eHealth Ontario

ONE® Mail Partnered – Client Deployment Guide

Instruction for Microsoft Exchange Server 2007

Version: 1.6

Document ID: 3234

Document Owner: ONE Mail Product Team

Ontario
eHealth Ontario

Document Control

The electronic version of this document is recognized as the only valid version.

Approval History

APPROVER(S)	TITLE/DEPARTMENT	APPROVED DATE
ONE Mail Product Team	ONE Mail Product Team	2013-06-28

Revision History

VERSION NO.	DATE	SUMMARY OF CHANGE	CHANGED BY
1.0	2008-08	Initial draft (Anatoly Kurdin) certificate	Anotoly Kurdin
1.1	2008-09	Initial draft (Ognjen Andrijasevic) connectors	Ognjen Andrijasevic
1.2	2008-09	Corrected document based on input from Alias Downey, David Thabet and Anatoly Kurdin	Anotoly Kurdin
1.3	2008-09	Integrated changes requested by Deployment team, related to adding new Send and Receive Connectors, instead modifying exiting ones	Ognjen Andrijasevic
1.4	2010-05	Added parameter in CSR to make private key exportable	
1.5	2012-06	Removed section for disabling SMTP service on other certificates, moved section for setting up Receive Connector before section for setting up Send Connector, added STOP message after configuration of Receive Connector	Ognjen Andrijasevic
1.6	2013-05	Updated for Internet Deployments	SMI review/addition

Document ID

3234

Document Sensitivity Level

Medium

Contents

1.0 Introduction

This document describes the steps required to connect Microsoft Exchange Server 2007 to ONE Mail Partnered product for secure e-mail routing:

- Generate a request for a PKI certificate
- Install the created certificate
- Install SSHA CA Root certificate
- Setup Send Connector for routing e-mail to ONE Mail Partnered environment
- Setup Receive Connector for routing e-mail from ONE Mail Partnered environment to your corporate messaging system

These instructions apply to Microsoft Exchange Server 2007 (with or without Service Packs 1, 2 or 3) installed on Windows Server 2003 or Microsoft Exchange Server 2007 SP1, SP2 or SP3 installed on Windows Server 2008.

2.0 Intended Audience

This document is intended for technical personnel at eHealth Ontario client organizations who are involved in registering computer applications with eHealth Ontario. This includes:

- Application Owners
- Their delegates

3.0 Overview

The process of connecting to ONE Mail Partnered is as follows:

1. **Register the application (for which you require a certificate) with eHealth Ontario, if this hasn't been previously done.**
2. **Obtain a PKI Reference Number from eHealth Ontario**. This number will be required to create and submit your request to eHealth Ontario.
3. **Create the Certificate Signing Request (CSR)**. The CSR is created on the machine where the certificate is to be used. The process of creating a CSR generates a matching public and private RSA key pair and stores the private key on the machine and puts the public key into the CSR.
4. **Send the CSR (with Reference Number) to the eHealth Ontario Deployment Team**
5. **Receive the created certificate back from the eHealth Ontario Deployment Team**

6. **Install the certificate**. This should be done on the same machine where the CSR was created.
7. **Install SSHA CA Trusted Root certificate**
8. **Setup Default Receive Connector on Exchange Server 2007**
9. **Setup Send Connector on Exchange Server 2007**

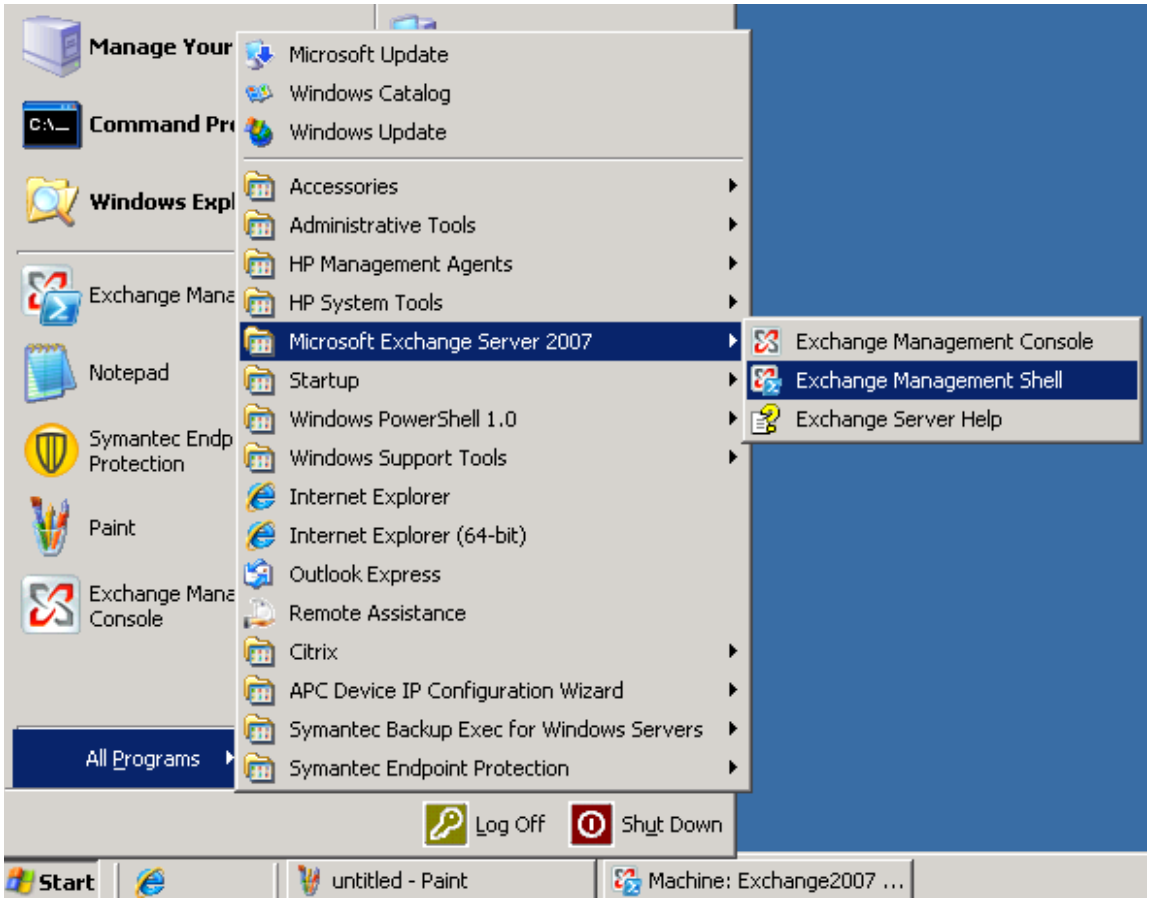
4.0 Creating CSR(s)

> **Note:** **Note:** For each request to be generated you require the corresponding Reference Number (example: 8934282) for this identity. These are obtained from the eHealth Ontario Deployment Team. A unique Reference Number is required for each certificate that is to be created.

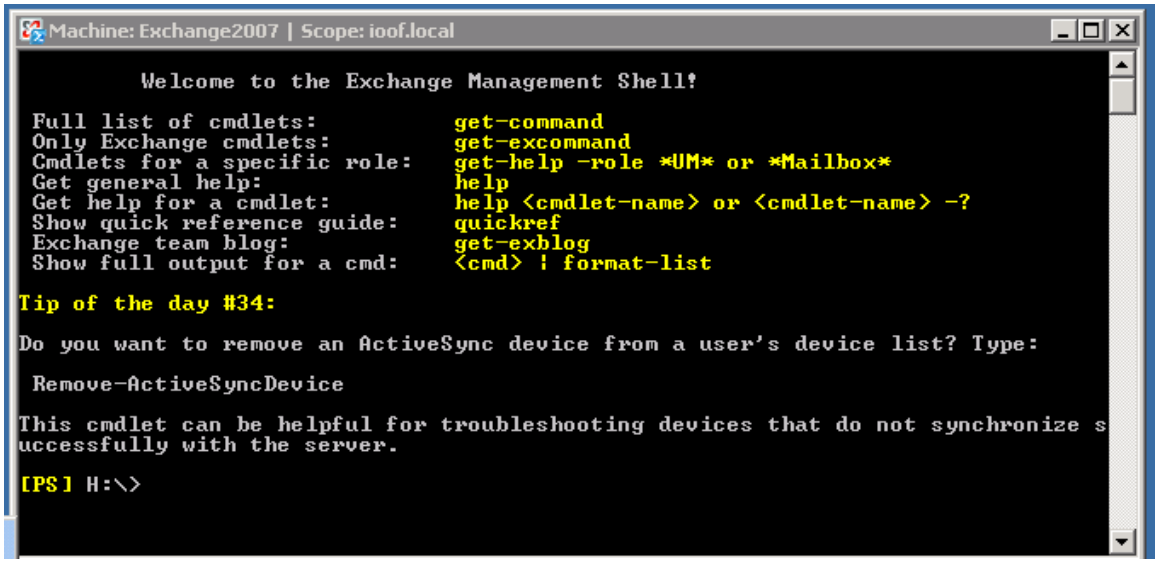
4.1 Generating a CSR

To generate a CSR for Microsoft Exchange Server 2007 use Exchange Management Shell, as explained below:

- Login to your Microsoft Exchange Server 2007 host server
- Click **Start** > **Programs** > **Microsoft Exchange Server 2007** > **Exchange Management Shell**



- The shell windows will be displayed

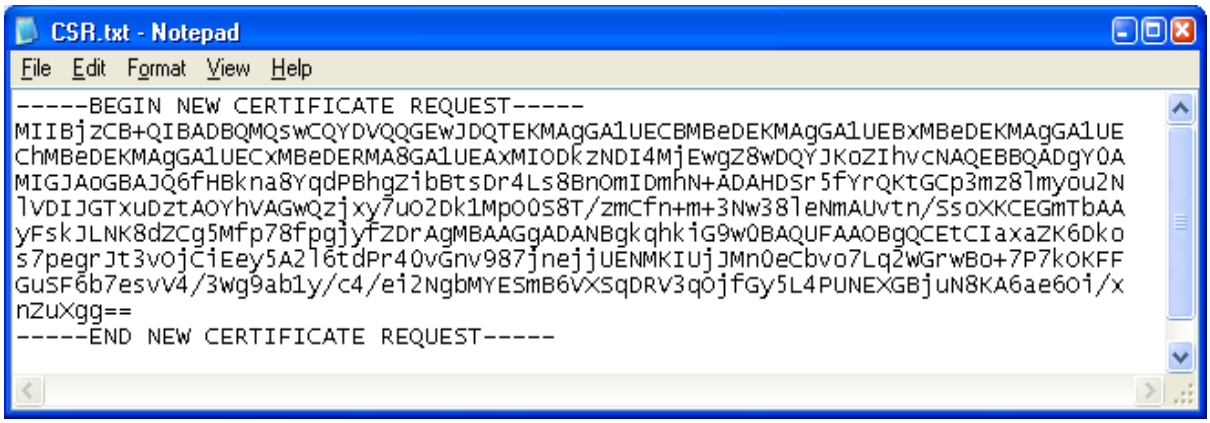


- Type-in the following **command** and press “Enter”

```
New-ExchangeCertificate -GenerateRequest: $True –PrivateKeyExportable $true -
DomainName <Your_Domain_Name> -SubjectName
"C=CA,O=<Your_Organization_Name>,ST=ON,CN=<Reference Number>" -Keysize 1024 -Path
"C:\CSR.txt"
```

Note: New-ExchangeCertificate utility requires the user to enter at least one **Domain Name**. This name is supposed to be added to the certificate **Alternative Subject Name List**. Currently, SSHA Certificate Authority **does not support** alternative subject name certificate property. As a result, the value provided for this field will be ignored by SSHA CA. However, to meet the utility requirement **you need to provide a valid domain name**.

