

HP Service Health Reporter 9.31

Handbook of Reports



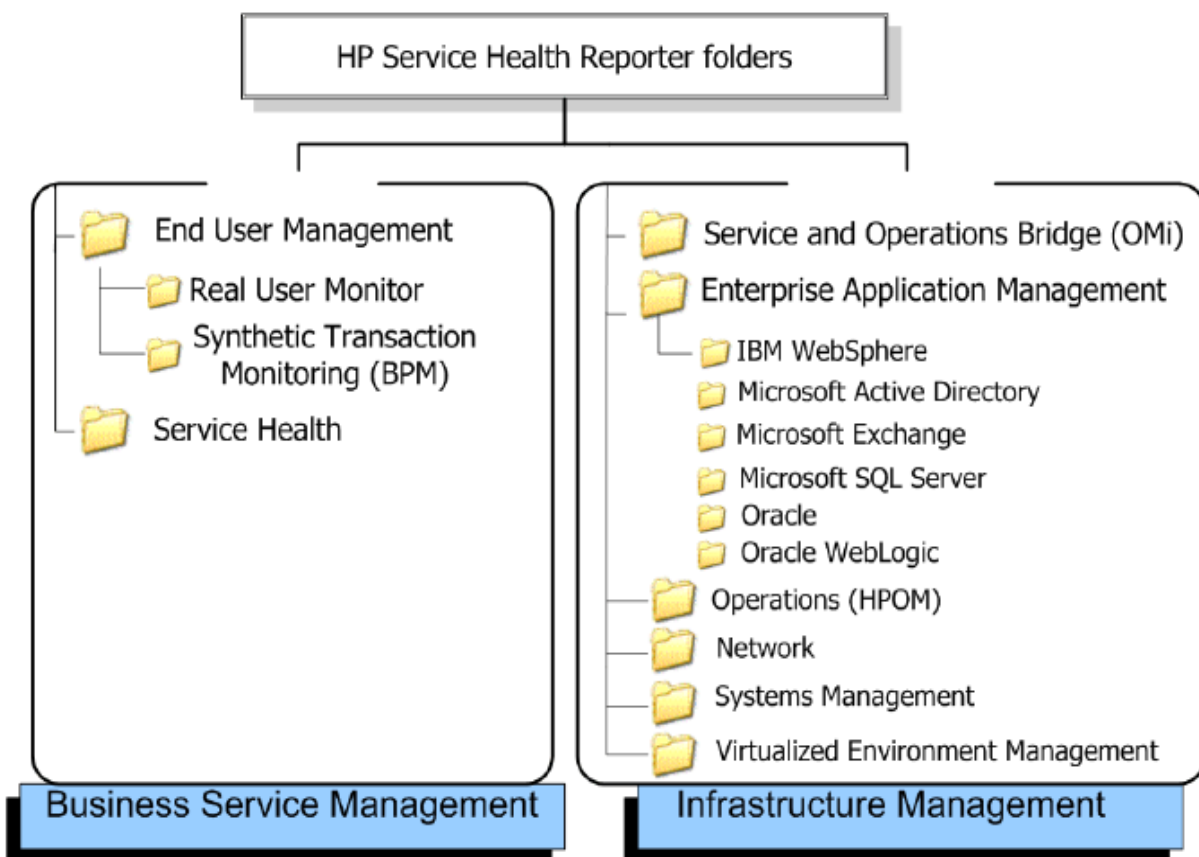
- Handbook of Reports 1
- Introduction 2
- Business Service Management 3
 - Real User Monitor (RUM) 3
 - Synthetic Transaction Monitoring 5
 - Service Health 6
- Infrastructure Management 7
 - Enterprise Application Management 7
 - IBM Websphere 7
 - Microsoft Active Directory 9
 - Microsoft Exchange 10
 - Microsoft SQL Server 11
 - Oracle 12
 - Oracle WebLogic 13
 - Network 14
 - Operations (HPOM) 15
 - Service and Operations Bridge (OMi) 16
 - System Management 17
 - Virtualized Environment Management 19

Introduction

This document provides an overview of all the reports available in HP Service Health Reporter (SHR), which 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:



Business Service Management

The Business Service Management category contains reports on end-user monitoring, both real time and simulated. It also has reports that indicate the health of a service based on the status of associated KPIs and His.

