

HP Service Health Reporter

Software Version: 9.40
Windows[®] and Linux operating systems

Operations Events Content Pack Reference

Document Release Date: May 2015
Software Release Date: January 2015



Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notice

© Copyright 2015 Hewlett-Packard Development Company, L.P.

Trademark Notices

Adobe™ is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates or to verify that you are using the most recent edition of a document, go to: <http://h20230.www2.hp.com/selfsolve/manuals>

This site requires that you register for an HP Passport and sign in. To register for an HP Passport ID, go to: <http://h20229.www2.hp.com/passport-registration.html>

Or click the **New users - please register** link on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

Visit the HP Software Support Online web site at: <http://www.hp.com/go/hpsupport>

This web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support web site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To register for an HP Passport ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

To find more information about access levels, go to:

http://h20230.www2.hp.com/new_access_levels.jsp

HP Software Solutions Now accesses the HPSW Solution and Integration Portal Web site. This site enables you to explore HP Product Solutions to meet your business needs, includes a full list of Integrations between HP Products, as well as a listing of ITIL Processes. The URL for this Web site is

<http://h20230.www2.hp.com/sc/solutions/index.jsp>

About this PDF Version of Online Help

This document is a PDF version of the online help. This PDF file is provided so you can easily print multiple topics from the help information or read the online help in PDF format. Because this content was originally created to be viewed as online help in a web browser, some topics may not be formatted properly. Some interactive topics may not be present in this PDF version. Those topics can be successfully printed from within the online help.

Contents

About This Document	5
Getting Started	6
Service Health Reporter (SHR) Overview	6
Deployment Scenarios	6
Types of Reports	7
Operations Events (HPOM) Content Pack Overview	8
Target Audience	8
Data Sources for HPOM Data	9
Data Source Collection Configuration	10
Configuring the HP Operations Manager Data Source	10
Report Navigation	11
Use Cases	11
Appendix	13
Appendix A: Terminology	13
Appendix B: Calculating message counts, age, and resolution time	13
Active Message Count	14
Acknowledged Message Count	14
Incoming Message Count	14
Age of the Active Messages	14
Resolution Time for Acknowledged Messages	15
Send Documentation Feedback	16

About This Document

This document provides an overview of SHR and Operations Events Content Pack. This document provides the list of Operations (HPOM) reports available with the Operations Events Content Pack. This document helps you to install and configure the data source for the Operations Events Content Pack. It provides information on report navigation.

Getting Started

This section provides SHR overview, deployment scenarios, and types of reports.

Service Health Reporter (SHR) Overview

SHR is a cross-domain historical infrastructure performance reporting solution. It displays top-down reports from Business Service Management (BSM) Business Service and Business Application, HP Operations Manager (HPOM) Node Group or HP OMi10 perspective to the underlying infrastructure. It also displays bottoms-up reports from the infrastructure to the impacted Business Services and Business Applications or Node Groups. It leverages the topology information to show how the underlying infrastructure health, performance and availability affects your Business Services and Business Applications or Node Groups in the long term. You can navigate from higher level crossdomain reports to detailed domain level reports.

Deployment Scenarios

Following are the deployment scenarios supported on SHR:

- **Deployment with BSM/OMi** - In this deployment, Run-time Service Model (RTSM) is the source of topology information. SHR discovers and synchronizes topology information from OMi. In a BSM environment with underlying HPOM servers, this synchronization technique receives discovered topology data from multiple HPOM systems and updates the Configuration Items (CIs) and CI relationships in the RTSM as soon as changes are discovered. However, you can also use the HPOM D-MoM dynamic topology synchronization technique to discover and synchronize the topology information in RTSM. In an environment with OMi 10.00, SHR uses RTSM to obtain topology information and metrics from HP Operations Agent or HP SiteScope systems that are configured with OMi.
- **Deployment with HP Operations Manager** - In this deployment, the topology information is a group of managed nodes defined in HPOM that are logically combined for operational monitoring. These logical node groups are created by HPOM users to classify the nodes as specific organizations or entities within their enterprise. For example, a group called Exchange Servers can be created in HPOM to organize the specific Exchange Servers and Active Directory nodes for reporting or monitoring purposes. SHR uses the node groups from HPOM for its topology computation.
- **Deployment with VMware vCenter** - VMware vCenter is a distributed server-client software solution that provides a central and a flexible platform for managing the virtual infrastructure in business-critical enterprise systems. VMware vCenter centrally monitors performance and events, and provides an enhanced level of visibility of the virtual environment, thus helping IT administrators to control the environment with ease.
- **Other deployments** - Apart from the basic deployment scenarios, you can collect data from the following sources independently:

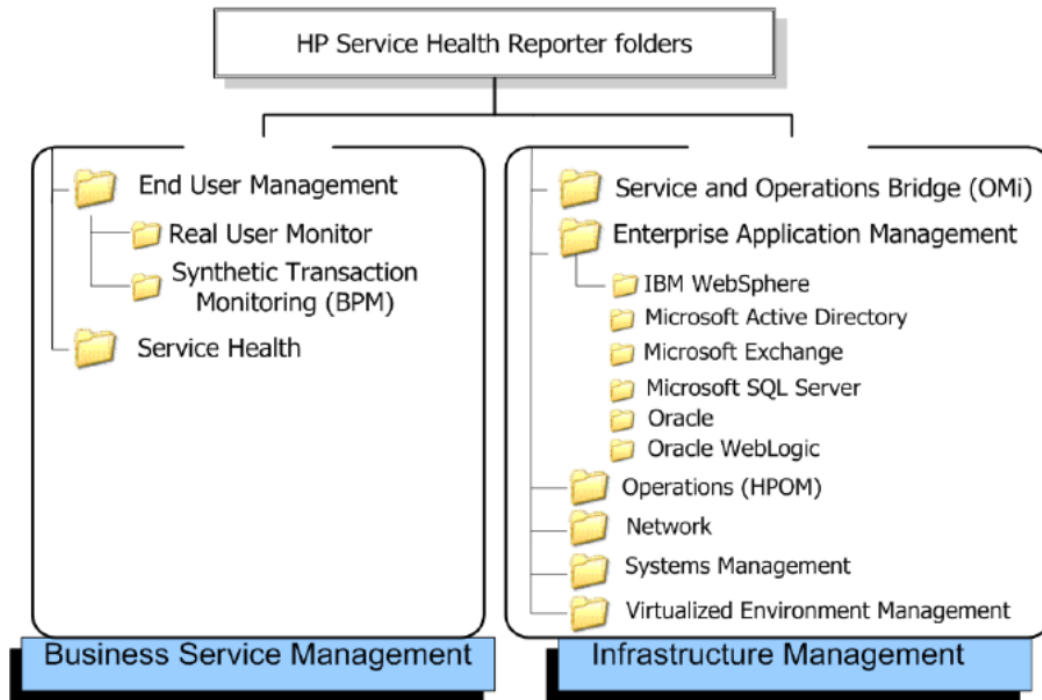
- Deployment with NNMi
- Deployment with a generic database
- Deployment with other applications using CSV

Types of Reports

The reports available in HP Service Health Reporter (SHR) are divided into two broad categories:

- Business Service Management
- Infrastructure Management

The following image shows the supported list of reports folders under both these categories:



To view a map of all the reports available in the Operations Events Content Pack, see [Report Navigation](#).

For more information on HP Service Health Reporter concepts, see *HP Service Health Reporter Concepts Guide* and *HP Service Health Reporter Content Development Guide*.

Operations Events (HPOM) Content Pack Overview

HP Operations Manager (HPOM) is a distributed client-server software solution designed to help system administrators detect, solve, and prevent problems occurring in networks, systems, and applications in your enterprise.

