

HP Operations Manager Incident Web Service

for the UNIX® and Windows® operating systems

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Integration Guide

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Contents

1	Introduction to the Incident Web Service	7
	Incident to Message Mappings	8
	XML Namespaces	12
	Endpoint References	13
2	Installing and Configuring the Incident Web Service	15
	Installation on HPOM for UNIX Management Servers	15
	Deinstallation	16
	Service Configuration	17
	Port Configuration	18
3	Operations Reference	19
	Get	20
	Put	21
	Create	23
	Close	25
	Reopen	26
	EnumerateOp	27
	PullOp	29
	ReleaseOp	31
	SubscribeOp	32
	UnsubscribeOp	35
	RenewOp	36
	OwnMany	37
	DisownMany	38
	GetAnnotations	39
	AddAnnotation	41
	UpdateAnnotation	42
	DeleteAnnotation	44
	SetCustomAttribute	45
	DeleteCustomAttribute	47
	CloseMany	48
	ReopenMany	49
4	Security for Incident Web Service Clients	51
	User Authentication	51
	Secure HTTP Connections	51

5	Basic Troubleshooting	53
	Troubleshoot Connectivity	53
	Troubleshoot on HPOM for UNIX	54
	Troubleshoot on HPOM for Windows	54
A	SOAP Envelope Examples	57
	Index	65

1 Introduction to the Incident Web Service

In HP Operations Manager (HPOM), a message is a structured, readable notification that HPOM generates after detecting, filtering, and correlating one or more events. These events relate to changes in application, system, network, or service status. HPOM messages are conceptually similar to incidents, as defined by the IT Infrastructure Library (ITIL) version 3 framework for service management. An ITIL-compliant incident is an event that could interrupt a service or degrade the quality of a service.

The HP Operations Manager Incident Web Service exposes HPOM messages as ITIL-compliant incidents. The service enables remote clients that you develop to get incidents from HPOM, and update and create incidents in HPOM. Clients can also trigger incident state changes in HPOM, for example, to close an incident.

The service provides the following features and benefits:

- Enables clients to access HPOM messages using industry-standard terminology and technical standards, instead of product-specific interfaces.
- Provides a consistent interface on both HP Operations Manager for UNIX and HP Operations Manager for Windows management servers. Clients can integrate seamlessly with HPOM management servers on both platforms.
- Complies with the Distributed Management Task Force (DMTF) Web Services for Management (WS-Management) standard. This compliance enables you to develop clients for the web service using tools that support WS-Management, for example Wiseman.
- Supports client development using other web service development tools (for example Apache Axis and Windows Communication Framework (WCF)).
- Provides operations that WS-Management specifies (for example Get, Put, Create), and in addition provides custom operations for incidents (for example Close, Reopen).

Developing a client to access the HPOM Incident Web Service requires knowledge of the standards and tools that you will use. Discussion of these standards and tools is outside the scope of this document.

You may want to consult the following external resources:

- Web services definition language: **www.w3.org**
- ITIL: **www.itil.co.uk**
- WS-Management: **www.dmtf.org** (document number DSP0226)
- Wiseman: **wiseman.dev.java.net**
- Apache Axis: **ws.apache.org**
- WCF: **msdn.microsoft.com**

Incident to Message Mappings

The HPOM Incident Web Service exposes HPOM messages as ITIL-compliant incidents. HPOM messages are conceptually similar to incidents, but do not have identical attributes. To enable operations on incidents for HPOM, the service maps HPOM message attributes into incident subelements, and incident subelements into HPOM messages attributes.

For some standard incident subelements, there are conceptually equivalent HPOM message attributes, and so the service maps them directly. The service also includes an extension to the standard incident definition, which makes it possible to map additional HPOM message attributes to incidents elements. Although an incident can contain other extensions, the service ignores them.

For other incident subelements, there are no conceptually equivalent HPOM message attributes. In some cases, the service maps these incident attributes to a custom message attribute (CMA). Each custom message attribute is a name-value pair. In HPOM, each message can have any number of custom message attributes attached to it.

Table 1 shows the mapping of Incident subelements to HPOM message attributes.

Table 1 Mapping of Incident Subelements to HPOM Message Attributes

Incident Subelement	HPOM Message Attribute	Description
IncidentID	<ul style="list-style-type: none">• UNIX: Message No.• Windows: ID	Unique identifier for this incident. HPOM generates this ID.
Description	CMA with the name “Description”	Detailed description of the incident.
Title	<ul style="list-style-type: none">• UNIX: Message Text• Windows: Text	Brief description of the event that this incident relates to.
LifeCycleState	Not mapped to an HPOM message attribute. The service uses the following rules to set the LifeCycleState in incidents that the service returns: <ul style="list-style-type: none">• If the message is acknowledged, LifeCycleState contains “closed”.• If the message is owned, LifeCycleState contains “work in progress”.• If the message is not acknowledged or owned, LifeCycleState contains “open”.• <i>HPOM for Windows only.</i> If the message’s State property is “Unknown”, LifeCycleState contains “Undefined”.	
Severity	Severity	Severity of the event that the incident relates to.
Solution	CMA with the name “Solution”	Description of steps taken in response to the incident.
Category	Message Group	String used for organizing incidents. Incidents that have some logical connection have the same category.
SubCategory	CMA with the name “Subcategory”	String used for more detailed organization of incidents that have the same category.

Table 1 Mapping of Incident Subelements to HPOM Message Attributes

Incident Subelement	HPOM Message Attribute	Description
ProductType	CMA with the name “Product Type”	String that may be used for integration with a service management product. The service management product defines the string’s value and purpose.
ProblemType	CMA with the name “Problem Type”	String that may be used for integration with a service management product. The service management product defines the string’s value and purpose.
CollaborationMode	CMA with the name “Collaboration Mode”	String that may be used for integration with a service management product. The service management product defines the string’s value and purpose.
EmittingCI.ID	<ul style="list-style-type: none"> • UNIX: Service Name • Windows: Service Id 	ID of the service that the incident relates to. The severity of an incident can affect the status of a service that it relates to.
EmittingNode.DnsName	<ul style="list-style-type: none"> • UNIX: Node • Windows: Primary Node Name 	Name of the node generating the incident.
AssignedOperator.Name	<ul style="list-style-type: none"> • UNIX: Owner • Windows: User of Last State Change 	Name of the HPOM user that is currently responsible for the incident. If the incident has an owner, HPOM prevents other users from starting some tasks on that incident.
AffectedCI	<i>Not mapped to HPOM messages</i>	
RequesterReference	<i>Not mapped to HPOM messages</i>	
Type	Message Type	String used for organizing incidents, for example, to group different types of incident within a category.

Table 2 shows the mapping of OperationsExtension subelements.

Table 2 Mapping of OperationsExtension Subelements to HPOM Message Attributes

OperationsExtension Subelements	HPOM Message Attributes	Description
Application	Application	Name of the application to which the incident relates.
Object	Object	Name of the object to which the incident relates.
StateChangeTime	<ul style="list-style-type: none"> • UNIX: Time Owned or Time Acknowledged • Windows: Time of Last State Change 	<ul style="list-style-type: none"> • UNIX: The time at which the incident was owned or acknowledged. The service maps whichever time is later (the time owned or the time acknowledged) StateChangeTime subelement. • Windows: Time at which the State message attribute last changed.
CreationTime	<ul style="list-style-type: none"> • UNIX: Time Created • Windows: Time First Created on Node 	Time at which the agent created the incident.
ReceivedTime	<ul style="list-style-type: none"> • UNIX: Time Received • Windows: Time First Received on Server 	Time at which the management server received the incident.
NumberOfDuplicates	Number of Duplicates	Number of duplicates that the management server has detected for the incident. If duplicate detection is disabled, the value of this is 0.
CorrelationKey	Message Key	String that enables other processes to identify incidents that relate to each other. Related incidents have similar message keys. Message keys are not unique.
ConditionMatched	Unmatched	Indicates whether the incident was sent to the server because of a matched condition in a policy or template.
AutomaticActionStatus	<ul style="list-style-type: none"> • UNIX: Automatic Action Status • Windows: Automatic Command 	<ul style="list-style-type: none"> • UNIX: Status of the automatic action, if one is associated with the incident. • Windows: If the message has an automatic command, the service sets the contents of AutomaticActionStatus to available. Otherwise, the service sets the contents of AutomaticActionStatus to notAvailable.