Real User Monitor (RUM)

The RUM reports use the historical data collected from the Profile database and provide both end-user and system-initiated network traffic data between client machines and servers. The reports also display data about the end-user groups and server sessions, the performance of the business applications accessed by the end-user groups, and the errors encountered over a period of time.

Report Group	Report Name	Description
Executive Summary	RUM Application Infrastructure Forecast	Displays the application summary information such as response time, server time, network time, and session counts for the selected business application and the infrastructure usage of the node hosting the business application over a period of 30 days. This report also forecasts the CPU, memory, and file system usage by the business application for the next 30, 60, and 90 days.
	RUM Application Infrastructure Summary	Provides statistical and graphical information about resource utilization (CPU, memory) of the node on which the business application is running, and the availability and response times of the selected business applications. This is a cross-domain report that displays System Performance data for the RUM monitored systems that are hosting the business applications.
	RUM Application Session Summary	Displays a list of the top five and bottom five business applications with the highest and lowest session events based on the historical data collected from RUM.
	RUM Application Top N Infrastructure Usage	Displays a list of the top and bottom N Business Application with the best and worst response times respectively, based on the historical real data collected from RUM. The number of applications to be displayed can be provided as input to the report. This is a cross-domain report that displays System Performance data for the nodes that are hosting the Business Applications.
	RUM Service Infrastructure Summary	Provides statistical and graphical information about resource utilization (CPU, memory) of the node on which the business application is running, and the availability and response times of the selected business applications. It also displays the status of the KPIs associated with the selected business service. This is a cross-domain report that displays Business service health for the selected business service along with System Performance data for the RUM monitored systems that are hosting the business applications.
	RUM Top N Nodes	Displays a list of the top N nodes based on the number of bytes handled by the node over a specific period of time.

		It also provides information on total requests, connections and average latency of application(s) on the nodes. The number of nodes to be displayed can be provided as an input to the report.
	RUM Network Usage	Provides a graphical representation of the network usage of the business application, the number of requests and latency of the node, the traffic throughput for the applications on the node, the response time for all requests from the nodes, and the number of connections that were reset and timed out over a given period of time.
Performance Analysis	RUM Application Performance Detail	Provides a graphical view of a selected business application's performance such as response time and session count, and the resource utilization of the node over a specific period of time for the selected business applications. This is a cross-domain report that displays System Performance data for the nodes that are hosting the application.
	RUM End User Group and Location Experience	Displays a list of the top five and bottom five end-user groups and locations based on the historical synthetic and actual data collected from BPM and RUM, respectively
	RUM Top 5 Actions	Displays the top and bottom five actions based on availability, the top and bottom five software elements based on the number of hits, and the top five and bottom five nodes based on the CPU usage. This is a cross-domain report that displays System Performance metric data for the nodes that are hosting the business application.
	RUM Top 5 Broken Links	Displays the top five business applications with the highest number of broken link events generated.

Synthetic Transaction Monitoring

The Synthetic Transaction Monitoring (BPM) reports show both summarized and detailed information about the performance, availability, and status of BPM transactions.

Report Group	Report Name	Description
Executive Summary	BPM Application Summary	Provides the complete overview of the performance and availability of the selected business applications along with the performance of the transactions for these applications during the specified period of time.
	BPM Error Summary	Provides a consolidated view of all the errors that occurred for the selected business applications during the specified period of time. This report also displays the error count details for each application, business transaction flow, business transaction, location, and end-user group.
	BPM Executive Summary	Displays the response time (in milliseconds) and availability (in percentage) of all the business applications, business transaction flows, locations, and end-user groups during the specified period of time.
	BPM Top 5 Instances	Displays the top and bottom five business applications, business transaction flows, locations, and end-user groups based on either availability percentage or response time for the specified period of time.
Performance	BPM Network Analysis	Displays the network analysis for the transactions of the selected business applications during the specified period of time based on the data gathered by WebTrace.
	BPM Performance	Displays the average response time and fail count (in percentage) of the selected business applications, business transaction flows, end-user groups, and locations for the selected time period.
	BPM Transaction Analysis	Displays consolidated and in-depth information about the performance and availability of the Business Transactions (of a particular Business Application) run over the selected time period.

