System Center Operations Manager Skype Alerts Notifications

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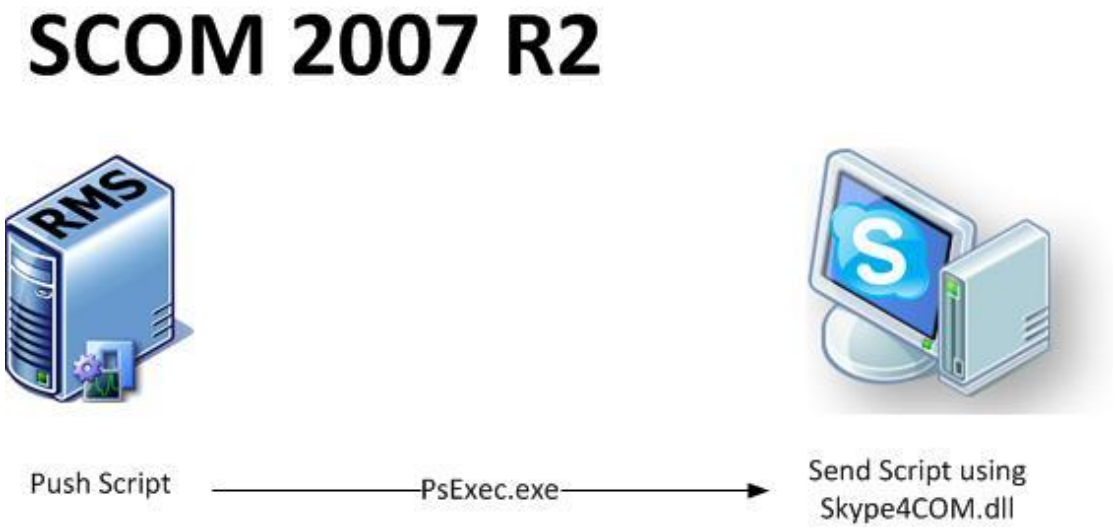
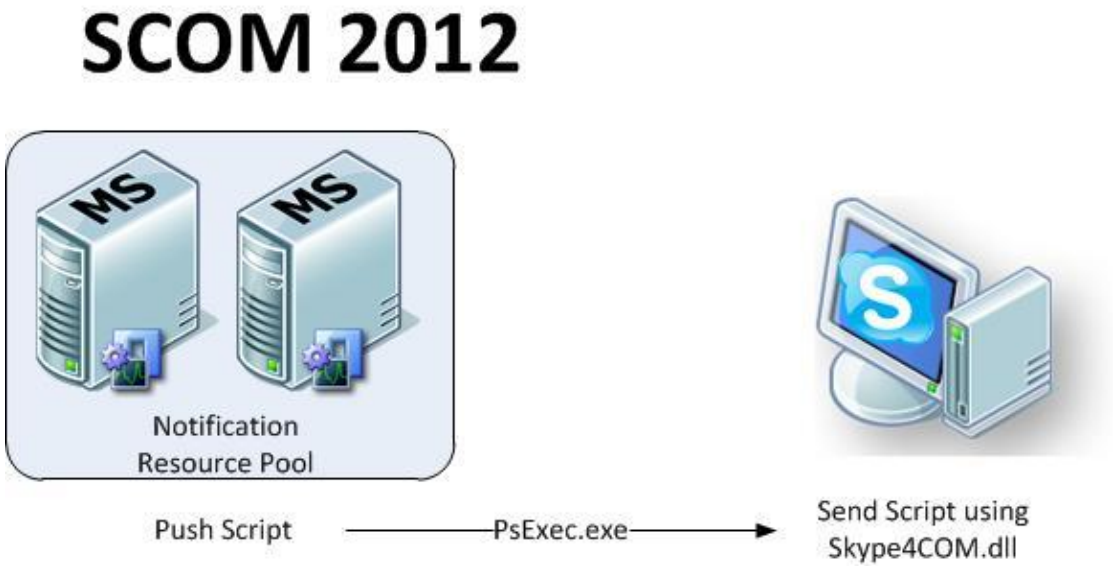
Introduction

This document is intended to be used as a guide to configure System Center Operations Manager 2007 R2 or System Center Operations Manager 2012 alert notification using Skype.

Overview

Since it seems silly and unpractical to install Skype on SCOM RMS / MS servers, this solution requires a separate computer running Skype (Skype Node) interactively so SCOM can use a command notification channel to push and remote execute a script located on Skype Node computer to send SCOM alert notifications via Skype messages.





