Troubleshooting Notes Migrator and Exchange 2010

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Purpose

The Quest Notes Migrator for Exchange User Guide makes reference to Exchange 2010, Remote powershell and how to enable it. Remote powershell is a new feature in Powershell 2.0 and Exchange 2010. Notes Migrator for Exchange no longer needs the Exchange Management Tools to migrate to Exchange 2010 but does require some extra configuration.

This document will attempt to give high-level detail on some ways to troubleshoot and verify that remote powershell is working from the migration console. It will also include some of the Exchange powershell cmdlets that Notes Migrator for Exchange is using during its actions.

Note: Powershell 2.0 can be downloaded from the following website.
http://support.microsoft.com/kb/968929

Note: A list of Exchange 2010 cmdlets can be obtained from the following website.
http://technet.microsoft.com/en-us/library/bb124413.aspx

Note: A list of cmdlets that are available to Powershell 2.0 can be obtained from the following website.
http://technet.microsoft.com/en-us/library/dd347701.aspx

This document is provided as is with no warranties. This document does not cover every possible scenario nor take (end-user) specific environmental variables into consideration. It is provided to give example of a simple structure.

If the end-user environment falls out of the scope of what this document can provide and the end user requires further assistance with the environmental setup, engaging Professional Services via your Quest Account Manager is highly recommended (and may be necessary) to ensure a successful and timely migration.

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How can I verify that Remote Powershell To Exchange 2010 Is Working Properly?

Figure 1 below shows that Remote Powershell to Exchange 2010 is working. If there are any errors then further troubleshooting will be necessary. Notes Migrator is a 32 bit application and is currently not supported on 64 bit platforms. The Exchange Management Tools are 64 bit only and therefore cannot be installed and are not needed.

Example Of Remote Powershell Working

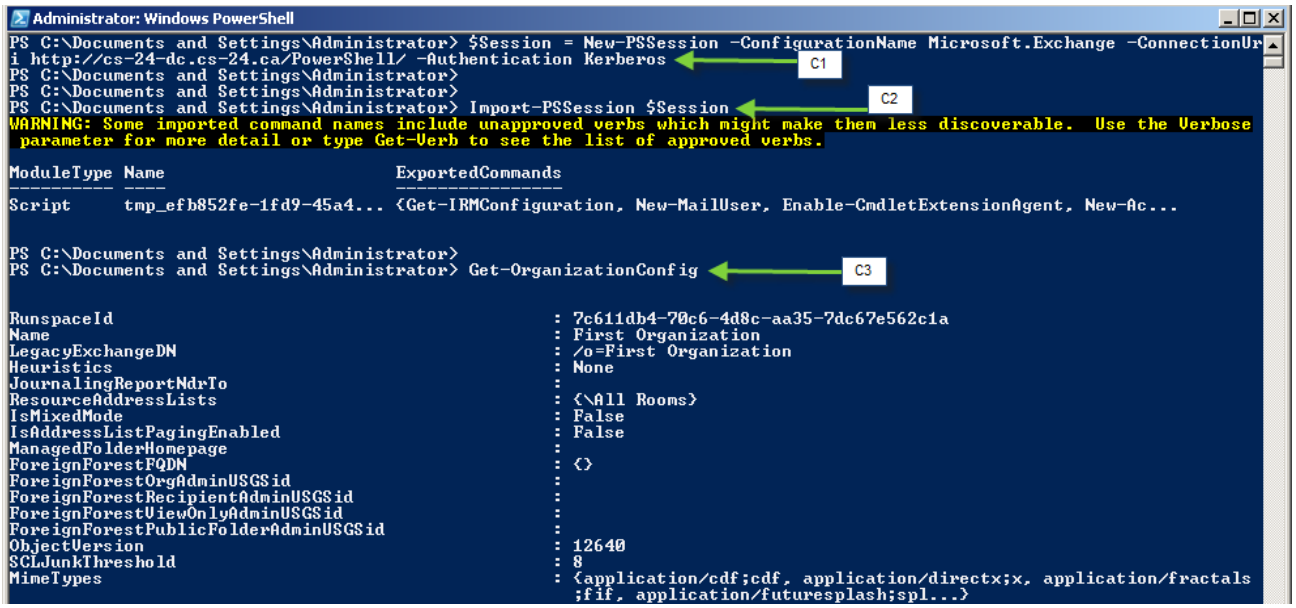

Figure 1 – Remote Powershell To Exchange Working Manually

To test the connection, Open powershell 2.0 and run the following 3 commands.