Service Health

The Service Health reports provide an overview of the overall health of the Business Service and the summary of the Key Performance Indicators (KPIs) for each of the configuration items (CIs).

Report Group	Report Name	Description
NA	KPI Overview	Displays the KPI status for the CIs belonging to the selected CI types for a given period of time. Additionally, it displays the KPI status, of the CI, as on the last day for which data is collected.
	Health Indicator Overview	Displays the Health Indicator (HI) status for the selected CI type over the previous month. Additionally, it displays the HI status for the previous day.
	Top N CI by KPI	Displays the top N (5,10, 15) CIs based on the highest duration, in percentage, spent in critical status for a given KPI and Business view(s)
	Top N domains by KPI	Displays the Top N (3, 5, 10) domains based on the highest duration, in percentage, spent in critical status by availability and performance KPIs of the top level CIs belonging to a domain. A domain is defined as a group of out of the box views. For example, "System Management" domain will represent the views used to get SiteScope and Operations Agent monitored nodes. The duration of availability and performance KPIs in critical status for a domain is calculated based on the top CIs in the views that belong to the domain
Service health trend	Health Indicator status over time	Displays the status of HI(s) over a period of time for selected list of CIs
	KPI status over time	Displays the status of KPI(s) over a period of time for selected list of CIs.

Infrastructure Management

The Infrastructure Management Category contains information about the IT infrastructure underlying the business services.

Enterprise Application Management

Enterprise Application Management folder contains reports related to enterprise applications like Oracle WebLogic, IBM WebSphere, Microsoft Active Directory, Microsoft Exchange Server, Microsoft SQL Server and Oracle Database.

IBM Websphere

The IBM WebSphere reports display the availability, utilization, and performance information about the IBM WebSphere servers underlying the Business Services.

Report Group	Report Name	Description
Executive Summary	WebSphere Top N summary	Displays the top N (5,10) JEE Server instances based on the Java Virtual Machine (JVM) memory utilization percentage, Thread Pool utilization percentage, EJB utilization percentage, and JDBC utilization percentage over a selected period of time for selected business service
	WebSphere Servlet Performance Overview	Displays the number of requests per second and the execution time in milliseconds, of all the servlets, for a given System and JEE server, over a selected period of time
	WebSphere Thread Pool Performance Overview	Displays the number of concurrently active threads and the total number of threads in all thread pools for a selected system and JEE instance
	WebSphere Executive Summary	A cross-domain report that contains system information about the WebSphere servers and the nodes on which they are running. It gives the inventory information about the nodes, the capacity usage, and the Grade of Service (GoS) summary of the nodes. It also displays the severity of the incoming messages from the WebSphere nodes. Additionally, it displays the forecast information for the node over the next 30 days.
Performance	WebSphere Servlet Performance Details	Displays the number of requests per second and the time taken to respond to those requests for servlets hosted on the selected system and JEE Server over a selected period of time
	WebSphere Server Availability Details	Displays the amount of time the selected server was up and running, the amount of time it was down, and the unknown time for the server present on the selected node.
	WebSphere Transaction Performance Details	Displays the performance of transactions for a selected system and JEE server instance with respect to commit

		rate, rollback rate and time out rate over a selected period of time
	WebSphere JVM Utilization Details	Displays the free heap space and memory utilized by the JVM of selected system and JEE server over a selected period of time.
	WebSphere JDBC Pool Throughput and Wait Time Details	Displays the number of connections successfully allocated per second and the amount of time that a client had to wait for a connection from the selected JDBC connection pool during the selected period of time.
	WebSphere JDBC Utilization Details	Displays the percentage of connections from the connection pool that are being used for a selected system and JEE Server instance over a selected period of time
	WebSphere EJB Performance Details	Displays the number of EJB method calls made per minute, the time taken by the EJB pools (in milliseconds) to respond to the call, the percentage of times a call to retrieve an EJB from the pool failed, and the average size of the EJB pool over a selected period of time.

