

Guide to setting up Azure Exchange TestLab to send/receive email with custom domain and journaling

13 April 2018 09:53

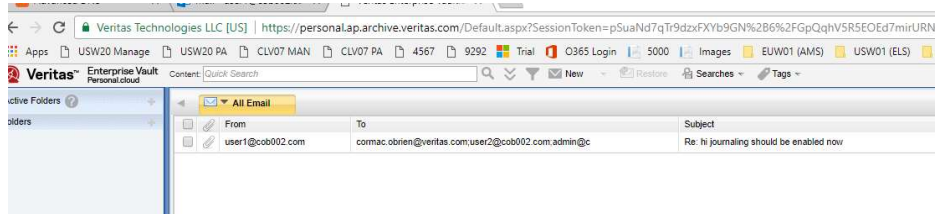
Goal

The goal is to set up a customer simulation environment with an on-premise installation of Exchange Server. This will be set up on Azure VMs which can be used with the free credit that comes from an MSDN subscription. We will set up external email flow to and from the environment, including Outlook Web Access for email secured with an SSL cert. This simulation environment can then be configured in EV.cloud, using CloudLink to synchronize accounts and with journaling and PA working.

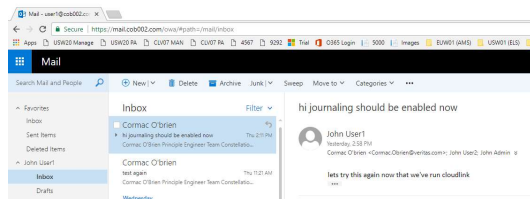
Setting up external email flow requires ownership of a domain and the ability to configure DNS records. An SSL cert is also required. We used www.namecheap.com to obtain these for a total cost of around 10 euro.

Result

External mail flow to and from an exchange server hosted at cob002. Set up in EV.cloud on AUE01 environment using CloudLink to sync accounts. Journaling enabled and emails showing up in the user's PA mailbox.



OWA access to mailbox via custom domain via https



Build Azure Environment

We will follow the steps outlined in this guide <https://docs.microsoft.com/en-us/office365/enterprise/base-configuration-dev-test-environment>

We won't be setting up a hybrid Office 365 environment so we can omit steps related to this. app1 server and setup of file shares is also omitted. It can be useful to have a client1 VM also with Outlook installed so this is included, however OWA provides more convenient access to email once it is activated.

First set up azure powershell

Use the [Cloud Shell](#) to run the Azure PowerShell in your browser, or [install](#) it on own computer.

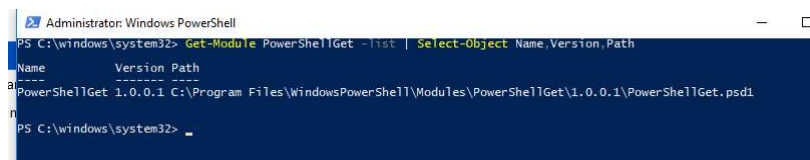
From <<https://docs.microsoft.com/en-gb/powershell/azure/overview?view=azurermps-5.2.0>>

Install and configure Azure PowerShell

From <<https://docs.microsoft.com/en-gb/powershell/azure/install-azurermp-5.2.0>>

Run this to verify Psget is in place

Get-Module PowerShellGet -list | Select-Object Name,Version,Path



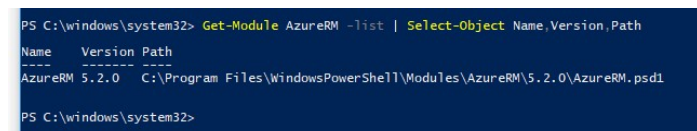
then

Install-Module AzureRM -AllowClobber

Import-Module AzureRM

You can confirm the module is loaded with

Get-Module AzureRM -list | Select-Object Name,Version,Path



Then login with your Azure credentials

with
Cormac.Obrien@veritas.com

Login-AzureRmAccount

returns

```
Account      : Cormac.Obrien@veritas.com
SubscriptionName : Visual Studio Enterprise
SubscriptionId  : 1a94abe3-08a7-43cf-8581-018acce54e5b
TenantId      : fc8e13c0-422c-4c55-b3ea-ca318e6cac32
Environment    : AzureCloud
```

Start creating the environment - Phase 1: Create the virtual network

Find SubscriptionId

Get-AzureRMSubscription | Sort Name | Select Name, Id

If you only have one just select it with this

Get-AzureRMSubscription | Select-AzureRmSubscription

Note that we encountered issues when using North Europe as the Azure location. Believe this is because the Azure account from MSDN is a trial subscription with certain restrictions. After switching to using the West Europe datacentre we were able to continue.

Create resource group (substitute cob002 for your resource group name)

```
$rgName="cob002"
$locName="West Europe"
New-AzureRmResourceGroup -Name $rgName -Location $locName
Get-AzureRmResourceGroup
```

```
PS C:\windows\system32> Get-AzureRmResourceGroup

ResourceGroupName : cob002
Location           : westeurope
ProvisioningState   : Succeeded
Tags               :
ResourceId          : /subscriptions/1a94abe3-08a7-43cf-8581-018acce54e5b/resourceGroups/cob002
```

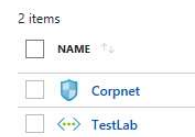
Create virtual network

Just copy the script from here

<https://docs.microsoft.com/en-us/office365/enterprise/base-configuration-dev-test-environment>

```
# Virtual Network
$corpnetSubnet = New-AzureRMVirtualNetworkSubnetConfig -Name Corpnet -AddressPrefix 10.0.0.0/24
New-AzureRMVirtualNetwork -Name TestLab -ResourceGroupName $rgName -Location $locName -AddressPrefix 10.0.0.0/8 -Subnet $corpnetSubnet -DNSServer 10.0.0.4
$rule1 = New-AzureRMNetworkSecurityRuleConfig -Name "AllowRdpInBound" -Description "Allow RDP to all VMs on the subnet" -Access Allow -Protocol Tcp -Direction Inbound -Priority 100 -SourceAddressPrefix Internet -SourcePortRange * -DestinationAddressPrefix * -DestinationPortRange 3389
$rule2 = New-AzureRMNetworkSecurityRuleConfig -Name "AllowWinRMInBound" -Description "Allow powershell remoting" -Access Allow -Protocol Tcp -Direction Inbound -Priority 1100 -SourceAddressPrefix Internet -SourcePortRange * -DestinationAddressPrefix * -DestinationPortRange 5986
New-AzureRMNetworkSecurityGroup -Name Corpnet -ResourceGroupName $rgName -Location $locName -SecurityRules $rule1, $rule2
$vnnet = Get-AzureRMVirtualNetwork -ResourceGroupName $rgName -Name TestLab
$nsgr = Get-AzureRMNetworkSecurityGroup -Name Corpnet -ResourceGroupName $rgName
Set-AzureRMVirtualNetworkSubnetConfig -VirtualNetwork $vnnet -Name Corpnet -AddressPrefix "10.0.0.0/24" -NetworkSecurityGroup $nsgr
```

Go to <https://portal.azure.com/> and verify that everything is created...



