HP Operations Orchestration Software

Software Version: 7.60

HP Operations Manager Incident Web Service Integration Guide

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On the Web: Finding OO support and documentation

There are two Web sites where you can find support and documentation, including updates to OO Help systems, guides, and tutorials:

- The OO Support site
- BSA Essentials Network

Support

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.

BSA Essentials Network

For support information, including patches, troubleshooting aids, support contract management, product manuals and more, visit the following site: http://www.hp.com/go/bsaessentialsnetwork

This is the **BSA Essentials Network** Web page. To sign in:

1. Click **Login Now**.
2. On the **HP Passport sign-in** page, enter your HP Passport user ID and password and then click **Sign-in**.
3. If you do not already have an HP Passport account, do the following:
   a. On the **HP Passport sign-in** page, click **New user registration**.
   b. On the **HP Passport new user registration** page, enter the required information and then click **Continue**.
   c. On the confirmation page that opens, check your information and then click **Register**.
   d. On the **Terms of Service** page, read the Terms of use and legal restrictions, select the **Agree** button, and then click **Submit**.

4. On the **BSA Essentials Network** page, click **Operations Orchestration Community.**
   The Operations Orchestration Community page contains links to announcements, discussions, downloads, documentation, help, and support.

Note: Contact your OO contact if you have any difficulties with this process.

In OO: How to find Help, PDFs, and tutorials

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 runs

  The 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 flows

  The 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.

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Overview of HP Operations Manager Incident Web Service integration

With the HP Operations Manager (HPOM) Incident Web Service integration, administrators can build HP Operations Orchestration (OO) flows that are integrated with HPOM through the Incident Web Service interface.

This document explains how this integration has been implemented and how the integration OO operations communicate between OO and the HPOM Incident Web Service interface.

The HP Operations Manager Incident Web Service interface exposes its messages as IT Infrastructure Library (ITIL) incidents and uses terminology (such as Close and Reopen) that is compliant with the Distributed Management Task Force (DMTF) Web Services for Management (WS-Management) standard. This terminology is different, yet similar, to HPOM native terminology.

Use cases and scenarios

1. Manage the following HPOM messages using the Incident Web Services:
   - Own Incident
   - Disown Incident
   - Close Incident/Reopen Incident
     This is also known as acknowledging/unacknowledging a message.
   - Change severity
     This is available via the Update Incident operation.
   - Change text
     This is available via the Update Incident operation.
   - Add Annotation
2. Manage OM actions using the Incident Web Services:
   - Get status of operation initiated/automatic action
     These status values are results of the Get Incident operation.

HPOM Incident Web Service integration operations

The HPOM Incident Web Service integration includes the following operations in the Studio Library, in the \Library\Integrations\Hewlett-Packard\Operations Manager\ folder.
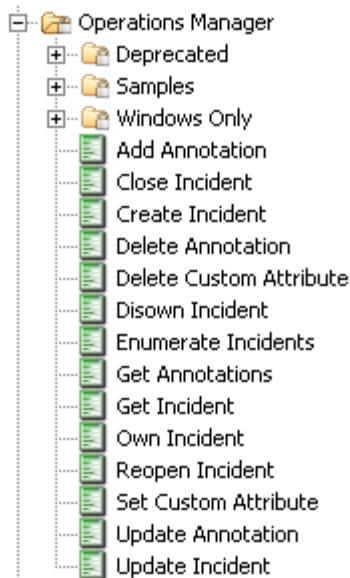
The operations for this integration support tasks such as:

- Creating an incident
- Closing and reopening an incident
- Updating the title and the severity of an incident
- Retrieving the details of an incident
- Enumerating (searching for) incidents that match specific criteria
- Managing annotation
- Managing custom attributes

This section introduces the operations for the HPOM Incident Web Service integration. For complete details of each operation, see the **Description** tab for the operation in Studio.

The destination URL for the Web service is built as:

`<protocol>://<host:port>/opr-webservice/Incident.svc`

Common inputs in the integration

The following inputs are used consistently throughout the HPOM Incident Web Service integration's operations. They control the HTTP connection to the Web service, including:

- Location
- Protocol
- Credentials
- Timeout

host
   The host on which the HPOM Incident Web Service is running.

port
   The port on which the HPOM Incident Web Service is running. The default value is **443** (the standard for HTTPS).

protocol
   The protocol used to communicate with the HPOM Incident Web Service. The default value is **https**.

username
   The HPOM user account under which the operation will be performed.

password
   The password corresponding to the user account.

timeout
   The amount of time in milliseconds (ms) that can elapse before the connection to the HPOM Incident Web Service is terminated. A value of 0 indicates an unlimited timeout. The default value is **0**.

Additional inputs for the operations are included in the operation descriptions in the Operation specifics section.

