HP Business Availability Center

for the Windows and Solaris operating systems

Software Version: 7.50

Reference Information

hp ®

i n v e n t

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This manual's title page contains the following identifying information:

- Software version number, which indicates the software version
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- Software release date, which indicates the release date of this version of the software

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Table of Contents

Welcome to This Guide

This guide provides general reference information for HP Business Availability Center.

This chapter includes:

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➤ Who Should Read This Guide on page 8

➤ Getting More Information on page 8

How This Guide Is Organized

The guide contains the following chapters:

Part I   UCMDB Reference

Explains how to customize tables that are part of the user interface; provides examples of regular expressions; provides a list of relationships used in HP Business Availability Center and provides details on how to build a URL that opens a specific HP Business Availability Center page directly in your browser.

Part II   Data

Describes the data samples and their fields that are available in various contexts in HP Business Availability Center (including Custom Reports, Measurement Filters, and Custom Query Builder).

Part III   Dates and Times

Describes date and time reference information for HP Business Availability Center.

Part IV   Troubleshooting

Describes the problems that arise while working with or administering HP Business Availability Center; lists the available log files; and lists the considerations and limitations when working in a non-English locale.

Who Should Read This Guide

This guide is intended for the following users of HP Business Availability Center:

➤ HP Business Availability Center administrators

➤ HP Business Availability Center platform administrators

➤ HP Business Availability Center application administrators

➤ HP Business Availability Center data collector administrators

Readers of this guide should be knowledgeable about enterprise system administration and HP Business Availability Center.

Getting More Information

For a complete list of all online documentation included with HP Business Availability Center, additional online resources, information on acquiring documentation updates, and typographical conventions used in this guide, see the *HP Business Availability Center Deployment Guide* PDF.

Part I

UCMDB Reference

1

Working with Tables

This chapter explains how to customize tables that you use when working with HP Universal CMDB.

This chapter includes:

Reference

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Columns User Interface

This section describes:

➤ Customizing Columns on page 12

➤ Select Columns Dialog Box on page 13

➤ Select Columns Dialog Box on page 14

➤ Set Rows Per Page Dialog Box on page 15

✎ **Customizing Columns**

Description	Enables you to customize tables by changing column width, changing the display order of the columns, or displaying only specific columns.

The following elements are included in table headings (unlabeled GUI elements are shown in angle brackets):

GUI Element (A–Z)	Description
<Right-click a header>	Click a column header to sort its contents in either ascending or descending order.
Auto-resize Column	Right-click the column header to change the column width to fit the contents.
Hide Column	Right-click the column header of the column to hide the column.
Select Columns	Right-click the column header to hide and display columns, and change their display. Opens the Select Columns dialog box.
Show All Columns	Right-click the column header to display all hidden columns. Displayed when a column is hidden.

⚙ **Select Columns Dialog Box**

Description	Enables you to select the columns to be displayed.
	To access: Click the **Select Columns** ⏸ button. This button appears above every table in a report.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
➡	Displays a column. Moves the selected column from the **Available Columns** pane to the **Visible Columns** pane.
⬅	Hides a selected column. Moves the selected column from the **Visible Columns** pane to the **Available Columns** pane.
➡	Displays all hidden columns. Moves all the columns from the **Available Columns** pane to the **Visible Columns** pane.
Available Columns	The columns in this pane do not appear in the table. Select the columns to be included in the report.
Default	Restores the report columns to their original status.
Visible Columns	The columns in this pane are visible in the table.

⚛ Select Columns Dialog Box

Description	Enables you to choose the information you are interested in displaying. You can change the display order of the columns, hide a column, or display a hidden column.
	To access: Right-click a column header and select **Select Columns** or click the ▥ **Customize Columns** button.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A–Z)	Description
➡	Displays a hidden column. Moves the selected column from the **Hidden Columns** pane to the **Visible Columns** pane.
⬅	Hides a selected column. Moves the selected column from the **Visible Columns** pane to the **Hidden Columns** pane. **Note**: Alternatively, you can right-click the required column in the table itself and select **Hide Column**.
⇶	Displays all hidden columns. Moves all the columns from the **Hidden Columns** pane to the **Visible Columns** pane (whether or not the columns are selected). **Note**: Alternatively, you can right-click the required column in the table itself and select **Show All Columns**. This option only appears if at least one column has already been hidden.
⇷	Hides all selected columns. Moves all the columns from the **Visible Columns** pane to the **Hidden Columns** pane.
⬆ ⬇	Moves one selected column up or down to determine the position of the column.
Hidden Columns	The columns in this pane do not appear in the table.
Visible Columns	The columns in this pane are visible in the table.

🔦 Set Rows Per Page Dialog Box

Description	Enables you to determine the number of node/CI instances that appear on a page. Enter the required number in the **Set rows per page** field.
	To access: Click **Set Rows Per Page** 📄 in a table.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element	Description
Set rows per page	Enter the required number.

2

Regular Expression Examples

This chapter provides examples of regular expressions.

This chapter includes:

Reference

➤ Examples of Regular Expressions on page 17

Examples of Regular Expressions

➤ Enter a regular expression to define an IP address (aa.yy.zz.mm):

To:	In the First Field Enter:	In the Second Field Enter:
Create label by aa	(.*)([.].*[.].*[.].*)	1
Create label by yy	(.*[.])(.*)([.].*[.].*)	2
Create label by zz	(.*[.].*[.])(.*)([.].*)	2
Create label by mm	(.*[.].*[.].*[.])(.*)	2

➤ Enter a regular expression to create the label by the first or last letters of the selected attribute:

To:	In the First Field Enter:	In the Second Field Enter:
Create label by the first letter	(.)(.*)	1
Create label by the last letter	(.*)(.)	2

To:	In the First Field Enter:	In the Second Field Enter:
Create label by the first two letters	(..)(.*)	1
Create label by the last two letters	(.*)(..)	2

3

Relationship Definitions

This chapter defines the types of relationships used in HP Business Availability Center.

This chapter includes:

Reference

Relationship Type Definitions

backbone

A physical connection between two switches. The relationship is discovered by the Discovery Network – Layer 2 module.

bcastdomain

The relationship between an elan (emulated LAN) and a switch.

bridgebackbone

A physical connection between two switches connecting a switch port to a switch bridge. The relationship is discovered by the Discovery base service.

brother

The relationship among elements which share the same parent.

chassiselanmap

The relationship between a chassis and an elan (emulated LAN).

chassisvlanmap

The relationship between a chassis and a vlan (virtual LAN).

clientserver

A row of data from the tcpConnLocalAddress table in the Management Information Base (MIB) tree. This data contains information about the TCP connection between the ports of two hosts when a differentiation can be made between the server port and the client port. The tcpConnLocalAddress table lies in the MIB address **1.3.6.1.2.1.6.13.1.2**. The clientserver relationship is discovered by the Discovery TCP connection collector.

contained

The relationship between two CIs whereby a second CI is included in the first CI. This relationship exists only between an IP and host.

container_f

The functional relationship between a parent and a child. The child does not inherit any properties.

contains

The relationship between two CIs whereby a second CI is included in the first CI.

dbclient

The relationship between a process and a database.

dblink

The relationship between a database and a database link object.

depend

The relationship wherein one CI needs the functionality of another CI.

dependency

The relationship wherein one CI needs the functionality of another CI.

deployed

The relationship wherein one CI is put into action by another CI.

elanvlanmap

The relationship between elan (emulated LAN) and vlan (virtual LAN) network components.

execute

The relationship between an agent and the job it deploys.

j2eesocket

The relationship between a server and a remote client.

layertwo

The physical connection between a switch and a host. The layertwo relationship is discovered by the Discovery layer 2 service.

member

The relationship between two CIs whereby one CI is included in another CI.

mqalias

The relationship between an alias queue and a local queue.

mqchannelof

The relationship between a channel and its transmission queue.

mqmqilink

The relationship between client and server channels for Message Queue Interface (MQI) calls.

mqmsglink

The relationship between two channels for message transfer.

mqrepository

The relationship between a message queue cluster and a message queue queue manager.

mqresolve

The relationship between a remote queue and the local queue to which it is mapped.

nfs

Network file server.

owner

> The user of a resource.

parent

> The relationship between elements where one element is parent of the other. For example, ip is the parent of interface.

pnniconnection

> The relationship between two ATM ports.

resource

> The relationship between elements where one element is the resource of the other. For example, dbsnapshot is the resource of dblinkobject.

route

> A row of data from the routing table in the Management Information Base (MIB) tree, containing the data of the next_hop IP address and the destination network address. The routing table lies in the MIB address **1.3.6.1.2.1.4.21.1.7**. The relationship is discovered by the Discovery route collector.

sap_rfc_connection

> The relationship between a SAP system and a host. The host may be another SAP system or a non-SAP system.

share

> The relationship between two drives.

talk

> The relationship between two hosts.

tcp

> A row of data from the tcpConnLocalAddress table in the Management Information Base (MIB) tree. This data contains information about the TCP connection between the ports of two hosts when a differentiation can be made between the server port and the client port. The tcpConnLocalAddress table lies in the MIB address **1.3.6.1.2.1.6.13.1.2**. The relationship is discovered by the Discovery TCP connection collector.

traffic

> Represents all network flow, regardless of protocol, between two IPs.

uniconnection

> The relationship between an ATM port and an IP.

unnumbered

> A row of data from the routing table in the Management Information Base (MIB) tree. This data contains information about the next_hop IP address and the destination network address. The routing table lies in the MIB address **1.3.6.1.2.1.4.21.1.7**. Unnumbered relationships are discovered by the base collector.

usb

> The relationship between two interfaces.

use

> The relationship between elements whereby one element uses the other. For example, process uses file.

virtual

> The relationship between a router and its virtual IP.

vlanmembership

> The relationship between a vlan (virtual LAN) and a physical port.

vlantobridge

> The relationship between a vlan (virtual LAN) and a bridge.

Part II

Data

4

Data Samples

This chapter describes the data samples, and their fields, that are available in various contexts in HP Business Availability Center (including Custom Reports, Measurement Filters, and Custom Query Builder). These samples can also be used to create queries to extract data from the HP Business Availability Center profile database using the HP Business Availability Center API.

This chapter includes:

🔍 Special Fields

This section describes the special fields that are available in various HP Business Availability Center contexts.

IP Addresses

In some samples, IP addresses are returned as 32 bits representing an array of four bytes. Each byte represents a segment of the IP address. To get the standard text representation of an IP address, convert the returned value to binary and pad left with zeros to a length of 32. Convert each eight bits separately into decimal representation and concatenate the text representation of the resulting numbers together with decimal points between the numbers.

For example:

```
The query returns: 167772247
The binary representation is: 1010000000000000000001010111
Pad to length of 32: 00001010000000000000000001010111
Split into bytes: 00001010.00000000.00000000.01010111
Convert each byte to decimal and present with the standard IP format: 10.0.0.87
```

Time Stamps

Time in queries and return data is a double data type representing seconds since January 1, 1970. For details on understanding date-time values returned by queries, see "Date-Time Values" in *Solutions and Integrations*.

🔍 Data Samples for Dashboard

This section describes the samples and sample fields for Dashboard data (that is, data processed by the Business Logic Engine). These samples use the Universal Data Exchange (UDX) framework, and are thus available for filtering in the Measurement Filters page (for details, see "Working with Measurement Filters" in *Platform Administration*).

Limitation: There is currently no configuration item name field, and it is not possible to map CI names to their CMDB IDs (entity_id field). As such the value of these samples is limited.

The samples and sample fields for Dashboard are:

➤ "Sample: KPI Statuses (bl_kpi_ot_ke)" on page 29

➤ "Sample: KPI Values (bl_kpi_ot_kt)" on page 30

Sample: KPI Statuses (bl_kpi_ot_ke)

The KPI Statuses sample (bl_kpi_ot_ke) contains data used when generating the KPIs Over Time report.

Field	Display Name	Data Type	Units	Description
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
entity_id	CMDB Entity id	BINARY		Configuration ID of CI
heartbeat	Heartbeat	INT	0 or 1	If 0, data sample representing status change has been sent from the source If 1, no status change has been sent from the source in the last 24 hours

Field	Display Name	Data Type	Units	Description
kpi_id	Kpi instance cmdb id	BINARY		Configuration ID of KPI instance
kpi_type	Kpi type	INT		The ID of the KPI, as displayed in the Repositories page (**Admin > Dashboard > Repositories > KPIs**)
sampletype		STRING		The name of the sample
status	Status	INT		The ID as defined in the **From** field in the Parameter Details window (**Admin > Dashboard > Repositories > KPIs > clone/override KPI > click the Edit Entity button > Item Details > click the parameter to display the Parameter Details window**)
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
TUID		STRING		Internal ID

Sample: KPI Values (bl_kpi_ot_kt)

The KPI Values sample (bl_kpi_ot_kt) contains data used when generating the KPI Over Time report.

Field	Display Name	Data Type	Units	Description
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
entity_id	CMDB Entity id	BINARY		Configuration ID of CI
kpi_id	Kpi instance cmdb id	BINARY		Configuration ID of KPI instance

Field	Display Name	Data Type	Units	Description
kpi_type	Kpi type	INT		The ID of the KPI, as displayed in the Repositories page (**Admin** > **Dashboard** > **Repositories** > **KPIs**)
sampletype		STRING		The name of the sample
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
TUID		STRING		Internal ID
Value	Value	DOUBLE	Depends on related rule	The result of the business rule calculation

🔍 Data Samples for SiteScope

This section describes the samples and sample fields for SiteScope data:

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➤ "Sample: SiteScope Heartbeat (ss_heartbeat)" on page 34

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➤ "Sample: SiteScope Measurement (ss_t)" on page 38

➤ "Sample: SiteScope Measurement Aggregation (ss_hr_t)" on page 40

Sample: SiteScope Monitor (ss_monitor_t)

The SiteScope Monitor sample (ss_monitor_t) includes the monitor data measured by SiteScope.

Field	Display Name	Data Type/Units	Description
cfg_frequency	Configuration Frequency	DOUBLE	The configuration frequency of the monitor
class_logical_name		STRING	The monitor class display name (for example, **CPU** for CPU monitor)
class_real_name		STRING	The monitor class name
class_type_id		U_INT	The ID that corresponds to the monitor class name
strCustomer Name	Customer Name	STRING	Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
dTime		DOUBLE/milli-seconds	Time stamp of when the measurement was taken
frequency	Frequency	DOUBLE	The average frequency that the monitor was run
monitor_ description		STRING	The description of the monitor (sent only in configuration sample)
monitor_full_id		STRING	The ID of the monitor, including the profile name and the full monitor ID (sent only in configuration sample)
monitor_full_path		STRING	The path of the monitor, including the groups in which the monitor is defined (sent only in configuration sample)
monitor_logical_ name	Monitor Name	STRING	The display name of the monitor
profile_name	Profile Name	STRING	Profile name
strCustomerName	Customer Name	STRING	Same as customer_name

Field	Display Name	Data Type/Units	Description
szConnectionName		STRING	Name of the instance of the monitor that monitors the measurement
szMonitorName	Monitor Type	STRING	Type of monitor that retrieved that measurement
szSessionName		STRING	HP Business Availability Center session name to which the sample belongs
szStatusMessage	Status Message	STRING	In **Normal** status, field is empty; in **No data** status, field returns reason for No Data status (for example, monitor disabled or monitor suspended)
szTargetName	Target Name	STRING	Name of the host that the monitor monitors
time_stamp		DOUBLE/seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
u_iConnectionId		U_INT	ID of the instance of the monitor that monitors the measurement
u_iMonitorId		U_INT	HP Business Availability Center ID of the monitor that retrieved the measurement
u_iQuality	Quality	U_INT	Quality of the measurement from 0 to 3 (3 is bad)
u_iSessionId		U_INT	Profile ID as stored in the SESSIONS table in the management database
u_iStatus	Status ID	U_INT	Status of the value: Value is valid = 0; error and the value is not valid = 1
u_iTargetId		U_INT	ID of the host that the monitor monitors

Sample: SiteScope Heartbeat (ss_heartbeat)

The SiteScope Heartbeat sample (ss_heartbeat) indicates that SiteScope is functioning properly and that its integration with HP Business Availability Center is healthy. The sample is only sent if SiteScope is in data reduction mode (in which case the sample is sent every minute).

Field	Display NameDisplay Name	Data Type/Units	Description
customer_name	Customer Name	STRING	Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
profile_name	Profile Name	STRING	Profile name
time_stamp	Time Stamp	DOUBLE/seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
sampletype		STRING	The name of the sample
status		INT	The Worst Child status of the SiteScope health monitors
status_description		STRING	The status value displayed in Dashboard (for example two out of 5 monitors are in Error)
TUID		STRING	Internal ID
u_iSessionId		U_INT	Profile ID as stored in the SESSIONS table in the management database

Sample: Event (event)

The Event sample (event) includes data from integration monitors (external EMS data), SiteScope alerts, and SiteScope status changes. You can use these fields when configuring integration monitor field mappings. For details, see "Integration Monitor Field Mapping" in *Using System Availability Management*. This sample uses the Universal Data Exchange (UDX) framework, and is thus available for filtering in the Measurement Filters page. For details, see "Working with Measurement Filters" in *Platform Administration*.

Field	Display Name	Description
acknowledged_by	Acknowledged By	Name of user that acknowledged this event
attr1		Extra data slot
attr2		Extra data slot
attr3		Extra data slot
attr4		Extra data slot
attr5		Extra data slot for long strings
ci_type	CI Type	The type of configuration item that is monitored by the EMS monitor that captures the event
collector_host_ip	Collector Host IP	IP address of the machine running SiteScope
collector_host_name	Collector Host Name	Host name of the machine running SiteScope
customer_name	Customer Name	Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
data_source	Data Source	System that generated the event
description	Description	Textual description of event
event_id	Event ID	Unique identifier of this event
instance	Instance	Instance of subject that generated the event (for example D:\ ); lowest level of hierarchy describing the event source

Field	Display Name	Description
logical_group	Logical Group	Logical grouping of this event
monitor_group	Monitor Group	Monitor group that reported this event
object	Object	Optional level in the hierarchy describing the event source
orig_severity_name	Original Severity Name	Severity in external EMS terminology
owner	Owner	Name of user who owns this event
severity	Severity	One of the following severities: SEVERITY_UNKNOWN SEVERITY_INFORMATIONAL SEVERITY_WARNING SEVERITY_MINOR SEVERITY_MAJOR SEVERITY_CRITICAL
severity_name	Severity Name	Severity name
status	Status	Status of event in external EMS terminology
subject	Subject	Subject of event (for example: CPU , SAP application, Hard Disk), middle/high level hierarchy describing the event source. The hierarchy describing an event is in the following format: monitor_group (optional) --> target_name --> object (optional) --> subject --> instance More levels can be added above monitor monitor_group by using logical_group, and attr1 - 5
target_ip	Target IP	IP of host or device that generated the event
target_name	Target Name	Name of device or host that generated the event
time_stamp	Time Stamp	Time stamp in seconds since Jan 1 1970
value	Value	Use to transfer numerical values from the event

Event Sample Examples

Infrastructure status change events (popular in EMS):

Timestamp	IP	Severity	Alert name
11/5/2004 10:20 AM	192.168.82.74	Critical	Server Unionville_1 is down

Ticketing system events:

Ticket ID	Severity	Region	Product	Open Date	Close Date
2321	1	Europe	HP Business Availability Center	11/5/2004 11:38 AM	13/5/2004 11:38 AM

Call center logs:

Call ID	Customer ID	Time Stamp	Queue number	Response Time	Call Answered	Call Duration
43443	4344322	15/5/04 8:23 AM	4	32 Sec.	Yes	284 Sec.

Miscellaneous events (server backup log):

Time stamp	IP	Backup Start Time	Backup Duration	Errors
15/5/04 8:23 AM	192.168.82.74	15/5/04 8:23 AM	15/5/04 14:23 AM	0

Sample: SiteScope Measurement (ss_t)

The SiteScope Measurement sample (ss_t) is sent from the SiteScope server to HP Business Availability Center for each metric that is measured. For example, if a CPU monitor measures utilization, for each run of the monitor, a sample is sent returning the value for this metric. If a monitor is configured to measure more than one metric, each run of the monitor sends a separate sample for each measured value.

