AlarmPoint Systems

AlarmPoint for Microsoft Operations Manager 2005

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1. Introduction

1.1 Summary

This document describes software requirements, installation, configuration, running select applications, and integration demonstrations for using Microsoft® Operations Manager 2005 with the AlarmPoint® software suite. This document is intended for administrators and other technical readers.

1.1.1 Benefits of the AlarmPoint for MOM 2005 Integration

Event and service impact management is typically handled by Operations staff monitoring the console or receiving basic email notifications. With the AlarmPoint integration, the appropriate technician can be notified directly via voice, email, pager, or other device. Information about the failure will be presented to the event resolver and decisions can be made in real-time such as acknowledging, assigning, closing the event, running remote diagnostics and retrieving event details. If an email device is being used, the user can also add additional notes to the event by typing free-form text in the email response. Once an action is selected on their remote device, AlarmPoint will interact with Impact Manager to execute that action for them in real-time.

The benefit is that this process is immediate – significantly faster than the time required for Operations staff to notice the failures or malfunctions, determine who is on call, and manually notify the right person. In addition, the ability to take simple actions on the event from any device gives the event resolver a quick way to deal with many issues and communicate to other team members the current status of the event. During the process, every notification, response, and action is logged in AlarmPoint. In addition, AlarmPoint can automatically update an incident ticket throughout the process. The AlarmPoint product features a self-service web user interface to allow accurate assignment of responsible personnel for each job.

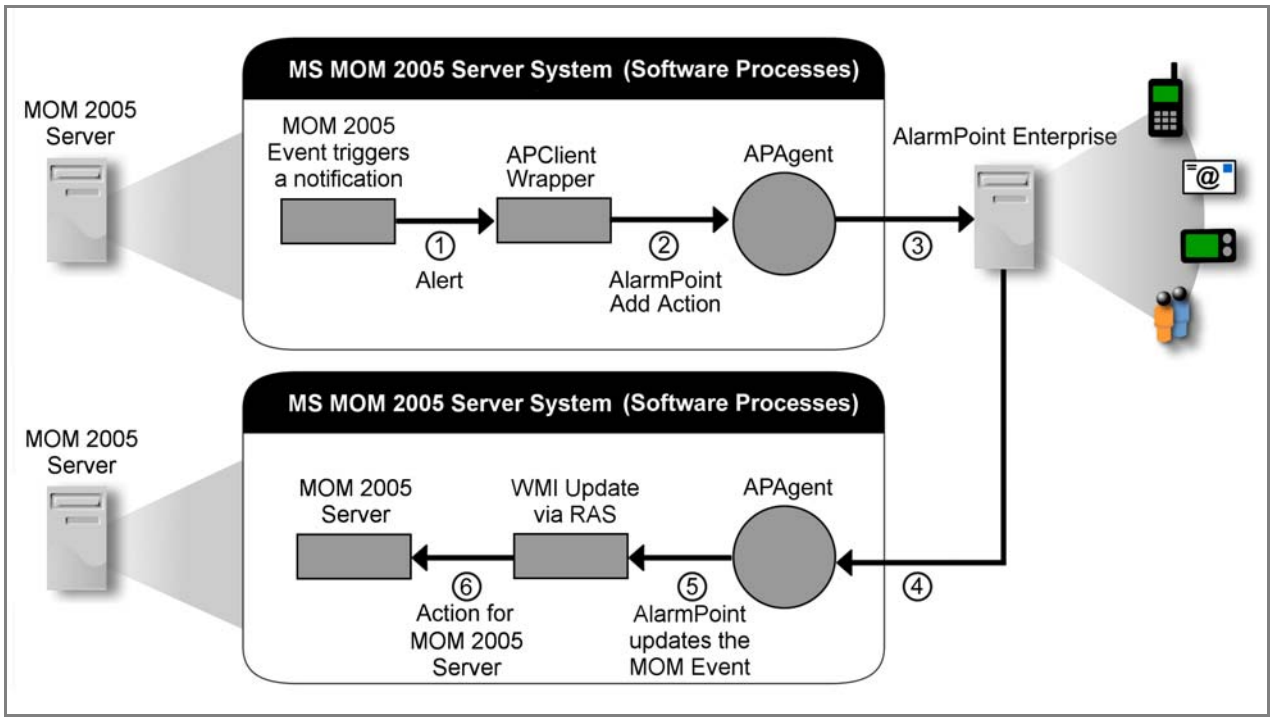
1.2 Overview

Microsoft Operations Manager 2005 (MOM) provides centralized management for your IT infrastructure. By default, it provides basic email alerting when an issue occurs. By combining MOM with AlarmPoint, you will have two-way proactive notification that provides additional features, including:

- Ability to acknowledge the event on the MOM console from any two-way device including voice over phone, pagers, email, etc. This also allows you to take any action on the MOM server from that remote device.
- Web based self-service capability for users to maintain their own device notification information
- Web based self-service capability for managers to maintain on-call schedules and sophisticated rotation groups
- Web based self-service to allow people to subscribe to events if you choose
- Ability to pre-define processes where AlarmPoint will use a specific escalation to notify various people on various devices until someone responds.