Versions and components

Operations Orchestration Version	HP Operations Manager Incident Web Service Version
7.60	8.0 Included automatically in Windows HP Operation Manager 8.10 or later Available for download for Unix HP Operations Manager 8.30 or later

Architecture
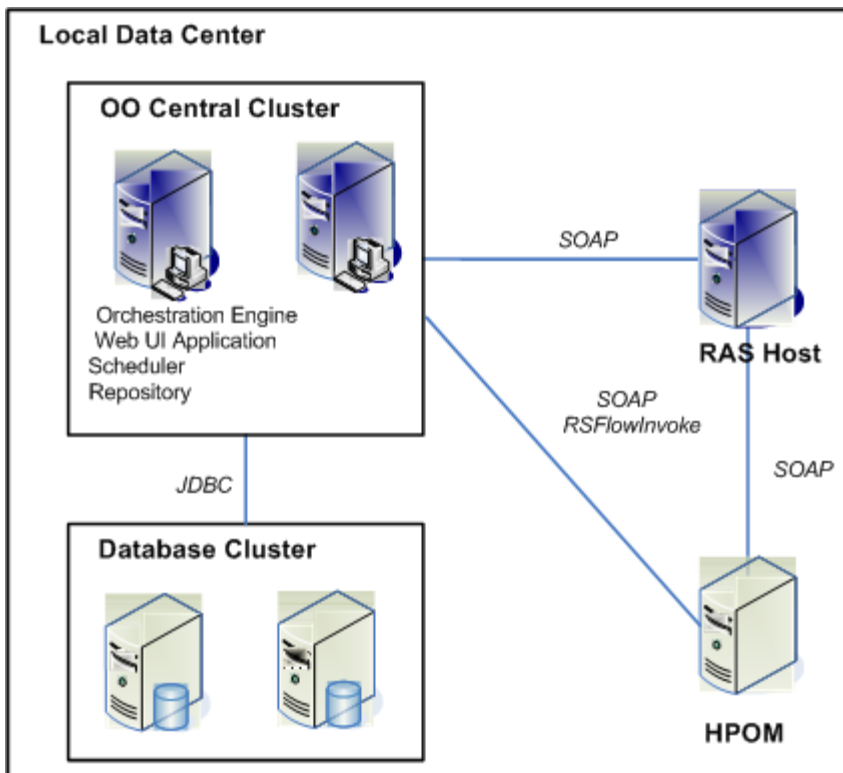
Installation and configuration instructions

There is no special installation required for HPOM Incident Web Service integration for Windows. For HPOM Incident Web Service integration for UNIX you must also install the HPOM for UNIX Incident Web Service. For more information, see *HP Operations Manager Incident Web Service for the UNIX and Windows Operating Systems Integration Guide* available on *http://support.openview.hp.com/selfsolve/manuals*.

Operation specifics

Add Annotation operation

This operation adds an annotation to an existing HPOM incident. The creation time of the annotations is populated with the current time on the HPOM host, and the user is populated with the **username** input to this operation.

id
   The incident ID to which the annotation will be added.

annotationText
   The annotation text to add.

Close Incident operation

This operation closes an HPOM incident. This is also known as *acknowledging* a message.

id
> The incident ID to close.

Create Incident operation

This operation creates an incident in HPOM with the given properties, and returns the ID of the newly-created incident.

If HPOM detects that a new incident is essentially a duplicate of an existing incident, it does not create the new incident. Instead it updates the original incident with the information that a duplicate was received. In this situation, the ID of the original event is returned by the operation.

description
> A detailed description of the incident. This is stored in a custom attribute named **Description**.

severity
> The severity of the event related to the incident. Valid values are **Critical**, **Major**, **Minor**, **Warning**, and **Normal**.

title
> The text of the incident; a brief description of the event that the incident relates to.

category
> The HPOM category for organizing incidents that have some logical connection. This is stored in the HPOM **Message Group** field.

subcategory
> A string used for more detailed organization of incidents that have the same category.

nodeDnsName
> The name of the node generating the incident.

collaborationMode
> A string that may be used for integration with a service management product. The service management product defines the string's value and purpose.

solution
> A description of steps taken in response to the incident.

problemType
> A string that may be used for integration with a service management product. The service management product defines the string's value and purpose.

productType
> A string that may be used for integration with a service management product. The service management product defines the string's value and purpose.

type
> A string used for organizing incidents, for example, to group different types of incidents within a category. This is stored in the HPOM **Message Type** field.

emittingCI
> The ID of the service to which the incident relates.

customAttributes

Each incident can have any number of custom message attributes, which are pairs of names and values. This input can contain multiple name=value pairs, separated by commas. For example, `color=green,flavor=pear`. The HPOM Incident Web Service maps several inputs into custom message attributes, including: **description**, **solution**, **subcategory**, **productType**, **problemType**, and **collaborationMode**.

correlationKey

A string that enables other processes to identify incidents that relate to each other. This is stored in the HPOM **Message Key** field.

application

The name of the application to which the incident relates.

object

The name of the object to which the incident relates.

Delete Annotation operation

This operation deletes an annotation from an existing HPOM incident.

id

The incident ID.

annotationId

The ID of the annotation. The **annotationId** input is a long string of hexadecimal digits that is generally only available from the Incident Web Service interface. Note that this identifier is not the same ID that is presented in the HPOM console, which is normally a small integer (beginning with 1 and incremented with each annotation).