1. $Session = New-PSSession -ConfigurationName Microsoft.Exchange -ConnectionUri http://cs-24-dc.cs-24.ca/PowerShell/ -Authentication Kerberos (As in C1)
2. Import-PSSession $Session (As in C2)
3. Get-OrganizationConfig (As in C3)

NOTE: -ConnectionUri http://cs-24-dc.cs-24.ca/PowerShell/ in Step #1 will have to be changed to be the Fully Qualified Domain Name of the exchange server that hosts the powershell webservice (which will also be a CAS role)

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The Remote Powershell Test Failed, What Do I Do Now?

Powershell Version

Currently only Windows Server 2008 R2 and Windows 7 have Powershell 2.0 built in. Notes Migrator only supports a 32 bit OS and is often installed on an OS that doesn't have Powershell 2.0 installed by default. An easy way to verify that Powershell 2.0 is installed is to open a Powershell window and type get-host as shown below. This will tell you if you have Powershell 1.0 or 2.0 installed.

Get-Host Showing Powershell Version

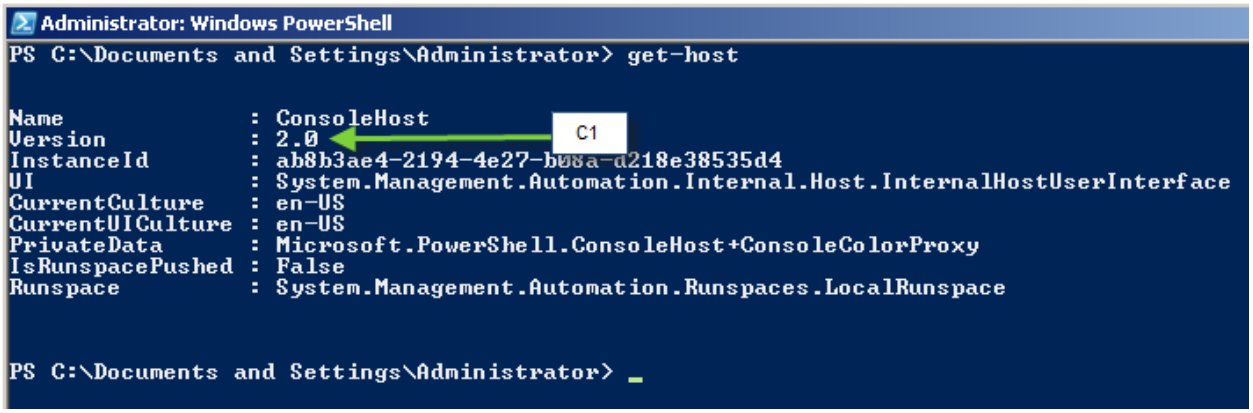

Figure 2 – Powershell Version

More information on the get-host cmdlet can be found here:

http://technet.microsoft.com/en-us/library/ee176850.aspx

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Execution Policy

The Powershell Execution Policy can protect your system by not allowing it to run any powershell scripts. This can cause problems with Exchange 2010 as when you make the remote connection, a script is run and will give an error as in Figure 3 if the policy is set too high.