1.2.1 Architecture

The following diagram provides a high-level overview of the major components for this integration:



The following steps (corresponding to the numbers in the above diagram) outline at a high level how an Alert triggers a notification and how the response to that notification is resolved:

1. MOM generates an Alert, which is passed via the AlarmPoint Client binary to the AlarmPoint Client.
2. AlarmPoint Client submits the Alert details to AlarmPoint Agent.
3. AlarmPoint Agent sends a message to AlarmPoint, which sends the actual notification.
4. The target user responds to the notification with a request to perform an action relating to the job that triggered the Alert.
5. The request is routed back to the AlarmPoint Agent on the MOM Server that detected the job fault.
6. The AlarmPoint Agent executes the request action in a Response Action Script.

1.3 System Requirements

The following products must be installed and operating correctly on separate servers prior to integration:

- AlarmPoint 3.0.2 or later
- AlarmPoint Java Client 2.2.3 or later
- Microsoft Operations Manager 2005

Note: *MOM 2005 Workgroup is not supported.*

Consult the respective user manuals for a detailed list of hardware and supporting software requirements.

1.4 Conventions & Terminology

This section describes how styles are used in the document, and provides a list of definitions.

1.4.1 Conventions

Some instructions appear in the following format: **MENU > OPTION**; for example, **File > Open** means click the **File** menu, and then click the **Open** menu option.

Words in **bold** typically reference text that appears on the screen.

Words in `monospace` font represent the following:

- text that must be typed into the computer
- directory and file names

1.4.2 Terminology

With respect to the AlarmPoint System, the following definitions apply:

Term	Meaning
AlarmPoint Admin	Administrative tool to control AlarmPoint Agent
AlarmPoint Agent	Communication layer between third-party applications (e.g., MOM 2005) and AlarmPoint
AlarmPoint Client	The Management System uses this to communicate with the AlarmPoint Agent
Application Server Node	The core AlarmPoint application, consisting of various components that process events and perform notifications.
AlarmPoint Java Client	Umbrella term for the AlarmPoint Admin, AlarmPoint Agent, AlarmPoint Bridge, and the AlarmPoint Client (both Java and native versions)
Notification Server Node	Delivers notifications to a person in a variety of ways (pager, phone, e-mail, etc.)
AlarmPoint System	Umbrella term for all AlarmPoint software components
Management System	A generic term for MOM 2005
Alert	Item of interest that typically generates a notification for a User or Group
Device	Medium through which a User is contacted (e-mail, phone, pager, etc.)
Target	User or group who should be notified
User Guide	The AlarmPoint user guides and documentation (deployment dependent)

2. Installation

2.1 Overview

This section describes how to install the following software components:

- AlarmPoint
- MOM 2005
- AlarmPoint – MOM 2005 Integration

2.2 AlarmPoint System

This integration requires the following AlarmPoint applications to be installed:

- AlarmPoint Java Client
- AlarmPoint 3.0.1.4 or later

Note: *The AlarmPoint Java Client must be the only AlarmPoint application installed on the MOM 2005 Server.*

2.2.1 AlarmPoint Java Client

The AlarmPoint Java Client is the communications bridge between the MOM 2005 applications and the rest of the AlarmPoint System. It allows MOM 2005 to inform the AlarmPoint System when a problem occurs. It must be installed on the MOM 2005 server.

For instructions on installing the AlarmPoint Java Client, refer to the *AlarmPoint Java Client Guide*.

Note: *It is recommended that you install the AlarmPoint Java Client to the default directory,* `C:\APAgent`. *If the APJC is installed in a different directory, the paths defined in this document must be updated to reflect the actual installation folder.*

2.2.2 AlarmPoint

For installation instructions, refer to the *AlarmPoint Installation and Administration Guide*.

2.3 MOM 2005

This integration requires MOM 2005 to be installed. Consult the MOM 2005 documentation for instructions on how to install and configure these applications.

2.4 AlarmPoint - MOM 2005 Integration

After MOM 2005 and AlarmPoint have been installed, integration components must be placed on each system. The integration archive contains updates for AlarmPoint and the AlarmPoint Java Client, and files for the MOM 2005 Server.

Extract the AP3-MOM-2005.zip file to access the integration files. The significant files and directories of the archive are as follows:

```
|-- components
| |-- alarmpoint
| | |-- scripts
| | | `-- AP3-MOM-2005.aps
| | `-- vox
| |   `-- english (contains English phrases)
| `-- alarmpoint-java-client
|   |-- AP3-MOM-2005.xml
|   |-- WbemScripting.jar
|   |-- 21100481.LIC
|   |-- izmcomjni.jar
|   |-- izmjnicom.dll
|   `-- momjacozoom.jar
`-- documentation
  `-- AP3-MOM2005-IntegrationGuide.pdf
```

2.4.1 Installing integration files

The following integration files provided in the extracted integration archive must be installed into their respective destination folders on the MOM 2005 server.

AP3-MOM-2005.xml

- Source folder:

  `\AP3-MOM-2005\components\alarmpoint-java-client`

- Destination folder:

  `C:\APAgent\etc\integrations`

Note: *If the default installation path of the Java Client has been changed, you must update `AP3-MOM-2005.xml` to reflect the new installation folder.*

---

momjacozoom.jar

- Source folder:

  `\AP3-MOM-2005\components\alarmpoint-java-client`

- Destination folder:

  `C:\APAgent\jre\lib\ext`

3. Configuration

This section explains and describes the configuration changes required for AlarmPoint, the AlarmPoint Java Client, and MOM 2005.

