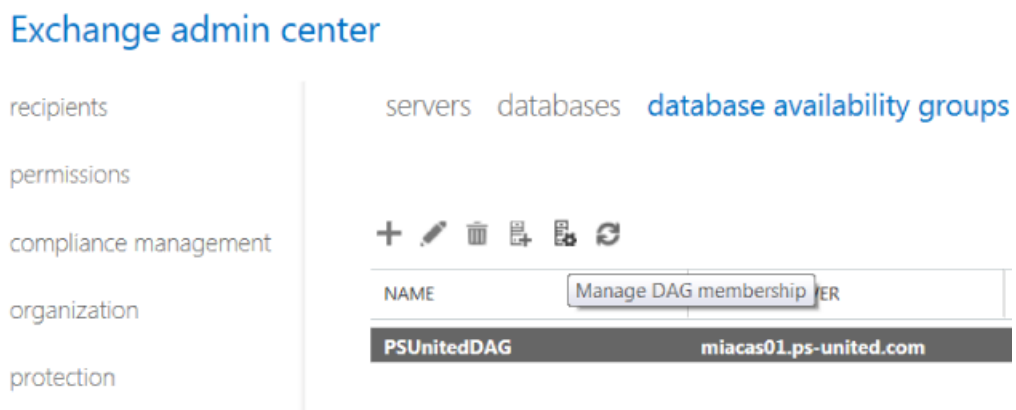
Add DAG memebers using PowerShell

Add-DatabaseAvailabilityGroupServer -Identity PSUnitedDAG -MailboxServer MiaMBX01

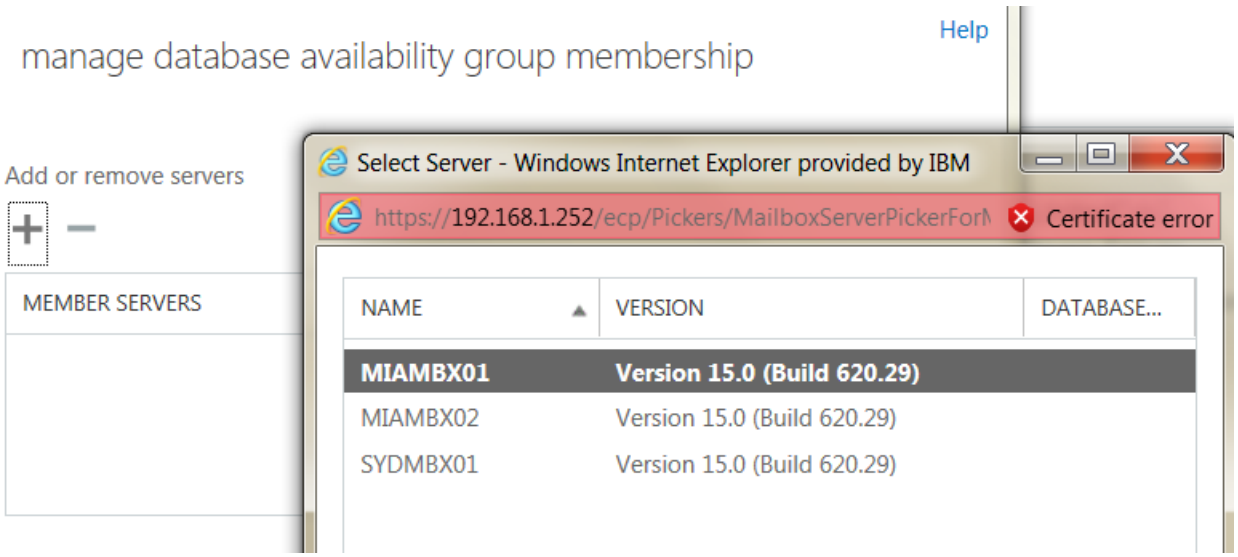


Add DAG members using ECP

- Select **Manage DAG membership** option on the DAG you have created



- Select the server you want to add to the DAG and finish the wizard



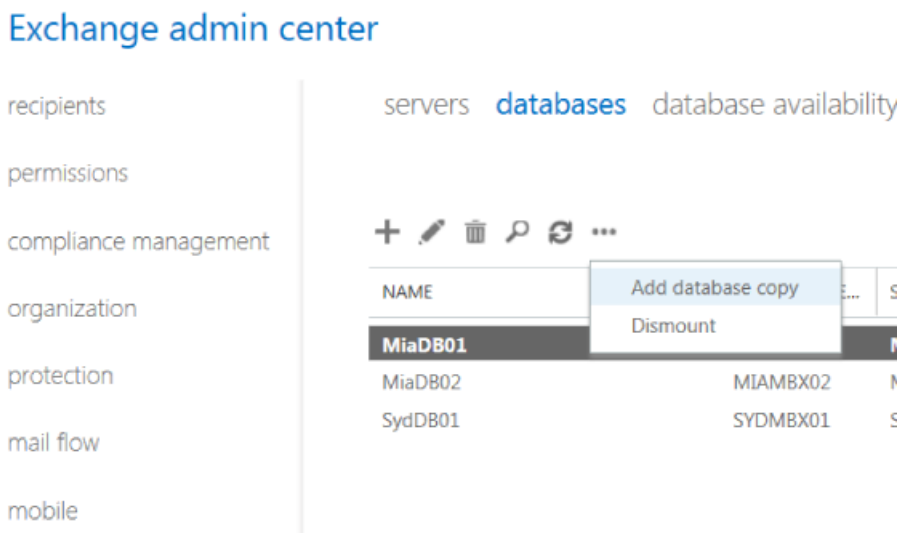
Adding Database copies to the DAG

Using PowerShell

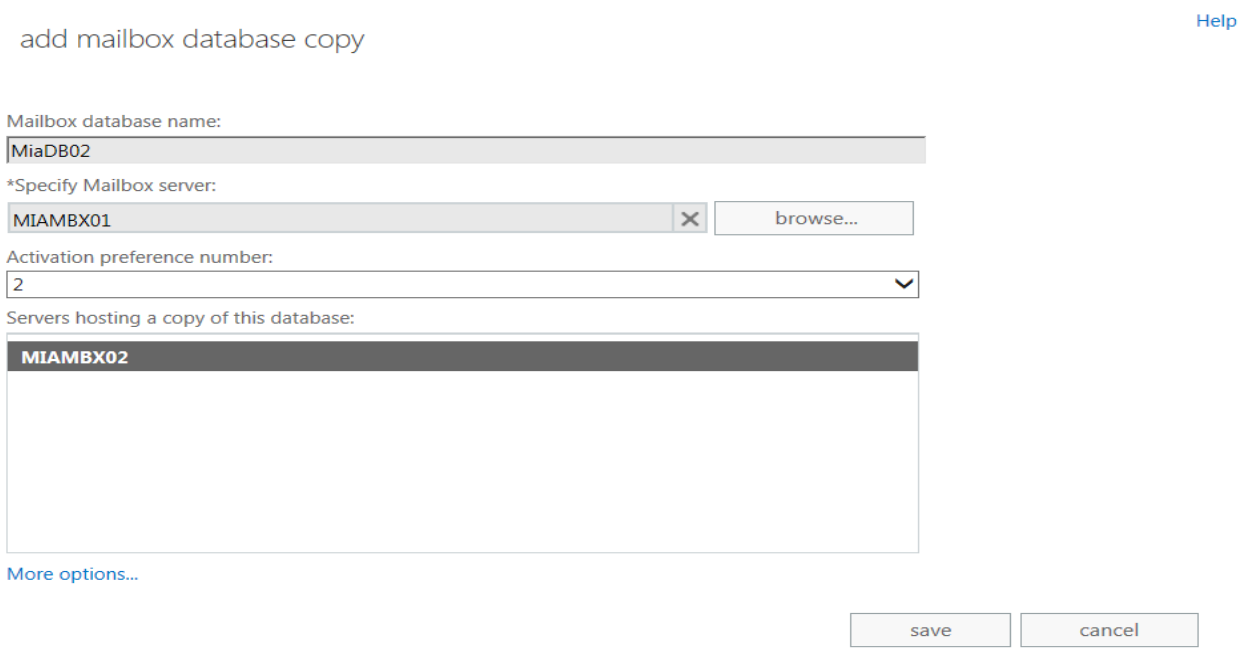
Add-MailboxDatabaseCopy -Identity MiaDB01 -MailboxServer MiaMBX02

Using ECP

- Open **Databases** under **Server** in ECP
- Select the database you want to add to a server as a copy and select **Add database copy**



- Specify the server where you want to store the copy and save it



Basic administrative work with DAG

- To check the status of the DAG run the following in PowerShell

Get-DatabaseAvailabilityGroup PSUnitedDAG -Status

```
Machine: MiaMBX01.ps-united.com
[PS] C:\Windows\system32>Get-DatabaseAvailabilityGroup PSUnitedDAG -Status

Name            Member Servers                                  Operational Servers
----            --------------                                  -------------------
PSUnitedDAG     {MIAMBX02, MIAMBX01}                            {MIAMBX01, MIAMBX02}

[PS] C:\Windows\system32>_
```

- The following script will create an Exchange Health Report including the DAG. The script is from http://exchangeserverpro.com/test-exchangeserverhealth-ps1-v1-2-released

Test-ExchangeServerHealth.ps1

Exchange Server Health Check Report

Generated: 05/16/2013 11:26:41

Exchange Server Health Check Summary

No Exchange server health alerts or warnings.