Table 2 Mapping of OperationsExtension Subelements to HPOM Message Attributes

OperationsExtension Subelements	HPOM Message Attributes	Description
OperatorActionStatus	<ul style="list-style-type: none"> • UNIX: Operator Action Status • Windows: Operator Command 	<ul style="list-style-type: none"> • UNIX: Status of the operator-initiated action, if one is associated with the incident. • Windows: If the message has an operator-initiated command, the service sets the contents of OperatorActionStatus to available. Otherwise, the service sets the contents of OperatorActionStatus to notAvailable.
EscalationStatus	<ul style="list-style-type: none"> • UNIX: Escalation (flag in the message browser) • Windows: Not available 	Defines the escalation status of the incident, if the incident was escalated by this management server, or to a different management server.
OriginalEvent	<ul style="list-style-type: none"> • UNIX: Original Message • Windows: Original Event 	Details of the event that is the cause of this incident.
CustomAttributes	<ul style="list-style-type: none"> • UNIX: Custom Attributes • Windows: Custom Message Attributes 	<p>Each incident can have any number of custom message attributes. Each custom message attribute is a name-value pair. The service excludes the following custom message attributes from the CustomAttributes subelement:</p> <ul style="list-style-type: none"> • Description • Solution • Subcategory • Product Type • Problem Type • Collaboration Mode <p>The service maps these custom message attributes to Incident subelements instead (see Table 1 on page 8).</p>
NumberOfAnnotations	Number of annotations	Number of annotations that have been added to the incident. An annotation is a short note about the incident. For example, a user can add an annotation to summarize actions taken in response to the message.
Source	<ul style="list-style-type: none"> • UNIX: Source • Windows: Policy 	Contains the name and version of the policy that created the message.

For an example incident in XML, see [Pull Response SOAP Envelope Example](#) on page 61.

XML Namespaces

Table 3 lists the prefixes used in this document to show the namespaces of element types.

Table 3 Prefixes and XML Namespaces Used in this Document

Prefix	XML Namespace
inc	http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
incExt	http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident
incFil	http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/IncidentFilter
ismCi	http://schemas.hp.com/ism/ServiceTransition/ConfigurationManagement/1/ConfigurationItem
ismNode	http://schemas.hp.com/ism/ServiceTransition/ConfigurationManagement/1/Node
ismWorkItem	http://schemas.hp.com/ism/ServiceOperation/Common/1/WorkItem
s	http://www.w3.org/2003/05/soap-envelope
wsa	http://schemas.xmlsoap.org/ws/2004/08/addressing
wse	http://schemas.xmlsoap.org/ws/2004/08/eventing
wsen	http://schemas.xmlsoap.org/ws/2004/09/enumeration
wsman	http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd
xs	http://www.w3.org/2001/XMLSchema

Endpoint References

The WS-Management specification uses WS-Addressing endpoint references (EPRs) as the addressing model for individual resource instances. [Table 3](#) on page 12 lists the prefixes used in this section to show the namespace of each element type.

An EPR is an XML element of the type *wsa:EndpointReferenceType*. An EPR element contains subelements that, in combination, provide the full reference to a resource instance. In terms of the HPOM Incident Web Service, this means that an EPR provides the full reference to an individual incident on a particular management server.

The following XML element shows an example of an EPR for the HPOM Incident Web Service:

```
<wsa:EndpointReference>
  <wsa:Address>
    https://manager1.example.com:443/opr-webservice/Incident.svc/
  </wsa:Address>
  <wsa:ReferenceParameters>
    <wsman:ResourceURI>
      http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/
      Incident
    </wsman:ResourceURI>
    <wsman:SelectorSet>
      <wsman:Selector Name="IncidentID">
        2b9cdf48-d6ca-71db-0d4b-1039228b0000
      </wsman:Selector>
    </wsman:SelectorSet>
  </wsa:ReferenceParameters>
</wsa:EndpointReference>
```

The above EPR contains the following conceptual elements:

- Address at which the service is available on a management server. This is in the format:
https://<server_name>:<port>/opr-webservice/Incident.svc/
- Unique identifier for the type of resource. This is the following URI:
http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
- Selector set that identifies an incident. This contains one selector, which contains an incident ID.

When you create a new incident using the service, the service returns an EPR for the new incident. You can store this EPR, and use it to uniquely identify the incident if you need to update it later. (See [Create](#) on page 23.)

WS-Addressing specifies that, to use an EPR in a request to a service, clients should add the contents of the EPR's *wsa:Address* subelement as the contents of the *wsa:To* subelement in the SOAP header. Where possible, clients should not rely on the *wsa:ReferenceParameters* subelement containing any particular subelements. Clients should instead treat the *wsa:ReferenceParameters* subelement as opaque, by unwrapping its contents and adding them all to the SOAP header of the request.

The following XML fragment shows an example of a SOAP header that contains the EPR of an incident:

```
<s:Header>
  ...
  <wsa:To>
```

```
    https://manager1.example.com:443/opr-webservice/Incident.svc/  
</wsa:To>  
<wsman:ResourceURI>  
    http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/  
Incident  
</wsman:ResourceURI>  
<wsman:SelectorSet>  
    <wsman:Selector Name="IncidentID">  
        2b9cdf48-d6ca-71db-0d4b-1039228b0000  
    </wsman:Selector>  
</wsman:SelectorSet>  
...  
</s:Header>
```

2 Installing and Configuring the Incident Web Service

Installation on HPOM for UNIX Management Servers

The HPOM Incident Web Service is available to download and install for supported versions of HPOM for UNIX. (HPOM for Windows 8.10 and later installs the HPOM Incident Web Service by default with the management server.)

Prerequisites

- HPOM for UNIX 8.30 or later.
- On HP-UX management servers, HP-UX patches are required for Java™ 5.0. These patches are available from the following web page:

<http://h18012.www1.hp.com/java/patches/index.html>

Install an HPOM for UNIX Incident Web Service

The HPOM Incident Web Service is bundled with the HPOM SiteScope Integration installation package. Installation packages are available for the following management server platforms:

- HP-UX PA-RISC
`ProductImage-HP0prSam-<version>-HPUX11.0-release.tar.gz`
- HP-UX Itanium
`ProductImage-HP0prSam-<version>-HPUX11.22_IPF32-release.tar.gz`
- Solaris
`ProductImage-HP0prSam-<version>-SunOS5.7-release.tar.gz`

These installation packages are available to download from the following location:

<ftp://ovweb.external.hp.com/pub/cpe/ito/OM-Installation>

Although these packages include HPOM SiteScope Integration, you do not have to install HPOM SiteScope Integration to use the HPOM Incident Web Service. For more information about HPOM SiteScope Integration, see the *HP Operations Manager SiteScope Administration Integration Installation Guide*.

To install the HPOM Incident Web Service:

- 1 Copy the installation package to a temporary directory on the HPOM for UNIX management server.
- 2 In a shell, navigate to the temporary folder that contains the installation package. Type the following commands to decompress the package:

a `gunzip <package_name>.tar.gz`

b `tar xvf <package_name>.tar`

3 Start the following program:

HPoprSam_<version>_setup.bin

The HP Software Installer wizard opens. Follow the instructions in the wizard.

To install the HPOM Incident Web Service on its own, select the custom installation type. The custom installation type enables you to deselect the HPOM SiteScope Integration installation option.

4 The installation wizard also installs or upgrades the required core packages:

— HPOvXpl

— HPOvJREB

— HPOvTomcatB

To enable the HPOM Incident Web Service to connect to HPOM for UNIX, ensure that OvTomcatB is running as root user.

Deinstallation

To deinstall the service from an HPOM for UNIX management server, start the following program again:

HPoprSam_<version>_setup.bin

The HP Software Installer wizard opens. Follow the instructions in the wizard, and select the **Uninstall** option.

Service Configuration

The HPOM Incident Web Service provides several configuration parameters that enable you to configure how the service responds to client requests. You can change the values of these parameters to suit your environment. [Table 4](#) lists the parameters that you can configure and their default values.

On HPOM for UNIX management servers, you can configure the parameters using `ovconfchg`. The parameters are in the `opc.WebService` namespace.

On HPOM for Windows management servers, you can configure the parameters in the Server Configuration dialog box. The parameters are in the Incident Web Service namespace.

Table 4 Service Configuration Parameters

Name	Default Value	Description
EnumerationExpiration	10 (minutes)	Default duration that enumeration contexts are valid for. (See EnumerateOp on page 27.)
EnumerationExpirationMaximum	60 (minutes)	Maximum duration that enumeration contexts are valid for. If a client specifies a longer duration, the service overrides the client and uses the value of this parameter instead. (See EnumerateOp on page 27.)
SubscriptionExpiration	60 (minutes)	Default duration that subscriptions are valid for. (See SubscribeOp on page 32.)
SubscriptionExpirationMaximum	1440 (minutes)	Maximum duration that subscriptions are valid for. If a client specifies a longer duration, the service overrides the client and uses the value of this parameter instead. (See SubscribeOp on page 32.)