Phase 2: Configure DC1

The VM admin account username and password will be:

veritasadmin
W3lcome!W3lcome!

```
# Create Virtual Machine
$pip = New-AzureRMPublicIpAddress -Name DC1-PIP -ResourceGroupName $rgName -Location $locName -AllocationMethod Dynamic
$nic = New-AzureRMNetworkInterface -Name DC1-NIC -ResourceGroupName $rgName -Location $locName -SubnetId $vnnet.Subnets[0].Id -PublicIpAddressId $pip.Id -PrivateIpAddress 10.0.0.4
$vm = New-AzureRMVMConfig -VMName DC1 -VMSize Standard_A1

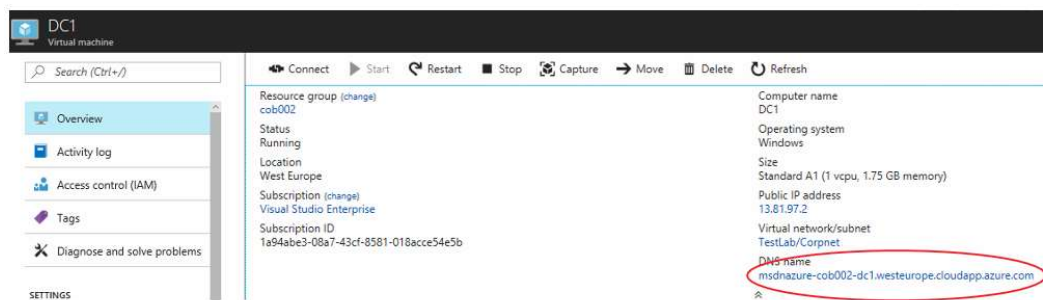
$username = "veritasadmin"
$password = ConvertTo-SecureString "W3lcome!W3lcome!" -AsPlainText -Force
$cred = New-Object System.Management.Automation.PSCredential $username, $password

$vm = Set-AzureRMVMOperatingSystem -VM $vm -Windows -ComputerName DC1 -Credential $cred -ProvisionVMAgent -EnableAutoUpdate
$vm = Set-AzureRMVMSourceImage -VM $vm -PublisherName MicrosoftWindowsServer -Offer WindowsServer -Skus 2016-Datacenter -Version "latest"
$vm = Add-AzureRMVNetworkInterface -VM $vm -Id $nic.Id
$vm = Set-AzureRMVMDisk -VM $vm -Name "DC1-OS" -DiskSizeInGB 128 -CreateOption FromImage -StorageAccountType "StandardLRS"
$diskConfig = New-AzureRMDiskConfig -AccountType "StandardLRS" -Location $locName -CreateOption Empty -DiskSizeGB 20
$dataDisk1 = New-AzureRMDisk -DiskName "DC1-DataDisk1" -Disk $diskConfig -ResourceGroupName $rgName
$vm = Add-AzureRMVMDisk -VM $vm -Name "DC1-DataDisk1" -CreateOption Attach -ManagedDiskId $dataDisk1.Id -Lun 1
New-AzureRMVM -ResourceGroupName $rgName -Location $locName -VM $vm
```

Set a DNS name for the server

In this case it is

msdnazure-cob002-dc1.westeurope.cloudapp.azure.com



RDP to the server

Use the DNS name as it will be constant

Log in with veritasadmin account

Create disk and activate DC1 as domain controller

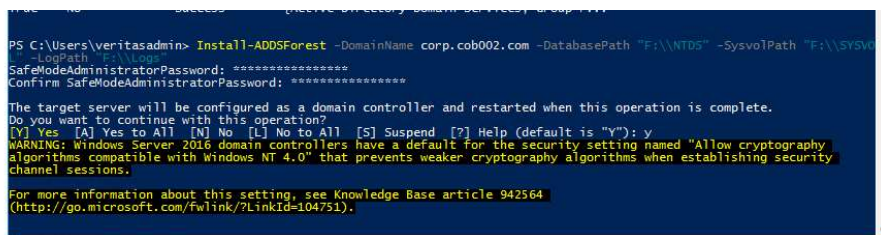
from dc1 run the following

Note the use of corp.cob002.com as the AD domain name, this should be changed to match the purchased domain name.

```
Get-Disk | Where PartitionStyle -eq "RAW" | Initialize-Disk -PartitionStyle MBR -PassThru | New-Partition -AssignDriveLetter -UseMaximumSize | Format-Volume -FileSystem NTFS -NewFileSystemLabel "WSAD Data"
```

```
Install-WindowsFeature AD-Domain-Services -IncludeManagementTools
```

```
Install-ADDSForest -DomainName corp.cob002.com -DatabasePath "F:\NTDS" -SysvolPath "F:\SYSVOL" -LogPath "F:\Logs"
```



Log out and connect again to DC1 using domain credentials

change credentials to be now

corp.cob002.com\veritasadmin
W3lcome!W3lcome!

and log back in

Set up Exchange server

combining the steps from:

Exchange 2016 dev/test environment in Azure

From <https://technet.microsoft.com/en-us/library/mt733070%28v=exchg.160%29.aspx?f=255&MSPPError=-2147217396>

we already have domain controller DC1 and vnet and nsg

only thing that is missing is RSAT-ADDS-Tools, so log into DC1 and run the following

```
Add-WindowsFeature RSAT-ADDS-Tools
```

Phase 2: Create the Exchange 2016 virtual machine

Run the script to create the exc1 machine, configuring the variables to match your environment

```
# Set up key variables
$subscriptionName="<name of your Azure subscription>"
$resourceGroupName="your resource group name"
$vmDNSName="unique, public DNS name for the Exchange server"

# Set the Azure subscription
Get-AzureRmSubscription -SubscriptionName $subscriptionName | Select-AzureRmSubscription

# Get the Azure location and storage account names
$location=(Get-AzureRmResourceGroup -Name $resourceGroupName).Location
$saName=(Get-AzureRmStorageAccount | Where {$_.ResourceGroupName -eq $resourceGroupName}).StorageAccountName

# Create an availability set for Exchange virtual machines
```

```
New-AzureRMAvailabilitySet -Name exAvailabilitySet -ResourceGroupName $rgName -Location $locName

# Specify the virtual machine name and size
$vmName="exVM"
$vmSize="Standard_D3_v2"
$vnNet=Get-AzureRMVirtualNetwork -Name "EX2016Vnet" -ResourceGroupName $rgName
$avSet=Get-AzureRMAvailabilitySet -Name exAvailabilitySet -ResourceGroupName $rgName
$vm=New-AzureRMVMConfig -VMName $vmName -VMSize $vmSize -AvailabilitySetId $avSet.Id

# Create the NIC for the virtual machine
$nicName=$vmName + "-NIC"
$pipName=$vmName + "-PublicIP"
$pip=New-AzureRMPublicIpAddress -Name $pipName -ResourceGroupName $rgName -DomainNameLabel $vmDNSName -Location $locName -AllocationMethod Dynamic
$nic=New-AzureRMNetworkInterface -Name $nicName -ResourceGroupName $rgName -Location $locName -SubnetId $vnet.Subnets[0].Id -PublicIpAddressId $pip.Id -PrivateIpAddress "10.0.0.5"

# Specify the image and local administrator account, and then add the NIC
$cred=Get-Credential -Message "Type the name and password of the local administrator account for exVM."
$vm=Set-AzureRMVMOperatingSystem -VM $vm -Windows -ComputerName $vmName -Credential $cred -ProvisionVMAgent -EnableAutoUpdate
$vm=Set-AzureRMVMSourceImage -VM $vm -PublisherName MicrosoftWindowsServer -Offer WindowsServer -Skus 2012-R2-Datacenter -Version "latest"
$vm=Add-AzureRMVMNetworkInterface -VM $vm -Id $nic.Id

# Specify the OS disk name and create the VM
$diskName="OSDisk"
$storageAcc=Get-AzureRMStorageAccount -ResourceGroupName $rgName -Name $saName
$osDiskUri=$storageAcc.PrimaryEndpoints.Blob.ToString() + "vhds/" + $vmName + $diskName + ".vhd"
$vm=Set-AzureRMVMOsDisk -VM $vm -Name $diskName -VhdUri $osDiskUri -CreateOption fromImage
New-AzureRMVM -ResourceGroupName $rgName -Location $locName -VM $vm
```