Exchange Server 2007/2010 Health

Server	Site	Roles	Version	DNS	Ping	Uptime (hrs)	Client Access Server Role Services	Hub Transport Server Role Services	Mailbox Server Role Services	Unified Messaging Server Role Services	Transport Queue	PF DBs Mounted	MB DBs Mounted	MAPI Test	Mail Flow Test
MIACAS01	Miami			Pass	Pass	52	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MIACAS02	Miami			Pass	Pass	49	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MIAMBX01	Miami			Pass	Pass	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MIAMBX02	Miami			Pass	Pass	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SYDCAS01	Sydney			Pass	Pass	47	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SYDMBX01	Sydney			Pass	Pass	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Database Availability Group **PSUnitedDAG** Health Summary:

Database	Mounted on	Preference	Total Copies	Healthy Copies	Unhealthy Copies	Healthy Queues	Unhealthy Queues	Lagged Queues	Healthy Indexes	Unhealthy Indexes
MiaDB01	MIAMBX01	1	2	2	0	2	0	0	2	0
MiaDB02	MIAMBX02	1	2	2	0	2	0	0	2	0

Database Availability Group **PSUnitedDAG** Health Details:

Database Copy	Database Name	Mailbox Server	Activation Preference	Status	Copy Queue	Replay Queue	Replay Lagged	Truncation Lagged	Content Index
MiaDB01\MIAMBX01	MiaDB01	MIAMBX01	1	Mounted	0	0	False	False	Healthy
MiaDB01\MIAMBX02	MiaDB01	MIAMBX02	2	Healthy	0	0	False	False	Healthy
MiaDB02\MIAMBX02	MiaDB02	MIAMBX02	1	Mounted	0	0	False	False	Healthy
MiaDB02\MIAMBX01	MiaDB02	MIAMBX01	2	Healthy	0	0	False	False	Healthy

Database Availability Group **PSUnitedDAG** Member Health:

Server	Cluster Service	Replay Service	Active Manager	Tasks RPC Listener	TCP Listener	DAG Members Up	Cluster Network	Quorum Group	File Share Quorum	DB Copy Suspended	DB Initializing	DB Disconnected	DB Log Copy Keeping Up	DB Log Replay Keeping Up
MIAMBX01	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
MIAMBX02	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed

- To rebalance the DAG based on activation preference, run the ***RedistributeActiveDatabases.ps1 –DagName PSUnitedDAG –BalanceDbsBy*** script. The file is under C:\Program Files\Microsoft\Exchange Server\V15\Scripts

Configuring Mail flow

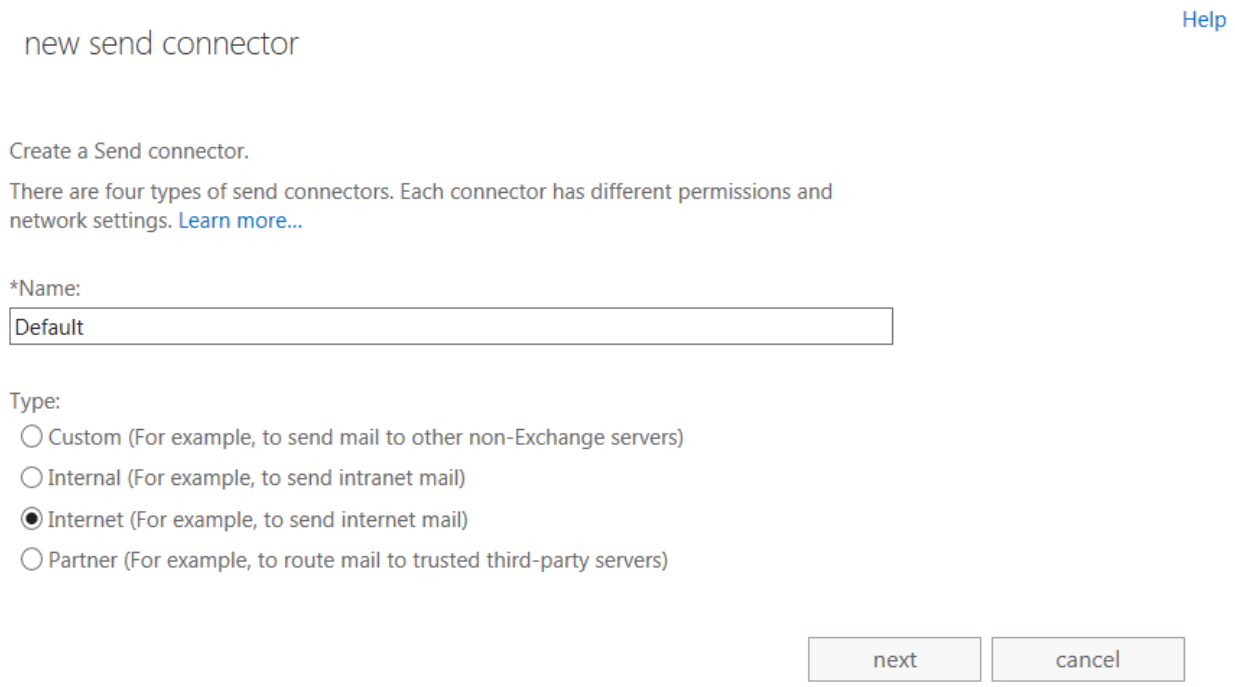
Using Powershell

New-SendConnector -Internet -Name Miami -AddressSpaces * -SourceTransportServers MiaMBX01,MiaMBX02