Delete Custom Attribute operation

This operation deletes a custom attribute from an existing incident.

id

The incident ID.

caName

The custom attribute name to delete.

Disown Incident operation

This operation disowns one or more incidents, by clearing the **owner name** attribute.

ids

A list of incident IDs, separated by the delimiter character.

delimiter

The delimiter placed between incident IDs. The default is "**,**" (comma).

Enumerate Incidents operation

This operation finds the incident IDs that match the values in the operation's inputs. The IDs for incidents that match all of the input values are returned. Flows will typically use the HPOM Incident Web Service **Get Incident** operation for each of the IDs returned by this operation.

application
>The name of the application to which the incident relates.

category
>The HPOM category for organizing incidents that have some logical connection.

conditionMatched
>This indicates whether the incident was sent to the server because of a matched condition in a policy or template.

correlationKey
>A string that enables other processes to identify incidents that relate to each other.

customAttributes
>A set of name=value attribute pairs separated by a comma. For example, color=green,flavor=pear.

emittingCI
>The ID of the service to which the incident relates.

emittingNode
>The name of the node generating the incident.

object
>The name of the object to which the incident relates.

receivedTime
>The date and time at which the incident was received by OM.

receivedTimeOperator
>The operator that specifies how to interpret the **receivedTime** input value. Valid values are **>** (after), **<** (before), and **=** (equal to). The operator indicates whether the operation will find incidents whose received time is after, before, or equal to the **recievedTime** input value.

severity
>The severity of the event. Valid values are **Critical**, **Major**, **Minor**, **Warning**, and **Normal**.

title
>The text that is contained in the title of the incident. You don't have to enter the entire title, just a substring of it.

maxIncidents
>The maximum number of matching incident IDs that can be returned by this operation. The default is **10**.

Get Annotations operation

This operation returns all of the annotations on the given incident as a list. The delimiter separates the annotations in the list.

id
>The incident ID.

delimiter
> The delimiter used to separate the annotations in the list.

Get Incident operation

This operation returns the details of an existing incident. The fields are returned as separate outputs.

id
> The incident ID.

Own Incident operation

This operation sets the incident owner's name to the user name of the currently authenticated HPOM user.

ids
> The list of incident IDs, separated by the delimiter character.

delimiter
> The delimiter used to separate the incident IDs. The default is "," (comma).

Reopen Incident operation

This operation reopens a closed incident. This is also known as *unacknowledging* a message.

id
> The incident ID.

Set Custom Attribute operation

This operation sets a custom attribute on an existing incident. If an attribute with the given name already exists, its value is updated; otherwise, a new attribute with the given name and value is added to the incident.

id
> The incident ID.

caName
> The custom attribute name to set.

caValue
> The custom attribute value to set.

Update Annotation operation

This operation updates an annotation on an existing incident.

id
> The incident ID.

annotationId

The ID of the annotation. The **annotationId** input is a long string of hexadecimal digits that is generally only available from the Incident Web Service interface. Note that this identifier is not the same ID that is presented in the HPOM console, which is normally a small integer (beginning with 1 and incremented with each annotation).

annotationText

The new text of the annotation.

Update Incident operation

This operation updates the modifiable attributes of an incident—**Severity** and **Title**.

id

The incident ID.

severity

The severity of the event to which the incident relates. Valid values are **Critical**, **Major**, **Minor**, **Warning**, and **Normal**.

title

The text of the incident. A brief description of the event to which the incident relates.

Troubleshooting

General troubleshooting procedure

If you encounter an error, you should attempt to replicate the error through the HPOM console.

Error Messages

The destination represented by the WS-Addressing To EPR with address unable to find specified incident

The requested incident ID being is not found in HPOM. IDs are displayed in the HP Operations Manager Console on the **General** tab of the properties page for a message, and they are normally composed of dash-separated hexadecimal characters, such as 96148820-3f38-71de-1398-0f178f0d0000.

org.apache.axis2.AxisFault.... Caused by: java.net.UnknownHostException

The **hostname** parameter refers to a host that cannot be found.

org.apache.axis2.AxisFault.... Caused by: java.net.ConnectionException: Connection refused

The HPOM Web service is not listening to the indicated port. The specified port may be incorrect or the HPOM Web service not running or is listening on a different port.

Security

The HPOM Incident Web Service is accessed via SOAP over HTTPS (or HTTP, if enabled on the host), and requires valid credentials to access OM.

Tools

JRSFlowInvoke.exe

A command-line tool with which flows can be started from outside the OO Central Web application.

Web Service Wizard (wswizard.exe)

A tool that displays a list of the methods in the interface of the specified Web service. In the wizard, you pick the methods that you want to use, and with one click for each method you have selected, the wizard creates an HP OO operation that can execute the method.

These tools are located in the \%OO_home%\Studio\tools\ folder.

You can learn how to invoke OO flows using the HPOM Incident Web Service operations in the *HP Operations Manager Integration Guide* (HP Operations Manager Integration Guide.pdf) available on the HP Software Product Manuals web site (*http://support.openview.hp.com/selfsolve/manuals*).