Microsoft Active Directory

The Microsoft Active Directory reports provide information about the data consistency across all Domain Controllers (DC), Global Catalog (GC) replication time and replication status, Flexible Single Master Operation (FSMO) role transfer status for each role master, and CPU, memory, Directory Information Tree (DIT) disk and log file disk, utilization details for all DCs.

Report Group	Report Name	Description
Executive Summary	AD Availability	Displays the availability details of the domains for the selected DCs for a given Business Service and Business View or node group
	FSMO Role Holder	Displays information about the success or failure of the FSMO role movement between different DCs over for a specific time period for a given Business Service and Business View or node group.
Performance	DC - GC Replication Delay	Displays a summary of the delay time for the replication between DC-to-GC servers.
	DC Capacity	Displays the CPU, memory, and log file memory capacity for the selected DCs running on Active Directory service, over selected period of time.
	DC Health	Enables to explore health of the DC by trending replication latency, CPU and memory usage of LSASS process over selected period of time.
Adhoc	AD Adhoc Comparison	Enables to compare selected DCs based on Disk Queue length, DIT disk space, Logfile Queue length, Logfile disk space and replication latency over selected period of time.

Microsoft Exchange

The Microsoft Exchange reports provide the performance details about the Edge Transport server, the Hub Transport server, the mailboxes, the public folders, the Active Directory sites on which the Edge Transport and Hub Transport servers are running, and the Exchange Site servers.

Report Group	Report Name	Description
Executive Summary	Exchange Site Executive Summary	Displays details about the number of users and messages, client access details, delivery notification, and SMTP utilization for a selected site.
	Exchange Source and Destination Mails Comparison	Provides a comparison between the number of messages sent and received internally and the number of bytes sent and received externally for a selected list of exchange servers over selected period of time.
	Exchange Top N Mail Senders and Recipients	Displays the list of top N (5, 10) message senders and receivers on specified server(s) over selected period of time.
	Exchange Top N MailBox	Displays the list of the top N (5, 10) mailboxes sorted by their size, belonging to specified server(s) or site(s) for a selected period of time.
	Exchange Top N PubFolder	Displays the list of the top N (5, 10) public folders sorted by their size, belonging to specified server(s) or site(s) for a selected period of time.
	Exchange MailServer Summary	Displays the database summary, the users' summary, and the message count summary for all the mailboxes and public folders belonging to specified server(s) or site(s) for a selected period of time.
Performance	Exchange MailBox Details	Displays the mailbox size details and the sent and delivered messages details of selected mailbox(es) for a selected period of time.
	Exchange MailBox Usage	Displays the space usage details of the mailbox and public folder of selected mail server(s) for a selected period of time.
	Exchange PubFolder Details	Displays the public folder size details and the sent and delivered messages details of selected public folders for a selected period of time.
	Exchange HubTransport SMTP and DSN Details	Displays the connection details of the SMTP server and the number of failed and delayed Delivery Status Notifications (DSN) sent by the server to the sender for selected exchange server(s) over a period of time.
	Exchange EdgeTransport SMTP Details	Displays the number of SMTP bytes and messages sent and received and the total number of inbound and outbound SMTP connections to selected exchange server(s) over a period of time
	Exchange EdgeTransport Queue Details	Displays the number of messages in each queue of the selected Exchange Edge Transport server(s) over a period of time.

Microsoft SQL Server

The Microsoft SQL Server reports display the performance, health, and resource requirement information for the SQL Server databases and the instances that are running on these database servers.

Report Group	Report Name	Description
Executive Summary	MSSQL Performance Summary	Provides information about the key performance metrics of SQL Server instances and the nodes hosting them for selected business service(s) over a period of time.
	MSSQL Table Space Usage Top N	Provides comparative information about the top N (5, 10) tables with the lowest available space in the selected node, the SQL Server instance, and the SQL Server database(s).
	MSSQL Database and Virtual Device Space Usage Top N	Lists the top N (5, 10) SQL Server databases and virtual devices based on the free space availability for selected node(s).
Performance	MSSQL Database Input and Output Statistics	Provides information about the outstanding read and write rates of a database instance for selected node and SQL Server instance over a period of time.
	MSSQL Detail Server Transaction Summary	Provides a summary of the transaction details for selected node and SQL Server instance over a period of time.
	MSSQL Database Space Usage Details	Displays the space utilization of a SQL Server database for selected node and SQL Server instance over a period of time.
	MSSQL Database Table Space Usage Details	Displays the aggregated amount of space used by a tablespace on selected node, SQL Server instance, and database over a period of time.
	MSSQL Virtual Device Space Usage Details	Provides information about the space utilized by virtual devices running on selected node and SQL Server instance over a period of time.
	MSSQL Users Connection Summary	Provides information about the user connections to a database instance for selected node and SQL Server instance over a period of time.
	MSSQL Database Locks Summary	Provides a summary of the database locks usage by a SQL Server database for selected node and SQL Server instance over a period of time.
	MSSQL Database Performance Summary	Provides information about the key database performance metrics for selected node and SQL Server instance over period of time.
	MSSQL Instance Availability Details	Provides information about the availability of the database instances that are running on selected node over a period of time.