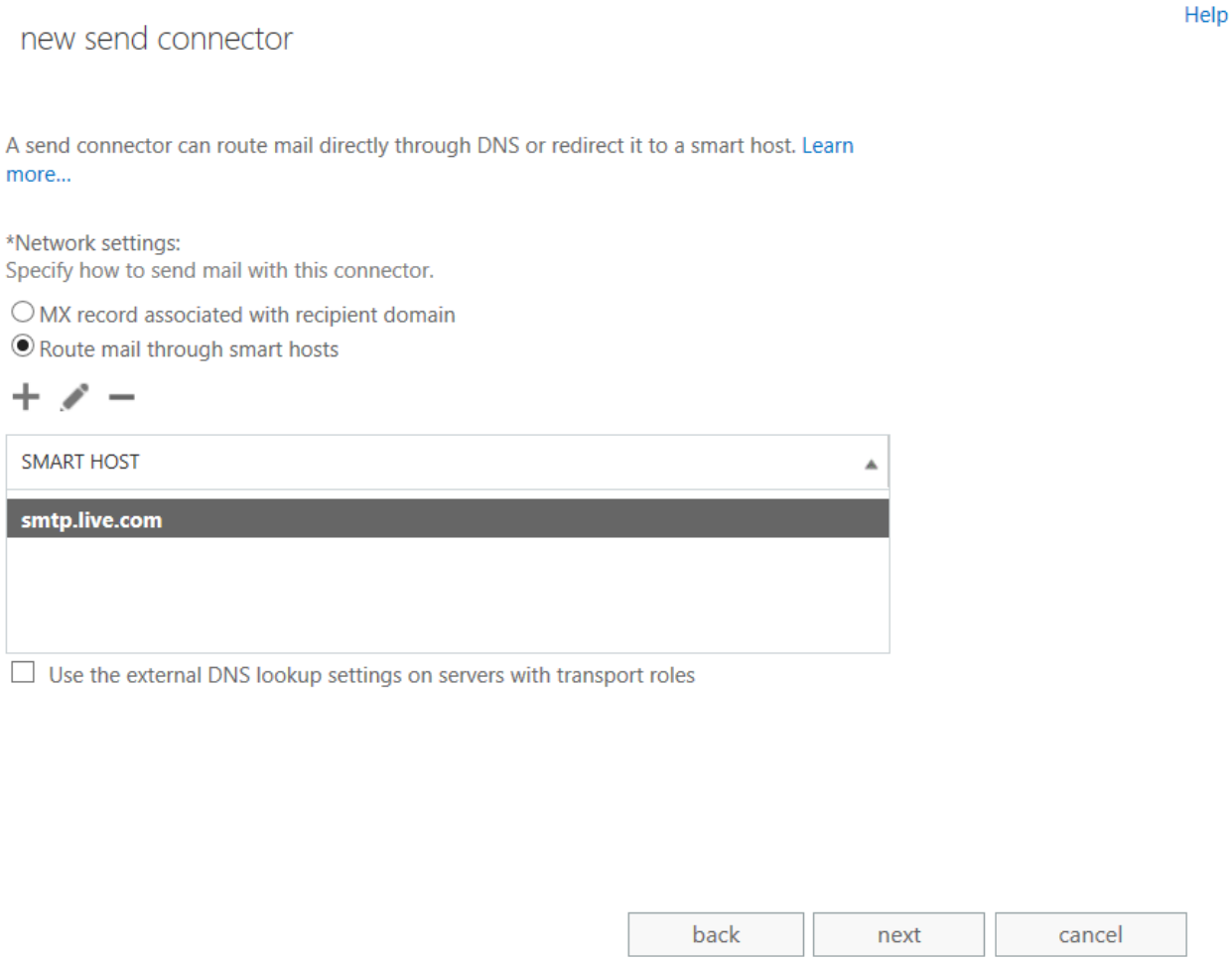
```
Machine: MiaMBX01.ps-united.com
[PS] C:\Scripts>New-SendConnector -Internet -Name Miami -AddressSpaces * -SourceTransportServers MiaMBX01,MiaMBX02

Identity                                AddressSpaces                           Enabled
--------                                -------------                           -------
Miami                                   {smtp:*;1}                              True

[PS] C:\Scripts>New-SendConnector -Internet -Name Sydney -AddressSpaces * -SourceTransportServers SydMBX01

Identity                                AddressSpaces                           Enabled
--------                                -------------                           -------
Sydney                                  {smtp:*;1}                              True

[PS] C:\Scripts>_
```

Using ECP

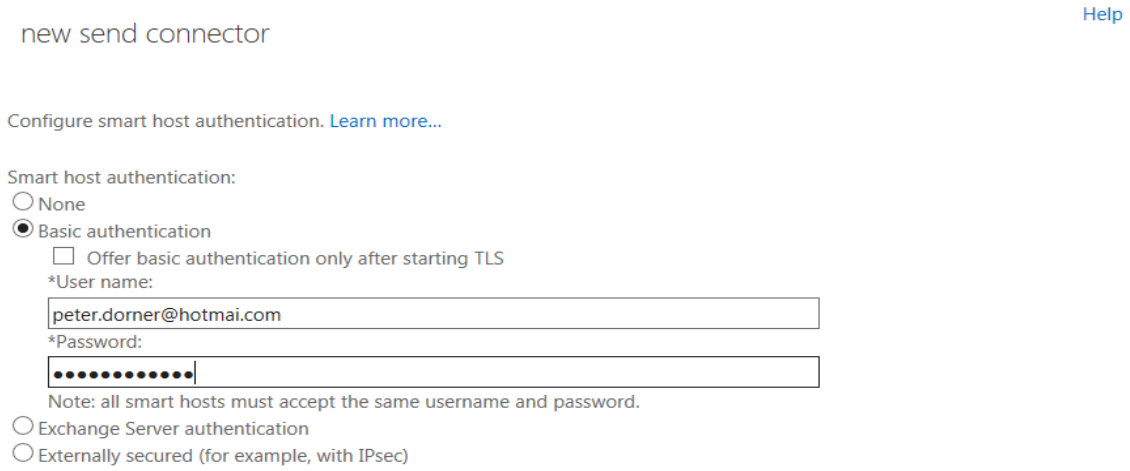
- Open **Send Connector** under **Mail flow** and start the **New send connector** wizard
- Give a meaning name of the send connector and select Internet under type



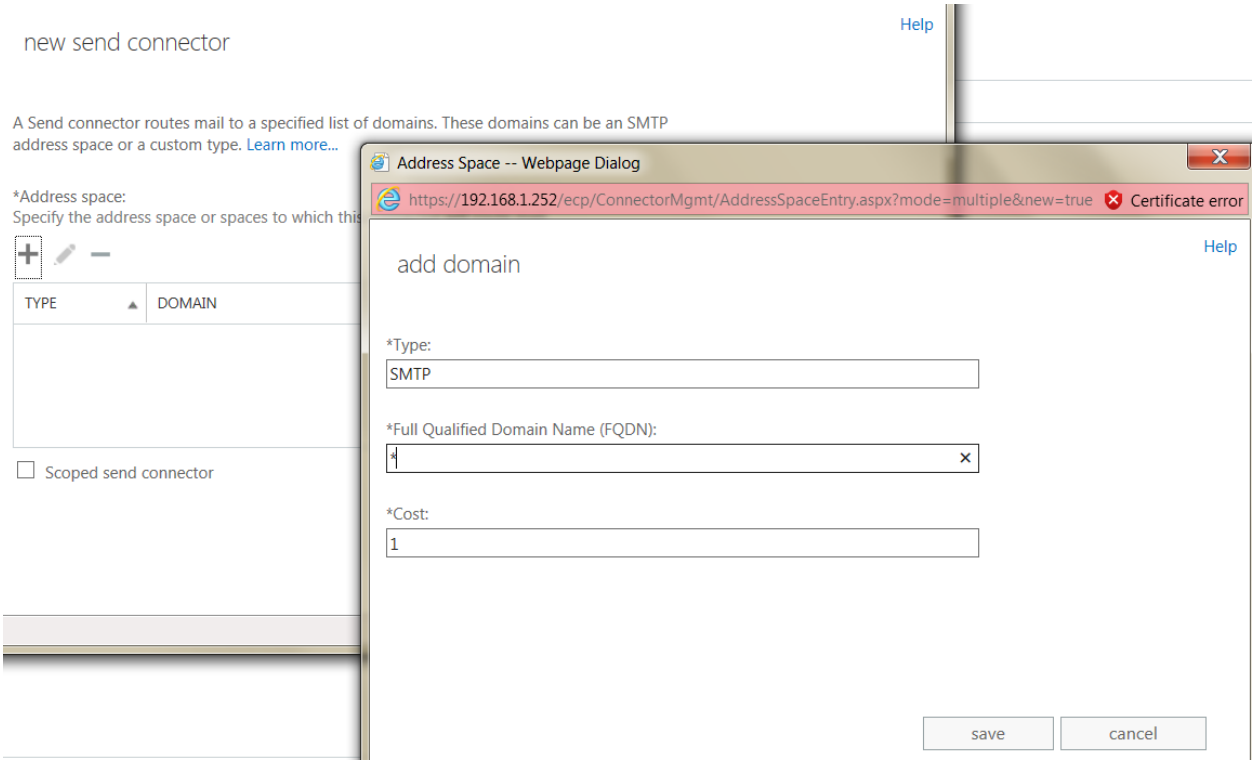
- You can use MX record lookup for mailsending or use a smarthost. In this case select **Route mail through smart hosts** and add smtp.live.com as a smart host address