Field	Display Name	Data Type/Units	Description
cfg_frequency	Configuration Frequency	DOUBLE	The configuration frequency of the monitor
customer_name		STRING	Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
dTime		DOUBLE/milliseconds	Time stamp of when the measurement was taken
dValue	Measurement Value	DOUBLE	Value of the measurement taken
frequency	Frequency	DOUBLE	The average frequency that the monitor was run
instance_id		INT	A unique id per instance that is set by the dispatcher
measurement_description	Measurement Description	STRING	The description of the measurement
monitor_curr_quality		INT	The average frequency that the measurement was run
profile_name	Profile Name	STRING	Profile name
start_time		DOUBLE	The start time of the bulk report
szCategoryName	Category Name	STRING	Monitor type name
szConnectionName	Connection Name	STRING	Name of the instance of the monitor that monitors the measurement

Field	Display Name	Data Type/Units	Description
szErr	Error Message	STRING	Error message if the sample has an error
szMeasurementName	Measurement Name	STRING	HP Business Availability Center measurement name
szMonitorName	Monitor Name	STRING	Type of monitor that retrieved that measurement
szMonitorTitle	Monitor Title	STRING	Name given to the monitor upon creation
szSessionName		STRING	HP Business Availability Center session name to which the sample belongs
szTargetName	Target Name	STRING	Name of the host that the monitor monitors
time_stamp	Time Stamp	DOUBLE/seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
u_iCategoryId		U_INT	monitor type ID
u_iConnectionId		U_INT	ID of the instance of the monitor that monitors the measurement
u_iMeasurementId		U_INT	HP Business Availability Center measurement ID
u_iMonitorId		U_INT	HP Business Availability Center ID of the monitor that retrieved the measurement
u_iMsmtQuality	Measurement Quality	U_INT	The measurement quality, indicating whether the value of the measurement represent a real value or an error value (helps to differentiate between 0 value that represents a real sample and 0 value that represents a error)
u_iQuality	Quality	U_INT	Quality of the measurement from 0 to 3 (3 is bad)

Field	Display Name	Data Type/Units	Description
u_iSessionId		U_INT	Profile ID as stored in the SESSIONS table in the management database
u_iStatus	Status ID	U_INT	Status of the value; Value is valid = 0; error and the value is not valid = 1
u_iTargetId		U_INT	ID of the host that the monitor monitors

Sample: SiteScope Measurement Aggregation (ss_hr_t)

The SiteScope Measurement Aggregation sample (ss_hr_t) contains the hourly aggregated data of the data in the SiteScope Measurement sample.

Field	Display Name	Data Type/Units	Description
customer_name	Customer Name	STRING	Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
dValue_max		DOUBLE	The maximum value of the measurements taken in the hour
dValue_min		DOUBLE	The minimum value of the measurements taken in the hour
dValue_sum		DOUBLE	Sum of the value of the measurements taken for the hour
dValue_sumsqr		DOUBLE	The sum of the squares of the value of the measurements taken for the hour. Can be used to calculate standard deviations
instance_id		INT	A unique id per instance that is set by the dispatcher
profile_name	Profile Name	STRING	Profile name as stored in the SESSIONS table in the management database
szCategoryName	Category Name	STRING	The category of the measurement (what the measurement measures)

Field	Display Name	Data Type/Units	Description
szConnectionName	Connection Name	STRING	Name of the instance of the monitor that monitors the measurement
szMeasurementName	Measurement Name	STRING	HP Business Availability Center measurement name
szMonitorName	Monitor Name	STRING	Monitor type as known by HP Business Availability Center
szMonitorTitle	Monitor Title	STRING	Name given to the monitor upon creation
szTargetName	Target Name	STRING	Name of the host that the monitor monitors
time_stamp	Time Stamp	DOUBLE/seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
u_iCategoryId		U_INT	ID of the category
u_iConnectionId		U_INT	ID of the instance of the monitor that monitors the measurement
u_iMeasurementId		U_INT	HP Business Availability Center measurement ID
u_iMonitorId		U_INT	Index of the monitor type
u_iQuality_good_sum		U_INT	Number of samples in the hour with a good status
u_iQuality_poor_sum		U_INT	Number of samples in the hour with a poor status
u_iQuality_warn_sum		U_INT	Number of samples in the hour with a warning status
u_iSessionId		U_INT	Profile ID as stored in the SESSIONS table in the management database
u_iStatus_abnormal_count		U_INT	Number of samples with an abnormal value that passed in the hour
u_iStatus_fail_count		U_INT	Number of samples with a non-valid value that passed in the hour

Field	Display Name	Data Type/Units	Description
u_iStatus_pass_count		U_INT	Number of samples with a valid value that passed successfully in the hour
u_iTargetId		U_INT	ID of the host that the monitor monitors

Data Samples for Business Process Monitor

This section describes the samples and sample fields for Business Process Monitor data:

Sample: Baselining Statistics (bsl_stats_t)

The Baselining Statistics sample (bsl_stats_t) contains data describing baselining statistics.

Field	Display Name	Data Type	Units	Description
bucket_count	Bucekt Count	Numeric		The numer of BPM samples whose values generated the sample's bucket Id for the sample's time stamp
bucket_id	Bucket ID	Numeric		The log of BPM response time values with a base of 1.05
customer_name	Customer Name	String		The Id of the TMS customer
em_location_id	Location ID	Numeric		Internal Id number
em_transaction_id	Transaction ID	Numeric		Internal Id number

Field	Display Name	Data Type	Units	Description
profile_id	Profile ID	Numeric		Internal Id number
sampletype		String		The type of the sample
time_stamp	Sample time	Numeric	Seconds	The time of the sample
TUID		String		Internal ID from the profile database

Sample: Transactions (trans_t)

The Transactions sample (trans_t) is used by Business Process Monitor to report transaction data for transactions in script monitors. It includes data on the transaction itself, as well as on the results of the specific run (duration, status, and so on).

Field	Display Name	Data Type	Units	Description
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
dEndTime	End Time	DOUBLE	milliseconds from 1970	Timestamp for the current management database time
dGreenThreshold	Green Threshold	DOUBLE	milliseconds	Defined OK threshold value
dRedThreshold	Red Threshold	DOUBLE	milliseconds	Defined Critical threshold value
dResponseTime	Response Time	DOUBLE	milliseconds	Response time (duration)
iComponentError Count	Component Error Count	INT		Number of component errors
instance_id	Instance Id	STRING		A unique id per instance that is set by the dispatcher

Field	Display Name	Data Type	Units	Description
trans_instance_id	Instance ID	STRING		A unique id per transaction instance that is set by the dispatcher
profile_name	Profile Name	STRING		Profile name
szHostName	Host Name	STRING		Data collector host name
szLegacyTime String	Legacy Time String	STRING		The time at which the transaction ended, in the format **%d/%m/%Y %H:%M:%S**
szLocationName	Location Name	STRING		Data collector location name
szOrganization Name	Organization Name	STRING		Group name for the data collector in the profile
szScriptName	Script Name	STRING		Script name
szStatusName	Status Name	STRING		Status of the transaction (passed/failed/timed out)
szTransaction Desc	Transaction Description	STRING		Transaction description
szTransaction Name	Transaction Name	STRING		Transaction name
szUniqueIdentifer	Unique Id	STRING		A unique identifier for this transaction run from the specific data collector
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
trans_instance_id	Instance ID	INT		A unique ID per transaction in an instance set by the dispatcher
u_iHostId		U_INT		Data collector host ID
u_iLocationId		U_INT		Location ID

Field	Display Name	Data Type	Units	Description
u_iOrganization Id		U_INT		Group ID for the data collector in the profile
u_iScriptId		U_INT		Script ID
u_iSessionId		U_INT		Profile ID as stored in the SESSIONS table in the management database
u_iSize	Download data size	U_INT	kilobytes	Total download size
u_iStatus		U_INT		Status ID of the transaction (passed/failed/timed out)
u_iSum ConnectionTime	Summary Connection Time	U_INT	milliseconds	Sum of component connection times in the transaction breakdown. This data is not presented in the reports.
u_iSumDnsTime	Summary DNS Time	U_INT	milliseconds	Sum of component DNS times in the transaction breakdown. This data is not presented in the reports.
u_iSumDownload Time	Summary Download Time	U_INT	milliseconds	Sum of component download times in the transaction breakdown. This data is not presented in the reports.
u_iSumFirstBuf Time	Summary Network First Buffer Time	U_INT	milliseconds	Sum of component 'time to first buffer' times in the transaction breakdown. This data is not presented in the reports.
u_iSumNetTime	Summary Network Time	U_INT	milliseconds	Sum of component network times in the transaction breakdown. This data is not presented in the reports.
u_iSumRetryTime	Summary Retry Time	U_INT	milliseconds	Sum of component retry times in the transaction breakdown. This data is not presented in the reports.

Field	Display Name	Data Type	Units	Description
u_iSumServer Time	Summary Server Time	U_INT	milliseconds	Sum of component server times in the transaction breakdown. This data is not presented in the reports.
u_iSumSSLTime	Summary SSL Time	U_INT	milliseconds	Sum of component SSL times in the transaction breakdown. This data is not presented in the reports.
u_iTransactionId		U_INT		Transaction ID
u_iWConnection Time	Weighted Connection Time	U_INT	milliseconds	Connection time in the transaction breakdown, using a weighed aggregation algorithm. This is the data presented in the reports.
u_iWDnsTime	Weighted DNS Time	U_INT	milliseconds	DNS time in the transaction breakdown, using a weighed aggregation algorithm. This is the data presented in the reports.
u_iWDownload Time	Weighted Download Time	U_INT	milliseconds	Download time in the transaction breakdown, using a weighed aggregation algorithm. This is the data presented in the reports.
u_iWFirstBufTime	Weighted Network First Buffer Time	U_INT	milliseconds	Time to first buffer in the transaction breakdown, using a weighed aggregation algorithm. This is the data presented in the reports.
u_iWNetTime	Weighted Network Time	U_INT	milliseconds	Network time in the transaction breakdown, using a weighed aggregation algorithm. This is the data presented in the reports.

Field	Display Name	Data Type	Units	Description
u_iWRetryTime	Weighted Retry Time	U_INT	milliseconds	Retry time in the transaction breakdown, using a weighed aggregation algorithm. This is the data presented in the reports.
u_iWServerTime	Weighted Server Time	U_INT	milliseconds	Server time in the transaction breakdown, using a weighed aggregation algorithm. This is the data presented in the reports.
u_iWSSLTime	Weighted SSL Time	U_INT	milliseconds	SSL time in the transaction breakdown, using a weighed aggregation algorithm. This is the data presented in the reports.

Sample: Transactions Aggregation (trans_hr_t)

The Transactions Aggregation sample (trans_hr_t) contains the hourly aggregated data of the data in the Transactions sample. Although these calculations are done for only successful Transactions samples, this sample also includes count data on failed and timed out transactions.

Field	Display Name	Data Type	Unit	Description
dGreenThreshold	Green Threshold	DOUBLE	milliseconds	Defined OK threshold value
dRedThreshold	Red Threshold	DOUBLE	milliseconds	Defined Critical threshold value
dResponseTime_ max		DOUBLE	milliseconds	The maximum response time for the sample during the hour
dResponseTime_ min		DOUBLE	milliseconds	The minimum response time for the sample during the hour
dResponseTime_ nbd_sum		DOUBLE	milliseconds	

Field	Display Name	Data Type	Unit	Description
dResponseTime_nbd_sumsqr		DOUBLE	milliseconds	
dResponseTime_obd_sum		DOUBLE	milliseconds	
dResponseTime_obd_sumsqr		DOUBLE	milliseconds	
dResponseTime_sum	Response Time	DOUBLE	milliseconds	The sum of the response times (duration) for the hour
dResponseTime_sumsqr		DOUBLE	milliseconds	The sum of the squares of the response times for the hour; can be used to calculate standard deviations
faile_count_cnt		Integer		Number of samples that failed during the hour
iComponentErrorCount_sum	Component Error Count	Integer		Number of component errors
page_cbd_count_sum		Integer		
pass_count_cnt		Integer		Number of samples that passed successfully in the hour
pass_count_ndb_cnt		Integer		
pass_count_obd_cnt		Integer		Number of samples that passed successfully in the hour with a connection time that was not null
profile_name	Profile Name	STRING		Profile name
szLocationName	Location Name	STRING		Data collector location name
szOrganizationName	Organization Name	STRING		Group name for the data collector in the profile

Field	Display Name	Data Type	Unit	Description
szScriptName	Script Name	STRING		Script name
szTransaction Desc	Transaction Description	STRING		Transaction description
szTransaction Name	Transaction Name	STRING		Transaction Name
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
timed_out_cnt		Integer		Number of samples that timed out during the hour
transaction_insta nce_id	Instance ID	INT		A unique id per transaction in an instance set by the dispatcher
u_iLocationId		U_INT		Location ID
u_iOrganization Id		U_INT		Group ID for the data collector in the profile
u_iScriptId		U_INT		Script ID
u_iSessionId		U_INT		Profile ID as stored in the SESSIONS table in the management database
u_iSize_nbd_sum		U_INT	kilobytes	
u_iSize_obd_sum		U_INT	kilobytes	
u_iSize_sum	Download data size	U_INT	kilobytes	The sum of the total download size
u_iSize_sumsqr		U_INT	kilobytes	The sum of the squares of the total download size. Can be used to calculate standard deviations.
u_iSumConnectio nTime_sum	Summary Connection Time	U_INT	milliseconds	The hourly sum of component connection times in the transaction breakdown.

Field	Display Name	Data Type	Unit	Description
u_iSumConnectionTime_sumsqr		U_INT	milliseconds	The sum of the squares of the hourly sum of component connection times in the transaction breakdown. Can be used to calculate standard deviations.
u_iSumDnsTime_sum	Summary DNS Time	U_INT	milliseconds	The hourly sum of component DNS times in the transaction breakdown.
u_iSumDnsTime_sumsqr		U_INT	milliseconds	The sum of the squares of the hourly sum of component DNS times in the transaction breakdown. Can be used to calculate standard deviations.
u_iSumDownloadTime_sum	Summary Download Time	U_INT	milliseconds	The hourly sum of component download times in the transaction breakdown.
u_iSumDownloadTime_sumsqr		U_INT	milliseconds	The sum of the squares of the hourly sum of component download times in the transaction breakdown. Can be used to calculate standard deviations.
u_iSumFirstBufTime_sum	Summary Network First Buffer Time	U_INT	milliseconds	The hourly sum of component 'time to first buffer' times in the transaction breakdown.
u_iSumFirstBufTime_sumsqr		U_INT	milliseconds	The sum of the squares of the hourly sum of component 'time to first buffer' times in the transaction breakdown. Can be used to calculate standard deviations.
u_iSumNetTime_sum	Summary Network Time	U_INT	milliseconds	The hourly sum of component network times in the transaction breakdown.

Field	Display Name	Data Type	Unit	Description
u_iSumNetTime_sumsqr		U_INT	milliseconds	The sum of the squares of the hourly sum of component network times in the transaction breakdown. Can be used to calculate standard deviations.
u_iSumRetryTime_sum	Summary Retry Time	U_INT	milliseconds	The hourly sum of component retry times in the transaction breakdown.
u_iSumRetryTime_sumsqr		U_INT	milliseconds	The sum of the squares of the hourly sum of component retry times in the transaction breakdown. Can be used to calculate standard deviations.
u_iSumServerTime_sum	Summary Server Time	U_INT	milliseconds	The hourly sum of component server times in the transaction breakdown.
u_iSumServerTime_sumsqr		U_INT	milliseconds	The sum of the squares of the hourly sum of component server times in the transaction breakdown. Can be used to calculate standard deviations.
u_iSumSSLTime_sum	Summary SSL Time	U_INT	milliseconds	The hourly sum of component SSL times in the transaction breakdown.
u_iSumSSLTime_sumsqr		U_INT	milliseconds	The sum of the squares of the hourly sum of component SSL times in the transaction breakdown. Can be used to calculate standard deviations.
u_iTransactionId		U_INT		Transaction ID
u_iWConnectionTime_sum	Weighted Connection Time	U_INT	milliseconds	The sum of the connection times in the transaction breakdown for the hour, using a weighed aggregation algorithm.

Field	Display Name	Data Type	Unit	Description
u_iWConnection Time_sumsqr		U_INT	milliseconds	The sum of the squares of the connection times in the transaction breakdown for the hour, using a weighed aggregation algorithm. Can be used to calculate standard deviations.
u_iWDnsTime_sum	Weighted DNS Time	U_INT	milliseconds	The sum of the DNS times in the transaction breakdown for the hour, using a weighed aggregation algorithm.
u_iWDnsTime_sumsqr		U_INT	milliseconds	The sum of the squares of the DNS times in the transaction breakdown for the hour, using a weighed aggregation algorithm. Can be used to calculate standard deviations.
u_iWDownloadTime_sum	Weighted Download Time	U_INT	milliseconds	The sum of the download times in the transaction breakdown for the hour, using a weighed aggregation algorithm.
u_iWDownloadTime_sumsqr		U_INT	milliseconds	The sum of the squares of the download times in the transaction breakdown for the hour, using a weighed aggregation algorithm. Can be used to calculate standard deviations.
u_iWFirstBufTime_sum	Weighted Network First Buffer Time	U_INT	milliseconds	The sum of the times to first buffer in the transaction breakdown for the hour, using a weighed aggregation algorithm.

Field	Display Name	Data Type	Unit	Description
u_iWFirstBufTime _sumsqr		U_INT	milliseconds	The sum of the squares of the times to first buffer in the transaction breakdown for the hour, using a weighed aggregation algorithm. Can be used to calculate standard deviations.
u_iWNetTime_su m	Weighted Network Time	U_INT	milliseconds	The sum of the network times in the transaction breakdown for the hour, using a weighed aggregation algorithm.
u_iWNetTime_su msqr		U_INT	milliseconds	The sum of the squares of the network times in the transaction breakdown for the hour, using a weighed aggregation algorithm. Can be used to calculate standard deviations.
u_iWRetryTime_s um	Weighted Retry Time	U_INT	milliseconds	The sum of the retry times in the transaction breakdown for the hour, using a weighed aggregation algorithm.
u_iWRetryTime_s umsqr		U_INT	milliseconds	The sum of the squares of the retry times in the transaction breakdown for the hour, using a weighed aggregation algorithm. Can be used to calculate standard deviations.
u_iWServerTime_ sum	Weighted Server Time	U_INT	milliseconds	The sum of the server times in the transaction breakdown for the hour, using a weighed aggregation algorithm.

Field	Display Name	Data Type	Unit	Description
u_iWServerTime_sumsqr		U_INT	milliseconds	The sum of the squares of the server times in the transaction breakdown for the hour, using a weighed aggregation algorithm. Can be used to calculate standard deviations.
u_iWSSLTime_sum	Weighted SSL Time	U_INT	milliseconds	The sum of the SSL times in the transaction breakdown for the hour, using a weighed aggregation algorithm.
u_iWSSLTime_sumsqr		U_INT	milliseconds	The sum of the squares of the SSL times in the transaction breakdown for the hour, using a weighed aggregation algorithm. Can be used to calculate standard deviations.

Sample: Webtrace (trc_path_t)

The Webtrace sample (trc_path_t) is used by Business Process Monitor to report WebTrace data.

Field	Display Name	Data Type	Units	Description
iDnsTime	DNS Time	INT		Not in use
iHostId		INT		ID of host machine from which WebTrace runs
iIsReachable	Is Reachable	INT	True/False	Indication of whether destination is reachable
iLocationId		INT		ID of location of host machine from which WebTrace runs
iRetries	Retries	INT		The number of times a data packet tries, but fails, to reach its destination due to timeout, network difficulty, and so on

Field	Display Name	Data Type	Units	Description
iRoundTrip	Round Trip	INT	milliseconds	The average time it takes for a packet of data to be sent from the host machine to the destination Web site
iSessionId		INT		ID of profile in which WebTrace is defined
profile_name	Profile Name	STRING		Name of profile in which WebTrace is defined
szDstIp	Destination IP	STRING		Destination server IP defined in the profile (in the profile you declare an IP or a destination name; WebTrace resolves the other by itself)
szDstName	Destination Name	STRING		Destination server name defined in the profile (in the profile you declare an IP or a destination name; WebTrace resolves the other by itself)
szHostName	Host Name	STRING		Name of host machine from which WebTrace runs
szLegacyTimeString	Legacy Time String	STRING		The time at which the transaction ended, in the format **%d/%m/%Y %H:%M:%S**
szLocationName	Location Name	STRING		Location name of host machine from which WebTrace runs
szLocationName	Location Name	STRING		Location name of host machine from which WebTrace runs
szSrcIp	Source IP	STRING		IP of host machine from which WebTrace runs
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
trc_instance_id		INT		Internal ID

🔍 Data Samples for Real User Monitor

This section describes the samples and sample fields for Real User Monitor data. These samples use the Universal Data Exchange (UDX) framework, and are thus available for filtering in the Measurement Filters page (for details, see "Working with Measurement Filters" in *Platform Administration*).

This section describes the following samples and sample fields for Real User Monitor:

Sample: RUM Active End Users (rum_active_eu_t)

The RUM Active End Users sample (rum_active_eu_t) contains data about the end-users that were detected as having performed the most hits in the last interval. This interval is defined in End User Management Administration.