Table 4 Service Configuration Parameters

Name	Default Value	Description
MaxItems	100	Maximum number of items that the service returns for a PullOp operation if the client does not specify a value. (See PullOp on page 29.)
MaxItemsMaximum	500	Maximum number of items that service returns for a PullOp operation. If a client specifies a larger number, the service uses this value instead. (See PullOp on page 29.) Set this parameter to a value below 5000. A value of 5000 or higher may cause heap space exceptions.
EventQueueSize	1000	Maximum number of events that an event queue can store. If the event queue contains the maximum number of events, and a new event occurs, the service discards the oldest event from the queue before it adds the new event to the end of the queue.

Port Configuration

The port that the HPOM Incident Web Service is available on depends on either the configuration of the Tomcat (B) servlet container on HPOM for UNIX management servers, or the configuration of Internet Information Services on HPOM for Windows management servers.

The service listens for HTTPS connections on the following ports by default:

- HPOM for UNIX
Port 8444
- HPOM for Windows
Port 443

On HPOM for UNIX management servers, the service also listens for insecure HTTP connections on port 8081. This can be useful for testing your client.

You can configure the service to listen for HTTPS connections on a different port as follows:

- HPOM for UNIX

Open a shell prompt on the management server, and then type the following command:

```
ovtomcatbctl -sethttpsport <port number>
```

- HPOM for Windows

In Microsoft Internet Information Services Manager, open the properties for the default web site, and change the SSL port.

3 Operations Reference

The HPOM Incident Web Service provides a Web Services Definition Language (WSDL) document, which describes the service. After you install the service, the WSDL is available from the following location on the HPOM management server:

`https://<server_name>:<port>/opr-webservice/Incident.svc?wsdl`

This WSDL document refers to the other WSDL documents and associated XML Schema Documents (XSDs), and gives their location on the management server. These documents provide complete information about the operations that the service supports. The details of how your client uses these operations depends on the web service client development toolkit that you choose.

HP provides unsupported examples for several client development toolkits. The examples are also available on the HPOM management server after you install the service.

The following read-me files provide more information on how to develop clients with each toolkit:

- Apache Axis2
`<install_dir>/contrib/oprweb/clients/axis/readme.txt.`
- Windows Communication Foundation
`<install_dir>/contrib/oprweb/clients/wcf/readme.txt.`
- Wiseman
`<install_dir>/contrib/oprweb/clients/wiseman/readme.txt.`

Alternatively, you can develop a client using any other suitable toolkit or programming language.

This chapter provides a generic reference to the operations that the service provides. For specific examples of SOAP envelopes that the service receives and sends, see [Appendix A, SOAP Envelope Examples](#)

[Table 3](#) on page 12 lists the prefixes used in this section to show the namespace of each element type.



The WSDL document contains the following operations that the service does not actually support:

- Delete
- SubscriptionEndOp

If your client attempts to use these operations, the service returns an ActionNotSupported fault.

Get

This operation returns one incident, which is identified by the incident ID.

Input

SOAP Body

Empty.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.xmlsoap.org/ws/2004/09/transfer/Get`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndPointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance to get.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body contains an element *inc:Incident* of type *inc:Incident*.

Fault

If it cannot return the incident, the service returns a fault according to the WS-Management standard.

Put

This operation updates an existing incident, which is identified by the incident ID.

Input

SOAP Body

Element *inc:Incident* of type *inc:Incident*. *inc:Incident* can contain any of the following the subelements to update on the server:

- Element *inc:Title* of type *xs:string*.
- Element *inc:Severity* of type *xs:string*. This can be one of the following strings:
 - Normal
 - Warning
 - Minor
 - Major
 - Critical

inc:Incident can also contain other valid subelements, although this operation ignores them and returns an incident with the contents of those subelements unchanged. In other words, if Incident contains immutable subelements, the operation does not return a fault.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.xmlsoap.org/ws/2004/09/transfer/Put`
- Element *wsan:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndpointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndpointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance to get.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body contains an element *inc:Incident* of type *inc:Incident*, which contains the updated incident.

Fault

If it cannot update the incident, the service returns a fault according to the WS-Management standard.

Create

This operation stores a new incident on the management server.

Input

SOAP Body

Element *inc:Incident* of type *inc:Incident*. *inc:Incident* must contain the following subelements:

- *inc>Title*
- *inc:EmittingNode / ismNode:DnsName*

Incident can contain any of the following subelements:

- *inc:Description*
- *inc:Severity* (default: “Unknown”)
- *inc:Solution*
- *inc:Category*
- *inc:SubCategory*
- *inc:ProductType*
- *inc:ProblemType*
- *inc:CollaborationMode* (default: “FYI”)
- *inc:EmittingCI / ismCi:ID*
- *inc>Type*
- *inc:Extensions / incExt:OperationsExtension / incExt:Application*
- *inc:Extensions / incExt:OperationsExtension / incExt:Object*
- *inc:Extensions / incExt:OperationsExtension / incExt:CreationTime* (default: the current time)
- *inc:Extensions / incExt:OperationsExtension / incExt:CorrelationKey* (default: null)
- *inc:Extensions / incExt:OperationsExtension / incExt:CustomAttributes* (default: an empty list)

inc:Incident can also contain other valid subelements, although this operation ignores them.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.xmlsoap.org/ws/2004/09/transfer/Create`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters / wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.

Alternatively, create a *wsman:ResourceURI* element that contains the following string:

<http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident>

- Element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

For an example, see [Create Request SOAP Envelope Example](#) on page 57.

Output

The SOAP body contains an element *wsa:EndpointReference* of type *wsa:EndpointReferenceType*. This element contains the subelements *wsman:ResourceURI* and *wsman:SelectorSet*, which you can use to uniquely identify the incident in subsequent operations.

For an example, see [Create Response SOAP Envelope Example](#) on page 58.

Fault

If the service cannot store the incident, it returns a fault according to the WS-Management standard.

Close

This operation sets the lifecycle state of an existing incident to closed. The incident is identified by the incident ID. Alternatively, you can use the [CloseMany](#) operation to close multiple incidents in one operation. (See [CloseMany](#) on page 48.)

Input

SOAP Body

Empty.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/Common/1/Close`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndPointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance to close.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a `TimedOut` fault if it cannot respond in time.

For an example, see [Close Request SOAP Envelope Example](#) on page 59.

Output

The SOAP body is empty. For an example, see [Close Response SOAP Envelope Example](#) on page 59.

Fault

If it cannot close the incident, the service returns a fault according to the WS-Management standard.

Reopen

This operation sets the lifecycle state of a closed incident to open. The incident is identified by the incident ID.

Alternatively, you can use the `ReopenMany` operation to open multiple incidents in one operation. (See [ReopenMany](#) on page 49.)

Input

SOAP Body

Empty.

SOAP Header

- Element `wsa:Action` of type `wsa:ActionType` that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/Common/1/Reopen`
- Element `wsman:ResourceURI` of type `wsman:AttributableURI`
Contains a string that identifies the resource type. You can use the element `wsa:ReferenceParameters/wsman:ResourceURI` from an element of type `wsa:EndPointReferenceType`.
Alternatively, create a `wsman:ResourceURI` element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element `wsman:SelectorSet` of type `wsman:SelectorSetType`
Contains one element of type `wsman:SelectorType`, which identifies the incident instance. You can use the element `wsa:ReferenceParameters/wsman:SelectorSet` from an element of type `wsa:EndPointReferenceType`. (See [Endpoint References](#) on page 13.)
Alternatively, create a `wsman:SelectorSet` that contains one `wsman:Selector` element of type `wsman:SelectorType`:
 - `wsman:Selector` attribute **Name** must have the value **IncidentID**.
 - `wsman:Selector` must contain the ID of the incident instance to reopen.
- Optional element `wsman:OperationTimeout` of type `wsman:AttributableDuration`
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a `TimedOut` fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot reopen the incident, the service returns a fault according to the WS-Management standard. The service returns a fault if the incident is already open.

EnumerateOp

This operation returns an enumeration context, which you can then use with the PullOp operation to get batches of incidents from the service. You can specify a filter, so that the enumeration context contains only specific incidents.

Input

SOAP Body

Element *Enumerate* of type *wsen:Enumerate*. This element can contain the following subelements:

- Optional element *wsen:Expires* of type *wsen:ExpirationType*.
Contains a duration, for which the client requires the enumeration context. If you omit this subelement, the service uses the value of the EnumerationExpiration parameter on the management server. If you specify a duration that exceeds the value of the EnumerationExpirationMaximum parameter, the service uses the value of SubscriptionExpirationMaximum instead. (See [Service Configuration](#) on page 17.)
- Optional element *wsen:Filter* of type *wsen:FilterType* or *wsman:Filter* of type *wsman:dialectableMixedDataType*. For compatibility with different toolkits, the service supports a filter of either type, but you must specify only one of them.