Oracle

The Oracle reports display performance, health, and resource requirement information for the Oracle database servers that are available in an IT environment and the instances running on these database servers.

Report Group	Report Name	Description
Executive Summary	Oracle Executive Summary	Displays the availability and memory pressure of Oracle instances for a given business service. It also graphs the average memory and CPU utilization of nodes that host the Oracle instances.
	Database Oracle Top 10 Instances and Tablespaces	Displays the top and bottom 10 Oracle tablespaces based on the available free space and the tablespace input or output. It also displays the top and bottom 10 Oracle instances based on their up time and the free space available.
	Database Oracle Top 5 instances Load and Efficiency	Displays the five busiest Oracle instances and the five Oracle instances that are facing the highest performance problems for selected business service.
Performance	Oracle Instance Availability detail	Displays the availability of specified instance that is running on selected node for a given time period.
	Oracle Instance Space Utilization Details	Displays the total amount of space used by all the Oracle instances that are running on selected Oracle node(s).
	Oracle TableSpace Space Utilization Detail	Displays the aggregated amount of space for the selected tablespaces running on instances of specific Oracle node.
	Oracle TableSpace Detail	Displays the average tablespace utilization for the selected instance running on specified node.
	Oracle Disk and Memory Sort Detail	Displays the disk sort and memory sort rates for the selected instance that is running on a selected Oracle node.
	Shared Pool and Cached Performance Detail	Displays the health and performance of the Oracle shared pool and cache for the selected instance running on a specific Oracle node.
	Database Oracle Segment Detail	Displays the performance of the extents and segments available for the selected instance that are running on a specific Oracle node.
	Database Oracle Archive Device detail	Displays the archive device utilization for the selected instance that is running on the selected node and instance.
	Database Oracle SQL Performance Detail	Displays the SQL performances of the specific instances running on a selected Oracle node. One can use the report to analyze the SQL performance for each instance and preserve SQL efficiency for varying transaction loads.

Oracle WebLogic

The Oracle WebLogic reports provide information on the processes, health, and availability of the Oracle WebLogic servers underlying the Business Service.

Report Group	Report Name	Description
Executive Summary	WebLogic Servlet Performance Summary	Displays the number of requests per second and the execution time in milliseconds, of all the servlets, for a given System and JEE server, over a selected period of time
	WebLogic Top N Summary	Displays the lists of the top N (5, 10) systems based on JVM memory utilization percentage, Execute Queue wait count, JDBC wait count, and EJB wait rate.
	WebLogic JDBC Connection Pool Summary	Displays the top five and the bottom five JDBC connection pools based on the average delay time, leak rate, average utilization percentage, and the average throughput rate.
	WebLogic Executive Summary	A cross-domain report that contains system information about the WebLogic servers and the nodes on which they are running. It gives the inventory information about the nodes, the capacity usage, and the GoS summary of the nodes. It also gives the severity of the incoming messages from the WebLogic nodes. Additionally, it displays the number of weblogic nodes that may run out of CPU, memory, filesystem space in the next 30 days.
Performance	WebLogic JMS Performance Details	Displays the number of messages and bytes passing through the JMS server per second, and the percentage of JMS server filled by these messages and bytes for selected JMS Server(s).
	WebLogic EJB Cache Hit	Displays the percentage of used EJBs in the cache. This report displays the average and the maximum values of the cache hit percentage for selected WebLogic instance(s) over a selected period of time.
	WebLogic JVM Utilization	Displays the free heap space and memory utilized by the JVM of selected node and JEE server over a selected period of time.
	WebLogic Server Availability Details	Displays the amount of time the selected server was up and running, the amount of time it was down, and the unknown time for the server present on selected node(s).
	WebLogic Transaction Performance Details	Displays the number of transactions processed per second and the average commit time taken for each transaction for selected node(s).

