HPE Operations Bridge Reporter

Software Version: 10.10

Handbook of Reports

Document Release Date: January 2017
Software Release Date: January 2017

Legal Notices

Warranty

The only warranties for Hewlett Packard Enterprise 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. Hewlett Packard Enterprise 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

Copyright Notice

Trademark Notices

Documentation Updates

To check for recent updates or to verify that you are using the most recent edition of a document, go to: https://softwaresupport.hpe.com/.

This site requires that you register for an HP Passport and to sign in. To register for an HP Passport ID, click **Register** on the HPE Software Support site or click **Create an Account** 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 HPE sales representative for details.

Support

Visit the HPE Software Support site at: https://softwaresupport.hpe.com/.

Most of the support areas require that you register as an HP Passport user and to sign in. Many also require a support contract. To register for an HP Passport ID, click **Register** on the HPE Support site or click **Create an Account** on the HP Passport login page.

To find more information about access levels, go to: https://softwaresupport.hpe.com/web/softwaresupport/access-levels.

HPE Software Solutions Now accesses the HPSW Solution and Integration Portal website. This site enables you to explore HPE Product Solutions to meet your business needs, includes a full list of Integrations between HPE Products, as well as a listing of ITIL Processes. The URL for this website is https://softwaresupport.hpe.com/km/KM01702731.

Contents

Chapter 1: Introduction

This document provides an overview of all the reports available in HPE Operations Bridge Reporter (OBR). The reports are divided into following categories:

• Business Service Management

• Infrastructure Management

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

New Reports

The following are the new network component health and network interface health reports in HPE *Operations Bridge Reporter* 10.00:

Component Health Reports:

1. Network Component Health Backplane Utilization

2. Network Component Health Buffer Utilization and Misses

3. Network Component Health CPU Utilization

4. Network Component Health Heat Chart

5. Network Component Health MEMORY Utilization

6. Network Component Health Top and Bottom N Nodes

7. Network Component Overview

Interface Health Reports:

1. Network Interface Health Discard Rate

2. Network Interface Health Error Rate

3. Network Interface Health Inventory Report

4. Network Interface Health Overview

5. Network Interface Health SNMP Response Time

6. Network Interface Health Top and Bottom N Nodes

7. Network Interface Health Utilization

8. Network Interface Health Volume Rate

Chapter 2: 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.

Reports
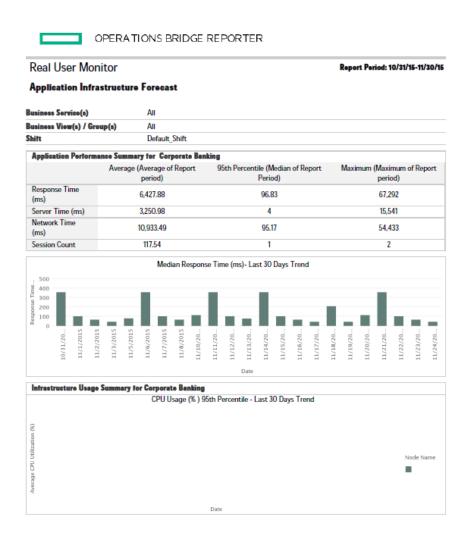
This section describes the following RUM reports:

Executive Summary Reports

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.

OPERATIONS BRIDGE REPORTER

Real User Monitor Report Period: 10/31/15-11/30/15

Application Infrastructure Forecast

Business Service(s)	All
Business View(s) / Group(s)	All
Shift	Default_Shift

Application Performance Summary for Corporate Banking

	Average (Average of Report period)	95th Percentile (Median of Report Period)	Maximum (Maximum of Report period)
Response Time (ms)	6,427.88	96.83	67,292
Server Time (ms)	3,250.98	4	15,541
Network Time (ms)	10,933.49	95.17	54,433
Session Count	117.54	1	2

Median Response Time (ms)- Last 30 Days Trend

Infrastructure Usage Summary for Corporate Banking

CPU Usage (%) 95th Percentile - Last 30 Days Trend

Node Name

RUM Application Infrastructure Summary

Displays 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.

```
          OPERATIONS BRIDGE REPORTER

Real User Monitor                        Report Period: 2/1/16 - 2/29/16

Application Session Summary

   | 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29 |

Business Service(s)          All
Business View(s) / Group(s)  All
Shift                        Default_Shift
```

Top 5 Applications with High Session Event Rate			
Business Application Name	Event Rate	Event Count	Session Count
Finance	5.27	8,417	1,598
Corporate Banking	0.16	42	255
YourOneStopShop	0.16	105	663

Top 5 Applications with Low Session Event Rate			
Business Application Name	Event Rate	Event Count	Session Count
YourOneStopShop	0.16	105	663
Corporate Banking	0.16	42	255
Finance	5.27	8,417	1,598

```
                                        Refresh Date: 2/18/16 2:53:31 PM GMT+00:00   Page 1 of 1
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.
```

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.

RUM Application Availability

Displays the availability details of the RUM application, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

Performance Analysis Reports

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 Groups 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 10 Broken Links

Displays the top ten business applications with the highest number of broken link events generated.

OPERATIONS BRIDGE REPORTER

Real User Monitor   Report Period: 2/1/16 - 2/29/16

Top 10 Broken Links

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Business Service(s)	All
Business View(s) / Group(s)	All
Shift	Default_Shift

Top 10 Broken Links

Business Application Tier Name	Business Application Name	Component URL	Broken Link Count
auto-disovered-tier-General_Web	Finance	http://16.150.210.10/medrec/images/spacer.gif	2,113
HTTP-Web	Corporate Banking	http://16.150.153.238/rumsiteNaina/js/loader_homepage_0.js	1,434
HTTP-Web	Corporate Banking	http://16.150.153.238/rumsiteNaina/images/forms/texture_orange_0.gif	1,433
HTTP-Web	Corporate Banking	http://16.150.153.238/rumsiteNaina/images/forms/big_0.gif	1,433
HTTP-Web	Corporate Banking	http://16.150.153.238/rumsiteNaina/css/discount_styles_0.css	1,433
auto-disovered-tier-General_Web	Finance	http://16.150.210.10/rumsiteNaina/js/loader_homepage_0.js	1,414
auto-discovered-tier-General_Web	Finance	http://16.150.210.10/rumsiteNaina/images/forms/texture_orange_0.gif	1,414
auto-discovered-tier-General_Web	Finance	http://16.150.210.10/rumsiteNaina/images/forms/big_0.gif	1,414
auto-disovered-tier-General_Web	Finance	http://16.150.210.10/rumsiteNaina/css/discount_styles_0.css	1,414
auto-disovered-tier-General_Web	Finance	http://16.150.210.10/www.shopping.hp.com/shopping/swf/accessories_navigation.swf?hpUrl=http%3A%2F%2Fwww.shopping.hp.com/webapp/shopping&userTier=	208

Refresh Date: 2/18/16 3:03:16 PM GMT+00:00   Page 1 of 1
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Synthetic Transaction Monitoring

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

Reports

This section describes the following BPM reports:

Executive Summary Reports

BPM Application Summary
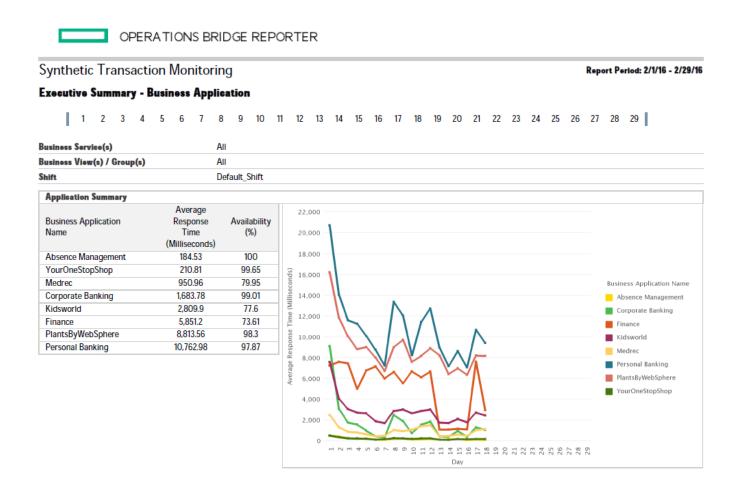
Provides the complete overview of the performance and availability of the selected business applications along with the performance of the transactions for these applications during the specified period of time.

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, location summary, and end-user groups during the specified period of time.

OPERATIONS BRIDGE REPORTER

Synthetic Transaction Monitoring

Report Period: 2/1/16 - 2/29/16

Executive Summary - Business Application

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Business Service(s)	All
Business View(s) / Group(s)	All
Shift	Default_Shift

Application Summary

Business Application Name	Average Response Time (Milliseconds)	Availability (%)
Absence Management	184.53	100
YourOneStopShop	210.81	99.65
Medrec	950.96	79.95
Corporate Banking	1,683.78	99.01
Kidsworld	2,809.9	77.6
Finance	5,851.2	73.61
PlantsByWebSphere	8,813.56	98.3
Personal Banking	10,762.98	97.87

Business Application Name

- Absence Management
- Corporate Banking
- Finance
- Kidsworld
- Medrec
- Personal Banking
- PlantsByWebSphere
- YourOneStopShop

Refresh Date: 2/18/16 3:06:25 PM GMT+00:00   Page 1 of 1
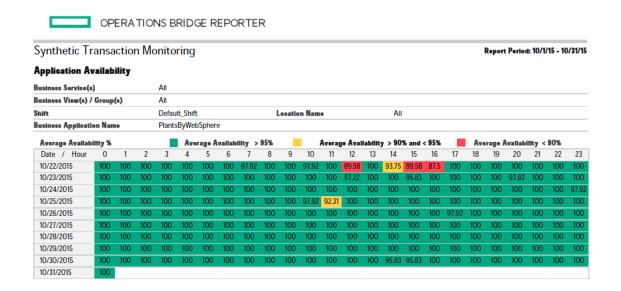
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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.
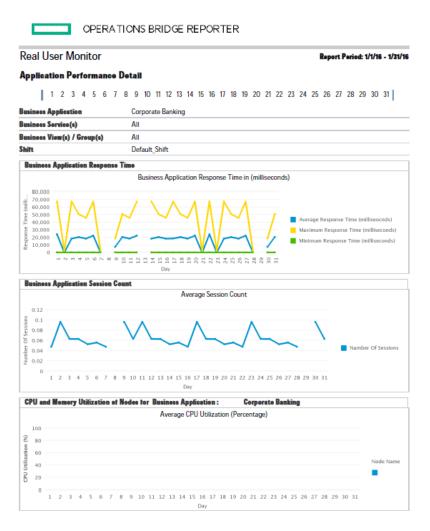
BPM Application Availability

Displays the availability details of the BPM application, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

Synthetic Transaction Monitoring

Report Period: 10/1/15 - 10/31/15

Application Availability

Business Service(s)	All
Business View(s) / Group(s)	All
Shift	Default_Shift	Location Name	All
Business Application Name	PlantsByWebSphere

Average Availability % — ■ Average Availability > 95% — ■ Average Availability > 90% and < 95% — ■ Average Availability < 90%

Date / Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
10/22/2015	100	100	100	100	100	100	100	97.92	100	100	97.92	100	89.58	100	93.75	89.58	87.5	100	100	100	100	100	100	100
10/23/2015	100	100	100	100	100	100	100	100	100	100	100	100	97.22	100	100	95.83	100	100	100	100	97.92	100	100	100
10/24/2015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	97.92
10/25/2015	100	100	100	100	100	100	100	100	100	100	97.92	92.31	100	100	100	100	100	100	100	100	100	100	100	100
10/26/2015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	97.92	100	100	100	100	100	100
10/27/2015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
10/28/2015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
10/29/2015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
10/30/2015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	95.83	95.83	100	100	100	100	100	100	100	100
10/31/2015	100																							

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Performance Reports

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.
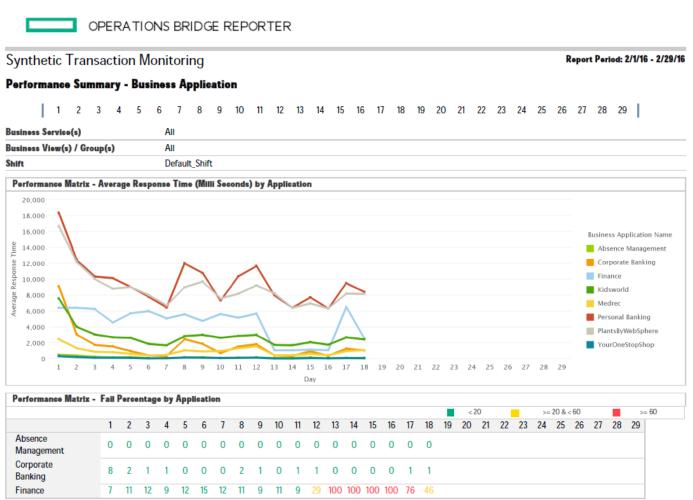
BPM Performance Summary

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.