Powershell Error Saying Scripts Are Disabled

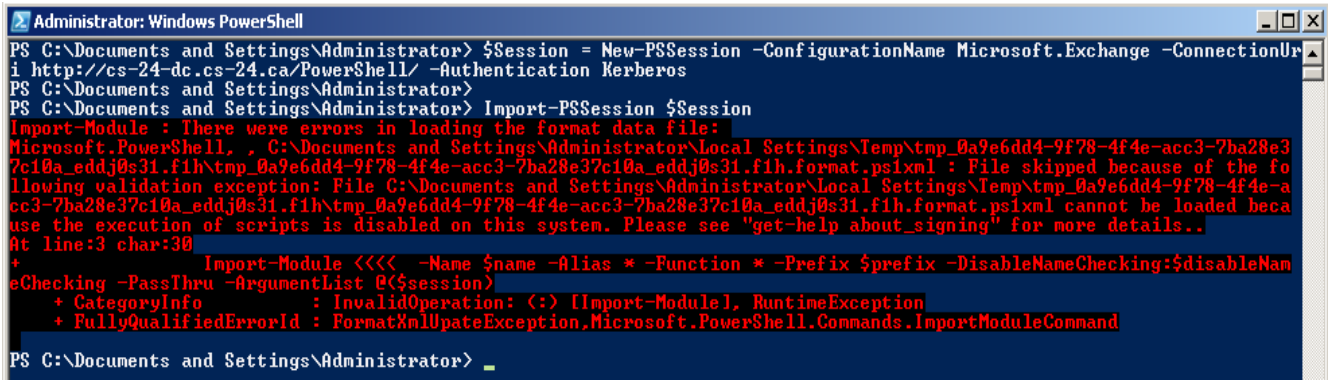

Figure 3 – Import Session Failed Due To Policy Restrictions

Get-ExecutionPolicy Showing Level Is Set To Restricted

Get-ExecutionPolicy shows the current machine policy. In this case it is set to restricted and will cause issues with Notes Migrator and remote connections to Exchange 2010 as no scripts will be allowed to run.

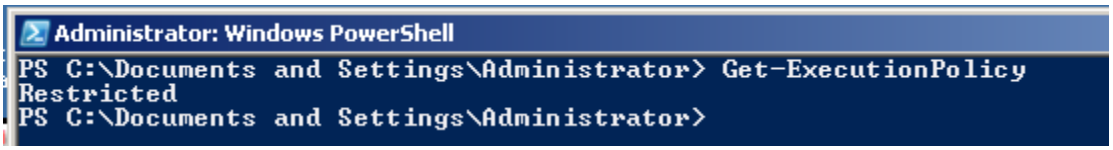

Figure 4 – Restricted Policy Setting

Set-Execution Policy Being Set To RemoteSigned

There are a few policy options that can be set. It is preferable to set the execution policy to RemoteSigned. If there are still problems, the policy level will have to be set to Unrestricted. This has to be done on the migration console.

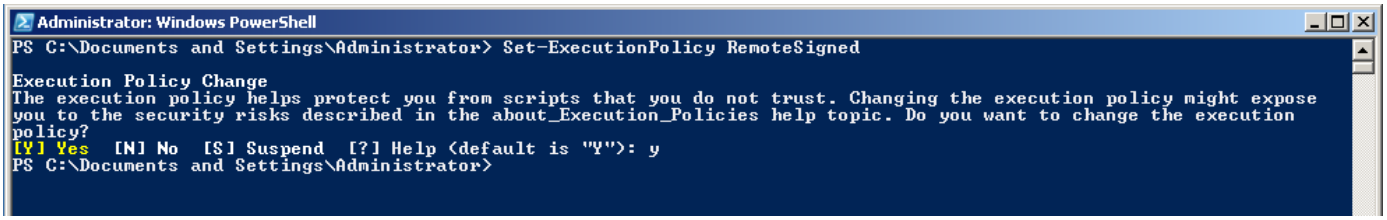

Figure 5 – Set Policy To Remote Signed

More information about the Set-ExecutionPolicy cmdlet can be found here :

http://technet.microsoft.com/en-us/library/ee176961.aspx

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User Is Not Enabled For Remote Powershell

In the Notes Migrator User Guide, It says that the user must be enabled for remote powershell. The account must be logged into the machine as well as the account being used in the Active Directory screen in Notes Migrator

Connection Failing Due To User Not Being Enabled For Remote Management

If the user is not enabled for remote management you will get an error similar to Figure 6 stating that the WinRM client cannot process the quest.