Log onto EXC1 and connect to domain

```
$username = "corp.cob002.com\admin"
$password = ConvertTo-SecureString "W3lc0m3!w3lc0m3!" -AsPlainText -Force
$cred = New-Object System.Management.Automation.PSCredential $username, $password

Add-Computer -DomainName corp.cob002.com -Credential $cred
Restart-Computer
```

Get the FQDN

```
Write-Host (Get-AzureRMPublicIpAddress -Name "exc1-PublicIP" -ResourceGroup $rgName).DnsSettings.Fqdn
```

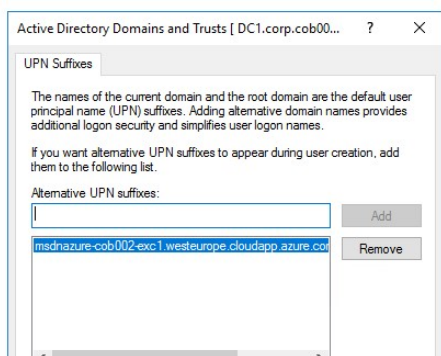
gives fqdn of

msdnazure-cob002-ex1.westeurope.cloudapp.azure.com

Connect to the dc1 VM and execute the following

1. From the Start screen of adVM, type **Active Directory**, and then click **Active Directory Domains and Trusts**.
2. Right-click **Active Directory Domains and Trusts**, and then click **Properties**.
3. In **Alternative UPN suffixes**, type or copy the Internet DNS name of the exVM virtual machine from step 2, click **Add**, and then click **OK**.
4. Close the remote desktop session with adVM.

From <<https://technet.microsoft.com/en-us/library/mt733070%28v=exchg.160%29.aspx?f=255&MSPPError=-2147217396>>



Install Exchange 2016

connect to exc1 as veritasadmin

install the following features from an admin powershell prompt and restart

```
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-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, RSAT-ADDS-Tools
Restart-Computer
```

Then download and install Unified Communications Managed API 4.0 Runtime

download from <https://www.microsoft.com/download/details.aspx?id=34992>

Download and install Exchange 2016 with latest updates

must log in as domain admin
cob002\admin

Note the organization name changed to **cob002**

download from [https://technet.microsoft.com/en-us/library/ji907309\(v=exchg.160\).aspx](https://technet.microsoft.com/en-us/library/ji907309(v=exchg.160).aspx)

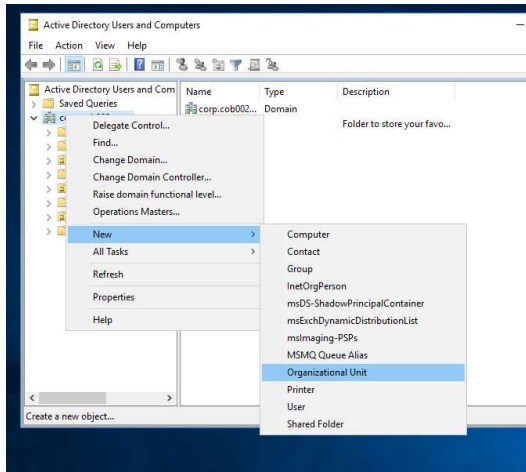
5. Click **Save** to store the ISO file in the Downloads folder.
6. Click **Open Folder**, right-click the Exchange ISO file, and then click **Mount**.
7. From an administrator-level Windows PowerShell command prompt on exVM, run the following:
e:
. \setup.exe /mode:Install /role:Mailbox /OrganizationName:cob002 /IacceptExchangeServerLicenseTerms
Restart-Computer
Wait until Exchange setup completes, which can take some time, and exVM restarts.

From <<https://technet.microsoft.com/en-us/library/mt733070%28v=exchg.160%29.aspx?f=255&MSPPError=-2147217396>>

Add two mailboxes to the Exchange server

Create users and mailboxes through Exchange, this easily allows you to add them to an OU of "Mail Users", this is very handy for configuring CloudLink later.

Log into dc1 and use Active Directory Users and Computers to create a new OU named "Mail Users"



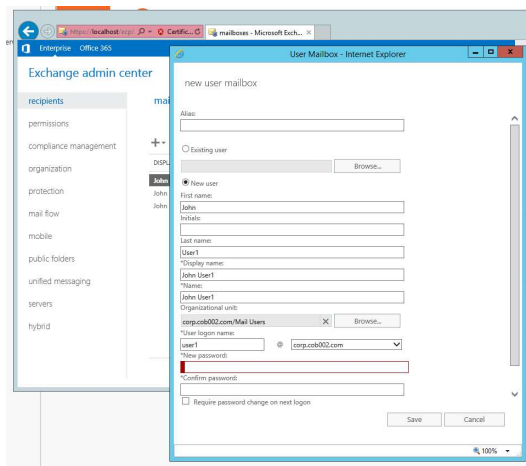
Log into exc1 and open exchange admin center

<https://localhost/ecp/>

Log in with:

corp.cob002.com\admin
W3lcome!W3lcome!

Create two mailboxes for user1 and user2 in the OU created above like the following



Use OWA to log in as each user and verify mail is flowing internally between mailboxes

<https://localhost/owa/>

Create CLIENT1

changed VMSize to Standard_A2_v2 as the other is too small

```
# Create CLIENT1 Virtual Machine
$vnets = Get-AzureRMVirtualNetwork -Name TestLab -ResourceGroupName $rgName
$pip = New-AzureRMPublicIpAddress -Name CLIENT1-PIP -ResourceGroupName $rgName -Location $locName -AllocationMethod Dynamic
$nic = New-AzureRMNetworkInterface -Name CLIENT1-NIC -ResourceGroupName $rgName -Location $locName -SubnetId $vnets.Subnets[0].Id -PublicIpAddressId $pip.Id
$vm = New-AzureRMVMConfig -VMName CLIENT1 -VMSize Standard_A2
$vm = Set-AzureRMVMOperatingSystem -VM $vm -Windows -ComputerName CLIENT1 -Credential $cred -ProvisionVMAgent -EnableAutoUpdate
$vm = Set-AzureRMVMSourceImage -VM $vm -PublisherName MicrosoftWindowsServer -Offer WindowsServer -Skus 2016-Datacenter -Version "latest"
$vm = Add-AzureRMVMNetworkInterface -VM $vm -Id $nic.Id
$vm = Set-AzureRMVMSDisk -VM $vm -Name "CLIENT1-OS" -DiskSizeInGB 128 -CreateOption FromImage -StorageAccountType "StandardLRS"
New-AzureRMVM -ResourceGroupName $rgName -Location $locName -VM $vm
```

Set the DNS name to

msdnazure-cob002-client1.westeurope.cloudapp.azure.com

Join domain

log in as veritasadmin and run

```
$username = "corp.cob002.com\veritasadmin"
$password = ConvertTo-SecureString "W3lcome!W3lcome!" -AsPlainText -Force
$cred = New-Object System.Management.Automation.PSCredential $username, $password

Add-Computer -DomainName corp.cob002.com -Credential $cred
Restart-Computer
```

Log in as user1

corp.cob002.com\user1
W3lcome!W3lcome!

lets install office client onto client1

log in as
cob002\user1

who is
user1@cob002.onmicrosoft.com

Then can outlook find the mailbox?

