Notification Setup Guide for Operations Manager 2007

Step-by-step setup guide for instant messaging and SMTP notification in System Center Operations Manager 2007

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Introduction

The notification engine has been completely retooled for Operations Manager 2007. One of the many enhancements in Operations Manager (SCOM) 2007 is the new notification framework. The new platform offers more flexibility in configuration of notification subscriptions out of the box than was available in the previous version of Operations Manager, as well as several exciting new features, including

- A **subscription-based model** for notification
- **Alert aging** (called escalation in our MOM 2005 feature requests)
- **Additional notification channels**, such as instant messaging and SMS (default format of which is nice for mobile devices)
- **Messaging format customization** at the user level
- Ability to configure **multiple SMTP servers** for redundancy
- Self-service notification, allowing Operator User Roles to configure their own recipient and subscription information.
- **Active Directory integration**, allowing notification recipients to be selected from the Active Directory.

This guide will step through the configuration steps and options for setting up SMTP and IM notification in SCOM 2007.

There are 4 steps involved in configuring notification in SCOM 2007:

1. **Enabling a notification channel** – SCOM supports three communication mediums: SMTP, SMS and SIP (instant message)

2. **Create one or more Notification Recipients** – The Notification Recipient object holds the scheduled hours during which the notification recipient should receive notifications and the address information for each notification channel on which the notification recipient is available.

3. **Create one or more Notification Subscriptions** – The Subscription defines the groups and object classes for which alerts notifications should be sent, as well as the alert severity, priority, category and resolution state criteria that should be applied to filter out unwanted alerts.

4. Next, we'll create the **Notification Action Account**, which will be used in the **Run As Profile** for sending notifications. For this example, we have created a domain account with the following attributes:

   Account Name: scom-notification
   E-mail: scom-notification@northwind.local
   Instant Messaging: sip:scom-notification@scomresources.local.

   NOTE: Before you start, verify that this account can send both IM and e-mail.

The **Notification Recipient** that will receive all notifications in this demonstration is John Conner His e-mail address is john.conner@scomresources.local and his IM address is SIP:john.conner@scomresources.local.

NOTE: Remember to configure your instant messaging client to accept IM from the SCOM IM account. With default settings your instant messaging client will not accept messages from everyone.

The environment specifics in this example are as follows:
Domain: scomresources.local
SMTP Server: SRMX01
Live Communication Server: SRLCS

Instant Messaging Server

We will use Microsoft Office live communication server 2005 to send IM notification to notification recipients. Installing a Live communications server 2005 isn't very difficult. For the LCS 2005 installation, we followed two documents from Microsoft webpage, "Live Communications Server 2005 with SP1 Active Directory Preparation" and "Live Communications Server 2005 with SP1 Standard Edition Lab Quick Start".

Instant Messaging Server Requirements

In regards of the public IM server, Microsoft says as long as these conditions are met, it should work with SCOM instant messaging notifications

- Supports SIP protocol (either using TCP/TLS).
- The address of the server is known.
- Your notification action account can access the server.

NOTE: Not all public IM servers implement the SIP protocol, but instead use proprietary protocols and formats. Microsoft has officially tested IM notification only with LCS via SIP protocol without Public IM connectivity.

You can use Public IM Connectivity for Live Communications Server 2005 to send IM notification to for example MSN Messenger users. To use Public IM via LCS as a gateway, you still need LCS 2K5 SP1 which support PIC (Public IM connectivity). For more information, see 'Additional Resources' section at the end of this document.

SMTP Notification

In this example we will use Microsoft Exchange 2007, which will use Windows integrated SMTP authentication when sending e-mails. However, Exchange is not required. You can use just about any SMTP server for sending e-mail notification in Operations Manager 2007, including a local instance of IIS

SMTP installed on your Management Server.