OPERATIONS BRIDGE REPORTER

Synthetic Transaction Monitoring

Report Period: 2/1/16 - 2/29/16

Performance Summary - Business Application

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Business Service(s)	All
Business View(s) / Group(s)	All
Shift	Default_Shift

Performance Matrix - Average Response Time (Milli Seconds) by Application

Business Application Name
- Absence Management
- Corporate Banking
- Finance
- Kidsworld
- Medrec
- Personal Banking
- PlantsByWebSphere
- YourOneStopShop

Performance Matrix - Fail Percentage by Application

■ < 20   ■ >= 20 & < 60   ■ >= 60

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Absence Management	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
Corporate Banking	8	2	1	1	0	0	0	2	1	0	1	1	0	0	0	0	1	1											
Finance	7	11	12	9	12	15	12	11	9	11	9	29	100	100	100	100	76	46											

Refresh Date: 2/18/16 3:08:08 PM GMT+00:00   Page 1 of 2

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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.

OPERATIONS BRIDGE REPORTER

Synthetic Transaction Monitoring

Report Period: 2/1/16 - 2/29/16

Transaction Analysis

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Business Service(s)	All
Business View(s) / Group(s)	All
Shift	Default_Shift

Business Transaction Summary for Application — Absence Management

Number of BTFs	1	Average Response Time (Milliseconds)	184.53
Number of Locations	1	Maximum Response Time (Milliseconds)	24,760
Number of End User Groups	1	Availability (%)	100
Number of Transactions	6	Average Fail Count	0

Performance

Status
- Critical
- Fail
- Minor
- Ok
- Timeout

Average Transaction Response Time for Application — Absence Management

Business Transaction Name
- Leave Application
- Leave Encashment
- Leave Types
- Login
- Logout
- LTA

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).

Reports

This section describes the following Service Health reports:

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).
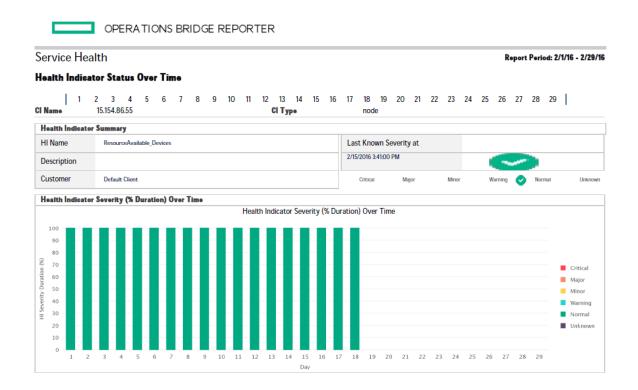
Top N Domains by KPI

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 Reports

Health Indicator Status Over Time

Displays the status of HI(s) over a period of time for selected list of CIs.

OPERATIONS BRIDGE REPORTER

Service Health   Report Period: 2/1/16 - 2/29/16

Health Indicator Status Over Time

	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	
CI Name	15.154.86.55	CI Type	node

Health Indicator Summary			
HI Name	ResourceAvailable_Devices	Last Known Severity at	
Description		2/15/2016 3:41:00 PM	
Customer	Default Client	Critical Major Minor Warning ✓ Normal Unknown	

Health Indicator Severity (% Duration) Over Time

Health Indicator Severity (% Duration) Over Time

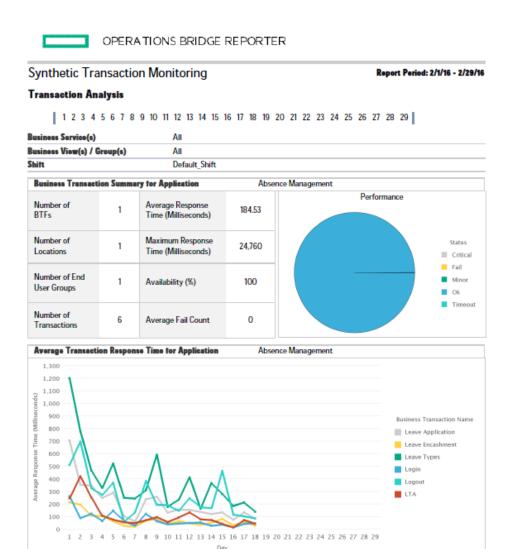- Critical
- Major
- Minor
- Warning
- Normal
- Unknown

Refresh Date: 2/18/16 3:16:19 PM GMT+00:00   Page 12 of 332

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

KPI Status Over Time

Displays the status of KPI(s) over a period of time for selected list of CIs.

OPERATIONS BRIDGE REPORTER

Service Health

Report Period: 2/1/16 - 2/29/16

KPI Status over Time

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

| CI Name | 15.154.86.55 | | CI Type | node |

KPI Summary

KPI ID	6	Customer	Default Client
KPI Name	Application Performance	Last Known Status at 2/2/2016 5:25:00 PM	✓
Domain	application	❌ Critical 🔶 Major 🟡 Minor 🔺 Warning ✓ OK ❓ Unknown	

KPI Summary

KPI Status Trend Over Time (Percentage)

Legend: Critical, Major, Minor, Warning, OK, Unknown

Refresh Date: 2/18/16 3:22:48 PM GMT+00:00   Page 7 of 333

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Chapter 3: 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.

IBM Websphere

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

Reports
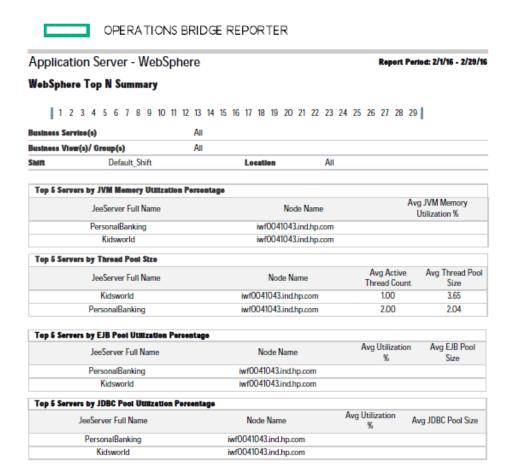
This section describes the following IBM WebSphere reports:

Executive Summary Reports

WebSphere Top N Summary
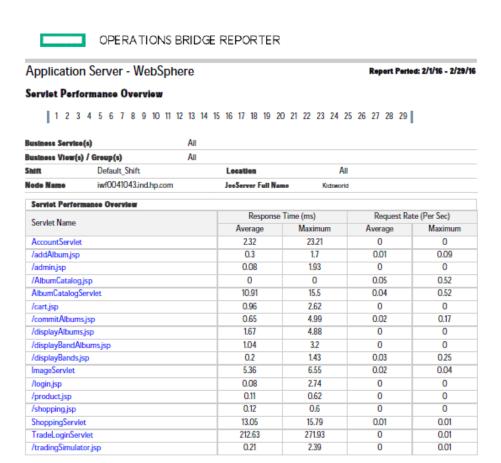
Displays the top N (5,10) JEE server instances based on the Java Virtual Machine (JVM) memory utilization percentage, thread pool utilization percentage, EJB utilization percentage, and JDBC utilization percentage over a selected period of time for selected business service.

OPERATIONS BRIDGE REPORTER

Application Server - WebSphere   Report Period: 2/1/16 - 2/29/16

WebSphere Top N Summary

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Business Service(s)	All
Business View(s)/ Group(s)	All
Shift	Default_Shift	**Location**	All

Top 5 Servers by JVM Memory Utilization Percentage

JeeServer Full Name	Node Name	Avg JVM Memory Utilization %
PersonalBanking	iwf0041043.ind.hp.com	
Kidsworld	iwf0041043.ind.hp.com	

Top 5 Servers by Thread Pool Size

JeeServer Full Name	Node Name	Avg Active Thread Count	Avg Thread Pool Size
Kidsworld	iwf0041043.ind.hp.com	1.00	3.65
PersonalBanking	iwf0041043.ind.hp.com	2.00	2.04

Top 5 Servers by EJB Pool Utilization Percentage

JeeServer Full Name	Node Name	Avg Utilization %	Avg EJB Pool Size
PersonalBanking	iwf0041043.ind.hp.com		
Kidsworld	iwf0041043.ind.hp.com		

Top 5 Servers by JDBC Pool Utilization Percentage

JeeServer Full Name	Node Name	Avg Utilization %	Avg JDBC Pool Size
PersonalBanking	iwf0041043.ind.hp.com		
Kidsworld	iwf0041043.ind.hp.com		

Refresh Date: 2/18/16 3:47:04 PM GMT+00:00 Page 1 of 1
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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.

OPERATIONS BRIDGE REPORTER

Application Server - WebSphere   **Report Period: 2/1/16 - 2/29/16**

Servlet Performance Overview

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Business Service(s)	All		
Business View(s) / Group(s)	All		
Shift	Default_Shift	**Location**	All
Node Name	iwf0041043.ind.hp.com	**JeeServer Full Name**	Kidsworld

Servlet Performance Overview

Servlet Name	Response Time (ms)		Request Rate (Per Sec)	
	Average	Maximum	Average	Maximum
AccountServlet	2.32	23.21	0	0
/addAlbum.jsp	0.3	1.7	0.01	0.09
/admin.jsp	0.08	1.93	0	0
/AlbumCatalog.jsp	0	0	0.05	0.52
AlbumCatalogServlet	10.91	15.5	0.04	0.52
/cart.jsp	0.96	2.62	0	0
/commitAlbums.jsp	0.65	4.99	0.02	0.17
/displayAlbums.jsp	1.67	4.88	0	0
/displayBandAlbums.jsp	1.04	3.2	0	0
/displayBands.jsp	0.2	1.43	0.03	0.25
ImageServlet	5.36	6.55	0.02	0.04
/login.jsp	0.08	2.74	0	0
/product.jsp	0.11	0.62	0	0
/shopping.jsp	0.12	0.6	0	0
ShoppingServlet	13.05	15.79	0.01	0.01
TradeLoginServlet	212.63	271.93	0	0.01
/tradingSimulator.jsp	0.21	2.39	0	0.01

Refresh Date: 2/18/16 3:44:10 PM GMT+00:00   Page 1 of 1
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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.

WebSphere Server Availability

Displays information about the average availability of the WebSphere server that are running on selected node over a period of time. It also displays the availability details of the WebSphere server, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

Performance Reports

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. Displays the availability details of the WebSphere server, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

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 time for 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, CPU, memory, Directory Information Tree (DIT) disk and log file disk, utilization details for all DCs.

Reports

This section describes the following Microsoft Active Directory reports:

Executive Summary Reports

AD Availability

Displays the availability details of the domains for the selected DCs for a given Business Service or Business View/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 or Business View/Node group.