- If the command is successfully executed open the created file specified in the **-Path** parameter. The file should have a similar content:



- Complete the above procedure for each certificate you need to create, **entering a new Reference Number, and a new output file name for each request**. This will result in a new CSR each time the procedure is executed.

4.2 Send the CSR to eHealth Ontario

Forward the **CSR/CSRs** to the eHealth Ontario Deployment Team. They will return a certificate created from the CSR and the eHealth Ontario CA Root certificate.

5.0 Receive the Certificates

When the certificate is created by SSHA CA, it will be sent to you in a file.

Its contents will resemble the following:

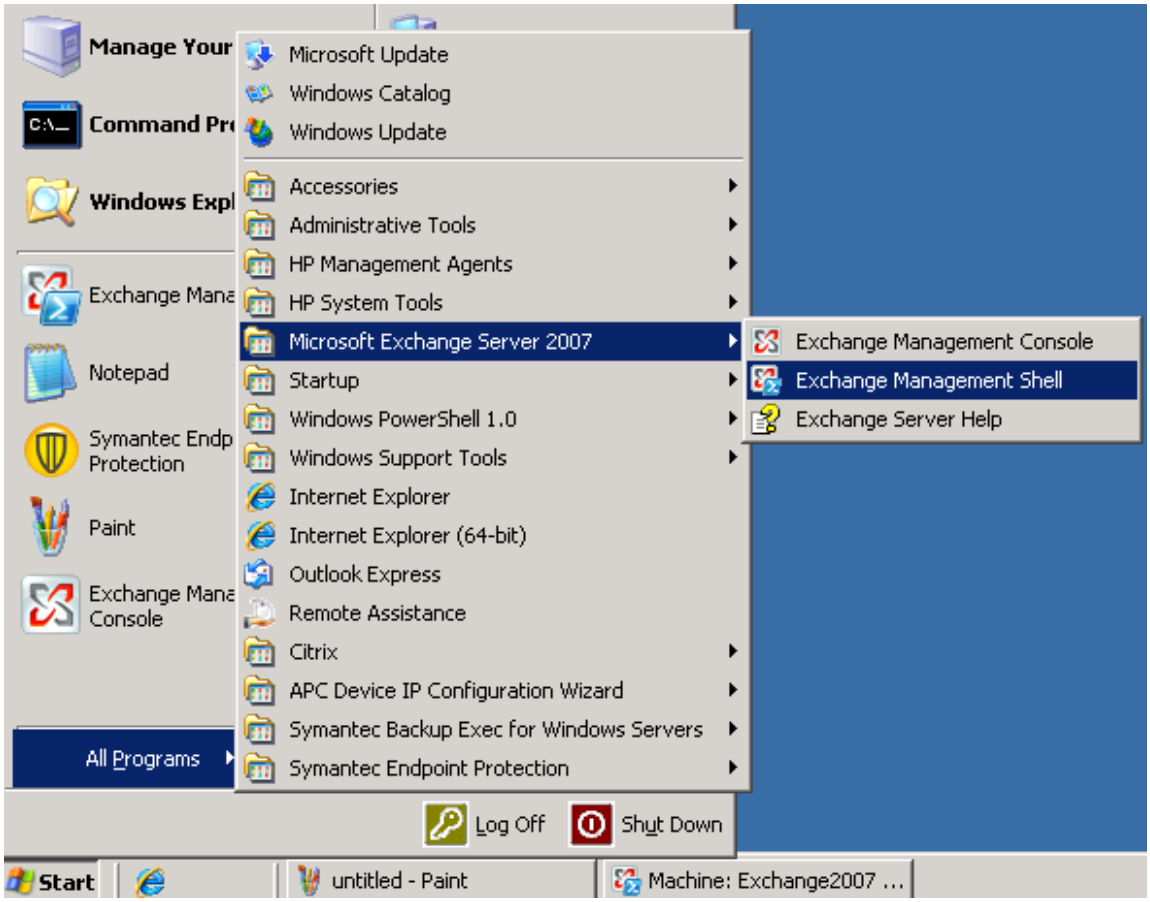
```
-----BEGIN CERTIFICATE-----
MIIGYAYJKoZIhvcNAQcCoIIGUTCCBk0CAQExADALBgkqhkiG9w0BBwGgggY1MIIG
MTCCBRmgAwIBAgIEQA9uVDANBgkqhkiG9w0BAQUFADCBpjETMBEGCgmSJomT8ixk
ARkWA3NzaDEbMBkGCgmSJomT8ixkARkWC1N1YnNjcmliZXJzMRUwEwYDVQQLEwxT
U0ggU2VydmljZXMxETAPBgNVBAsTCFNlY3VyaXR5MQwwCgYDVQQLEwNQS0kxOjA4
BgNVBAMTMVNtYXJ0IFN5c3RlbXMgZm9yIEhlYWx0aCBBZ2VuY3kgUm9vdCBDQSAt
IFRlc3RpbmcwHhcNMDYwMjE3MDEwNDQxWhcNMDkwMjE3MDEzNDQxWjCBkzETMBEG
CgmSJomT8ixkARkWA3NzaDEbMBkGCgmSJomT8ixkARkWC3N1YnNjcmliZXJzMRQw
EgYDVQQLEwtTdWJzY3JpYmVyczESMBAGA1UECxMJSG9zcGl0YWxzMQ8wDQYDVQQL
EwZPTFNUU1QxFTATBgNVBAsTDEFwcGxpY2F0aW9uczENMAsGA1UEAxMESElTNjCB
nzANBgkqhkiG9w0BAQEFAAOBjQAwgYkCgYEAwmVaRaRrPLO+ZY44H2ZIX1s6jpA3
H24UDEOKYfaZ1gZesltzYDphXOMp/7ZnP350TnbiZQqpNFLqqckFOWskJSC83PEU
xMa5jJU1xTfdpGWtnYrvT+mi0q3x+KGQ4y7DDtD4KSAWXkkIKndiYH9mvPBQ+q4X
aqHqmFN/DZw/kTECAwEAAaOCAvowggL2MAsGA1UdDwQEAwIHgDArBgNVHRAEJDAi
gA8yMDA2MDIxNzAxMDQ0MVqBDzIwMDgwMzI1MDUzNDQxWjCBxQYIKwYBBQUHAQEE
gbgwgbUwgbIGCCsGAQUFBzAChoGlbGRhcDovL3NzaHBraTJhMDAwMXUuc3Vic2Ny
aWJlcnMuc3NoL2NuPVNtYXJ0IFN5c3RlbXMgZm9yIEhlYWx0aCBBZ2VuY3kgUm9v
dCBDQSAtIFRlc3RpbmcsIG91PVBLSSwgb3U9U2VjdXJpdHksIG91PVNTSCBTZXJ2
aWNlcywgZGM9U3Vic2NyaWJlcnMsIGRjPXNzaD9jQUNlcnRpZmljYXRlMIIBigYD
VR0fBIIBgTCCAX0wgcGggb6ggbukgbgwgbUxEzARBgoJkiaJk/IsZAEZFgNzc2gx
GzAZBgoJkiaJk/IsZAEZFgtTdWJzY3JpYmVyczEVMBMGA1UECxMMU1NIIFNlcnZp
Y2VzMREwDwYDVQQLEwhTZWN1cml0eTEMMAoGA1UECxMDUEtJMTowOAYDVQQDEzFT
bWFydCBTeXN0ZW1zIGZvciBIZWFsdGggQWdlbmN5IFJvb3QgQ0EgLSBUZXN0aW5n
MQ0wCwYDVQQDEwRDUkwyMIG2oIGzoIGwhoGtbGRhcDovL2NybHUuc3NoYS5jYS9j
bj1TbWFydCUyMFN5c3RlbXMlMjBmb3IlMjBIZWFsdGglMjBBZ2VuY3klMjBSb290
JTIwQ0ElMjAtJTIwVGVzdGluZyxvdT1QS0ksb3U9U2VjdXJpdHksb3U9U1NIJTIw
U2VydmljZXMsZGM9U3Vic2NyaWJlcnMsZGM9c3NoP2NlcnRpZmljYXRlUmV2b2Nh
dGlvbkxpc3QwHwYDVR0jBBgwFoAUoDjQCKRd/Fk7eTuqfcpZKT5GWRowHQYDVR0O
BBYEFDtLS1NyMiADLtzKP/vfrPTThIQVMAkGA1UdEwQCMAAwGQYJKoZIhvZ9B0EA
BAwwChsEVjcuMQMCBLAwDQYJKoZIhvcNAQEFBQADggEBAB45Jjvk7NeokO2/iy+H
X142NV7wRR1lBmcJKLxYE3YgrGw7C7kBRjBEZbjoQy8g1Mniop8m1kA6tiJreuF2
kAxElilGu1DK5IqrA+lW7S3b7G5XipgC7jF8iQ9zUhblTsfLfLKZ0r/exPX3LE/P
RYeqIUbATXfc/tuwcPm4kjRigpNIs+uEJAgkoOr73A1U2SLlGf1Q+EhSyTQ2qRI/
lIDTnEACHXbgEhU4qG8p+cN2GDcN8HJUqVLGlH6GOzfpl+6rZVeHfapUqf+hWmtX
LCjcOCVZeaS6GpzIlbBlhRLae6glPUNQUqfX0P8dxCitvY20w0mePuikS1dFsAMz
MGYxAA==
-----END CERTIFICATE-----
```

Proceed to the next section to install the certificate generated from the CSR.