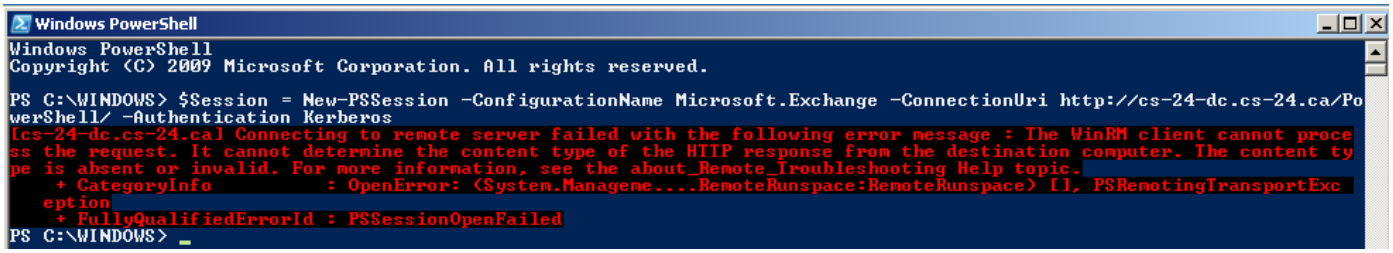

Figure 6 – Connection Failing Due To User Not Being Remote Enabled

Enabling User For Remote Management

The Set-User cmdlet must be run from an Exchange Management Shell or a Remote Session as shown below.

Figure 7 – Enabling Remote For User

Verifying that User Is Enabled For Remote Management

If you are to run the Set-User cmdlet on a user that is already enabled, you will see a warning as in Figure 8

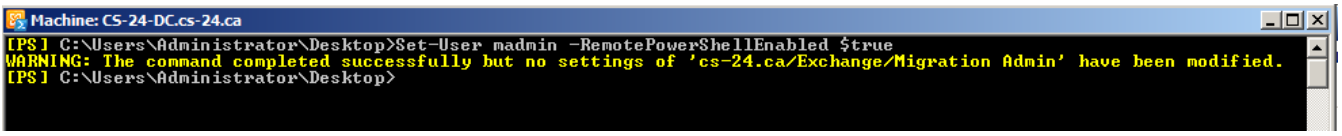

Figure 8 – User Is Already Remote Enabled

More information about the Set-User cmdlet can be found here:

http://technet.microsoft.com/en-us/library/aa998221.aspx

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WinRM Has Not Been Configured

In the Notes Migrator User Guide, it states that WinRM needs to be run. This will have to be run on the exchange server that contains the CAS role and is also specified in the Notes Migrator Exchange Server screen.

Checking To See If The Remote Management Service Is Listening

Using the command below from the exchange server shows no output. This means that the WinRM listener was never created or has been deleted.

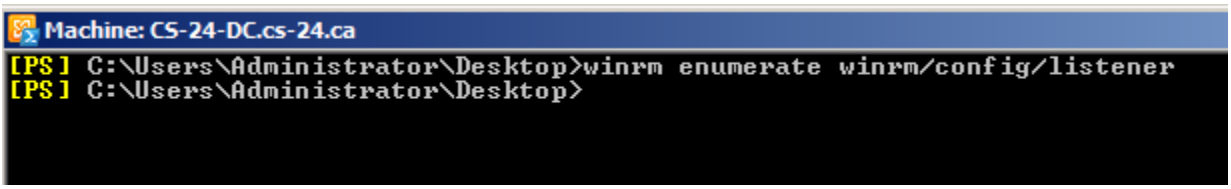

Figure 9 – No Output Meaning that WinRM QuickConfig Was Not Run

Running WinRM quickconfig To Enable A HTTP Listener

Running WinRM quickconfig from a command prompt or powershell window on the exchange server will create a HTTP listener to accept remote connections.