Network

The Network reports provide an overview of the performance trend of systems and network devices from the context of a business service, and help one analyze the health of the monitored network devices.

Report Group	Report Name	Description
Executive Summary	Network and System Node Inventory	Provides an inventory of all the network and system nodes organized according to location and performance over the specified period of time. This is a cross-domain report that displays network data collected from the NNM iSPI for Performance and Network Performance Server (NPS) and resource utilization information of the nodes available in the System Management reports.
	Network Device Performance Summary	Provides a summarized view of the performance trend of systems and network devices for the selected time period. Using this report, one can analyze the nodes that exceed the performance baseline value for selected measures.
	Network Forecast Summary	Displays the current CPU and memory utilization (average and maximum) for the network nodes and the forecasted utilization for the next 30, 60, and 90 days. It also displays the current and the forecasted utilization in and out, error rates, and discard rates for the network interfaces for the next 30, 60, 90 days.
	Network Node Baseline Quick View	Displays the baseline trends including the upper and lower limits of different network-specific measures, such as CPU, memory, backplane, buffer, and so on, for the different groups of network nodes in an IT environment over a specific period of time.
	Network Node Exception Summary	Displays a trend of the baseline exception counts and the exception rates for the different network-specific measures for a group of network nodes during the specified period of time. This report also displays exception details at the node level.
	Network Node Health by Group	Provides a graphical representation of the network device distribution based on resource utilization, exception rate, error and discard rates, and availability for all network node groups that support the selected business service, business view, or node group. This report also displays the resource utilization details of each network node in the selected group.
	Top 10 Network Nodes and Systems by Performance	Displays the top 10 network and system nodes based on their performance over the specified period of time. This is a cross-domain report that displays network data collected from the Network Performance Server (NPS) and resource utilization information of the nodes available in the System Management reports.
	Top N Network Nodes and Interfaces	Displays the top five and top 10 network nodes and interfaces based on specific network baseline metrics for the selected time period.

Operations (HPOM)

The HPOM reports provide detailed information about the messages sent to the management console of a particular HPOM management server. They help in analyzing the message trends based on their severity and resolution time so that one can proactively resolve the underlying bottlenecks before they impact the performance of a business service.

Report Group	Report Name	Description
NA	HPOM Message Details	Displays the details about the messages, such as the active and acknowledged message counts, the age of the messages, and the resolution time, that are sent to the console of each HP Operations Manager (HPOM) management server that is configured during the specified period of time.
	HPOM Message Trend and Responsiveness	Displays the total number of messages that are sent to the console of each HPOM management server and the amount of time taken to acknowledge them during the specified period of time.
	HPOM Operator Details	Displays operator-wise details about the messages, such as the message counts and message resolution times, sent to the console across all HPOM management servers that are configured for specified period of time.
	HPOM Service log	Displays the amount of time for which the selected service was in different states (of severity).
	HPOM Top 10 Active Message	Displays a list of applications, services, nodes, and node groups that have the highest number of active messages across all management servers that are configured for a specified period of time. More number of active messages means that the application, service, node, or node group has problems and requires attention.

Service and Operations Bridge (OMi)

The OMi reports provide information about the events generated by HP Operations Manager (HPOM).

