

HP Operations Orchestration Software

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CA Unicenter Network/Systems Management Integration

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Documentation enhancements are a continual project at Hewlett-Packard Software. You can obtain or update the HP OO documentation set and tutorials at any time from the HP Software Product Manuals web site. You will need an HP Passport to log in to the web site.

To obtain HP OO documentation and tutorials

1. Go to the HP Software Product Manuals web site (<http://support.openview.hp.com/selfsolve/manuals>).
2. Log in with your HP Passport user name and password.
OR

If you do not have an HP Passport, click **New users – please register** to create an HP Passport, then return to this page and log in.

If you need help getting an HP Passport, see your HP OO contact.

3. In the **Product** list box, scroll down to and select **Operations Orchestration**.
4. In the **Product Version** list, click the version of the manuals that you're interested in.
5. In the **Operating System** list, click the relevant operating system.
6. Click the **Search** button.
7. In the **Results** list, click the link for the file that you want.

Where to Find Help, Tutorials, and More

The HP Operations Orchestration software (HP OO) documentation set is made up of the following:

- Help for Central
Central Help provides information to the following:
 - Finding and running flows
 - For HP OO administrators, configuring the functioning of HP OO
 - Generating and viewing the information available from the outcomes of flow runsThe Central Help system is also available as a PDF document in the HP OO home directory, in the \Central\docs subdirectory.
- Help for Studio
Studio Help instructs flow authors at varying levels of programming ability.
The Studio Help system is also available as a PDF document in the HP OO home directory, in the \Studio\docs subdirectory.
- Animated tutorials for Central and Studio
HP OO tutorials can each be completed in less than half an hour and provide basic instruction on the following:
 - In Central, finding, running, and viewing information from flows
 - In Studio, modifying flowsThe tutorials are available in the Central and Studio subdirectories of the HP OO home directory.
- Self-documentation for operations and flows in the Accelerator Packs and ITIL folders

Self-documentation is available in the descriptions of the operations and steps that are included in the flows.

Support

For support information, including patches, troubleshooting aids, support contract management, product manuals and more, visit the following site:

- <http://support.openview.hp.com>

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Event management

Event management integration allows users to automatically run a flow when an event matching a certain set of criteria occurs. Setting this up requires the following steps:

1. Create a message definition that describes the events that will trigger the flow.
2. Create a message action for this message definition. The message action specifies the flow to run and starts the external RSFlowInvoke utility to run the flow.

Creating a message definition for incoming events

In order for an action to run in response to events, you need to define the specific incoming message that will trigger the action. The following steps assume that the event log contains a copy of the event that will trigger your action. If the event has not been logged, you can trigger a test event. This is documented in a later section in this guide.

To create a message definition for incoming events

1. Open the **Event Management** console (**Start > All Programs > Computer Associates > Unicenter > NSM > Enterprise Management > EM Classic**).
2. Click the **Windows** icon.
3. Click the **Event** icon.
4. Click the **Console Logs** icon.
5. Right-click the event for which you wish to create a message definition, and select **Define Message Record**.

The message record window opens, and NSM fills in the **Message id** field.

6. To trigger on multiple event types, use * as a wildcard in this field.
7. In the **Description** field, add a meaningful description for the message.
8. You may want to delete domain user and domain node values, unless you only want to match the message from specific users or nodes.
9. You may also want to delete the value from the **Program** field under the **More** tab.
10. Click **Save**.

Creating a message action and associating it with the message

Now that you have a message definition, you can create actions to associate with it. Event actions automatically perform an action when an incoming event is received. These actions can be simple internal tasks, such as highlighting the event in the event log, or they can also execute commands on either a local or remote machine. The following steps will run a command on the local host.

To create a message action and associate it with the message

1. On the **Message Definitions** screen, click the **Actions** button.
2. Click **New**.
3. Pick a sequence number (for example, 10).
4. In the **text** field, enter the command line you wish to run (for example, 'c:\run.bat').
5. On the **Action** drop down, select **COMMAND**.
6. To save your action, click **OK**.
7. To update the message definitions, in the command line, run **opr cmd opreload**.

You can now close the **Message Action Summary** window.

Triggering a test event

- To trigger a test event, use either the `cawto` or `cawtor` command line tool, using syntax such as the following:

```
cawto TestMessage
```

This sends the event containing the text **TestMessage** to the NSM event log.

Accessing event information from the .bat file.

A lot of data about the event is put into environment variables when running a command.

- To obtain a full list of these environment variables and their values, add the following line to your bat file:

```
set > c:\environment.txt
```

This puts a list of all environment variables in the `environment.txt` file.

Below are some of the event-related environment variables and what they mean.

Variable	Value
EVENT_DATEGEN	The date that the event occurred.
EVENT_LOGRECID	The ID of the last event written to the log when this command was started.
EVENT_MSGLOGRECID	The ID of the message that triggered command execution.
EVENT_NODEDOMAIN	The domain of the node where the event occurred.
EVENT_NODEID	The domain\host of the node where the event occurred.
EVENT_NODENAME	The host name of the node where the event occurred.
EVENT_PID	The process identification number (PID) of the process that notified NSM of the event.
EVENT_PROGRAM	The name of the program that notified NSM of the event.
EVENT_SEQNO	The sequence number of the action that launched this command.
EVENT_TAG	The tag of the event in NSM.
EVENT_TEXT	The message that was sent in the event.
EVENT_TIMEGEN	The time that the event was generated.
EVENT_TOKEN	The token of the message rule that matched the event.
EVENT_TYPE	The NSM type of the event.
EVENT_USERID	The username on the node that created the event.