Field	Display Name	Data Type	Units	Description
application_id	Application Id	INT		HP Business Availability Center internal application ID number
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration
eu_end_ip	End User End IP	INT		End IP address for end-user range as configured in Monitor Admistration
eu_id		INT		HP Business Availability Center internal end-user ID number
eu_loc	End User Location	STRING		End-user location as configured in End User Management Administration
eu_name	End User Domain And Subnet Range	STRING		End-user name as configured in End User Management Administration
eu_start_ip	End User Start IP	INT		Start IP address for end-user range as configured in Monitor Admistration
new_tot_page_hits	New Total Page Hits	INT	number of hits	Total number of pages hit by end-user

Field	Display Name	Data Type	Units	Description
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
sampletype		STRING		Currently not used
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_conn_hits	Total Connection Hits	INT		Currently not used
tot_http_bytes	Total http bytes	DOUBLE	bytes	Total number of bytes sent and received by the end-user for http
tot_https_bytes	Total https bytes	DOUBLE	bytes	Total number of bytes sent and received by the end-user for https
tot_latency	Latency	DOUBLE	milliseconds	total latency of all packets sent by end-user
tot_packets	Total Number of Packets	DOUBLE	Packets	Currently not used
tot_page_hits	Total Page Hits	INT	number of hits	Total number of pages hit by the end-user
TUID		STRING		Internal ID from the profile database

Sample: RUM Broken Links (rum_bro_links_t)

The RUM Broken Links sample (rum_bro_links_t) contains data about a component that was missing. Only components that were accessed from within a site defined in End User Management Administration are reported.

Field	Display Name	Data Type	Units	Description
application_id	Application Id	INT		HP Business Availability Center internal application ID number
availability	Availability	INT	0 or 1	Always 0 (not available)
comp_url	Component URL	STRING		URL of component on page
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
ref_url	Referer URL	STRING		URL of page that requested component
sampletype		STRING		Currently not used
server_ip		INT		IP address of component server
server_name	Server name	STRING		Name of component server

Field	Display Name	Data Type	Units	Description
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_comp_hits	Total Component Hits	INT	number of hits	Total number of components hit
TUID		STRING		Internal ID from the profile database

Sample: RUM End Users (rum_eu_t)

The RUM End Users sample (rum_eu_t) contains data describing a specific end-user.

Field	Display Name	Data Type	Units	Description
active_session_count	Active Sessions Counter	DOUBLE		Number of sessions that were active during the time frame to which the sample refers
application_id		INT		Monitored application internal ID number
closed_session_count	Closed Sessions Counter	DOUBLE		Number of sessions closed during the time frame to which the sample refers
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
eu_domain_name	End User Domain Name	STRING		End-user group name as configured in End User Management Administration
eu_end_ip	End User End IP	INT		End IP address for end-user range as configured in Monitor Admistration
eu_id		INT		HP Business Availability Center internal end-user ID number
eu_loc	End User Location	STRING		End-user location as configured in End User Management Administration
eu_loc_city	End User Location City	STRING		End-user city as configured in End User Management Administration
eu_loc_country	End User Location Country	STRING		End-user country as configured in End User Management Administration
eu_loc_state	End User Location State	STRING		End-user state as configured in End User Management Administration
eu_name	End User Domain And Subnet Range	STRING		End-user name as configured in End User Management Administration
eu_start_ip	End User Start IP	INT		Start IP address for end-user range as configured in Monitor Admistration
new_tot_page_hits	New Total Page Hits	INT	number of hits	Total number of pages hit by end-user
op_se_with_err_count	Active Sessions With Errors Counter	DOUBLE		Number of active sessions in which an error event occurred during the time frame to which the sample refers

Field	Display Name	Data Type	Units	Description
op_se_with_perf_count	Active Sessions With Performance Event Counter	DOUBLE		Number of active sessions in which a performance event occurred during the time frame to which the sample refers
open_session_count	Opened Sessions Counter	DOUBLE		Number of sessions opened during the time frame to which the sample refers
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
reporter		INT		Currently not used
sampletype		STRING		Currently not used
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_available_page_hits	Total available page hits	DOUBLE		Total number of available pages hit by the end-user
tot_conn_b_lth	Connections Below Latency Warning Threshold	INT		Currently not used
tot_conn_o_lth	Total Connections over latency threshold	INT		Currently not used
tot_http_bin	Total http bytes in	DOUBLE	bytes	Total size of all end-user http requests

Field	Display Name	Data Type	Units	Description
tot_http_bout	Total http bytes out	DOUBLE	bytes	Total size of all end-user http replies
tot_https_bin	Total https bytes in	DOUBLE	bytes	Total size of all end-user https requests
tot_https_bout	Total https bytes out	DOUBLE	bytes	Total size of all end-user https replies
tot_latency	Latency	DOUBLE	milliseconds	Total latency of all packets sent by end-user
tot_latency_b_lth	Latency Below Latency Warning Threshold	DOUBLE	milliseconds	Total latency time that was less than the threshold configured in End User Management Administration
tot_latency_color		DOUBLE	number representing color	Color of end-user status in Dashboard
tot_latency_o_lth	Latency Over Latency Threshold	DOUBLE	milliseconds	Total latency time that was more than the threshold configured in End User Management Administration
tot_packets	Total Number of Packets	DOUBLE	packets	Currently not used
tot_page_b_lth	Number Of Pages Hits Below Latency Threshold	INT	number of hits	Number of pages hit that had a latency less than the threshold configured in End User Management Administration
tot_page_hits	Total Page Hits	INT	number of hits	Total number of pages hit by the end-user
tot_page_o_lth	Number Of Page Hits Over Latency Threshold	INT	number of hits	Number of pages hit that had a latency more than the threshold configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
tot_pages_with_err	Pages with availability problems	DOUBLE		Number of pages that had availability problems
tot_pages_with_perf	Pages with perf problems	DOUBLE		Number of pages that had performance problems
tot_unavailable_page_hits	Total unavailable page hits	DOUBLE		Total number of unavailable pages hit by the end-user
total_conn	Total Connection Hits	INT		Currently not used
TUID		STRING		Internal ID from the profile database

Sample: RUM Events (rum_event_t)

The RUM Events sample (rum_event_t) contains data about a defined event that was detected. The different event types are configured in End User Management Administration.

Field	Display Name	Data Type	Units	Description
application_id	Application Id	INT		HP Business Availability Center internal application ID number
bb_guid	BB GUID	STRING		An internal, unique session ID from the Real User Monitor probe
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id	Engine Id	INT		HP Business Availability Center internal Real User Monitor engine ID number

Field	Display Name	Data Type	Units	Description
eu_domain_name	End User Domain Name	STRING		End-user group name as configured in End User Management Administration
eu_end_ip	End User End IP	INT		End IP address for end-user range as configured in Monitor Admistration
eu_host_name	End User Host Name	STRING		Host machine name of the end-user
eu_id	End User Id	INT		HP Business Availability Center internal end-user ID number
eu_ip	End User IP	INT		IP address of end-user
eu_loc		STRING		End-user location as configured in End User Management Administration
eu_loc_city	End User Location City	STRING		End-user city as configured in End User Management Administration
eu_loc_country	End User Location Country	STRING		End-user country as configured in End User Management Administration
eu_loc_state	End User Location State	STRING		End-user state as configured in End User Management Administration
eu_name	End User Domain And Subnet Range	STRING		End-user name as configured in End User Management Administration
eu_start_ip	End User Start IP	INT		Start IP address for end-user range as configured in Monitor Admistration
eu_subnet_name	End User Subnet Name	STRING		Currently not used
eu_user_name	End User Login Name	STRING		Login name of end-user

Field	Display Name	Data Type	Units	Description
event_category	Event Category	INT		Category of event configured in End User Management Administration (for example, informational, error, http, performance)
event_data	Event Extra Data	STRING	alpha-numeric	Actual values returned from event
event_id	Event Id	INT		HP Business Availability Center internal event ID number
event_name	Event Name	STRING		Name of event as configured in End User Management Administration
event_type	Event Type	INT	number (of event type)	Event type as configured in End User Management Administration
page_id	Page Id	INT		HP Business Availability Center internal page id of the page configured in End User Management Administration, on which the event occurred (-1 used for pages that have not been configured)
page_name		STRING		Name of page as configured in End User Management Administration
page_url	Page URL	STRING		URL of the page configured in End User Management Administration, on which the event occurred
profile_id	Profile Id	INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name

Field	Display Name	Data Type	Units	Description
sampletype		STRING		Currently not used
server_ip	Server IP	INT		IP address of component server
server_name	Server Name	STRING		Name of server
session_comp_seq	Component Sequence Number in Session	INT	number	Last component sequence number on the page on which the event occurred
time_stamp	End Time	DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
TUID		STRING		Internal ID from the profile database

Sample: RUM Pages (rum_page_t)

The RUM Pages sample (rum_page_t) contains data about a monitored page. The sample contains performance, availability, and general measurements regarding the page. Only pages that match one of the page definitions in End User Management Administration are reported to HP Business Availability Center.

Field	Display Name	Data Type	Units	Description
application_id		INT		HP Business Availability Center internal application ID number
availability	Availability	INT	number of pages	number of available pages (of the monitored page) during the time frame
bb_guid	BB GUID	STRING		An internal, unique session ID from the Real User Monitor probe

Field	Display Name	Data Type	Units	Description
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration
eu_end_ip	End User End IP	INT		End IP address for end-user range as configured in Monitor Admistration
eu_id		INT		HP Business Availability Center internal end-user ID number
eu_loc	End User Location	STRING		End-user location as configured in End User Management Administration
eu_loc_city	End User Location City	STRING		End-user city as configured in End User Management Administration
eu_loc_country	End User Location Country	STRING		End-user country as configured in End User Management Administration
eu_loc_state	End User Location State	STRING		End-user state as configured in End User Management Administration
eu_name	End User Domain And Subnet Range	STRING		End-user name as configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
eu_start_ip	End User Start IP	INT		Start IP address for end-user range as configured in Monitor Admistration
eu_subnet_name	End User Domain And Subnet Range	STRING		Currently not used
external_integrations		INT		For internal use
http_err_bad_c	HTTP Error Bad Request Category	INT		Currently not used
http_err_nfound_c	HTTP Error Request Not Found Category	INT		Currently not used
http_err_ref_c	HTTP Error Request Refused Category	INT		Currently not used
http_err_serr_c	HTTP Error Server Errors Category	INT		Currently not used
main_http_err	HTTP Response Code	INT	number	http response code for the requested page
max_client_time	Maximum Client Time	Double	milliseconds	Maximum client time of a page
max_dl_time	Maximum Download Time	Double	milliseconds	Maximum download time of a page
max_net_time	Maximum Network Time	Double	milliseconds	Maximum network time of a page

Field	Display Name	Data Type	Units	Description
max_server_time	Maximum Server Time	Double	milliseconds	Maximum server time of a page
min_client_time	Minimum Client Time	Double	milliseconds	Minimum client time of a page
min_dl_time	Minimum Download Time	Double	milliseconds	Minimum download time of a page
min_net_time	Minimum Network Time	Double	milliseconds	Minimum network time of a page
min_server_time	Minimum Server Time	Double	milliseconds	Minimum server time of a page
page_id		INT		HP Business Availability Center internal page id of the page configured in End User Management Administration
page_name	Page Name	STRING		Name of page as configured in End User Management Administration
page_url	Page URL	STRING		URL of the page configured in End User Management Administration
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
reporter		INT		Currently not used
squares_sum_client_time	Squares Sum Client Time	DOUBLE	milliseconds	The sum of the client squares of all pages in the sample
squares_sum_dl_time	Squares Sum Download Time	DOUBLE	milliseconds	The sum of the download time squares of all pages in the sample

Field	Display Name	Data Type	Units	Description
squares_sum_net _time	Squares Sum Network Time	DOUBLE	milliseconds	The sum of the network time squares of all pages in the sample
squares_sum_serv er_time	Squares Sum Server Time	DOUBLE	milliseconds	The sum of the server time squares of all pages in the sample
sampletype		STRING		Currently not used
server_ip	Server IP	INT		IP address of server
server_name	Server Name	STRING		Name of server
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_avail_color		DOUBLE	number representing color	Color representing status of page in Dashboard
tot_client_time	Client Time	DOUBLE	milliseconds	Amount of time of total processing time between components
tot_components	Number of Page Components	INT	number	Total number of components on the page
tot_connection_ti me	Total Connection Time	DOUBLE	milliseconds	Total TCP handshake time for all connections that were opened for transferring the page data
tot_dl_b_dth	Download Time Below Download Warning Threshold	DOUBLE	milliseconds	Amount of download time less than the download warning threshold configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
tot_dl_o_dth	Download Time Over Download Threshold	DOUBLE	milliseconds	Amount of download time more than the download warning threshold configured in End User Management Administration
tot_dl_time	Download Time	DOUBLE	milliseconds	Total download time of page
tot_event_app_error	Application Errors Events	INT	number of error events	Total number of application error events on page
tot_event_http_error	HTTP Errors Events	INT	number of http errors	Total number of http errors on page
tot_event_info	Non Error Events	INT	number of info events	Total number of informational event on page
tot_frstbffr_b_fbth	Total time of time to first buffer below the threshold	Double	milliseconds	The amount of time to first buffer less than the threshold configured in End User Management Administration
tot_frstbffr_o_fbth	Total time of time to first buffer over the threshold	Double	milliseconds	The amount of time to first buffer more than the threshold configured in End User Management Administration
tot_frstbffr_time	Sum of total time to first buffer	Double	milliseconds	The total time to first buffer for a page
tot_hits_b_dth	Hits Below Download Warning Threshold	INT	number of hits	Total number of hits with a download time less than the threshold configured in End User Management Administration
tot_hits_b_fbth	Total hits below the time to first buffer threshold	Double	number of hits	The total number of hits with a time to first buffer less than the threshold configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
tot_hits_b_sth	Hits Below Server Warning Threshold	INT	number of hits	Total number of hits with server time less than the threshold configured in End User Management Administration
tot_hits_o_dth	Hits Over Download Threshold	INT	number of hits	Total number of hits with a download time more than the threshold configured in End User Management Administration
tot_hits_o_fbth	Total hits over the time to first buffer threshold	Double	number of hits	The total number of hits with a time to first buffer more than the threshold configured in End User Management Administration
tot_hits_o_sth	Hits Over Server Threshold	INT	number of hits	Total number of hits with server time more than the threshold configured in End User Management Administration
tot_net_time	Network Time	DOUBLE	milliseconds	Total network time
tot_page_color		DOUBLE	number representing color	Color representing status of page in Dashboard
tot_page_size	Page Size	DOUBLE	bytes	Total page size
tot_retransmission_time	Total Retransmission Time	DOUBLE	milliseconds	Total time spent on retransmissions during the page download
tot_server_b_sth	Server Time Below Server Warning Threshold	DOUBLE	milliseconds	Amount of server time less than the threshold configured in End User Management Administration
tot_server_color		DOUBLE	number representing color	Color representing status of server in Dashboard

Field	Display Name	Data Type	Units	Description
tot_server_o_sth	Server Time Over Server Threshold	DOUBLE	milliseconds	Amount of server time more than the threshold configured in End User Management Administration
tot_server_time	Server Time	DOUBLE	milliseconds	Total server time
tot_ssl_time	Total SSL Negotiation Time	DOUBLE	milliseconds	Total SSL handshake time for all connections that were opened for transferring the page data
tot_stopped	Number Of Stopped Pages	INT	number of pages	Total number of pages stopped before their download was completed
total_hits	Hits	INT	number of hits	Total number of hits on page
TUID		STRING		Internal ID from the profile database

Sample: RUM Most Error Pages (rum_most_error_page_t)

The RUM Most Error Pages sample (rum_most_error_page_t) contains data about the pages that were detected as having the most HTTP and application errors occur on them in the last interval. The pages detected do not have to be defined in End User Management Administration.

Field	Display Name	Data Type	Units	Description
application_id		INT		HP Business Availability Center internal application ID number for the page
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number

Field	Display Name	Data Type	Units	Description
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration
page_id		INT		HP Business Availability Center internal page id of the page configured in End User Management Administration
page_hits		INT	number of hits	Total number of hits of the page
page_name	Page Name	STRING		The meaningful name assigned to the page, if configured.
page_url	Page URL	STRING		URL of the page on which most errors occurred
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
sampletype		STRING		Currently not used
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_app_errors	Application Errors	INT	number of application errors	Total number of application errors that occurred on the page
tot_errors	Total Errors	INT	total number of application and HTTP errors	Total number of application and HTTP errors that occurred on the page

Field	Display Name	Data Type	Units	Description
tot_http_errors	HTTP Errors	INT	number of http errors	Total number of http errors that occurred on the page
TUID		STRING		Internal ID from the profile database

Sample: RUM Popular Pages (rum_pop_page_t)

The RUM Popular Pages sample (rum_pop_page_t) contains data about the pages that were detected as having the highest number of hits in the last interval. The interval is defined in End User Management Administration. The pages detected do not have to be defined in End User Management Administration.

Field	Display Name	Data Type	Units	Description
application_id	Application ID	INT		HP Business Availability Center internal application ID number
availability	Availability	INT		Currently not used
comp_url	Page URL	STRING		URL of component on page
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration
page_id		INT		HP Business Availability Center internal page id of the page configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
page_name	Page Name	STRING		Name of page as configured in End User Management Administration
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
sampletype		STRING		Currently not used
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_page_hits		INT	number of hits	Total number of hits of the page
TUID		STRING		Internal ID from the profile database

Sample: RUM Servers (rum_server_t)

The RUM Servers sample (rum_server_t) contains data about a server whose traffic the Real User Monitor is listening to.

Field	Display Name	Data Type	Units	Description
application_id	Application ID	INT		HP Business Availability Center internal application ID number
availability	Availability	INT	# of requests	Number of requests successfully handled by server, or with HTTP denial codes not in the range of 500-599
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)

Field	Display Name	Data Type	Units	Description
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
reporter		INT		Currently not used
sampletype		STRING		Currently not used
server_ip	Server IP	INT		IP address of component server
server_name	Server Name	STRING		Name of server
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_avail_color		DOUBLE	number representing color	Color representing status of page in Dashboard
tot_comp_hits	Total Component Hits	INT	number of hits	Total number of components hits
tot_conn_hits	Total Connection Hits	INT		Currently not used
tot_http_bin	Total Http Bytes In	DOUBLE	bytes	Total size of all end-user http requests
tot_http_bout	Total Http Bytes Out	DOUBLE	bytes	Total size of all end-user http replies

Field	Display Name	Data Type	Units	Description
tot_https_bin	Total Https Bytes In	DOUBLE	bytes	Total size of all end-user https requests
tot_https_bout	Total Https Bytes Out	DOUBLE	bytes	Total size of all end-user https replies
tot_ok_comp_hits	Total OK Component Hits	INT	number of hits	Total number of hits on components that were successfully downloaded
tot_page_hits	Total Page Hits	INT	number of hits	Total number of pages hit on the server
total_hits	Total Component Hits	INT	number of hits	Total number of all component hits
TUID		STRING		Internal ID from the profile database

Sample: RUM Sessions (rum_session_t)

The RUM Sessions sample (rum_session_t) contains information about a user session. This sample is sent only after the session has ended. The rum_session_t is always sent with the rum_session_id_t sample.