Log into client1 as user1

log in as
cob002\user1

who is
user1@cob002.onmicrosoft.com

Install office from MSDN subscription and open Outlook

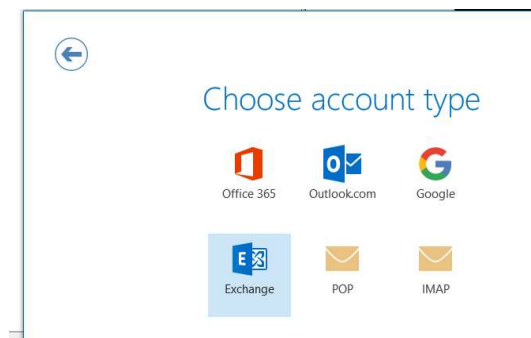
Welcome to Outlook

Enter an email address to add your account.

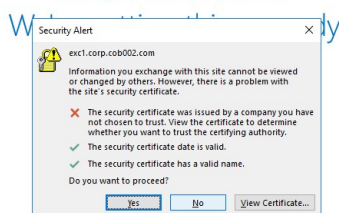
user1@corp.cob002.com

Advanced options ▾

Connect



Adding user1@corp.cob002.com

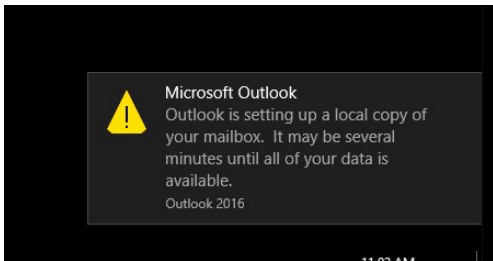


Adding user1@corp.cob002.com

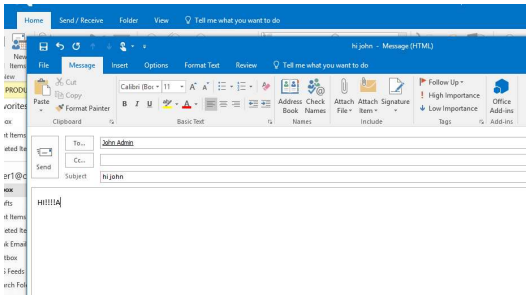
Account setup is complete

OK

☐ Set up Outlook Mobile on my phone, too



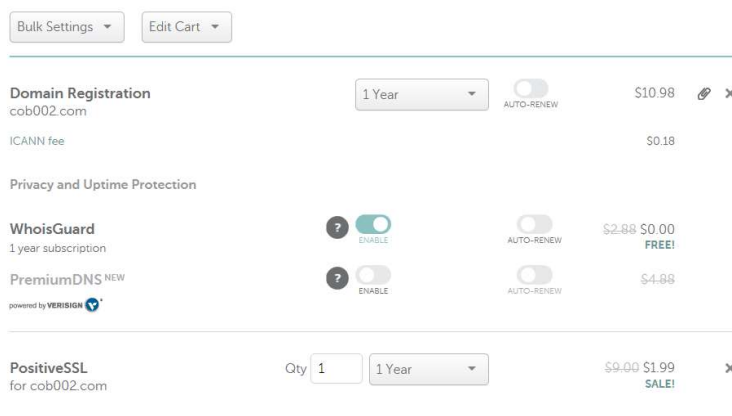
Verify sending emails between user1 and user2



Buy domain and SSL cert for to set up external email flow

Register domain with namecheap including PositiveSSL cert for one domain

later we will activate the ssl cert for mail.cob002.com



Set up mail flow following the steps in

Configure mail flow and client access

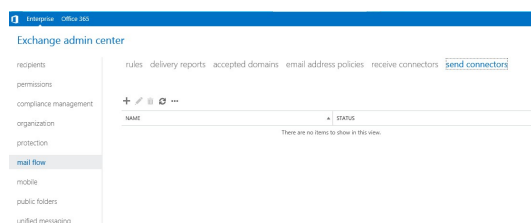
From [https://technet.microsoft.com/en-us/library/jj218640\(v=exchg.160\).aspx](https://technet.microsoft.com/en-us/library/jj218640(v=exchg.160).aspx)

Open the EAC by browsing to the URL of your Mailbox server. For example, <https://Ex2016MBX/ECP>

<https://localhost/ecp/>

corp.cob002.com\admin

W3lcome!W3lcome!



Send Connector - Internet Explorer

new send connector

Create a Send connector.
There are four types of send connectors. Each connector has different permissions and network settings. [Learn more...](#)

*Name:

Type:
☐ Custom (For example, to send mail to other non-Exchange servers)
☐ Internal (For example, to send intranet mail)
☒ Internet (For example, to send internet mail)
☐ Partner (For example, to route mail to trusted third-party servers)

Send Connector - Internet Explorer

new send connector

A send connector can route mail directly through DNS or redirect it to a smart host. [Learn more...](#)

*Network settings:
Specify how to send mail with this connector.
☒ MX record associated with recipient domain
☐ Route mail through smart hosts

+ -

SMART HOST

☐ Use the external DNS lookup settings on servers with transport roles

new send connector

Address Space -- Webpage Dialog

add domain

*Type:

*Full Qualified Domain Name (FQDN):
 x

*Cost:

Save Cancel

NEW SEND CONNECTOR

A Send connector routes mail to a specified list of domains. These domains can be an SMTP address space or a custom type. [Learn more...](#)

*Address space:
Specify the address space or spaces to which this connector will route mail.

+ -

TYPE	DOMAIN	COST
SMTP	*	1

☐ Scoped send connector

Address Space - Internet Explorer

NAME	SITE	ROLE	VERSION
exc1	corp.cob002.com/Configurat...	Mailbox	Version 15.1 (Buil...

1 selected of 1 total

add -> exc1 [remove]

OK Cancel

new send connector

A send connector sends mail from a list of servers with transport roles or Edge Subscriptions.
[Learn more...](#)

*Source server:
 Associate this connector with the following servers containing transport roles. You can also add Edge Subscriptions to this list.

SERVER	SITE	ROLE
exc1	corp.cob002.com/Configuration/Sites/Default-Fir...	Mailbox

At this point there should be email flowing out, however you will find that on an Azure VM email is not being sent. This is due to restrictions on sending email from Azure VMs see <https://blogs.msdn.microsoft.com/mast/2017/11/15/enhanced-azure-security-for-sending-emails-november-2017-update/>

Without a paid plan it is not possible to send outgoing emails.

However there is an option of using SendGrid as a mail relay, a free account can send up to 100 emails/day through this relay and we can configure Exchange to use it.

seems we could use a free sendgrid account

Want to get started for free?