3.1 Configuring AlarmPoint

Configuring AlarmPoint requires the following steps:

- Importing the AlarmPoint script package.
- Installing the voice files.
- Defining an Event Domain
- Setting up a User with a two-way Device.

3.1.1 Import the AlarmPoint script package

This step requires the AlarmPoint Developer IDE. For installation instrustions, refer to the *AlarmPoint Developer's Guide & Scripting Reference*.

To import the AlarmPoint Script Package:

1. Launch the AlarmPoint Developer IDE, and configure the database connection (refer to the AlarmPoint Developer IDE Help or the *AlarmPoint Developer's Guide & Scripting Reference* for details).
2. Click **Workspace > Import**.

Note: *Ensure that your workspace is empty before continuing.*

3. Select the `AP3-MOM-2005.aps` file extracted from the integration zip file into the following folder:
   - `AP3-MOM-2005\components\alarmpoint\scripts\`
4. In the File dialog box, click **OK**, and then click **OK** again.
5. Right-click the folder.
6. In the Validation dialog box, select **Validate**, and then click **Close**.
7. Right-click the folder, and then click **Check In**.
8. In the Check In dialog box, click **Create**.
9. In the Script Package dialog box, click **Delete**, and then click **Close**.
10. Close the IDE.

3.1.2 Install Voice Files

These files must be installed into an AlarmPoint deployment running a Voice Device Engine. For more information, refer to the *AlarmPoint Installation and Administration Guide*.

To install the voice files:

1. Copy all of the files in the `AP3-MOM-2005\components\alarmpoint\vox\english` folder from the extracted integration zip file to the following node installs folder:

```
node\phone-engine\Datastore\domains\common\Recordings\<language>\Phrases
```

Note: *This integration provides only English voice files.*

3.1.3 Define an Event Domain

The AlarmPoint webserver must be running to perform this portion of the integration.

To define an Event Domain:

1. Login to AlarmPoint as a Company Administrator, and click the **Developer** tab.
2. In the Developer menu on the left side of the screen, click **Event Domains**.
3. On the Event Domains page, click **Add New**.
4. Enter the following information into the form:
   - **Name**: ms-mom
   - **Description**: Microsoft Operations Manager 2005
   - **Script Package**: ms-mom
5. Click **Save**.
6. Log out of AlarmPoint.

Note: *It is strongly recommended that you use the Event Domain Name specified above. For the integration to be successful, the Event Domain name must match the Client ID of the AlarmPoint Java Client.*

3.1.4 Set up a two-way Device

You can use any User or Group as a target for notifications, such as the default demonstration User named “Bob Smith”. Follow the steps below to ensure that this User exists and has a virtual two-way text phone Device:

Note: *To perform this portion of the integration, the AlarmPoint webserver must be running.*

To set up a two-way Device:

1. Login to AlarmPoint as a Company Administrator, and click the **Users** tab.
2. On the Find Users page, click **S**.
3. In the list of returned Users, click **Smith, Bob**.
4. On the Details for Bob Smith page, in the Common Tasks pane, click **User Devices**.
5. Verify that a virtual text phone Device exists.
6. Click **Reorder**, and set the virtual phone to be the first Device in the list.
7. Click **Save**.
8. Log out of AlarmPoint.

Note: *If this user is missing, create a User named bsmith with a virtual text phone Device and use them as a target for notifications. For more information and instructions on how to perform these tasks, refer to the* AlarmPoint User Guide.

3.1.5 Set up a sample Group

The integration examples used in this document use the default "Operations" Group created during the AlarmPoint installation. If you want to use a different Group, you will need to replace all instances of "Operations" in the Configuration chapter with the name of your sample Group.

To confirm the sample Group:

1. Login to AlarmPoint as a Company Administrator, and click the **Groups** tab.
2. In the Groups I Supervise table, confirm that the Operations Group exists, and that it contains a Team in which "bsmith" is a member.
3. Log out of AlarmPoint.

Note: *If the Operations Group does not exist, use the Group Creation Wizard to create the Group, and assign bsmith to a Team within the Group. For more information about creating Groups and Teams, refer to the* AlarmPoint User Guide.

3.2 Configuring the AlarmPoint Java Client

Once the AlarmPoint Java Client is installed, several steps must be taken to configure it for the integration:

3.2.1 Basic Configuration

Copy the XML configuration file from the integration archive directory (`C:\AP3-MOM2005\components\alarmpoint-java-client\`) to the AlarmPoint Agent's integrations directory:

```
C:\APAgent\etc\integrations
```

The following files need to be copied into `C:\APAgent\jre\lib\ext`:

- `WbemScripting.jar`
- `izmcomjni.jar`.

The following files need to be placed on the system path (i.e., `C:\Windows\system32`):

- `izmjnicom.dll`
- `21100481.LIC`

3.2.2 Configure APAgent.xml

The APAgent configuration file `APAgent.xml` requires the MOM 2005 domain mapping to be added.

To add the domain mapping:

1. Open the `APAgent.xml` file (located in `C:/APAgent/etc`).
2. Add the following line:

```
<alarmpoint-agent-client id="ms-mom" filename="integrations/APE3-MOM-2005.xml" />
```

3.3 Configuring MOM 2005

This configuration is intended as an example of Alert generation from MOM to notify a named User or Group within AlarmPoint, and as an example of user-driven actions in MOM via a two-way response on User Devices.