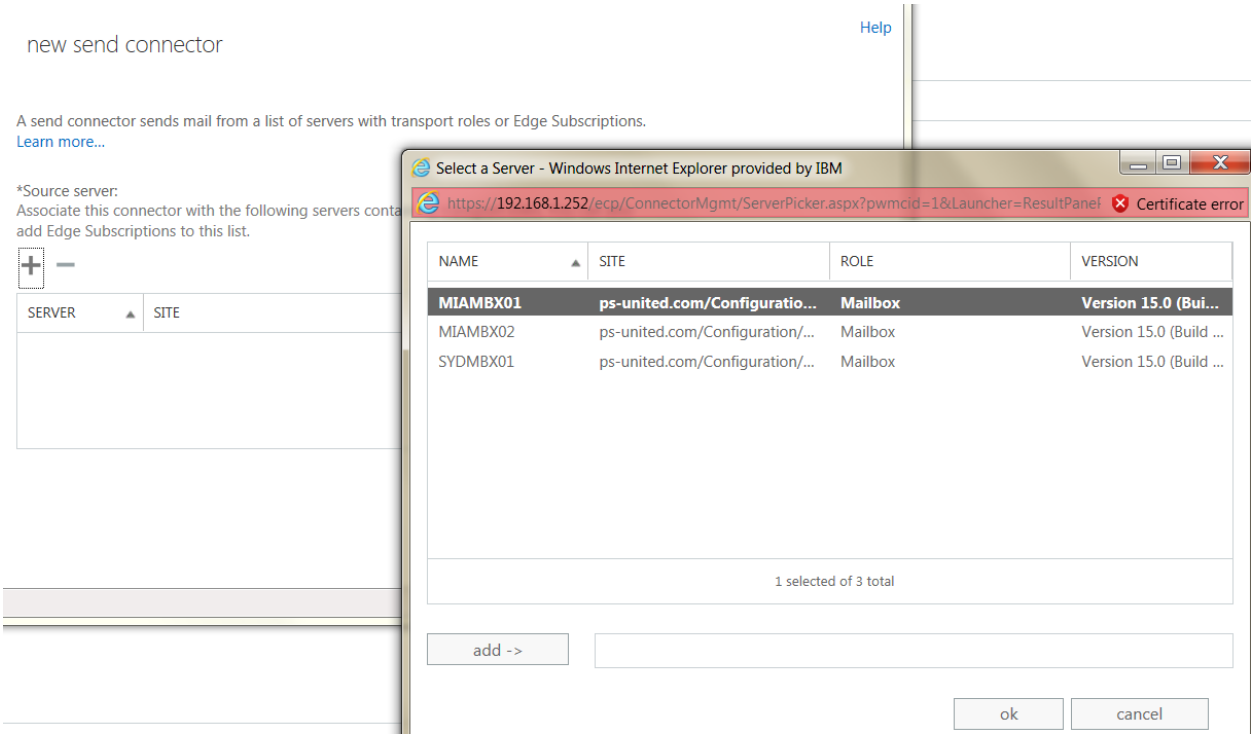
- On the next page, select Basic Authnetication andtype in the credentials



- Add the * address space to this send connector



- Select the which server can use this connector (MiaMBX01 and MiaMBX02) and finish the wizard

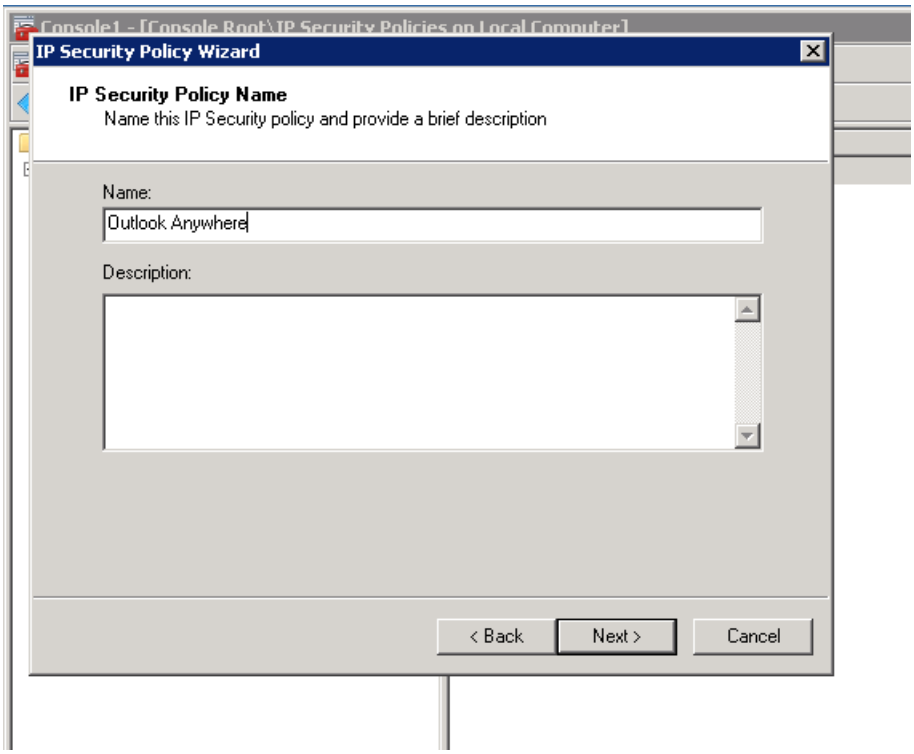


Using IPSec for Outlook Anywhere

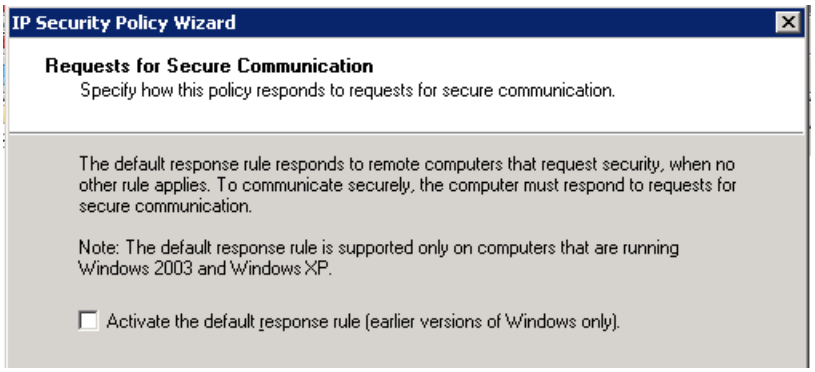
Create IPSec rule on the CAS server

- Start a new empty MMC console and add the **IP Security Policies on Local Computer** snap-in and start a new IP Security Policy

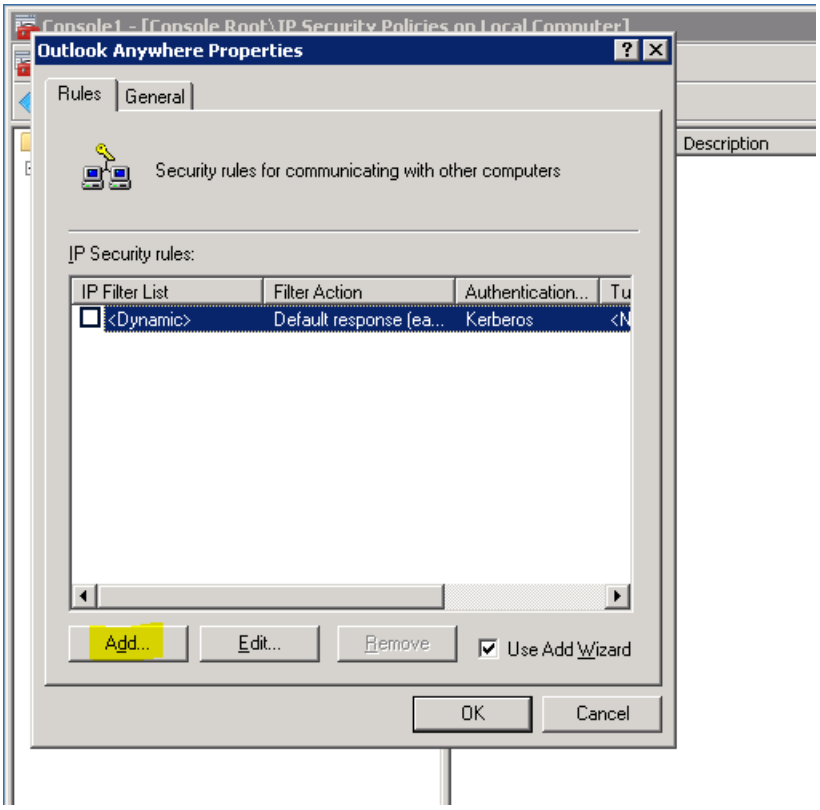
- Give the Outlook Anywhere as the name of the policy