Full feature trial includes access to our **Essentials 40,000 email plan**, free for 30 days, then send 100 emails/day for free forever. Also store up to **2,000 contacts** within Marketing Campaigns. **No credit card required.**

[Try for Free](#)

SMTP Relay: Reliable and Scalable Email Delivery

From <[https://sendgrid.com/marketing/smtp-relay/?cvosrc=PPC.Google.smtp%20relay&cvos_cid=SendGrid%20-%20UK%20-%20Focus%20Keywords%20\(English\)&mc=Paid%20Search&mcd=AdWords&keyword=smtp%20relay&network=g&matchtype=p&mobile=&content=&search=1&gclid=Cj0KCQjwkpFWBRDZARisAAFeXaocMm0blOxZRLN8AExAbU-kRCJtsW8RWQpHRISyNUZYvL8z8r57fAQaAjbTEALw_wcB](https://sendgrid.com/marketing/smtp-relay/?cvosrc=PPC.Google.smtp%20relay&cvos_cid=SendGrid%20-%20UK%20-%20Focus%20Keywords%20(English)&mc=Paid%20Search&mcd=AdWords&keyword=smtp%20relay&network=g&matchtype=p&mobile=&content=&search=1&gclid=Cj0KCQjwkpFWBRDZARisAAFeXaocMm0blOxZRLN8AExAbU-kRCJtsW8RWQpHRISyNUZYvL8z8r57fAQaAjbTEALw_wcB)>

Sign up for account with SendGrid and get the details for setting up SMTP relay

Integrate using our Web API or SMTP relay

Easily send API-driven email from your application.

[Start](#)

How to Integrate

Integrate using our Web API or SMTP Relay

Choose a setup method

Web API

The fastest, most flexible way to send email using languages like Python, Ruby, or JavaScript.

[Create](#)

SMTP Relay

The easiest way to send email. It only requires modifying your application's SMTP configuration.

[Create](#)

Configured using the instructions here

configured like the following

https://sendgrid.com/docs/Integrate/Mail_Servers/exchange_2010.html

InternetSendConnector

general

delivery

scoping

*Network settings:
 Specify how to send mail with this connector.
☐ Mail record associated with recipient domain
☒ Route mail through smart hosts

Smart host authentication:
☐ None
☒ Basic authentication
☐ Other basic authentication only after starting TLS

User name:

Password:

Note: All smart hosts must accept the same username and password.
☐ Exchange Server authentication
☐ Externally secured (for example, with IPsec)

☐ Use the external DNS lookup settings on servers with transport roles

Need to use powershell to change the port number

see

<http://www.networkinghowtos.com/howto/change-exchange-smart-host-port-number/>

Get-SendConnector

```
PS C:\Windows\system32>Get-SendConnector -identity "InternetSendConnector" -Port:587
Identity      AddressSpaces Enabled
-----
InternetSendConnector  SMTP:*:* True
```

Set-SendConnector -identity "InternetSendConnector" -Port:587

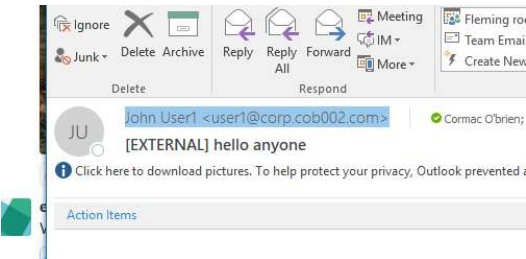
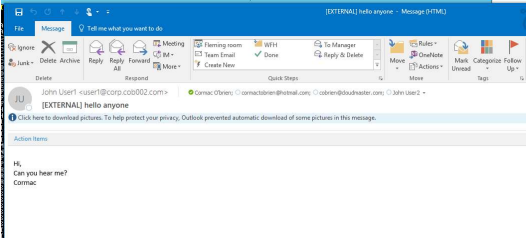
Get-SendConnector -identity "InternetSendConnector" | fl

```
PS C:\Windows\system32>Get-SendConnector -identity "InternetSendConnector" -Port:587
PS C:\Windows\system32>Get-SendConnector -identity "InternetSendConnector" | fl

AddressSpaces          : {SMTP:*:*}
AuthenticationCredential : System.Management.Automation.PSCredential
CloudServicesMailEnabled : False
Comment                :
ConnectedDomains       : {}
ConnectionInactivityTimeout : 00:10:00
ConnectorType          : Default
DNSRoutingEnabled      : False
DomainSecureEnabled    : True
Enabled                : True
ErrorPolicies          : Default
ForceHELO              : False
Fqdn                  :
ForwardProxyEnabled    : False
HomeMTR                : Microsoft MTR
HomeMTRServerId       : exch1
Identity               : InternetSendConnector
IsScopedConnector      : False
IsSMTPConnector        : True
MaxMessageSize         : 25 MB (36,788,160 bytes)
Name                   : InternetSendConnector
Port                   : 587
ProtocolLoggingLevel   : None
Region                 : NotSpecified
RequireOplog           : False
RequireTLS             : False
SmartHostAuthMechanism : BasicAuthRequireTLS
SmartHosts              : {smtp.sendgrid.net}
SmartHostsString        : smtp.sendgrid.net
SMTPMaxMessagesPerConnection : 20
SourceAddress          : 0.0.0.0
SourceRoutingGroup     : Exchange Routing Group (DMBGZHF001QNBJR)
SourceTransportServers : {exch1}
TlsAuthLevel           :
TlsCertificateName     :
TlsDomain              :
UseExternalDNSServersEnabled : False
```

Now we should have outgoing emails, send an email to veritas.com address to confirm

wow it worked



Now get incoming mail to work

back to here
[https://technet.microsoft.com/en-us/library/jj218640\(v=exchg.160\).aspx](https://technet.microsoft.com/en-us/library/jj218640(v=exchg.160).aspx)

By default, when you deploy a new Exchange 2016 organization in an Active Directory forest, Exchange uses the domain name of the Active Directory domain where Setup /PrepareAD was run. If you want recipients to receive and send messages to and from another domain, you must add the domain as an accepted domain. This domain is also added as the primary SMTP address on the default email address policy in the next step.

let's try to get a more usual scenario of mail arriving from user1@cob002.com

rules delivery reports **accepted domains** email address policies receive connectors send connectors

NAME	ACCEPTED DOMAIN	DOMAIN TYPE	
cob002.com	cob002.com	Authoritative	CO
corp.cob002.com (default domain)	corp.cob002.com	Authoritative	Full cob D...

now set the default policy

try this configuration

email address format

Select an accepted domain: **corp002.com**

Specify a custom domain name for the email address:

Email address format:
Example user: John Smith

☒ alias@contoso.com
☐ John.Smith@contoso.com
☐ JSmith@contoso.com
☐ JohnG@contoso.com
☐ SmithJohn@contoso.com
☐ SJohn@contoso.com
☐ SmithJ@contoso.com

☐ Enter a custom address type

SMTP
If you don't want to use one of the pre-canned SMTP email address formats, you can specify a custom SMTP email address.
[Learn more](#)

Email address parameters:
@corp002.com

☒ Make this format the reply email address

Save Cancel

and apply

SMTP
Primary: alias@corp002.com

Includes
All recipient types

Not Applied
Some changes were recently made to this email address policy.
[Apply](#)

Verify the change

looks good

[mailboxes](#) groups resources contacts shared migration

DISPLAY NAME	MAILBOX TYPE	EMAIL ADDRESS	
John Admin	User	admin@corp.cob002.com	John User1 User mailbox user1@corp002.com Edit Office: Work phone: Phone and Voice Features Unified Messaging: Disabled Enable
John User1	User	user1@corp.cob002.com	
John User2	User	User2@corp.cob002.com	

now send an email again and verify it has arrived from corp002.com

Quick Steps: [G](#) [Move](#) [Tags](#) [Find](#) [Add-i](#)

[Reply](#) [Reply All](#) [Forward](#) [Print](#)

John User1 <user1@corp002.com> Cormac O'Brien

[EXTERNAL] am i now corp002?