The following .bat file will run the **Windows Health Check** flow against any host that logs my error:

```
c:\RSFlowInvoke
"https://%MY_HOST%:8443/OpsForce/services/http/run/Library/Accelerator
Packs/Operating Systems/Windows Management/Windows Health
Check?host=%EVENT_NODENAME%&sendEmail=No" -u ss -p ss -rc 1 > c:\request.txt
```

Note that this batch file redirects the output of RSFlowInvoke to c:\request.txt in order to make debugging easier.

Alert management

In NSM, alerts can be created from any incoming event, but only from events. For this reason, this section of this document assumes that you have already familiarized yourself with event management.

Creating an alert from an event

To create an alert from an event

1. Create a message definition for the event and add a message action.
2. Instead of starting a command with the message action, choose **Alert** from the **Action** drop down.

For more information see the Event Management section on creating a message action.

3. To generate a test alert, instigate a test event that matches the message definition.
For more on creating a test event, see the "Event Management" section of this document.

Creating a user action

An event can automatically trigger actions when the event matches a specific rule set. Alerts cannot automatically trigger actions. However, there is a predefined list of user actions that can be performed on an alert. To launch a flow automatically from an alert, launch it from the event message definition that creates the alert.

To create a user action

1. Open the Management Command Center (**Start > All Programs > Computer Associates > Unicenter > NSM > Management Command Center**).
2. Select the **View** drop-down box.
3. Select **Alerts**.
4. You can use this view to see alerts that have arrived.
5. Select **My Actions**, and then click **Define Actions**.
6. Click **New**.
7. In the **command** field, type a command using the following syntax to run an external run.bat file:
`COMMAND(c:\run.bat)`
8. Click **OK**.

Unicenter Service Desk integration

You can use NSM to collect and manage incoming events from a variety of devices. Service Desk is a service-desk ticketing system. NSM includes an integration that enables it to create and close NSM tickets based on alerts. Note that in some versions of Unicenter Service Desk this integration appears to be broken.

Enabling integration

For the integration to open Service Desk requests, you must provide a means of contacting the service desk server.

To enable integration with Service Desk

1. Open the Management Command Center (**Start > All Programs > Computer Associates > Unicenter > NSM > Management Command Center**).
2. Select **View**, then **Options**.
3. Select **Connections**.
4. Type in the URL of your service desk web client (for example: **http://erebus:8080/CAisd/pdmweb.exe**).
5. Select **File**, then **Exit**.
6. Open the **Alert Management** console (**Start > All Programs > Computer Associates > Unicenter > NSM > Enterprise Management > EM Classic**).
7. Click the **Windows** icon.
8. Click the **AMS** icon.
9. Click the **Alert Global Definitions** icon.
10. Specify the Service Desk URL, username, and password.
The URL is the URL of the Service Desk Web server (For example, **http://erebus:8080/axis/services/USD_R11_WebService**).
11. Click **Save**.

Specifying policies for alert life cycles

You can open or close Service Desk requests based on what happened to an alert. You do so by setting policies in the Alert class.

To set policies in the Alert class

1. Open the Alert Management console (**Start > All Programs > Computer Associates > Unicenter > NSM > Enterprise Management > M Classic**).
2. Click the **Windows** icon.
3. Click the **AMS** icon.
4. Click the **Alert Classes** icon.
5. Double click the name of the alert class you wish to modify.
6. Select the **Actions** tab.
7. Check the desired fields for the Service Desk Integration.
8. You may also want to delete the value from the **Program** field under the **More** tab.
9. Click **Save**.

WorldView integration

WorldView is a tool that shows users a network topology and enables them to view alerts and interact with topology components. Using our integration with WorldView, you can launch a flow from WorldView's right-click menu.

Running a flow

You start a flow from WorldView by creating a batch file that will execute RSFlowInvoke. WorldView can pass information about the managed object into the batch file in the form of command line parameters.

To run a flow from WorldView

1. Open up the WorldView 2-D Map. (**Start > All Programs > Computer Associated > Unicenter > NSM > WorldView > 2-D Map.**)
2. Scroll to the object for which you want to add a flow.
3. Right-click the object and select **Edit Class**.
4. Click **Menu**.
5. Click **Insert**.
6. Type a name for the menu item.

The type is "Batch," and the command is the full path to your batch file.

7. From the **parameters** inset list, add any parameters you want.

Note: The parameters are passed in the order that you add them. For example, you might update the menu for a computer object, and pass the address property.

8. Click **OK** to save your menu modification.

Take a look at the following sample .bat file:

```
echo %1%
c:\RSFlowinvoke
"https://%MY_HOST%:8443/OpsForce/services/http/run/Library/Accelerator
Packs/Operating Systems/Windows Management/Windows Health
Check?host=%1%&sendEmail=No" -u ss -p ss -rc 1 >WVrequest.txt
```

Note that this bat file echoes the first input to the screen, and also redirects the Process Automation System Central response to a text file in order to simplify debugging.