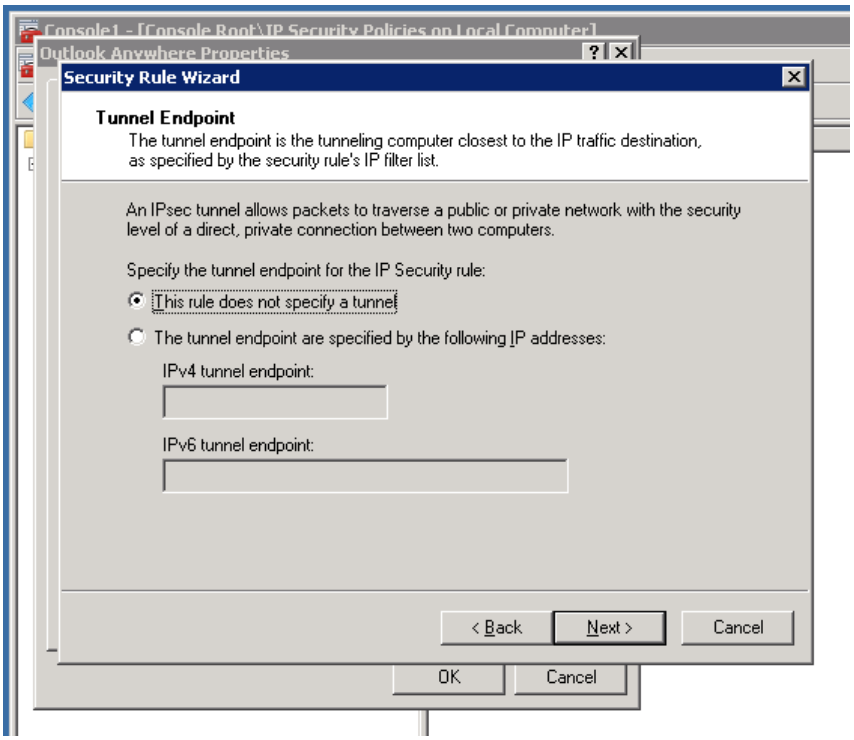
- Do NOT select the Activate the default response rule, click Next anf Finish



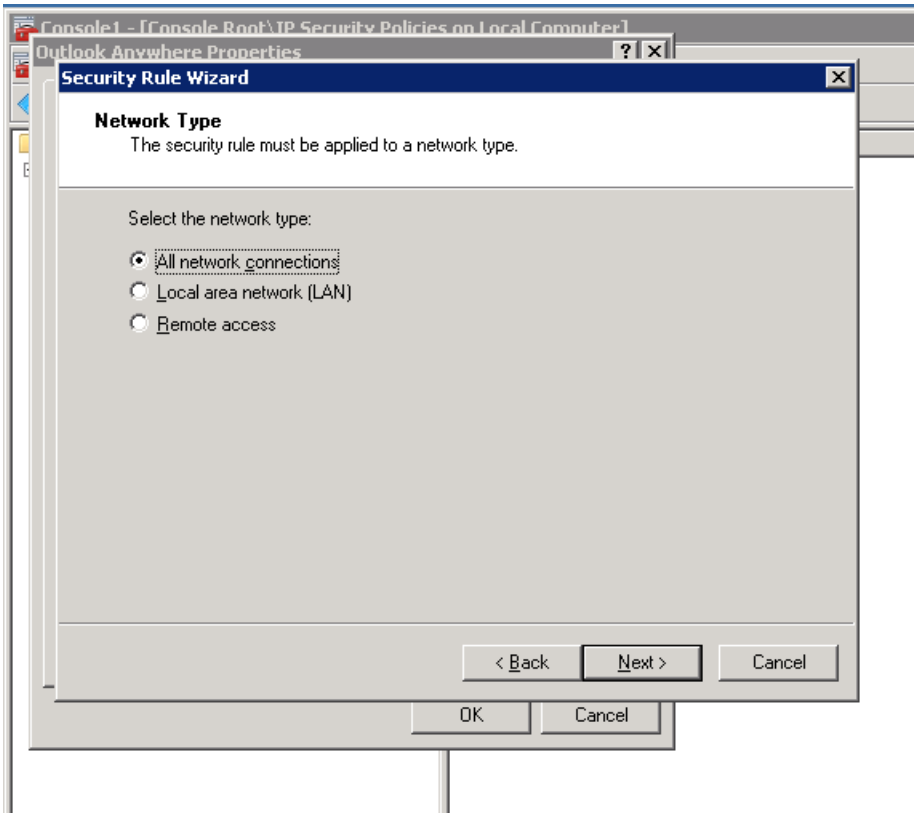
- On the new rule select **Add** and select **Next**



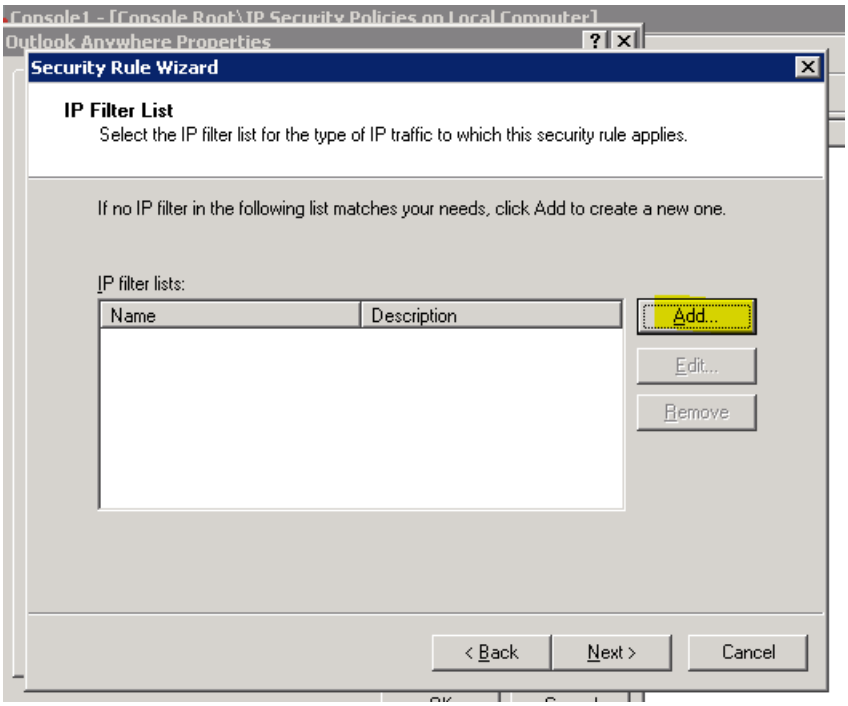
- The default selection (This rule does not specify a tunnel) is fine