OPERATIONS BRIDGE REPORTER

Active Directory

Report Period: 2/1/16 - 2/29/16

FSMO Role Holder

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Shift Name	Default_Shift	Location	All

FSMO Role Movement

Domain Controller Name	FSMO Role Name	Time Stamp	Status
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 12:05:00 AM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 1:05:00 AM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 4:45:00 AM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 5:45:00 AM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 9:25:00 AM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 10:25:00 AM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 2:05:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 3:05:00 PM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 6:45:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 7:45:00 PM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/1/2016 11:25:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 12:25:00 AM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 4:05:00 AM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 5:05:00 AM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 8:45:00 AM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 9:45:00 AM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 1:25:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 2:25:00 PM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 6:05:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 7:05:00 PM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 10:45:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/2/2016 11:45:00 PM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 3:25:00 AM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 4:25:00 AM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 8:05:00 AM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 9:05:00 AM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 12:45:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 1:45:00 PM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 5:25:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 6:25:00 PM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 10:05:00 PM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/3/2016 11:05:00 PM	LOST
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/4/2016 2:45:00 AM	ACQUIRED
iwf1089074.ind.hp.com	DOMAIN NAMING MASTER	2/4/2016 3:45:00 AM	LOST

Refresh Date: 2/21/16 3:49:01 AM GMT+00:00   Page 1 of 31
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.
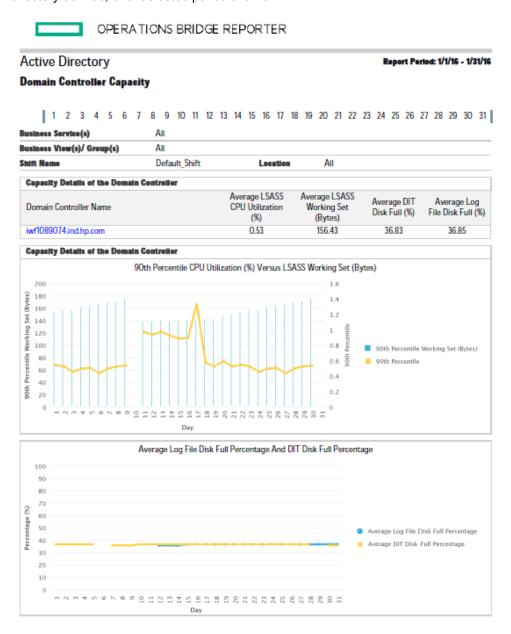
Performance Reports

DC - GC Replication Delay

Displays a summary of the delay time for the replication between DC-to-GC servers.

Domain Controller 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.

DC Availability Details

Displays the availability details such as up time, down time, unknown time, planned downtime, and excused downtime for the selected DCs for a given Business Service or Business View/Node group.

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.

OPERATIONS BRIDGE REPORTER

Active Directory　　　　　　　　　　　　　　　　　　**Report Period: 2/1/16 - 2/29/16**

AD Adhoc Comparison

| 1　2　3　4　5　6　7　8　9　10　11　12　13　14　15　16　17　18　19　20　21　22　23　24　25　26　27　28　29 |

Business Service(s)	All
Business View/Group(s)	All
Shift Name	Default_Shift　　　　**Location**　　　All
Domain Controller Name(s)	All

Average Replication Latency (Minutes)

Domain Controller Name	Average Disk Queue Length
iwf1089074.ind.hp.com	5.9

Comparison of Selected Domain Controllers

Average Replication Latency (Minutes) for Selected Domain Controllers

Domain Controller
● iwf1089074.ind.hp.com

Day

Refresh Date: 2/21/16 3:42:40 AM GMT+00:00　Page 1 of 1
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Microsoft Exchange

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

Reports

This section describes the following Microsoft Exchange reports:

Executive Summary Reports

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 Sizes

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.

OPERATIONS BRIDGE REPORTER

Exchange Server

Report Period: 2/1/16 - 2/29/16

Top N MailBox Sizes

Business Service(s)	All			
Business View(s) / Group(s)	All			
Shift	Default_Shift	**Location**	All	

Top N Mailboxes by Size (MB)

Site Name	Server Name	MailBox Name	Average MailBox size (MB)	Average No.of Messages Sent	Average No.of Messages Received
default-first-site-name	iwf1089080	arulm	1,066.91		
default-first-site-name	iwf1089080	sabari	999.6		
default-first-site-name	iwf1089080	mazhar	989.54		
default-first-site-name	iwf1089080	naina	973.4		
default-first-site-name	iwf1089080	raghu	955.14		
default-first-site-name	iwf1089080	sujata	883.74		
default-first-site-name	iwf1089080	soumya	876.52		
default-first-site-name	iwf1089080	shika	876.52		
default-first-site-name	iwf1089080	mahesh	876.52		
default-first-site-name	iwf1089080	madhu	876.52		
default-first-site-name	iwf1089080	krbtgt	0		
default-first-site-name	iwf1089080	microsoft system	0		

Refresh Date: 2/21/16 5:07:37 AM GMT+00:00   Page 1 of 1

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Exchange Top N PubFolder
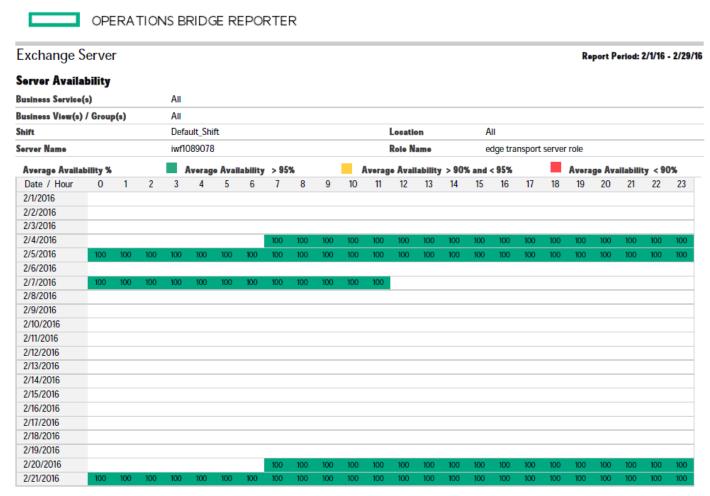
Displays the list of the top N (5, 10) public folders sorted by their size, belonging to specified server(s) or site(s) for a selected period of time.

Exchange MailServer Summary

Displays the database summary, the user 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.

Exchange Server Availability

Displays the availability details of the exchange mail server, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

Exchange Server

Report Period: 2/1/16 - 2/29/16

Server Availability

Business Service(s)	All		
Business View(s) / Group(s)	All		
Shift	Default_Shift	Location	All
Server Name	iwf1089078	Role Name	edge transport server role

Average Availability %   ▊ **Average Availability > 95%**   ▊ **Average Availability > 90% and < 95%**   ▊ **Average Availability < 90%**

Date / Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2/1/2016																								
2/2/2016																								
2/3/2016																								
2/4/2016								100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/5/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/6/2016																								
2/7/2016	100	100	100	100	100	100	100	100	100	100	100	100												
2/8/2016																								
2/9/2016																								
2/10/2016																								
2/11/2016																								
2/12/2016																								
2/13/2016																								
2/14/2016																								
2/15/2016																								
2/16/2016																								
2/17/2016																								
2/18/2016																								
2/19/2016																								
2/20/2016								100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/21/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Refresh Date: 2/21/16 4:37:27 AM GMT+00:00   Page 1 of 18

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Performance Reports

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
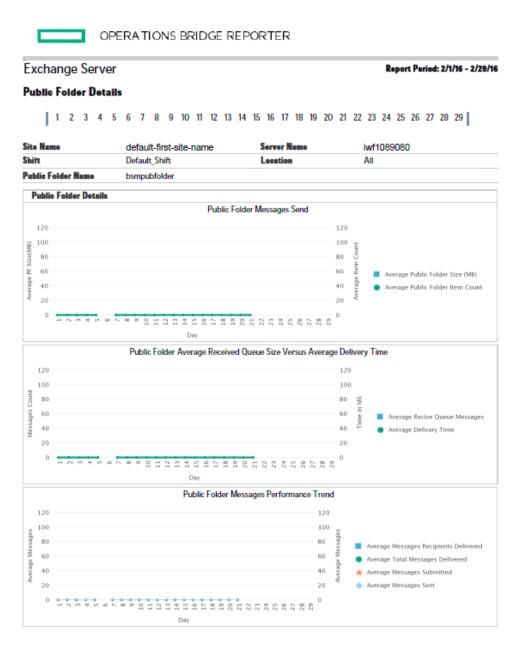
Displays the space usage details of the mailbox and public folder of selected mail server(s) for a selected period of time.

Exchange Public Folder Details

Displays the public folder size, and 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 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.

Reports

This section describes the following Microsoft SQL Server reports:
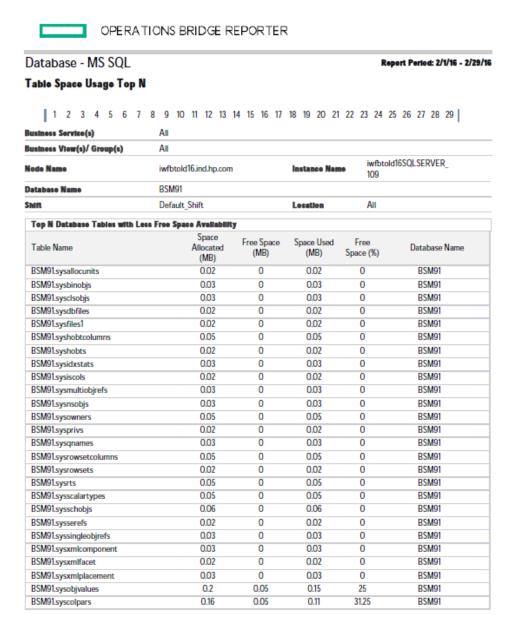
Executive Summary Reports

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).

OPERATIONS BRIDGE REPORTER

Database - MS SQL   Report Period: 2/1/16 - 2/29/16
Table Space Usage Top N

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Business Service(s)	All		
Business View(s)/ Group(s)	All		
Node Name	iwfbtold16.ind.hp.com	**Instance Name**	iwfbtold16SQLSERVER_109
Database Name	BSM91		
Shift	Default_Shift	**Location**	All

Top N Database Tables with Less Free Space Availability

Table Name	Space Allocated (MB)	Free Space (MB)	Space Used (MB)	Free Space (%)	Database Name
BSM91.sysallocunits	0.02	0	0.02	0	BSM91
BSM91.sysbinobjs	0.03	0	0.03	0	BSM91
BSM91.sysclsobjs	0.03	0	0.03	0	BSM91
BSM91.sysdbfiles	0.02	0	0.02	0	BSM91
BSM91.sysfiles1	0.02	0	0.02	0	BSM91
BSM91.syshobtcolumns	0.05	0	0.05	0	BSM91
BSM91.syshobts	0.02	0	0.02	0	BSM91
BSM91.sysidxstats	0.03	0	0.03	0	BSM91
BSM91.sysiscols	0.02	0	0.02	0	BSM91
BSM91.sysmultiobjrefs	0.03	0	0.03	0	BSM91
BSM91.sysnsobjs	0.03	0	0.03	0	BSM91
BSM91.sysowners	0.05	0	0.05	0	BSM91
BSM91.sysprivs	0.02	0	0.02	0	BSM91
BSM91.sysqnames	0.03	0	0.03	0	BSM91
BSM91.sysrowsetcolumns	0.05	0	0.05	0	BSM91
BSM91.sysrowsets	0.02	0	0.02	0	BSM91
BSM91.sysrts	0.05	0	0.05	0	BSM91
BSM91.sysscalartypes	0.05	0	0.05	0	BSM91
BSM91.sysschobjs	0.06	0	0.06	0	BSM91
BSM91.sysserefs	0.02	0	0.02	0	BSM91
BSM91.syssingleobjrefs	0.03	0	0.03	0	BSM91
BSM91.sysxmlcomponent	0.03	0	0.03	0	BSM91
BSM91.sysxmlfacet	0.02	0	0.02	0	BSM91
BSM91.sysxmlplacement	0.03	0	0.03	0	BSM91
BSM91.sysobjvalues	0.2	0.05	0.15	25	BSM91
BSM91.syscolpars	0.16	0.05	0.11	31.25	BSM91

Refresh Date: 2/21/16 5:33:23 AM GMT+00:00   Page 1 of 55
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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).