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

am i >

Step 4: Configure external URLs

again see [https://technet.microsoft.com/en-us/library/jj218640\(v=exchg.160\).aspx](https://technet.microsoft.com/en-us/library/jj218640(v=exchg.160).aspx)

<https://localhost/ECP>

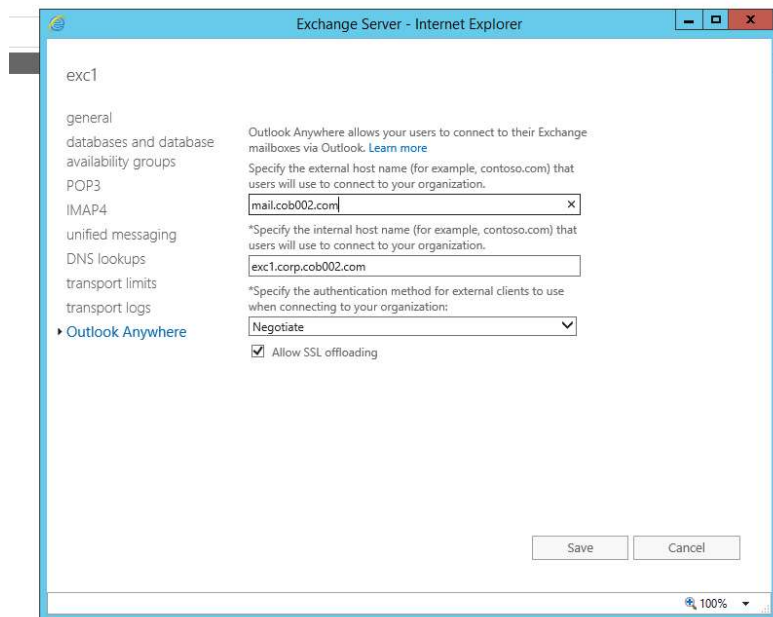
corp.cob002.com\admin
W3lcome!W3lcome!

Exchange admin center			
recipients	servers databases database availability groups virtual directories certificates		
permissions			
compliance management			
organization			
protection			
mail flow			
mobile			
public folders			
unified messaging			
servers			
hybrid			
NAME	SERVER ROLES	VERSION	
ex1	Mailbox	Version 15.1 (Build 1415.2)	EX1 Mailbox Version 15.1 (Build 1415.2) Standard Trial Edition Trial Enter Product Key

set the following values

external host name
mail.cob002.com

internal host name
exc1.corp.cob002.com



Exchange admin center

recipients
permissions
compliance management
organization
protection
mail flow
mobile
public folders
unified messaging
servers
hybrid

servers databases database availability groups **virtual directories** certificates

Select server: All servers
Select type: All

NAME SERVER TYPE VERSION LAST MODIFIED TIME

Autodiscover (Default Web Site)	exc1	Autodiscover	Version 15.1 (Build 1415.2)	12/02/2018 14:38	Autodiscover
ecp (Default Web Site)	exc1	ECP	Version 15.1 (Build 1415.2)	12/02/2018 14:38	Authentication: B2
EWS (Default Web Site)	exc1	EWS	Version 15.1 (Build 1415.2)	12/02/2018 14:38	
mapi (Default Web Site)	exc1	Mapi	Version 15.1 (Build 1415.2)	12/02/2018 14:38	
Microsoft-Server-ActiveSync (Default Web Site)	exc1	EAS	Version 15.1 (Build 1415.2)	12/02/2018 14:38	
OAB (Default Web Site)	exc1	OAB	Version 15.1 (Build 1415.2)	12/02/2018 14:38	
owa (Default Web Site)	exc1	OWA	Version 15.1 (Build 1415.2)	12/02/2018 14:38	
PowerShell (Default Web Site)	exc1	PowerShell	Version 15.1 (Build 1415.2)	12/02/2018 14:38	

you click the spanner

Select server: All servers
Select type: All

NAME SERVER

use domain mail.cob002.com

Exchange admin center

servers databases database availability groups **virtual directories** certificates

Select server: All servers
Select type: All

configure external access domain - Internet Explorer

configure external access domain

Select the servers to use with the external URL.

exc1

Enter the domain name you will use with your external servers (example: contoso.com).

mail.cob002.com

you implmenet external domain once and it appears to get applied to all, see details in right panel

owa (Default Web Site)

Website: Default Web Site
Authentication: Basic, FBA
Outlook Web App version: Exchange2013
External URL: <https://mail.cob002.com/owa>

we are not going to follow the step of setting a unique fqdn for owa

so owa url will remain
<https://mail.cob002.com/owa>

next set up DNS

Use Azure portal to get the FQDN and IP Address of the exc1 server

Connect

Start

Restart

Stop

More

Delete

Refresh

Resource group

cob002

Status

Running

Location

West Europe

Subscription (charge)

Visual Studio Enterprise

Subscription ID

7a94a6e3-06a7-43d4-8581-01bacc54e9c

Computer name

exc1

Operating system

Windows

Size

Standard D3 v2 (4 vcpus, 14 GB memory)

Public IP address

51.144.99.215

Virtual network/subnet

TestLab-ConnNet

DNS name

msdnazure-cob002-exc1.westeurope.cloudapp.azure.com

Go to namecheap, enable custom MX

DNSSEC

Status

MAIL SETTINGS

Type

TXT Record

Email Forwarding

No Email Service

Email Forwarding

MXE Record

Custom MX

Private Email

set MX record to the exc1 FQDN

Type	Host	Value	TTL
MX Record	@	msdnazure-cob002-exc1.westeurop... 101	5 min
ADD NEW RECORD			

add an A record for mail to point at the IP address, and a CNAME record for autodiscover

result should be

Type	Host	Value	TTL
A Record	mail	51.144.99.215	20 min
CNAME Record	autodiscover	mail.cob002.com.	Automatic
ADD NEW RECORD			

Verify DNS

after record we should be able to access (ignore the SSL error)

<https://mail.cob002.com/owa>

Also run the following

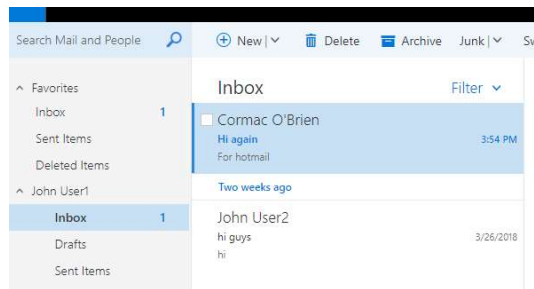
nslookup -type=mx cob002.com

Administrator: Windows PowerShell

PS C:\windows\system32> nslookup -type=mx cob002.com
Server: dns-emcal.net.veritas.com
Address: 172.16.8.22

Non-authoritative answer:
cob002.com MX preference = 101, mail exchanger = msdnazure-cob002-exc1.westeurope.cloudapp.azure.com
PS C:\windows\system32>

now incoming mail should arrive to user1@cob002.com



Step 6: Configure an SSL certificate

again see [https://technet.microsoft.com/en-us/library/jj218640\(v=exchg.160\).aspx](https://technet.microsoft.com/en-us/library/jj218640(v=exchg.160).aspx)

we will look for cert for mail.cob002.com

start activation of cert on namecheap

Name	Can cover	Cycle	ID	
PositiveSSL PROMO Comodo SSL Certificate <small>The SSL certificate needs activation</small>	1 domain	1 yr	3811689	ACTIVATE

click **Activate**

Certificate Details: PositiveSSL **PROMO** **ALERT**

Certificate needs to be activated.