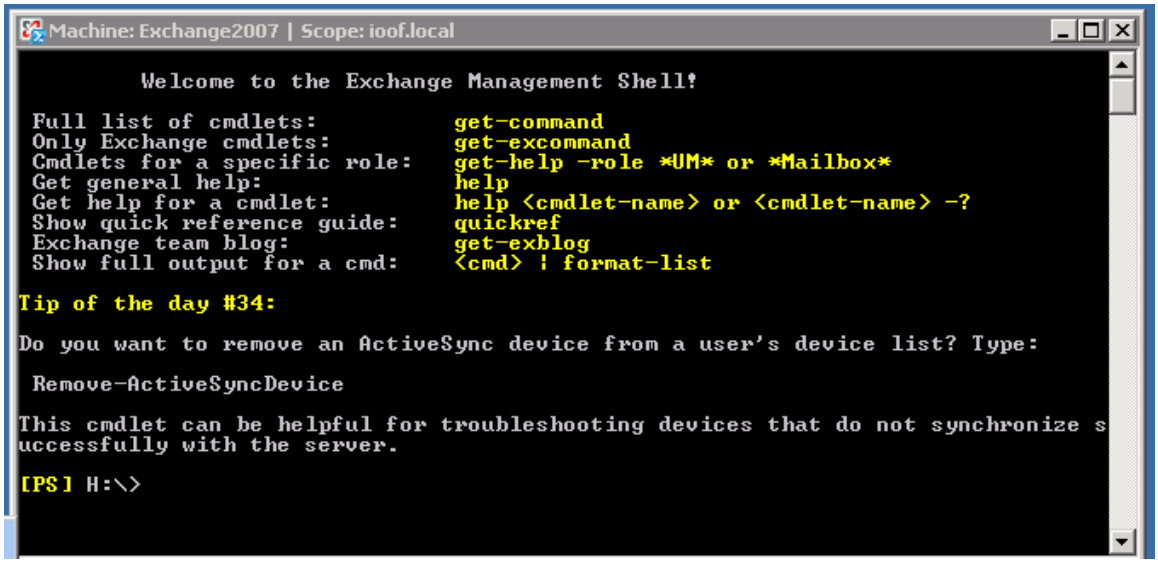
6.0 Installing an Exchange Certificate

To install the certificate received from eHealth Ontario for Microsoft Exchange Server 2007 use the Exchange Management Shell, as explained below:

- Login to your Microsoft Exchange Server 2007 host server
- Click **Start** > **Programs** > **Microsoft Exchange Server 2007** > **Exchange Management Shell**



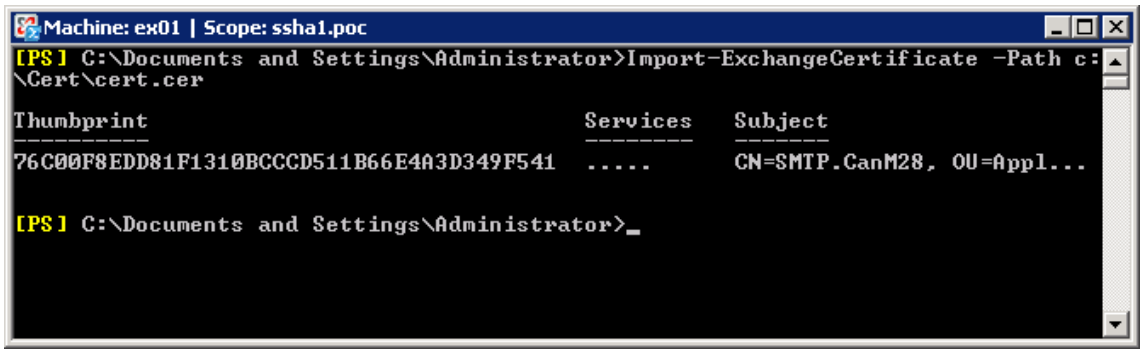
- The shell windows will be displayed



- Type-in the following command and press **Enter**

```
Import-ExchangeCertificate -Path c:\Cert\cert.cer
```

The command (if successfully executed) will install the certificate and enable it for **SMTP** service:



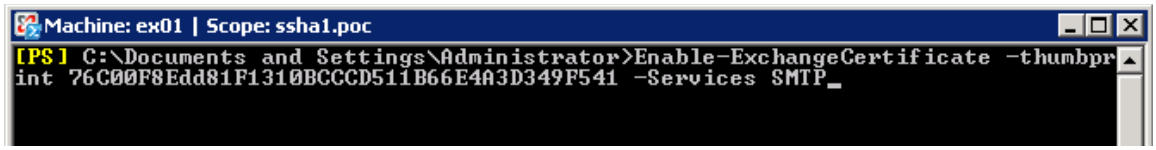
Note: **Note:** You have to specify the path and name of the certificate which was issued by eHealth Ontario for you, based on your previous CSR. Do not specify the path and name of the SSHA Root Certificate, that certificate will be installed later in another location.

- Type-in the following command and press **Enter**

```
Enable-ExchangeCertificate –Thumbprint eHealth Ontario_Certificate_ThumbPrint -
Services SMTP
```

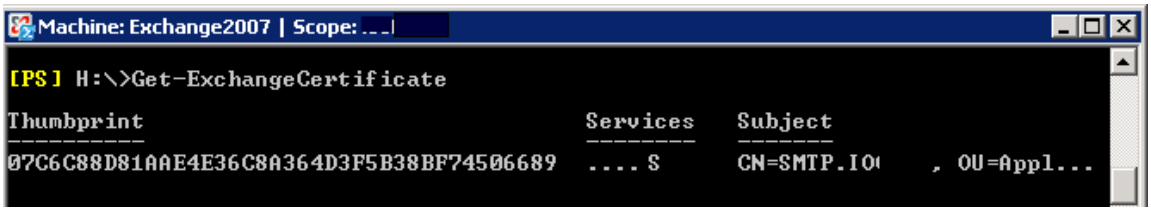
Where *eH0_Cerificate_ThumbPrint* is thumbprint of eHealth Ontario issued certificate visible in output of previous command.

The command (if successfully executed) will enable this certificate for **SMTP** service:



7.0 Verifying the Exchange Certificate Installation

To verify the certificate installation, run *Get-ExchangeCertificate* command from Exchange Management Shell. The command should provide the certificate subject name, its thumbprint and a list of enabled services (**S - SMTP** for this example shown here).

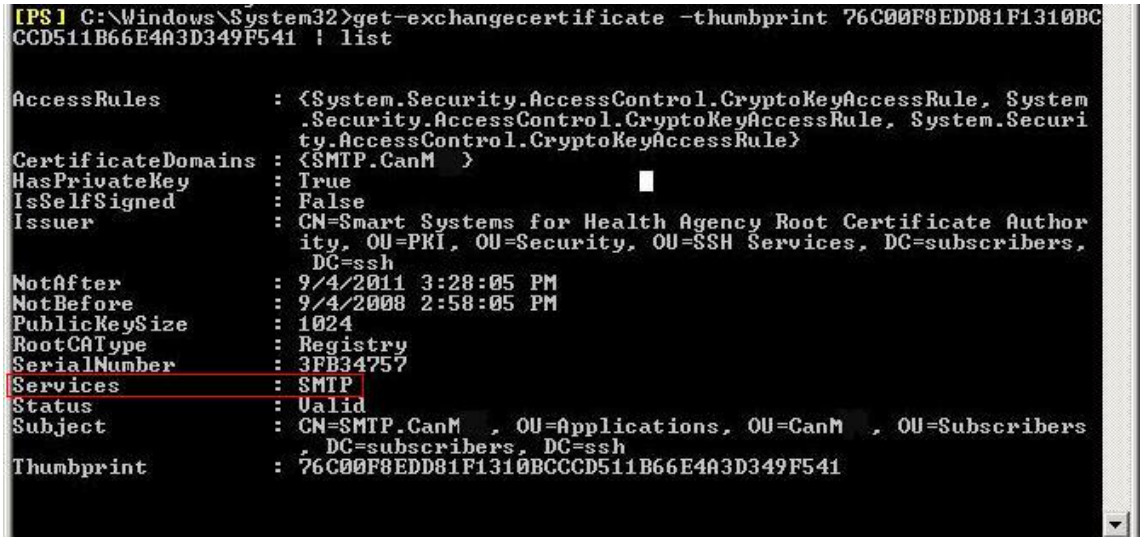


- Type-in the following command and press **Enter**

```
Get-ExchangeCertificate –Thumbprint eHo_Certificate_ThumbPrint |Format-List
```

Where *eHealth Ontario_Cerificate_ThumbPrint* is thumbprint of eHealth Ontario issued certificate visible in output of *Get-ExchangeCertificate* command.

In the **"Services"** property of this certificate you should see only SMTP service as in the example shown below:

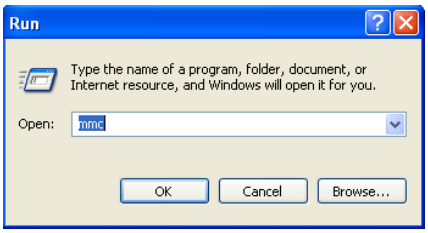


8.0 Install SSHA CA Root Certificate

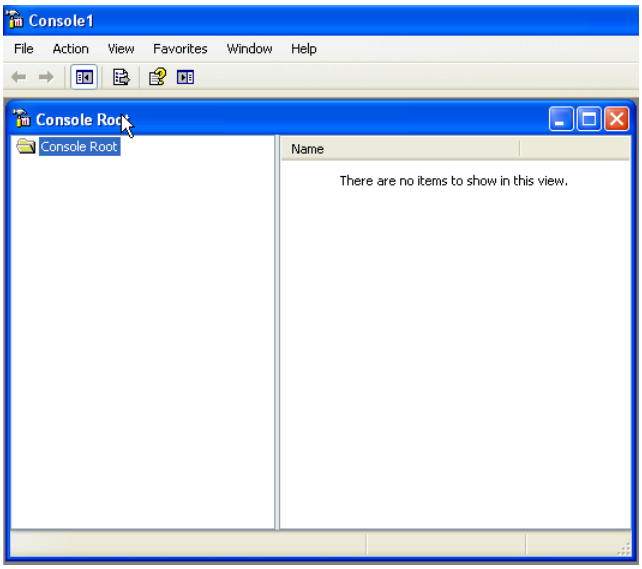
> **Note:** **Note:** You must also install the SSHA Root Certificate; this is not the certificate which you installed earlier in Personal Certificates storage for local computer. If you are missing this certificate in your installation package please contact eHealth Ontario and they will provide this to you.

Install the **SSHA CA Root certificate** using Microsoft Management Console (**MMC**).

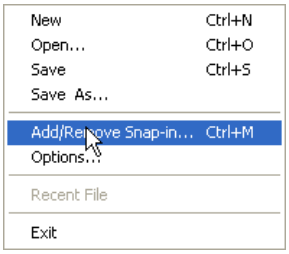
- From the **Start** menu, select **Run**. In the Run dialog box, type **mmc** and click **OK**.



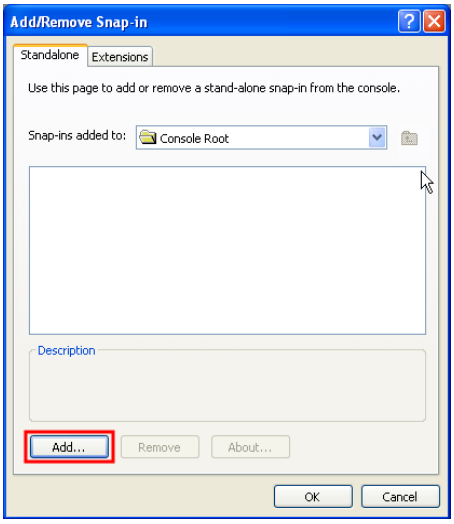
- The Microsoft Management Console is displayed.



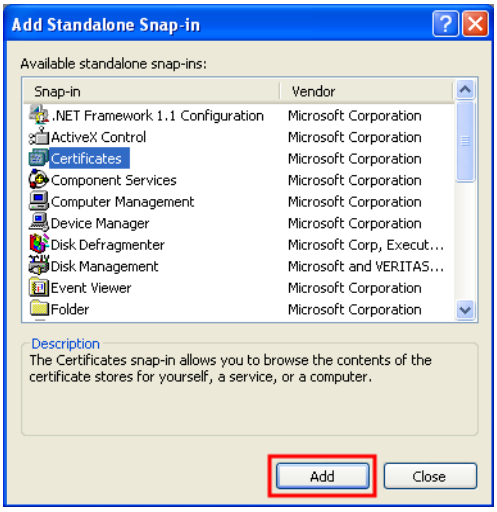
- From the **File** menu, select **Add/Remove Snap-in**.