System Requirements

System Requirements for SCOM 2007 R2 Environments

- A computer running Skype interactively (either on the console session or on a RDP session). We call this computer Skype Node.
- Windows PowerShell is loaded on Skype Node and allows script execution.
- Skype API Skype4com.dll (http://developer.skype.com/accessories/skype4com)
- The Skype Node computer account requires **SCOM Administrator** access.
- Windows PowerShell Execution policy is set to allow script execution on the SCOM RMS (or all RMS cluster nodes if RMS is clustered).
- PsExec.exe (http://technet.microsoft.com/en-us/sysinternals/bb897553.aspx) is required on RMS.

System Requirements for SCOM 2012 Environments

- A computer running Skype interactively (either on the console session or on a RDP session). We call this computer Skype Node.
- Windows PowerShell is loaded on Skype Node and allows script execution.
- SCOM 2012 PowerShell Command Console (SCOM 2012 PowerShell Module) needs to be installed on the Skype Node computer.
- Skype API Skype4com.dll (http://developer.skype.com/accessories/skype4com)
- The Skype Node computer account requires **SCOM Operator** access.
- Windows PowerShell Execution policy is set to allow script execution on the SCOM RMS (or all RMS cluster nodes if RMS is clustered).
- PsExec.exe (http://technet.microsoft.com/en-us/sysinternals/bb897553.aspx) is required on RMS.

Note: Skype4com is a **32-bit** app. It will only work in 32-bit environment.

Setup Instruction

Assumptions: Below instruction assumes all computers are running **64-bit** Windows.

SCOM 2007 R2 Setup Instruction

Setup Skype Node for SCOM 2007 R2 Environment

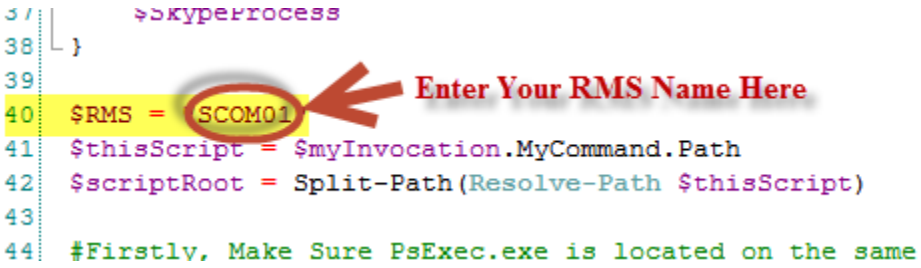
1. Install Skype (http://www.skype.com)
2. Register a Skype ID for the sender.
3. Login to Skype as the sender, add each SCOM alert recipient's Skype ID as contacts in Skype.
4. Download Skype4Com (http://developer.skype.com/accessories/skype4com)
5. Copy Skype4com files to Skype Node's local hard drive (i.e. "C:\Program Files (x86)\Skype\Skype4COM")
6. Register skype4com.dll (**regsvr32 Skype4Com.dll**)
7. Copy **SkypeNotify07.PS1** to Skype Node's local hard drive (i.e. "C:\Scripts")

8. Make sure the PowerShell Execution Policy for **32-bit** PowerShell is set to **Unrestricted** or **RemoteSigned**.
9. Copy Setup folder to local drive on the Skype Node
10. Run **Setup.ps1** from a **64-bit** Windows PowerShell prompt. This will configure the SCOM 2007 R2 Command Console (PowerShell Snap-in) for **32-bit** PowerShell.

    Note: This is required even when SCOM PowerShell Snap-in is already installed. If it is already installed, the setup.ps1 script will make the snap-in DLLs available for 32-bit PowerShell. If the snap-in is not previously installed, the script will copy the required files to C:\Program Files and then make them available for 32-bit PowerShell.

Configure RMS for SCOM 2007 R2 Environment

1. Copy **Push-OM07SkypeNotification.ps1** and **PsExec.exe** to local hard drive (i.e. D:\Scripts\SkypeNotification). If RMS is clustered, copy these files to a folder located on the cluster shared volume so all RMS cluster nodes can access them.
2. Open **Push-OM07SkypeNotification.ps1**, modify line **40** ($RMS="<RMS Name>") and enter the RMS name (RMS computer name or the cluster resource name if RMS is clustered).



    Note: The script is designed this way to cater the cluster RMS scenario.
3. On RMS (or all RMS cluster nodes if RMS is clustered), make sure the PowerShell Execution Policy for **64-bit** PowerShell is set to Unrestricted or RemoteSigned.

4. Setup Command Notification Channel

Command Line	C:\Windows\System32\WindowsPowerShell\v1.0\Powershell.exe
Command Line Parameters	-Command "& '"D:\Scripts\SkypeNotification\Push-OM07SkypeNotification.ps1"'" -SkypeNode 'SkypeNode' -SendScriptPath 'C:\Scripts\SkypeNotify07.PS1' -alertID '$Data/Context/DataItem/AlertId$' -Recipients 'SkypeID1,SkypeID2'
Startup Folder	D:\Scripts\SkypeNotification

Note:

- modify the GREEN sections in command line parameters:
  - SkypeNode: The Skype Node Computer Name.
  - SkypeID1 and SkypeID2: Skype Recipients IDs. If there are more than 2, please separate each ID using comma(“,”)
  - It is assumed the PushOM07SkypeNotification.PS1 script and PsExec.exe is located under D:\Scripts\SkypeNotification folder. Change it if you need to.

5. Setup Command Subscriber
6. Create Subscriptions

Configure Security

1. Grant the SCOM Action account local administrator rights on the Skype Node Computer.
2. Grant the Skype Node Computer Account "**Operations Manager Administrators**" access.

Note: SCOM admin access is required to use SCOM 2007 PowerShell Snap-in. This is a limitation in SCOM 2007.

SCOM 2012 Setup Instruction

Setup Skype Node for SCOM 2012 Environment

1. Install Skype (http://www.skype.com)
2. Register a Skype ID for the sender.
3. Login to Skype as the sender, add each SCOM alert recipient's Skype ID as contacts in Skype.
4. Download Skype4Com (http://developer.skype.com/accessories/skype4com)
5. Copy Skype4com files to Skype Node's local hard drive (i.e. "C:\Program Files (x86)\Skype\Skype4COM")
6. Register skype4com.dll (**regsvr32 Skype4Com.dll**)
7. Copy **SkypeNotify12.PS1** to Skype Node's local hard drive (i.e. "C:\Scripts")
8. Make sure the PowerShell Execution Policy for **32-bit** PowerShell is set to **Unrestricted** or **RemoteSigned**.
9. Install SCOM 2012 Command Console from SCOM 2012 installation media.

Configure Management Servers for SCOM 2012 Environment

1. Copy **Push-OM12SkypeNotification.ps1** and **PsExec.exe** to local hard drive (i.e. D:\Scripts\SkypeNotification). Make sure they are copied to identical locations on all Management servers that handle notifications.
2. On all management servers that handle notifications, make sure the PowerShell Execution Policy for 64-bit PowerShell is set to **Unrestricted** or **RemoteSigned**.
3. Setup Command Notification Channel

Command Line	C:\Windows\System32\WindowsPowerShell\v1.0\Powershell.exe
Command Line Parameters	-Command "& '"D:\Scripts\SkypeNotification\Push-OM12SkypeNotification.ps1"'" -SkypeNode 'SkypeNode' -SendScriptPath 'C:\Scripts\SkypeNotify12.PS1' -alertID '$Data/Context/DataItem/AlertId$' -Recipients 'SkypeID1,SkypeID2'
Startup Folder	D:\Scripts\SkypeNotification

Note:

- modify the GREEN sections in command line parameters:
  - SkypeNode: The Skype Node Computer Name.
  - SkypeID1 and SkypeID2: Skype Recipients IDs. If there are more than 2, please separate each ID using comma(“**,**”)
  - It is assumed the PushOM07SkypeNotification.PS1 script and PsExec.exe is located under D:\Scripts\SkypeNotification folder. Change it if you need to.

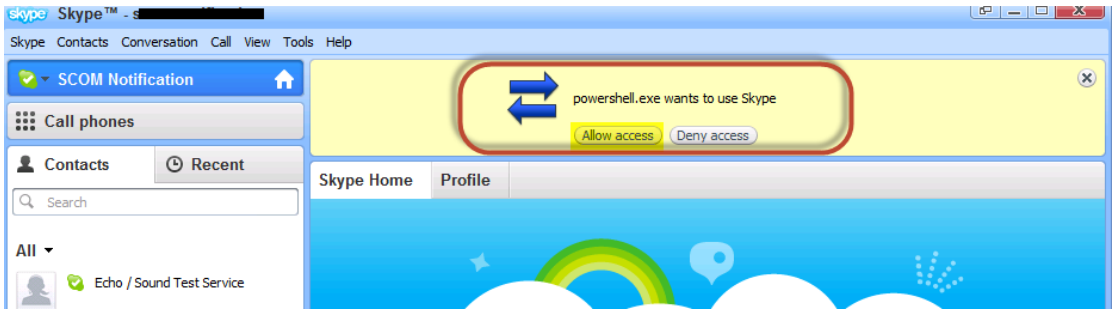
4. Setup Command Subscriber
5. Create Subscriptions

Configure Security

1. Grant the SCOM Action account local administrator rights on the Skype Node Computer.
2. Grant the Skype Node Computer Account "**Operations Manager Operators**" access.

Post Installation Configuration

On the Skype Node computer, when first time the PowerShell script trying to send messages via Skype, you will be prompted in Skype that PowerShell.exe wants to use Skype:



Please Click "**Allow Access**".

You can use below PowerShell script in a 32-bit PowerShell command prompt to test after you have configured the Skype Node computer:

```
$name = "SkypeID1"
$mesasge = "hello world"
$skype = New-Object -ComObject Skype4Com.Skype
$chat = $skype.CreateChatWith($name)
[void]$chat.SendMessage($message)
```

Note: Please replace **SkypeID1** with your Skype ID.

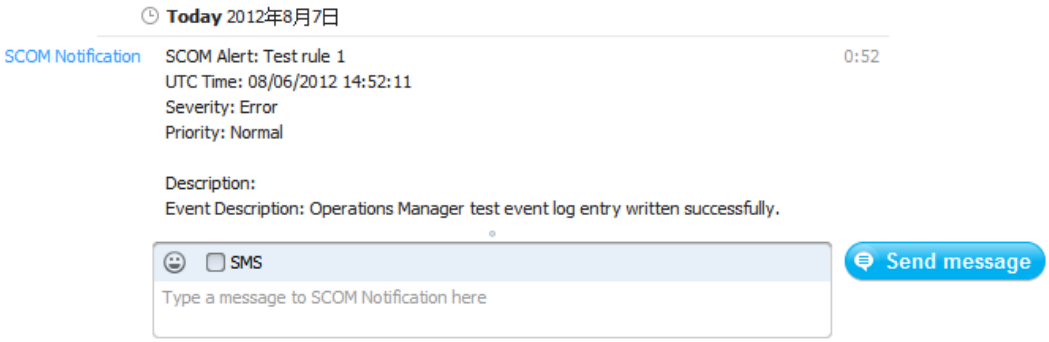
Other Considerations / Suggestions

Test Notifications

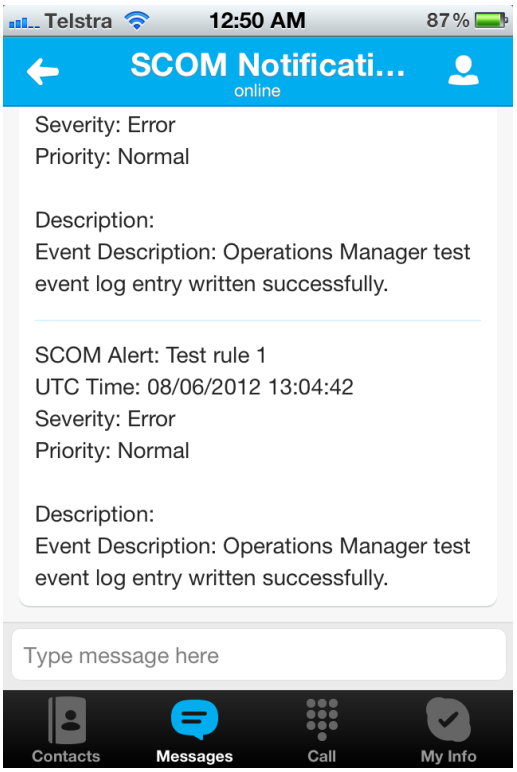
You can follow the instructions from http://support.microsoft.com/kb/934756 to test the Skype Notification.

If successful, your recipients will get a message in Skype with details of the alert.

On PC:

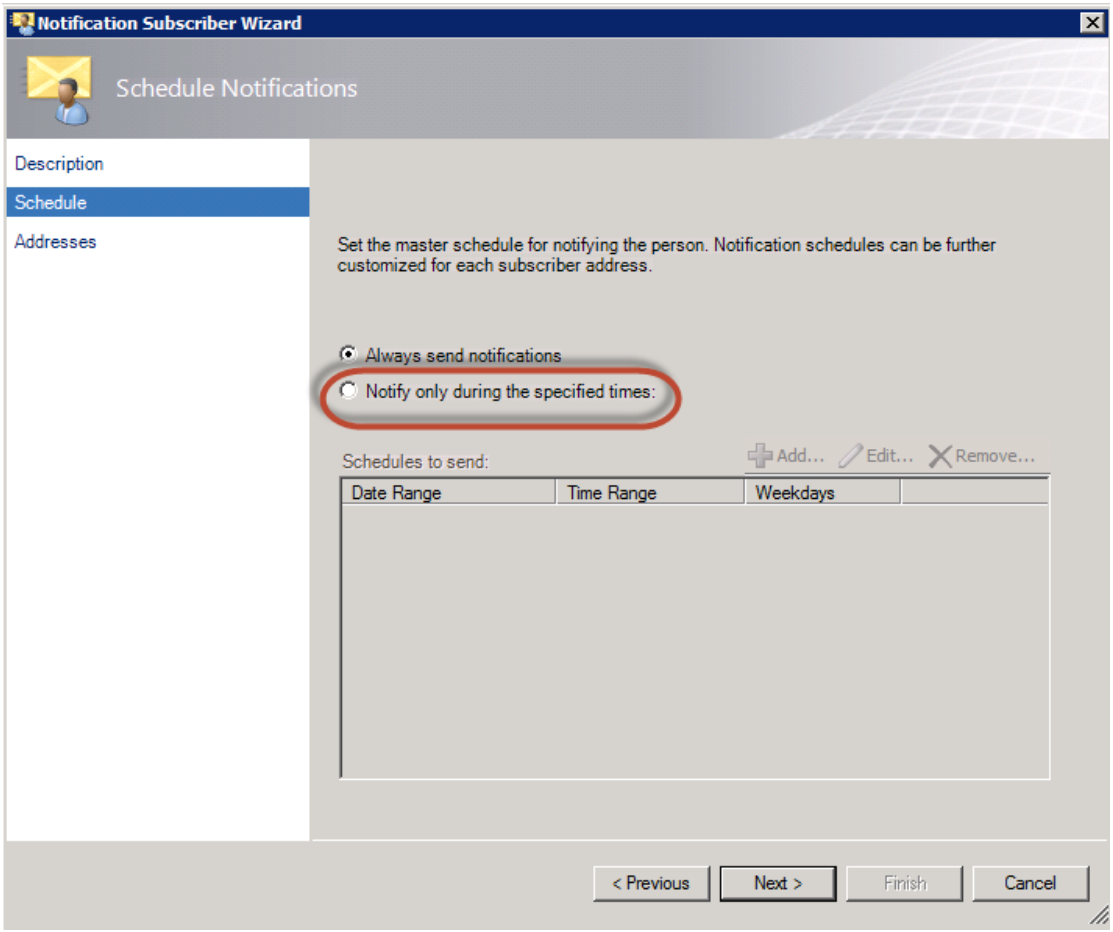


On Mobile Device (i.e. iPhone):



Receiving Skype SCOM Notification Messages

Please consider what devices your notification recipients are using. If you don't want to wake people up in the middle of the night because they are running Skype on their smart phones or tablets, please consider setting up schedules for the command subscriber:



Auto-Admin Logon for the Skype Node computer

Since Skype needs to be running on the Skype Node computer while SCOM is pushing alerts through, it is recommended to configure Auto Admin Logon on the Skype Node computer and make sure Skype starts when the OS is started.

If you believe this is a security risk, you can also configure a logon script for the Skype Node computer to automatically lock the screen after logging on using Auto Admin Logon.

PsExec.exe Limitations

Even though I cannot find the official documentation, but I believe the maximum number of characters for PsExec parameters are only 260. Therefore, it may break the SCOM command notification script if you have added too many Skype recipients so the parameter length exceeds 260. Please take this limitation when setting up the command channel in SCOM.

Because of the same reason, when placing the SkypeNotify07.PS1 or SkypeNotify12.PS1 on the Skype Node computer, please do not put these scripts too deep into folders and sub folders.