HPOM helps you solve problems in your computing environment proactively. It notifies you when a problem is about to occur or has just occurred by sending messages to the management console of the management server. HPOM also provides you with the resources to avoid or resolve the problem.

For more information about HPOM, see *HP Operations Manager for UNIX Concepts Guide* or the *HP Operations Manager For Windows Console Online Help*.

The Operations Content Pack collects and aggregates message statistics based on various dimensions to provide an overview of the operation of the applications, services, nodes, and node groups in your environment. This Content Pack helps you understand the number of active and acknowledged messages generated for a node, node group, application, service, message group, or operator-wise messages and the time taken to resolve message. With this information, you can identify those applications, nodes, or services that are error-prone and take the necessary corrective or optimization actions.

Target Audience

The target audience for the HPOM reports is:

- **HPOM administrators:** They are Windows users who are members of the HP-OVE-ADMINS group and can perform administrative tasks (for example, adding nodes, or configuring and deploying policies). An HPOM administrator is not the same as a Windows domain administrator. Note that the HPOM administrator must be a trusted user because it has (by way of the agent) near administrative capabilities on all managed nodes.
- **Operators:** They are members of the HP-OVE-OPERATORS group and perform tasks such as monitoring the HPOM console, in particular the message browser, and responding to messages.

An operator or administrator can use the HPOM reports to:

- Know summary and trend of message count by severity and by Management server
- Understand the time taken to resolve the acknowledged messages
- Know the trend of total incoming messages and resolved messages
- Determine the age of the active messages
- Understand the load on each operator and time taken to resolve the messages by the operator

- Identify the best and worst performing application, services, and message groups based on the number of message received

Data Sources for HPOM Data

SHR integrates with and collects historical and ongoing operations data from the HPOM database server in both BSM Run-time Service Model (RTSM) and HPOM deployment scenarios. HPOM centrally monitors performance and events by using agents that are installed on the managed nodes. An agent is a deployment package that helps you manage nodes by collecting data, discovering services, monitoring events, and running actions and commands that control the nodes.

You can configure the connection to the HPOM database through the SHR Administration Console. Once it has been configured, SHR collects event statistics, severity statistics for each of those events, as well as operator statistics, such as how many events were handled by each operator, from the HPOM database.

The Operations Content Pack identifies the list of messages by node, application, operator, service, message group, and node group that SHR must collect from the HPOM database. All dimension¹ and fact² data are collected from the Microsoft SQL Server database in the Windows installation of HPOM and from the Oracle database in the Unix installation.

SHR collects data from the HPOM database at periodic intervals based on the collection policies predefined in the Operations Content Pack. The snapshot of the message information is collected every one hour. This data is stored in the SHR database in hourly tables as individual records. SHR then performs aggregation routines on these records and converts the data to daily data. This aggregated data is displayed in the reports.

¹In data warehousing, a dimension is a data element that categorizes the fact data. For example, customer, date, product are all dimensions under which specific fact values are organized. Dimension data is stored in the dimension table in the database.

²In data warehousing, a fact is a value or measurement of a business process. This fact data is stored in a fact table in the database.

Data Source Collection Configuration

After installing Content Packs, you must configure SHR to collect required data from various data collectors. The data collectors work internally within the SHR infrastructure to collect the data. Therefore, you cannot directly interface with these collectors. Instead, you can specify the data sources from where the collectors can collect the data through the Administration Console.

Configuring the HP Operations Manager Data Source

If you have installed the HP Operations Manager (HPOM) Content Pack and created the topology source connection for HPOM on the Service Definition page, the same data source connection appears on the HP Operations Manager page. You need not create a new data source connection. You can test the existing connection and save it.

However, updating the data source connection on the Service Definition page does not update the connection details on the Operations Manager page.