You will need to modify this configuration to suit your particular business requirements and adjust it to suit your expected loads. This example features extensive logging from AlarmPoint to MOM; in a high-volume production system, this can significantly affect performance. Consider your expected volume of alerts and server capacity when designing your own integration to AlarmPoint.

To configure MOM 2005, you must specify the default Notification Command Format.

To set the Notification Command Format:

1. In MOM 2005, click **Administration** > **Global Settings**.
2. In the Global Setting dialog box, click the **Security** tab.
3. Clear the **Disable execution of custom responses on Management Servers** check box.
   - Enabling this setting may prevent notifications from being delivered to AlarmPoint.
4. Click the **Notification Command Format** tab, and then select the **Use Windows command interpreter** check box.
5. In the Command Line field, type the following:

```
C:\APAgent\apclient.bin.exe --map-data ms-mom "$Severity$" $Alert GUID$ "$Event
Type$" "$Source Name$" "$Description$" "$Computer$" "$Owner$" "$Event Time$"
```

   - If necessary, replace `C:\APAgent` with the install directory of the AlarmPoint Java Client.
6. Click **OK**.

Note: *If you do not define the default Notification Command Format, you will need to specify it on each rule for which you want AlarmPoint to deliver notifications.*

---

4. Integration

4.1 Overview

This section describes how to set up and test the AlarmPoint - MOM 2005 integration. The following instructions target the demonstration user within AlarmPoint, “bsmith”. Refer to section 3.1.4, “Set up a two-way Device,” on page 7 to confirm that this User exists.

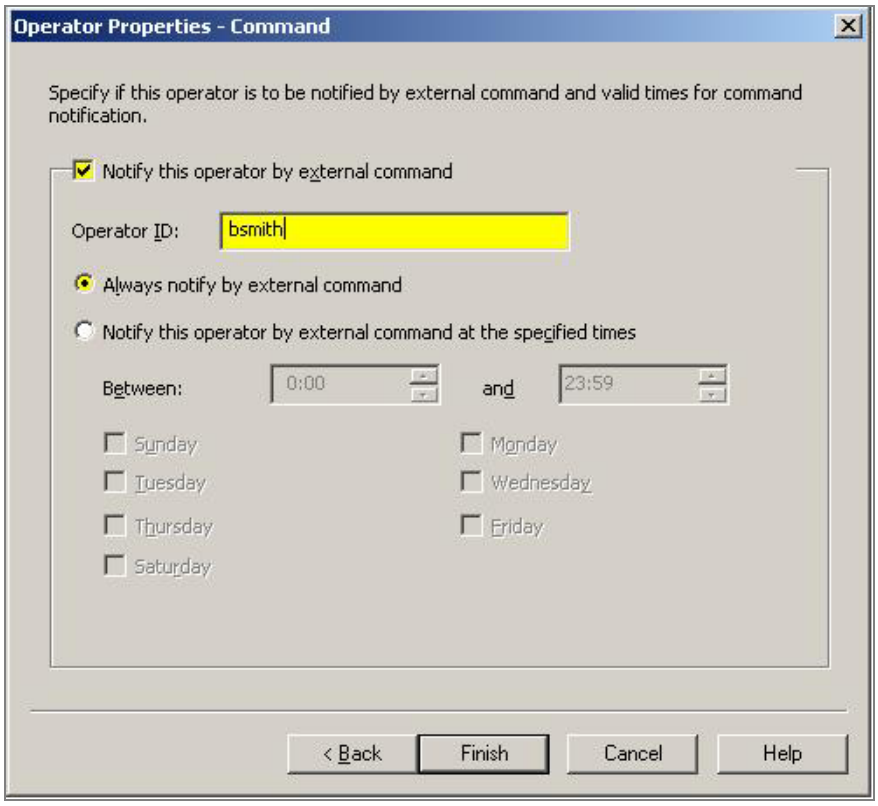
Note: *While testing the integration, you may want to reduce the rule polling interval, available in the Management Servers Properties dialog box. If you do, ensure that you reset it to its original value when you are finished testing.*

4.2 Configuring MOM 2005

You must create an Operator in MOM 2005 for each AlarmPoint User or Group that you want to target with notifications. The following examples use an Operator that targets Bob Smith.