Validity: 1 year

Validation Level: Domain Validation (DV)

Namecheap Order ID: 34023465 **SEE ORDER**

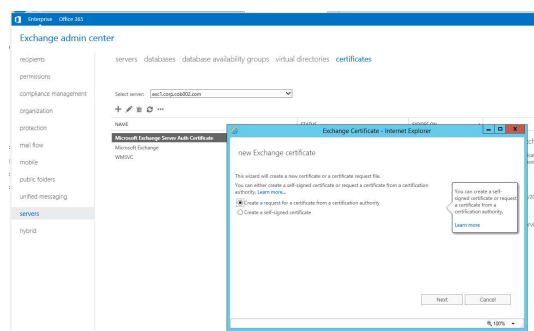
Total Domains: 1 domain

Certificate Versions

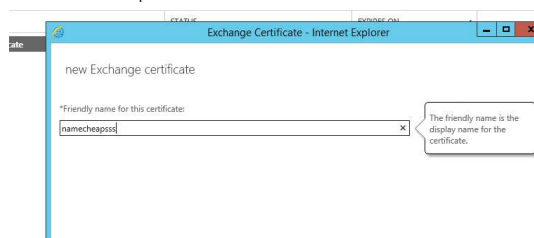
Certificate ID	Status	Secured Domains
3811689	NEW	1 Domain

Done

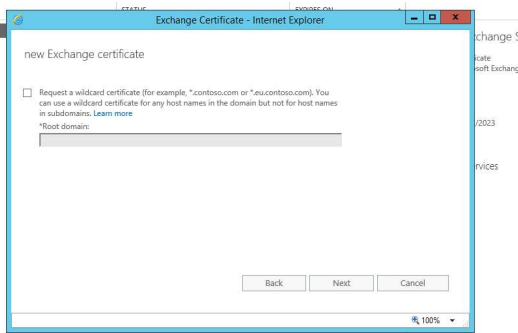
now we need CSR, we get exchange to create this from step 6 in [https://technet.microsoft.com/en-us/library/jj218640\(v=exchg.160\).aspx](https://technet.microsoft.com/en-us/library/jj218640(v=exchg.160).aspx) and <https://www.namecheap.com/support/knowledgebase/article.aspx/9745/0/exchange2013eac>



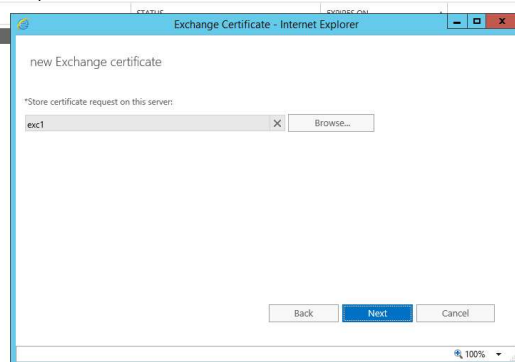
named it namecheapssl



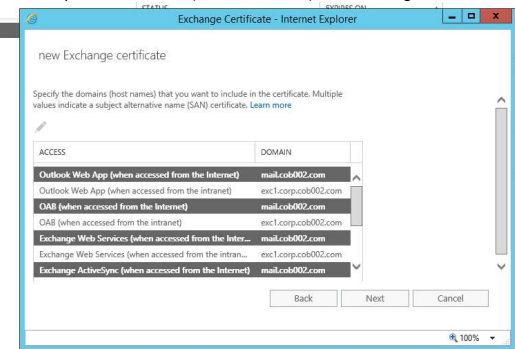
wildcard not supported



we only have one server

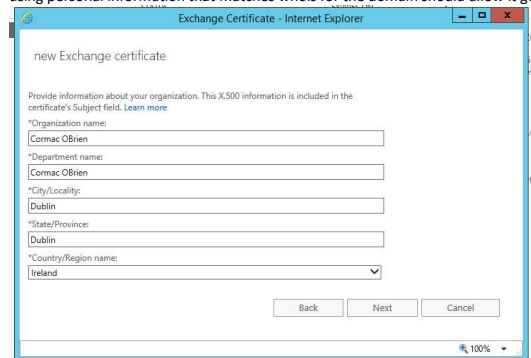


we can only have one domain (mail.cob002.com) think selecting one or all of the services will be the same effect



no it added other domains, we need to remove everything from the CSR except for mail.cob002.com

using personal information that matches whois for the domain should allow it get approved, doubt you could use Veritas and expect it to be approved



create a share everyone can access can access

create folder on desktop
give everyone access

we will use the DNS method

use the email from the domain name application

follow step for DNS-based DCV

click **Get Record** (hidden in drop down)

here is the CNAME we need to add

EV.Cloud Page 17

Domains to Validate
mail.cob002.com PRIMARY DOMAIN

Host
_5A0F6B544719E37A617A842BED3FC2D9.mail.cob002.com

Target
E0E049CB90570282823AE4B41CB20C81.366DF14DE7B764E9677958AD9ED7C3E8.SacdeSecb373e.comodoca.com

in DNS management add like the following

remember you don't include cob002.com

so host is
_5A0F6B544719E37A617A842BED3FC2D9.mail

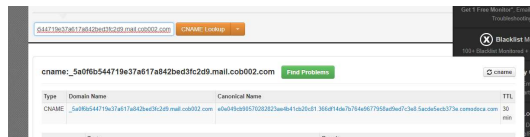
result should look like:

Actions	Filters	Search	
Type	Host	Value	TTL
<input type="checkbox"/> CNAME Record	autodiscover	mail.cob002.com.	Automatic
<input type="checkbox"/> CNAME Record	_5a0f6b544719e37...	E0E049CB90570282823AE4B41CB20C81.366DF14DE7B764E9...	Automatic
ADD NEW RECORD			

use mxtoolbox to confirm CNAME record is there <https://mxtoolbox.com/SuperTool.aspx?action=cname>

enter full host of

_5A0F6B544719E37A617A842BED3FC2D9.mail.cob002.com



how do we know DCV validation of ownership worked? there isn't any way except to wait for email confirmation, which should arrive in about 30 minutes

Complete applying the certificate

click **Complete**

[Exchange admin center](#)

recipients
permissions
compliance management
organization
protection
mail flow
mobile
public folders
unified messaging
servers
hybrid

servers databases database availability groups virtual directories **certificates**