Filter attribute **Dialect** must have the following value:

```
http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/IncidentFilter
```

Filter must contain the subelement *incFil:IncidentEnumerationFilter* of type *incFil:IncidentEnumerationFilter*. *IncidentEnumerationFilter* can contain any of the following subelements:

- Optional element *incFil:Severity* of type *inc:Severity_OpenType*
- Optional element *incFil:EmittingNode* of type *incFil:EmittingNode*
- Optional element *incFil:Category* of type *xs:string*
- Optional element *incFil:Application* of type *xs:string*
- Optional element *incFil:Object* of type *xs:string*
- Optional element *incFil:EmittingCI* of type *incFil:EmittingCI*
- Optional element *incFil:CorrelationKey* of type *xs:string*
- Optional element *incFil:EscalationStatus* of type *xs:string*
- Optional element *incFil:ConditionMatched* of type *xs:boolean*
- Optional element *incFil:ReceivedTime* of type *incFil:TimeFilter*
- Optional element *incFil:Title* of type *incFil:KeywordFilter*
- Optional element *incFil:CustomAttributes* of type *incFil:CustomAttributes*

The service enumerates incidents that match the contents of the *incFil:IncidentEnumerationFilter* subelements that you specify. For more details on incident attributes, see [Incident to Message Mappings](#) on page 8.

If you omit *Filter*, the service enumerates all incidents that have the status open or work in progress.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.xmlsoap.org/ws/2004/09/enumeration/Enumerate`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsm:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

For an example, see [Enumerate Request SOAP Envelope Example](#) on page 60.

Output

The SOAP body contains an element *wsen:EnumerateResponse* (of anonymous type), which contains the following subelements:

- Element *wsen:Expires* of type *wsen:ExpirationType*.
Contains a duration, for which the enumeration context is valid. You can use the `ReleaseOp` operation to cancel the enumeration context early. (See [ReleaseOp](#) on page 31.)
- Element *wsen:EnumerationContext* of type *wsen:EnumerationContextType*.
Contains a string that identifies the enumeration context. Use *wsen:EnumerationContext* with the `PullOp` operation to get batches of incidents from the service. (See [PullOp](#) on page 29.)

For an example, see [Enumerate Response SOAP Envelope Example](#) on page 60.

Fault

If it cannot return the enumeration context, the service returns a fault according to the WS-Management standard.

PullOp

This operation returns a batch of incidents from an enumeration context.

Input

SOAP Body

Element *wsen:Pull* (of anonymous type), which contains the following subelements:

- Element *wsen:EnumerationContext* of type *wsen:EnumerationContextType*.
Contains a string that identifies the enumeration context. Use a *wsen:EnumerationContext* that one of the following operations returns:
 - EnumerateOp (see [page 27](#))
 - SubscribeOp (see [page 32](#))
 - PullOp (see below)
- Optional element *wsen:MaxElements* of type *xs:positiveInteger*.
Contains an integer that indicates the maximum number of incidents to return in this batch. If you omit this subelement, the service uses the value of the MaxItems parameter on the management server. (See [Service Configuration](#) on [page 17](#).)

The HPOM Incident Web Service does not support the subelements *wsen:MaxTime* or *wsen:MaxCharacters*. You should omit these subelements.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.xmlsoap.org/ws/2004/09/enumeration/Pull`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.
For enumeration contexts from the SubscribeOp operation, if the event queue remains empty for the specified OperationTimeout, PullOp returns a TimedOut fault.

For an example, see [Pull Request SOAP Envelope Example](#) on [page 61](#).

Output

The SOAP body contains an element *wsen:PullResponse* (of anonymous type), which contains the following subelements:

- Element *wsen:EnumerationContext* of type *wsen:EnumerationContextType*.
Contains a string that identifies the enumeration context. This is the same as the input *wsen:EnumerationContext*.
- Element *wsen:Items* of the type *wsen:ItemListType*.
Contains multiple *inc:Incident* elements of type *inc:Incident*.
- Optional element *wsen:EndOfSequence* of type *wsen:attributableEmpty*.
This element is empty. If *wsen:EndOfSequence* is present, there are no remaining items to pull for this enumeration context and the enumeration context is no longer valid.

For an example, see [Pull Response SOAP Envelope Example](#) on page 61.

Fault

If it cannot return the batch of incidents, the service returns a fault according to the WS-Management standard.

ReleaseOp

This operation cancels an existing enumeration context early (that is, before the client has pulled all the incidents, and before the enumeration context has expired.)

You can use this operation to cancel an enumeration context from an enumerate operation. To cancel an enumeration context from a subscription operation, unsubscribe instead. (See [UnsubscribeOp](#) on page 35.)

Input

SOAP Body

Element *wsen:Release* (of anonymous type), which contains the subelement *wsen:EnumerationContext* of type *wsen:EnumerationContextType*.

wsen:EnumerationContext contains a string that identifies the enumeration context. Use a *wsen:EnumerationContext* that one of the following operations returns:

- EnumerateOp (see [page 27](#))
- PullOp (see [page 29](#))

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:

`http://schemas.xmlsoap.org/ws/2004/09/enumeration/Release`

- Element *wsman:ResourceURI* of type *wsman:AttributableURI*

Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.

Alternatively, create a *wsman:ResourceURI* element that contains the following string:

`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`

- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*

Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot release the enumeration context, the service returns a fault according to the WS-Management standard.

SubscribeOp

This operation returns an enumeration context, which you can then use with the PullOp operation to get batches of new or updated incidents from the service. The service maintains an event queue of new or updated incidents. If an existing incident changes several times, the service adds the incident to the event queue several times (the service does not consolidate the events).

The value of the EventQueueSize parameter on the management server constrains the size of the event queue. (See [Service Configuration](#) on page 17.) To prevent the service from deleting events from the queue, you must pull batches of updated incidents at appropriate intervals. Consider using the following procedure to manage a subscription:

- 1 Use the SubscribeOp operation to get an enumeration context.
- 2 Immediately after SubscribeOp returns the enumeration context, start a PullOp operation. As soon as the event queue contains events, PullOp returns a batch of incidents.

If the event queue remains empty for the specified OperationTimeout, PullOp returns a TimedOut fault.

- 3 Immediately after the PullOp returns incidents or a fault, start another PullOp operation.

This step ensures that you always have a PullOp running, which should prevent the event queue from becoming too large.



If you restart the HPOM Incident Web Service, the service releases any enumeration contexts. The service does not maintain an event queue of new or updated incidents until the client subscribes again. This situation can also arise if the management server is part of a cluster and a failover occurs.

Input

SOAP Body

Element *wse:Subscribe* of type *wse:SubscribeType*, which contains the following subelements:

- Element *wse:Delivery* of type *wse:DeliveryType*. *wse:Delivery* attribute **Mode** must have the following value:

```
http://schemas.dmtf.org/wbem/wsman/1/wsman/Pull
```

- Optional element *wse:Expires* of type *wse:ExpirationType*.

Contains either a duration that specifies how long the client requires the subscription, or a date and time at which the subscription should expire. If you omit this subelement, the service uses the value of the SubscriptionExpiration parameter on the management server. If you specify a duration that exceeds the value of the SubscriptionExpirationMaximum parameter, the service uses the value of SubscriptionExpirationMaximum instead. (See [Service Configuration](#) on page 17.)

- Optional element *wse:Filter* of type *wse:FilterType* or *wsman:Filter* of type *wsman:dialectableMixedDataType*. For compatibility with different toolkits, the service supports a filter of either type, but you must specify only one of them.

Filter attribute **Dialect** must have the following value:

```
http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/IncidentFilter
```


Filter must contain the subelement *incFil:IncidentEventingFilter* of type *incFil:IncidentEventingFilter*. *IncidentEventingFilter* can contain any of the following subelements:

- Optional element *incFil:Severity* of type *inc:Severity_OpenType*
- Optional element *incFil:EmittingNode* of type *incFil:EmittingNode*
- Optional element *incFil:Category* of type *xs:string*
- Optional element *incFil:Application* of type *xs:string*
- Optional element *incFil:Object* of type *xs:string*
- Optional element *incFil:EmittingCI* of type *incFil:EmittingCI*
- Optional element *incFil:CorrelationKey* of type *xs:string*
- Optional element *incFil:Type* of type *xs:string*
- Optional element *incFil:EscalationStatus* of type *xs:string*
- Optional element *incFil:ConditionMatched* of type *xs:boolean*
- Optional element *incFil:ForwardToTroubleTicket* of type *xs:boolean*

incFil:ForwardToTroubleTicket enables you to filter incidents, depending on whether the corresponding HPOM message is flagged for forwarding to an external trouble ticket system.