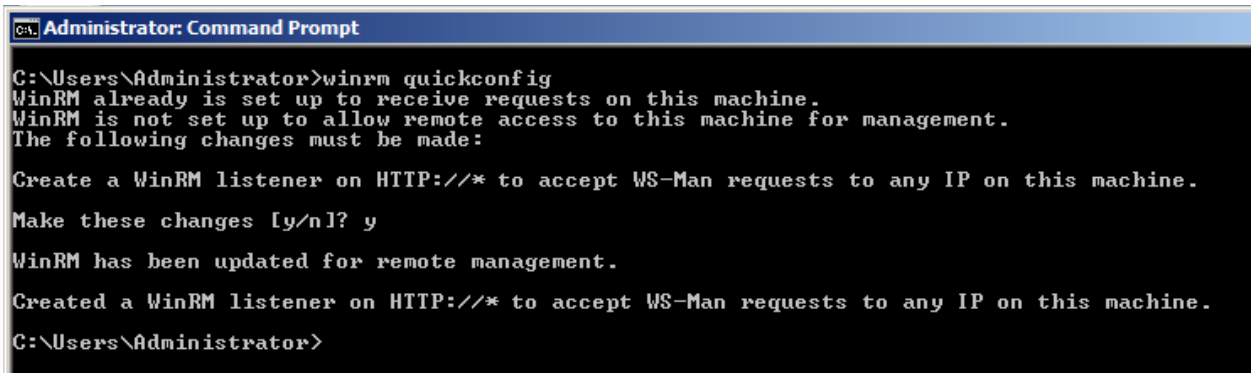

Figure 10 – WinRM QuickConfig Being Run

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Output Showing That WinRM is Listening

Running the WinRM enumerate command now shows that a listener is running and accepting remote connections.

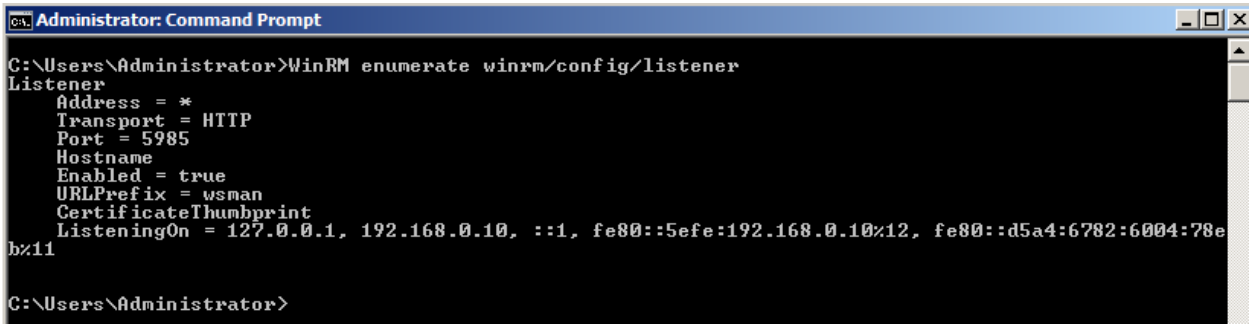

Figure 11 – Verification That HTTP Listener Was Created

NOTE: For more information on Windows Remote Management, Please see the following link.
http://msdn.microsoft.com/en-us/library/aa384426(VS.85).aspx

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Connection Succeeds But Get-Organizationconfig Fails

Figures 12 and 13 below show that Get-OrgranizationConfig cannot be found. Typically there can be two reasons for this to happen:

1. The user is not a member of the View-Only Organization Management
2. The remote powershell session could not be initiated.

Notes Migrator will require a domain user account in Active Directory, with Read/Write delegate access on all OUs where users and groups will be provisioned. On the Exchange server, this account will need Exchange Administration delegate access to the Administrative Group where the users' mailboxes will be created. This account must then be used to login to the migration workstation.