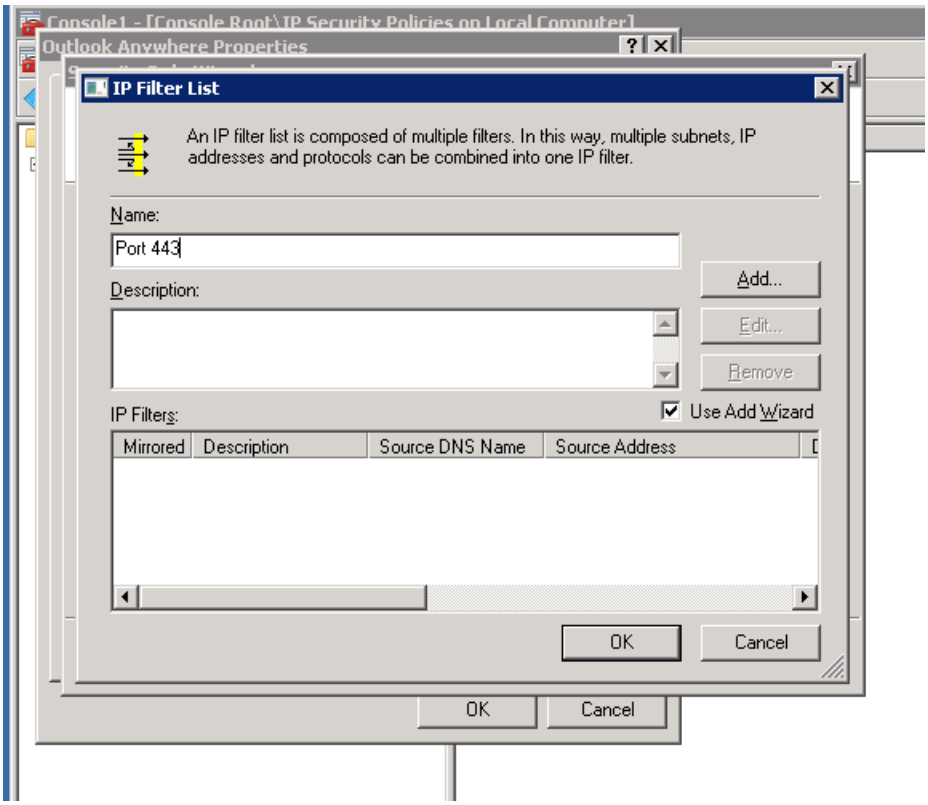
- Select **All network connections**



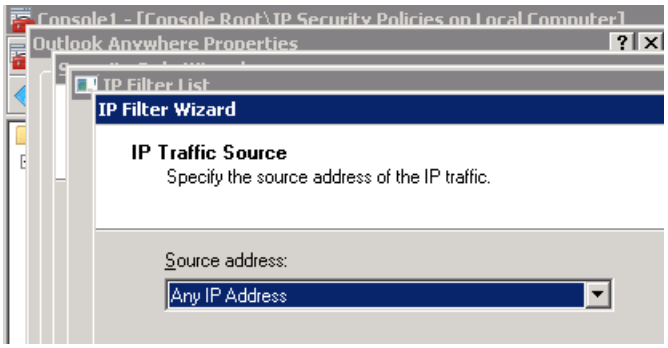
- Select **Add**



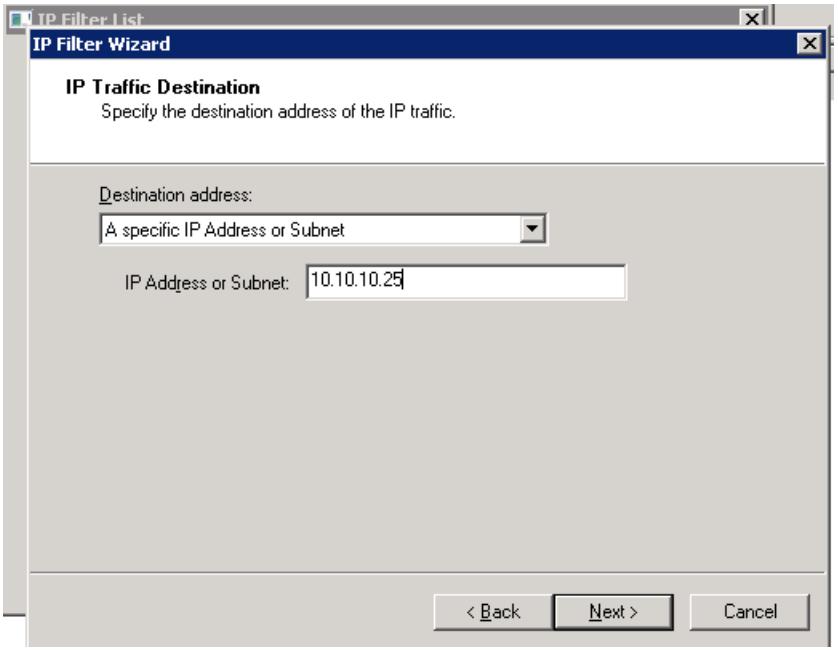
- Here we will filter the incoming conections for TCP 443, give the Port 443 as the name of the new IP filter list and select **Add**



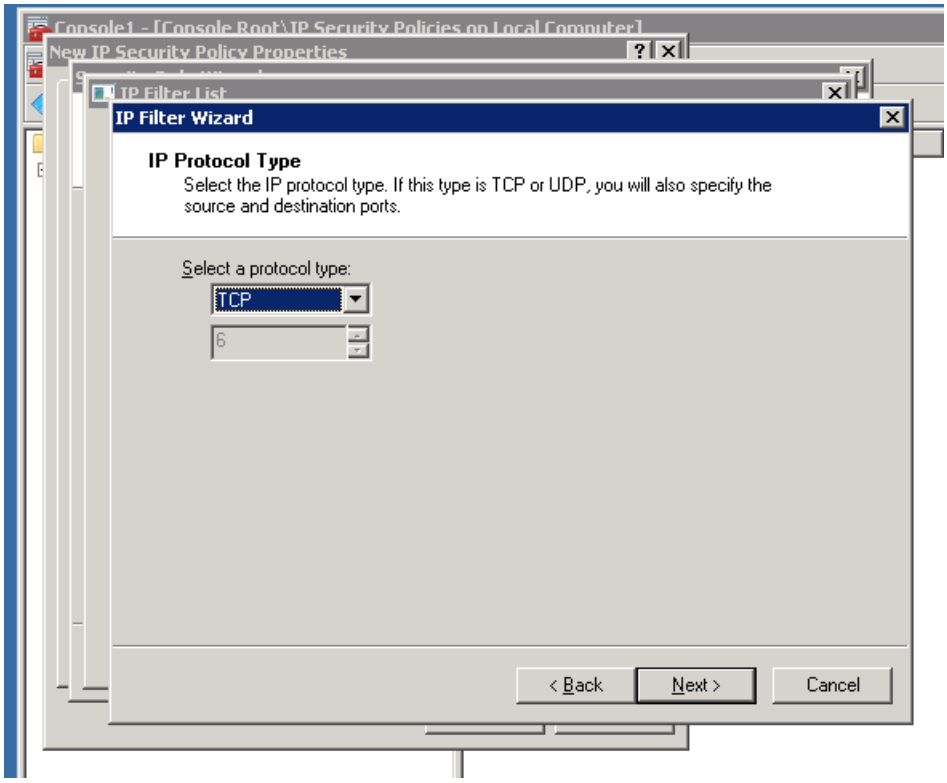
- Selecy **Next** in the IP Filter Wizard
- Give a Description of the filter list if you want then select **Next**
- **Any IP Address** as the default is fine for the incoming traffic, select **Next**



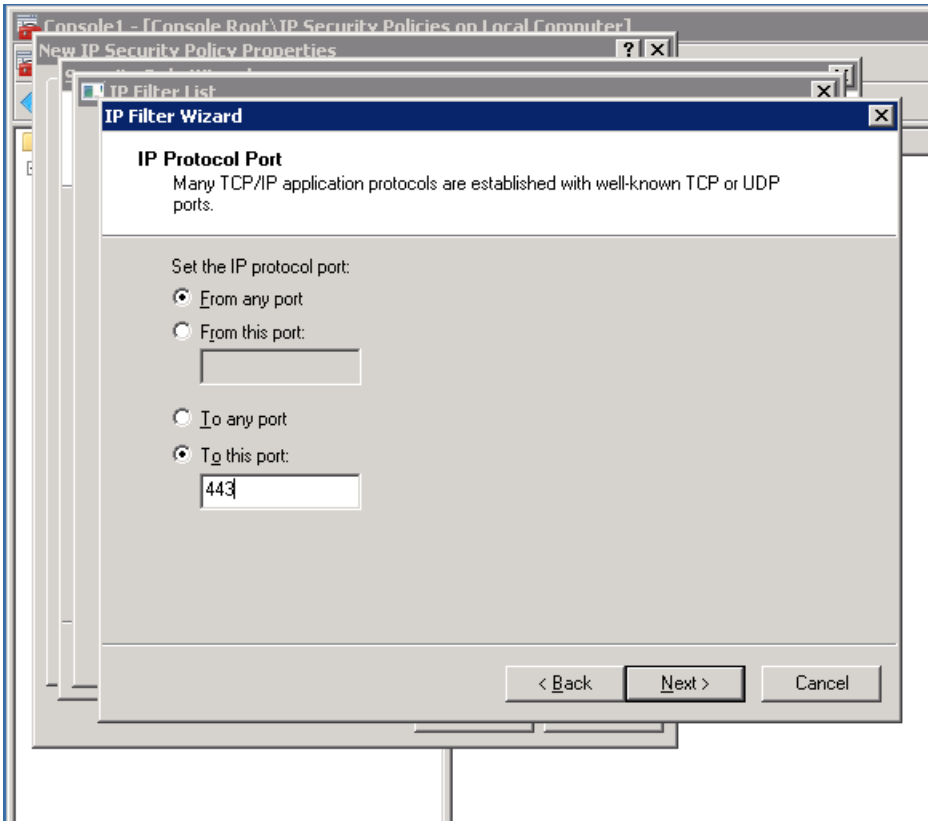
- Destination IP is the IP of the load balancer which is 10.10.10.25