- Optional element *incFil:ForwardToNotification* of type *xs:boolean*

incFil:ForwardToNotification enables you to filter incidents depending on whether the corresponding HPOM message is flagged for forwarding to an external notification system.

- Optional element *incFil:Title* of type *incFil:KeywordFilter*
- Optional elements *incFil:ChangeType* of type *xs:string*

incFil:ChangeType enables you to filter incidents depending on how they have changed (whether they are new, updated, closed, or reopened). *incFil:ChangeType* must contain one of the following strings:

- new
- modified
- closed
- reopened

For example, if you are interested in new incidents only, you specify a filter with a *incFil:ChangeType* subelement that contains *new*. To subscribe to a combination of change types, specify several *incFil:ChangeType* subelements.

To subscribe to all change types, you can omit the *incFil:ChangeType* subelements.

- Optional element *incFil:CustomAttributes* of type *incFil:CustomAttributes*

The service enumerates all incidents that match the contents of the *incFil:IncidentEventingFilter* subelements that you specify. For more details on incident attributes, see [Incident to Message Mappings](#) on page 8.

If you omit *Filter*, the service enumerates all incidents that have the status open or work in progress.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.xmlsoap.org/ws/2004/08/eventing/Subscribe`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsm:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

For an example, see [Subscribe Request SOAP Envelope Example](#) on page 64.

Output

The SOAP body contains an element *wse:SubscribeResponse* (of anonymous type), which contains the following subelements:

- Element *wse:SubscriptionManager* of type *wsa:EndpointReferenceType*.
Contains the subelement *wsa:ReferenceParameters/wse:Identifier* of type *wse:Identifier*, which you use to identify the subscription if you unsubscribe or renew it. (See [UnsubscribeOp](#) on page 35 and [RenewOp](#) on page 36.)
- Element *wse:Expires* of type *wse:ExpirationType*.
Contains a duration, for which the service maintains the subscription. You can use the [RenewOp](#) operation to renew the subscription before it expires. (See [RenewOp](#) on page 36.)
- Element *wsen:EnumerationContext* of type *wsen:EnumerationContextType*.
Contains a string that identifies the enumeration context. Use *EnumerationContext* with the [PullOp](#) operation to get batches of updated incidents from the service. (See [PullOp](#) on page 29.)

Fault

If it cannot return the enumeration context, the service returns a fault according to the WS-Management standard.

UnsubscribeOp

This operation cancels a subscription before the subscription expires.

Input

SOAP Body

Element *wse:Unsubscribe* of type *wse:UnsubscribeType*. This element is required, but should be empty.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.xmlsoap.org/ws/2004/08/eventing/Unsubscribe`
- Element *wse:Identifier* of type *xs:anyURI*.
Contains the identifier of an active subscription. You can use the element *wse:SubscriptionManager/wsa:ReferenceParameters/wse:Identifier* from the output of a [SubscribeOp](#) operation. (See [SubscribeOp](#) on page 32.)
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a `TimedOut` fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot cancel the subscription, the service returns a fault according to the WS-Management standard.

RenewOp

This operation renews a subscription before it expires.

Input

SOAP Body

Element *wse:Renew* (of anonymous type), which contains the optional subelement *wse:Expires* of type *wse:ExpirationType*.

Contains either a duration that specifies how long the client requires the subscription, or a date and time at which the subscription should expire. If you omit this subelement, the service uses the value of the `SubscriptionExpiration` parameter on the management server. If you specify a duration that exceeds the value of the `SubscriptionExpirationMaximum` parameter, the service uses the value of `SubscriptionExpirationMaximum` instead. (See [Service Configuration](#) on page 17.)

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.xmlsoap.org/ws/2004/08/eventing/Renew`
- Element *wse:Identifier* of type *xs:anyURI*.
Contains the identifier of an active subscription. You can use the element *wse:SubscriptionManager/wsa:ReferenceParameters/wse:Identifier* from the output of a `SubscribeOp` operation. (See [SubscribeOp](#) on page 32.)
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a `TimedOut` fault if it cannot respond in time.

Output

The SOAP body contains an element *wse:RenewResponse* (of anonymous type), which contains the subelement *wse:Expires* of type *wse:ExpirationType*.

wse:Expires contains the new date and time at which the subscription expires.

Fault

If it cannot renew the subscription, the service returns a fault according to the WS-Management standard.

OwnMany

This operation sets the value of the *ismWorkItem:AssignedOperator/ismWorkItem:PersonAttributes/Name* element for one or more incidents. The incidents are identified by incident IDs. The operation sets value of the *Name* element to the user name of the currently authenticated HPOM user. ([User Authentication](#) on page 51.)

Input

SOAP Body

Element *incExt:IncidentIDs* of type *incExt:IncidentIDs*, which contains any number of *incExt:id* elements of type *xs:string*.

Each *incExt:id* contains the ID of an incident to own.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:

```
http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident/OwnMany
```

- Element *wsman:ResourceURI* of type *wsman:AttributableURI*

Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.

Alternatively, create a *wsman:ResourceURI* element that contains the following string:

```
http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
```

- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*

Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a *TimedOut* fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot own the incidents, the service returns a fault according to the WS-Management standard.

DisownMany

This operation clears the value of the *ismWorkItem:AssignedOperator* / *ismWorkItem:PersonAttributes/Name* element for one or more incidents. The incidents are identified by incident IDs.

Input

SOAP Body

Element *incExt:IncidentIDs* of type *incExt:IncidentIDs*, which contains any number of *incExt:id* elements of type *xs:string*.

Each *incExt:id* contains the ID of an incident to disown.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:

```
http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident/DisownMany
```

- Element *wsman:ResourceURI* of type *wsman:AttributableURI*

Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.

Alternatively, create a *ResourceURI* element that contains the following string:

```
http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
```

- Optional element *OperationTimeout* of type *wsman:AttributableDuration*

Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a *TimedOut* fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot disown the incidents, the service returns a fault according to the WS-Management standard.

GetAnnotations

This operation returns the annotations for one incident, which is identified by the incident ID.

Input

SOAP Body

Empty.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident/GetAnnotations`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndPointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance to get annotations for.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body contains an element *incExt:Annotations* of type *incExt:Annotations*, which contains any number of *incExt:Annotation* elements of type *incExt:Annotation*.

Each *incExt:Annotation* contains the following subelements:

- Optional element *incExt:Author* of type *xs:string*.
- Element *incExt:Text* of type *xs:string*.
- Optional element *incExt:Date* of type *xs:dateTime*.
- Optional element *incExt:ID* of type *xs:string*.

Fault

If it cannot return the annotations, the service returns a fault according to the WS-Management standard.

AddAnnotation

This operation stores a new annotation to an existing incident. The incident is identified by incident ID.

Input

SOAP Body

Element *incExt:AnnotationText* of type *xs:string*, which contains the text of the annotation to add. (HPOM sets the annotation's *incExt:ID*, *incExt:Date*, and *incExt:Author* automatically.)

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident/AddAnnotation`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndPointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance to add the annotation to.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body contains element *incExt:AnnotationId* of type *xs:string*. This is the ID that HPOM generates for the annotation.

Fault

If it cannot add the annotation, the service returns a fault according to the WS-Management standard.

UpdateAnnotation

This operation updates an annotation to an existing incident. The annotation to update is identified by annotation ID. The existing incident is identified by incident ID.

Input

SOAP Body

Element *incExt:UpdateAnnotation* of type *incExt:UpdateAnnotation*, which contains the following subelements:

- Element *incExt:AnnotationId* of type *xs:string*.
Contains the ID of the annotation to update.
- Element *incExt:AnnotationText* of type *xs:string*.
Contains the updated text for the annotation.

(HPOM updates the annotation's *incExt:Date* and *incExt:Author* automatically.)

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident/UpdateAnnotation`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndPointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance that contains the annotation.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot update the annotation, the service returns a fault according to the WS-Management standard.

DeleteAnnotation

This operation deletes an annotation from an existing incident. The annotation to delete is identified by annotation ID. The existing incident is identified by incident ID.

Input

SOAP Body

Element *incExt:AnnotationId* of type *xs:string*, which contains the ID of the annotation to delete.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident/DeleteAnnotation`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndPointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance that contains the annotation to delete.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot delete the annotation, the service returns a fault according to the WS-Management standard.

SetCustomAttribute

This operation creates or updates a custom attribute for an existing incident. The existing incident is identified by incident ID.