Get-OrganizationConfig Failing On Mailbox Enable In NME

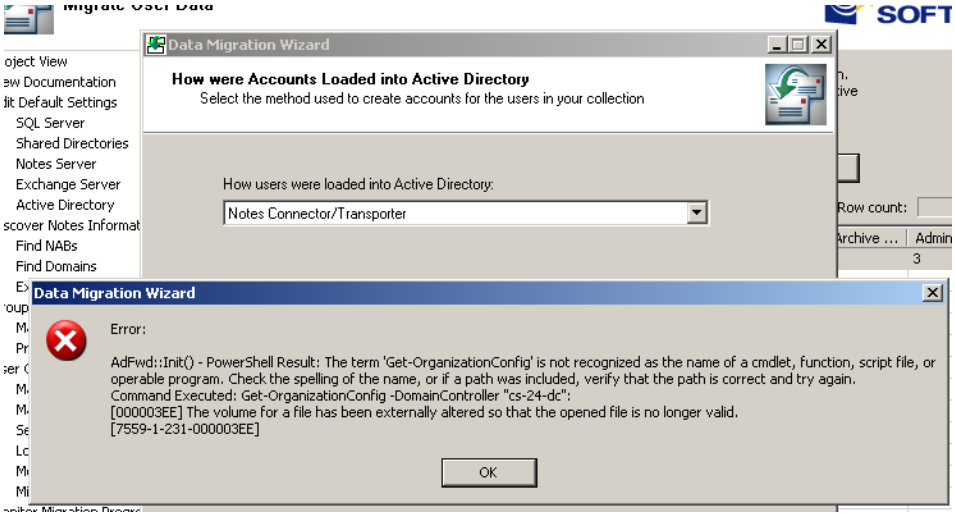

Figure 12 – Get-OrganizationConfig Failing During Mailbox-Enable

Get-OrganizationConfig Failing Due To Missing cmdlet

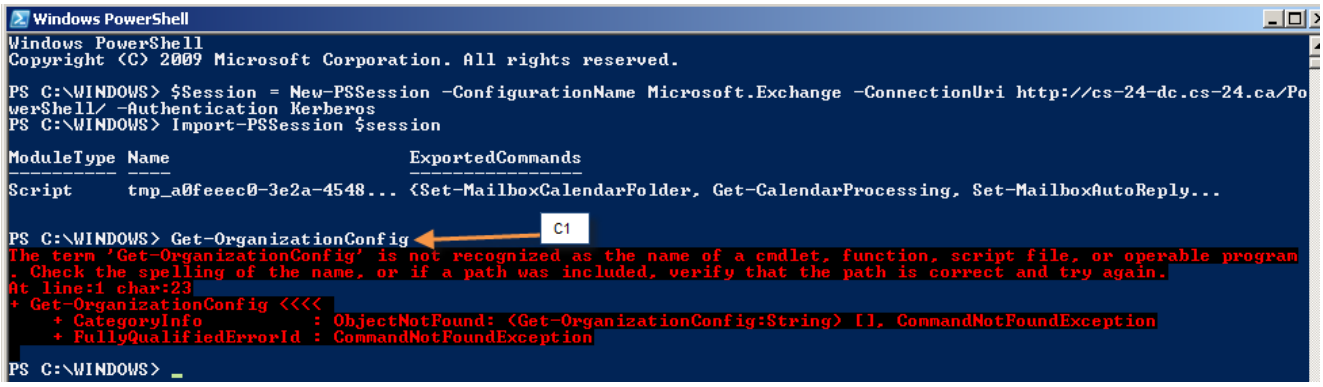

Figure 13 – Get-OrganizationConfig Failing Due To cmdlet Missing

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Remote Powershell Is Working But Notes Migrator Is Still Giving Me Errors. What Should I Do?

PSHME.DLL/PSHMEV2.DLL

For NME to function with Powershell and Exchange 2010, Two DLL files need to be registered and are usually registered during installation. There are instances where the DLL's fail to register due to powershell not being installed or a permissions issue of some type.

Figures 14 and 15 below show two common issues if the DLL files have not been registered.