Select server: **exc1.corp.cob002.com**

NAME	STATUS	EXPIRES ON
namecheapssl	Pending request	11/04/2019
Microsoft Exchange Server Auth Certificate	Valid	17/01/2023
Microsoft Exchange	Valid	12/02/2023
WMSVC	Valid	10/02/2028

namecheapssl

Certification authority-signed certificate

Issued: C=IE, S=Dublin, L=Dublin, O=Cormac O'Brien, OU=Cormac O'Brien

Status

Pending request

Expires on: 11/04/2019

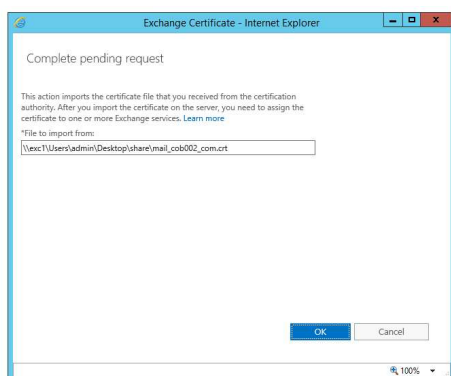
Complete

Assigned to services

NONE

save the certificate emailed to you in the share (crt file)

[\\exc1\Users\admin\Desktop\share\mail_cob002_com.crt](#)



Click **Edit**

Select server:

ec1.corp.cob002.com

+

✕

🔍

⋮

NAME	STATUS	EXPIRES ON
nameheapsssl	Valid	11/04/2019
Microsoft Exchange Server Auth Certificate	Valid	17/01/2023
Microsoft Exchange	Valid	12/02/2023
WMSVC	Valid	10/02/2028

Exchange Certificate - Internet Explorer

nameheapsssl

general

services

Name: nameheapsssl

Status: Valid

Issuer: CN=COMODO RSA Domain Validation Secure Server CA, O=COMODO

Expires on: 11/04/2019

Subject: CN=mail.cob002.com, OU=PositiveSSL, OU=Domain Control Validation Services

Subject Alternative Names: mail.cob002.com, www.mail.cob002.com

Save Cancel

select the following services

Exchange Certificate - Internet Explorer

nameheapsssl

general

services

Specify the Exchange services that you want to assign this certificate to. [Learn more](#)

☒ SMTP

☐ Microsoft Exchange Unified Messaging

☐ Unified Messaging Call Router

☐ IMAP

☐ POP

☒ IIS

Save Cancel

Click Yes

Specify the Exchange services that you want to assign this certificate to. [Learn more](#)

☒ SMTP

Warning

Overwrite the existing default SMTP certificate? Current certificate: 'DD32187C913579C872C3A406CD9B5013A0F00967' (expires 12/02/2023 14:28:11) Replace it with certificate: '6CE4A8ED057928FD0A0AEB34FFB13CA170915A21' (expires 11/04/2019 23:59:59)

Yes

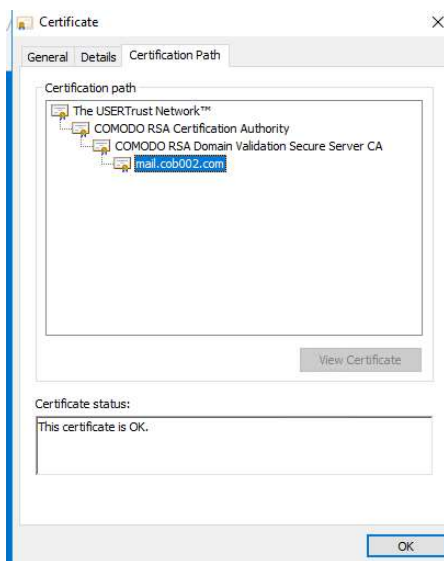
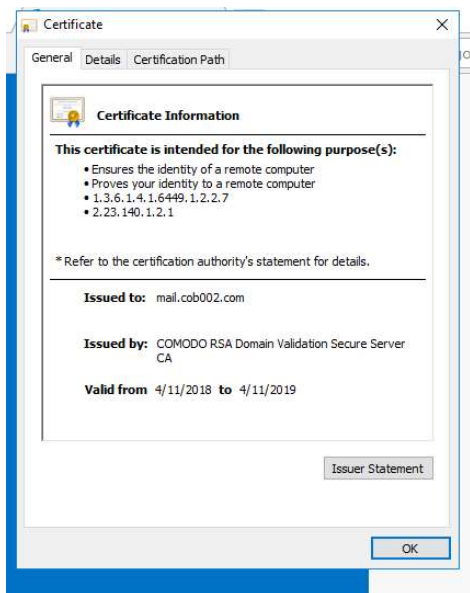
No

Finally double check with OWA that SSL is applied

browse to <https://mail.cob002.com> and verify it is secure



inspect the certificate



Set up company on EV.cloud

Follow other instructions on doing this,
add the domain cob002.com
configure sync of users with CloudLink

Configure journalling on exchange

go to manage as the superuser and add cob002.com as a domain and make it the primary one



add journalling address like

QA_cob002@journal.sydney.archivecloud.net

see veritas documentation on enabling journalling
https://www.veritas.com/content/support/en_US/doc/102694636-102700804-0/v101459417-102700804

Step 1 - Create Journaling Contact

then run

Set-MailContact -Identity "JournalingContact" -UseMapiRichTextFormat Never

```

VERBOSE: Connecting to exch1.corp.cob002.com.
VERBOSE: Connected to exch1.corp.cob002.com.
[PS] C:\Windows\system32>Set-MailContact -Identity "JournalingContact" -UseMapiRichTextFormat Never
WARNING: The command completed successfully but no settings of 'corp.cob002.com/Users/Journaling Contact' have been modified.
[PS] C:\Windows\system32>_

```

Step 2 - Create SMTP Send Connector

this is optional really, no need to do it in our setup

Step 3 - Activate Journaling

we will just set up standard journaling

To activate journaling per database (Standard and Premium Journaling)

1. Select servers and then databases.
2. Double-click on the mailbox database that requires journaling. The Mailbox Database window displays.
3. Select **Maintenance**.
4. Click **browse**, next to the **Journal recipient** field.
5. Select the Journaling Contact, and then click **ok**.
6. The Mailbox database page displays with the journaling contact in the **Journal recipient** field.
7. Click **save**
8. Repeat these steps for all databases that require journaling.

From <https://www.veritas.com/content/support/en_US/doc/102694636-102700804-0/v101463820-102700804>

Finally users should be synced with CloudLink

Mailbox	Last Name	First Name	Job
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	
JournalingContact@corp.cob002.com	Journaling	Contact	

and user should have access to PA with journaling forwarding all emails to there

Veritas Technologies LLC [US] | https://personal.lap.archive.veritas.com/Default.aspx?SessionToken=pSuaNd7qTr9dzzFYyb9GN%2B6%2FGpQqhV5R5EOEd7mirURN

Apps

USW20 Manage

USW20 PA

CLV07 MAN

CLV07 PA

4567

9292

Trial

O365 Login

5000

Images

EUW01 (AMS)

USW01 (ELS)

Veritas

Enterprise Vault

Personal cloud

Content: Quick Search

Q

New

Restore

Searches

Tags

Active Folders

olders

All Email

From	To	Subject
user1@cob002.com	comac.obrien@veritas.com;user2@cob002.com;admin@c	Re: hi journaling should be enabled now