Input

SOAP Body

Element *incExt:CustomAttribute* of type *incExt:CustomAttribute*, which contains the following subelements:

- Element *incExt:Key* of type *xs:string*.
Contains the key for the custom attribute. If a custom attribute with this key exists, the operation updates the existing a custom attribute. If a custom attribute with the specified key does not exist, the operation stores an new custom attribute.
- Element *incExt:Text* of type *xs:string*.
Contains the value of the custom attribute.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident/SetCustomAttribute`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndPointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance that contains the custom attribute.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot create or update the custom attribute, the service returns a fault according to the WS-Management standard.

DeleteCustomAttribute

This operation deletes a custom attribute from an existing incident. The existing incident is identified by incident ID.

Input

SOAP Body

Element *incExt:CustomAttributeKey* of type *xs:string*, which contains the key of the custom attribute to delete.

SOAP Header

- Element *wsa:Action* of type *wsa:ActionType* that contains the following string:
`http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident/DeleteCustomAttribute`
- Element *wsman:ResourceURI* of type *wsman:AttributableURI*
Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.
Alternatively, create a *wsman:ResourceURI* element that contains the following string:
`http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident`
- Element *wsman:SelectorSet* of type *wsman:SelectorSetType*
Contains one element of type *wsman:SelectorType*, which identifies the incident instance. You can use the element *wsa:ReferenceParameters/wsman:SelectorSet* from an element of type *wsa:EndPointReferenceType*. (See [Endpoint References](#) on page 13.)
Alternatively, create a *wsman:SelectorSet* that contains one *wsman:Selector* element of type *wsman:SelectorType*:
 - *wsman:Selector* attribute **Name** must have the value **IncidentID**.
 - *wsman:Selector* must contain the ID of the incident instance that contains the custom attribute to delete.
- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*
Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot delete the custom attribute, the service returns a fault according to the WS-Management standard.

CloseMany

This operation sets the lifecycle state of multiple existing incidents to closed. The incidents are identified by incident IDs.

Input

SOAP Body

Element *incExt:IncidentIDs* of type *incExt:IncidentIDs*, which contains any number of *incExt:id* elements of type *xs:string*.

Each *incExt:id* contains the ID of an incident to close.

SOAP Header

- Element *wsman:ResourceURI* of type *wsman:AttributableURI*

Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.

Alternatively, create a *wsman:ResourceURI* element that contains the following string:

```
http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
```

- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*

Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot close the incidents, the service returns a fault according to the WS-Management standard.

ReopenMany

This operation sets the lifecycle state of multiple closed incidents to open. The incidents are identified by incident IDs.

Input

SOAP Body

Element *incExt:IncidentIDs* of type *incExt:IncidentIDs*, which contains any number of *incExt:id* elements of type *xs:string*.

Each *incExt:id* contains the ID of an incident to close.

SOAP Header

- Element *wsman:ResourceURI* of type *wsman:AttributableURI*

Contains a string that identifies the resource type. You can use the element *wsa:ReferenceParameters/wsman:ResourceURI* from an element of type *wsa:EndPointReferenceType*.

Alternatively, create a *wsman:ResourceURI* element that contains the following string:

```
http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
```

- Optional element *wsman:OperationTimeout* of type *wsman:AttributableDuration*

Contains a maximum duration within which you expect the service to respond. On an HPOM for UNIX management server, the service returns a TimedOut fault if it cannot respond in time.

Output

The SOAP body is empty.

Fault

If it cannot reopen the incidents, the service returns a fault according to the WS-Management standard. If any incident is already open, the service returns a fault and stops processing the list of incidents. The service does not roll back changes to incidents that it completed successfully before the fault occurred.

4 Security for Incident Web Service Clients

User Authentication

A client must connect to the HPOM Incident Web Service using HTTP basic authentication. Use your normal client development toolkit to specify a username and password in the client's HTTP requests.

The username and password that you specify must be those of a valid HPOM user. The user must have appropriate rights to perform the operations that the client attempts.

If the user that you specify is an operator, the client's permissions depend on the platform:

- HPOM for UNIX

The client has the same permissions as the operator would have in the HPOM console. For example, the `EnumerateOp` returns only incidents that the operator would see as messages in the console.

- HPOM for Windows

The client may have more permissions than the operator would have in the HPOM console. In particular, any restrictions from user roles do not apply. The service can enumerate all messages, and change messages that are not already owned by another user.

Secure HTTP Connections

HP recommends that you connect to the HPOM Incident Web Service using HTTPS connections, which require a suitable certificate on the server. The management server installation creates a self-signed certificate for HTTPS communication, but you can replace this with a different certificate if necessary. The port that the service uses for HTTPS communication depends on the configuration of the HPOM management server.

The default HTTPS port numbers are as follows:

- HPOM for UNIX

Port 8444

- HPOM for Windows

Port 443

For further security, HP recommends that you verify the hostname and certificate for each HTTPS connection. To verify the certificate for an HTTPS connection, the client system must trust the server's certificate. You may need to export the server's certificate and import it to the client system.

You can export the server's certificate from your management server as follows:

- HPOM for UNIX

- a Open a shell and navigate to the directory that contains the keystore file:

```
cd /var/opt/OV/certificates/tomcat/b
```

- b Export the certificate using the following command:

```
/opt/OV/nonOV/jre/b/bin/keytool -keystore tomcat.keystore -export  
-alias ovtomcatb -file /tmp/server.cer
```

- HPOM for Windows

Export the certificate from the security settings in Internet Information Services Manager using the following options:

- Do not export the private key.
 - Select the export format DER encoded binary X.509 (.CER).

After you export the server's certificate from the management server, you must import it using the appropriate tools for your client environment. You can then program your client to verify HTTPS connections using the methods that your client development toolkit provides.

5 Basic Troubleshooting

Troubleshoot Connectivity

- Check the network connectivity from your client system to the HPOM management server. For example:
 - Use `nslookup` to check that the client system can resolve the management server's hostname.
 - Use `ping` to check that the client system can reach the management server.
- Check the connectivity from your client system to the HPOM Incident Web Service.

Open a web browser and navigate to the following location on the HPOM management server:

`https://<server_name>:<port>/opr-webservice/Incident.svc?wsdl`

The port that the service is available on depends on the configuration of the HPOM management server. The default port numbers are as follows:

- HPOM for UNIX
Port 8444
- HPOM for Windows
Port 443

You may need to accept a certificate and provide credentials for the HPOM management server. If your browser cannot open the WSDL document, check that the service is installed and running. (See [Troubleshoot on HPOM for UNIX](#) on page 54 and [Troubleshoot on HPOM for Windows](#) on page 54.)

Troubleshoot on HPOM for UNIX

- The service runs within the Tomcat (B) servlet container. Check the status of the ovtomcatB component by typing the following command:

```
/opt/OV/bin/ovc -status ovtomcatB
```

If ovtomcatB is not running, type the following command to start it:

```
/opt/OV/bin/ovc -start ovtomcatB
```

- Check the installation of the HPOM Incident Web Service.

Open a shell prompt or file browser, and then navigate to the following directory:

```
/opt/OV/nonOV/tomcat/b/www/webapps
```

The directory should contain the files `opr-webservice.war` file and the subdirectory `opr-webservice` directory,

If any of the files or directories are missing, type the following command:

```
/opt/OV/bin/ovc -restart ovtomcatB
```

If the files or folders are still missing, reinstall the service. (See [Deinstallation](#) on page 16.)

- Check the following log files for errors and warnings:

```
— /var/opt/OV/log/om/incident_ws.0.en
```

```
— /var/opt/OV/log/tomcat/ovtomcatb.out
```

Troubleshoot on HPOM for Windows

- The service runs within Microsoft Internet Information Services (IIS). Check the status of the World Wide Web Publishing Service to ensure that it is started. The minimum you must do to restart the service is restart the default web site using Microsoft Internet Information Services Manager. To ensure a clean startup, you can restart the World Wide Web Publishing Service.

- Check the installation of the HPOM Incident Web Service as follows:

- Open Windows Explorer, and then navigate to the following folder:

```
%OvInstallDir%www\webapps\omws-incident
```

The folder should contain the files `Incident.svc`, `PrecompiledApp.config`, `Web.config`, and the subfolders `bin` and `Metadata`.

The `bin` subfolder should contain nine DLL files.

If any of the files or folders are missing, reinstall the service.

- Verify the configuration of Microsoft Internet Information Server (IIS):

In the Internet Information Services Manager console tree, click **Application Pools**→**DefaultAppPool**. Verify that the application HP Operations Manager Incident Web Service exists.

In the console tree, click **Web Sites**→**Default Web Site**. Check that the web site `omws` exists.