MSSQL Instance Availability

Provides information about the availability of the database instances that are running on selected node over a period of time. Displays the availability details of Microsoft SQL instances, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

Database - MS SQL   **Report Period: 2/1/16 - 2/29/16**

Instance Availability

Business Service(s)	All		
Business View(s) / Group(s)	All		
Shift	Default_Shift	Location	All
Node Name	iwfbtold16.ind.hp.com	Instance Name	iwfbtold16SQLSERVER_109

Average Availability %   ■ Average Availability > 95%   ■ Average Availability > 90% and < 95%   ■ Average Availability < 90%

Date / Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2/1/2016	100	100	100	100	100	100	100					100	100	100	100	100	100	100	100	100	100	100	100	100
2/2/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/3/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/4/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/5/2016	100																			100	100	100	100	100
2/6/2016	100	100	100	100	100	100	100					100	100	100	100	100	100	100	100	100	100	100	100	100
2/7/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/8/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/9/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/10/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/11/2016																								
2/12/2016	100	100	100	100	100	100	100					100	100	100	100	100	100	100	100	100	100	100	100	100
2/13/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/14/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/15/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/16/2016	100																			100	100	100	100	100
2/17/2016	100	100	100	100	100	100	100					100	100	100	100	100	100	100	100	100	100	100	100	100
2/18/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/19/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/20/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/21/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Refresh Date: 2/21/16 5:30:46 AM GMT+00:00   Page 1 of 2

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Performance Reports

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 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.
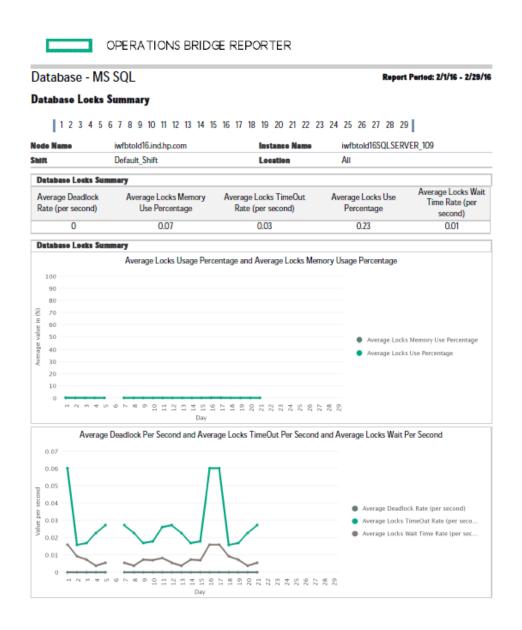
MSSQL Virtual Device Space Usage Details

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.

OPERATIONS BRIDGE REPORTER

Database - MS SQL   Report Period: 2/1/16 - 2/29/16

Database Locks Summary

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Node Name	iwfbtold16.ind.hp.com	Instance Name	iwfbtold16SQLSERVER_109
Shift	Default_Shift	Location	All

Database Locks Summary

Average Deadlock Rate (per second)	Average Locks Memory Use Percentage	Average Locks TimeOut Rate (per second)	Average Locks Use Percentage	Average Locks Wait Time Rate (per second)
0	0.07	0.03	0.23	0.01

Database Locks Summary

Average Locks Usage Percentage and Average Locks Memory Usage Percentage

- Average Locks Memory Use Percentage
- Average Locks Use Percentage

Average Deadlock Per Second and Average Locks TimeOut Per Second and Average Locks Wait Per Second

- Average Deadlock Rate (per second)
- Average Locks TimeOut Rate (per seco...
- Average Locks Wait Time Rate (per sec...

Refresh Date: 2/21/16 5:37:17 AM GMT+00:00   Page 1 of 1
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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. Displays the availability details of Microsoft SQL instances, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

Database - MS SQL

Report Period: 2/1/16 - 2/29/16
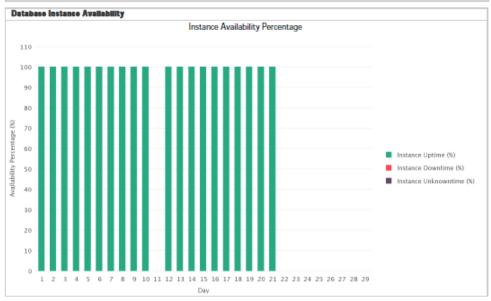
Instance Availability Details

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Node Name	iwfbtold16.ind.hp.com	Instance Name	iwfbtold16SQLSERVER_109
Shift	Default_Shift	Location	All

Database Instance Availability Summary

Instance Name	Instance Uptime (%)	Instance Downtime (%)	Instance Unknowntime (%)	Planned Down Time (%)	Excused Down Time (%)	Availability (%)
iwfbtold16SQLSERVER_1 09	100.00	0.00	0.00			100

Database Instance Availability

Instance Availability Percentage

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.

Reports

This section describes the following Oracle reports:

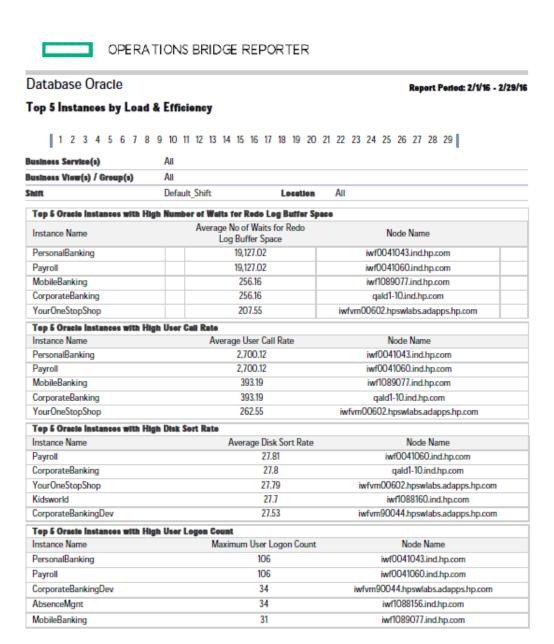## *Executive Summary Reports*

Database 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 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.

OPERATIONS BRIDGE REPORTER

Database Oracle

Report Period: 2/1/16 - 2/29/16

Top 5 Instances by Load & Efficiency

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Business Service(s)	All
Business View(s) / Group(s)	All
Shift	Default_Shift **Location** All

Top 5 Oracle Instances with High Number of Waits for Redo Log Buffer Space

Instance Name	Average No of Waits for Redo Log Buffer Space	Node Name
PersonalBanking	19,127.02	iwf0041043.ind.hp.com
Payroll	19,127.02	iwf0041060.ind.hp.com
MobileBanking	256.16	iwf1089077.ind.hp.com
CorporateBanking	256.16	qald1-10.ind.hp.com
YourOneStopShop	207.55	iwfvm00602.hpswlabs.adapps.hp.com

Top 5 Oracle Instances with High User Call Rate

Instance Name	Average User Call Rate	Node Name
PersonalBanking	2,700.12	iwf0041043.ind.hp.com
Payroll	2,700.12	iwf0041060.ind.hp.com
MobileBanking	393.19	iwf1089077.ind.hp.com
CorporateBanking	393.19	qald1-10.ind.hp.com
YourOneStopShop	262.55	iwfvm00602.hpswlabs.adapps.hp.com

Top 5 Oracle Instances with High Disk Sort Rate

Instance Name	Average Disk Sort Rate	Node Name
Payroll	27.81	iwf0041060.ind.hp.com
CorporateBanking	27.8	qald1-10.ind.hp.com
YourOneStopShop	27.79	iwfvm00602.hpswlabs.adapps.hp.com
Kidsworld	27.7	iwf1088160.ind.hp.com
CorporateBankingDev	27.53	iwfvm90044.hpswlabs.adapps.hp.com

Top 5 Oracle Instances with High User Logon Count

Instance Name	Maximum User Logon Count	Node Name
PersonalBanking	106	iwf0041043.ind.hp.com
Payroll	106	iwf0041060.ind.hp.com
CorporateBankingDev	34	iwfvm90044.hpswlabs.adapps.hp.com
AbsenceMgnt	34	iwf1088156.ind.hp.com
MobileBanking	31	iwf1089077.ind.hp.com

Refresh Date: 2/21/16 5:20:54 AM GMT+00:00 Page 1 of 1

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Database Oracle Instance Availability

Provides information about the availability of the database instances that are running on selected node over a period of time. Displays the availability details of Oracle instances, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

Database Oracle   Report Period: 2/1/16 - 2/29/16

Oracle Instance Availability

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Shift   Default_Shift   **Location**   All

Up Time Percentage

Instance Availability Percentage

Instance Name	Node Name	Up Time (%)	Down Time (%)	Planned Down Time (%)	Excused Down Time (%)	Availability (%)
PersonalBanking	iwf0041043.ind.hp.com	100	0			100

Refresh Date: 2/21/16 5:28:59 AM GMT+00:00   Page 1 of 8
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Performance Reports

Database Oracle Instance Availability Detail

Displays the availability of specified instance that is running on selected node for a given time period. Displays the availability details of Oracle instances, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

Database 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).

Database Oracle TableSpace Space Utilization Detail
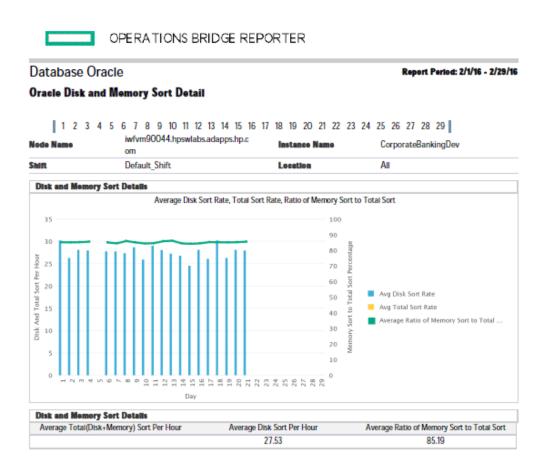
Displays the aggregated amount of space for the selected tablespaces running on instances of specific Oracle node.

Database Oracle TableSpace Detail

Displays the average tablespace utilization for the selected instance running on specified node.

Database 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.

OPERATIONS BRIDGE REPORTER

Database Oracle　　　　　　　　　　Report Period: 2/1/16 - 2/29/16

Oracle Disk and Memory Sort Detail

| 1　2　3　4　5　6　7　8　9　10　11　12　13　14　15　16　17　18　19　20　21　22　23　24　25　26　27　28　29 |

| **Node Name** | iwfvm90044.hpswlabs.adapps.hp.c om | **Instance Name** | CorporateBankingDev |
| **Shift** | Default_Shift | **Location** | All |

Disk and Memory Sort Details

Average Disk Sort Rate, Total Sort Rate, Ratio of Memory Sort to Total Sort

- Avg Disk Sort Rate
- Avg Total Sort Rate
- Average Ratio of Memory Sort to Total ...

Disk and Memory Sort Details

Average Total(Disk+Memory) Sort Per Hour	Average Disk Sort Per Hour	Average Ratio of Memory Sort to Total Sort
	27.53	85.19

Database Oracle 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
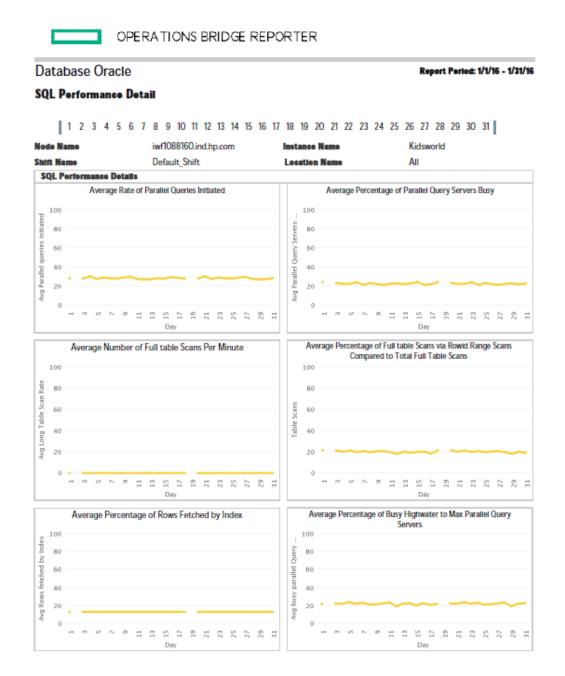
Displays the performance of the extents and segments available for the selected instance that are running on a specific Oracle node.

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.