NOTE: How to test SMTP services manually in Windows server 2003
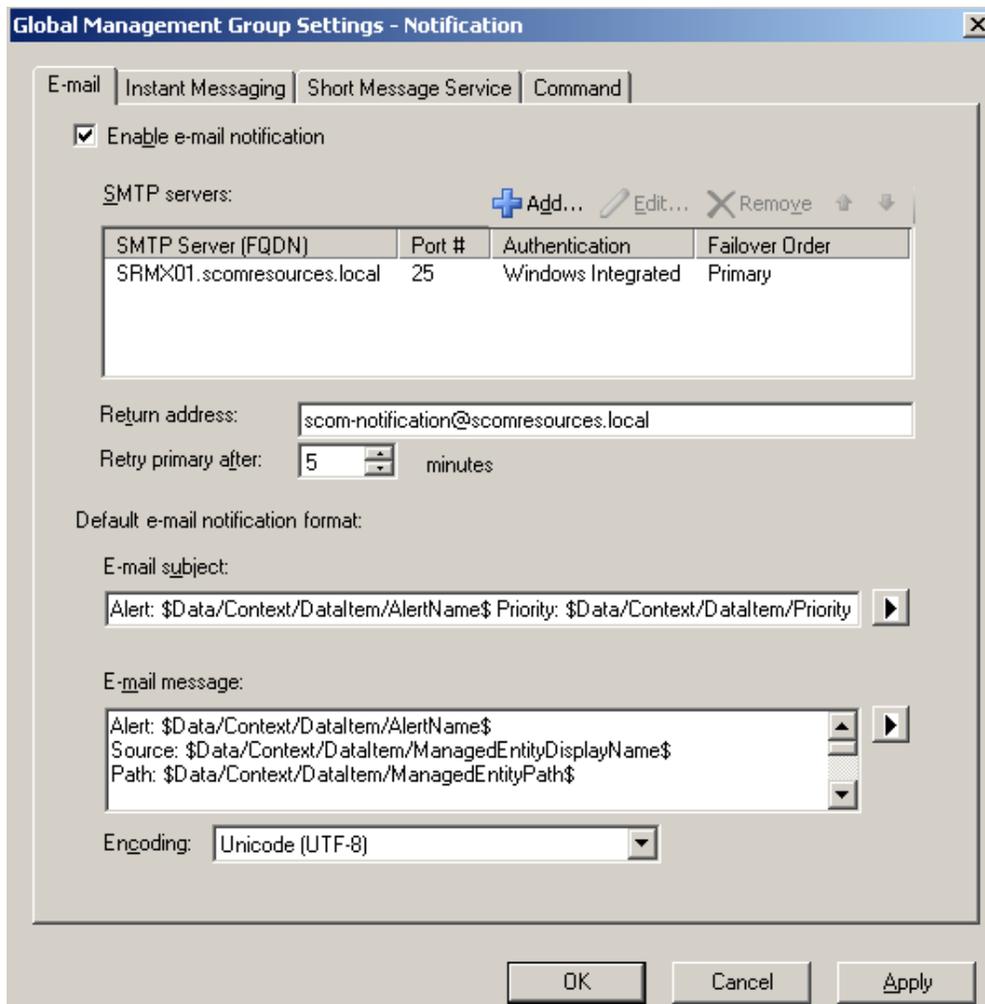http://support.microsoft.com/kb/323350

Setup Notification Channel

In this part we will setup channels SCOM 2007 can use to send IM and SMTP.

1. From the **Start Menu**, select the SCOM **Operations Console**

2. In the Navigation pane (left)**,** Click **Administration**

3. In the Administration pane, click **Settings**

4. In the Action pane, right click **Notification** and select **Properties** from the context menu.

5. On the **E-mail** tab**,** select the "Enable e-mail notification" checkbox.

6. Next, we'll add the SMTP Server. Click the **Add** button. Enter the FQDN of the target SMTP Server, port number (In most cases you can leave default port 25), and the authentication method for the SMTP Server. In this example, the SMTP Server requires Windows Integrated authentication. Consult your e-mail administrator for the appropriate authentication setting for your SMTP Server.

   NOTE: You can add additional SMTP servers for failover to provide redundancy in the event of failure of the primary SMTP Server.

7. Next, input the **Return address**; this address will be shown as sender when notifications are sent to notification recipients. Note that this e-mail needs to be the e-mail address of the Notification Action Account. Accept the default values in the remaining fields.

Global Management Group Settings - Notification

E-mail | Instant Messaging | Short Message Service | Command

☑ Enable e-mail notification

SMTP servers: ➕ Add... ✏ Edit... ✖ Remove ⬆ ⬇

SMTP Server (FQDN)	Port #	Authentication	Failover Order
SRMX01.scomresources.local	25	Windows Integrated	Primary

Return address: scom-notification@scomresources.local

Retry primary after: 5 ⬆⬇   minutes

Default e-mail notification format:

E-mail subject:

Alert: $Data/Context/DataItem/AlertName$ Priority: $Data/Context/DataItem/Priority ▶

E-mail message:

Alert: $Data/Context/DataItem/AlertName$
Source: $Data/Context/DataItem/ManagedEntityDisplayName$
Path: $Data/Context/DataItem/ManagedEntityPath$ ▶

Encoding: Unicode (UTF-8)

[OK]   [Cancel]   [Apply]

8. Next, select the **Instant Messaging** tab**.** Select the "Enable instant messaging notifications" checkbox. In the **IM Server** field, enter the FQDN of your LCS server. In the **Return address** field, enter the sip address of the Notification Action Account.