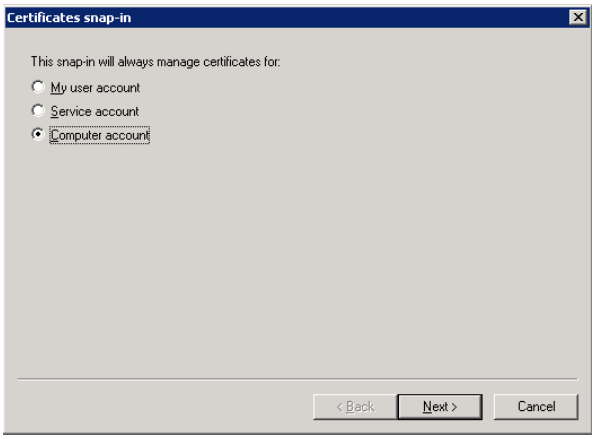
- On the Standalone tab, click **Add**.



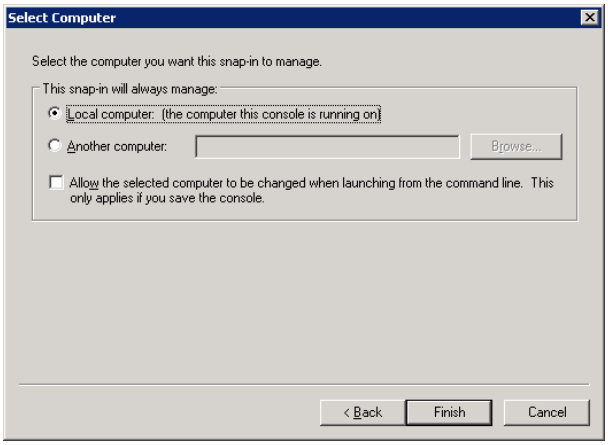
- From the Available Standalone Snap-in list box, select "**Certificates**", and then click **Add**.



- In **Certificates snap-in** pop-up window select **Computer account** and press **Next**.

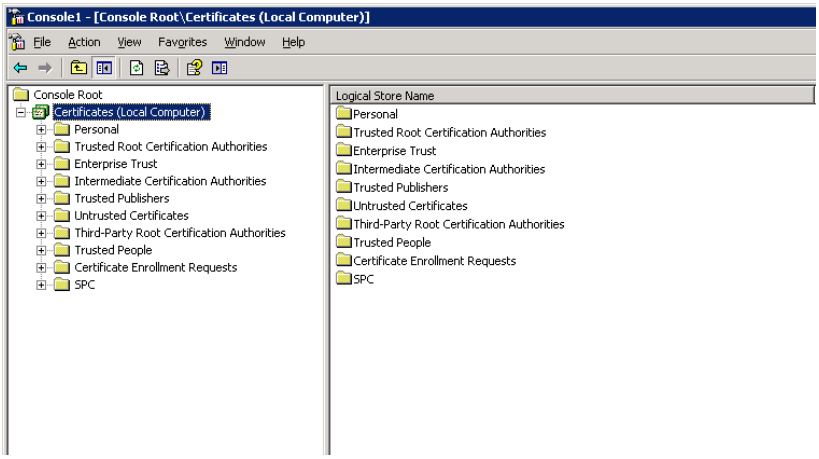


- In **Select Computer** pop-up window select **Local Computer** option and click on **Finish** button.

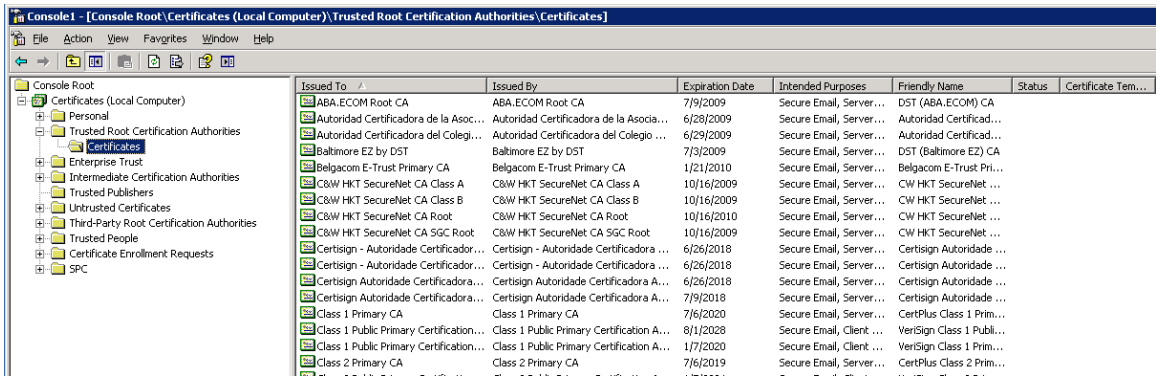


- In Stand Alone snap-in window press **Close** button and in Add/Remove window click on **OK** to exit.

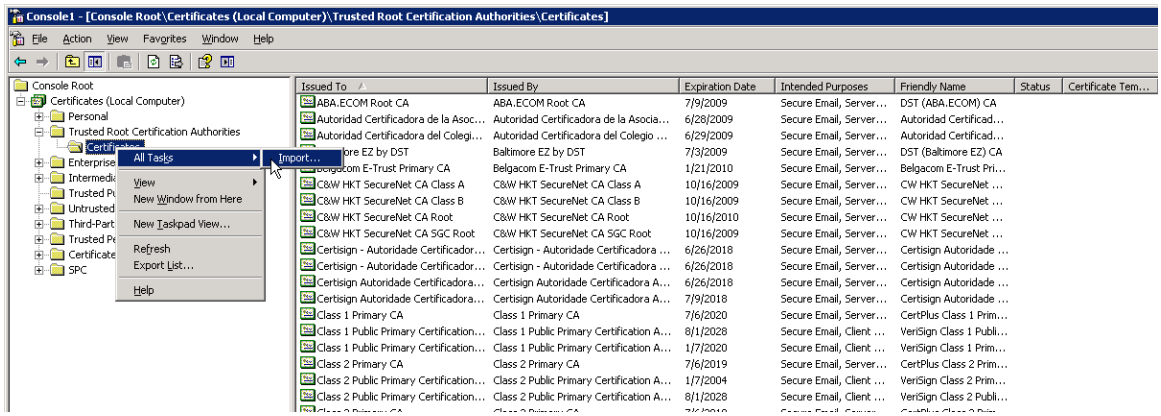
- In Microsoft Management Console (**MMC**), expend the **Certificates** snap-in.



- In the console tree, select **Trusted Root Certificate Authorities – Certificates** container.



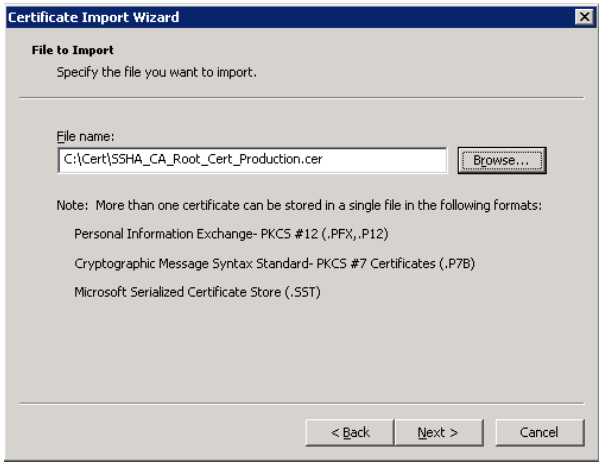
- Right click on it and select **All Task -> Import**



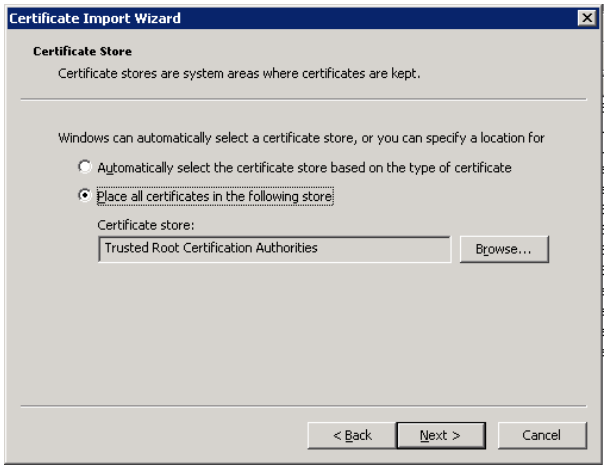
- Browse to the **SSHA CA Root certificate** received from eHealth Ontario and click **Next**

- Following the Wizard select **Next** and **Finish**.

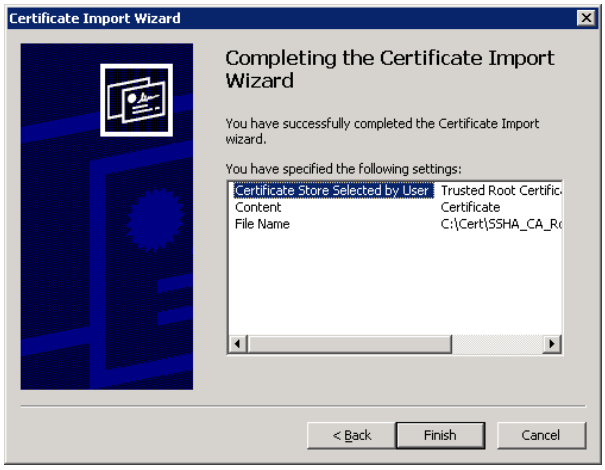
- In the **File to Import** screen click on **Browse** button, select SSHA CA Root Certificate which you received from eHealth Ontario and click on **Next** to proceed.



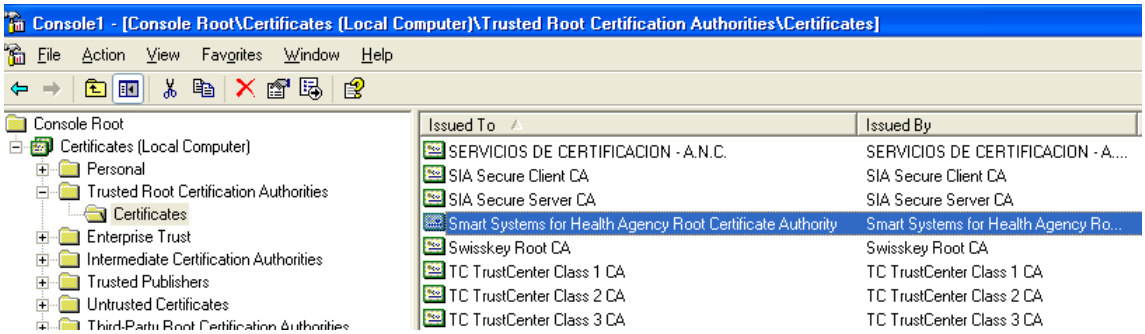
- In **Certificate Store** screen verify that **Place all certificates in the following store** and **Trusted Root Certification Authorities** options are selected and click on **Next** to proceed.