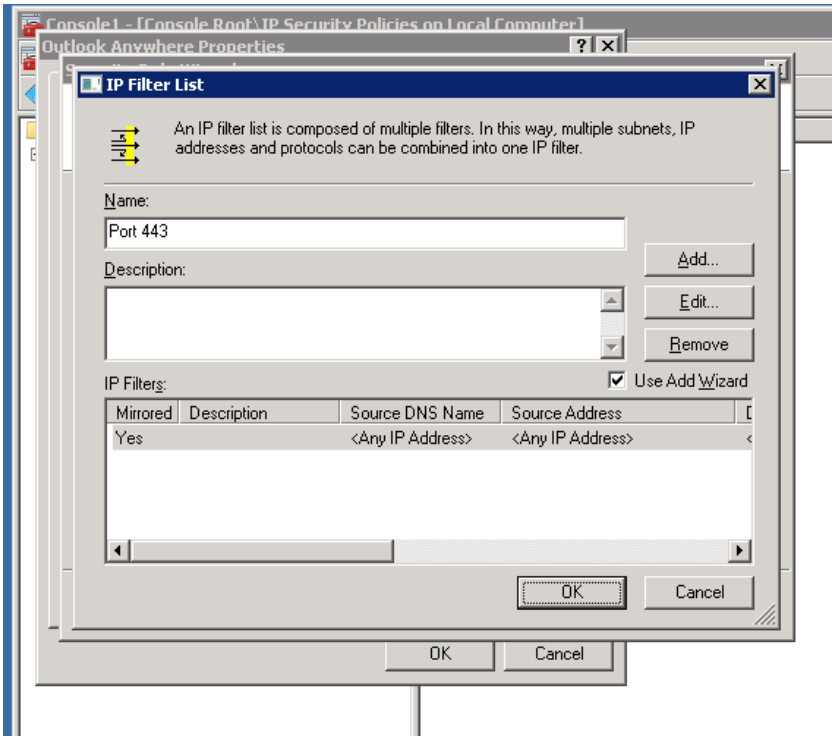
- Select **TCP** as a **protocol type**



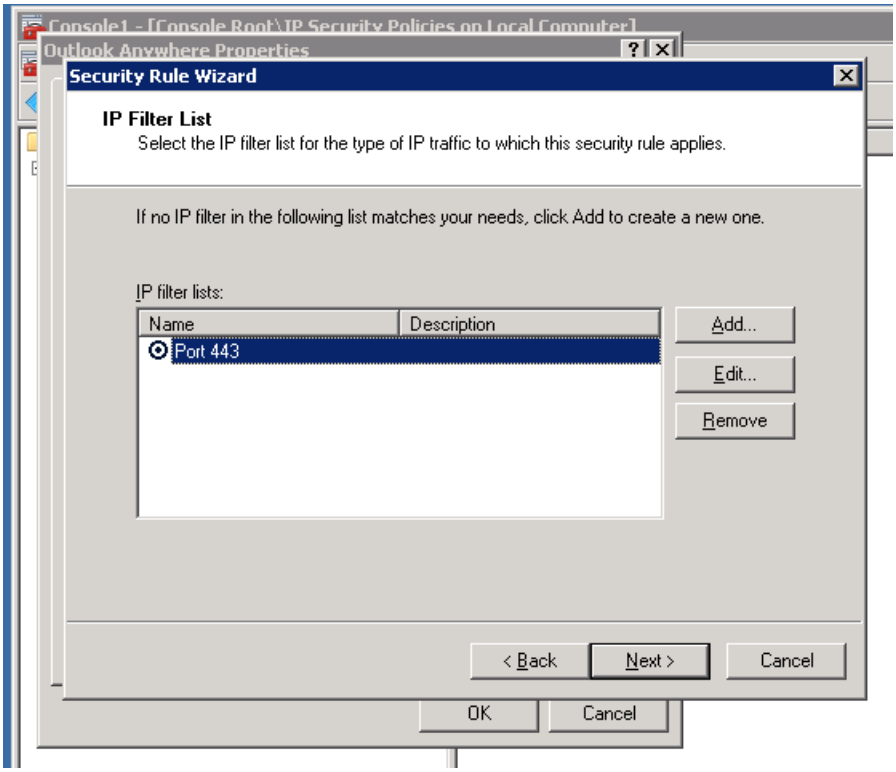
- On the next page select the **To this port** option and enter **443** and finish the wizard