Field	Display Name	Data Type	Units	Description
application_id	Application ID	INT		HP Business Availability Center internal application ID number
availability	Availability	INT	number of pages	number of all available pages in the session
bb_guid	BB GUID	STRING		An internal, unique session ID from the Real User Monitor probe
browser	Browser	STRING		Type of browser used for the session

Field	Display Name	Data Type	Units	Description
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
download_time	Download Time	DOUBLE	milliseconds	Total download time of all pages in the session
dwell_Time	Dwell Time	DOUBLE		Currently not used
engine_id	Engine ID	INT		HP Business Availability Center internal Real User Monitor engine ID number
eu_domain_name	End User Domain Name	STRING		End-user group name as configured in End User Management Administration
eu_end_ip	End User End IP	INT		End IP address for end-user range as configured in Monitor Admistration
eu_host_name	End User Host Name	STRING		Host machine name of the end-user
eu_id	End User Id	INT		HP Business Availability Center internal end-user ID number
eu_ip	End User IP	INT		IP address of end-user
eu_loc		STRING		End-user location as configured in End User Management Administration
eu_loc_city	End User Location City	STRING		End-user city as configured in End User Management Administration
eu_loc_country	End User Location Country	STRING		End-user country as configured in End User Management Administration
eu_loc_state	End User Location State	STRING		End-user state as configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
eu_name	End User Domain And Subnet Range	STRING		End-user name as configured in End User Management Administration
eu_start_ip	End User Start IP	INT		Start IP address for end-user range as configured in Monitor Admistration
eu_subnet_name	End User Subnet Name	STRING		Currently not used
eu_user_name	End User Login Name	STRING		Login name of end-user
http_version	Http Version	STRING		http version used for session
os	Operating System	STRING		Operating system used for session
profile_id	Profile ID	INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
sampletype		STRING		Currently not used
server_ip	Server IP	INT		IP address of component server
session_size	Session Size	DOUBLE	bytes	Total size of all pages included in the session
start_time	Session Start Time	DOUBLE	seconds since Jan 1 1970	Time that the session started
time_stamp	Session End Time	DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_event_app_error	Application Errors	INT	number of events	Total number of application events that occurred in the session

Field	Display Name	Data Type	Units	Description
tot_event_http_error	HTTP Errors	INT	number of events	Total number of http error events that occurred in the session
tot_event_info	Informational Events	INT	number of events	Total number of information events that occurred in the session
tot_event_performance	Performance Events	INT	number of events	Total number of performance events that occurred in the session
tot_latency	Latency	DOUBLE	milliseconds	total latency of all packets sent by end-user in session
tot_pages	Pages Hits	INT	number of pages	Total number of pages in the session
TUID		STRING		Internal ID from the profile database

Sample: RUM Session Statistics (rum_session_stats_t)

The RUM Session Statistics sample (rum_session_stats_t) contains aggregated data about open sessions over a five minute period for a specific application on a specific Real User Monitor engine.

Field	Display Name	Data Type	Units	Description
active_session_count	Active Sessions Counter	DOUBLE		Number of sessions that were active during the time frame to which the sample refers
application_id		INT		Monitored application internal ID number
application_name		STRING		Monitored application name
closed_session_count	Closed Sessions Counter	DOUBLE		Number of sessions closed during the time frame to which the sample refers

Field	Display Name	Data Type	Units	Description
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name		STRING		Real User Monitor engine name as configured in End User Management Administration
op_se_with_err_count	Active Sessions With Errors Counter	DOUBLE		Number of active sessions in which an error event occurred during the time frame to which the sample refers
op_se_with_perf_count	Active Sessions With Performance Event Counter	DOUBLE		Number of active sessions in which a performance event occurred during the time frame to which the sample refers
open_session_count	Opened Sessions Counter	DOUBLE		Number of sessions opened during the time frame to which the sample refers
probe_ip		INT		The IP of the probe machine
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name		STRING		HP Business Availability Center internal profile name
sampletype		STRING		Currently not used

Field	Display Name	Data Type	Units	Description
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
TUID		STRING		Internal ID from the profile database

Sample: RUM Slowest Components (rum_slow_comp_t)

The RUM Slowest Components sample (rum_slow_comp_t) contains data about the pages that were detected as having the longest download time in the last interval. The interval is defined in End User Management Administration. The pages do not have to be defined in End User Management Administration.

Field	Display Name	Data Type	Units	Description
application_id		INT		Monitored application internal ID number
availability	Availability	INT	numeric value between 0 and 1	Availability of page in requested time frame
comp_url	Page URL	STRING		URL of component on page
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
page_id		INT		HP Business Availability Center internal page id of the page configured in End User Management Administration
page_name	Page Name	STRING		Name of page as configured in End User Management Administration
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
sampletype		STRING		Currently not used
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_comp_hits	Page Hits	INT	number of hits	Total number of components hit
tot_dl	Page Download Time	DOUBLE	milliseconds	Total page download time
tot_server_time	Page Server Time	DOUBLE	milliseconds	Total server time
TUID		STRING		Internal ID from the profile database

Sample: RUM Slowest End Users (rum_slow_eu_t)

The RUM Slowest End Users sample (rum_slow_eu_t) contains data about
the slowest end-users that were detected in the last interval. The interval is
defined in End User Management Administration. The slowest end-users are
those that experienced the highest average network latency for the defined
interval.

Field	Display Name	Data Type	Units	Description
application_id		INT		Monitored application internal ID number
availability	Availability	INT		Currently not used
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration
eu_end_ip	End User End IP	INT		End IP address for end-user range as configured in Monitor Admistration
eu_id		INT		HP Business Availability Center internal end-user ID number
eu_loc	End User Location	STRING		End-user location as configured in End User Management Administration
eu_name	End User Domain And Subnet Range	STRING		End-user name as configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
eu_start_ip	End User Start IP	INT		Start IP address for end-user range as configured in Monitor Admistration
new_tot_page_hits	New Total Page Hits	INT	number of hits	Total number of pages hit by end-user
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
sampletype		STRING		Currently not used
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_conn_hits	Total Connection Hits	INT		Currently not used
tot_http_bytes	Total http bytes	DOUBLE	bytes	Total number of bytes sent and received by the end-user for http
tot_https_bytes	Total https bytes	DOUBLE	bytes	Total number of bytes sent and received by the end-user for https
tot_latency	Latency	DOUBLE	milliseconds	total latency of all packets sent by end-user
tot_latency_color		DOUBLE	number representing color	Color of end-user status in Dashboard
tot_packets	Total Number of Packets	DOUBLE	Packets	Currently not used

Field	Display Name	Data Type	Units	Description
tot_page_hits	Total Page Hits	INT	number of hits	Total number of pages hit by the end-user
TUID		STRING		Internal ID from the profile database

Sample: RUM TCP Applications (rum_tcp_application_t)

The RUM TCP Applications sample (rum_tcp_application_t) contains TCP layer data about an application configured in End User Management Administration being monitored by Real User Monitor.

Field	Display Name	Data Type	Units	Description
application_id	Application Id	INT		HP Business Availability Center internal application Id number
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise default client)
engine_id	Engine Id	INT		HP Business Availability Center internal Real User Monitor engine Id number
max_bytes_per_sec	Maximum rate of bytes per sec	DOUBLE	Byte/Sec	Currently not used
max_client_time	Maximum Request Client Time	DOUBLE	milliseconds	Maximum request-response client time for all requests on this application
max_dl_time	Maximum Request Download Time	DOUBLE	milliseconds	Maximum request-response time for all requests on this application
max_frstbffr_time	Maximum Request Time to first Buffer	DOUBLE	milliseconds	Maximum request-response time to first buffer for all requests on this application

Field	Display Name	Data Type	Units	Description
max_network _time	Maximum Request Network Time	DOUBLE	milliseconds	Maximum request-response network time for all requests on this application
max_server_ti me	Maximum Request Server Time	DOUBLE	milliseconds	Maximum request-response server time for all requests on this application
min_client_ti me	Minimum Request Client Time	DOUBLE	milliseconds	Minimum request-response client time for all requests on this application
min_dl_time	Minimum Request Download Time	DOUBLE	milliseconds	Minimum request-response time for all requests on this application
min_frstbffr_ti me	Minimum Request Time to first Buffer	DOUBLE	milliseconds	Minimum request-response time to first buffer for all requests on this application
min_network_ time	Minimum Request Network Time	DOUBLE	milliseconds	Minimum request-response network time for all requests on this application
min_server_ti me	Minimum Request Server Time	DOUBLE	milliseconds	Minimum request-response server time for all requests on this application
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
squares_sum_f rstbffr _time	Sum Squares of Request Time to first Buffer	DOUBLE	Square Milliseconds	Sum of the squares of the request-response time to first buffer for all requests on this application
sum_squares_ client_time	Sum Squares of Request Client Time	DOUBLE	Square Milliseconds	Sum of the squares of the request-response client time for all requests on this application

Field	Display Name	Data Type	Units	Description
sum_squares_dl_time	Sum Squares of Request Download Time	DOUBLE	Square Milliseconds	Sum of the squares of the request-response time for all requests on this application
sum_squares_network_time	Sum Squares of Request Network Time	DOUBLE	Square Milliseconds	Sum of the squares of the request-response network time for all requests on this application
sum_squares_server_time	Sum Squares of Request Server Time	DOUBLE	Square Milliseconds	Sum of the squares of the request-response server time for all requests on this application
time_stamp	Timestamp	DOUBLE	seconds	Time stamp in seconds since Jan 1 1970
tot_app_plain_bytes_in	Total plain application bytes in	DOUBLE	bytes	Total amount of plain application traffic, not including TCP overhead, from client to server for the application
tot_app_plain_bytes_out	Total plain application bytes out	DOUBLE	bytes	Total amount of plain application traffic not, including TCP overhead, from server to client for the application
tot_app_ssl_bytes_in	Total SSL application bytes in	DOUBLE	bytes	Total amount of encrypted application traffic, not including TCP overhead, from client to server for the application
tot_app_ssl_bytes_out	Total SSL application bytes out	DOUBLE	bytes	Total amount of encrypted application traffic, not including TCP overhead, from server to client for the application
tot_bytes_in	Total number of TCP bytes in	DOUBLE	bytes	Total amount of traffic from client to server for the application

Field	Display Name	Data Type	Units	Description
tot_bytes_out	Total number of TCP bytes out	DOUBLE	bytes	Total amount of traffic from server to client for the application
tot_client_time	Total Request Client Time	DOUBLE	milliseconds	Total request-response client time for all requests on this application
tot_conn	Total Connections Attempts	INT	connections	Total attempts to open connections to the application
tot_conn_refused	Number of connection failures due to timeout	INT	connections	Total attempts to open a connection to the application that failed on reset from the server
tot_conn_success_color		DOUBLE		
tot_conn_timeout	Number of connection failures due to reset	INT	connections	Total attempts to open a connection to the application that failed due to timeout
tot_connect_time	Total Connection Negotiation Time	DOUBLE	milliseconds	Total TCP handshake time for all connections to the application
tot_dl_time	Total Request Download Time	DOUBLE	milliseconds	Total request-response time for all requests on this application
tot_dl_time_color		DOUBLE		
tot_duplicate_acks	Total duplicate ack packets	DOUBLE	packets	Total retransmitted acks
tot_duplicate_packets	Total duplicate packets	DOUBLE	packets	Total retransmitted packets

Field	Display Name	Data Type	Units	Description
tot_duplicate_ packets_color		DOUBLE		
tot_frstbffr_ti me	Total Request Time to first Buffer	DOUBLE	milliseconds	Total request-response time to first buffer for all requests on this application
tot_network_ti me	Total Request Network Time	DOUBLE	milliseconds	Total request-response network time for all requests on this application
tot_packets	Total number of packets	DOUBLE	packets	Total packets flowing between client and server for the application
tot_requests	Total number of requests	INT	requests	Total number of requests on this application
tot_requests_o _dl_th	Total hits over download time threshold	INT	requests	Total number of requests on this application with total time exceeding the total time threshold
tot_retransmis sion_bytes	Total Retransmissio n bytes	DOUBLE	bytes	Total amount of retransmitted bytes for the application
tot_retransmis sion_time	Total Retransmissio n TIme	DOUBLE	milliseconds	Total retransmission delay time on all requests-responses to the application
tot_retransmis sions	Total retransmitted packets	DOUBLE	packets	Total retransmitted data packets
tot_server_bad _packets	Total Server bad packets	DOUBLE	packets	Total problematic packets from server to client
tot_server_bad _packets_color		DOUBLE		

Field	Display Name	Data Type	Units	Description
tot_server_fast _retransmissio n	Total server fast retransmissio n packets	DOUBLE	packets	Currently not used
tot_server_tim e	Total Request Server Time	DOUBLE	milliseconds	Total request-response server time for all requests on this application
tot_server_tim e_color		DOUBLE		
tot_server_win dow_stuck	Total server packets with window stuck	DOUBLE	packets	Total packets which indicate server window stuck, transmitted from the server
tot_server_win dow_zero	Total server packets with window size zero	DOUBLE	packets	Total packets with window size 0 transmitted from the server
tot_ssl_time	Total SSL negotiation TIme	DOUBLE	milliseconds	Total SSL handshake time for all connections to the application

Sample: RUM TCP End Users (rum_tcp_eu_t)

The RUM TCP End Users sample (rum_tcp_eu_t) contains TCP layer data about an end-user group.

Fields	Display Name	Data Type	Units	Description
application_id	Application id	INT		Monitored application internal Id number
customer_nam e	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id	Engine Id	INT		HP Business Availability Center internal Real User Monitor engine Id number

Fields	Display Name	Data Type	Units	Description
eu_domain_name	End User Domain	STRING		End-user group name as configured in End User Management Administration
eu_end_ip	End User Group IP range end	INT		End IP address for end-user range as configured in End User Management Administration
eu_id	End User Group Rule Id	INT		HP Business Availability Center internal end-user Id number
eu_loc_city	End User City	STRING		End-user city as configured in End User Management Administration
eu_loc_country	End User Country	STRING		End-user country as configured in End User Management Administration
eu_loc_state	End User State	STRING		End-user state as configured in End User Management Administration
eu_name	End User Group Name	STRING		HP Business Availability Center internal application Id number
eu_start_ip	End User Group IP range start	INT		Start IP address for end-user range as configured in End User Management Administration
is_real_tcp		INT		Currently not used
max_client_time	Maximum Request Client Time	DOUBLE	milliseconds	Maximum request-response client time for all requests from the end user
max_dl_time	Maximum Request Download Time	DOUBLE	milliseconds	Maximum request-response time for all requests from the end user
max_network_time	Maximum Request Network Time	DOUBLE	milliseconds	Maximum request-response network time for all requests from the end user

Fields	Display Name	Data Type	Units	Description
min_client_time	Minimum Request Client Time	DOUBLE	milliseconds	Minimum request-response client time for all requests from the end user
min_dl_time	Minimum Request Download Time	DOUBLE	milliseconds	Minimum request-response time for all requests from the end user
min_network_time	Minimum Request Network Time	DOUBLE	milliseconds	Minimum request-response network time for all requests from the end user
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
sum_squares_client_time	Sum Squares of Request Client Time	DOUBLE	Square milliseconds	Sum of the squares of the request-response client time for all requests from the end user
sum_squares_dl_time	Sum Squares of Request Download Time	DOUBLE	Square milliseconds	Sum of the squares of the request-response time for all requests from the end user
sum_squares_network_time	Sum Squares of Request Network Time	DOUBLE	Square milliseconds	Sum of the squares of the request-response network time for all requests from the end user
time_stamp	Timestamp	DOUBLE		Time stamp in seconds since Jan 1 1970
tot_app_plain_bytes_in	Total plain application bytes in	DOUBLE	bytes	Total amount of plain application traffic, not including TCP overhead, from the end user
tot_app_plain_bytes_out	Total plain application bytes out	DOUBLE	bytes	Total amount of plain application traffic, not including TCP overhead, to the end user

Fields	Display Name	Data Type	Units	Description
tot_app_ssl_byt es_in	Total SSL application bytes in	DOUBLE	bytes	Total amount of encrypted application traffic, not including TCP overhead, from the end user
tot_app_ssl_byt es_out	Total SSL application bytes out	DOUBLE	bytes	Total amount of encrypted application traffic, not including TCP overhead, to the end user
tot_bytes_in	Total number of TCP bytes in	DOUBLE	bytes	Total amount of traffic from the end user
tot_bytes_out	Total number of TCP bytes out	DOUBLE	bytes	Total amount of traffic to the end user
tot_client_bad_ packets	Total number of bad client packets	DOUBLE	packets	Total problematic packets from the end user
tot_client_bad_ packets_color		DOUBLE		
tot_client_fast_ retransmission	Total client fast retransmissio n packets	DOUBLE	packets	Currently not used
tot_client_time	Total Request Client Time	DOUBLE	milliseconds	Total request-response client time for all requests from the end user
tot_client_win dow_stuck	Total client packets with window stuck	DOUBLE	packets	Total packets which indicate client window stuck, transmitted from the end user
tot_client_win dow_zero	Total client packets with window size zero	DOUBLE	packets	Total packets with window size 0, transmitted from the end user

Fields	Display Name	Data Type	Units	Description
tot_conn	Total Connections Attempts	INT	connections	Total attempts to open connections from the end user
tot_conn_reset	Number of connection failures due to reset	INT	connections	Total attempts to open a connection from this end user that failed due to timeout
tot_conn_success_color		DOUBLE		
tot_conn_timeout	Number of connection failures due to timeout	INT	connections	Total attempts to open a connection from this end user that failed on reset from the server
tot_dl_time	Total Request Download Time	DOUBLE	milliseconds	Total request-response time for all requests from the end user
tot_dl_time_color		DOUBLE		
tot_duplicate_acks	Total duplicate ack packets	DOUBLE	packets	Total retransmitted acks from and to the end user
tot_duplicate_packets	Total number of duplicate packets	DOUBLE	packets	Total retransmitted packets from and to the end user
tot_duplicate_packets_color		DOUBLE		
tot_latency	Total packets latency	DOUBLE	Milliseconds	Total round trip time for all packets sent by the end user
tot_latency_color		DOUBLE		
tot_network_time	Total Request Network Time	DOUBLE	milliseconds	Total request-response network time for all requests from the end user

Fields	Display Name	Data Type	Units	Description
tot_packtes	Total number of packets	DOUBLE	packets	Total packets from and to the end user
tot_requests_o_dl_th	Total hits over download time threshold	INT	requests	Total number of requests on the application with total time exceeding the total time threshold
tot_retransmission_bytes	Total Number of retransmitted bytes	DOUBLE	bytes	Total amount of retransmitted bytes from and to the end user
tot_retransmissions	Total retransmitted packets	DOUBLE	packets	Total retransmitted data packets from and to end user
total_requests	Total number of requests	INT	requests	Total number of requests from the end user

Sample: RUM TCP Servers (rum_tcp_server_t)

The RUM TCP Servers sample (rum_tcp_server_t) contains TCP layer data about a server whose traffic is monitored by Real User Monitor.

Field	Display Name	Data Type	Units	Description
application_id	Application Id			HP Business Availability Center internal application Id number
availability	Number of successful connections	INT	connectiosn	Total attempts to open connections to this server that were successful
customer_name	Customer Name			Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id	Engine Id			HP Business Availability Center internal Real User Monitor engine Id number

Field	Display Name	Data Type	Units	Description
is_real_tcp		INT		Currently not used
max_dl_time	Maximum Request Download Time	DOUBLE	milliseconds	Maximum request-response time for all requests to this server
max_frstbffr_time	Maximum Request Time to first Buffer	DOUBLE	milliseconds	Maximum request-response time to first buffer for all requests to this server
max_server_time	Maximum Request Server Time	DOUBLE	milliseconds	Maximum request-response server time for all requests to this server
min_dl_time	Minimum Request Download Time	DOUBLE	milliseconds	Minimum request-response time for all requests to this server
min_frstbffr_time	Minimum Request Time to first Buffer	DOUBLE	milliseconds	Minimum request-esponse time to first buffer for all requests to this server
min_server_time	Minimum Request Server Time	DOUBLE	milliseconds	Minimum request-response server time for all requests to this server
profile_name	Profile Name			HP Business Availability Center internal profile name
server_ip	Server IP	INT		Server IP address
server_name	Server Name	STRING		Server DNS name
squares_sum_dl_time	Sum Squares of Request Download Time	DOUBLE	Square milliseconds	Sum of squares of the request-response time for all requests to this server
squares_sum_frstbffr _time	Sum Squares of Request Time to first Buffer	DOUBLE	Square milliseconds	Sum of the squares of the request-response time to first buffer for all requests to this server

Field	Display Name	Data Type	Units	Description
squares_sum_server_time	Sum Squares of Request Server Time	DOUBLE	Square milliseconds	Sum of the squares of the request-response server time for all requests to this server
time_stamp	Timestamp		Seconds	Time stamp in seconds since Jan 1 1970
tot_app_plain_bytes_in	Total plain application bytes in	DOUBLE	bytes	Total amount of plain application traffic, not including TCP overhead, to this server
tot_app_plain_bytes_out	Total plain application bytes out	DOUBLE	bytes	Total amount of plain application traffic, not including TCP overhead, from this server
tot_app_ssl_bytes_in	Total SSL application bytes in	DOUBLE	bytes	Total amount of encrypted application traffic, not including TCP overhead, to this server
tot_app_ssl_bytes_out	Total SSL application bytes out	DOUBLE	bytes	Total amount of encrypted application traffic, not including TCP overhead, from this server
tot_avail_color		DOUBLE		
tot_bytes_in	Total number of TCP bytes in	DOUBLE	bytes	Total amount of traffic to this server
tot_bytes_out	Total number of TCP bytes out	DOUBLE	bytes	Total amount of traffic from this server
tot_conn	Total number of connection attempts	INT	connections	Total attempts to open connections to this server
tot_conn_reset	Number of connection failures due to reset	INT	connections	Total attempts to open a connection to this application that failed on reset from the server
tot_conn_success_color		DOUBLE		

Field	Display Name	Data Type	Units	Description
tot_conn_timeout	Number of connection failures due to timeout	INT	connections	Total attempts to open a connection to this server that failed due to timeout
tot_dl_time	Total Request Download Time	DOUBLE	milliseconds	Total request-response time for all requests to this server
tot_dl_time_color		DOUBLE		
tot_frstbffr_time	Total Request Time to first Buffer	DOUBLE	milliseconds	Total request-response time to first buffer for all requests to this server
tot_packets	Total number of packets	DOUBLE	packets	Total amount of packets to and from this server
tot_requests	Total number of requests	INT	requests	Total number of requests to this server
tot_requests_o_dl_th	Total hits download time threshold	INT	requests	Total number of requests on this application with server time exceeding the server time threshold
tot_requests_o_s_th	Total hits over server time threshold	INT	requests	Total number of requests on this application with total time exceeding the total time threshold
tot_retransmission_bytes	Total Number of retransmitted bytes	DOUBLE	bytes	Total amount of retransmitted bytes from and to this end user.
tot_server_bad_packets	Total number of bad server packets	DOUBLE	packets	Total problematic packets transmitted from this server
tot_server_bad_packets_color		DOUBLE		

Field	Display Name	Data Type	Units	Description
tot_server_fast_r etransmission	Total server fast retransmissio n packets	DOUBLE	packets	Currently not used
tot_server_time	Total Request Server Time	DOUBLE	milliseconds	Total request-response server time for all requests to this server
tot_server_time _color		DOUBLE		
tot_server_wind ow_stuck	Total server packets with window stuck	DOUBLE	packets	Total packets which indicate server window stuck, transmitted from this server
tot_server_wind ow_zero	Total server packets with window size zero	DOUBLE	packets	Total packets with window size 0, transmitted from this server

Sample: RUM Transactions (rum_trans_t)

The RUM Transactions sample (rum_trans_t) contains data performance and availability measurements of end-user transactions that match one of the transaction definitions in End User Management Administration.