- In **Completing** screen verify selected options and click on **Finish** to exit.



- Open **Certificates** folder in the **Trusted Root Certificate Authorities** and verify if **SSHA CA Root certificate** is installed

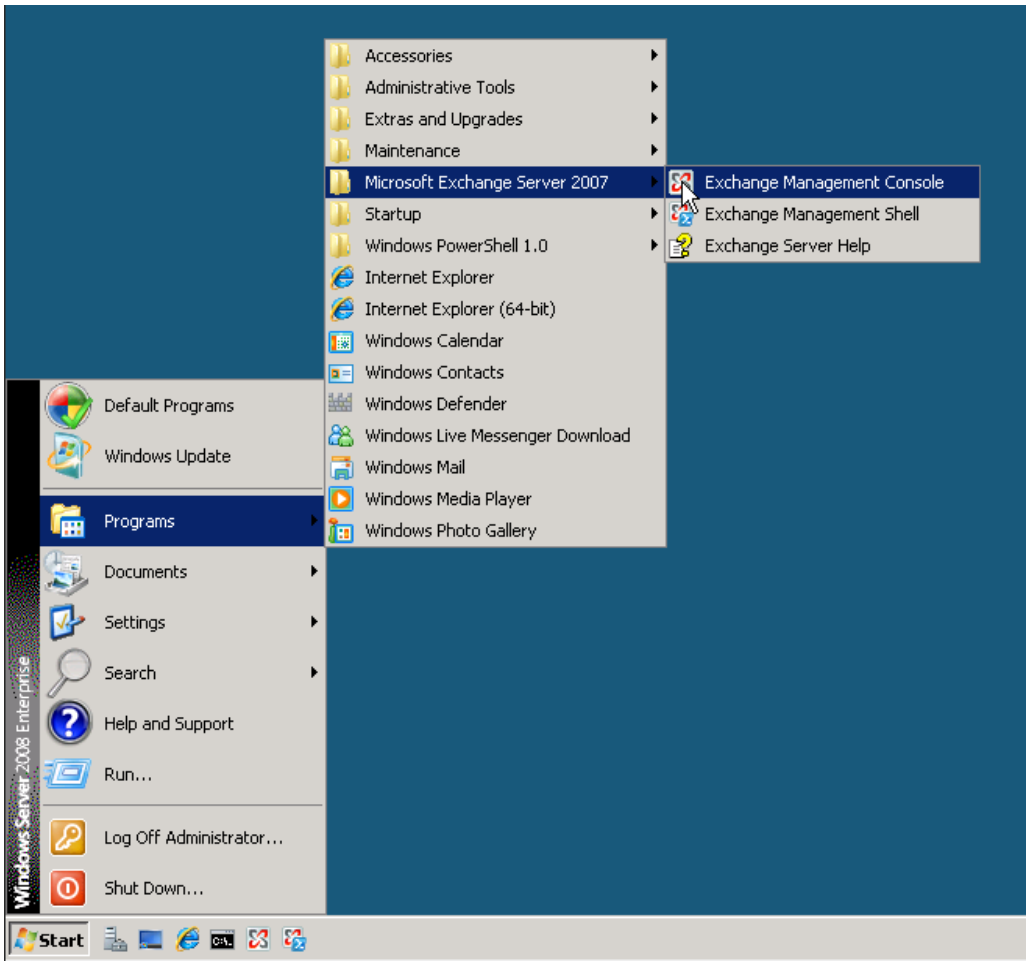


- You have successfully installed the SSHA CA Root certificate.

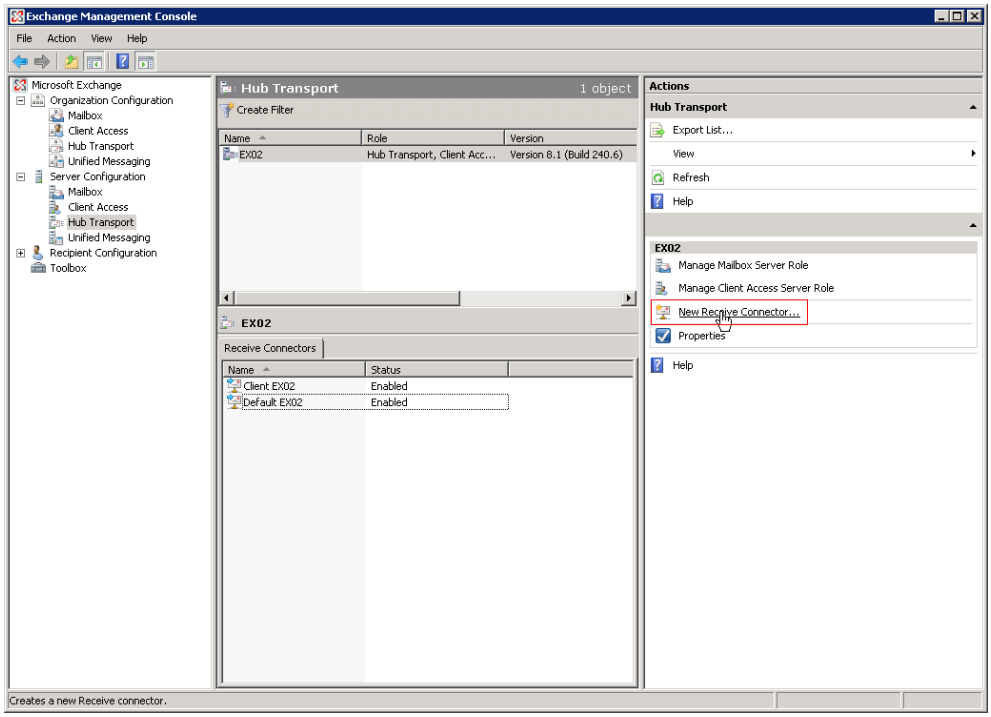
9.0 Set Up Receive Connector

To configure a Default Receive Connector for ONE Mail Partnered environment on your Exchange Server 2007, use the Exchange Management Console as explained below:

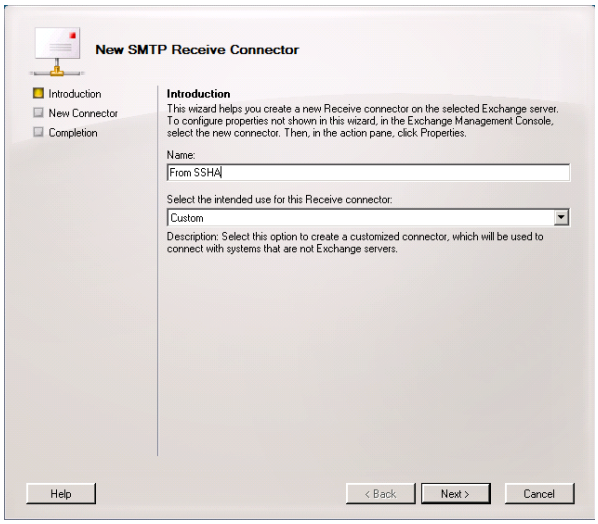
- Login to your Microsoft Exchange Server 2007 hub transport server.
- Click **Start > Programs > Microsoft Exchange Server 2007 > Exchange Management Console**



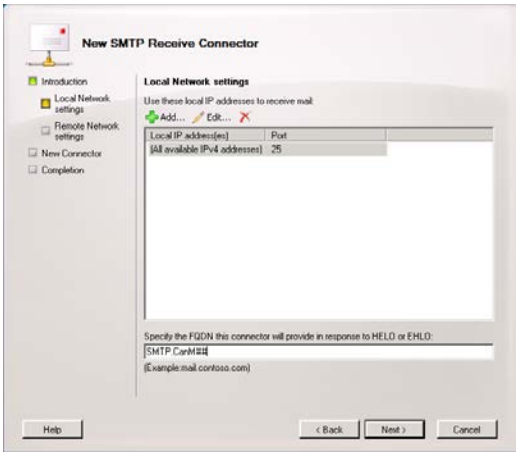
In the left tree pane expand **Server Configuration** and select **Hub Transport** container. In upper middle pane, select your hub transport server, and in left pane, select **New Receive Connector**



- In **Introduction** window of wizard specify name for new connector (exp. From eHealth Ontario) and click on **Next** to proceed:



- In the **Local Network settings** window under **Specify the FQDN this connector will provide in response to HELO or EHLO:** field, specify the name which is listed in subject line of eHealth Ontario's certificate issued to your organization and click on **Next** to proceed.

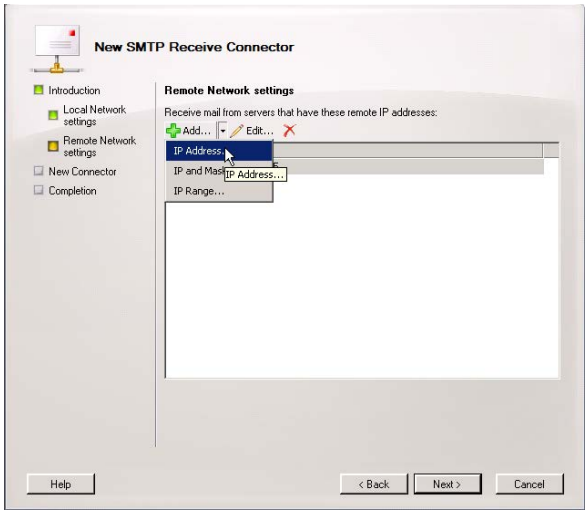


For example you can run **Get-ExchangeCertificate –ThumbPrint** *eHo_Certificate_ThumbPrint* **| fl** command, and in subject line find CN component of the certificate:

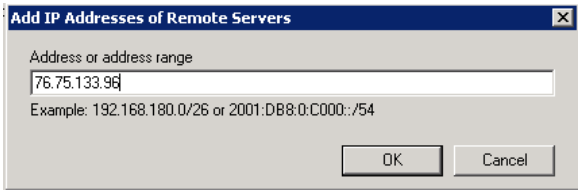
```
[PS] C:\Windows\System32>get-exchangecertificate -thumbprint 76C00F8EDD81F1310BC
CCD511B66E4A3D349F541 | list


AccessRules        : {System.Security.AccessControl.CryptoKeyAccessRule, System
                     .Security.AccessControl.CryptoKeyAccessRule, System.Securi
                     ty.AccessControl.CryptoKeyAccessRule}
CertificateDomains : {SMTP.CanM  }
HasPrivateKey      : True
IsSelfSigned       : False
Issuer             : CN=Smart Systems for Health Agency Root Certificate Author
                     ity, OU=PKI, OU=Security, OU=SSH Services, DC=subscribers,
                      DC=ssh
NotAfter           : 9/4/2011 3:28:05 PM
NotBefore          : 9/4/2008 2:58:05 PM
PublicKeySize      : 1024
RootCAType         : Registry
SerialNumber       : 3FB34757
Services           : SMTP
Status             : Valid
Subject            : CN=SMTP.CanM  , OU=Applications, OU=CanM  , OU=Subscribers
                     , DC=subscribers, DC=ssh
Thumbprint         : 76C00F8EDD81F1310BCCCD511B66E4A3D349F541
```

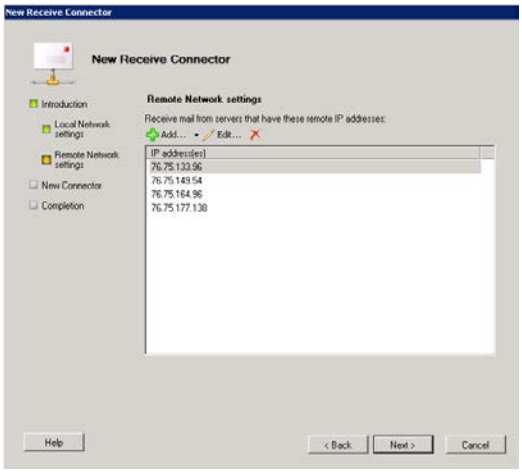
- In **Remote Network settings** window, you need to add IP address of eHealth Ontario's TLS-OUT server here by selecting down arrow button next to **+Add** and chose **IP Address...** option.