To configure the database connection, follow these steps:

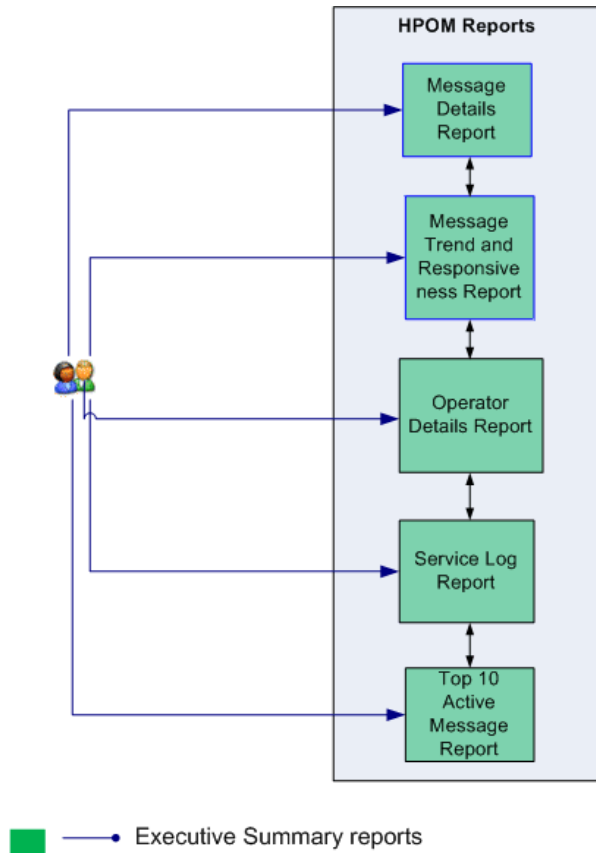
1. In the **Administration Console**, click **Collection Configuration > HP Operations Manager**. The **HP Operations Manager** page appears.
2. Select the check box next to the host name and then click **Test Connection** to test the connection.
3. Click **Save** to save the changes. A *Saved Successfully* message appears in the Information message panel.

You can configure additional HPOM data sources by clicking the **Create New** button. You can modify a specific data source connection by clicking **Configure**.

4. To change the HPOM data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 1 and 24 hours in the **Hrs** box.
5. Click **Save** to save the changes. A *Saved Successfully* message appears in the Information message panel.

Report Navigation

All the reports in the Operations folder are separate reports that display specific information to the viewer. There is no cross-launch functionality across the reports. Therefore, you cannot navigate from one report to the another for additional information. The following diagram consolidates the reports in the HPOM domain and depicts one possible way of navigating the reports.



Use Cases

This section provides information on use cases for Operations Events reports. The following table provides description, user, and report name for the use cases:

Description	Report Category	Report Name
To know the summary and trend of acknowledged and active message count by severity	Message Details	HP OM Message Details

Description	Report Category	Report Name
To know how long the messages are open and time taken to resolve the messages by severity. Also, the trend of total incoming messages and resolved messages.	Message Details	HP OM Message Trend and Responsiveness
To view the load on each operator and time taken to resolve the messages by operator	Operator Details	HPOM Operator Details
To know how long services are in different states	Service Details	HPOM Service Log
To view the top 10 Application/Service/Node/Node Group having highest number of Active messages	Top N Details	HPOM Top 10 Active Message Report

Appendix

This section provides information on [Terminology](#) and [Calculating message counts, age, and resolution time](#).

Appendix A: Terminology

Node Groups: Group of managed nodes defined by users or available by default in HPOM to classify as specific organizations or entities within the enterprise. SHR uses the node groups from HPOM for its topology information.

HPOM Administrator: Windows users who are members of the HP-OVE-ADMINS group and can perform administrative tasks (for example, adding nodes, or configuring and deploying policies).

HPOM Operator: Members of the HP-OVE-OPERATORS group and perform tasks such as monitoring the HPOM console, in particular the message browser, and responding to messages.

Management server: The server on which HPOM is installed. The management server includes the HPOM database and the HPOM console, through which the HPOM operator can monitor the managed nodes. The management server acts as the single repository of information collected by HPOM. You can configure multiple management servers in your environment.