OPERATIONS BRIDGE REPORTER

Database Oracle

Report Period: 1/1/16 - 1/31/16

SQL Performance Detail

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 |

Node Name	iwf1088160.ind.hp.com	**Instance Name**	Kidsworld
Shift Name	Default_Shift	**Location Name**	All

SQL Performance Details

Average Rate of Parallel Queries Initiated

Average Percentage of Parallel Query Servers Busy

Average Number of Full table Scans Per Minute

Average Percentage of Full table Scans via Rowid Range Scans Compared to Total Full Table Scans

Average Percentage of Rows Fetched by Index

Average Percentage of Busy Highwater to Max Parallel Query Servers

Refresh Date: 2/21/16 5:24:33 AM GMT+00:00 Page 5 of 10
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Oracle WebLogic

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

Reports

This section describes the following Oracle WebLogic reports:

Executive Summary Reports

WebLogic Servlet Performance Summary

Displays the number of requests per second and 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
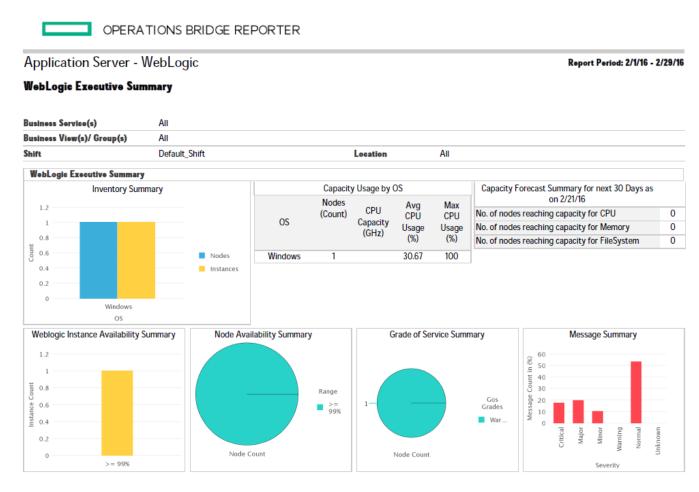
Displays the lists of the top N (5, 10) systems based on JVM memory utilization percentage, execute queue wait count, JDBC delay time, and EJB wait rate.

WebLogic JDBC Connection Pool Summary

Displays the top and 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.
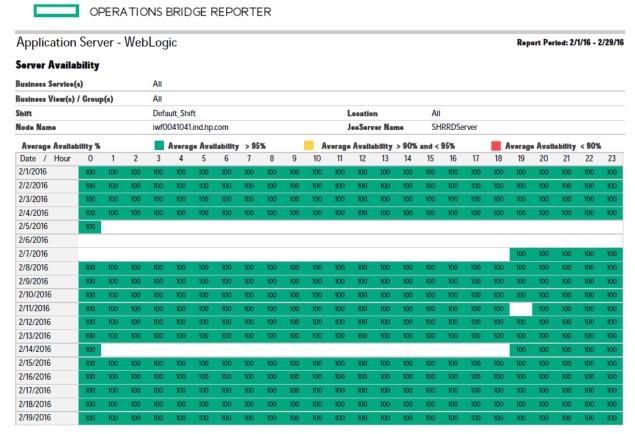
WebLogic Server Availability

Displays the availability details of the WebLogic server, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

Application Server - WebLogic   Report Period: 2/1/16 - 2/29/16

Server Availability

Business Service(s)	All		
Business View(s) / Group(s)	All		
Shift	Default_Shift	Location	All
Node Name	iwf0041041.ind.hp.com	JeeServer Name	SHRRDServer

Average Availability %   ■ Average Availability > 95%   ■ Average Availability > 90% and < 95%   ■ Average Availability < 90%

Date / Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2/1/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/2/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/3/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/4/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/5/2016	100																							
2/6/2016																								
2/7/2016																				100	100	100	100	100
2/8/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/9/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/10/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/11/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		100	100	100	100	100
2/12/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/13/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/14/2016	100																			100	100	100	100	100
2/15/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/16/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/17/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/18/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/19/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Refresh Date: 2/21/16 5:44:57 AM GMT+00:00   Page 1 of 2

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Performance Reports

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.

OPERATIONS BRIDGE REPORTER

Application Server - WebLogic

Report Period: 2/1/16 - 2/29/16

Java Virtual Machine (JVM) Utilization

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Shift	Default_Shift	**Location**	All
Node Name	iwf0041041.ind.hp.com	**JeeServer Name**	SHRRDServer

JVM Heap Free Memory and JVM Memory Utilization Percentage

JVM Heap Free Memory (in MB)		JVM Memory Utilization (%)	
Average	Maximum	Average	Maximum
109.95	165.06	109.95	44

JVM Heap Free Memory and JVM Memory Utilization Percentage

Average, Maximum JVM Heap Space Utilization (in MB)

- ● Average JVM Heap Free Memory(in MB)   ● Maximum JVM Heap Free Memory(in MB)

Average, Maximum JVM Memory Utilization (%)

- ● Average JVM Memory Utilization (%)   ● Maximum JVM Memory Utilization (%)

Refresh Date: 2/21/16 5:55:01 AM GMT+00:00   Page 1 of 1
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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). Displays the availability details of the WebLogic server, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

Application Server - WebLogic   Report Period: 2/1/16 - 2/29/16

Server Availability Details

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Shift	Default_Shift		**Location**	All
Node Name	iwf0041041.ind.hp.com			

Server Availability Summary

JeeServer Name	Uptime (%)	Downtime (%)	Unknowntime (%)	Planned Downtime (%)	Excused Downtime (%)	Availability (%)
SHRRDServer	100	0	0			100.00

Up Time Percentage Trend

JeeServer Name
● SHRRDServer

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).

Mashup reports

Mashup Report folder contains reports related to MyBSM integration. The reports displays prompts necessary for MyBSM/dashboard integration.

Reports

This section describes the following Mashup reports:

SM CPU Heat Chart

Displays average CPU utilization for system management that cross high and low threshold based on selected Business Service, Business View or node group.

SM Memory Heat Chart

Displays average memory utilization for system management that cross high and low threshold based on selected Business Service, Business View or node group.

SM Virtualization VMware Cluster Inventory

Displays cluster inventory details such as CPU capacity, memory capacity, number of ESX nodes, and number of logical systems of a VMware cluster.

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.

Executive Summary Reports

Reports

This section describes the following Network reports:

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 NNMi SPI 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.

OPERATIONS BRIDGE REPORTER

Network

Network Forecast Summary

Business Service(s)	All		
Business View(s)/ Group(s)	All		
Shift	Default_Shift	Location	All

Network Node Summary

No of Network Nodes	CPU Utilization (%)		Memory Utilization (%)	
	Average	Maximum	Average	Maximum
	<5	80	<5	85

Network Node Forecast Summary

Network Node Forecast Details

Network Nodes	Today		Day 30		Day 60		Day 90	
	CPU Utilization % (Avg & Max)	Memory Utilization % (Avg & Max)	CPU Utilization % (Avg & Max)	Memory Utilization % (Avg & Max)	CPU Utilization % (Avg & Max)	Memory Utilization % (Avg & Max)	CPU Utilization % (Avg & Max)	Memory Utilization % (Avg & Max)
15.154.87.190	5.65	5.39	12.92	29	13.86	29	14.84	29
	80	85	16	30	17	30	18	30
15.154.96.4	<5	<5						
	0	0						

Refresh Date: 2/21/16 6:32:51 AM GMT+00:00   Page 1 of 2

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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 Baseline 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.

OPERATIONS BRIDGE REPORTER

Network   Report Period: 2/1/16 - 2/29/16

Network Node Health by Group

Business Service(s)	All
Business View(s)/ Group(s)	FrameRelay Interfaces
Shift	Default_Shift
Location(s)	All

Node Device Distribution based on Resource Utilization (%)
- Memory Utili...
- Buffer Utilizat...
- CPU Utilization

Node Device Distribution based on Exception Rate
- Buffer Except...
- CPU Exceptio...
- Memory Exce...

Interface Distribution based on Error and Discard Rate (%)
- Discard Rate
- Error Rate

Node Device Distribution based on Availability (%)

Availability
- 0–25%
- 51–75%
- 76–100%

Network Node Details

Node Name	Average Node Availability(%)	Average CPU Utilization(%)	Average Memory Utilization(%)	Average Buffer Utilization(%)	Average Discard Rate (%)	Average Error Rate (%)	Average CPU Utilization Exception Rate	Average Memory Utilization Exception Rate	Average Buffer Utilization Exception Rate
15.154.87.190	55.96	5.39	5.22	3.67	67.5	60	4.16	3.92	4.26
15.154.96.4		0	0	0	45	35	0	0	0
15.154.86.11					31.67	55			

Refresh Date: 2/21/16 6:35:32 AM GMT+00:00   Page 1 of 13
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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.

Network Node Availability

Displays the availability details of the monitored network nodes, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

Network — Report Period: 2/1/16 - 2/29/16

Network Node Availability

Business Service(s)	All
Business View(s) / Group(s)	All
Shift	Default_Shift — Location — All
Node Name	15.154.87.190

Average Availability %   ■ Average Availability > 95%   ■ Average Availability > 90% and < 95%   ■ Average Availability < 90%

Date / Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2/1/2016	40	40	40	40	40	40	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/2/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/3/2016	100	100	100	100	100	40	40	40	40	40	40	40	40	40	40	40	40	40	40	25	25	25	25	25
2/4/2016	25	25	25	25	25	25																		
2/5/2016																								
2/6/2016							25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
2/7/2016	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
2/8/2016	25	25	25	25	25	25																		
2/9/2016							25	25	25	25	25	25	25	25	25	25	25	25	40	40	40	40	40	40
2/10/2016	40	40	40	40	40	40	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/11/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/12/2016	100	100	100	100	100	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
2/13/2016	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
2/14/2016	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
2/15/2016	40	40	40	40	40	40	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/16/2016	100	100	100	100	100	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
2/17/2016	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
2/18/2016	40	40	40	40	40	40	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/19/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/20/2016	100	100	100	100	100	40	40	40	40	40	40	40	40	40	40	40	40	40	40	25	25	25	25	25
2/21/2016	25	25	25	25	25	25																		
2/22/2016																								

Refresh Date: 2/21/16 6:34:06 AM GMT+00:00   Page 1 of 8

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Network Component Health Reports

The Network Component Health reports provide performance data for the network components such as CPU, Memory, Buffer, SNMP response time as chart and/or table. These reports help you to monitor the backplane utilization, buffer utilization, CPU utilization, memory utilization, and also to identify the top and bottom nodes that are available and reachable. You can drill down the report from year to 5 minute data.
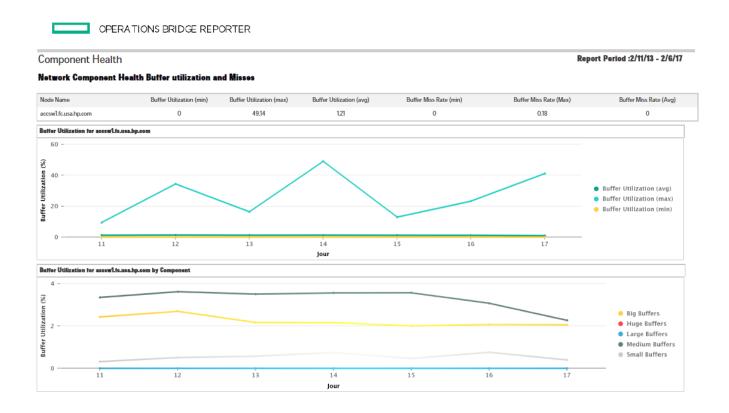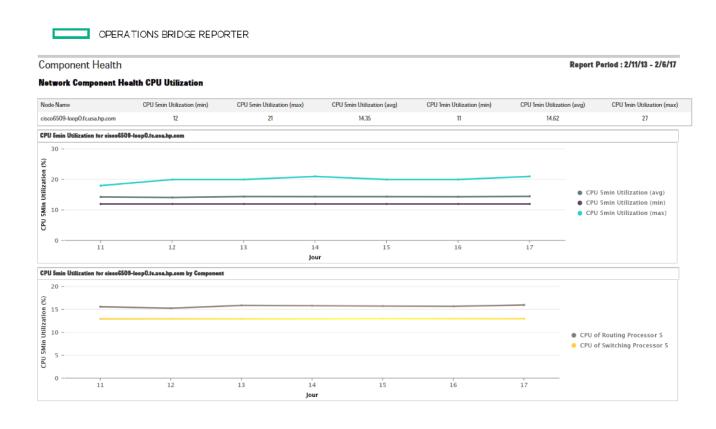
Reports

This section describes the following Network Component Health reports:

Network Component Health Backplane Utilization

Displays backplane utilization for a node. The backplane utilization is displayed on single page per node. It provides information on maximum and minimum backplane utilization for a node as table and as a chart. The second chart in the report displays average backplane utilization for selected component(s) of the node as a chart.

Network Component Health Buffer Utilization and Misses

Displays buffer utilization and buffer miss rate for a node. The buffer utilization and buffer miss rate are displayed on single page per node. It provides information on average, maximum, and minimum buffer utilization and buffer miss rate for a node as table and as a chart. The second chart in the report displays average buffer utilization for selected component(s) of the node as a chart.