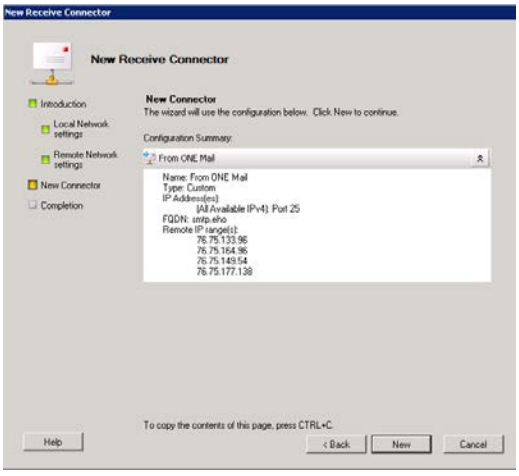
- In **Add IP Address(es) of Remote Servers** pop-up window insert IP Address of eHealth Ontario's TLS-OUT servers and click on **OK** to exit this screen. There are 4 IPs to be added:
    - 76.75.133.96
    - 76.75.164.96
    - 76.75.149.54
    - 76.75.177.138



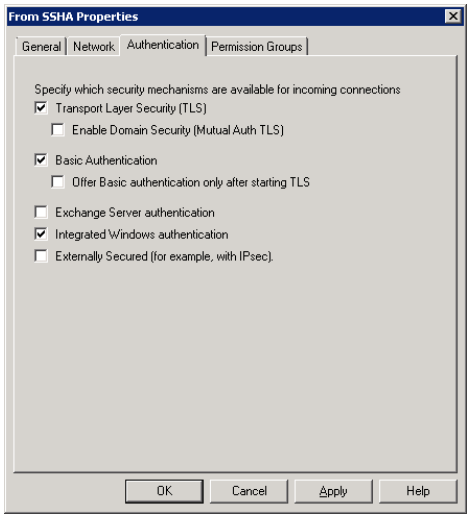
- Remove full range of all IP v.4 addresses (0.0.0.0 – 255.255.255.255) and click on **Next** in **Remote network** window to proceed:



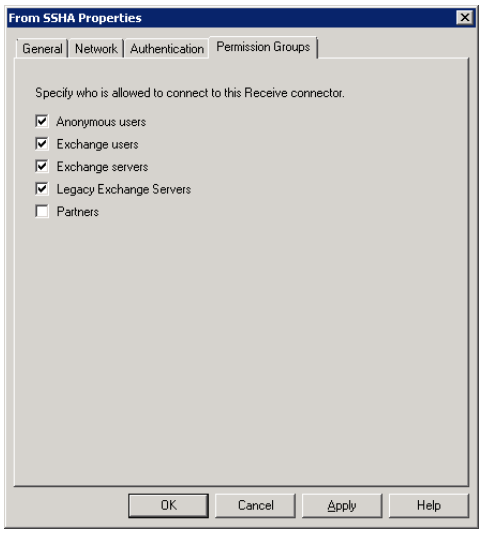
- Review configuration settings in **Configuration Summary** window and click on **New** button to create connector and click on **Finish** in **Completion** window to exit:



- Double click on newly created connector **From eHealth Ontario** to get properties and switch to **Authentication** tab and only select the following options:
    - Transport Layer Security (TLS)
    - Basic Authentication
    - Integrated Windows authentication



- Switch to the **Permission Groups** tab and select all available permission groups except **Partners** and click on **Apply** to save changes and exit **Exchange Management Console**.



- Run **Services.msc** tool and restart **Microsoft Exchange Transport** service to immediately apply all changes.

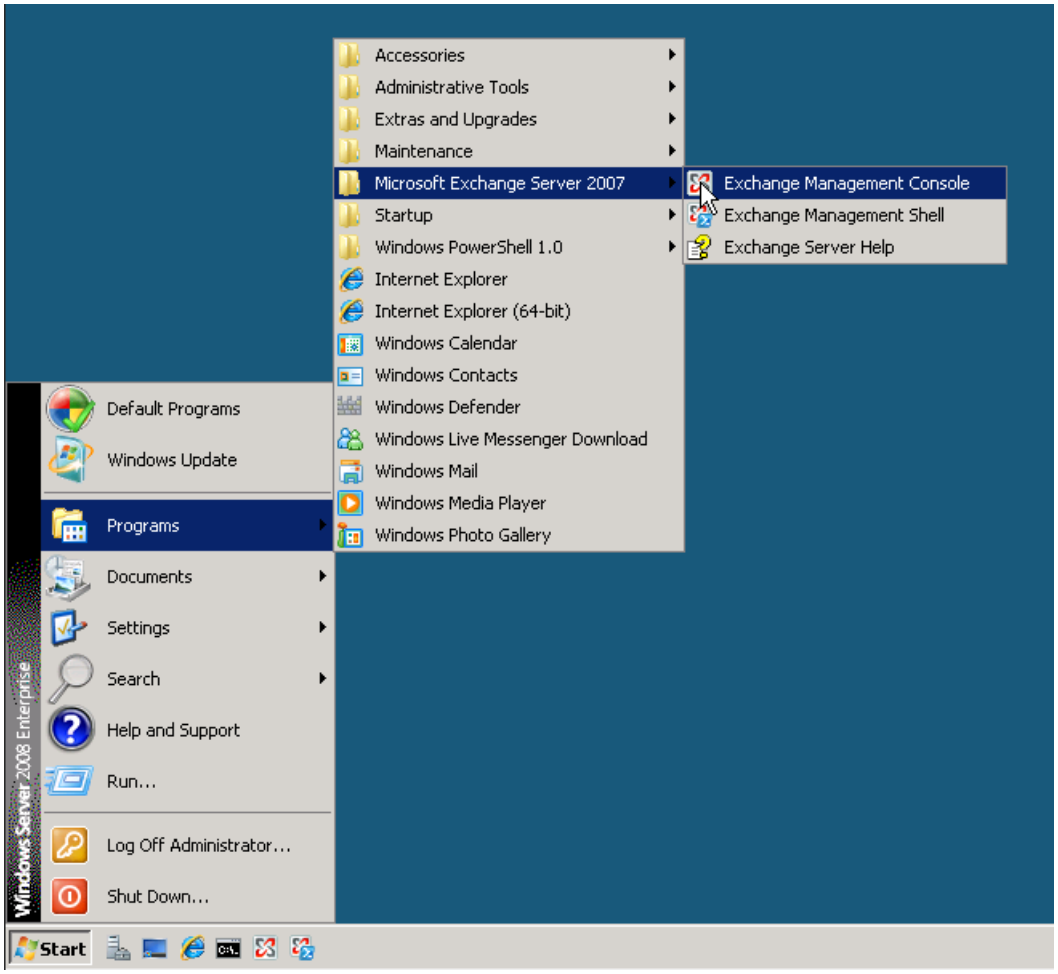
STOP: Do not complete the remainder of the configurations until the scheduled Go Live date.

10.0 Set Up Send Connector

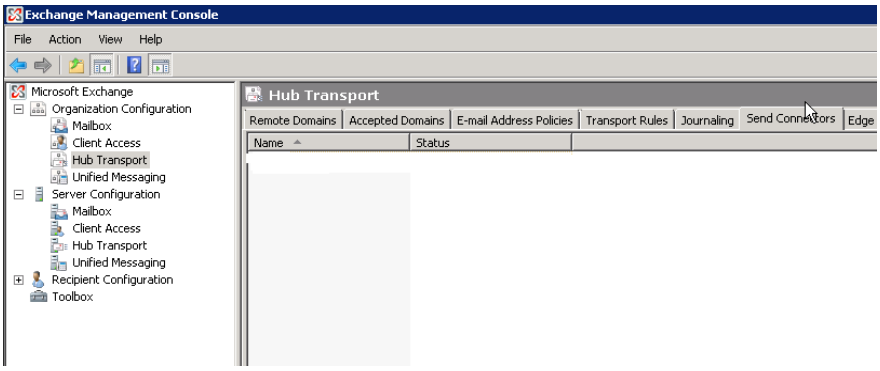
To create and configure a Send Connector for the ONE Mail Partnered environment on your Exchange Server 2007 use Exchange Management Console, as explained below:

Note: **Note:** If you already have **Send Connector** configured on your server, please change priority of this connector to 20, by taking Properties of that Send Connector, switch to Address Space tab, edit exiting address space and change Cost value from 1 to 20. After that proceed with creation of the new Send Connector to connect to eHealth Ontario's ONE Mail Partnered program.

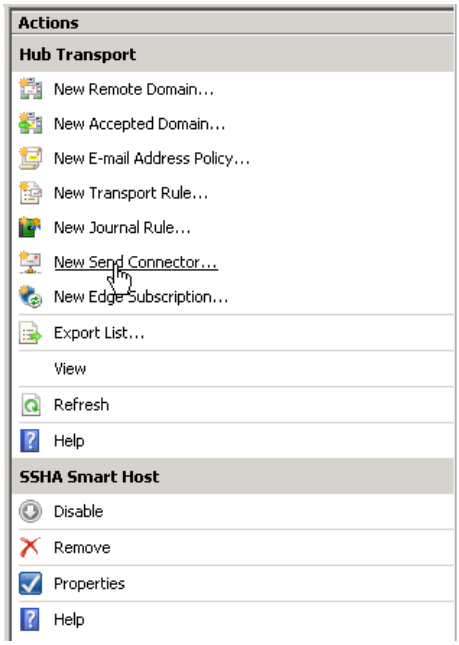
- Login to your Microsoft Exchange Server 2007 host server.
- Click **Start** > **Programs** > **Microsoft Exchange Server 2007** > **Exchange Management Console.**



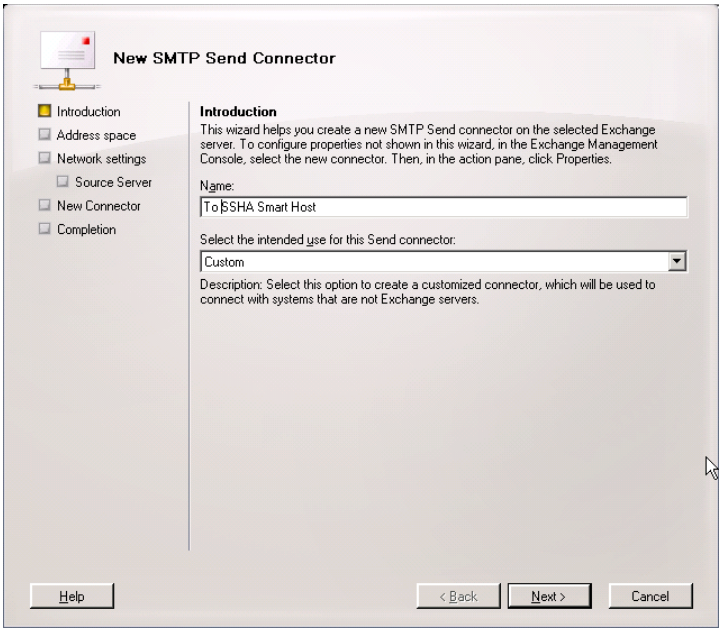
- In Exchange Management Console, in the left tree pane browse to Organization Configuration to Hub Transport container. Then select the **Send Connector** tab. If you have Send Connector configured to rout your out-bound e-mail directly to Internet, or to your previous ISP you need to delete that connector.