Field	Display Name	Data Type	Units	Description
application_id	Application ID	INT		HP Business Availability Center internal application ID number
availability	Availability	INT		The number of transactions that were available
bb_guid	BB GUID	STRING		An internal, unique session ID from the Real User Monitor probe

Field	Display Name	Data Type	Units	Description
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
engine_id		INT		HP Business Availability Center internal Real User Monitor engine ID number
engine_name	Engine Name	STRING		Real User Monitor engine name as configured in End User Management Administration
eu_end_ip	End User End IP	INT		End IP address for end-user range as configured in Monitor Admistration
eu_id		INT		HP Business Availability Center internal end-user ID number
eu_loc	End User Location	STRING		End-user location as configured in End User Management Administration
eu_loc_city	End User Location City	STRING		End-user city as configured in End User Management Administration
eu_loc_country	End User Location Country	STRING		End-user country as configured in End User Management Administration
eu_loc_state	End User Location State	STRING		End-user state as configured in End User Management Administration
eu_name	End User Domain And Subnet Range	STRING		End-user name as configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
eu_start_ip	End User Start IP	INT		Start IP address for end-user range as configured in Monitor Admistration
last_http_error	Last HTTP Error	INT	http error code number	Error code number of last http error in transaction
last_trans_page	Last Transaction Page	STRING	page url	URL of last page in transaction
last_trans_pid	Last Transaction Page ID	INT		HP Business Availability Center internal page ID number of the last page in transaction
max_client_time	Maximum Client Time	Double		Maximum client time of a transaction
max_dl_time	Maximum Download Time	Double		Maximum download time of a transaction
max_net_time	Maximum Network Time	Double		Maximum network time of a transaction
max_server_time	Maximum Server Time	Double		Maximum server time of a transaction
min_client_time	Minimum Client Time	Double		Minimum client time of a transaction
min_dl_time	Minimum Download Time	Double		Minimum download time of a transaction
min_net_time	Minimum Network Time	Double		Minimum network time of a transaction
min_server_time	Minimum Server Time	Double		Minimum server time of a transaction

Field	Display Name	Data Type	Units	Description
profile_id		INT		HP Business Availability Center internal profile ID number (default 1)
profile_name	Profile Name	STRING		HP Business Availability Center internal profile name
reporter		INT		Currently not used
sampletype		STRING		Currently not used
server_ip	Server IP	INT		IP address of component server
server_name	First Page Server Name	STRING		Name of server of first page in transaction
squares_sum_client_time	Squares Sum Client Time	DOUBLE		The sum of the client squares of the transaction
squares_sum_dl_time	Squares Sum Download Time	DOUBLE		The sum of the download time squares of the transaction
squares_sum_net_time	Squares Sum Network Time	DOUBLE		The sum of the network time squares of the transaction
squares_sum_server_time	Squares Sum Server Time	DOUBLE		The sum of the server time squares of the transaction
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
tot_avail_color		DOUBLE	number representing color	Color representing status of page in Dashboard
tot_client_time	Client Time	DOUBLE	milliseconds	Amount of time of total processing time between components
tot_completed	Number of Completed Transctions	INT	number of transactions	Always 1

Field	Display Name	Data Type	Units	Description
tot_components	Number of Page Components	INT	number	Total number of components on transaction pages
tot_connection_time	Connection Time	DOUBLE	milliseconds	Total TCP handshake time for all connections that were opened for transferring the page data
tot_event_app_error	Application Errors Events	INT	number of error events	Total number of application error events in transaction
tot_event_http_error	HTTP Errors Events	INT	number of error events	Total number of http error events in transaction
tot_event_info	Non Error Events	INT	number of error events	Total number of information events in transaction
tot_event_performance	Performance Events	INT	number of error events	Total number of performance events in transaction
tot_frstbffr_b_fbth	Total time of time to first buffer below the threshold	Double		The amount of time to first buffer less than the threshold configured in End User Management Administration
tot_frstbffr_o_fbth	Total time of time to first buffer over the threshold	Double		The amount of time to first buffer more than the threshold configured in End User Management Administration
tot_frstbffr_time	Sum of total time to first buffer	Double		The total time to first buffer for the transaction
tot_gdl_b_gth	Gross Download Time Below Gross Warning Threshold	DOUBLE	milliseconds	Total download time of transaction less than the threshold configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
tot_gdl_o_gth	Gross Download Time Over Gross Threshold	DOUBLE	milliseconds	Total download time of transaction more than the threshold configured in End User Management Administration
tot_gdl_time	Gross Download Time	DOUBLE	milliseconds	Total download time of transaction
tot_gross_color		DOUBLEe	number representing color	Color representing status of transaction in Dashboard
tot_hits_b_fbth	Total hits below the time to first buffer threshold	Double	number of hits	The total number of hits with a time to first buffer less than the threshold configured in End User Management Administration
tot_hits_b_gth	Hits Below Gross Warning Threshold	INT	number of hits	Number of hits whose time was less than the gross threshold configured in End User Management Administration. Always 0 or 1
tot_hits_b_nth	Hits Below Net Warning Threshold	INT	number of hits	Number of hits whose time was less than the net threshold configured in End User Management Administration. Always 0 or 1
tot_hits_b_sth	Hits Below Server Warning Threshold	INT	number of hits	Number of hits whose time was less than the server threshold configured in End User Management Administration
tot_hits_o_fbth	Total hits over the time to first buffer threshold	Double	number of hits	The total number of hits with a time to first buffer more than the threshold configured in End User Management Administration

Field	Display Name	Data Type	Units	Description
tot_hits_o_gth	Hits Over Gross Threshold	INT	number of hits	Number of hits whose time was more than the gross threshold configured in End User Management Administration. Always 0 or 1
tot_hits_o_nth	Hits Over Net Threshold	INT	number of hits	Number of hits whose time was more than the net threshold configured in End User Management Administration. Always 0 or 1
tot_hits_o_sth	Hits Over Server Threshold	INT	number of hits	Number of hits whose time was more than the server threshold configured in End User Management Administration
tot_ndl_b_nth	Net Download Time Below Net Warning Threshold	DOUBLE	milliseconds	Total time of pages in the transaction whose time was less than the net threshold configured in End User Management Administration
tot_ndl_o_nth	Net Download Time Over Net Threshold	DOUBLE	milliseconds	Total time of pages in the transaction whose time was more than the net threshold configured in End User Management Administration
tot_ndl_time	Net Download Time	DOUBLE	milliseconds	Total net download time
tot_net_color		DOUBLE	number representing color	Color representing status of transaction in Dashboard
tot_net_time	Network Time	DOUBLE	milliseconds	Total network time
tot_retransmission_time	Retransmission Time	DOUBLE	milliseconds	Total time spent on retransmissions during the page download

Field	Display Name	Data Type	Units	Description
tot_server_b_sth	Server Time Below Server Warning Threshold	DOUBLE	number of hits	Total number of hits whose time was below the threshold configured in End User Management Administration
tot_server_color		DOUBLE	number representing color	Color representing status of server in Dashboard
tot_server_o_sth	Server Time Over Server Threshold	DOUBLE	milliseconds	Total server time more than the threshold configured in End User Management Administration
tot_server_time	Server Time	DOUBLE	milliseconds	Total server time
tot_ssl_time	SSL Negotiation Time	DOUBLE	milliseconds	Total SSL handshake time for all connections that were opened for transferring the page data
tot_trans_size	Transaction Size	DOUBLE	bytes	Total size of transaction
total_hits	Transaction Hits	INT	number of hits	Total number of hits in transaction
trans_id		INT		HP Business Availability Center internal transaction ID
trans_name	Transaction Name	STRING	alpha-numeric	Transaction name as configured in End User Management Administration
trans_pages_seq_ids		STRING	sequence numbers	String of the sequence numbers of the pages that comprise the transaction
TUID		STRING		Internal ID from the profile database

🔍 Data Samples for Alerts

This section describes the samples and sample fields for alerts generated by the new alert engine (CI Status Alerts) and the legacy alert engine (Business Process Monitor and Real User Monitor alerts).

Sample: Alert Log (alert_log)

The Alert Log sample (alert_log) contains data generated by CI Status Alerts used when generating the Configuration Item Status Alerts report.

Limitation: There is currently no configuration item name field, and it is not possible to map CI names to their CMDB IDs (entity_id field). As such, the value of this sample is limited.

This sample uses the Universal Data Exchange (UDX) framework, and is thus available for filtering in the Measurement Filters page (for details, see "Working with Measurement Filters" in *Platform Administration*).

Field	Display Name	Data Type	Units	Description
action	Action	STRING		The actions performed by the alert
alert_id	alert_id	INT		Alert instance ID
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
entity_id	CMDB Entity id	BINARY		Configuration ID of CI
kpi_name	KPI name	STRING		The name of the KPI
name	Alert Name	STRING		The name of the alert

Field	Display Name	Data Type	Units	Description
next_severity	Next Severity	INT		The severity status of the KPI after the change that caused the alert to be sent, expresses as the ID defined in the **From** field in the Parameter Details window (**Admin > Dashboard > Repositories > KPIs > clone/override KPI > click the Edit Entity button > Item Details > click the parameter to display the Parameter Details window**)
obj_name	Objective name	STRING		For future use
prev_severity	Previous Severity	INT		The severity status of the KPI before the change that caused the alert to be sent, expresses as the ID defined in the **From** field in the Parameter Details window (**Admin > Dashboard > Repositories > KPIs > clone/override KPI > click the Edit Entity button > Item Details > click the parameter to display the Parameter Details window**)
sampletype		STRING		The name of the sample
send_time	Send time	DOUBLE	seconds since Jan 1 1970	The date and time that the alert was sent, expressed in seconds since Jan 1 1970
time_stamp	Time Stamp	DOUBLE	seconds since Jan 1 1970	The date and time of the event that caused the status change, expressed in seconds since Jan 1 1970
TUID		STRING		Internal ID

Sample: Alerts (alarm_t)

The Alerts sample (alarm_t) contains data generated by Business Process Monitor and Real User Monitor alerts.

Field	Display Name	Data Type	Units	Description
alarm_id	alarm Id	INT		ID of the alert (definition)
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
dEventTimeStamp	triggered time	DOUBLE	seconds	Time of the event that triggered the alert
iIsLoggedOnly	Is logged Only	INT		Determines whether the alert is logged only (1 is true or 0 is false)
iIsPositive	Is Positive	INT		Determines whether the alert is a follow-up (1 is true or 0 is false)
iNmmtEventTypeId	Nmmt Event Type Id	INT		Obsolete
iNmmtId	NMMT Id	INT		Obsolete
iSessionId	Profile ID	INT		Profile ID as stored in the SESSIONS table in the management database
iSeverityId	Severity ID	INT		Severity of the alert
profile_name	Profile Name	STRING		Profile name
szActionDesc	Action Description	STRING		Action that is taken as a result of the alert
szAlarmDesc	Alarm Description	STRING		Description of the alert
szAlarmName	Alarm Name	STRING		Alert name
szNmmtEventType	Nmmt Event Type	STRING		Obsolete

Field	Display Name	Data Type	Units	Description
szNmmtName	NMMT Name	STRING		Obsolete
time_stamp	Time Stamp	DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970

Sample: BL Alerts (bl_alert_t)

The Baseline Alerts sample (bl_alarm_t) contains data generated by Business Process Monitor alerts triggered as a result of baseline thresholds being breached. The bl_alarm_t sample is sent only when the profile is in baseline suggestion mode. In baseline auto mode or if no baselines are enabled, the alarm_t sample is sent as a result of an alert being triggered.

Field	Display Name	Data Type	Units	Description
alarm_id	alarm Id	INT		ID of the alert (definition)
alarm_name	Alarm Name	STRING		Name of the alert
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
triggered_time	triggered time	DOUBLE	seconds	Time the sample was created
is_logged_only	Is logged Only	INT		Determines whether the alert is only logged (1 is true or 0 is false) and no action is taken when alert is triggered
is_positive	Is Positive	INT		Determines whether the alert is a follow-up alert (1 is true or 0 is false). A follow up alert notifies that the conditions that triggered the alert are no longer true
nmmt_event_type_id	Nmmt Event Type Id	INT		Obsolete

Field	Display Name	Data Type	Units	Description
nmmt_id	NMMT Id	INT		Obsolete
Severity_id	Severity Name	INT		Severity of the alert as defined by user when alert scheme was created
profile_id	Profile ID	INT		Internal ID of the profile to which the alert belongs
profile_name	Profile Name	STRING		Profile name
action_desc	Action Description	STRING		Action that is taken as a result of the triggered alert
alarm_desc	Alarm Description	STRING		Description of what caused the alert to be triggered
time_stamp	Time Stamp	DOUBLE	seconds since Jan 1 1970	Time stamp in seconds when the alert was triggered

🔍 Data Sample for TransactionVision

The TransactionVision sample (tv_trans_t) contains data integrated into HP Business Availability Center from HP TransactionVision monitoring software. This sample uses the Universal Data Exchange (UDX) framework, and is thus available for filtering in the Measurement Filters page. For details, see "Working with Measurement Filters" in *Platform Administration*.

Note: For the fields that give a value, TransactionVision provides actual transaction values, for example, the dollar value of a purchase in a transaction.

Field	Display Name	Data Type	Units	Description
tx_name	Transaction name	STRING		The transaction name as it appears in TransactionVision
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
tx_id	TV id	INT		The ID for the transaction in TransactionVision
time_stamp	Time Stamp	LONG	seconds	Timestamp in seconds since Jan 1 1970 The end time for the aggregated data (all transaction hits are aggregated and one aggregated data sample is sent in each reporting interval)

Field	Display Name	Data Type	Units	Description
sum_response_time	Sum transaction response time	DOUBLE	milli-seconds	The total response time of transactions instances in the reporting interval (not including failed transaction instances)
tx_count	Total transaction count	INT		Total number of transaction instances in the reporting interval
failed_tx_count	Total failed transaction count	INT		Number of failed transactions instances
tot_failed_tx_value	Total failed transaction value	DOUBLE		Total value of the failed transaction instances
late_tx_count	Total late transaction count	INT		Number of transactions instances that are have passed the late threshold defined in TransactionVision
exp_tx_count	Exception transaction count	INT		Number of transactions instances that are exceptions
tot_late_tx_value	Total late transaction value	DOUBLE		Total value of transaction instances that have passed the late threshold defined in TransactionVision
max_response_time	Maximum transaction response time	DOUBLE	milli-seconds	The maximum response time of transactions instances in the reporting interval (not including failed transaction instances)
min_response_time	Minimum transaction response time	DOUBLE	milli-seconds	The minimum response time of transactions instances in the reporting interval (not including failed transaction instances)

Field	Display Name	Data Type	Units	Description
tot_tx_value	Total transaction value	DOUBLE		Total value of all transaction instances
tot_exp_tx_value	Total Exception transaction value	DOUBLE		Total value of transaction instances that are exceptions
curr_tx_count	Total transaction count	INT		Total number of in-process transactions instances at the end of the reporting interval
curr_failed_tx_count	Total failed transaction count	INT		Number of failed in-process transactions instances at the end of the reporting interval
curr_tot_failed_tx_value	Total failed transaction value	DOUBLE		Total value of the failed in-process transaction instances at the end of the reporting interval
curr_late_tx_count	Total late transaction count	INT		Number of in-process transactions instances that have passed the late threshold defined in TransactionVision, at the end of the reporting interval
curr_exp_tx_count	Exception transaction count	INT		Number of in-process transactions instances that are exceptions, at the end of the reporting interval
curr_tot_late_tx_value	Total late transaction value	DOUBLE		Total value of the in-process transaction instances that have passed the late threshold defined in TransactionVision, at the end of the reporting interval

Field	Display Name	Data Type	Units	Description
curr_tot_tx_value	Total transaction value	DOUBLE		Total value of all in-process transaction instances at the end of the reporting interval
curr_tot_exp_tx_value	Total Exception transaction value	DOUBLE		Total value of the in-process transaction instances that are exceptions, at the end of the reporting interval

Data Samples for SOA

This section describes the samples and sample fields for SOA data (that is, data used in the Business Availability Center for SOA application). These samples use the Universal Data Exchange (UDX) framework, and are thus available for filtering in the Measurement Filters page (for details, see "Working with Measurement Filters" in *Platform Administration*).

Sample: SOA Event (ws_event_aggr_t)

The SOA Event sample (ws_event_aggr_t) contains data used in SOA event reports. Data collectors can collect data for the following types of events:

➤ **HTTP errors.** Can be used to detect client and server side errors, such as: Not found 404 and Internal Error 500.

➤ **SOAP errors.** There are several standard SOAP faults that can indicate on the reason for a problem. For example: "version mismatch". In addition there can be customized SOAP faults per WS implementation.

Field	Display Name	Data Type	Units	Description
consumer_id	Consumer	STRING		Business Process Monitor and SiteScope send their client IP. HP Diagnostics sends the following valid values: ➤ **1** – Consumer ID taken from payload. ➤ **2** – Consumer group name ➤ **3** – Consumer IP ➤ **4** – Unregistered consumer (value="-") ➤ **\<http header\>** ➤ The IP address of current SiS agent (for example 192.168.22.6)
customer_name		STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)

Field	Display Name	Data Type	Units	Description
dc_source	DC Source	STRING		The data collector source—Diagnostics, Business Process Monitor, or SiteScope
end_point	End Point	STRING		The name of the monitored end point or the port name from WSDL monitored by SiteScope or Business Process Monitor, or the application server alias for Diagnostics
event_count	Event Count	INT		The number of occurrences of the event in the time period of the aggregation
event_name	Event Name	STRING		The name of the event
is_synthetic	Is Synthetic	STRING		It can be: ➤ 0 for real user monitoring ➤ 1 for synthetic monitoring
name	Name	STRING		The name of the Web service. It appears in the WSDL as the service name. There might be more than one in a WSDL
namespace	Namespace	STRING		The URI of the definition resource of the Web service (it appears in the WSDL as the targetNamespace)
operation	Operation Name	STRING		The operation name of the Web service
sampletype		STRING		The name of the sample (ws_event_aggr_t).
server	Server IP	INT		The IP address of the monitored server
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970 (this sample has aggregated values of 5 minutes)
TUID		STRING		Internal ID

Sample: WS Performance (ws_perf_aggr_t)

The WS Performance sample (ws_perf_aggr_t) contains data used in SOA performance reports. Data collectors can collect data for end to end performance of Web service operation, including availability and response time.