4.2.1 Creating an Operator

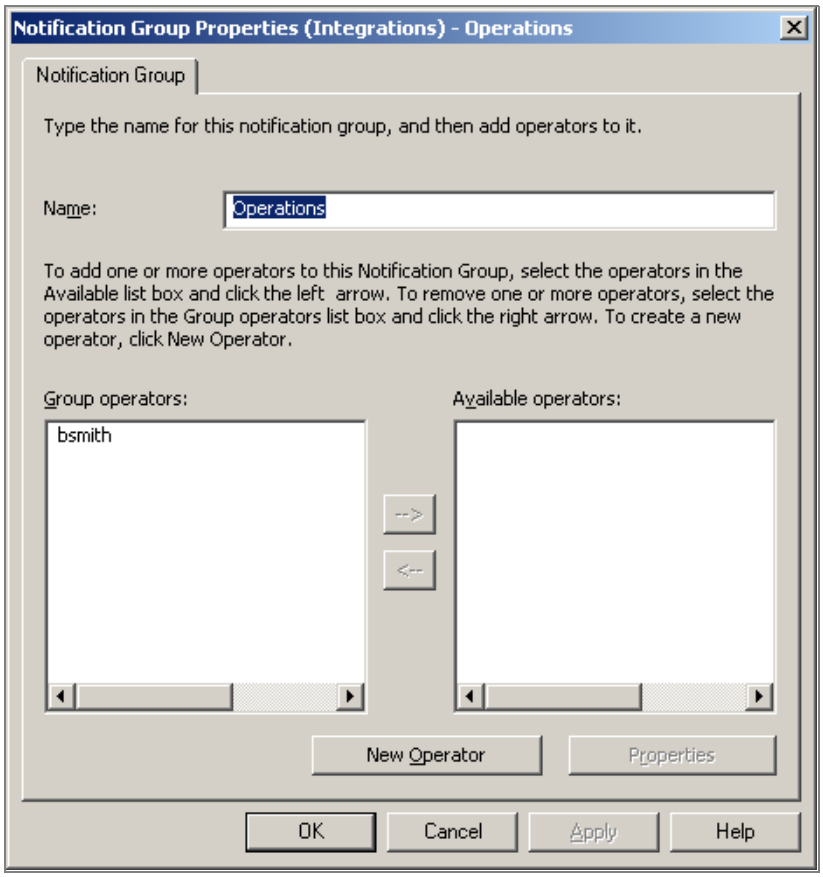
1. In MOM 2005, click **Management Pack** > **Notification**.
2. In the Console pane, right-click **Operators**, and then select **Create Operator**.
3. In the Operator Properties dialog box, type a name for the new Operator in the **Name** field, and then click **Next**.
4. The AlarmPoint - MOM 2005 integration supports only the Command notification method, so click **Next** twice to skip both the Email and Page dialog boxes.
   - MOM 2005 displays the Operator Properties - Command dialog box:



5. Select the **Notify this operator by external command** check box.
6. In the Operator ID field, type **bsmith**, or the AlarmPoint Group name or User ID you want to notify.
7. Select **Always notify by external command**, and then click **Finish** to create the Operator.

4.2.2 Configuring a Notification Group

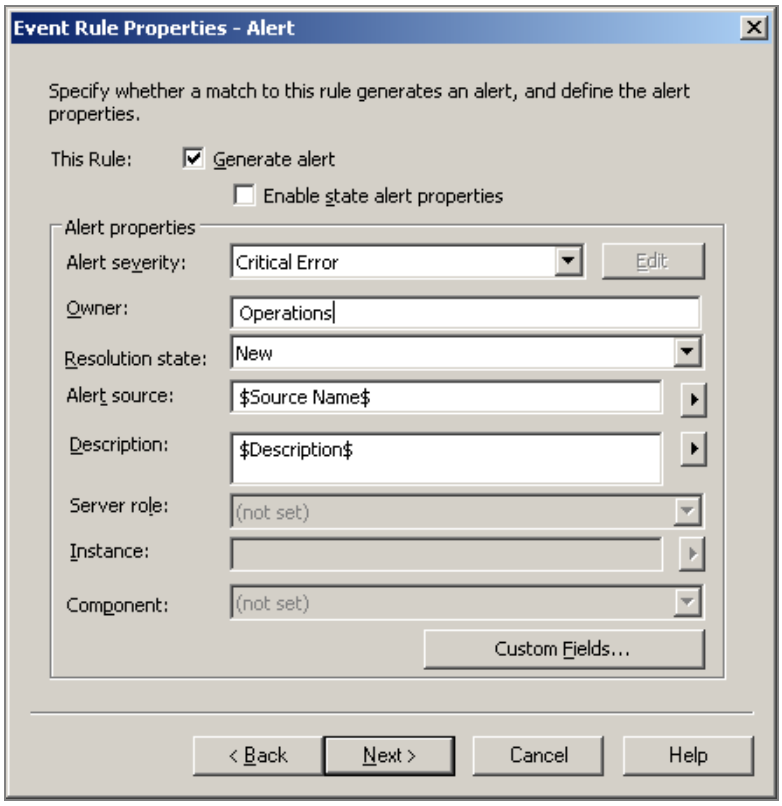
1. In MOM 2005, click **Management Pack** > **Notification**.
2. In the Console pane, right-click **Notification Group**, and then select **Create Notification Group**.
3. In the Notification Group Properties dialog box, in the **Name** field, type **Operations**.
4. Add **bsmith** to the Group Operators:



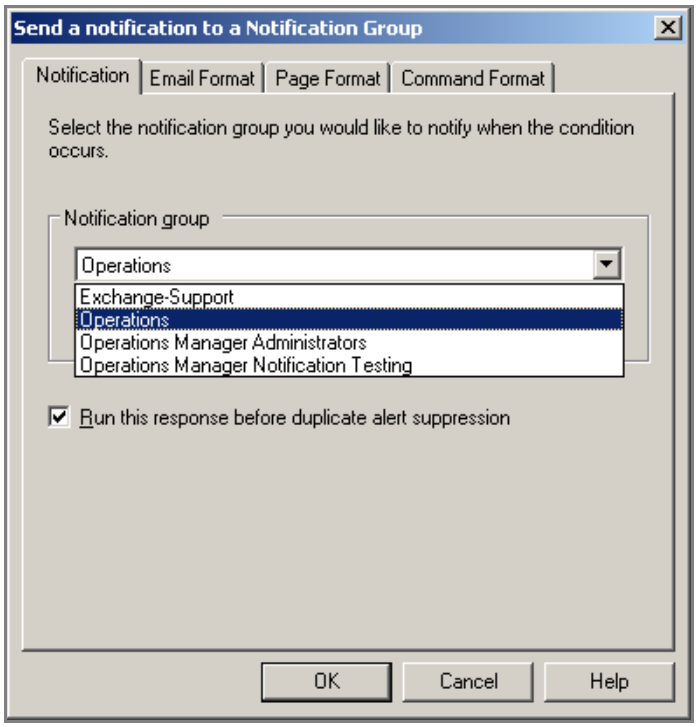
5. Click **Finish**.