Report Group	Report Name	Description
NA	OMi Event Summary	Displays the overall events summary and event duration summary for all CIs. The report displays data collected during the last 30 days of the specified date.
	OMi Event Distribution Executive Summary	Displays the summary of the event distribution by application, Event Type Indicator (ETI), and CI type for specified time period.
	TOP N CIs by events	Displays the Top N (5, 10, 15) CIs based on incoming events and critical events in the context of the selected business view(s)
	Top N Domains by events	Displays the Top N (5, 10, 15) domains based on incoming events and critical events. A domain is defined as a group of out of the box views. For example, "System Management" domain will represent the views used to get SiteScope and Operations Agent and monitored nodes. The incoming and critical events are calculated based on the Top CIs in the views that belong to the domain
	OMi Event Backlog overload correlation by User Groups	Displays the Top N (5, 10) groups based on high backlog overload. Backlog overload is defined as the percentage of events whose "time to own" is twice the average "time to own", for an event, in a group.
Detail Events	OMi Event assignment by User Groups	Displays the summary of the events assigned for each of the user groups for specified time period.
	OMi Event assignment by Users	Displays the summary of the events assigned for each of the users for specified time period.
	OMi Event Summary by CI	Displays the overall event count, event categorization, event severity categorization, and event duration based on the events raised for the selected CIs.
	OMi Event Summary by ETI	Displays the overall event count, event categorization, event severity categorization, and event duration based on the ETI. You must install the ETL content pack for ServiceHealth to see data in this report. SHR verifies if an ETI is a Health Indicator and if the K_HI dimension table is populated before the report is generated.
Event Trend	OMi Event distribution over time	Displays the event count details and the distribution details of the events for a CI. It also shows the graph of events based on the amount of time taken to acknowledge, resolve, and close the events.

System Management

The System Management reports help to anticipate resource problems in IT environment before they become serious. The reports display historical information about the performance and availability of key system resources which helps in analyzing the actions that were taken to resolve issues in the past. From higher level executive reports, one can navigate to detailed reports to analyze the root cause of problems.

Report Group	Report Name	Description
Executive Summary	SM Executive Summary	Displays inventory, summary of present and forecasted capacity and usage data of system resources, along with the availability, GoS, and exceptions in systems for a given Business Service and Business view or node group
	SM Heat Chart	Enables to identify systems that have crossed the threshold values defined for CPU utilization, memory utilization, physical disk I/O rate, and network I/O rate for a given Business Service and Business View or node group
	SM System Availability Summary	Displays the availability details of the nodes for the selected period of time. The table lists the values of average uptime and downtime percentages and also the total uptime and downtime in hours. This report also displays the availability heat chart for all the nodes with which one can identify those nodes that cross the availability thresholds.
	SM System Exception by Group	Enables to view the number of exceptions in each of the defined node groups for a given time period
	SM System Forecast Summary	Provides a summary of the current CPU and memory utilization (average and 90th percentile) of all the monitored physical systems and virtual hosts in an IT environment. It also displays the projected CPU and memory utilization of the physical systems and the virtual hosts for next 30, 60, and 90 days. The report displays the forecasted information in both graphical and tabular formats.
	SM System Grade of Service by Group	Displays the grade of service (GoS) for a group of nodes based on the resource utilization of that group. One can compare the GoS across different groups and also drill down to view GoS of every node of a group.
	SM System Inventory	Displays the overall information and values of key resources for the systems in a Business Service and Business View or node group.
	SM System Resource Outage Forecast Summary	Displays the systems that are projected to cross the 100 percent threshold value for CPU and memory utilization within the next 30, 60 and 90 days, for a given Business Service and Business View or node group.
	SM Top and Bottom 5 Systems	Displays the top five systems based on the average availability, and the average and 90th percentile of the

		CPU utilization or memory utilization over the selected period of time.
	SM Top and Bottom 10 Filesystems by Free Space Utilization	Displays the 10 best and worst performing filesystems based on free space utilization over a period of time.
Performance		
	SM System Availability Detail	Displays the uptime, downtime, and availability percentages for the selected nodes over the specified period of time.
	SM System Exception Detail	Displays the threshold values and the threshold breaches in the resource utilization, such as CPU, memory, run queue, swap, and memory page out rates, for each of the selected system(s) for the specified period of time.
	SM System Grade of Service Detail	Displays the GoS for the selected nodes based on its resource utilization, such as CPU, memory, run queue, and swap utilization, for the specified period of time.
	SM System Usage Detail	Provides a graphical representation of the CPU, memory, network I/O rate, and disk I/O rate utilization for each of the selected nodes over the specified period of time.
	SM Filesystem Utilization Detail	Provides details on free space utilization of the selected the filesystem.