If either the application or web site is missing, reinstall the service.

To reinstall the service:

- a Copy the installation package (HPOprWsInc-<version>-WinNT4.0-release.msi) to temporary folder on the HPOM for Windows management server.
- b Open a command prompt, and navigate to the temporary folder that contains the installation package. Type the following command:

```
msiexec /i HPOprWsInc-<version>-WinNT4.0-release.msi /qn
```

- Check the following log file for errors and warnings:

```
%OvShareDir%server\log\om\incident-ws.trace.txt
```

This file exists only after the service receives the first request from a client.

A SOAP Envelope Examples

The following examples show SOAP envelopes that the HPOM Incident Web Service receives and sends for various operations.

Create Request SOAP Envelope Example

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/09/transfer/Create</a:Action>
    <h:OperationTimeout xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
      PT10M0.00S
    </h:OperationTimeout>
    <h:ResourceURI xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
      http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
    </h:ResourceURI>
    <a:MessageID>urn:uuid:2be9d179-a8be-476d-8558-576e5d2283b8</a:MessageID>
    <a:ReplyTo>
      <a:Address>http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:Address>
    </a:ReplyTo>
    <a:To s:mustUnderstand="1">http://manager1.example.com/opr-webservice/Incident.svc</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <Incident xmlns="http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident">
      <Title>My custom app has serious problems</Title>
      <Severity>Major</Severity>
      <Category>CustomApplications</Category>
      <CollaborationMode>fyi</CollaborationMode>
      <EmittingCI>
        <ConfigurationItemProperties
          xmlns="http://schemas.hp.com/ism/ServiceTransition/ConfigurationManagement/1/ConfigurationItem">
          <ID>92384-1232-234-2134</ID>
        </ConfigurationItemProperties>
      </EmittingCI>
      <EmittingNode>
        <NodeProperties xmlns="http://schemas.hp.com/ism/ServiceTransition/ConfigurationManagement/1/Node">
          <DnsName>host.example.com</DnsName>
        </NodeProperties>
      </EmittingNode>
      <Extensions>
        <OperationsExtension xmlns="http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident">
          <Application>My custom app</Application>
          <Object>Custom Apps</Object>
          <NumberOfDuplicates>0</NumberOfDuplicates>
        </OperationsExtension>
      </Extensions>
    </Incident>
  </s:Body>
</s:Envelope>
```

```

    <ConditionMatched>false</ConditionMatched>
    <AutomaticActionStatus>notAvailable</AutomaticActionStatus>
    <OperatorActionStatus>notAvailable</OperatorActionStatus>
    <EscalationStatus>notEscalated</EscalationStatus>
    <CustomAttributes>
      <CustomAttribute>
        <Key>Customer</Key>
        <Text>VIP</Text>
      </CustomAttribute>
    </CustomAttributes>
    <NumberOfAnnotations>0</NumberOfAnnotations>
  </OperationsExtension>
</Extensions>
</Incident>
</s:Body>
</s:Envelope>

```

Create Response SOAP Envelope Example

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/09/transfer/CreateResponse</a:Action>
    <a:RelatesTo>urn:uuid:2be9d179-a8be-476d-8558-576e5d2283b8</a:RelatesTo>
    <a:To s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <ResourceCreated xmlns="http://schemas.xmlsoap.org/ws/2004/09/transfer">
      <a:Address>http://manager1.example.com/opr-webservice/Incident.svc</a:Address>
      <a:ReferenceParameters>
        <SelectorSet xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
          <Selector Name="IncidentID">a1a822f0-d485-40d5-96bb-2e42b6dd961a</Selector>
        </SelectorSet>
        <ResourceURI xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
          http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
        </ResourceURI>
      </a:ReferenceParameters>
    </ResourceCreated>
  </s:Body>
</s:Envelope>

```

Close Request SOAP Envelope Example

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.hp.com/ism/ServiceOperation/Common/1/Close</a:Action>
    <h:ResourceURI xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
      http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
    </h:ResourceURI>
    <h:SelectorSet xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Selector Name="IncidentID">527c6290-c5b8-71dc-1691-103941590000</Selector>
    </h:SelectorSet>
    <h:OperationTimeout xmlns:h="http://schemas.xmlsoap.org/ws/2005/06/management"
      xmlns="http://schemas.xmlsoap.org/ws/2005/06/management">
      PT10M0.00S
    </h:OperationTimeout>
    <a:MessageID>urn:uuid:73f6adda-7b30-4d4d-b1ae-d0c2848527b9</a:MessageID>
    <a:ReplyTo>
      <a:Address>http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:Address>
    </a:ReplyTo>
    <a:To s:mustUnderstand="1">http://manager1.example.com/opr-webservice/Incident.svc</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" />
</s:Envelope>
```

Close Response SOAP Envelope Example

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.hp.com/ism/ServiceOperation/Common/1/CloseResponse</a:Action>
    <a:RelatesTo>urn:uuid:73f6adda-7b30-4d4d-b1ae-d0c2848527b9</a:RelatesTo>
    <a:To s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" />
</s:Envelope>
```

Enumerate Request SOAP Envelope Example

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/09/enumeration/Enumerate</a:Action>
    <h:OperationTimeout xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
      PT10M0.00S
    </h:OperationTimeout>
    <h:ResourceURI xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
      http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
    </h:ResourceURI>
    <a:MessageID>urn:uuid:9e8b81d7-a725-4693-9af3-f025045750c6</a:MessageID>
    <a:ReplyTo>
      <a:Address>http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:Address>
    </a:ReplyTo>
    <a:To s:mustUnderstand="1">http://manager1.example.com:8081/opr-webservice/Incident.svc</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <Enumerate xmlns="http://schemas.xmlsoap.org/ws/2004/09/enumeration">
      <Filter Dialect="http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/IncidentFilter">
        <IncidentEnumerationFilter
          xmlns="http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/IncidentFilter">
          <Severity>Critical</Severity>
          <Severity>Major</Severity>
          <Category>Database</Category>
          <CustomAttributes>
            <CustomAttribute>
              <Key>Customer</Key>
              <Text>VIP</Text>
            </CustomAttribute>
          </CustomAttributes>
        </IncidentEnumerationFilter>
      </Filter>
    </Enumerate>
  </s:Body>
</s:Envelope>
```

Enumerate Response SOAP Envelope Example

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/09/enumeration/EnumerateResponse</a:Action>
    <a:RelatesTo>urn:uuid:f449fd93-be02-43cf-a8f3-2b32b3355ce8</a:RelatesTo>
    <a:To s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
```

```

<EnumerateResponse xmlns="http://schemas.xmlsoap.org/ws/2004/09/enumeration">
  <Expires>2008-01-18T12:41:20.968+01:00</Expires>
  <EnumerationContext>60d863fd-f058-41b1-8195-341652bd458a</EnumerationContext>
</EnumerateResponse>
</s:Body>
</s:Envelope>

```

Pull Request SOAP Envelope Example

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/09/enumeration/Pull</a:Action>
    <h:OperationTimeout xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
      PT100M0.00S
    </h:OperationTimeout>
    <h:ResourceURI xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
      http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
    </h:ResourceURI>
    <a:MessageID>urn:uuid:42f16c88-6adc-49f0-8881-558fdecfecfe</a:MessageID>
    <a:ReplyTo>
      <a:Address>http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:Address>
    </a:ReplyTo>
    <a:To s:mustUnderstand="1">http://manager1.example.com/opr-webservice/Incident.svc</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <Pull xmlns="http://schemas.xmlsoap.org/ws/2004/09/enumeration">
      <EnumerationContext>60d863fd-f058-41b1-8195-341652bd458a</EnumerationContext>
    </Pull>
  </s:Body>
</s:Envelope>

```

Pull Response SOAP Envelope Example

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/09/enumeration/PullResponse</a:Action>
    <a:RelatesTo>urn:uuid:42f16c88-6adc-49f0-8881-558fdecfecfe</a:RelatesTo>
    <a:To s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <PullResponse xmlns="http://schemas.xmlsoap.org/ws/2004/09/enumeration">
      <EnumerationContext>60d863fd-f058-41b1-8195-341652bd458a</EnumerationContext>
      <Items>
        <Incident xmlns="http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident">
          <AssignedOperator xmlns="http://schemas.hp.com/ism/ServiceOperation/Common/1/WorkItem">
            <PersonAttributes>