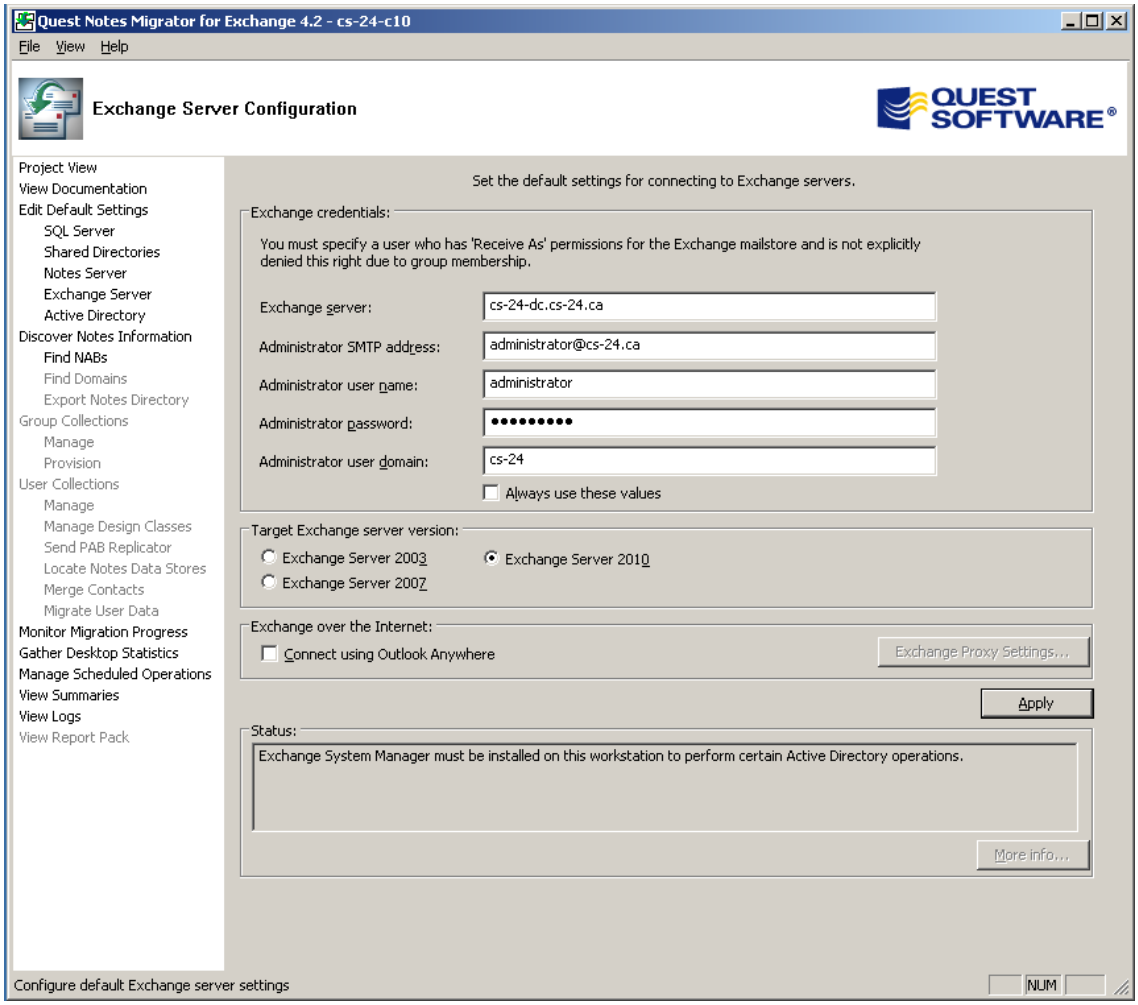

Figure 14 – ESM Must Be Installed

Figure 14 says that the Exchange System Manager needs to be installed. Exchange System Manager is for Exchange 2003 and usually appears when powershell was installed after Notes MIgrator. The Exchange tools for Exchange 2010 are not needed as all the powershell commands are called remotely

