

HP Business Service Management

Software Version: 9.25

Windows operating system

RUM for Citrix - Best Practices

Document Release Date: February 2015

Software Release Date: January 2015



Legal Notices

Warranty

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

The information contained herein is subject to change without notice.

Restricted Rights Legend

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

Copyright Notice

© Copyright 2005 - 2014 Hewlett-Packard Development Company, L.P.

Trademark Notices

Adobe® and Acrobat® are trademarks of Adobe Systems Incorporated.

AMD and the AMD Arrow symbol are trademarks of Advanced Micro Devices, Inc.

Google™ and Google Maps™ are trademarks of Google Inc.

Intel®, Itanium®, Pentium®, and Intel® Xeon® are trademarks of Intel Corporation in the U.S. and other countries.

iPod is a trademark of Apple Computer, Inc.

Java is a registered trademark of Oracle and/or its affiliates.

Microsoft®, Windows®, Windows NT®, Windows® XP, and Windows Vista® are U.S. registered trademarks of Microsoft Corporation.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates.

UNIX® is a registered trademark of The Open Group.

Adobe® and Acrobat® are trademarks of Adobe Systems Incorporated.

Intel®, Pentium®, and Intel® Xeon® are trademarks of Intel Corporation in the U.S. and other countries.

iPod is a trademark of Apple Computer, Inc.

Java is a registered trademark of Oracle and/or its affiliates.

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

Oracle is a registered trademark of Oracle Corporation and/or its affiliates.

UNIX® is a registered trademark of The Open Group.

Documentation Updates

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

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

To check for recent updates or to verify that you are using the most recent edition of a document, go to: <https://softwaresupport.hp.com/group/softwaresupport/search-result?keyword=>.

This site requires an HP Passport account. If you do not have one, click the **Create an account** button on the HP Passport Sign in page.

Support

Visit the HP Software Support web site at: <https://softwaresupport.hp.com>

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

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

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

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To register for an HP Passport ID, go to <https://softwaresupport.hp.com> and click **Register**.

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

HP Software Integrations, Solutions and Best Practices

Visit the Integrations and Solutions Catalog at <https://softwaresupport.hp.com/group/softwaresupport/search-result/-/facetsearch/document/KM01702710> to explore how the products in the HP Software catalog work together, exchange information, and solve business needs.

Visit the Cross Portfolio Best Practices Library at <https://hpin.hp.com/group/best-practices-hpsw> to access a wide variety of best practice documents and materials.

Contents

Chapter 1: Introduction	5
Scope and Motivation	5
How is Citrix Unique?	5
Chapter 2: Monitoring Citrix with Enhanced VDI Support	7
Application Configuration	7
Additional Configuration	9
Chapter 3: Citrix EUM Reports - Monitoring All Citrix Applications	11
Chapter 4: RUM VDI Agent – Installation	12
Chapter 5: RUM VDI Agent – Advanced Configuration	13
Send Documentation Feedback	14

Chapter 1: Introduction

Scope and Motivation

In BSM 9.x, Real User Monitor (RUM) is increasingly used to monitor Citrix environments. This document shows how to configure BSM so that you can maximize the benefit from the data retrieved by RUM regarding your Citrix application.

For more details, refer to the the Real User Monitor Administration Guide.

How is Citrix Unique?

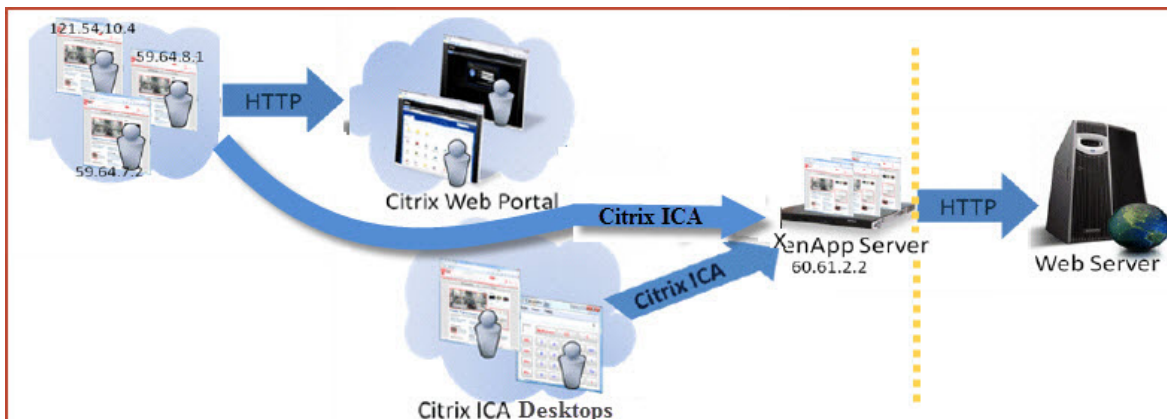
Applications can generally be divided between a front-end tier, to which end users connect directly (or through a load balancer), and one or more back-end tiers. This is configured in BSM End User Management as a front-end tier, with back-end tiers connected to it.

Citrix, or Virtual Desktop Infrastructure (VDI), enables end users to run applications (also called published applications) on the Citrix XenApp Server instead of on their desktops, thereby eliminating the need to install each software change on every desktop. All updates are made on the XenApp Server only.

Users can connect directly to the XenApp Server and run applications (such as a browser or a regular application) on it, using a Citrix desktop client that connects to the XenApp Server.

Another way to connect to the XenApp Server is by a Citrix component called the Portal, or Login application. You connect to it via the web, usually after authentication, and receive from it an ICA client for further direct communication with the XenApp Server.

A common use case of the Citrix platform is illustrated in the following diagram:



This platform comprises a regular web application that may include back-end tiers, behind a XenApp Citrix server that acts as a proxy for end users.

This architecture poses a challenge to regular monitoring systems due to the fact that when monitoring the web application, all the traffic coming into it seems to be coming directly from the XenApp server, and the actual clients are screened out.

RUM has two possible solutions to monitor Citrix:

- **Enhanced VDI Support.** This solution is designed for the application owner/application support to understand the impact of the VDI solution on application performance and to isolate problems and understand if the source of the problem is the VDI or the application itself. This solution is for web applications only. For more information, see ["Monitoring Citrix with Enhanced VDI Support" on page 7.](#)
- **VDI Support.** This solution is designed for the Citrix team to monitor the Citrix server as an application that provides connection to your applications. For more information, see ["Monitoring All Citrix Applications in EUM" on page 1.](#)

There is a possibility to combine both solutions to monitor web applications using the enhanced VDI support solution and monitoring other applications using the regular VDI support solution.

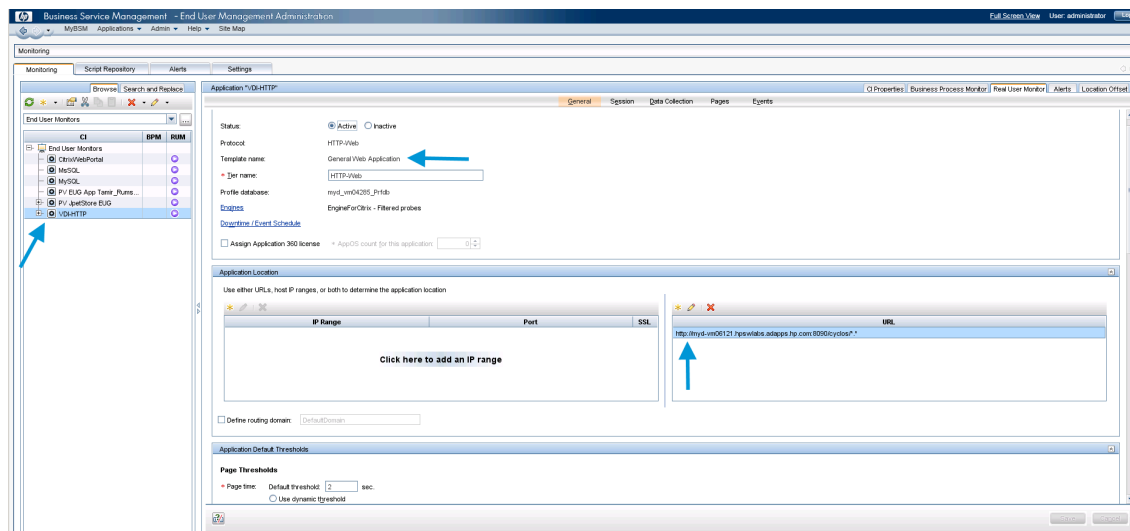
Chapter 2: Monitoring Citrix with Enhanced VDI Support

Application Configuration

Within EUM, create the following two front-end applications.

Important: Make sure that you configure the correct template for each application. The XenApp application (as a VDI tier) must use the Citrix ICA VDI template. The Portal (if it exists) must use the Citrix-HTTP template, and the web application (if it exists) should use the General Web Application template.

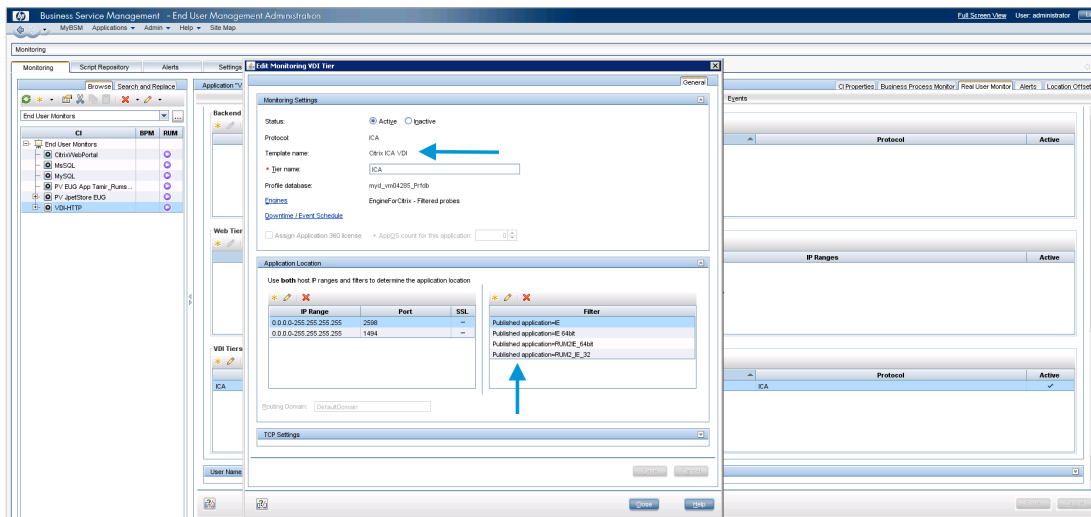
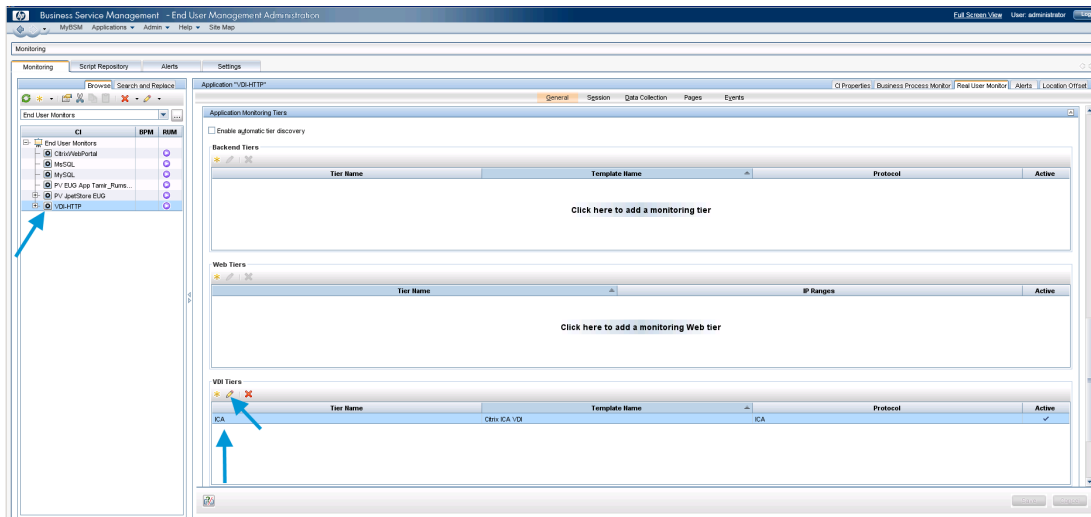
- **Web Application** (using the General Web Application template).



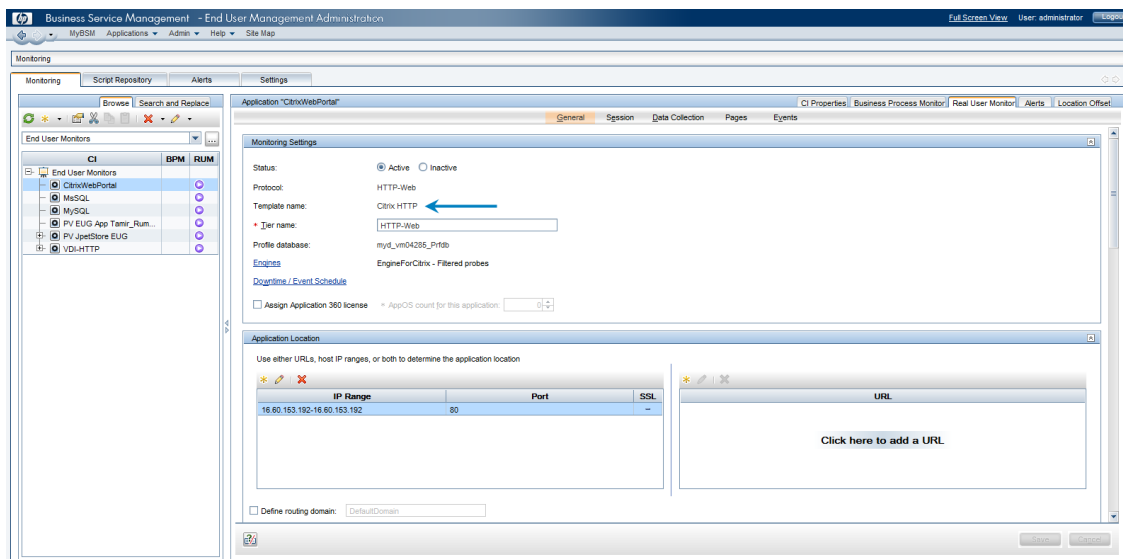
- **XenApp Application configured as a VDI tier under the main General Web Application** (using the Citrix ICA VDI template).

RUM for Citrix - Best Practices

Chapter 2: Monitoring Citrix with Enhanced VDI Support



- **Login Application** (using the Citrix HTTP template).



Note the following:

- The web application should also include BPM transactions, if BPM is part of the customer portfolio.
- Make sure you have installed the RUM VDI Agent on the XenApp Server, so that all the data from the end user is attached to the web application. Without the RUM VDI Agent, the web application sees the XenApp server as the end user which made the last actual hit, but the real end user client IP is needed for correct monitoring.
- The RUM VDI Agent supports XenApp server 4.5 or later installed on Windows 2003 server 2003 or later, and it supports monitoring traffic for the following applications: Internet Explorer 6 and up.

Additional Configuration

To obtain the user name from the Citrix ICA application to the web application, you must add a user name detection definition with the following details: Search in **HTTP Header**. Header name is name is **RUM_USER_NAME**. Extract the full value.

The web application may require users to log in when opening the application in the Web browser. In such cases, you should decide whether you prefer configuring the user name for the web application as the Citrix user name, or as the web application's user name. In either case, you may consider configuring the other user name (Citrix or web application) as a Session Property.

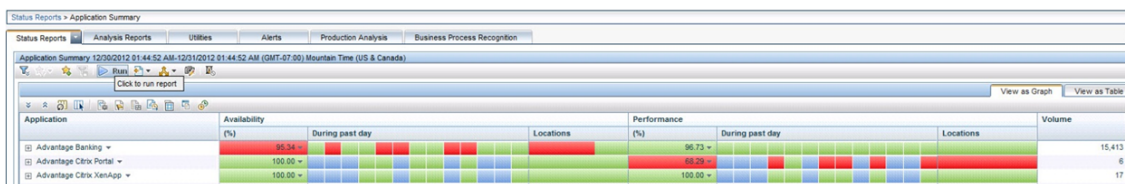
If you also want to see the original Citrix end user (and not the XenApp server IP) as the client IP for the web application in the client IP field:

1. Edit the <HPRUM>\conf\configurationmanager\Beatbox_Default_Const_Configuration.xml file.
2. Add the following line at the end of the [Global] section: **forwarded_for_header RUM_CLIENT_ADDRESS IPV4*([\^;]*)\.* \$1**

Chapter 3: Citrix EUM Reports - Monitoring All Citrix Applications

The following are examples of out-of-the-box EUM reports useful for monitoring Citrix applications:

- Application Summary.** In this report you can see the overall experience of the Citrix application for all of its tiers (Portal, XenApp and real application), and quickly assess which tier is the most problematic and needs further examination, as shown here:



- RUM Session Summary.** In this report you can see the actual users, and find the most active users or those experiencing the most errors. You can drill down from this report to the Session Analyzer report to triage the problem. Here is an example of this report grouped by user names:

The screenshot shows the 'RUM Session Summary' report. It displays a table with columns for Value, Number of Sessions, Number of Subgroups, Error Events, Info Events, Performance Events, Total Actions, Unavailable Actions, Latency (sec), and Total Traffic (KB). The data is as follows:

Value	Number of Sessions	Number of Subgroups	Error Events	Info Events	Performance Events	Total Actions	Unavailable Actions	Latency (sec)	Total Traffic (KB)
admin	5	1	4	3	3	70	4	148.88	326.2
cassiah	349	1	16	215	10	3,780	16	17.54	205,923.5
denniac	360	1	18	213	12	3,067	18	17.74	216,770.5
maryh	2,132	5	336	720	125	16,964	336	43.45	891,268.4
randym	329	1	21	195	14	3,521	21	19.19	197,648.7
robina	950	1	34	799	13	12,602	34	9.09	556,757.6
Other Value	304	0	191	0	1	922	620	25.71	93,965.7
	4,429		620	2,145	178	41,726	1,049	26.18	2,145,810.6

Detailed Subgroups:

Value	Number of Sessions	Error Events	Info Events	Performance Events	Total Actions	Unavailable Actions	Latency (sec)	Total Traffic (KB)
Windows	5	4	3	3	70	4	148.88	326.2
	5	4	3	3	70	4	148.88	326.2

Chapter 4: RUM VDI Agent – Installation

The setup file for installing the RUM VDI Agent depends on your operating system. The following setup files are available:

- For 64bit systems: **HPRumVDIAgent_<version number>_setup.exe**

The package contains a zip file with all the relevant files and can be downloaded from:

https://softwaresupport.hp.com/group/softwaresupport/search-result/-/facetsearch/document/LID/BACRUMP_00090?lang=en&cc=us&hpappid=OSP

The RUM VDI Agent Setup file can be accessed from the RUM installation package.

To install the RUM VDI Agent:

1. Save the relevant setup file to the machine on which you want to install the RUM VDI Agent.
2. Run the setup program by double-clicking the downloaded file.
3. Follow the online instructions. During the installation, you are prompted to select the program location.

Note: The RUM VDI Agent delivers digitally signed DLL files.

Chapter 5: RUM VDI Agent – Advanced Configuration

You configure advanced settings by editing the **<All users Application Data path>\HP\RumVdiAgent\settings\RumHttpAgent.cfg** file on the Citrix XenApp server on which the RUM VDI Agent is installed.

(For example, this might be in C:\Documents and Settings\All Users\Application Data\HP\RumVdiAgent\settings\RumHttpAgent.cfg.)

- **To disable the RUM VDI Agent:**

In the [common] section of the file, change the **disable** parameter value to **true**.

The change takes effect for new IE browser instances.

- **To turn on logging:**

In the [common] section of the file, change the **enableLog** parameter value to **true**.

Log files are located in the **<COMMONAPPDATA>\HP\RumVdiAgent\logs** directory, where **<COMMONAPPDATA>** is the file system directory that contains application data for all users.

This directory differs between operating systems. For example, in Windows 7 it is C:\ProgramData, and in Windows XP it is C:\Documents and Settings\All Users\Application Data.

Send Documentation Feedback

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

Feedback on RUM for Citrix - Best Practices (Business Service Management 9.25)

Just add your feedback to the email and click send.

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

We appreciate your feedback!