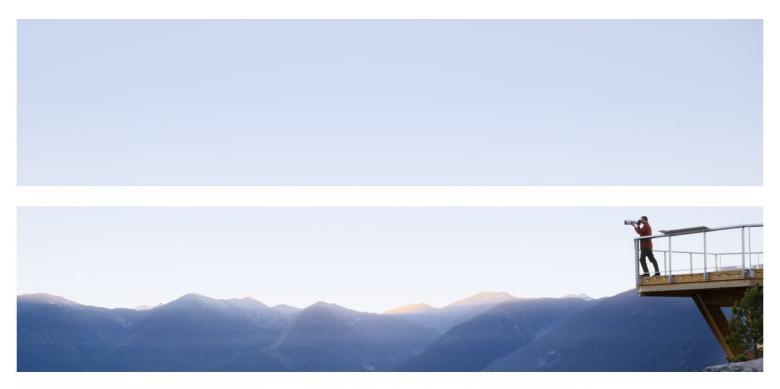


Real User Monitor

Version 9.40, Released August 2017

Release Notes

Published September 2017





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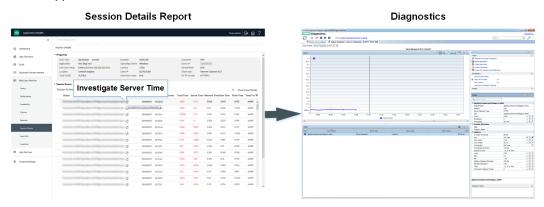
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Real User Monitor Release Notes

This document provides information about Real User Monitor (RUM) 9.40.

What's New in This Release

- Rejuvenated UI Application Health Reports
 - Drill down to Diagnostics from RUM reports Completes the isolation flow to launch Diagnostics where applicable



- Complete Isolation flow The drill through abilities and end to end isolation flow is enabled starting from the dashboard and continues to enable reviewing everything related to a session.
- Enhanced App Infra with a Topology Map to enable visualization of application topology. For Multitiered applications, the nodes and their relationship are demonstrated. Isolation of issues can be invoked from the respective nodes showing performance or availability issue.

Application Health													admir	10	لما
	~	Cyclos_Multi_Tier	\sim								н	D	w 🗎	G	
) Dashboard		Performance & Availability by Tiers & S	iervers												
App Overview		Tier	Availab	ility	Performance	Total Action	Slow Action H	Download Time	Connec	tion A	Total Traffic	Tota	l Requests	Total	Attempt
) SLM		> HTTP-Web	0	98.81%	100.00 %	4,437	0	0.22	0	99.86 %	6.53	4,765	5	710	
Business Process Monito		> auto-disovered-tier-General_Web	0	98.76 %	100.00 %	2,815	0	0.01	0	99.52 %	4.57	3,054		207	
Real User Monitor		Topology Map													
Status		$\overline{\mathbf{O}}$													
		-													
Performance		8													
Performance Availability		8													
		۵					٩								
Availability Volume						-]								
Availability Volume Sessions		۵				ļ	Į								
Availability Volume]								
Availability Volume Sessions							j								
Availability Volume Sessions Session Details															
Availability Volume Sessions Session Details AppInfra							1								

- Added application drop down list to provide users with the ability to change applications in the context
 of a single report
- Added enhanced filtering capabilities to enable users to focus on the necessary sessions
- Added Sessions report Provides the ability to review all sessions within the application context. The time period can be selected. The columns can also be filtered to provide a better review of the reported data.

-⁄v	- Application Health												admin 🛛 🕞	습 ′	?
	«	Cyclos_Multi_Tier		\sim								н р w	İ <i>C</i>	7	\mathbb{V}
습	Dashboard	Session List													
0:0	App Overview	Start Time 🔻	Tier	End User Gre	Client	Username	Location	Active	Duration	Latency	Errors	Info Events	Slow Actions	Action	s
Ø	SLM	01/17/2017 15:51	HTTP-Web	Others [0.0	*****	j2ee07	Rio De Jane	yes	00:00:00:1	212.76	0	0	0	4	
-		01/17/2017 15:51	HTTP-Web	Others [0.0	10000	admin	Boston	yes	00:00:00:1	208.41	0	0	0	6	
~	Business Process Monitor	01/17/2017 15:51	HTTP-Web	Others [0.0		J2ee02	United King	yes	00:00:00:1	209.13	0	0	0	2	
8	Real User Monitor	01/17/2017 15:51	HTTP-Web	Others [0.0	10.00	j2ee05	Australia	yes	00:00:00:1	204.47	0	0	0	2	
	Status	01/17/2017 15:51	HTTP-Web	Others [0.0		admin	Boston	yes	00:00:00.1	206.23	0	0	0	11	
	Performance	01/17/2017 15:50	HTTP-Web	Others [0.0	100.00	j2ee05	Australia	yes	00:00:00:1	175.86	0	0	0	11	
		01/17/2017 15:50	HTTP-Web	Others [0.0	10000	j2ee10	Tokyo	yes	00:00:00:1	210.13	0	0	0	2	
	Availability	01/17/2017 15:50	HTTP-Web	Others [0.0		j2ee08	Egypt	yes	00:00:00:1	207.19	0	0	0	7	
	Volume	01/17/2017 15:50	HTTP-Web	Others [0.0	10,041748	j2ee04	Shanghai	yes	00:00:00:1	131.70	0	0	0	3	
	Sessions	01/17/2017 15:50	HTTP-Web	Others [0.0	-	J2ee09	India	yes	00:00:00:1	208.39	0	0	0	8	
	Session Details	01/17/2017 15:50	HTTP-Web	Others [0.0	101010	j2ee07	Rio De Jane	yes	00:00:00.1	199.72	0	0	0	6	
		01/17/2017 15:50	HTTP-Web	Others [0.0	212210.	user01	India	yes	00:00:00:1	205.06	0	0	0	8	
	App Infra	•						148/200			28	0	0	2606	•
	Locations														

• Added drill down to Session Details report, that includes Action List, Action Details, Request, Response, and Events. This report enables completing the isolation flow for the selected context in Application Health. All session specific details are also displayed.

-1	 Application Health 	adm	nin 📗	₿	습	?
	«	Cyclos_Multi_Tier V				
습	Dashboard	Session Details				
<u>0.0</u>	App Overview	> Session Events Session Actions Hide Action Details ≫				
٨	SLM	Action Details Response Request Event				
	Business Process Monitor	Action Description				1
8-	Real User Monitor	Cyclos_Login_Page Action name Undefined Action Host				
	Status	URI HTTP Method GET				
	Performance	Server IP Server Name				
	Availability	Cyclos_Account_Overview Server port 9090 Cyclos_Account_Overview Running software Web Server				
	Volume	Client IP Client name				
	Sessions	Client port				
	Session Details	Total Requests 2 Cyclos, Account, Overview Start Time 01/17/2017 15:51:12				
	App Infra	Sent Trafic 4296 Received Trafic 728				
	Locations					

Docker Report - Aligned to CMDB Docker model to enable consolidated status

- Application Health Admin
 - Web Application life cycle Added ability to create, view, update, and delete web applications.
 - RUM / BPM application integrated support Added ability to define applications that are configured for both RUM and BPM.
 - Support basic configuration of RUM applications
 - General setting Configure application location (URL and IPs), thresholds, attach engine, and TCP settings

-1	 Application Health 		User: admin 🕞 🏠 ?
	«	test-jpet V Create New App	^
습	Dashboard	General Data Extraction Sessions Data Collection	Cancel Save
0:0	App Overview	APPLICATION ACTIVE	
۵	SLM	Name test-jpet	
	Business Process Monitor	Description	
8	Real User Monitor	Template Name General Web Application	
ø	App Settings	Tier Name HTTP-Web	
	Business Process Monitor	Protocol HTTP-Web	
	basiness in occasi nomitor	Profile Database	
	Real User Monitor	Engines Attach Engine	
	Alerts	\checkmark application location	
	Downtime	# IP Range Port SSL	
		1. 8080 -	$\hat{\mathbf{Q}}$
Ф	General Settings	Add IP Range	
		# URL	
		Add URL	~

• Data Extraction settings – Configure user name detection and parameter extraction

-^,	- Application Health									User: admin	B	습	?
		~	test-jpe	et		~	Create New A	qq					1
命	Dashboard		Gene	eral	Data Extraction	Sessions	Data Col	lection		Cancel	Sav	'e	
<u>0a0</u>	App Overview			NAME EXT	RACTION								
٨	SLM		#	Active	Search		Content						
	Business Process Monitor		1.		HTTP Header		Header name: hea	ider3, All Content				$\hat{}$	
8	Real User Monitor							Add New User Name					
ø	App Settings		SEARC	H USERNA	ME IN O All pag	es 🔿 Specif	fic pages						
	Business Process Monitor			IETER EXT	FRACTION								
	Real User Monitor		#	Active	Name		Search in		Content				
			1.		param4		HTTP Header		Header name: header4, All C			$\hat{}$	
	Alerts							Add New Parameter Extraction					
	Downtime		∨ нттрі	METHOD E	XTRACTION								
¢	General Settings		0	Extract	method name (Use th	is option to expo	se the http method	of requests as part of the visible URL)					

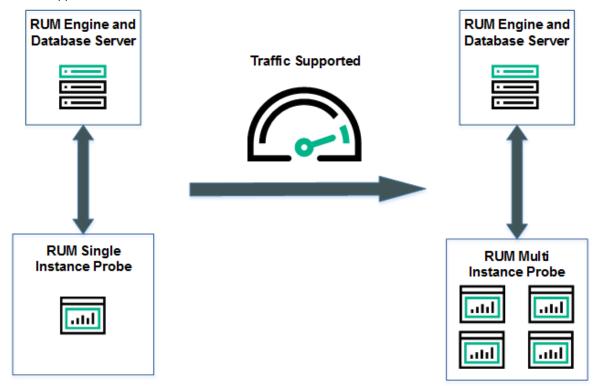
• Session settings - Configure session identification, properties, and reset

Application Health	User: admin 🕞 🟠 ?
≪ test-jpet ∨ Create New App	^
Dashboard General Data Extraction Sessions Data Collection	Cancel Save
App Overview	
SLM # Active Search Content	
Business Process Monitor 1 Cet/Post Parameters Parameter: login, All Content	0
Real User Monitor Add Session ID	
Business Process Monitor (Reset the session on timeout of 20 minutes)	
Real User Monitor	
1. Start a session	^
Alerts 2. End a session	~
Downtime Add Start/End Session	
General Settings V SESSION PROPERTIES	
# Active Name Search Content	
Add New Session Property	

• Data Collection settings – Configure data collection, sensitive data, and snapshot properties

-1	Application Health			User:	admin	₿ @	?	
		«	test-jpet V Create New A	qq			^	
습	Dashboard		General Data Extraction Sessions Data Col	llection	:el	Save		
0:0	App Overview		✓ GENERAL					
۵	SLM		Enable clickstream					
	Business Process Monitor		Enable page component breakdown					
8	Real User Monitor		Enable frame unification					
ø	App Settings		Enable automatic page classification					
	Business Process Monitor		Exclude BPM data SENSITIVE DATA - HTTP PARAMETERS					
	Real User Monitor		Delimiter ;					
	Alerts		O Report all parameters					
	Downtime		Report all parameters except the following password.password					
¢	General Settings		Report only the following parameters undefined SENSITIVE DATA SETTINGS					
ч¢х'	Genel di Seriirigs		> SENSITIVE DATA SETTINGS > SNAPSHOT COLLECTION					
			> STATISTICS COLLECTION					
			> HOST ALIASES				~	1

- Performance
 - Multi Instance Probe A new RUM deployment for better resource utilization which offers increased traffic support



- Optimized engine database cache handling
- Optimized Kernel Filters for larger configurations: Kernel level optimization for better probe performance.
- · Optimized multiple SSL certificate handling
- Probe performance calculator update New benchmarking in updated hardware setting demonstrates a better performance number
- RUM Monitoring
 - Extended Master Secret SSL handshaking During the Key Exchange phase of The Transport Layer Security (TLS) Handshake Protocol, the client and server exchange random numbers and a special number called the Pre-Master Secret. These numbers are combined with additional data permitting client and server to create their shared secret, called the Master Secret. The Master Secret is used by client and server to generate the write MAC secret, which is the session key used for hashing, and the write key, which is the session key used for encryption.

A new TLS extension has been introduced (Extended master secret) that changes the way master_ secret is generated.

When this feature is on, Clients and servers DO NOT accept handshakes that do not use the extended master secret.

- MQ version 8 monitoring and sessions reporting Support Message Queue (MQ) version 8 monitoring, sessions reporting, and providing correlation with session parameters
- ISO 8583 scalable monitoring solution with configurable parameters for encoding With configurable message parameters, RUM gives an ability to decode ISO 8583 across vendors and service provides (for example, MasterCard, Visa, etc.) and show sessions in RUM reports.
- Monitor Virtual Extensible LAN (VXLAN) traffic Virtual Extensible LAN (VXLAN) is a network
 virtualization technology that attempts to address the scalability problems associated with large cloud
 computing deployments. RUM is now able to monitor applications hosted in VXLAN environment.
- Monitor Kony mobile apps (beta) Support instrumentation and monitoring of Kony mobile apps using RUM Mobile framework (beta)
- Security
 - RUM Engine Database MySQL upgraded to 5.7.16. Added instructions for upgrading MySQL
 - Tomcat version in Client Monitor upgraded to 8.5.4.
 - Open SSL version in sniffer probe upgraded to 1.1.0
 - Applied security vulnerabilities fixes
- Certifications
 - Support OpenJDK 8 for RUM Engine and Probe
 - Support MS Hyper-V 2012 R2
 - Browser versions
 - Internet Explorer 11.0
 - Firefox 52.x ESR
 - Google Chrome with the latest available version for Application Health only.

Requirements

RUM System Requirements and Support Matrixes

RUM system requirements and support matrix information is located in the RUM Installation and Upgrade Guide(https://softwaresupport.hpe.com/km/KM02505679), located on the HPE Software Support site (https://softwaresupport.hpe.com/).

Installation Requirements

You can find requirements and steps to install and upgrade Real User Monitor in the RUM Installation and Upgrade Guide (https://softwaresupport.hpe.com/km/KM02505679), located on the HPE Software Support site (https://softwaresupport.hpe.com/).

The Real User Monitor Deployment Planning Guide (https://softwaresupport.hpe.com/km/KM02505669) provides the information necessary for designing and planning the deployment of the RUM solution.

The Real User Monitor Hardening Guide (https://softwaresupport.hpe.com/km/KM02505678) covers hardening of the RUM Sniffer Probe, RUM Client Monitor Probe, and RUM Engine.

Notes and Limitations

RUM Engine

RUM engine currently does not work with APMs with a non-default root context (APM is accessed with /custom/topaz rather than /topaz). For updates see QCCR11127091.

RUM Client Monitor Probe

Client Monitor Probe does not report HTTP error events, such as 400 series error (page not found, etc.) and 500 series error (server errors).

RUM Sniffer Probe

The Stopped Page feature is supported only in the Internet Explorer browser.

RUM cannot decrypt Diffie-Hellman secured traffic. Please configure your applications to use RSA security.

Before installing the RUM Probe on a Linux machine, you must either disable SELinux or make sure that it will not block the RUM Probe.

Load Balancing using the Client IP range is not possible when Tier Discovery is enabled for that application.

Mobile

After instrumenting a mobile app for monitoring by RUM, you must test the instrumented application to ensure that it functions properly before uploading it to the app store.

The android crash engine detects Java related crashes only.

iOS crash data includes only the class name and stack trace.

iOS crashes are reported in the following application launch if the application is re-launched within two hours of the crash.

If during instrumentation it is discovered that ACRA crash reporting (which is a third-party tool) is already instrumented on your application, the RUM crash reporting will be disabled, the instrumentation will succeed, but a warning message will appear on the console and RUM will not report crashes.

When running an application, a few of the initial crashes may be ignored.

There is limited support for Hybrid and Kony mobile apps.

VDI

The RUM VDI solution does not support multiple concurrent sessions on different applications from the same user.

When running Internet Explorer from a CMD line with a URL, the VDI agent does not report the first URL.

Fixed Defects

The reference number for each fixed defect is the Quality Center Change Request (QCCR) number. For more information about fixed defects, visit HPE Software Support site, or contact your HPE Support representative directly.

The Client Monitor Probe's Active Sessions count goes beyond the probe's maxSessions configuration value (QCCR1I121375)

Fix: The Client Monitor Probe's code logic was correct so that it now has an exact Active Sessions count.

RUM Session Analyzer report displays incorrect data with a future startTime (QCCR1123241)

Fix: If a page has a gap in the start time, a new session is created.

Meaning of errors: Error while parsing Probe channel line. Error while parsing field "x-sessionbytes [session bytes]" - bad int format (QCCR1I123670)

Fix: Changed x-sessions-bytes from int format to Long format.

Not able to save the settings for RUM applications when http front end and mobile back end are assigned to the same engine (QCCR1I122342)

Fix: Mobile applications are not listed in the available templates during back end tier definition.

Admin password is not retained during upgrade (QCCR1I121281)

Fix: Added the missing xml to the RUM 9.25 to 9.26 upgrade flow.

Sample thrown: No container was resolved (QCCR1I121054)

Fix: Fixed request sample processing in the RUM Engine which provides a way for non-Docker related request samples to pass through untouched.

Defining an application with 'Clickstream' disabled and 'Collect request snapshots' enabled causes errors when synchronizing configuration in RUM (QCCR1I117977)

Fix: Unnecessary configuration snapshots are not created when Clickstream is disabled.

Aggregation rules of "Connection Availability(%)" in RUM Application Infrastructure Summary Report (QCCR1I119927)

Fix: The aggregated status of the server element based on the underlying child software elements is now calculated correctly in the RUM Application Infrastructure Summary report.

RUM Client Monitor Probe does not use maxSessions and sessionMaxIdleTime values from the cm.properties file (QCCR1I120816)

Fix: Changed Client Monitor Probe to use maxSessions, enableGlobalSessionTimeout, and sessionMaxIdleTime from the cm.properties file. enableGlobalSessionTimeout must be set to true for the

Client Monitor Probe to use sessionMaxIdleTime.

RUM Engine Data Publisher should modify double-quotes before exporting data to CSVs (QCCR1122900)

Fix: Double quotes have been replaced with single quotes in Crash Event data.

RUM Session Details report sometimes shows "There was a problem retrieving data from Real User Monitor Engines" when the RUM Engine has no data for the selected session (QCCR11122448)

Fix: If data for a selected session was not found on the RUM Engine, it throws an exception: UnknownGUIDException. This in turn showed up as an error in the Session Details report. An UnknownGUIDException error now causes an empty row to be displayed for the data type in the report.

RUM Session Details report's General Event's section sometimes shows "There was a problem retrieving data from Real User Monitor Engines." when a crash event contains invalid Unicode characters (QCCR1122450)

Fix: Replaced all characters that match the regex "\\u0000-\\u0008\\u000B-\\u000C\\u000E-\\u001f" with a blank space before sending the crash event to APM.

RUM Client Monitor Probe for mobile report issue. In the RUM Session summary report, if you select Application Version as the *group by* option, no application versions appear in the list (QCCR1I121176)

Fix: The responses from different engines are now merged manually and the data is processed on the report level.

Snapshot Replay button in RUM report is not working in non-English locales (QCCR1123499)

Fix: Snapshot Replay button on RUM reports now works in non-English locales.

Set the default value of the flag 'check_uptodate_config' to true (QCCR1I125890)

Fix: Updated the default value of the flag 'check_uptodate_config' to true.

Incorporate security patches in RUM MySQL versions 5.5 and 5.6 (QCCR1I99991)

Fix: Engine Database MySQL upgraded to 5.7.16

RUM Web Console - Add sorting by status and regrouping on System Health (QCCR11116942)

Fix: Enabled sorting options.

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Feedback on Release Notes (Real User Monitor 9.40)

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We appreciate your feedback!