OPERATIONS BRIDGE REPORTER

Component Health   Report Period :2/11/13 - 2/6/17

Network Component Health Buffer utilization and Misses

Node Name	Buffer Utilization (min)	Buffer Utilization (max)	Buffer Utilization (avg)	Buffer Miss Rate (min)	Buffer Miss Rate (Max)	Buffer Miss Rate (Avg)
accsw1.fc.usa.hp.com	0	49.14	1.21	0	0.18	0

Buffer Utilization for accsw1.fc.usa.hp.com

Buffer Utilization for accsw1.fc.usa.hp.com by Component

Refresh Date: 2/24/16 8:52:43 AM GMT+00:00   Page 8 of 37

Operations Bridge Reporter |© 2015 Hewlett Packard Enterprise Company, L.P.

Network Component Health CPU Utilization

Displays CPU 5min Utilization and CPU 1min Utilization for a node. The CPU 5min Utilization and
CPU 1min Utilization are displayed on single page per node. It provides information on average,
maximum, and minimum CPU 5min Utilization and CPU 1min Utilization for a node as table and as a
chart. The second chart in the report displays average CPU 5min Utilization for selected component(s)
of the node as a chart.

OPERATIONS BRIDGE REPORTER

Component Health   **Report Period : 2/11/13 - 2/6/17**

Network Component Health CPU Utilization

Node Name	CPU 5min Utilization (min)	CPU 5min Utilization (max)	CPU 5min Utilization (avg)	CPU 1min Utilization (min)	CPU 1min Utilization (avg)	CPU 1min Utilization (max)
cisco6509-loop0.fc.usa.hp.com	12	21	14.35	11	14.62	27

CPU 5min Utilization for cisco6509-loop0.fc.usa.hp.com

- CPU 5min Utilization (avg)
- CPU 5min Utilization (min)
- CPU 5min Utilization (max)

CPU 5min Utilization for cisco6509-loop0.fc.usa.hp.com by Component

- CPU of Routing Processor 5
- CPU of Switching Processor 5

Refresh Date: 2/24/16 8:46:27 AM GMT+00:00   Page 11 of 37

Operations Bridge Reporter |© 2015 Hewlett Packard Enterprise Company, L.P.

Network Component Health Heat Chart

Displays availability and reachability for all the selected nodes as a chart.

Network Component Health MEMORY Utilization

Displays memory utilization for a node. The memory utilization is displayed on single page per node. It provides information on maximum and minimum memory utilization for a node as table and as a chart. The second chart in the report displays average memory utilization for selected component(s) of the node as a chart.

Network Component Health Top and Bottom N Nodes

Displays average node availability , average node reachability, average SNMP response time, and average ICMP response time for top and bottom N selected nodes based on availability and reachability.

Network Component Health Overview

Displays top N node name as a chart with low availability, CPU utilization, and memory utilization for all selected nodes.

OPERATIONS BRIDGE REPORTER

Component Health

Report Period : 2/11/13 - :

Network Component Health Overview

| 2013 | 2014 | 2015 | 2016 | 2017 |

Nodes With Low Availability (avg) (Less than 100% but greater than 1%)

Node Name	Node Availability (avg)	Node Availability (max)	Node Availability (min)
internet-switch-3.fc.usa.hp.com	100	100	74.3
internet-switch-4.fc.usa.hp.com	100	100	66.6
dcbladesrvr.fc.usa.hp.com	100	100	45.6

Top 10 Nodes by Node Availability (avg)

Node Name	Node Availability (avg)	Node Availability (max)	Node Availability (min)
16.78.56.12	100	100	100
16.78.56.20	100	100	100
16.78.56.3	100	100	100
16.78.56.40	100	100	100
16.78.56.6	100	100	100
16.78.56.99	100	100	100
5uecon9.fc.usa.hp.com	100	100	100

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

Network Interface Health Reports

The Network Interface Health reports provide information about discard rate, error rate, inventory, SNMP response time, utilization, volume rate for network interfaces. These reports help you to determine the status of the interfaces on your network.

Reports

This section describes the following Network Interface Health reports:

Network Interface Health Discard Rate

Displays discard rate, discard rate in, and discard rate out for a node. The discard rate is displayed on single page per node. It provides information on average, maximum and minimum discard rate for a node as table and as a chart. The second chart in the report displays average discard rate for selected interface of the node as a chart.

Network Interface Health Error Rate

Displays error rate, error rate in, and error rate out for a node. The error rate is displayed on single page per node. It provides information on average, maximum and minimum error rate for a node as table and as a chart. The second chart in the report displays average error rate for selected interface of the node as a chart.
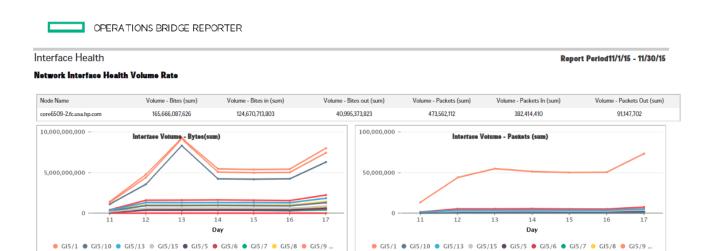
Network Interface Health Inventory Report
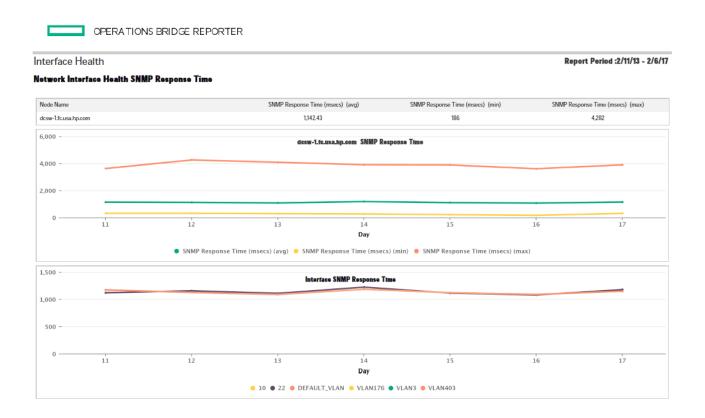
Provides information on network health inventory such as interface name, interface type, tenant name, and security or group name for groups. It also provides inventory summary for a particular inventory with number of nodes, tenant name, qualified interface and interface type.

Network Interface Health Overview

Provides overview of health of the network interfaces available in your environment. Displays interfaces by their volume, discard rate, and errors. It also displays interfaces with low availability of less than 100% and greater than 1%, and interfaces with lowest availability.

Network Interface Health SNMP Response Time

Displays SNMP Response Time for a node. The SNMP Response Time is displayed on single page per node. It provides information on average, maximum and minimum SNMP Response Time for a node as table and as a chart. The second chart in the report displays average SNMP Response Time for selected interface of the node as a chart.
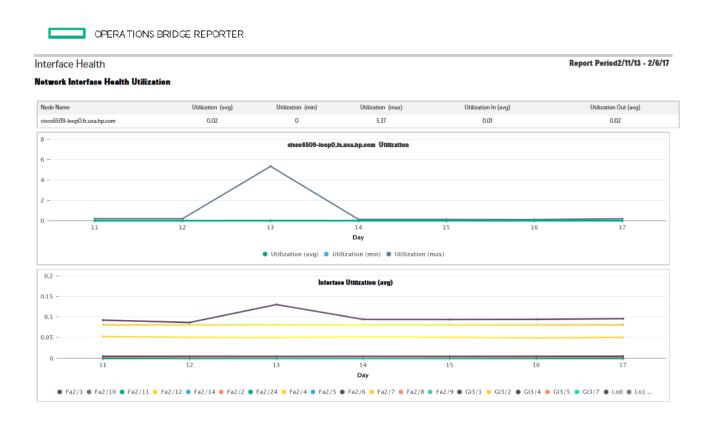
Network Interface Health Top and Bottom N Nodes

Displays top and bottom N nodes based on node availability and SNMP response time. The Top and Bottom N Availability and Top and Bottom N Node by SNMP Response tabs provides information such as average node availability, SNMP response time, utilization, throughput, discard rate, and error rate for top and bottom N node names based on node availability and SNMP response time.

Network Interface Health Utilization

Displays utilization, utilization in, and utilization out for a node. The utilization is displayed on single page per node. It provides information on average, maximum and minimum utilization for a node as table and as a chart. The second chart in the report displays average utilization for selected interface of the node as a chart.

OPERATIONS BRIDGE REPORTER

Interface Health   Report Period2/11/13 - 2/6/17

Network Interface Health Utilization

Node Name	Utilization (avg)	Utilization (min)	Utilization (max)	Utilization In (avg)	Utilization Out (avg)
cisco6509-loop0.fc.usa.hp.com	0.02	0	5.37	0.01	0.02

cisco6509-loop0.fc.usa.hp.com Utilization

● Utilization (avg)   ● Utilization (min)   ● Utilization (max)

Interface Utilization (avg)

● Fa2/1 ● Fa2/10 ● Fa2/11 ● Fa2/12 ● Fa2/14 ● Fa2/2 ● Fa2/24 ● Fa2/4 ● Fa2/5 ● Fa2/6 ● Fa2/7 ● Fa2/8 ● Fa2/9 ● GI3/1 ● GI3/2 ● GI3/4 ● GI3/5 ● GI3/7 ● Lo0 ● Lo1 ...

Network Interface Health Volume Rate

Displays graphical representation of interface health by volume rate far a specific time period. Displays the volume rate for bites and packets in terms of sum of bites in, bites out, packets in, and packets out.

OPERATIONS BRIDGE REPORTER

Interface Health

Report Period11/1/15 - 11/30/15

Network Interface Health Volume Rate

Node Name	Volume - Bites (sum)	Volume - Bites in (sum)	Volume - Bites out (sum)	Volume - Packets (sum)	Volume - Packets In (sum)	Volume - Packets Out (sum)
core6509-2.fc.usa.hp.com	165,666,087,626	124,670,713,803	40,995,373,823	473,562,112	382,414,410	91,147,702

Operations Bridge Reporter |© 2015 Hewlett Packard Enterprise Company, L.P.

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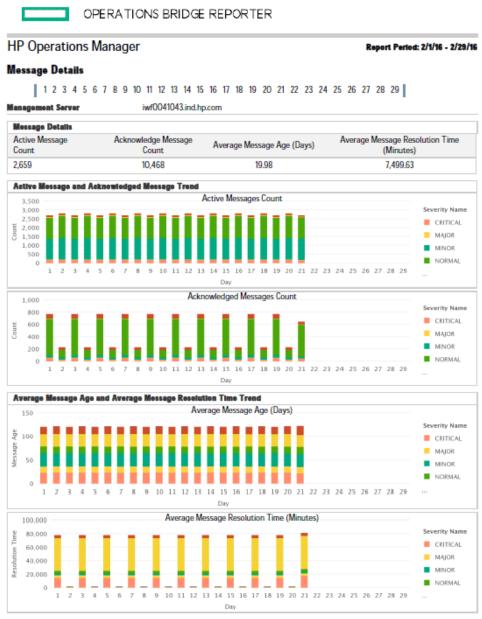
The HPOM reports provide detailed information about the messages sent to the management console of a particular HPOM management server. They help in analyzing the message trends based on their severity and resolution time so that one can proactively resolve the underlying bottlenecks before they impact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

Reports

This section describes the following HPOM reports:

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.
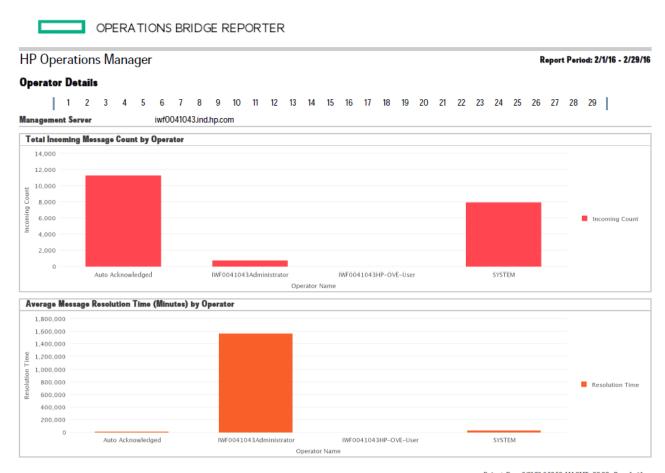
HPOM Message Trend and Responsiveness

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 Report

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. The number of active messages are more this means that the application, service, node, or node group has problems and requires attention.