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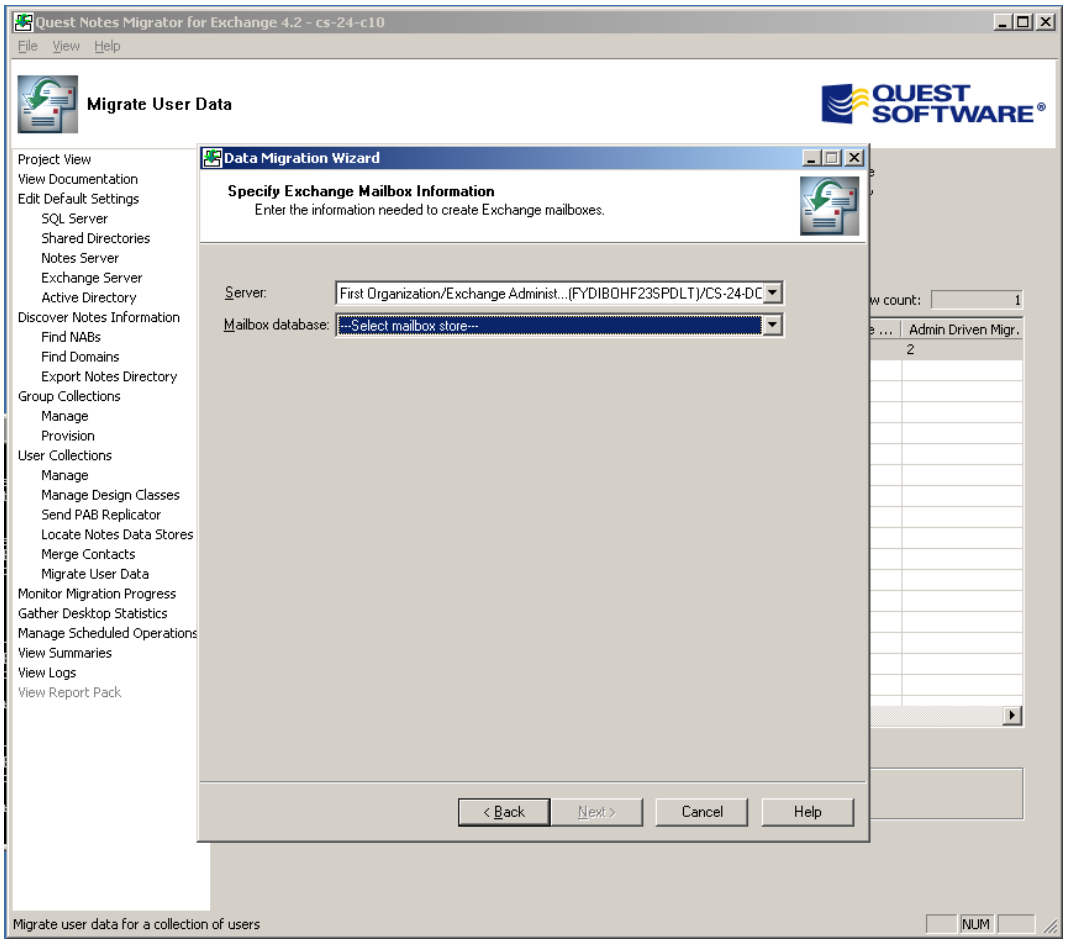

Figure 15 – Mailbox Databases are empty

In Figure 15, the mailbox database dropdown is empty. This can mean that you do not have access to the get-mailboxdatabase cmdlet but is more commonly found when the DLL files are not registered properly. To re-register the DLL files, close Notes Migrator and run the following two commands from a command prompt.

1. "C:\windows\microsoft.net\framework\v2.0.XXXXX\regasm.exe "c:\program files\quest software\quest notes migrator for exchange\pshme.dll"
2. "C:\windows\microsoft.net\framework\v2.0.XXXXX\regasm.exe "c:\program files\quest software\quest notes migrator for exchange\pshmev2.dll"

Replace the XXXXX with the version number from the directory found in C:\windows\microsoft.net\framework\

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