```

```

    <Name xmlns="" />
  </PersonAttributes>
</AssignedOperator>
<IncidentID>527c6290-c5b8-71dc-1691-103941590000</IncidentID>
<Title>
  MS IIS Server (WWW): (1013) A process serving application pool 'DefaultAppPool' exceeded time limits during
  shut down. The process id was '5736'.
</Title>
<Type />
<LifecycleState>open</LifecycleState>
<Severity>Warning</Severity>
<Category>WINOSSPI-INTERNET_SERVICE</Category>
<CollaborationMode>fyi</CollaborationMode>
<EmittingCI>
  <ConfigurationItemProperties
    xmlns="http://schemas.hp.com/ism/ServiceTransition/ConfigurationManagement/1/ConfigurationItem">
    <ID>WINOSSPI:IIS60@@{9768285B-3AA5-4F49-B6DE-CB654F5AD67B}</ID>
  </ConfigurationItemProperties>
</EmittingCI>
<EmittingNode>
  <NodeProperties xmlns="http://schemas.hp.com/ism/ServiceTransition/ConfigurationManagement/1/Node">
    <DnsName>host.example.com</DnsName>
  </NodeProperties>
</EmittingNode>
<Extensions>
  <OperationsExtension xmlns="http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident">
    <Application>IIS 6.0</Application>
    <Object>W3SVC</Object>
    <StateChangeTime>2008-01-18T12:27:16</StateChangeTime>
    <CreationTime>2008-01-18T12:25:47</CreationTime>
    <ReceivedTime>2008-01-18T12:27:16</ReceivedTime>
    <NumberOfDuplicates>0</NumberOfDuplicates>
    <CorrelationKey>host.example.com:W3SVC:0x800003F5</CorrelationKey>
    <ConditionMatched>true</ConditionMatched>
    <AutomaticActionStatus>notAvailable</AutomaticActionStatus>
    <OperatorActionStatus>notAvailable</OperatorActionStatus>
    <EscalationStatus>notEscalated</EscalationStatus>
    <Source>WINOSSPI-IIS60_FwdAllSystemWarnError(10.0)</Source>
    <NumberOfAnnotations>0</NumberOfAnnotations>
    <OriginalEvent>
      Computer: host Source: W3SVC Category: None Type: Warning Event ID: 1013 Description: A process serving
      application pool 'DefaultAppPool' exceeded time limits during shut down. The process id was '5736'.
    </OriginalEvent>
  </OperationsExtension>
</Extensions>
</Incident>
<Incident xmlns="http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident">
  <AssignedOperator xmlns="http://schemas.hp.com/ism/ServiceOperation/Common/1/WorkItem">
    <PersonAttributes>
      <Name xmlns="" />

```

```

    </PersonAttributes>
  </AssignedOperator>
  <IncidentID>a4669be0-c5b6-71dc-1209-103941590000</IncidentID>
  <Title>(ctrl-45) Component 'opcacta' with pid 4704 exited. Restarting component.</Title>
  <Type />
  <LifecycleState>open</LifecycleState>
  <Severity>Major</Severity>
  <Category>OpenView</Category>
  <CollaborationMode>fyi</CollaborationMode>
  <EmittingCI>
    <ConfigurationItemProperties
      xmlns="http://schemas.hp.com/ism/ServiceTransition/ConfigurationManagement/1/ConfigurationItem">
      <ID />
    </ConfigurationItemProperties>
  </EmittingCI>
  <EmittingNode>
    <NodeProperties xmlns="http://schemas.hp.com/ism/ServiceTransition/ConfigurationManagement/1/Node">
      <DnsName>host.example.com</DnsName>
    </NodeProperties>
  </EmittingNode>
  <Extensions>
    <OperationsExtension xmlns="http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/Incident">
      <Application>OpenView</Application>
      <Object>ovcd</Object>
      <StateChangeTime>2008-01-18T12:15:14</StateChangeTime>
      <CreationTime>2008-01-18T12:15:14</CreationTime>
      <ReceivedTime>2008-01-18T12:15:14</ReceivedTime>
      <NumberOfDuplicates>0</NumberOfDuplicates>
      <CorrelationKey />
      <ConditionMatched>true</ConditionMatched>
      <AutomaticActionStatus>notAvailable</AutomaticActionStatus>
      <OperatorActionStatus>notAvailable</OperatorActionStatus>
      <EscalationStatus>notEscalated</EscalationStatus>
      <Source></Source>
      <NumberOfAnnotations>0</NumberOfAnnotations>
      <OriginalEvent />
    </OperationsExtension>
  </Extensions>
</Incident>
</Items>
<EndOfSequence />
</PullResponse>
</s:Body>
</s:Envelope>

```

Subscribe Request SOAP Envelope Example

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://schemas.xmlsoap.org/ws/2004/08/eventing/Subscribe</a:Action>
    <h:ResourceURI xmlns:h="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd"
      xmlns="http://schemas.dmtf.org/wbem/wsman/1/wsman.xsd">
      http://schemas.hp.com/ism/ServiceOperation/IncidentManagement/1/Incident
    </h:ResourceURI>
    <h:OperationTimeout xmlns:h="http://schemas.xmlsoap.org/ws/2005/06/management"
      xmlns="http://schemas.xmlsoap.org/ws/2005/06/management">
      PT100M0.00S
    </h:OperationTimeout>
    <a:MessageID>urn:uuid:2822dea3-af62-4e26-a1de-31d738f2bc59</a:MessageID>
    <a:ReplyTo>
      <a:Address>http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:Address>
    </a:ReplyTo>
    <a:To s:mustUnderstand="1">http://manager1.example.com:8081/opr-webservice/Incident.svc</a:To>
  </s:Header>
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <Subscribe xmlns="http://schemas.xmlsoap.org/ws/2004/08/eventing">
      <Delivery Mode="http://schemas.dmtf.org/wbem/wsman/1/wsman/Pull"/>
      <Filter Dialect="http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/IncidentFilter">
        <IncidentEventingFilter
          xmlns="http://schemas.hp.com/opr/ws/ServiceOperation/IncidentManagement/1/IncidentFilter">
          <Severity>Critical</Severity>
          <Severity>Major</Severity>
          <EmittingNode>
            <NodeProperties>
              <DnsName>host.example.com</DnsName>
            </NodeProperties>
          </EmittingNode>
          <CustomAttributes>
            <CustomAttribute>
              <Key>Customer</Key>
              <Text>VIP</Text>
            </CustomAttribute>
          </CustomAttributes>
          <ChangeType>new</ChangeType>
          <ChangeType>closed</ChangeType>
        </IncidentEventingFilter>
      </Filter>
    </Subscribe>
  </s:Body>
</s:Envelope>

```


Index

A

- addannotation operation, 41
- annotations
 - adding, 41
 - deleting, 44
 - getting, 39
 - updating, 42
- Apache Axis, 19
- authentication, 51
- Axis, 19

C

- certificates, 51
- closemany operation, 48
- close operation, 25
- CMAs, 8
- configuring the service, 17
- create operation, 23
- custom message attributes, 8
 - creating, 45
 - deleting, 47
 - updating, 45

D

- deinstallation, 16
- deleteannotations operation, 44
- deletcustomattribute operation, 47
- disownmany operation, 38

E

- endpoint references, 13
- enumerate operation, 27
- EnumerationExpiration, 17
- EnumerationExpirationMaximum, 17
- EPRs, 13
- EventQueueSize, 18

G

- getannotations operation, 39
- get operation, 20

H

- HTTPS connections, 51

I

- incident to message mappings, 8
- installation
 - on UNIX, 15

M

- MaxItems, 18
- MaxItemsMaximum, 18
- message to incident mappings, 8

O

- operations
 - addannotation, 41
 - close, 25
 - closemany, 48
 - create, 23
 - deleteannotations, 44
 - deletcustomattribute, 47
 - disownmany, 38
 - enumerate, 27
 - get, 20
 - getannotations, 39
 - overview, 19
 - ownmany, 37
 - pullop, 29
 - put, 21
 - release, 31
 - renew, 36
 - reopen, 26
 - reopenmany, 49
 - setcustomattribute, 45
 - subscribe, 32
 - unsubscribe, 35
 - updateannotations, 42

ownmany operation, 37

P

ports, 19

prerequisites, 15

pullop operation, 29

put operation, 21

R

registry keys, 17

release operation, 31

renew operation, 36

reopenmany operation, 49

reopen operation, 26

S

security, 51

selector sets, 13

service configuration, 17

setcustomattribute operation, 45

SOAP envelope examples, 57

subscribe operation, 32

SubscriptionExpiration, 17

SubscriptionExpirationMaximum, 17

T

troubleshoot

- connectivity, 53

- on UNIX, 54

- on Windows, 54

U

uninstalling, 16

UNIX installation, 15

unsubscribe operation, 35

updateannotations operation, 42

user authentication, 51

W

WCF, 19

Windows Communication Framework, 19

Wiseman, 19

WSDL location, 19

X

XPL parameters, 17