Service and Operations Bridge (OMi)

The Service and Operations Bridge reports provide information about the events from HP Operations Manager I (inclusive of events forwarded from SiS, OM, NNM, 3rd party products etc.).

Reports

This section describes the following Service and Operations Bridge reports:

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.
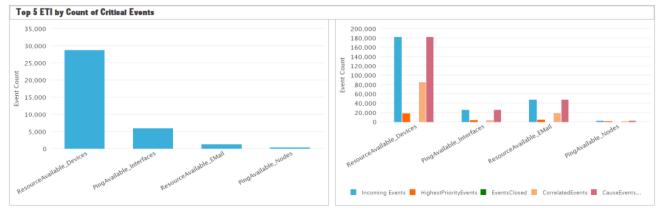
OMi Event Distribution Executive Summary

Displays the summary of the event distribution by application, Event Type Indicator (ETI), and CI type for specified time period.

OPERATIONS BRIDGE REPORTER

Operations Management (OMi)

Report Period: 2/1/16 - 2/29/16

OMi Event Distribution Executive Summary

Top 5 ETI by Count of Critical Events

| | Incoming Events | HighestPriorityEvents | EventsClosed | CorrelatedEvents | CauseEvents... |

Event Statistics by ETI for the Period 2/1/16 - 2/29/16

Event Type Indicator	Critical Events	Incoming Events	Avg Closure Time (in min)	Average Time To Respond (in min)	Average Resolution Time (in min)
HardwareAvailable_Disk	0	31,881	120.00	45.00	56.00
PingAvailable_Interfaces	5,802	24,990	120.00	45.00	56.00
PingAvailable_Nodes	192	1,038	0	0	0
ResourceAvailable_Devices	28,602	181,224	120.00	45.00	56.00
ResourceAvailable_EMail	1,143	46,638	120.00	45.00	56.00
SoftwareAvailable_Oracle	0	39,360	120.00	45.00	56.00

Refresh Date: 2/21/16 7:00:48 AM GMT+00:00   Page 1 of 1

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

OMi Event Forecast Summary

Helps predict the incoming events from different domains such as Systems, Network, Microsoft SQL, and so on based on past data. These reports help you assess the increasing or decreasing trend of the incoming events per domain and the average event resolution time.

OPERATIONS BRIDGE REPORTER

Operations Management (OMi)　　　　　　　　**Report Period: 2016-01 - 2016-05**

OMi Event Forecast Summary

Domain Name	AppServer

Incoming Events - Trend and Forecast

Average Resolution Time - Trend and Forecast

Event Forecast Summary

Domain Name	Incoming Events Forecast			Avg Resolution Time (Mins) Forecast		
	2016-03	2016-04	2016-05	2016-03	2016-04	2016-05
AppServer	20,400	20,400	20,400			

Refresh Date: 2/25/16 4:01:39 AM GMT+00:00   Page 2 of 6

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

OMi Event Summary by Significance

Displays event by significance, percentage of cause, count of events by distribution, and count of correlated events.

Top N Categories by Events

Displays the Top N (5,10, 15) event count of categories, such as category name, critical event, minor events, warning events, normal events, unknown events, and total events.

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.
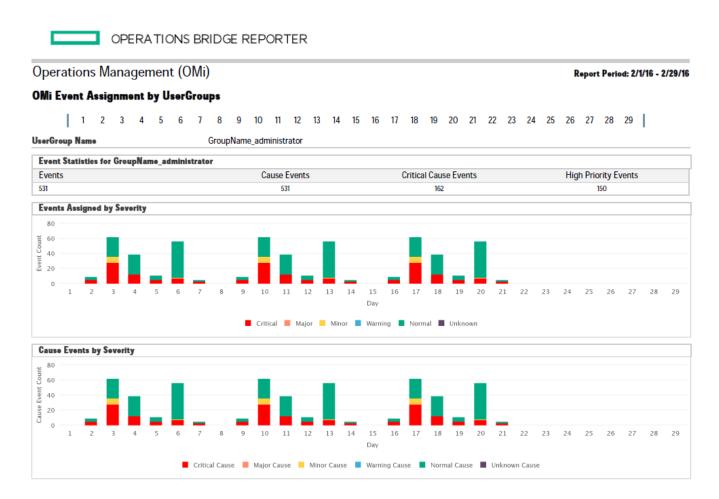
OMi Event Backlog Overload Correlation by User Groups

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. HPE OBR verifies if an ETI is a Health Indicator and if the K_HI dimension table is populated before the report is generated.
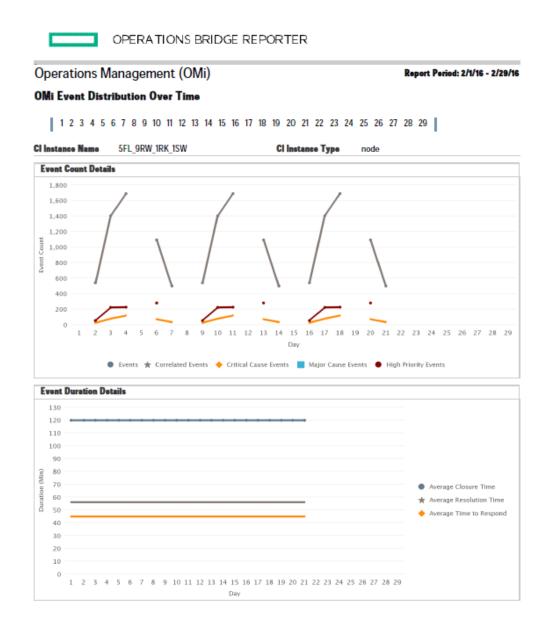
Event Trend

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.

OPERATIONS BRIDGE REPORTER

Operations Management (OMi)

Report Period: 2/1/16 - 2/29/16

OMi Event Distribution Over Time

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

| CI Instance Name | 5FL_9RW_1RK_1SW | CI Instance Type | node |

Event Count Details

● Events ★ Correlated Events ◆ Critical Cause Events ■ Major Cause Events ● High Priority Events

Event Duration Details

● Average Closure Time
★ Average Resolution Time
◆ Average Time to Respond

Refresh Date: 2/21/16 6:43:49 AM GMT+00:00   Page 5 of 78
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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.

Reports

This section describes the following System Management reports:

Executive Summary Reports

SM Executive Summary
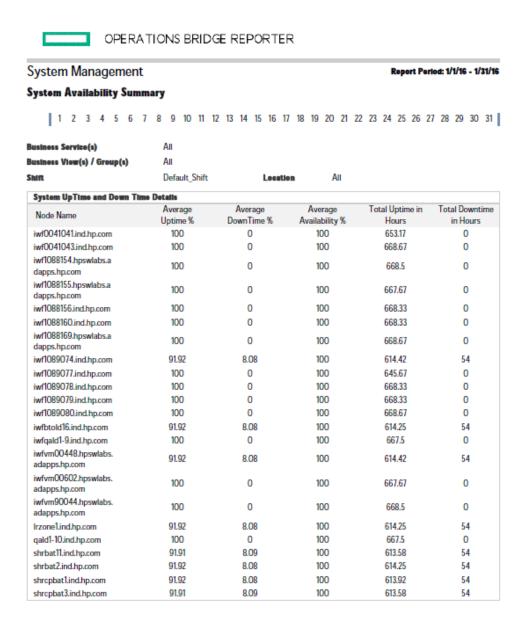
Displays inventory, summary of present and forecasted capacity and usage data of system resources, along with the availability, and exceptions in systems for a given Business Service or Business View/Node group.

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 or Business View/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.

OPERATIONS BRIDGE REPORTER

System Management   Report Period: 1/1/16 - 1/31/16

System Availability Summary

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 |

Business Service(s)	All		
Business View(s) / Group(s)	All		
Shift	Default_Shift	**Location**	All

System UpTime and Down Time Details

Node Name	Average Uptime %	Average DownTime %	Average Availability %	Total Uptime in Hours	Total Downtime in Hours
iwf0041041.ind.hp.com	100	0	100	653.17	0
iwf0041043.ind.hp.com	100	0	100	668.67	0
iwf1088154.hpswlabs.adapps.hp.com	100	0	100	668.5	0
iwf1088155.hpswlabs.adapps.hp.com	100	0	100	667.67	0
iwf1088156.ind.hp.com	100	0	100	668.33	0
iwf1088160.ind.hp.com	100	0	100	668.33	0
iwf1088169.hpswlabs.adapps.hp.com	100	0	100	668.67	0
iwf1089074.ind.hp.com	91.92	8.08	100	614.42	54
iwf1089077.ind.hp.com	100	0	100	645.67	0
iwf1089078.ind.hp.com	100	0	100	668.33	0
iwf1089079.ind.hp.com	100	0	100	668.33	0
iwf1089080.ind.hp.com	100	0	100	668.67	0
iwfbtold16.ind.hp.com	91.92	8.08	100	614.25	54
iwfqald1-9.ind.hp.com	100	0	100	667.5	0
iwfvm00448.hpswlabs.adapps.hp.com	91.92	8.08	100	614.42	54
iwfvm00602.hpswlabs.adapps.hp.com	100	0	100	667.67	0
iwfvm90044.hpswlabs.adapps.hp.com	100	0	100	668.5	0
lrzone1.ind.hp.com	91.92	8.08	100	614.25	54
qald1-10.ind.hp.com	100	0	100	667.5	0
shrbat11.ind.hp.com	91.91	8.09	100	613.58	54
shrbat2.ind.hp.com	91.92	8.08	100	614.25	54
shrcpbat1.ind.hp.com	91.92	8.08	100	613.92	54
shrcpbat3.ind.hp.com	91.91	8.09	100	613.58	54

Refresh Date: 2/21/16 9:33:32 AM GMT+00:00 Page 1 of 1

Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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 or standalone systems and virtual hosts, such as ESX servers, 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.
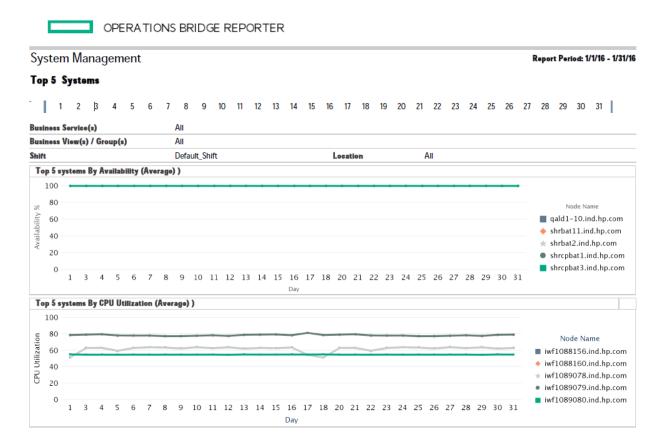
SM System Inventory

Displays the overall information and values of key resources for the systems in a Business Service or Business View/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 or Business View/Node group.

SM Top and Bottom 5 Systems

Displays the top and bottom five systems based on the average availability, and the average of the CPU utilization or memory utilization over the selected period of time.
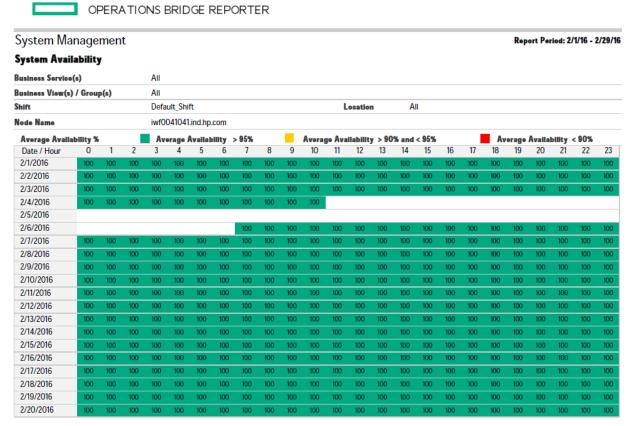
SM Top and Bottom 10 Filesystems by Free Space Utilization

Displays the top and bottom 10 performance of filesystems based on free space utilization over a period of time.