Virtualized Environment Management

The Virtualized Environment Management reports display the performance data about the virtual machines (VMs), and physical systems hosting the virtual machines, installed in an IT environment.

Report Group	Report Name	Description
Executive Summary	SM Virtualization Host Inventory	Displays the key measures of the physical nodes such as operating system, model, processor architecture, CPU speed, and the number of CPUs, disks, and network interface cards used, and the number of logical systems running on them.
	SM Virtualization Logical System Inventory	Displays the inventory details of the logical systems hosted on each physical node in an IT environment. The report display a summary of the physical node which includes the node operating system, the node model, the CPU speed, the number of CPUs, the physical memory, and the virtualization technology used. For each node, the report display all the logical systems hosted on that node along with the VM operating system, state of the VM, the number of disks and LAN that is allocated, and the maximum and minimum entitled CPU and memory.
	SM Virtualization Logical Systems performance summary	Provides a graphical representation of the performance details such as CPU and memory utilization of all the selected logical systems over the specified period of time. This report helps to compare the CPU utilization of the physical node to that of the logical system. It also displays the availability trend of the logical system during the specified period of time.
	SM Virtualization Resource outage forecast summary	Displays the physical systems that are projected to cross the 100 percent threshold value for CPU and memory utilization within the next 30, 60 and 90 days, for a given Business Service and Business View or node group. It also displays the virtual machines that are hosted on the affected physical systems
	SM Virtualization Top and Bottom N Logical Systems	Displays the top and bottom N (5, 10, 20) logical systems based on the selected measure such as CPU utilization, memory utilization, availability and hypervisor type, for a given business service and Business View or node group.
	SM Virtualization Top and Bottom N Nodes	Displays the top and bottom N (5, 10, 20) physical systems, that host logical systems, based on the selected measure such as CPU and memory utilization and OS type, for a given business service and Business View or node group.
	SM Virtualization Virtual Infrastructure Inventory	Provides a graphical representation of the inventory details, such as the number of hosts and VMs, the number of logical system based on the operating system type, and resources allocation for the various virtualization technologies in an IT environment. This report also displays the total number of hosts, count and density of the

		VMs, total number of CPU, and the percentage of unreserved CPU for each virtualization technology.
Performance	SM Virtualization Logical System Performance Details	Displays the availability, the CPU utilization, and the entitled memory utilization of the selected VM for the specified period of time.
VMware	SM Virtualization VMware cluster detail inventory	Displays the inventory details such as CPU and memory capacity, CPU and memory limits, CPU and memory reservation, number of disks, number of network interfaces, and so on, of the ESX nodes, the resource pools, and the logical systems in a selected cluster.
	SM Virtualization VMware ESX Server detail inventory	Displays the inventory details such as CPU and memory limits, CPU and memory reservation, number of disks, number of network interfaces, number of virtual CPUs, CPU shares, and so on, of the logical systems and the resource pools for the selected nodes.
	SM Virtualization VMware inventory	Displays the summarized inventory details of the VMware cluster and non-clustered ESX nodes. The inventory details include CPU speed, CPU and memory capacity, number of nodes and logical systems, VM density, number of CPU cores, number of disks, number of network interfaces, and so on.
	SM Virtualization VMware logical system CPU bottleneck details	Displays the CPU utilization and CPU cycles used by the selected logical systems over the specified period of time. Using this information, one can identify the CPU bottlenecks in the logical systems.
	SM Virtualization VMware logical system memory bottleneck details	Displays the average utilization for the entitled memory and physical memory of the selected logical systems. The report shows the comparison of the average memory swap in, swap out, and overhead. It also shows the comparison of the utilization percentage of the average entitled memory and average physical memory.
	SM Virtualization VMware Top and Bottom N ESX Servers	Displays the top and bottom N(5, 10, 15, 20) ESX Servers based on the selected measure such as CPU utilization, memory utilization, net I/O rate, and swap utilization for given business service and Business View or node group.
	SM Virtualization VMware Top and Bottom N Logical systems	Displays the top and bottom N (5, 10, 15, 20) logical systems, hosted on ESX Servers, based on selected measure such as such as active memory, CPU and memory utilization, CPU ready time, and unavailability for a given business service and Business View or node group.