4.2.3 Creating an Event

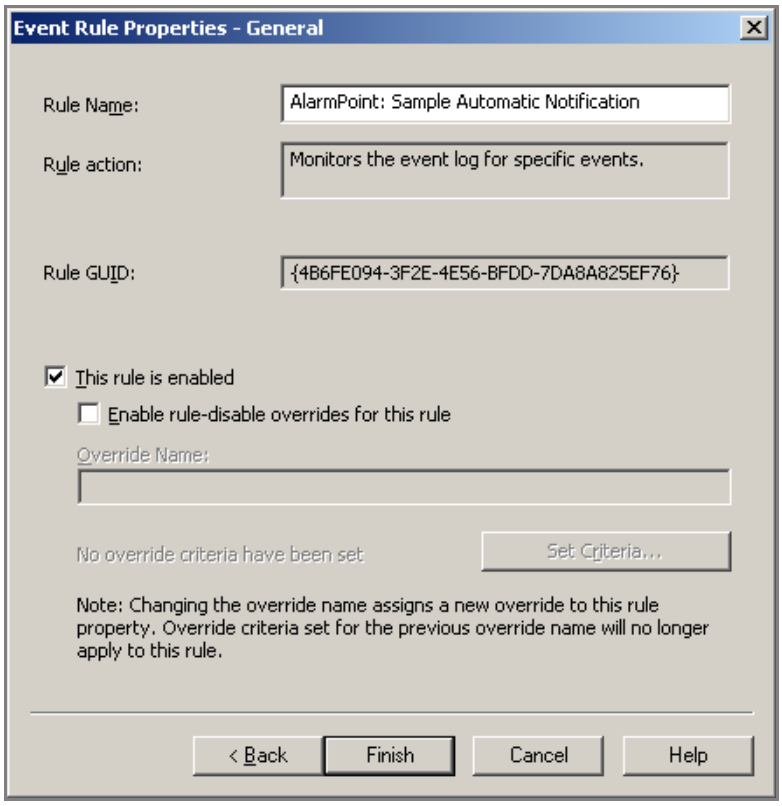
1. In MOM 2005, click **Management Pack > Rule Groups > MOM > Operations Manager 2005**.
2. In the Server folder, right-click **Event Rules**, and then select **Create Event Rule**.
3. In the Select Event Rule Type dialog box, select **Alert on or Respond to Event (Event)**, and then click **Next**.
4. In the Event Rule Properties - Data Provider dialog box, in the **Provider Name** drop-down list, select **Application**, and then click **Next**.
5. In the Event Rule Properties - Criteria dialog box, specify the following settings:
   - Match events from source: Microsoft Search
   - Match events **with event id: 1003**.
6. Click **Next**.
7. On the Event Rule Properties - Schedule dialog box, select **Always process data** from the drop-down list, and then click **Next**.
8. In the Event Rule Properties - Alert dialog box, in the **Owner** field, type **Operations**:



9. Click **Next**.
10. In the Event Rule Properties - Alert Suppression dialog box, specify any required suppression settings, and then click **Next**.
11. In the Event Rule Properties - Responses dialog box, click **Add**, and then select **Send a notification to a Notification Group**.
    - MOM 2005 displays the Send a notification to a Notification Group dialog box:



12. In the Notification Group drop-down list, select **Operations**.
13. Click the Command Format tab, and then select Use default command.
14. Click **OK**.
15. In the Event Rule Properties - Knowledge Base dialog box, click Next.
    - MOM 2005 displays the completed Event Rule:



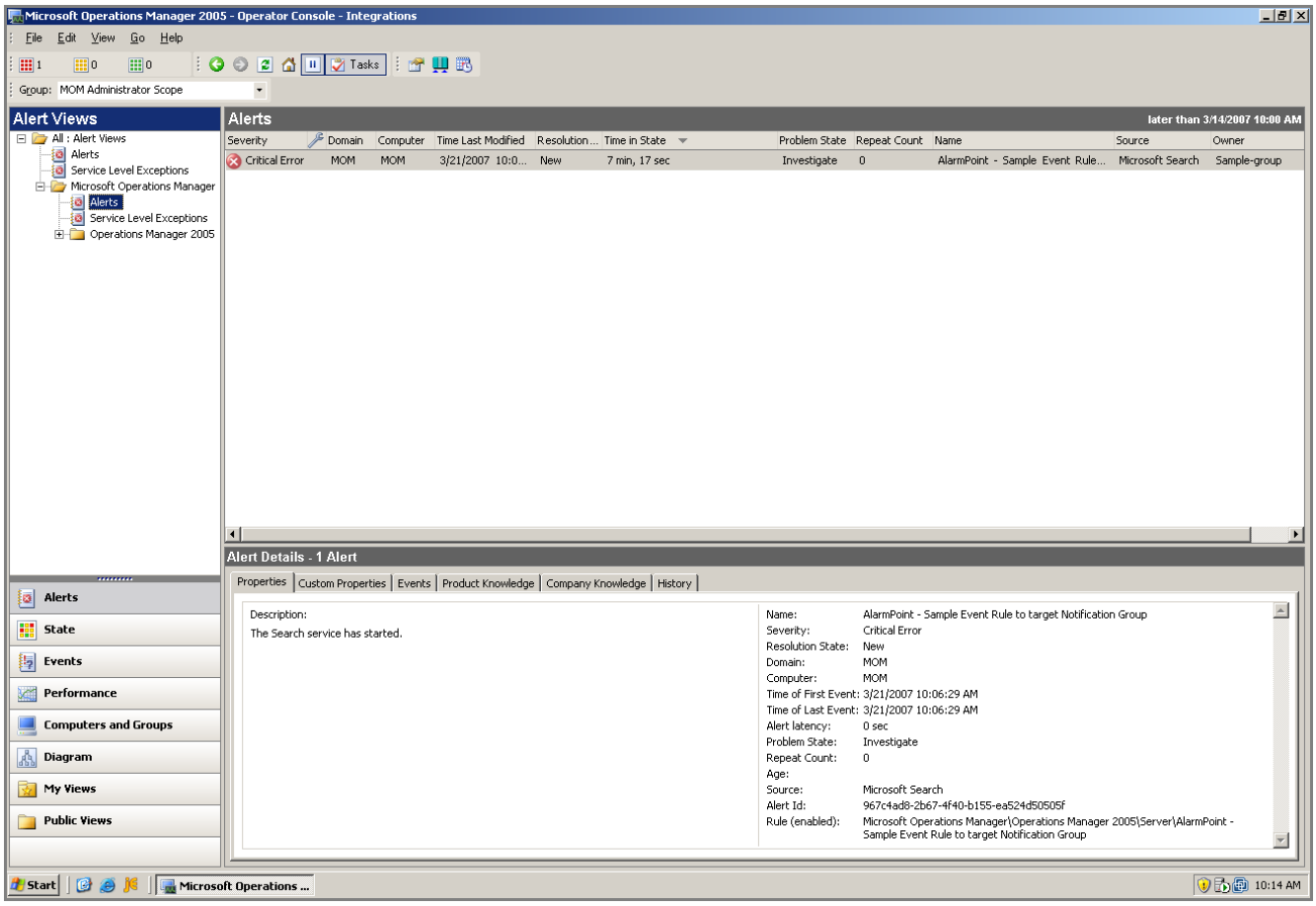
16. In the **Rule Name** field, type a name for the Event Rule, and select the **This rule is enabled** check box.
17. Click **Finish**.

4.2.4 Testing the Event Generation

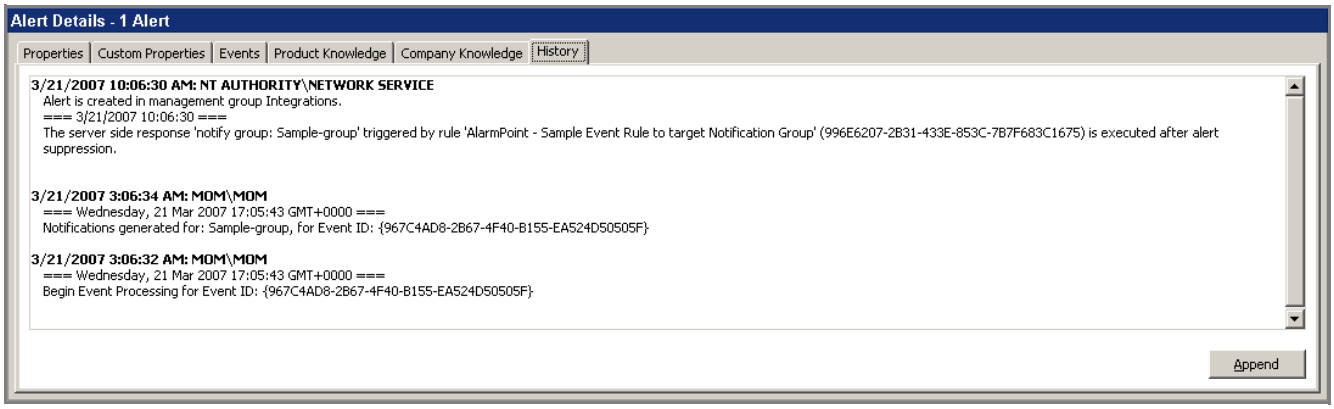
Once you have configured MOM 2005, you can test the integration.