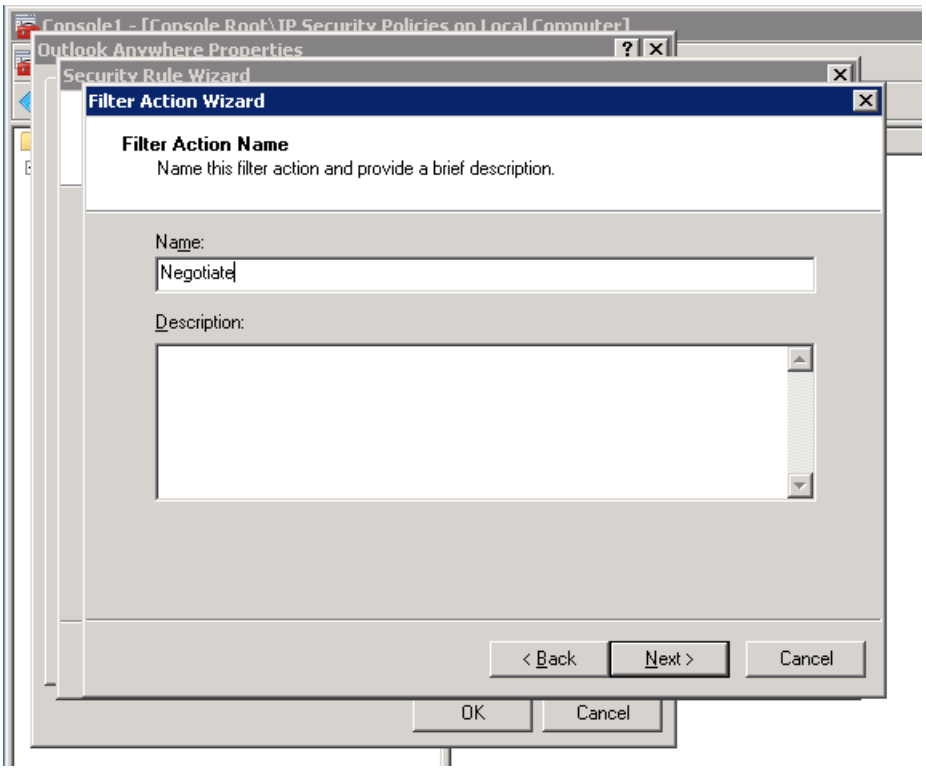
- Select **OK**



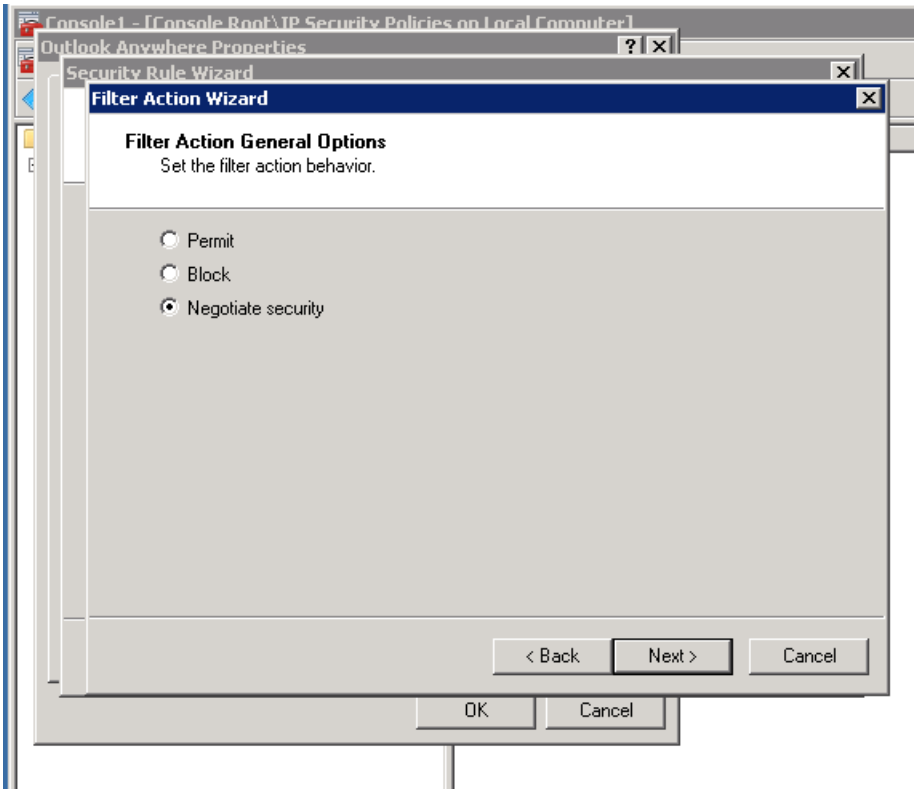
- **Next**



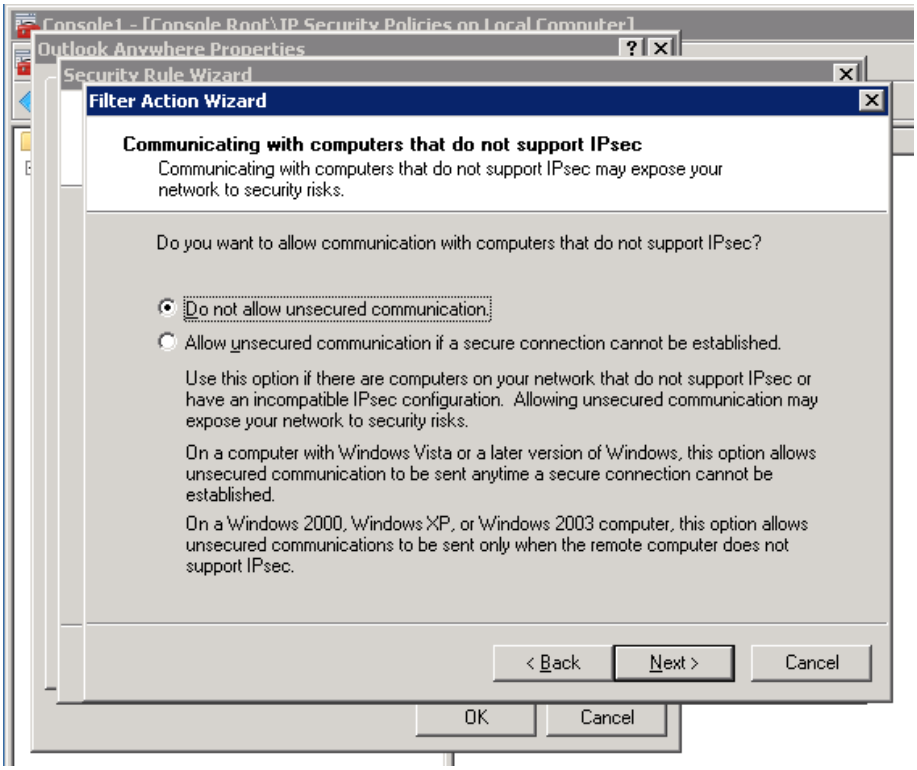
- Create a **new filter action** and give the Integrity name, select **Next**



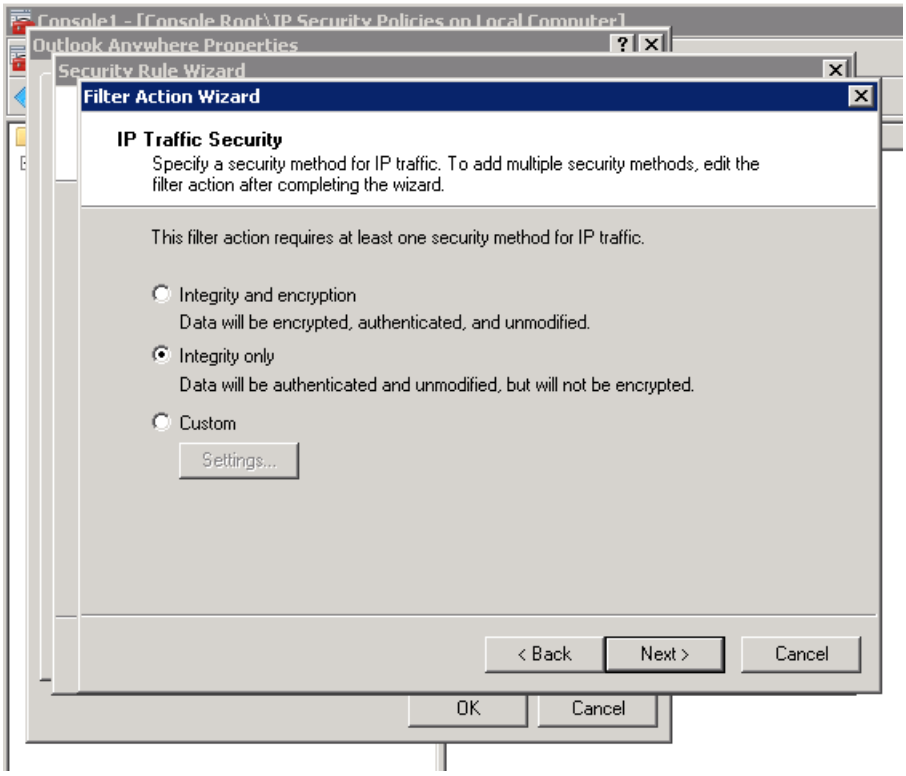
- Select the **Negotiate security** option



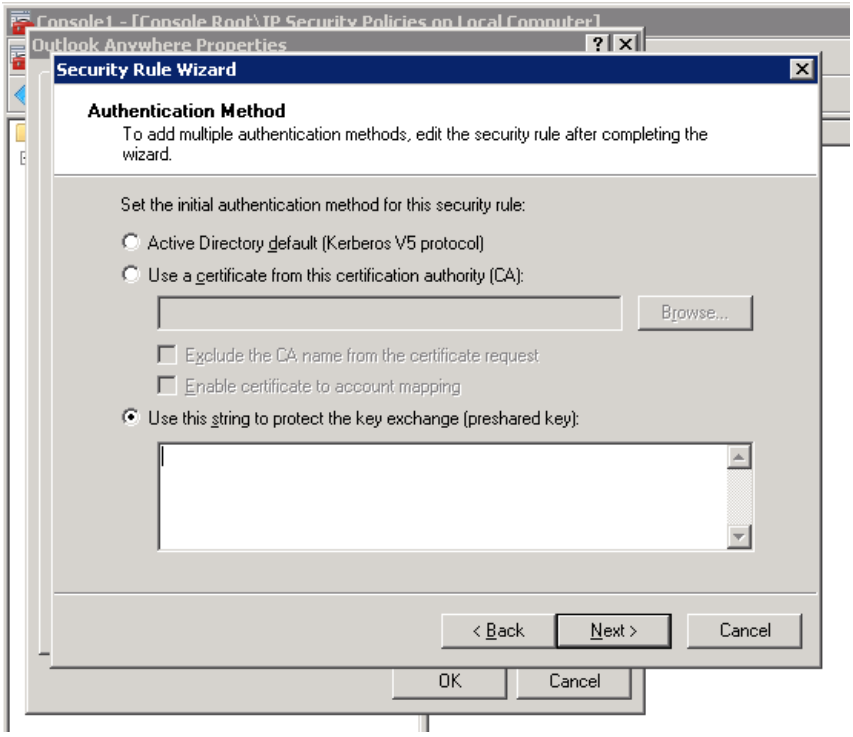
- Select **Do not allow unsecured communication** and hit **Next**



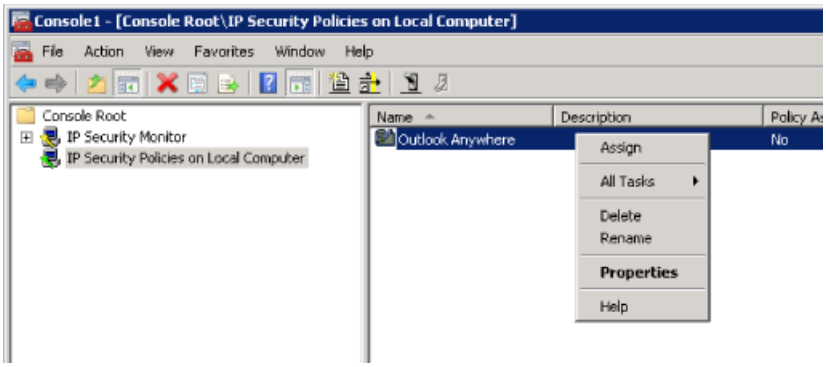
- Select the **Integrity only** option and hit **Next**



- Select the **Use this string to protect the key exchange option** and tpe the preshared key thenselect **Next** and finish the wizard



- Assign the policy on the CAS server



- Create the same rule on MiaCAS02

Create IPSec rule on the client

The settings are the same however you need to specify the load balancer IP 10.10.10.25 as the destination IP when you create the rule.
If you want to use IPsec outside of your network you need a separate IP for Outlook Anywhere and set the external IP as a destination IP in the client IPSec settings. For example if the external Outlook Anywhere FQDN is ipsec.ps-united.com then you need to put the IP associated with ipsec.ps-united.com.

You can confirm that IPsec is working if you run Outlook and it's connected to Microsoft Exchange or using the IP Security Monitor MMC snap-in you can see the established Security Association.