Services: These are customer-based, user-oriented, or infrastructure capabilities provided by one or more hardware or software components within a computing environment (such as email, network bandwidth, and application access). Policies help assure that appropriate service levels are provided to designated consumers of the service.

Nodes: A node is a real or virtual computer system or an intelligent device that can be managed from the HPOM management server. HPOM can manage Windows, UNIX, and Linux nodes.

Message group: Group of messages that are classified by the HPOM administrator or operator as specific entities such as system-related messages, service messages, and so on.

Policy: In HPOM, a policy is a set of configuration information that enables you to automate network and system administration. HPOM administrators can deploy policies to computers in a managed network to provide consistent, automated administration across the network.

Agent: An agent is a deployment package that enables you to manage nodes. After you deploy an agent to a node, it enables you to collect data, discover services, monitor events, and run actions and commands that control the node.

Appendix B: Calculating message counts, age, and resolution time

This section explains how SHR calculates the active, acknowledged, and incoming message counts based on the data collected from the HPOM database. It also explains the logic used for calculating the age of the active messages and the resolution time for the acknowledged messages.

Active Message Count

The count of the active messages is calculated based on the hourly snapshots taken right from when SHR starts to collect data from the HPOM database. An hourly snapshot refers to the total number of active message in that hour. For example, a snapshot taken at 11:00 A.M. displays 50 active messages and a snapshot at 12:00 P.M. displays 52. For each hour, the number of active messages can increase or decrease.

When SHR converts the hourly data to daily data, instead of calculating the average of the collected hourly values, SHR takes the last hour's data as the count for that day. For example, if 12:00 P.M. were the last hour of that day, then 52 would be considered as the daily active message count for that day.

Acknowledged Message Count

Unlike active messages, SHR does not collect the historical count of the acknowledged messages. It only collects the hourly count of the acknowledged message from the time it starts to collect data from the HPOM database. It does not consider messages that were acknowledged a day, two days, or even 10 days ago. SHR only considers messages that undergo a state change between the previous and the present hour as acknowledged messages. The time when the state of the message was changed is recorded in the **Timeofstatechange** column in the HPOM database. SHR uses this value in the **Timeofstatechange** column to calculate the total number of acknowledged messages within that hour.

When SHR converts the hourly data to daily data, an aggregation is performed on the collected hourly values and the sum is recorded as the value for that day.

Incoming Message Count

In the HPOM database, the time at which a message was received is recorded in the **TimeReceived** column. SHR considers message received within the previous hour and the present as incoming messages. It does not consider the historical data for the incoming message count. Based on the values in the **TimeReceived** column, SHR calculates the total count of incoming messages for that hour.

When SHR converts the hourly data to daily data, an aggregation is performed on the collected hourly values and the sum is recorded as the value for that day.

Age of the Active Messages

The age of active messages refers to the average length of time the messages were in the queue. SHR calculates the average age for an entire count of messages between the **TimeReceived** to the present hour.

For example, suppose one active message was present in the queue for 10 days, another for 20 days, and another for 30 days.

The average age for all three messages = $(10+20+30)/3 = 20$ days as of that hour.

When SHR converts the hourly data to daily data, an aggregation is performed on the collected hourly values and the (last value is) recorded as the value for that day.

Resolution Time for Acknowledged Messages

The resolution time for acknowledged messages refers to the average time taken to resolve the messages. Between the previous and present hour, SHR calculates the resolution time for a message based on the values in the **TimeReceived** and **Timeofstatechange** columns. An average value is calculated for all messages in that hour.

When SHR converts the hourly data to daily data, an aggregation is performed on the collected hourly values and the average is recorded as the value for that day.

Send Documentation Feedback

If you have comments about this document, you can [contact the documentation team](#) by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Operations Events Content Pack Reference (Service Health Reporter 9.40)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to docfeedback@hp.com.

We appreciate your feedback!