To test the integration:

1. Open Service Control and restart the Service used in generating the Event Rule; in the example, the MS Search Service.
    - The Alert is created in MOM:



- The MOM Alert is passed into AlarmPoint and the User, “bsmith”, is notified that the MS Search Service was restarted:



4.2.5 Responding to a Notification

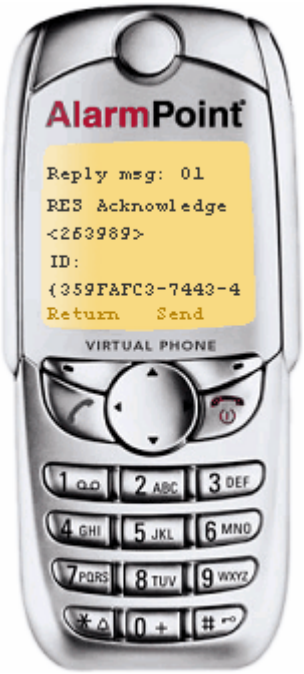
This section describes how to respond to a message using the default User’s virtual phone:

1. When a call arrives for the default User, the virtual phone appears and indicates the number of calls that have been received:

2. To see the first call, click **Select**:

3. Scroll down using the arrow buttons to view the call details and the list of possible replies:

4. Click **Reply**, and then type **RES Acknowledge**:

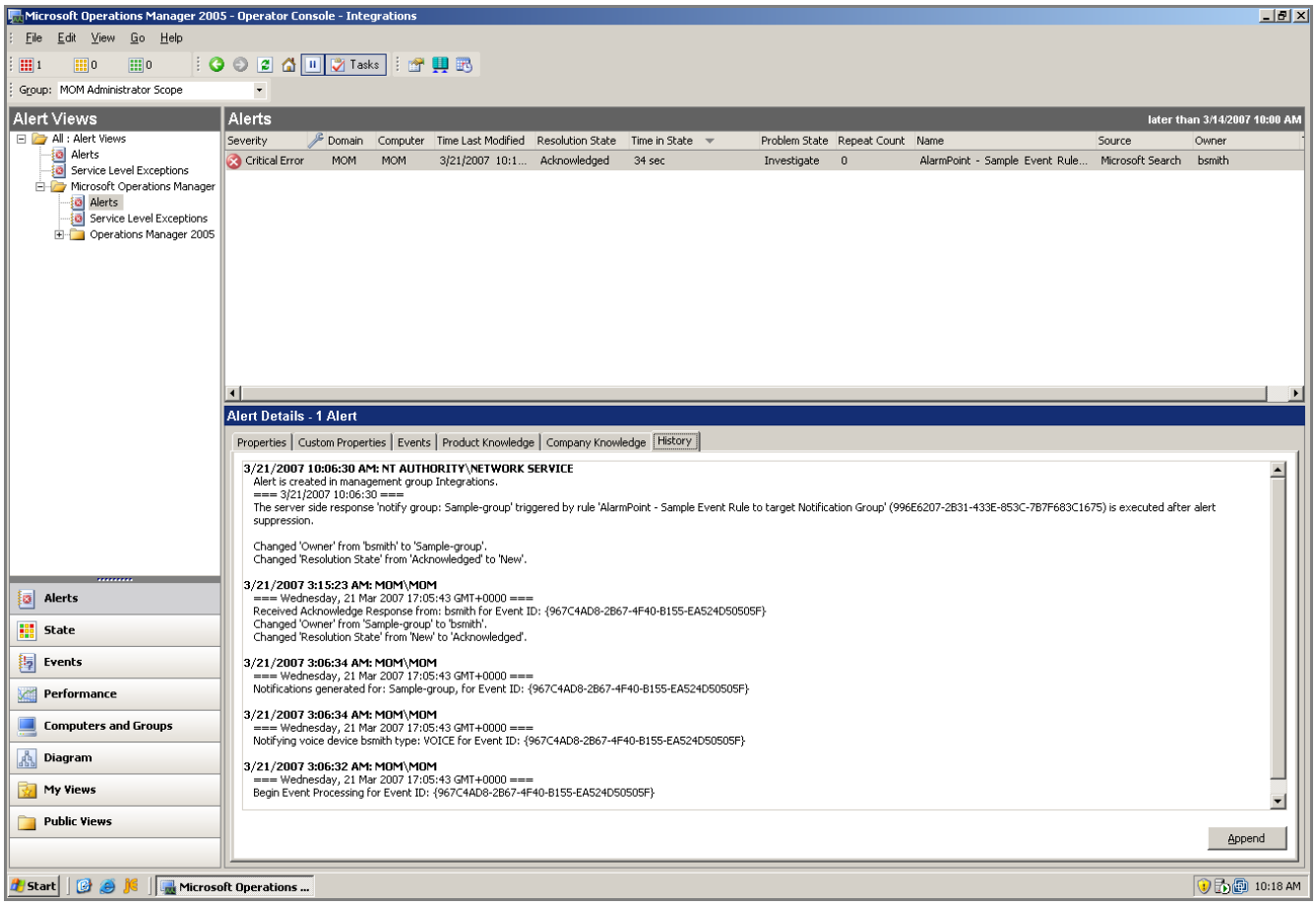


5. Click **Send**, and AlarmPoint will send the acknowledgement to MOM 2005.

4.2.6 View Results

After responding to the notification using the virtual text phone, you can view the results of the response in MOM 2005.

1. Open the Event Viewer and note the changes to the Alert:



- The Resolution state has changed to “Acknowledged”, and bsmith is now the Alert owner.

5. Contact Us

You can access the AlarmPoint Systems Web Site at http://www.alarmpoint.com. From this site you can obtain information about the Company, the Products, Support and other helpful information. You may also access the Customer Support Site from the main web page. In this protected site you will find current product releases, helpful hints, patches, release notes, and other tools provided by AlarmPoint Systems, Inc.

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