Field	Display Name	Data Type	Units	Description
calls_count	Calls Count	INT		The number of calls in the last 5 minutes
consumer_id	Consumer	STRING		Business Process Monitor and SiteScope send their client IP. HP Diagnostics sends the following valid values: ➤ **1** – Consumer ID taken from payload. ➤ **2** – Consumer group name ➤ **3** – Consumer IP ➤ **4** – Unregistered consumer (value="-") ➤ **\<http header\>** ➤ The IP address of current SiS agent (for example 192.168.22.6)
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
dc_source	DC Source	STRING		Specifies the data collector source—Diagnostics, Business Process Monitor, or SiteScope
end_point	End Point	STRING		The name of the monitored end point or the port name from WSDL monitored by SiteScope or Business Process Monitor, or the application server alias for Diagnostics

Field	Display Name	Data Type	Units	Description
error_count	Error Count	INT		The numbers of errors that occurred in the last 5 minutes
faults_count	Faults Count	INT		The numbers of SOAP faults in the last 5 minutes
is_synthetic	Is Synthetic	STRING		Specify 0 for real user monitor data source and 1 for synthetic monitor data source
max_st	Max Server Time	INT	milli-seconds	The maximum server response time
max_rtt	Max Total Response Time	INT	milli-seconds	The maximum round trip response time
min_st	Min Server Time	INT	milli-seconds	The minimum server response time
min_rtt	Min Total Response Time	INT	milli-seconds	The minimum round trip response time
name	Name	STRING		The name of the Web service. It appears in the WSDL as the service name. There might be more than one Web service in a WSDL
namespace	Namespace	STRING		The URI of the definition resource of the Web service (it appears in the WSDL as the targetNamespace)
operation	Operation	STRING		The operation name of the Web service
over_threshold_rtt	Over Threshold Client Time	INT		The number of instances of round trip response time being over threshold
over_threshold_st	Over Threshold Server Time	INT		The number of instances of server time being over threshold

Field	Display Name	Data Type	Units	Description
sampletype		STRING		The name of the sample (ws_perf_aggr_t)
server	Server IP	INT		The IP address of the monitored server
sum_st	Sum Server Time	INT	milli-seconds	The sum of server response time
sum_rtt	Sum Total Response Time	INT	milli-seconds	The sum of round trip response time
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970 (this sample has aggregated values of 5 minutes)
TUID		STRING		Internal ID

🔍 Data Samples for Business Process Insight (BPI)

This section describes the samples and sample fields for HP Business Process Insight data.

➤ "Sample: BPI Duration (bpi_duration_t)" on page 124

➤ "Sample: BPI Process Monitors (bpi_process_t)" on page 126

➤ "Sample: BPI Process Step Monitors (bpi_step_t)" on page 128

➤ "Sample: BPI Value Monitor (bpi_value_t)" on page 130

Sample: BPI Duration (bpi_duration_t)

The BPI sample (bpi_duration_t) contains data from the HP Business Process Insight application. The sample includes the following fields (in alphabetical order):

Field	Display Name	Data Type	Units	Description
backlog_count	backlog_count	INT		The number of active business process instances in process in the most recent collection interval
backlog_value	backlog_value	BINARY		The total value of active business process instances in process in the most recent collection interval
bp_cmdb_id		BINARY		The CMDB ID number of the HP Business Process Insight business process
bp_monitor_cmdb_id		BINARY		The CMDB ID number of the HP Business Process Insight monitor
completed_count	completed_count	INT		The number of business process instances that completed in the most recent collection interval
critical_violations	critical_violations	INT		The number of critical instance violations in the most recent collection interval

Field	Display Name	Data Type	Units	Description
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
major_ violations	major_ violations	INT		The number of major instance violations in the most recent collection interval
max_ duration	max_ duration	BINARY	Seconds	The maximum duration of monitor instances that completed in the most recent collection interval
min_duration	min_duration	BINARY	Seconds	The minimum duration of monitor instances that completed in the most recent collection interval
minor_ violations	minor_ violations	INT		The number of minor instance violations in the most recent collection interval
throughput_ count		INT		The throughput count of completed instances in the most recent collection interval (normalized to count per hour)
throughput_value		BINARY		The throughput value of completed instances in the most recent collection interval (normalized to value per hour)
time_stamp		BINARY		Collection interval
total_ duration	total_ duration	BINARY	Seconds	The sum of duration for all monitor instances that completed in the most recent collection interval
total_value	total_value	BINARY		The sum of values of all monitor instances in the most recent collection interval

Field	Display Name	Data Type	Units	Description
total_ weighted_ duration	total_ weighted_ duration	BINARY	Seconds	The sum of weighted duration of all monitor instances that completed in the most recent collection interval
warning_ violations	warning_ violations	INT		The number of warning instance violations in the most recent collection interval

Sample: BPI Process Monitors (bpi_process_t)

The BPI sample (bpi_process_t) contains data from the HP Business Process Insight application. The sample includes the following fields (in alphabetical order):

Field	Display Name	Data Type	Units	Description
at_risk_ count	at_risk_ count	INT		The total number of At Risk business process instances in the most recent collection interval
at_risk_ value	at_risk_ value	BINARY		The total value of At Risk business process instances in the most recent collection interval
backlog_count	backlog_ count	INT		The total number of the active business process instances in the most recent collection interval
backlog_ value	backlog_ value	BINARY		The total value of the active business process instances in the most recent collection interval
blocked_ count	blocked_ count	INT		The total number of Blocked business process instances in the most recent collection interval
blocked_ value	blocked_ value	BINARY		The total value of the Blocked business process instances in the most recent collection interval

Field	Display Name	Data Type	Units	Description
bp_cmdb_id		BINARY		The CMDB ID number of the HP Business Process Insight business process
completed_ count	completed_ count	INT		The total number of completed business process instances that completed during the period of time represented by the sample
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
healthy_ count	healthy_ count	INT		The total number of Healthy business process instances in the most recent collection interval
healthy_ value	healthy_ value	BINARY		The total value of Healthy business process instances in the most recent collection interval
throughput_ count		INT		The throughput count of completed instances in the most recent collection interval (normalized to count per hour)
throughput_value		BINARY		The throughput value of completed instances in the most recent collection interval (normalized to value per hour)
time_stamp		BINARY		Collection interval
total_ value	total_ value	BINARY		The total value of the business process instances that completed during the period of time represented by the sample

Sample: BPI Process Step Monitors (bpi_step_t)

The BPI sample (bpi_step_t) contains data from the HP Business Process Insight application. The sample includes the following fields (in alphabetical order):

Field	Display Name	Data Type	Units	Description
backlog_ count	backlog_ count	INT		The total number of active business process instances in the most recent collection interval
backlog_ value	backlog_ value	BINARY		The total value of active business process instances in the most recent collection interval
bp_cmdb_id		BINARY		The CMDB ID number of the HP Business Process Insight business process
bp_step_ cmdb_id		BINARY		The CMDB ID number of the HP Business Process Insight business process step
completed_ count	completed_ count	INT		The total number of the business process instances that completed during the period of time represented by the sample
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
throughput_ count		INT		The throughput count of completed instances in the most recent collection interval (normalized to count per hour)
throughput_value		BINARY		The throughput value of completed instances in the most recent collection interval (normalized to value per hour)

Field	Display Name	Data Type	Units	Description
time_stamp		BINARY	Seconds	Collection interval
total_ value	total_ value	BINARY		The total value of the business process instances that completed during the period of time represented by the sample

Sample: BPI Value Monitor (bpi_value_t)

The BPI sample (bpi_value_t) contains data from the HP Business Process Insight application. The sample includes the following fields (in alphabetical order):

Field	Display Name	Data Type	Units	Description
backlog_ count	backlog_ count	INT		The total number of active business process instances in the most recent collection interval
backlog_ value	backlog_ value	BINARY		The total value of active business process instances that did not complete in the most recent collection interval
bp_cmdb_id		BINARY		The CMDB ID number of the HP Business Process Insight business process
bp_monitor_ cmdb_id		BINARY		The CMDB ID number of the HP Business Process Insight monitor
completed_ count	completed_ count	INT		The total number of completed business process instances in the most recent collection interval
critical_ violations	critical_ violations	INT		The number of critical instance violations in the most recent collection interval
customer_id		INT		The ID of the HP Business Availability Center customer (for HP Software-as-a-Service, otherwise Default client)
major_ violations	major_ violations	INT		The number of major instance violations in the most recent collection interval
max_ value	max_ value	BINARY		The maximum value of instances that completed in the most recent collection interval

Field	Display Name	Data Type	Units	Description
min_ value	min_ value	BINARY		The minimum value of instances that completed in the most recent collection interval
minor_ violations	minor_ violations	INT		The number of minor instance violations in the most recent collection interval
throughput_ count		INT		The throughput count of completed instances in the most recent collection interval (normalized to count per hour)
throughput_value		BINARY		The throughput value of completed instances in the most recent collection interval (normalized to value per hour)
time_stamp		BINARY		Collection interval
total_ monitor_ value	total_ monitor_ value	BINARY		The sum of the values of all monitor instances that completed in the most recent collection interval
total_value	total_value	BINARY		The total value of completed business process instances in the most recent collection interval
total_ weighted_ monitor_ value	total_ weighted_ monitor_ value	BINARY		The sum of weighted values of all monitor instances that completed in the most recent collection interval
warning_ violations	warning_ violations	INT		The number of warning instance violations in the most recent collection interval

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🔍 Data Samples for HP Diagnostics

This section describes the samples and sample fields for HP Diagnostics data:

➤ "Sample: Real Users Aggregated Data (appmon_ru_t)" on page 132

➤ "Sample: Virtual User Data (appmon_vu_t)" on page 134

Sample: Real Users Aggregated Data (appmon_ru_t)

The HP Diagnostics sample (appmon_ru_t) contains data from the
HP Diagnostics application. The sample includes the following fields (in
alphabetical order):

Field	Display Name	Data Type	Units	Description
app_server_host	App Server Host	STRING		The name of the probe host
availability	Availability	INT		Unused
call_count	Call Count	BINARY		The total number of Server Requests the probe has handled
class_name	Class Name	STRING		Unused
cpu_time_excl	CPU Time Excl	BINARY		Always has the value: 0.0
cpu_time_total	CPU Time Total	BINARY		Always has the value: 0.0
duration	Duration	BINARY		Always has the value: 0.0
error_count	Error Count	BINARY		The total number of Server Requests with an exception
exclusive_time	Exclusive Time	BINARY		Always has the value: 0.0
layer_name	Layer Name	STRING		Unused
max_exclusive_time	Max Exclusive Time	BINARY		Always has the value: 0.0

Field	Display Name	Data Type	Units	Description
max_total_time	Max Total Time	BINARY	Seconds	The latency of the longest Server Request the probe has measured
method_ arguments	Method Arguments	STRING		Unused
method_name	Method Name	STRING		Unused
node_name	Node Name	STRING		Unused
parent_node_ name	Parent Node Name	STRING		The name of the probe group
platform	Platform	STRING		Value is **J2EE** for a Java probe or **.NET** for a .NET probe
probe_instance	Probe Instance	STRING		The name of the probe
profile_name	Profile Name	STRING		The name of the profile with the J2EE_For + customer name format
quality	Quality	INT		The value is based on the status of the probe latency threshold in HP Diagnostics. It can be: ➤ Q_CRITICAL=0 ➤ Q_MAJOR=5 ➤ Q_MINOR=10 ➤ Q_WARNING=15 ➤ Q_OK=20
timeout_count	Timeout Count	BINARY		The total number of Service Requests with timeout
total_time	Total Time	BINARY	Seconds	The total latency of of all Server Requests
ttx_desc_name	Thread Transaction Descriptive Name	STRING		A description of the quality reason. The quality is the status of the transaction: critical, major, minor, warning, or OK
ttx_name	Ttx Name	STRING		Unused

Sample: Virtual User Data (appmon_vu_t)

The HP Diagnostics sample (appmon_vu_t) data from the HP Diagnostics application. The sample includes the following fields (in alphabetical order):

Field	Display Name	Data Type	Units	Description
app_server_host	App Server Host	STRING		Unused
availability	Availability	INT		Unused
call_count	Call Count	BINARY		The number of fragments in the transaction
class_name	Class Name	STRING		Unused
concurrent_time	Concurrent Time	BINARY	Seconds	Always 0.0
cpu_time_excl	CPU Time Excl	BINARY	Seconds	Always 0.0
cpu_time_total	CPU Time Total	BINARY	Seconds	Always 0.0
customer_name	Customer Name	STRING		Customer name to which the sample belongs (for HP Software-as-a-Service, otherwise Default client)
duration	Duration	BINARY	Seconds	Always 0.0
error_count	Error Count	BINARY		The total number of transactions with exception
exclusive_time	Exclusive Time	BINARY	Seconds	Always 0.0
layer_name	Layer Name	STRING		Unused
max_exclusive_time	Max Exclusive Time	BINARY	Seconds	Always 0.0
max_total_time	Max Total Time	BINARY	Seconds	The time of the longest method call in the transaction

Field	Display Name	Data Type	Units	Description
method_arguments	Method Arguments	STRING		Unused
method_name	Method Name	STRING		Unused
node_name	Node Name	STRING		Unused
parent_node_name	Parent Node Name	STRING		Unused
platform	Platform	STRING		Unused
probe_instance	Probe Instance	STRING		Unused
profile_name	Profile Name	STRING		The name of the profile with the J2EE_For + customer name format
quality	Quality	INT		The value is based on the status of the transaction latency threshold in HP Diagnostics. It can be: ➤ Q_CRITICAL=0 ➤ Q_MAJOR=5 ➤ Q_MINOR=10 ➤ Q_WARNING=15 ➤ Q_OK=20
time_stamp		DOUBLE	seconds since Jan 1 1970	Time stamp in seconds since Jan 1 1970
timeout_count	Timeout Count	BINARY		The total number of timeouts for the transaction
total_time	Total Time	BINARY	Seconds	The time of the longest method call in the transaction
ttx_desc_name	Thread Transaction Descriptive Name	STRING		A description of the quality reason. The quality is the status of the transaction: critical, major, minor, warning, or OK
ttx_name	Ttx Name	STRING		Unused

Field	Display Name	Data Type	Units	Description
vu_call_count	Vu Call Count	BINARY		The number of fragments in the transaction
vu_host_name	Vu Host Name	STRING		Unused
vu_location	Vu Location	STRING		Unused
vu_profile_name	Vu Profile Name	STRING		The name of the Business Process Monitor profile
vu_trans_name	Vu Trans Name	STRING		The name of the transaction

5

Data Aggregation

This chapter describes the how HP Business Availability Center uses data aggregation to improve data management.

This chapter includes:

Concepts

Data Aggregation Overview

HP Business Availability Center uses data aggregation to make data handling and management more efficient and to improve the speed and performance of report generation. HP Business Availability Center data aggregation tasks are performed on the Data Processing Server.

HP Business Availability Center aggregates various types of data that it collects for reports (for example, response time data collected by Business Process Monitor, infrastructure machine performance data collected by SiteScope, and user traffic data collected by Real User Monitor). Data aggregation involves combining individual measurements into manageable chunks. The result is improved speed and performance of report generation.

HP Business Availability Center groups data into the following categories:

➤ **raw data.** The actual metrics collected by data collectors.

➤ **fine aggregation granularity.** Data grouped into hourly chunks.

➤ **coarse aggregation granularity.** Data grouped into daily chunks.

How Data Is Aggregated

HP Business Availability Center aggregates data collected by Business Process Monitor and SiteScope data collectors (not including SiteScope Integration Monitors using the event data template). Data is aggregated as follows:

Hourly

Hourly aggregation is performed every hour. The default schedule is as follows:

Hourly aggregation for Business Process Monitor and SiteScope data is done every hour for the time period that began 2 hours earlier (for example, at 12:00 PM HP Business Availability Center aggregates the data collected between 10:00 AM and 11:00 AM).

Daily

Daily aggregation is performed once a day after the hourly aggregation. The default schedule is that aggregation begins at 1:00 AM for the previous day (for example, at 1:00 AM HP Business Availability Center aggregates the data collected between 12 am, 25 hours ago and 12 am, 1 hour ago). When configuring profile properties, you can specify the time zone that HP Business Availability Center uses to determine when to perform daily aggregation in **GMT Offset**. For more details, see "GMT Time Zones" on page 152.

You can define a different delay for when the aggregation begins in the Offline Aggregator context of the Infrastructure Settings page (**Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings** > **Foundation** > **Offline Aggregator**). You can specify a separate delay for Business Process Monitor, custom, and SiteScope data. The delay you specify is for both the hourly and daily aggregations. It is recommended that only advanced users change the defaults set in Infrastructure Settings and after first consulting HP Software Support or your HP Services representative. For details on using the Infrastructure Settings Manager page, see "Infrastructure Settings" in *Platform Administration*.

How Reports Use Aggregated Data

Whether HP Business Availability Center displays a report using raw data, daily aggregated data, or hourly aggregated data depends on several factors:

➤ If the requested data in the report is for the past 30 hours, HP Business Availability Center uses raw data for Business Process Monitor data.

➤ For reports that use custom data—trend reports, Real User Monitor reports, Service Level Management reports containing custom data, and Diagnostics reports (if installed)—for the requested time range and granularity, Business Availability Center chooses the optimal combination of data categories so that the least amount of rows must be retrieved from the database.

For example, for a time range Jan. 1 10:40 AM - Jan. 3 10:40 AM and granularity of 1 day, Business Availability Center chooses data categories as follows:

➤ for Jan. 1 10:40 AM - Jan. 1 11:00 AM – raw data is used

➤ for Jan. 1 11:00 AM - Jan. 1 11:59 PM – hourly aggregated data is used

➤ for Jan. 2 12:00 AM - Jan. 2 11:59 PM – daily aggregated data is used

➤ for Jan. 3 12:00 AM - Jan. 3 10:00 AM – hourly aggregated data is used

➤ for Jan. 3 10:00 AM - Jan. 3 10:40 AM – raw data is used

➤ If the requested data in the report does not use custom data and the report range is not 30 hours, HP Business Availability Center uses an aggregation threshold—by default, 93% of the maximum—to determine whether to use daily aggregated data, hourly aggregated data, or raw data. When a report is generated for a specific time range, HP Business Availability Center calculates the amount of each type of data that exists over that time range and considers only the data types that are above the aggregation threshold.

For example, HP Business Availability Center might determine that, for the requested time range "Past Week," raw data exists for 100% of the time range, hourly aggregated data exists for 96% of the time range, and daily aggregated data exists for 86% of the time range. In this case, HP Business Availability Center only considers raw data and hourly aggregated data as possible options since both exceed the aggregation threshold of 93%.

When more than one option exists, HP Business Availability Center gives priority to the data with the highest granularity (that is, daily is chosen over hourly or raw, hourly is chosen over raw). Thus, in the above example, HP Business Availability Center would display the report using hourly aggregated data.

➤ If the time granularity for the report (or report time range in reports that are not over time) is set to less than a day, regardless of the chosen time range, HP Business Availability Center never uses daily aggregated data.

➤ If the time granularity for the report (or report time range in reports that are not over time) is set to less than an hour, regardless of the chosen time range, HP Business Availability Center always uses raw data.

Note: (not relevant for HP Software-as-a-Service customers) If you select a report time range that includes the past day (for example Past Month), and for which HP Business Availability Center chooses daily aggregated data, the data for the past day may be missing, as it may not yet have been aggregated into its one day chunk. In such cases, you can "force" HP Business Availability Center to use one hour chunks, instead of one day chunks, by increasing the aggregation threshold from its default setting of 93% to 98%. To do so, open the file **<Gateway Server root directory>\ AppServer\DataEngine\conf\ TAS_consts.properties** in a text editor, and search for the line **defConf.aggrReasonableDiff=7**. Modify the value from 7 to 2, save the file, and restart HP Business Availability Center on the Gateway Server machine. (If you have multiple Gateway Servers, repeat this procedure on all the servers.) Keep in mind that, once you make this change, it will apply for all generated reports.

The **Aggregation Policy** setting defines the aggregated data usage policy for reports that use custom data. By default, reports use all available data, raw and aggregated. In certain circumstances, however, it may be necessary to modify this setting. For example, if the aggregation engine is not working (aggregator process on the Data Processing Server is down), you can modify the setting so that only raw data is used.

The setting can be configured in the Infrastructure Settings Manager, **Foundations** > **Generic Data Engine** context, **Generic Data Engine - Aggregation** table to modify the way aggregated data is used in reports.

Note: In general, **Aggregation Policy** setting should not be modified without first consulting HP Software Support. It is not relevant for HP Software-as-a-Service customers.

♣ Effect of Outlier Setting on Data Aggregation

When aggregating data, if the **Ignore outlier data in reports** setting is cleared in a profile's properties, in the Transaction Threshold Settings section in End User Management Administration, HP Business Availability Center excludes transaction instances whose response time exceeds the outlier value, also set in the Transaction Threshold Settings section. If the **Ignore outlier data in reports** setting is selected, HP Business Availability Center ignores outlier transactions, and therefore the data is not considered. Note that the default outlier value for all transactions is 45 seconds. For details on configuring outlier values, see "Transaction Threshold Settings" in *Using End User Management*.

🔍 Data Aggregation Limitations

The following limitations apply, as a result of data aggregation:

➤ When viewing aggregated data, you may not always be able to see results when drilling down to individual transaction instances.