SM System Availability

Displays the average availability of the monitored system nodes, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

System Management

Report Period: 2/1/16 - 2/29/16

System Availability

Business Service(s)	All		
Business View(s) / Group(s)	All		
Shift	Default_Shift	Location	All
Node Name	iwf0041041.ind.hp.com		

Average Availability % — ■ Average Availability > 95% ▢ Average Availability > 90% and < 95% ■ Average Availability < 90%

Date / Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2/1/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/2/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/3/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/4/2016	100	100	100	100	100	100	100	100	100	100	100													
2/5/2016																								
2/6/2016								100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/7/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/8/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/9/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/10/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/11/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/12/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/13/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/14/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/15/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/16/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/17/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/18/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/19/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2/20/2016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Refresh Date: 2/21/16 9:30:38 AM GMT+00:00   Page 1 of 46

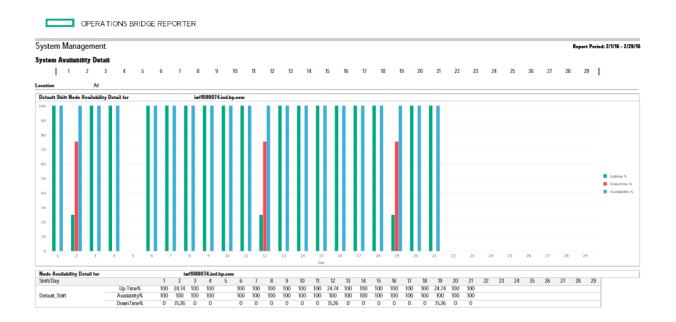Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

## *Performance Reports*

SM System Availability Detail

Displays the uptime, downtime, and availability percentages for the selected nodes over the specified period of time. Displays the availability details of the monitored system nodes, as a heat-map based on predetermined thresholds, for every hour across the selected time period.

OPERATIONS BRIDGE REPORTER

System Management   Report Period: 2/1/16 - 2/29/16

System Availability Detail

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Location   All

Default Shift Node Availability Detail for   iwf1089074.ind.hp.com

Legend:
- Uptime %
- Downtime %
- Availability %

Node Availability Detail for   iwf1089074.ind.hp.com

Shift/Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	Up Time%	100	24.74	100	100		100	100	100	100	100	100	24.74	100	100	100	100	100	100	24.74	100	100							
Default_Shift	Availability%	100	100	100	100		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100							
	DownTime%	0	75.26	0	0		0	0	0	0	0	0	75.26	0	0	0	0	0	0	75.26	0	0							

Refresh Date: 2/21/16 9:50:14 AM GMT+00:00   Page 27 of 63
Operations Bridge Reporter I© 2015 Hewlett Packard Enterprise Company, L.P.

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.
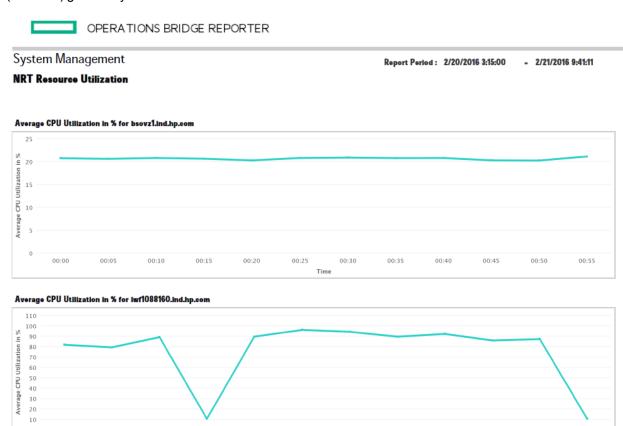
SM Filesystem Utilization Detail

Displays fine grain details of the 10 best and worst performing filesystems.

Operational Reports

NRT Resource Utilization

Displays the resource utilization trend of the selected node and the selected metric at the 5- minute (rate data) granularity for the last 24 hours.

Resource Utilization - Trend

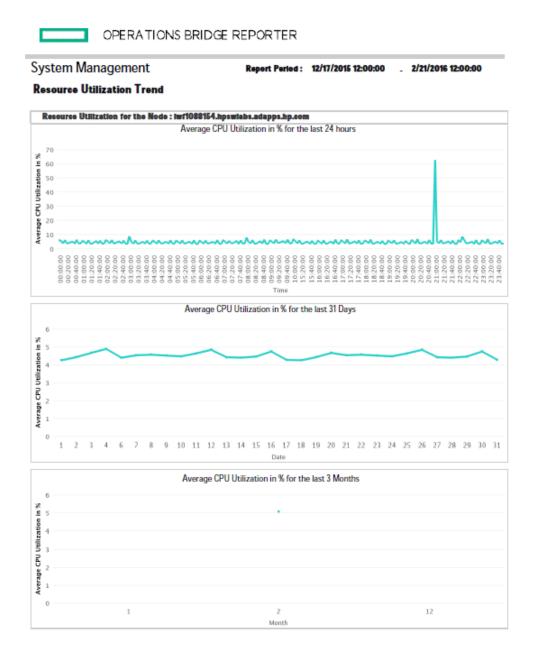Displays the trend of resource utilization of the selected node over the following time periods:

- 5- minute (rate data) granularity for the last 24 hours

- Hourly (hourly data) granularity for the last 31 days

- Daily (daily data) granularity for the last 3 months

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.

Reports

This section describes the following Virtualized Environment Management reports:
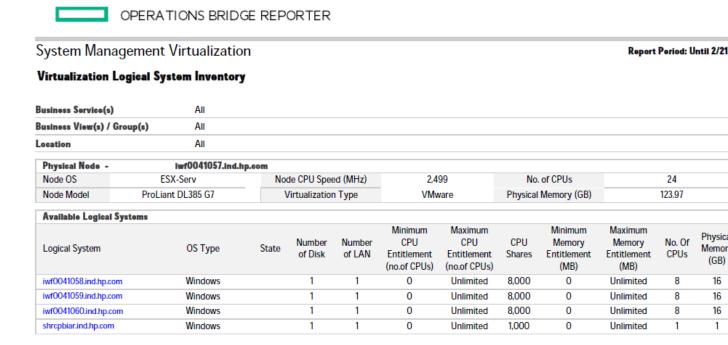
Executive Summary Reports

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.

OPERATIONS BRIDGE REPORTER

System Management Virtualization   **Report Period: Until 2/21**

Virtualization Logical System Inventory

Business Service(s)	All
Business View(s) / Group(s)	All
Location	All

Physical Node -	iwf0041057.ind.hp.com				
Node OS	ESX-Serv	Node CPU Speed (MHz)	2,499	No. of CPUs	24
Node Model	ProLiant DL385 G7	Virtualization Type	VMware	Physical Memory (GB)	123.97

Available Logical Systems

Logical System	OS Type	State	Number of Disk	Number of LAN	Minimum CPU Entitlement (no.of CPUs)	Maximum CPU Entitlement (no.of CPUs)	CPU Shares	Minimum Memory Entitlement (MB)	Maximum Memory Entitlement (MB)	No. Of CPUs	Physica Memor (GB)
iwf0041058.ind.hp.com	Windows		1	1	0	Unlimited	8,000	0	Unlimited	8	16
iwf0041059.ind.hp.com	Windows		1	1	0	Unlimited	8,000	0	Unlimited	8	16
iwf0041060.ind.hp.com	Windows		1	1	0	Unlimited	8,000	0	Unlimited	8	16
shrcpbiar.ind.hp.com	Windows		1	1	0	Unlimited	1,000	0	Unlimited	1	1

Operations Bridge Reporter |© 2015 Hewlett Packard Enterprise Company, L.P.

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.

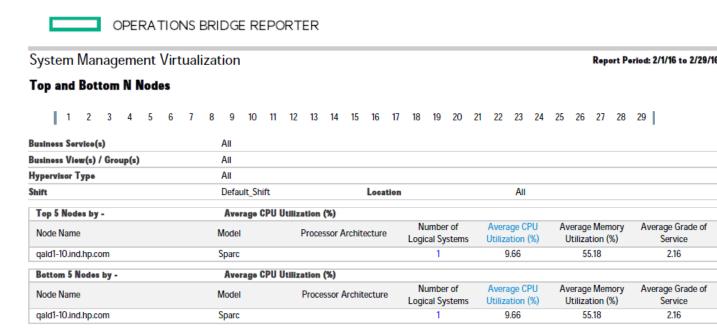**SM Virtualization Resource Outage Risk Forecast Summary**

Displays the physical systems that are projected to cross the threshold value for CPU and memory utilization within the next 30, 60 and 90 days, for a given Business Service or Business View/Node group. It also displays the virtual machines that are hosted on the affected physical systems. It displays the affected virtual hosts and number of VMs hosted on each servers. A cross launch option is also available to do more detailed analysis on affected VMs.

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 or Business View/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 or Business View/Node group.

OPERATIONS BRIDGE REPORTER

System Management Virtualization   Report Period: 2/1/16 to 2/29/16

Top and Bottom N Nodes

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 |

Business Service(s)	All		
Business View(s) / Group(s)	All		
Hypervisor Type	All		
Shift	Default_Shift	Location	All

Top 5 Nodes by -	Average CPU Utilization (%)					
Node Name	Model	Processor Architecture	Number of Logical Systems	Average CPU Utilization (%)	Average Memory Utilization (%)	Average Grade of Service
qald1-10.ind.hp.com	Sparc		1	9.66	55.18	2.16

Bottom 5 Nodes by -	Average CPU Utilization (%)					
Node Name	Model	Processor Architecture	Number of Logical Systems	Average CPU Utilization (%)	Average Memory Utilization (%)	Average Grade of Service
qald1-10.ind.hp.com	Sparc		1	9.66	55.18	2.16

Refresh Date: 2/21/16 10:08:56 AM GMT+00:00   Page 1 of 1
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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 Reports

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.

OPERATIONS BRIDGE REPORTER

System Management Virtualization Report Period: Until 2/21/16

VMware ESX Server detail inventory

Location	All

ESX Node Name: ordvz3.bbn.hp.com

Node OS	ESX-Serv	Physical Memory (GB)	123.97
Node Model	ProLiant DL385 G7	No. of CPUs	24

Available Logical Systems

Logical System	Logical System OS	Number Of Disks	Number Of Virtual CPUs	Number Of Network Interfaces	CPU Reservation (MHz)	CPU Limit (MHz)	Memory Reservation (MB)	Memory Limit (MB)
iwf0041049.bbn.hp.com	Windows	1	8	1	0	Unlimited	0	Unlimited
iwf0041050.bbn.hp.com	Windows	1	8	1	0	Unlimited	0	Unlimited
iwf0041051.bbn.hp.com	Windows	1	8	1	0	Unlimited	0	Unlimited
shrcp8943.bbn.hp.com	Windows	1	1	1	0	Unlimited	0	Unlimited

Refresh Date: 2/21/16 10:11:56 AM GMT+00:00 Page 6 of 11
Operations Bridge Reporter | © 2015 Hewlett Packard Enterprise Company, L.P.

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.

OPERATIONS BRIDGE REPORTER

System Management Virtualization   **Report Period: Until 2/21/16**
VMware Inventory
This Report displays the Inventory Details of the VMware Cluster and Non Cluster ESX Nodes.

Summary

Number of Clusters	Total CPU Capacity(GHz)	Total Memory Capacity (GB)	Number Of ESX Nodes	Number Of Logical Systems	VM density
3	441.49	921.79	14	62	4.43

Cluster Inventory

Cluster Name	Total CPU Capacity (GHz)	CPU Unreserved (GHz)	Number Of CPU Cores	Total Memory Capacity (GB)	Number Of ESX Nodes	Number Of Logical Systems
SHRDevCluster	245.28	244.67	96	575.89	8	46
SHRQACluster	76.26	76.26	24	153.97	4	14
SHRRDCluster	119.95	119.95	48	191.93	2	2

Non Cluster inventory - ESX Nodes

ESX Node	Model	CPU Speed (MHz)	CPU Capacity (GHz)	CPU Cycle Unreserved (GHz)	Memory Capacity (GB)	Number Of Logical Systems	Number Of CPU Cores	Number Of Disks	Number Of Network Interfaces

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 ESX Servers Top and Bottom N

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 or Business View/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 or Business View/Node group.

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 Handbook of Reports (Operations Bridge Reporter 10.10)

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@hpe.com.

We appreciate your feedback!