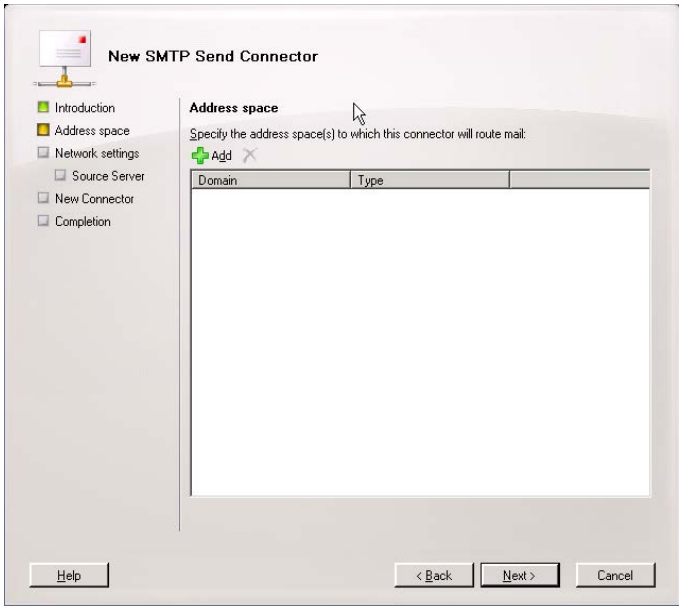
- To create new Send Connector, in the right action pane select **New Send Connector.**



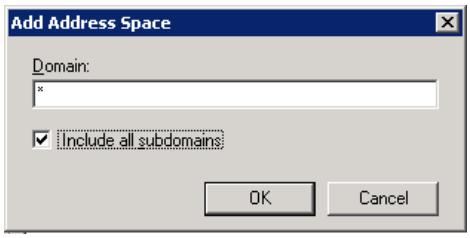
- On the **New SMTP Send Connector** introduction screen select the name of the new connector and insert in the **Name** field (ex. To eHealth Ontario Smart Host). From the **Select the intended use for this Send connector** drop down menu select ***Custom*** and press **Next.**



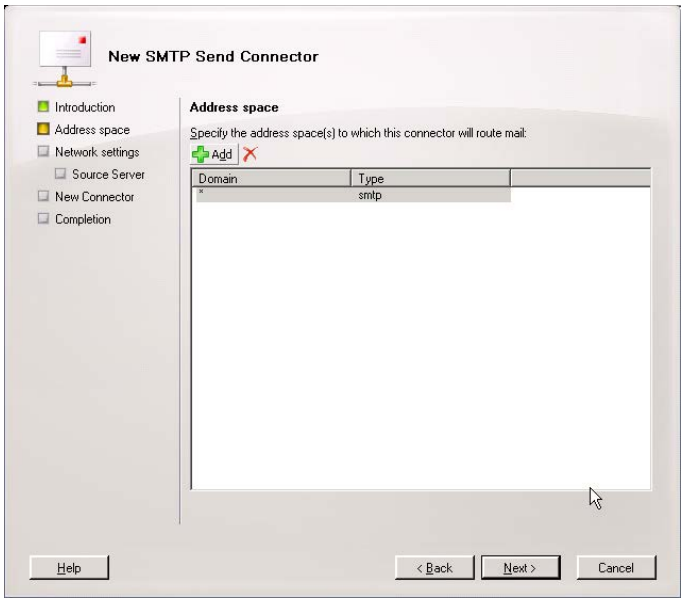
- In the Address space screen click the **Add** button



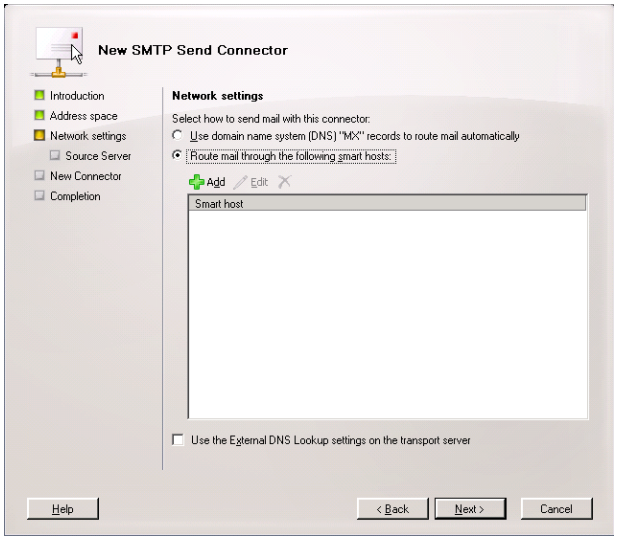
- In the **Add Address Space** window type "*" in the **Domain** box and press **OK**.



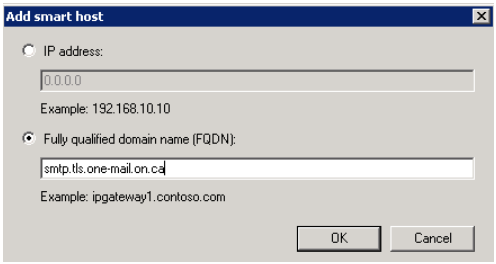
- In the **Address space** screen you will see the new address space, press **Next** to proceed:



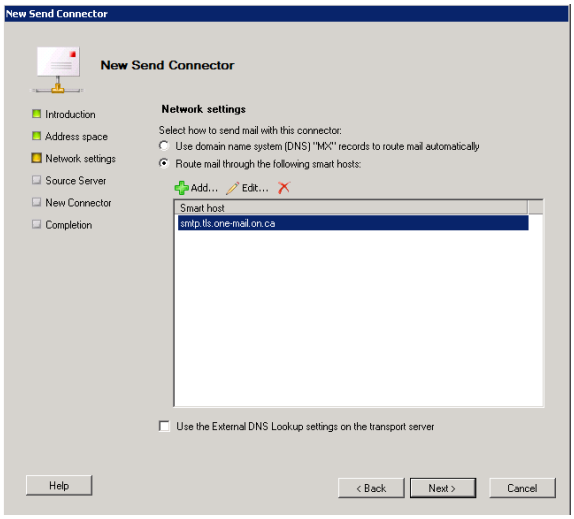
- In **Network settings** screen select option **Route mail through the following smart host:** and press the **Add** button.



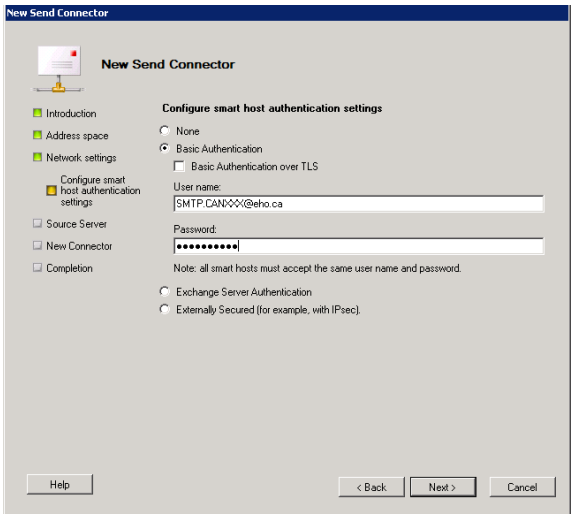
- In the **Add smart host** pop up window select **Fully qualified domain name (FQDN):** and insert eHealth Ontario's TLS-IN FQDN **smtp.tls.one-mail.on.ca** and press **OK.**



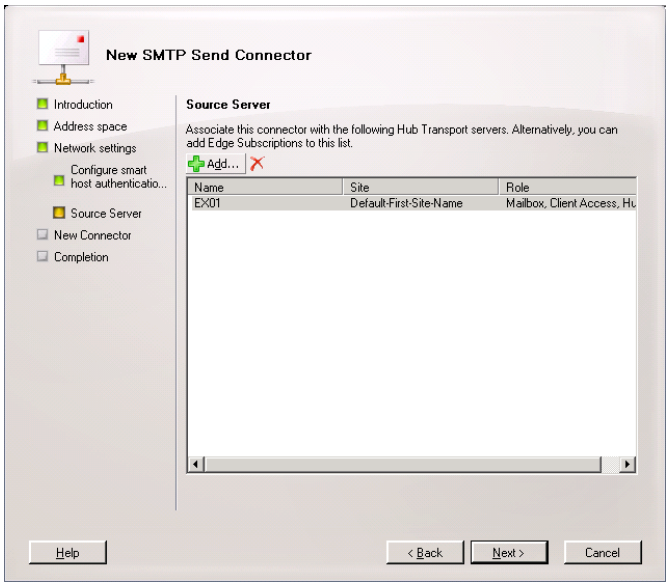
- Back in the **Network settings** screen, you will now see new smart host and press **Next** to proceed.



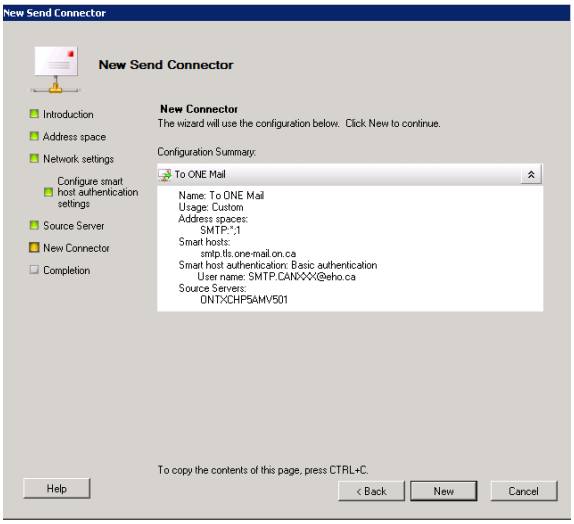
- In the **Authentication Settings** screen select only **Basic Authentication** option and insert user name and password provided by eHealth Ontario, then press **Next** to proceed.



- In the **Source Server** screen select only your **Hub Transport** server and press **Next** to proceed.