➤ When viewing aggregated data for non-rounded time periods, there might be inaccuracies for the time period close to the starting and ending times of the report. For example, if you generate a report on a Thursday based on data collected between 9:45 AM the previous Monday and 9:45 AM the previous Tuesday, the time period between 9:45 AM and 10:00 AM Monday will not contain any data, even if data was originally collected.

➤ HP Business Availability Center is unable to display both aggregated and raw data simultaneously in the Multi-Profile report.

➤ When viewing SiteScope data that is aggregated hourly, keep in mind that if the aggregator did not finish aggregating the necessary data, the latest hour may not include all the data. This may happen on rare occasions when there is a large amount of data needing hourly aggregation.

➤ Service Level Management aggregates some data differently. For details, see "Aggregated Data" in *Using Service Level Management*.

Part III

Dates and Times

6

Dates and Times

This chapter describes date and time reference information for HP Business Availability Center.

This chapter includes:

Concepts

Reference

❀ **Times and Time Zones**

HP Business Availability Center deals with times and time zones differently, depending on the context. Dates are displayed according to the time zone set for the user. For details, see "General Settings Page" in *Platform Administration*.

Note:

All HP Business Availability Center servers, as well as the database servers, must be installed in the same time zone, with the same daylight savings time configuration, and be set to the same time.

HP Business Availability Center does not support setting the time zone for its servers at a time zone that is on the half hour relative to GMT, for example GMT+6:30 Indian. This may cause problems during data aggregation, which is performed on the hour. For a list of supported time zones, see "GMT Time Zones" on page 152.

This section includes the following topics:

➤ "Data Collection" on page 147

➤ "Business Process Monitor Scheduling" on page 147

➤ "Data Aggregation" on page 147

➤ "Alerts and Alert Recipients" on page 148

➤ "Scheduled Reports" on page 148

➤ "Service Level Agreements" on page 148

Data Collection

HP Business Availability Center data collectors collect performance data and transmit it to the Gateway Server, which submits the data to profile databases using the loader mechanism. Data is inserted into the database along with a timestamp. HP Business Availability Center components synchronize their time clocks with that of the database server machine hosting the HP Business Availability Center management database. Thus, the timestamp attached to each measurement inserted into the database is that of the database server clock at the time the measurement was collected.

Business Process Monitor Scheduling

When running profiles and WebTrace, the Business Process Monitors use the schedule you set when specifying profile settings. When configuring schedule properties, the Business Process Monitor can base its scheduling on:

➤ **the data collector machine's time clock.** HP Business Availability Center uses the host machine's time zone (displayed in parentheses), which is registered in the management database when the Business Process Monitor is installed on the host machine.

➤ **a specific time zone relative to GMT.** HP Business Availability Center uses the time zone you specify. Choosing Offset from GMT enables you to synchronize transaction run times among hosts in different time zones. Note that this setting is not available for all-day scheduling schemes.

Data Aggregation

The aggregators on the Gateway Server aggregate the raw data in the profile databases on an hourly and daily basis.

For the standard data aggregator, you set the time zone, relative to GMT, for daily data aggregation when defining a profile's properties. For the custom data aggregator, you set the time zone for data aggregation when configuring the default profile database. For more information on the different aggregators used by HP Business Availability Center, see "Data Aggregation" on page 147.

For example, for HP Business Availability Center to perform daily aggregation on data collected by a particular profile based on Pacific Time, enter **-8**, since Pacific Time is GMT-8. Note that this setting cannot be edited once it is saved.

Alerts and Alert Recipients

HP Business Availability Center sends alerts from the Gateway Server. The Gateway Server synchronizes its time clock with that of the database server machine hosting the management database. Thus, the time associated with an alert or subalert is that of the database server clock at the time the alert or subalert occurred.

HP Business Availability Center sends alerts to recipients based on the time range and GMT offset factor that you set when configuring recipient properties in the Platform Administration. For example, if you configure a recipient to receive pager alerts from 9:00 AM - 9:00 PM, and choose a GMT offset of -5 hours, the recipient receives alerts via pager only from 9:00 AM - 9:00 PM Eastern Time.

Scheduled Reports

HP Business Availability Center sends scheduled reports from the Gateway Server machine. HP Business Availability Center sends scheduled reports based on the report generation time and GMT offset factor that you set when configuring scheduled reports in the Reports Manager. For details, "Report Schedules" in *Reports*.

For example, if you configure a scheduled report to be sent at 9:00 AM, and choose to offset report generation time from GMT by -8 hours, HP Business Availability Center sends the report at 9:00 AM Pacific Time.

Service Level Agreements

Service Level Management enables you to specify the time zone of each SLA. Service Level Management calculates reports according to this time zone, so that data is linked to the appropriate time interval. However, Service Level Management displays dates and times according to the time zone settings of the machine on which it is installed.

🔧 Date Formats on Client Machines

HP Business Availability Center displays dates according to the machine's locale (HP Business Availability Center supports 17 locale definitions).

Note: HP Business Availability Center does not retrieve the date formats from the machine's date definitions.

🔍 Report Times

In some HP Business Availability Center reports (for example, Average Response Times over Time and Transaction Breakdown over Time), the selected time range is displayed along the x-axis. HP Business Availability Center breaks down the time range according to segments, which differ depending on the time range. For example, for the **Day** time range, HP Business Availability Center uses one-hour segments.

HP Business Availability Center calculates each time segment differently, depending on the selected time range. Each time segment is exactly the same amount of time with the exception of the first and last time segment of the time range, which are rounded to the start and end time of the report.

The table below describes the time segments that appear along the x-axis for each available time range. For illustration purposes, the information in the table is based on the starting date and time 13/9/01 12:03 PM, where the date format is **month/day/year** and the time format is **hours:minutes:seconds**.

Time Range	Segment	First Time Segment	Example of Middle Time Segment	Last Time Segment
Hour	5 minutes	9/13/01 12:03:00 PM to 9/13/01 12:04:59 PM	9/13/01 12:05:00 PM to 9/13/01 12:09:59 PM	9/13/01 1:00:00 PM to 9/13/01 1:02:59 PM
Day	1 hour	9/13/01 12:03:00 PM to 9/13/01 12:59:59 PM	9/13/01 1:00:00 PM to 9/13/01 1:59:59 PM	9/14/01 12:00:00 PM to 9/14/01 12:02:59 PM
Week	1 day	9/13/01 12:03:00 PM to 9/13/01 11:59:59 PM	9/14/01 12:00:00 AM to 9/14/01 11:59:59 PM	9/20/01 12:00:00 AM to 9/20/01 12:02:59 PM
Month	1 day	9/13/01 12:03:00 PM to 9/13/01 11:59:59 PM	9/14/01 12:00:00 AM to 9/14/01 11:59:59 PM	10/13/01 12:00:00 AM to 10/13/01 12:02:59 PM

Time Range	Segment	First Time Segment	Example of Middle Time Segment	Last Time Segment
Quarter*	1 week	9/13/01 12:03:00 PM to 9/16/01 11:59:59 PM	9/17/01 12:00:00 AM to 9/23/01 11:59:59 PM	12/10/01 12:00:00 AM to 12/13/01 12:02:59 PM
Year	1 month	9/13/01 12:03:00 PM to 9/30/01 11:59:59 PM	10/1/01 12:00:00 AM to 10/31/01 11:59:59 PM	9/1/02 12:00:00 AM to 9/13/02 12:02:59 PM

* For the **Quarter** time range, the week starts on Monday, and the first step is from the start time until the beginning of the following week.

🔍 GMT Time Zones

The following list describes GMT time zones for locations throughout the world.

(GMT -11) Pacific/Niue   (GMT -11) Pacific/Apia
(GMT -11) MIT   (GMT -11) Pacific/Pago_Pago
(GMT -10) Pacific/Tahiti   (GMT -10) Pacific/Fakaofo
(GMT -10) Pacific/Honolulu   (GMT -10) HST
(GMT -10) America/Adak   (GMT -10) Pacific/Rarotonga
(GMT -9) Pacific/Marquesas   (GMT -9) Pacific/Gambier
(GMT -9) America/Anchorage   (GMT -9) AST
(GMT -8) Pacific/Pitcairn   (GMT -8) America/Vancouver
(GMT -8) America/Tijuana   (GMT -8) America/Los_Angeles
(GMT -8) PST   (GMT -7) America/Dawson_Creek
(GMT -7) America/Phoenix   (GMT -7) PNT
(GMT -7) America/Edmonton   (GMT -7) America/Mazatlan
(GMT -7) America/Denver   (GMT -7) MST
(GMT -6) America/Belize   (GMT -6) America/Regina
(GMT -6) Pacific/Galapagos   (GMT -6) America/Guatemala
(GMT -6) America/Tegucigalpa   (GMT -6) America/El_Salvador
(GMT -6) America/Costa_Rica   (GMT -6) America/Winnipeg
(GMT -6) Pacific/Easter   (GMT -6) America/Mexico_City
(GMT -6) America/Chicago   (GMT -6) CST
(GMT -5) America/Porto_Acre   (GMT -5) America/Bogota
(GMT -5) America/Guayaquil   (GMT -5) America/Jamaica
(GMT -5) America/Cayman   (GMT -5) America/Managua
(GMT -5) America/Panama   (GMT -5) America/Lima
(GMT -5) America/Indianapolis   (GMT -5) IET
(GMT -5) America/Nassau   (GMT -5) America/Montreal
(GMT -5) America/Havana   (GMT -5) America/Port-au-Prince
(GMT -5) America/Grand_Turk   (GMT -5) America/New_York
(GMT -5) EST   (GMT -4) America/Antigua
(GMT -4) America/Anguilla   (GMT -4) America/Curacao
(GMT -4) America/Aruba   (GMT -4) America/Barbados
(GMT -4) America/La_Paz   (GMT -4) America/Manaus
(GMT -4) America/Dominica   (GMT -4) America/Santo_Domingo

(GMT -4) America/Grenada   (GMT -4) America/Guadeloupe
(GMT -4) America/Guyana   (GMT -4) America/St_Kitts
(GMT -4) America/St_Lucia   (GMT -4) America/Martinique
(GMT -4) America/Montserrat   (GMT -4) America/Puerto_Rico
(GMT -4) PRT   (GMT -4) America/Port_of_Spain
(GMT -4) America/St_Vincent   (GMT -4) America/Tortola
(GMT -4) America/St_Thomas   (GMT -4) America/Caracas
(GMT -4) Antarctica/Palmer   (GMT -4) Atlantic/Bermuda
(GMT -4) America/Cuiaba   (GMT -4) America/Halifax
(GMT -4) Atlantic/Stanley   (GMT -4) America/Thule
(GMT -4) America/Asuncion   (GMT -4) America/Santiago
(GMT -3) America/St_Johns   (GMT -3) CNT
(GMT -3) America/Fortaleza   (GMT -3) America/Cayenne
(GMT -3) America/Paramaribo   (GMT -3) America/Montevideo
(GMT -3) America/Buenos_Aires   (GMT -3) AGT
(GMT -3) America/Godthab   (GMT -3) America/Miquelon
(GMT -3) America/Sao_Paulo   (GMT -3) BET
(GMT -2) America/Noronha   (GMT -2) Atlantic/South_Georgia
(GMT -1) Atlantic/Jan_Mayen   (GMT -1) Atlantic/Cape_Verde
(GMT -1) America/Scoresbysund   (GMT -1) Atlantic/Azores
(GMT +0) Africa/Ouagadougou   (GMT +0) Africa/Abidjan
(GMT +0) Africa/Accra   (GMT +0) Africa/Banjul
(GMT +0) Africa/Conakry   (GMT +0) Africa/Bissau
(GMT +0) Atlantic/Reykjavik   (GMT +0) Africa/Monrovia
(GMT +0) Africa/Casablanca   (GMT +0) Africa/Timbuktu
(GMT +0) Africa/Nouakchott   (GMT +0) Atlantic/St_Helena
(GMT +0) Africa/Freetown   (GMT +0) Africa/Dakar
(GMT +0) Africa/Sao_Tome   (GMT +0) Africa/Lome
(GMT +0) GMT   (GMT +0) UTC
(GMT +0) Atlantic/Faeroe   (GMT +0) Atlantic/Canary
(GMT +0) Europe/Dublin   (GMT +0) Europe/Lisbon
(GMT +0) Europe/London   (GMT +1) Africa/Luanda
(GMT +1) Africa/Porto-Novo   (GMT +1) Africa/Bangui
(GMT +1) Africa/Kinshasa   (GMT +1) Africa/Douala
(GMT +1) Africa/Libreville   (GMT +1) Africa/Malabo
(GMT +1) Africa/Niamey   (GMT +1) Africa/Lagos

(GMT +1) Africa/Ndjamena	(GMT +1) Africa/Tunis
(GMT +1) Africa/Algiers	(GMT +1) Europe/Andorra
(GMT +1) Europe/Tirane	(GMT +1) Europe/Vienna
(GMT +1) Europe/Brussels	(GMT +1) Europe/Zurich
(GMT +1) Europe/Prague	(GMT +1) Europe/Berlin
(GMT +1) Europe/Copenhagen	(GMT +1) Europe/Madrid
(GMT +1) Europe/Gibraltar	(GMT +1) Europe/Budapest
(GMT +1) Europe/Rome	(GMT +1) Europe/Vaduz
(GMT +1) Europe/Luxembourg	(GMT +2) Africa/Tripoli
(GMT +1) Europe/Monaco	(GMT +1) Europe/Malta
(GMT +1) Africa/Windhoek	(GMT +1) Europe/Amsterdam
(GMT +1) Europe/Oslo	(GMT +1) Europe/Warsaw
(GMT +1) Europe/Stockholm	(GMT +1) Europe/Belgrade
(GMT +1) Europe/Paris	(GMT +1) ECT
(GMT +2) Africa/Bujumbura	(GMT +2) Africa/Gaborone
(GMT +2) Africa/Lubumbashi	(GMT +2) Africa/Maseru
(GMT +2) Africa/Blantyre	(GMT +2) Africa/Maputo
(GMT +2) Africa/Kigali	(GMT +2) Africa/Khartoum
(GMT +2) Africa/Mbabane	(GMT +2) Africa/Lusaka
(GMT +2) Africa/Harare	(GMT +2) CAT
(GMT +2) Africa/Johannesburg	(GMT +2) Europe/Sofia
(GMT +2) Europe/Minsk	(GMT +2) Asia/Nicosia
(GMT +2) Europe/Tallinn	(GMT +2) Africa/Cairo
(GMT +2) ART	(GMT +2) Europe/Helsinki
(GMT +2) Europe/Athens	(GMT +2) Asia/Jerusalem
(GMT +2) Asia/Amman	(GMT +2) Asia/Beirut
(GMT +1) Europe/Vilnius	(GMT +2) Europe/Riga
(GMT +2) Europe/Chisinau	(GMT +2) Europe/Bucharest
(GMT +2) Europe/Kaliningrad	(GMT +2) Asia/Damascus
(GMT +2) Europe/Kiev	(GMT +2) Europe/Istanbul
(GMT +2) EET	(GMT +3) Asia/Bahrain
(GMT +3) Africa/Djibouti	(GMT +3) Africa/Asmera
(GMT +3) Africa/Addis_Ababa	(GMT +3) EAT
(GMT +3) Africa/Nairobi	(GMT +3) Indian/Comoro
(GMT +3) Asia/Kuwait	(GMT +3) Indian/Antananarivo
(GMT +3) Asia/Qatar	(GMT +3) Africa/Mogadishu

(GMT +3) Africa/Dar_es_Salaam (GMT +3) Africa/Kampala
(GMT +3) Asia/Aden (GMT +3) Indian/Mayotte
(GMT +3) Asia/Riyadh (GMT +3) Asia/Baghdad
(GMT +2) Europe/Simferopol (GMT +3) Europe/Moscow
(GMT +3) Asia/Tehran (GMT +3) MET
(GMT +4) Asia/Dubai (GMT +4) Indian/Mauritius
(GMT +4) Asia/Muscat (GMT +4) Indian/Reunion
(GMT +4) Indian/Mahe (GMT +4) Asia/Yerevan
(GMT +4) NET (GMT +4) Asia/Baku
(GMT +4) Asia/Aqtau (GMT +4) Europe/Samara
(GMT +4) Asia/Kabul (GMT +5) Indian/Kerguelen
(GMT +4) Asia/Tbilisi (GMT +5) Indian/Chagos
(GMT +5) Indian/Maldives (GMT +5) Asia/Dushanbe
(GMT +5) Asia/Ashkhabad (GMT +5) Asia/Tashkent
(GMT +5) Asia/Karachi (GMT +5) PLT
(GMT +5) Asia/Bishkek (GMT +5) Asia/Aqtobe
(GMT +5) Asia/Yekaterinburg (GMT +5) Asia/Calcutta
(GMT +5) IST (GMT +5) Asia/Katmandu
(GMT +6) Antarctica/Mawson (GMT +6) Asia/Thimbu
(GMT +6) Asia/Colombo (GMT +6) Asia/Dacca
(GMT +6) BST (GMT +6) Asia/Almaty
(GMT +6) Asia/Novosibirsk (GMT +6) Indian/Cocos
(GMT +6) Asia/Rangoon (GMT +7) Indian/Christmas
(GMT +7) Asia/Jakarta (GMT +7) Asia/Phnom_Penh
(GMT +7) Asia/Vientiane (GMT +7) Asia/Saigon
(GMT +7) VST (GMT +7) Asia/Bangkok
(GMT +7) Asia/Krasnoyarsk (GMT +8) Antarctica/Casey
(GMT +8) Australia/Perth (GMT +8) Asia/Brunei
(GMT +8) Asia/Hong_Kong (GMT +8) Asia/Ujung_Pandang
(GMT +8) Asia/Macao (GMT +8) Asia/Kuala_Lumpur
(GMT +8) Asia/Manila (GMT +8) Asia/Singapore
(GMT +8) Asia/Taipei (GMT +8) Asia/Shanghai
(GMT +8) CTT (GMT +8) Asia/Ulan_Bator
(GMT +8) Asia/Irkutsk (GMT +9) Asia/Jayapura
(GMT +9) Asia/Pyongyang (GMT +9) Asia/Seoul
(GMT +9) Pacific/Palau (GMT +9) Asia/Tokyo

(GMT +9) JST
(GMT +9) Asia/Yakutsk
(GMT +9) Australia/Darwin
(GMT +9) ACT
(GMT +9) Australia/Adelaide
(GMT +9) Australia/Broken_Hill
(GMT +10) Australia/Hobart
(GMT +10) Antarctica/
DumontDUrville
(GMT +10) Pacific/Truk
(GMT +10) Pacific/Guam
(GMT +10) Pacific/Saipan
(GMT +10) Pacific/Port_Moresby
(GMT +10) Australia/Brisbane
(GMT +10) Asia/Vladivostok
(GMT +10) Australia/Sydney
(GMT +10) AET
(GMT +10) Australia/Lord_Howe
(GMT +11) Pacific/Ponape
(GMT +11) Pacific/Efate
(GMT +11) Pacific/Guadalcanal
(GMT +11) SST
(GMT +11) Pacific/Noumea
(GMT +11) Asia/Magadan
(GMT +11) Pacific/Norfolk
(GMT +12) Pacific/Kosrae
(GMT +12) Pacific/Tarawa
(GMT +12) Pacific/Majuro
(GMT +12) Pacific/Nauru
(GMT +12) Pacific/Funafuti
(GMT +12) Pacific/Wake
(GMT +12) Pacific/Wallis
(GMT +12) Pacific/Fiji
(GMT +12) Antarctica/McMurdo
(GMT +12) Asia/Kamchatka
(GMT +12) Pacific/Auckland
(GMT +12) NST
(GMT +12) Pacific/Chatham
(GMT +13) Pacific/Enderbury
(GMT +13) Pacific/Tongatapu
(GMT +13) Asia/Anadyr
(GMT +14) Pacific/Kiritimati

Part IV

Troubleshooting

7

Available Troubleshooting Resources

This chapter provides information on the resources that are available to assist you when troubleshooting problems that arise while working with HP Business Availability Center.

This chapter includes:

Reference

➤ Troubleshooting Resources on page 159

🔍 Troubleshooting Resources

➤ **Installation troubleshooting.** Use to troubleshoot common problems that you may encounter when installing HP Business Availability Center, and the solutions to those problems. For details, see "Installation and Connectivity Troubleshooting" in the *HP Business Availability Center Deployment Guide* PDF.

➤ **Login troubleshooting.** Use to troubleshoot possible causes of failure to log in to HP Business Availability Center. For details, see "Troubleshooting and Limitations" in *Platform Administration*.

➤ **HP Software Self-solve knowledge base.** Use to search for specific troubleshooting information on a wide variety of topics. Located on the HP Software Support Web site, the HP Software Self-solve knowledge base can be accessed by selecting **Troubleshooting & Knowledge Base** from the HP Business Availability Center Help menu.

Note that only registered customers can access the resources on the HP Software Support Web site. Customers who have not yet registered can do so from the site.

➤ **HP Business Availability Center tools.** Use to assist in troubleshooting the HP Business Availability Center environment. You access the tools from the **<HP Business Availability Center server root directory>\tools** directory. Most of the tools should only be used in coordination with HP personnel. The Database Schema Verification utility (dbverify) and Data Marking utility should be used according to their documented instructions.

8

Working in Non-English Locales

This chapter lists considerations and limitations when working in a non-English locale.

This chapter includes:

➤ Installation and Deployment Issues on page 162

➤ Database Environment Issues on page 162

➤ Administration Issues on page 163

➤ Dashboard Issues on page 163

➤ Service Level Management Issues on page 164

➤ HP Business Availability Center for Siebel Applications Issues on page 164

➤ Report Issues on page 165

➤ Business Process Monitor Issues on page 166

➤ SiteScope Issues on page 166

➤ Real User Monitor Issues on page 167

➤ End User Management Administration Issues on page 167

➤ Problem Isolation Issues on page 167

➤ Multiple-language Issues on page 168

➤ Multi-Lingual User (MLU) Interface Support on page 169

✎ Installation and Deployment Issues

➤ Installing HP Business Availability Center in an I18N environment is supported for HP Business Availability Center installed on a Windows platform or on a Solaris platform. Other UNIX platforms are not supported. For details on installing HP Business Availability Center on a Windows platform, see "Installing HP Business Availability Center Servers on a Windows Platform" in the *HP Business Availability Center Deployment Guide* PDF.

➤ Business Process Monitors and the Gateway Server must be installed on an operating system that has the same locale as the data.

➤ During Business Process Monitor installation, use English names only for the host name and location. If necessary, you can change the names to non-English names after installation, in Business Process Monitor Admin.

➤ The installation path for all HP Business Availability Center components must not contain non-English language characters.

✎ Database Environment Issues

➤ To work in a non-English language HP Business Availability Center environment, you can use either an Oracle Server database or a Microsoft SQL Server database. The encoding of the database should be the same as the encoding of the specific language. When using Oracle Server database, the encoding of the database can also be UTF-8 or AL32UTF-8, which supports both non-English languages as well as multiple languages.

➤ When you create a new Oracle instance in an Oracle database, you must specify the character set for the instance. All character data, including data in the data dictionary, is stored in the instance's character set. For details on working with Oracle databases, see "Deploying and Maintaining the Oracle Server Database" in the *HP Business Availability Center Database Guide* PDF.

➤ The Database Query Monitor can connect to an Oracle database but the Oracle user names and passwords must contain only English characters.

🔖 Administration Issues

➤ E-mail alerts sent with ISO-2022-JP encoding are supported only by an SMTP server running on a Windows platform. Use of this encoding affects all HP Business Availability Center servers.

➤ When using the default authentication strategy, Lightweight SSO, to authenticate users logging in to HP Business Availability Center, user names and passwords can be in non-English characters.

➤ To support non-English characters, the encoding for HP Business Availability Center databases must be defined as UTF-8 or AL32UTF-8, or set to the specific language. For further details, see "Database Environment Issues" on page 162.

🔖 Dashboard Issues

You may have to perform several steps to enable displaying non-Latin languages in the Dashboard Top View.

To display non-Latin languages in Dashboard Top View:

1 Verify that you have followed the instructions on installing the JRE on a non-Western Windows system. The instructions are found at the http://java.sun.com/j2se/1.5.0/jre/install-windows.html.

2 Make sure that you:

➤ have administrative permissions to install the J2SE Runtime Environment on Microsoft Windows 2000 and XP.

➤ (For users installing the JRE on non-Western 32-bit machines) choose a **Custom** Setup Type. In Custom Setup under feature 2 (**Support for Additional Languages**), select **This feature is installed on local hard drive**.

3 Select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Application**, and locate the **Top View Font Name** entry in the **Dashboard Application – Top View Properties** table. Change the value to **Arial Unicode MS**.

> **Important:** If the value of the **Top View Font Name** entry is **default**, you do not need to perform this step, as the Top View Font Name property automatically assumes the Arial Unicode MS value in that case.

---

4 Close all instances of the Web browser.

5 Log in to HP Business Availability Center and access Dashboard Top View. Verify that the Chinese or Japanese characters now appear correctly.

Service Level Management Issues

Service Level Management does not support service names that contain more than 50 multibyte characters.

HP Business Availability Center for Siebel Applications Issues

➤ Non-English characters may not appear or may be corrupted in the Topology View. If you encounter this problem, install the Arial Unicode Microsoft font from the Microsoft Web site.

➤ HP Business Availability Center by default only supports English language Siebel. Do not deliver data from a non-English version of Siebel to HP Business Availability Center. You should use special translation adapters to enable HP Business Availability Center to work with a non-English version of the Siebel application. For details, contact HP Software Support.

Report Issues

➤ HP Business Availability Center does not support Custom Report names that contain more than 50 multibyte characters.

➤ The Page Component Breakdown report does not support URLs that contain multibyte characters. When specifying a URL and a location from which to run the breakdown, you must enter English characters in the URL box.

➤ Excel reports must have English file names when uploading to HP Business Availability Center running on a Chinese Simplified operating system. To view Excel reports, select **Applications** > **User Reports** > **Report Manager**.

➤ Reports downloaded from HP Business Availability Center to Excel cannot be displayed properly on an operating system whose language differs from the data language.

To download Excel files with multibyte data when HP Business Availability Center is installed on an English-language machine, set the **user.encoding** entry in the **<Business Availability Center root directory>\AppServer\resources\strings.properties** file to the correct encoding.

➤ By default, Excel does not open UTF8 encoded CSV documents correctly. After saving a report as a .csv file, you can import it into Excel by doing the following in Excel:

a On the **Data** menu, select **Import External Data**, and click **Import Data**.

b In the Files of type box, click **Text Files.**

c In the **Look in** box, locate and double-click the text file you want to import as an external data range.

d To specify how you want to divide the text into columns, follow the instructions in the Text Import Wizard, and then click **Finish**.

Business Process Monitor Issues

➤ If the Business Process Monitor log files contain non-English data, you must open them in a viewer that supports UTF-8 format parsing, for example, Notepad, rather than from the View BPM Files window in the Business Process Monitor Admin.

   Log files that are saved in the default encoding of the server on which the Business Process Monitor Admin is installed are shown correctly in the View BPM Files window.

➤ HP Business Availability Center does not support Business Process Monitor host names that contain more than 25 multibyte characters.

SiteScope Issues

➤ In SiteScopes running in I18N mode, the **Return to Group** link displayed during monitor set creation shows the indexed-based group name (for example, **group0**) instead of the user-defined group name.

➤ The Database Query Monitor can connect to an Oracle database only if the Oracle user names and passwords contain English-only characters.

➤ SiteScope does not support non-English characters in the username/password.

➤ Beginning with SiteScope version 8.5, the user interface can be displayed in several languages. For details, see "Working in an Internationalization (I18N) Environment" in *Using System Availability Management*.

➤ For a list of monitors that are tested for internationalization, see "Monitors Tested for Internationalization" in *Using System Availability Management*.

Real User Monitor Issues

➤ Real User Monitor supports non-English characters in UTF-8 format. For details on configuring the HP Real User Monitor probe to support non-Unicode encodings, see "Configuring the HP Real User Monitor Probe for I18N" in the *Real User Monitor Administration* PDF.

➤ To support non-English character from Real User Monitor, the encoding for HP Business Availability Center databases must be defined as UTF-8, or set to the specific language. For further details, see "Database Environment Issues" on page 162.

End User Management Administration Issues

➤ Global replace does not support non-English languages.

➤ When using Solaris, Business Process Monitor transaction names containing Japanese characters are properly displayed by adding **-Dfile.encoding= MS932** to the **product_run.sh** file and then restarting HP Business Availability Center.

Problem Isolation Issues

Problem Isolation is translated and partially supports I18N:

➤ Reactive Analysis supports I18N.

➤ Proactive Analysis does not support I18N.

🔍 Multiple-language Issues

➤ The SNMP notification method does not support multiple-language text, and can only send a notification in the character set of the Gateway Server machine. This is because HP Business Availability Center uses SNMP version 1.0, which does not support multilingual data.

➤ Error messages in the Failed Transactions report do not display correctly when HP Business Availability Center runs on an English operating system, and the Business Process Monitor runs on a Japanese operating system. To access the Failed Transactions report, select **Applications** > **End User Management** > **Business Processes** > **Error Summary**. Locate the General Errors table, and click a link to open the Failed Transactions window.

➤ There is support for I18N and MLU on Solaris platforms but not on other UNIX platforms. For other UNIX platforms, make sure that transactions and scripts contain English characters only.

➤ HP Business Availability Center can store multiple-language data. However, a regular executable cannot usually accept multiple-language data on the command line.

The following table describes the procedures that you must perform to add multiple-language data to the command line when running an executable file upon alert:

Platform	Procedure
Windows	To prevent multiple-language data from being lost, write the application with a **wmain** function instead of a **main** function. You can also use another **main**-type function that can take command line parameters of type **wchar** instead of type **char**. **Note:** When you use the SubAlerts command line option, the created XML file does not include an encoding attribute, and the encoding is different from the default UTF-8 encoding.
Solaris	Inform the writer of the application that the parameters passed to the application must be encoded in UTF-8.

For details on using a custom command line when running an executable file upon alert, see "Run Executable File Dialog Box" in *Alerts*.

➤ An executable file that was created for a previous version of HP Business Availability Center is compatible with a multiple-language version.

🔩 Multi-Lingual User (MLU) Interface Support

The HP Business Availability Center user interface can be viewed in the following languages in your Web browser:

Language	Language Preference in Web Browser
English	English
French	French (France) [fr]
Japanese	Japanese [ja]
Korean	Korean [ko]
Simplified Chinese	Chinese (China) [zh-cn]

The following are languages in which HP Business Availability Center can operate but the user interface of only the HP Universal CMDB applications are presented in the language.

Language	Language Preference in Web Browser
Dutch	Dutch (Netherlands) [nl]
German	German (Germany) [de]
Portuguese	Portuguese (Brazil) [pt-br]
Russian	Russian [ru]
Spanish	Spanish [es]
Italian	Italian (Italy) [it]

Use the language preference option in your browser to select how to view HP Business Availability Center. The language preference chosen affects only your local machine (the client machine) and not the HP Business Availability Center machine or any other user accessing the same HP Business Availability Center machine.

To set up and view HP Business Availability Center in a specific language:

1 Install the appropriate language's fonts on your local machine if they are not yet installed. If you choose a language in your Web browser whose fonts have not been installed, HP Business Availability Center displays the characters as squares.

2 If you are logged in to HP Business Availability Center, you must log out. Click **LOGOUT** at the top of the HP Business Availability Center window.

Close every open browser window or alternatively clear the cache (if HP Business Availability Center is running on Internet Explorer).

3 If HP Business Availability Center is running on Internet Explorer, configure the Web browser on your local machine to select the language in which you want to view HP Business Availability Center (**Tools** > **Internet Options**).

  a Click the **Languages** button and in the Language Preference dialog box, highlight the language in which you want to view HP Business Availability Center.

  b If the language you want is not listed in the dialog box, click **Add** to display the list of languages. Select the language you want to add and click **OK**.

  c Click **Move Up** to move the selected language to the first row.

  d Click **OK** to save the settings.

  e Display the HP Business Availability Center login window.

  f From the Internet Explorer menu, select **View** > **Refresh**. HP Business Availability Center immediately refreshes and the user interface is displayed in the selected language.

Note: For details on viewing Web pages in Internet Explorer that are written in a different language, see http://support.microsoft.com/kb/306872/en-us.

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4 If HP Business Availability Center is being viewed on FireFox, configure the Web browser on your local machine as follows:

  a Select **Tools** > **Options** > **Advanced**. Click **Edit Languages**. The Language dialog box opens.

b Highlight the language in which you want to view HP Business Availability Center.

If the language you want is not listed in the dialog box, expand the **Select language to add...** list, select the language, and click **Add**.

c Click **Move Up** to move the selected language to the first row.

d Click **OK** to save the settings. Click **OK** to close the Language dialog box.

Notes and Limitations

➤ There is no language pack installation. All translated languages are integrated into the HP Business Availability Center Multi-lingual User Interface (MLU).

➤ Data remains in the language it is entered in, even if the language of the Web browser changes. Changing the language of the Web browser on your local machine does not change the language of the data input definitions and configurations.

➤ You cannot deploy a package if the server locale is different than the client locale and the package name contains non-English characters. For details, see "Package Manager" in *Model Management*.

➤ You cannot create a package that contains resources (for example, views and TQLs) having non-English characters in their names, if the server locale is different from the client locale. For details, see "Package Manager" in *Model Management*.

➤ In the View Manager, you cannot create a new view if the view's name contains more than 18 Japanese characters. For details, see "View Manager" in *Model Management*.

➤ You cannot use a URL to display a specific view in your browser if the view name in the URL contains any Asian or European multibyte characters. For details, see "Opening an Application Page Using a URL" on page 41.

➤ The HP Business Availability Center server status HTML page appears only in English. It is not translated into any other language. For details, see "Viewing Server Status" in the *HP Business Availability Center Deployment Guide* PDF.

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HP Business Availability Center Logs

Note to HP Software-as-a-Service customers: This chapter is not relevant for HP Software-as-a-Service customers.

This chapter provides an overview of HP Business Availability Center log files.

This chapter includes:

🔱 About HP Business Availability Center Logs

HP Business Availability Center records the procedures and actions performed by the various components in log files. The log files are usually designed to serve HP Software Support when HP Business Availability Center does not perform as expected.

The default severity threshold level for log files differs per log, but is generally set to either **Info** or **Error**. For a definition of log levels, see "Log Severity Levels" on page 175.

You can view log files with any text editor.

🔱 Log File Locations

Most log files are located in the **<HP Business Availability Center root directory>\log** directory and in subdirectories organized by component.

Log file properties are defined in files in the following directory and its subdirectories: **<HP Business Availability Center root directory> \conf\core\Tools\log4j**.

Log File Locations in a Distributed Deployment

In typical or compact installations, all HP Business Availability Center servers and their logs reside on the same machine. In the case of a distributed deployment of the servers among several machines, logs for a particular server are usually saved on the computer on which the server is installed. However, if it is necessary for you to inspect logs, you should do so on all machines.

When comparing logs on client machines to those on the HP Business Availability Center server machines, keep in mind that the date and time recorded in a log are taken from the machine on which the log was produced. It follows that if there is a time difference between the server and client machines, the same event is recorded by each with a different time stamp.

🍂 Log Severity Levels

Each log is set so that the information it records corresponds to a certain severity threshold. Because the various logs are used to keep track of different information, each is preset to an appropriate default level. For details on changing the log level, see "Changing Log Levels" below.

Typical log levels are listed below from narrowest to widest scope:

➤ **Error.** The log records only events that adversely affect the immediate functioning of HP Business Availability Center. When a malfunction occurs, you can check if Error messages were logged and inspect their content to trace the source of the failure.

➤ **Warning.** The log's scope includes, in addition to Error-level events, problems for which HP Business Availability Center is currently able to compensate and incidents that should be noted to prevent possible future malfunctions.

➤ **Info.** The log records all activity. Most of the information is normally routine and of little use and the log file quickly fills up.

➤ **Debug.** This level is used by HP Software Support when troubleshooting problems.

Note: The names of the different log levels may vary slightly on different servers and for different procedures. For example, **Info** may be referred to as **Always logged** or **Flow**.

Changing Log Levels

If requested by HP Software Support, you may have to change the severity threshold level in a log, for example, to a debug level.

To change the severity threshold level:

 1 Open the log properties file in a text editor. Log file properties are defined in files in the following directory: **<HP Business Availability Center root directory>\conf\core\Tools\log4j**.

 2 Locate the **loglevel** parameter. For example,

```
loglevel=ERROR
```

 3 Change the level to the required level. For example,

```
loglevel=DEBUG
```

 4 Save the file.

Log File Size and Automatic Archiving

A size limit is set for each type of log file. When a file reaches this limit, it is renamed and becomes an archived log. A new active log file is then created.

For many logs, the number of archived log files saved can be configured. When a file reaches its size limit, it is renamed with the numbered extension **1**. If there is currently an archived log with the extension **1**, it is renamed with the extension **2**, **log.2** becomes **log.3**, and so on, until the oldest archived log file (with the number corresponding to the maximum number of files to be saved) is permanently deleted.

The following image shows an example of a log file, **topaz_all.ejb.log**, and its archived copies.

The maximum file size and the number of archived log files are defined in the log properties files located in <**HP Business Availability Center root directory**>**conf****core****Tools****log4j**. An example is:

```
def.file.max.size=2000KB
def.files.backup.count=10
```

JBoss and Tomcat Logs

The following <**HP Business Availability Center root directory**>**log** directory holds JBoss- and Tomcat-related log files:

➤ **jboss_boot.log.** Logs startup activities including running the JBoss process, deployment, and startup status, as well as the number of busy ports. If HP Business Availability Center fails to start, any problems are written to this log.

➤ **jboss_server.log.** Logs all JBoss activities including JBoss messages, deployment and startup status.

➤ **jboss_tomcat.log.** Logs the Tomcat messages.

Note: You can view the JBoss Management Console at http://<HP Business Availability Center server>:8080/jmx-console.

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🟦 Real User Monitor Logs

Real User Monitor logs store messages from Real User Monitor modules and are used to troubleshoot problems, and to provide information about the system's operations. There are three types of logs: engine logs, JBoss logs, and core logs. The log files are located in the **<Real User Monitor Engine root>\log** directory.

You change log levels, and the default log size and archiving parameters, in the same way as in HP Business Availability Center. For details, see "Changing Log Levels" on page 176, and "Log File Size and Automatic Archiving" on page 176.

This section contains the following topics:

➤ Engine Logs

➤ JBoss and Tomcat Logs

➤ Core Logs

Engine Logs

Engine logs contain log messages from the different processes. There are two types of engine log files:

➤ **rumengine log files.** Log files for modules within the Real User Monitor engine.

➤ **repository log files.** Log files for modules connecting the Real User Monitor engine and its mySQL database.

There is a log for each module and the Real User Monitor engine saves up to 20 files for each log by default. When a file reaches a maximum, default size of 3 MB, a new log file is created automatically. Each time the Real User Monitor engine is restarted, it creates a new set of logs. The name of the log file consists of the log type (rumengine or repository), the module name, log and the log file number.

For example, a rumengine type module called **clustermanager** would produce the following log files:

```
rumengine.clustermanager.log
rumengine.clustermanager.log.1
rumengine.clustermanager.log.2
```

and so on.

The structure of a message in the log file is as follows: <timestamp> <invoking thread> <java class name and line number> <message log level> <message content>. For example:

```
2005-08-03 14:20:32,953 [main] (NodesVerifierManager.java:185) INFO - Found
primary installation on current machine
2005-08-03 14:20:33,125 [main] (NodeVerifierServer.java:103) INFO - Got host
name=paddington from repository. Hostname ID=1
```

You can change the default log file size and archiving cycle. For details, see "Log File Size and Automatic Archiving" on page 176.

You can change the error level that is reported to the log file for each module. The following error levels can be set for Real User Monitor log files:

➤ **Fatal.** The log only records severe events that could cause the Real User Monitor to abort.

➤ **Error.** The log records severe events that adversely affect the immediate functioning of Real User Monitor, that might still allow the application to continue running.

➤ **Warn.** The log's scope is widened to include events that include potentially harmful situations.

➤ **Info.** The log includes informational messages about the regular running of the system.

➤ **Debug.** This level is used by HP Software Support when troubleshooting problems.

For details on changing the error level, see "Changing Log Levels" on page 176.

Note: Each severity level includes all the levels above it. For example, if the log is set to **Warn** level, it includes **Warn**, **Error** and **Fatal** events.

JBoss and Tomcat Logs

JBoss and Tomcat log messages are written to the following files in the **<Real User Monitor Engine root>\log** directory:

➤ **jboss_boot.log.** Logs startup activities including running the JBoss process, deployment, and startup status. If the Real User Monitor fails to start, any problems are written to this log.

➤ **jboss_server.log.** Logs all JBoss activities including JBoss messages, deployment and startup status.

➤ **jboss_tomcat.log.** Logs the Tomcat messages.

Core Logs

Core log messages are written to log files in the **<Real User Monitor Engine root>\log\core** directory.

The core log files contain messages about the general status of the application server on which the HP Real User Monitor engine is installed, and its services.

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