   NOTE: You must add sip: in front of the return address, for example sip:scom-notification@scomresources.local.

9. If you have installed a Microsoft Office Live Communication 2005 Server with default settings, you will have to change IM port to 5060. It is important that you use your Notification Action Account instant messaging address; otherwise instant message notifications may fail due to lack of permissions. Accept the remaining default values by clicking OK.

Global Management Group Settings - Notification

E-mail | Instant Messaging | Short Message Service | Command |

☑ Enable instant messaging notifications

IM server: srlcs.scomresources.local

Return address: sip:scom-notification@scomresources.local

IM port: 5060

Authentication method: NTLM

Protocol option: TCP

Default instant messaging notification format:

IM message:

Alert: $Data/Context/DataItem/AlertName$ Priority: $Data/Context/Da ▶

Encoding: Unicode (UTF-8)

OK   Cancel   Apply

Setup Notification Action Account

In this part we will create an account that will be used to send SMTP and IM notification, the notification action account. Note that this account should have the e-mail and SIP URI that you have filled in as return addresses under notification channels. I have created a domain user account named SCOM-NOTIFICATION that will be used to both send SMTP and IM.

1. From the Start Menu, launch the SCOM Operations Console

2. In the Navigation pane (left)**,** Click **Administration**

3. In the Administration pane**,** right-click **Run As Accounts** and choose **Create Run As Account** from the context menu to launch the **Create Run As Account Wizard.**

4. On the **Introduction** screen, click **Next**

5. On the **General screen,** choose Windows from the **Run as account type** drop-down box, input display name and a short description. Click **Next**

6. On the **Account** screen, input user name, password and domain, then click **Create**. The wizard will close when done.

WARNING: The Notification Action Account MUST have logon rights to the root management server (RMS) or notifications will not be sent successfully.

Configure Run As Profile for Notification Action Account

We will now configure SCOM to use that account when sending notifications from your Management Server.

1. In the Administration pane click **Run As Profiles.** In the Action pane, right-click the **Notification Account** node and choose **Properties**

2. Select the **Run As Accounts** tab, then click New

3. On the **Alternative Run As Account** screen, choose the Run As Account created in previous section, and then select your Management Server in the matching computer list. Then click **OK. Click OK again to finish.**

## Create a Notification Recipient to Receive SMTP and IM Notifications

First we will create a recipient and fill in all information about that account. Then we will create a subscription and setup what notifications will be sent to that recipient. Finally, we will add notification devices to allow the notification recipient to receive notifications via both e-mail and instant message. In this example, we have created a domain account named John Conner that will receive all alerts at all times, both IM and SMTP.

1. From the Start Menu, launch the SCOM Operations Console

2. In the Navigation pane (left)**,** Click **Administration**

3. In the Administration pane, right-click **Recipients** and choose **New Notification Recipient**

4. On the **General** tab click the button to the right of the textbox   to select your notification recipients' domain account and click **OK**.

5. On the **Notification Devices** tab, click Add to launch the **Create Notification Device Wizard**.

6. Choose **E-mail** from the **Notification channel** dropdown. Verify that the recipient e-mail address is correct in the "Delivery address for the selected channel" textbox. Click **Next.**

7. On the **Schedule** screen, leave the default settings and this recipient will receive e-mails 24/7. Click **Next**

8. On the **General** screen, enter a device name, for example John Conner E-Mail. Click **Finish**

9. On the Notification Devices screen, click **Add.**

10. Then choose **Instant Messaging** from the notification channel dropdown. Verify that the recipient address is correct in the "Delivery address for the selected channel" textbox, for example SIP:john.conner@scomresources.local. The value should be the notification recipients SIP URI. Click **next**

11. On the Schedule screen, leave the default settings, this recipient will receive IM 24/7. Click **Next**

12. On the General screen, enter a device name, for example John Conner IM, and then click **Finish.** Click OK again to finish.

13. In the Administration pane, right-click **Subscriptions** and choose **New Notification Subscription** to launch the Create Notification Subscription Wizard.

14. Create Notification Subscription Wizard - Introduction: Click **Next**

15. On the General screen, input a name, for example "all alerts at all time". Input a short description and then click **Add**

16. Choose your domain recipient created in the previous section and click **OK**. Click **Next**.

17. On the User Role Filter screen, leave the default settings and click **Next**

18. On the **Groups** screen, leave default settings, all groups selected, and click **Next**

19. On the **Classes** screen, leave default settings, all classes, and click **Next**

20. On the **Alert Criteria** screen, leave default settings, all alert criteria, and click **Next**

21. On the **Alert Aging** screen, leave default settings, do not notify on alert aging. and click **Next**

22. On the **Formats** screen, leave the default e-mail and IM format, click **Finish**

Self Service

After an administrator has configured at least one notification channel, an operator can create notification subscriptions to be notified and alerted of problems and changes in the monitoring environment. Instead of asking an administrator to do this, Operators can create their own notification subscriptions within his or her own 'My Workspace' area in the Operations Console. Assuming a recipient has not already been created, the operator must first create a recipient object for himself / herself, and then configure a subscription to define for which alerts they will receive notification.
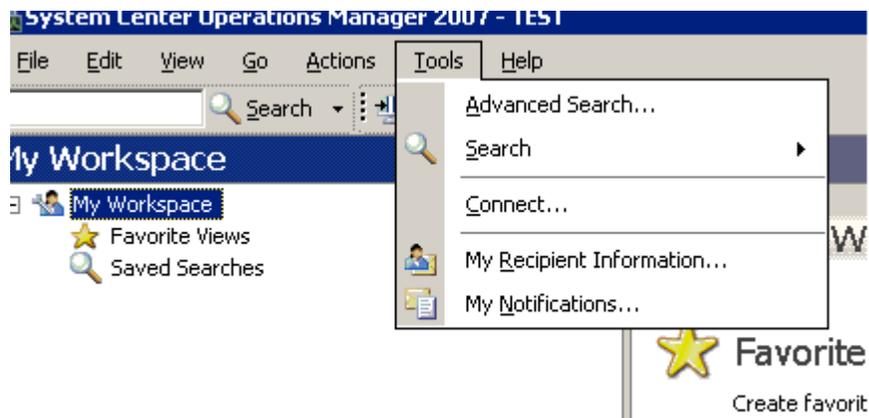
To configure a recipient from My Workspace:

1. From the Start Menu, launch the SCOM Operations Console

2. In the Navigation pane (left)**,** Click **My Workspace**

3. Open the **Tools** menu and choose **My Recipient Information**

4. On the **General** tab input suitable notification schedule.

5. Click the **Notification Device** tab, click **Add**

6. Choose a **notification channel**, for example STMP/E-mail

7. Input **delivery address**, for example your e-mail address, click **Next**

8. Input schedule for chosen notification device, click **Next**

9. Input a **notification device name**, for example "John Conner E-mail", click **Finish**

10. Click **OK**

Once this is complete, the next step is to configure a notification subscription.

1.   From the Start Menu, launch the SCOM Operations Console

2.   In the Navigation pane (left)**,** Click **My Workspace**

3.   Open the **Tools** menu and choose **My Notification**

4.   Click **New** in the Notification Subscriptions window

5.   Input a **Subscription name** and description, click **Next**

6.   Choose **Groups** to receive notification about, click **Next**

7.   Choose **Classes**, click **Next**

8.   Choose **Alert Criteria**, click **Next**

9.   Choose **Alert Aging**, click **Next**

10. Choose **format** for notification, click **Finish**

11. Click **Close** in the Notification Subscription window

Now both recipient information and notification subscription are setup.

Testing Your Installation

You can use "Event Creator" from Microsoft Operations Manager (MOM) 2005 resource kit to test your notification rules. This tool allows administrators to generate an event and test if the correct rule is responding.

If you for example want to verify that your Active Directory notification recipients receive a notification when an alert is generated from the Active Directory management pack, look at the properties for a rule from the Active directory management pack and generate an artificial event with the Event Creator utility. Verify that you are generating the event on computer running the current management pack, in this example you will have to generate the event on a domain controller.

Additional Resources

Live Communications Server 2005 Deployment Resources
http://office.microsoft.com/en-us/products/FX011526591033.aspx

LCS 2005 as a Public IM Connectivity Gateway
http://members.microsoft.com/partner/asia/iw/theme/realtimecollaboration/solution.aspx
http://www.microsoft.com/office/livecomm/prodinfo/publicim.mspx
http://www.microsoft.com/technet/prodtechnol/office/livecomm/library/security/lcssec_1.mspx

MOM 2005 Resource kit
http://www.microsoft.com/mom/downloads/2005/reskit/default.mspx

Feedback

I hope you find this article helpful. Your feedback is always welcome and appreciated at anders@contoso.se or administrator@systemcenterforum.org