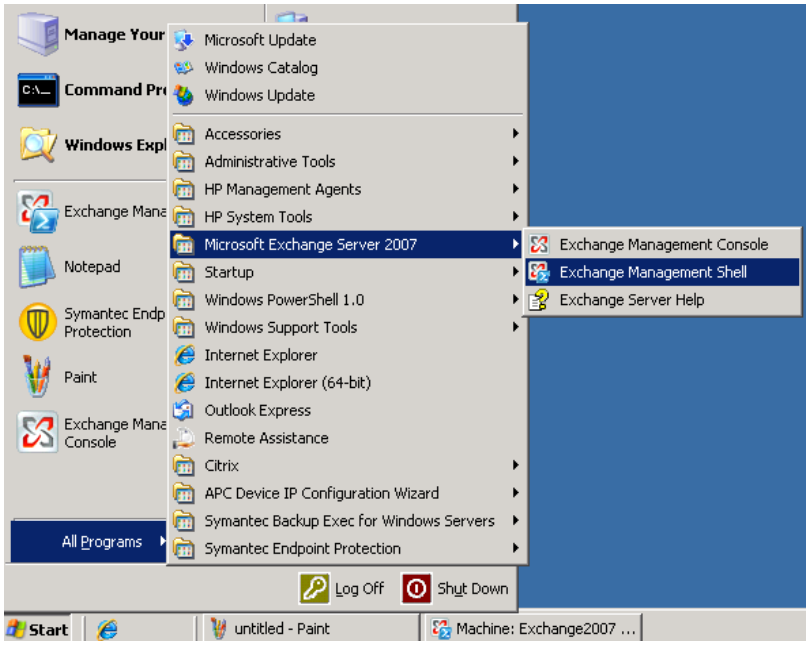


- In the **Configuration Summary** screen review selected options and press **New** to proceed.



In the **Completion** screen press **Finish** to exit.

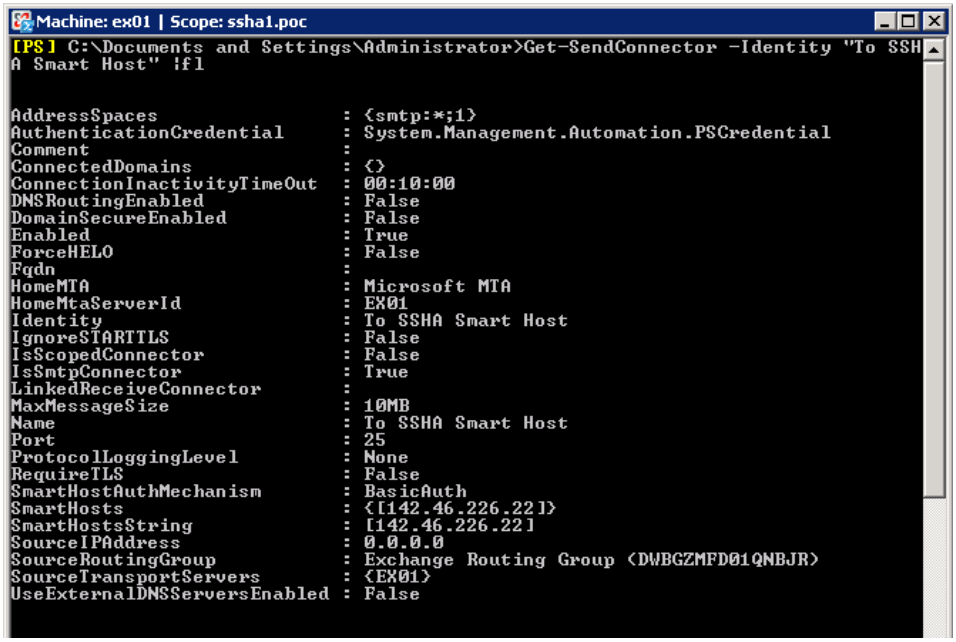
- Now open Exchange Management Shell from Start Menu.



- Then type command:

```
Get-SendConnector –Identity "Your_Send_Connector_Name" |fl
```

"*Your_Send_Connector_Name*" is the name which you specified during connection creation.



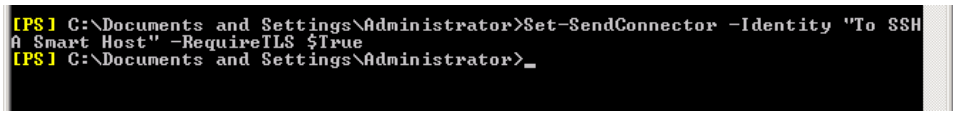
Check following fields in output:

- *IgnoreSTARTTLS* need to be *False*
- *SmartHostAuthMechanism* need to be only *BasicAuth*
- RequireTLS need to be True

Note: RequireTLS by default is **False (as you can see on previous screenshot)** and we need to change that to **True** by running following command:

```
Set-SendConnector –Identity "Your_Send_Connector_Name" –RequireTLS $True
```

Where "*Your_Send_Connector_Name*" is the name which you specified during connection creation:

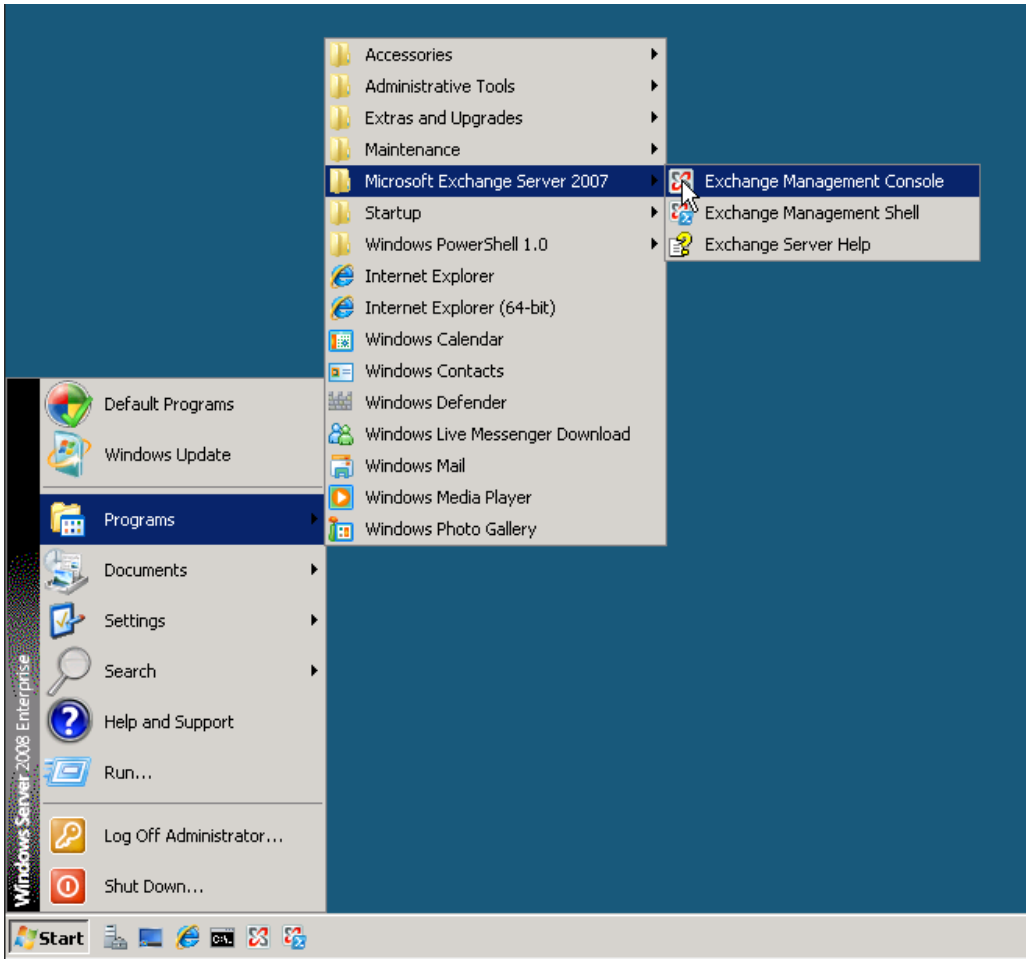


Note: If any other two parameters are not setup as required use same command with appropriate parameters to set them.

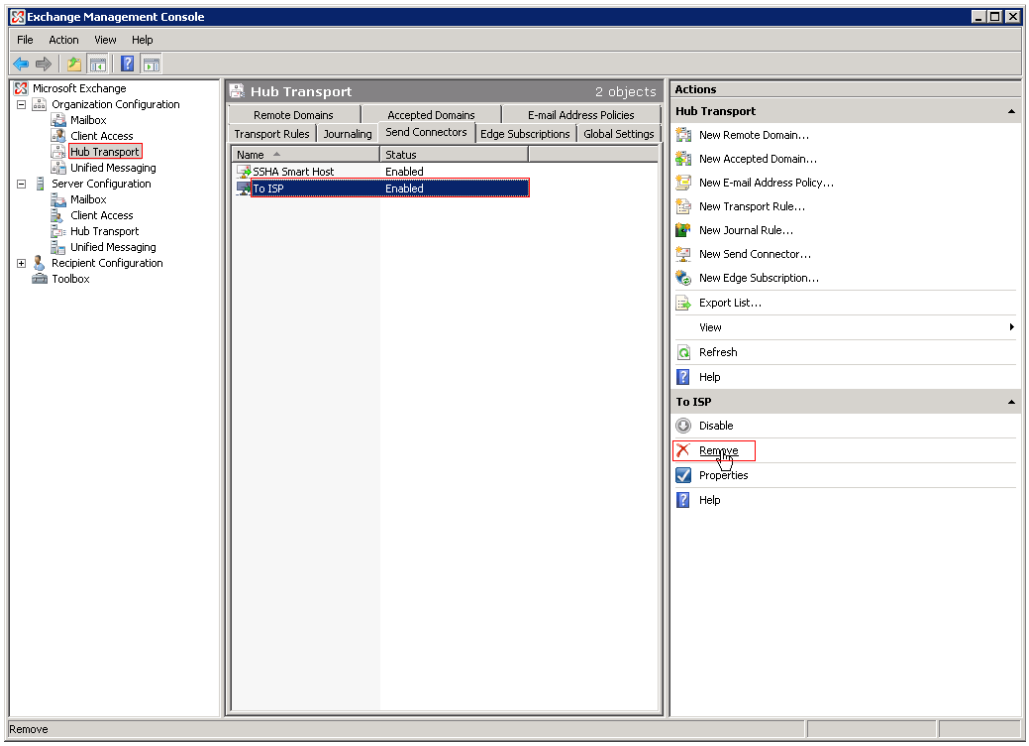
11.0 Post Configuration Changes

Once full integration with ONE Mail Partnered program is implemented and tested, and you are fully disconnected from your previous ISP service, you will need to remove all old Send and Receive Connector configurations by following these steps:

- Login to your Microsoft Exchange Server 2007 hub transport server.
- Click **Start** > **Programs** > **Microsoft Exchange Server 2007** > **Exchange Management Console**



- In the left tree pane expand **Organization Configuration** and select **Hub Transport** container, in the middle pane switch to **Send Connector** tab, select old Send connector which was used to connect to ISP mail server, and in left **Action** pane select **Remove**:



- In the left tree pane expand **Server Configuration** and select **Hub Transport** container, in the lower middle pane select old Receive connector which was used to receive mail from ISP mail server, and in left **Action** pane select **Remove**: