

# HP Business Service Management

Software Version: 9.26

## BSM System Requirements and Support Matrixes

Document Release Date: September 2015  
Software Release Date: September 2015



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# Chapter 1: Introduction

The BSM System Requirements and Support Matrixes document contains system requirement, support matrix, and software compatibility information for the BSM platform and the various HP components and software that work with BSM.

The information in this document can be used to aid in:

- planning BSM system architecture
- establishing hardware, operating system and other software requirements required to run BSM and its components
- understanding compatibility among the various components of BSM

This document contains information relating to all major BSM licensed components, including Operations Management (OMi), End User Management, System Availability Management, and Transaction Management.

**Note:** HP does not support server, database, browser, or other software versions that have been declared EOL (end-of-life) by their manufacturer.

# Chapter 2: BSM System Requirements

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## HP BSM Servers

<b>Computer/ Processor</b>	BSM requires that all CPU cores are 2.4 GHz or higher. <b>Tip:</b> As BSM performance is dependent upon processor speed, it is recommended to get the fastest possible processor speed to ensure proper performance.
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<p><b>Operating System</b></p>	<p><b>Windows:</b></p> <ul style="list-style-type: none"> <li>• Windows Server 2012 Standard/Datacenter Edition (64-bit)</li> <li>• Windows Server 2012 R2 Standard/Datacenter Edition (64-bit)</li> <li>• Windows Server 2008 Enterprise Edition SP2 or later (64-bit)</li> <li>• Windows Server 2008 Standard Edition SP2 or later (64-bit)</li> <li>• Windows Server 2008 R2 Enterprise Edition SP1 or later (64-bit)</li> <li>• Windows Server 2008 R2 Standard Edition SP1 or later (64-bit)</li> <li>• Windows Server 2008 R2 Datacenter Edition SP1 or later (64-bit)</li> </ul> <p><b>Note:</b> User Access Control (UAC) must be disabled during the installation process. If you are running Windows Server 2008 SP2, User Access Control (UAC) must always be disabled.</p> <p><b>Linux:</b></p> <ul style="list-style-type: none"> <li>• Red Hat Enterprise Linux 7.x (recommended), 6.x (6.4, 6.5 recommended) (Intel x64 64-bit)</li> <li>• Oracle Linux (OEL) 6.x (recommended 6.4 or 6.5)</li> </ul> <p>Later updates to Red Hat Enterprise Linux Version 7 and Oracle Linux Version 6, when released, will be supported, but may require a BSM patch.</p> <p>Check the Application Performance Management (BAC / BSM) Support and News Forum (<a href="http://h30499.www3.hp.com/t5/Application-Perf-Mgmt-BAC-BSM/bd-p/itrc-875">http://h30499.www3.hp.com/t5/Application-Perf-Mgmt-BAC-BSM/bd-p/itrc-875</a>) for information.</p> <p>BSM requires that your Linux deployment contain specific RPM files. For details, see "<a href="#">Required Linux RPM Files</a>" on the next page.</p>
<p><b>Domain Name</b></p>	<p>Each BSM server must have a resolvable Fully Qualified Domain Name.</p> <p>To verify, run the commands <b>hostname</b> and <b>nslookup</b>. If either command returns an FQDN, your domain name is supported.</p>

<p><b>Web Server</b></p>	<p><b>Windows:</b></p> <ul style="list-style-type: none"> <li>• Microsoft Internet Information Services (IIS) 7.0, 7.5, 8.0, 8.5</li> <li>• Apache HTTP Server - requires use of Apache HTTP Server version adapted by HP for BSM and installed during the BSM server installation</li> </ul> <p><b>Linux:</b></p> <p>Apache HTTP Server (adapted by HP for BSM and installed during the BSM server installation)</p>
<p><b>Coexistence with other HP Components</b></p>	<p>Coexistence of BSM servers with the following components has been tested and is supported:</p> <ul style="list-style-type: none"> <li>• System Health: Coexistence is supported on Typical Deployment or Gateway Server, as long as the hardware resources assigned to each application comply with the application’s environment specifications. Note that coexistence of System Health and SiteScope on the same server is not supported.</li> <li>• SiteScope: Coexistence is supported on Typical Deployment, Gateway Server, or Data Processing Server when event integration is not being used and as long as the hardware resources assigned to each application comply with the application’s environment specifications.</li> <li>• Operations Agent: Coexistence is supported on Typical Deployment, Gateway Server, or Data Processing Server. For details on supported install sequences and required hotfixes and patches, see the BSM - Operations Manager Integration Guide.</li> <li>• Data Flow Probe: Coexistence is supported on Typical Deployment or Gateway Server.</li> </ul>
<p><b>Disk Space</b></p>	<p>Minimum: 40 GB</p>

## Required Linux RPM Files

For Oracle Linux (OEL) and Red Hat Enterprise Linux OS versions 7.x or 6.x, the following RPM packages are required when working with BSM:

<ul style="list-style-type: none"> <li>• glibc</li> </ul>	<ul style="list-style-type: none"> <li>• libXext</li> </ul>
<ul style="list-style-type: none"> <li>• glibc-common</li> </ul>	<ul style="list-style-type: none"> <li>• libXtst</li> </ul>
<ul style="list-style-type: none"> <li>• nss-softokn-freebl</li> </ul>	<ul style="list-style-type: none"> <li>• compat-libstdc++-33</li> </ul>

• libXau	• libXrender
• libxcb	• libgcc
• libX11	• openssl098e
• compat-expat1	• rpm-devel

**Note:** Before installing BSM on Linux OS 7.x or 6.x, run the **rpm\_installer.sh** utility. It is located in the **LinuxSetup > rhel\_oel\_installation\_fix** directory. This utility installs the Linux RPM packages automatically.

## Memory and CPU Requirements

The following table lists the memory and CPU requirements according to some of the deployment scenarios available for BSM. To get the most accurate requirement information for your deployment, use the capacity calculator. You can access the capacity calculator on the SSO site:

[http://support.openview.hp.com/selfsolve/document/KM00754741/binary/BSM\\_924\\_BSM\\_9\\_Deployment\\_and\\_Capacities.xls](http://support.openview.hp.com/selfsolve/document/KM00754741/binary/BSM_924_BSM_9_Deployment_and_Capacities.xls)

Certified Deployment	Server Type	Memory (GB)	CPU Cores	Minimum Virtual Memory/ Swap Space (GB)
<b>APM Basic</b>	One machine	8	4	8
<b>APM Advanced</b>	Gateway	8	8	8
<b>APM Advanced</b>	DPS	19	8	8
<b>OPS Basic</b>	One machine	9	4	9
<b>OPS Advanced</b>	Gateway	9	8	8
<b>OPS Advanced</b>	DPS	20	8	8
<b>BSM Full</b>	Gateway	10	8	8
<b>BSM Full</b>	DPS	24	8	8



## HP BSM Databases

### Hardware Requirements

The following table describes the hardware (CPU and memory) requirements recommended for the HP BSM Oracle or Microsoft SQL database server:

Deployment	Number of Processors	Physical Memory
Standard	2 CPU cores	Minimum: 2G RAM Recommended: 4G RAM
Large	Minimum 4 CPU cores	Minimum: 4G RAM Recommended: 8G RAM and up

Although Business Process Insight and TransactionVision may use the same database server as BSM, it is possible to use a separate database server for these products if desired for scalability purposes.

For details on the criteria for standard and large deployments of HP BSM, see the *HP Business Service Management Database Guide PDF*.

### Software Requirements - Oracle Server

The following table lists the Oracle servers supported for working with HP BSM.

Database Release - Version	System Type
Oracle 12c RAC Enterprise Edition	64-bit
Oracle 12c Enterprise Edition	64-bit
Oracle 11.2 (11g R2) RAC Enterprise Edition	64-bit
Oracle 11.2 (11g R2) Enterprise Edition	64-bit

**Note:**

- We strongly recommend to apply the latest critical Oracle patches for your operating system. For details, consult the Oracle documentation.

- Consult the Oracle documentation for supported platforms.
- The Oracle Partitioning option must be enabled.

## Examples of Tested Deployments - Oracle Server

The following table details the deployment environments that were tested by HP.

Database Release		Operating System
Version	System Type	
Oracle 12c RAC Enterprise Edition	64-bit	Linux Enterprise Edition RHEL 6.5
Oracle 12c Enterprise Edition	64-bit	Windows 2008 R2 Enterprise Edition
Oracle 11.2 (11g R2) RAC Enterprise Edition	64-bit	Linux Enterprise Edition RHEL 6/5
Oracle 11.2 (11g R2) Enterprise Edition	64-bit	Linux Enterprise Edition RHEL 6.5/5

## Software Requirements - Microsoft SQL Server

The following table describes the Microsoft SQL servers supported for working with BSM:

Database Release		
Version	System Type	Service Pack
Microsoft SQL Server 2014 Enterprise Edition - with failover clustering	64-bit	—
Microsoft SQL Server 2014 Enterprise Edition	64-bit	—
Microsoft SQL Server 2014 Developer Edition	64-bit	—
Microsoft SQL Server 2012 Enterprise Edition - with failover clustering	64-bit	1, 2
Microsoft SQL Server 2012 Enterprise Edition	64-bit	1, 2
Microsoft SQL Server 2012 Developer Edition	64-bit	1, 2
Microsoft SQL Server 2008 R2 Enterprise Edition - with failover clustering	64-bit	1, 2
Microsoft SQL Server 2008 R2 Enterprise Edition	64-bit	1, 2

Database Release		
Version	System Type	Service Pack
Microsoft SQL Server 2008 Enterprise Edition	32-bit	2, 3
Microsoft SQL Server 2008 Enterprise Edition	64-bit	2, 3

**Note:**

- Only supported service packs should be installed. Patches newer than the installed service pack are also supported.
- Consult the Microsoft SQL Server documentation for supported platforms.
- Failover clustering is supported with all BSM databases. To configure failover clustering with BSM, in the Setup and Database Configuration Utility enter the cluster server name as the host name. No extra configuration is required.

## Examples of Tested Deployments - Microsoft SQL Server

The following table details the deployment environments that were tested by HP.

Database Release			Operating System
Version	System Type	Service Pack	
Microsoft SQL Server 2012 Enterprise Edition - with failover clustering	64-bit	Service Pack 1	Windows 2012 Enterprise Edition (64-bit)
Microsoft SQL Server 2008 R2 Enterprise Edition	64-bit	Service Pack 1, Service Pack 2	Windows 2008 R2 Enterprise Edition Service Pack 1 (64-bit)
Microsoft SQL Server 2008 Enterprise Edition	32-bit	Service Pack 3	Windows 2008 Enterprise Edition Service Pack 2

## Client Requirements for Viewing BSM

<p><b>Display</b></p>	<p>Minimum: color palette setting of at least 256 colors</p> <p>Recommended: color palette setting of 32,000 colors</p>
<p><b>Resolution</b></p>	<p>1600x900 or higher (recommended)</p> <p>1280x1024 (supported)</p>
<p><b>Supported Browsers</b></p>	<ul style="list-style-type: none"> <li>• Microsoft Internet Explorer (IE) 11.0 (without compatibility view mode)</li> <li>• Microsoft Internet Explorer (IE) 10.0</li> <li>• Microsoft Internet Explorer (IE) 9.0</li> <li>• Mozilla Firefox 38.x ESR</li> </ul> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• If using IE, to achieve optimal viewing and application performance, it is recommended to use IE 10.0.</li> <li>• The browser must be set to accept third-party cookies and allow session cookies.</li> <li>• The browser must be set to enable JavaScript execution.</li> <li>• The browser must allow pop-ups from the BSM application.</li> <li>• Internet Explorer users must set browser caching to automatically check for newer versions of stored pages.</li> <li>• To access App Owner Zone, you must run BSM in one of the following browsers: Firefox ESR 38, Internet Explorer 11, or Internet Explorer 10 .</li> </ul>

<b>Flash Player</b>	Adobe Flash 18.0.0.194.  Later patches to this version may be supported, but may require a BSM patch.
<b>Fonts</b>	The following fonts must be installed on client systems: <ul style="list-style-type: none"><li>• MS Gothic for Japanese locales</li><li>• Gulim for Korean locales</li><li>• SimSun for simplified Chinese locales</li><li>• Arial for all other locales</li></ul>

<b>Java Runtime Environment</b>	<ul style="list-style-type: none"><li>• Version 7 update 80</li><li>• Version 8 update 51 (recommended)</li></ul> <p>Later updates to version 8.x, when released, will be supported, but may require a BSM patch.</p> <p>Check the Application Performance Management (BAC / BSM) Support and News Forum (<a href="http://h30499.www3.hp.com/t5/Application-Perf-Mgmt-BAC-BSM/bd-p/itrc-875">http://h30499.www3.hp.com/t5/Application-Perf-Mgmt-BAC-BSM/bd-p/itrc-875</a>) for information.</p> <p><b>Note:</b> You may not be able to view all BSM applets with an earlier version of Java and you will need to download the latest version from the Java download site (<a href="http://www.java.com/en/download/manual.jsp">http://www.java.com/en/download/manual.jsp</a>) and install it. You may also have to disable earlier versions after download.</p> <p>To verify/manage running Java versions in Internet Explorer: Select <b>Tools &gt; Internet Options &gt; Programs &gt; Manage add-ons &gt; Toolbars and Extensions</b>, and locate the <b>Oracle</b> section. After making any changes, close and reopen the browser.</p> <p>For details about how to verify the Java version in Mozilla Firefox, see the Mozilla Firefox documentation.</p> <p><b>Note:</b> The following configuration is not supported due to Oracle's known bug in Java 7 update 72:</p> <p>BSM configured with CAC and client certificate authentication where the client side Java is enabled with Java TLS 1.2 protocol and Java 7 update 72.</p> <p>For more information regarding this Oracle bug, see <a href="https://bugs.openjdk.java.net/browse/JDK-8062032">https://bugs.openjdk.java.net/browse/JDK-8062032</a></p> <p><b>Workaround:</b> Disable Java TLS 1.2 protocol in Java options on the client and server sides.</p>
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## Java Applet

In this version of BSM, most of the BSM components can run without the Java applet. However, the following BSM components still require the Java applet:

- Administration:
  - End User Management (EUM)
  - Service Level Management (SLM)
  - Service Health (SH)
  - TransactionVision (TV) - Administration panel
  - Business Process Insight (BPI) - BPI Modeler
  - Downtime Management
  - Locations
- Applications:
  - Operations Manager i (OMi) - Health Perspective View
  - Diagnostics
  - Run Time Service Model (RTSM)
  - Transaction Tracking Report Scatter graph
  - Transaction Summary Report Vertical Bar graph
  - Transaction Topology - topology flow map graph
  - Business Process Insight (BPI) Scorecard
  - Business Process Insight (BPI) Health
- Any flow containing:
  - Top View
  - Topology Map
  - Neighborhood Map
  - Problematic Sub Tree

## Server Environment Settings

<b>Time settings</b>	All BSM servers and database servers must have the same settings for the following: <ul style="list-style-type: none"><li>• Time zone</li><li>• Daylight Saving Time configuration</li><li>• Java DST</li><li>• Time</li></ul>
<b>Name resolution</b>	The BSM servers must be able to resolve the names of the machines with which they must communicate. These include all the BSM servers, database servers, and data collectors.
<b>TCP</b>	<b>Windows:</b> It is highly recommended that you make the following change in your registry:  For registry key MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters, create a new key TcpTimedWaitDelay (DWORD) and set the (Decimal) value to 60.  If this is not done, there may be a problem with exhausting the available TCP resources because the time delay default value may be too long.  <b>Tip:</b> It is recommended that you back up the registry before making any changes to it.



**Linux Resource Limits**

Resource limits (open files and max user processes) on Linux machines must be set to 30000 or higher. To verify the current resource limit settings on your Linux machine, run the command: **ulimit -a**. If the values returned are lower than 30000 for either open files or max user processes, change the settings to 30000 by executing the appropriate command:

To set open files: **ulimit -n 30000**

To set max user processes: **ulimit -u 30000**

**Note:** Running the command **ulimit -n 30000** affects the current session only. However, this change is lost after rebooting the system. To keep the new limits after rebooting the system, save the new resource limits in the following configuration files:

- **/etc/security/limits.conf**

Add or update the following lines with the appropriate resource limits:

\* **soft nofile 30000**

\* **hard nofile 30000**

- **/etc/profile**

Add or update the following line at the end of the file:

**ulimit -n 30000**

## HP BSM on Virtual Platforms

The following general limitations and recommendations are applicable to an installation on a virtual machine:

- The following virtualization platforms are supported:
  - VMware ESX 3.x, 4.x, ESXi 5.x
  - Microsoft Hyper-V 2008 R2
- Performance of BSM on a virtual machine can be expected to be slower than in a regular installation.
- BSM capacities and performance will vary according to the various server resources, such as CPU, memory, and network bandwidth, allocated to BSM components.
- A Gigabit network card should be used.
- If you plan to run a database server containing HP BSM databases on a virtual machine, check with your database vendor for their support policies and performance implications.

**Note:** For details on data collector or other component requirements for installing on a virtual machine, refer to that component's documentation.

## IPV6 Support

- **BSM** - All management information in BSM that represents an IP address can be either an IPv4 or IPv6 address, and the data is processed, stored, and displayed correctly in the product. BSM can be installed on dual-stack servers, but the network transport between many BSM components is limited to IPv4 routing and does not yet support IPv6 addresses.
- **Real User Monitor** - RUM can manage the IT infrastructure over IPv6 routing. RUM can monitor real-user network traffic in IPv6 networks.
- **SiteScope** - Various SiteScope monitors can connect to managed servers over IPv6.
- **Operations Agent** - The agent can grab IPv6 related SNMP traps and connect to WMI on IPv6 nodes, but the data is transported via IPv4 to the servers.

For additional details on the level of IPv6 support for different components, see the documentation for those components. For Real User Monitor, see "Monitoring IPv6 Traffic with Real User Monitor" in the BSM Application Administration Guide. For SiteScope, see "Enable SiteScope to Prefer IP Version 6 Addresses" in the Using SiteSopce Guide.

# Chapter 3: Component Support and Compatibility

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# Business Process Monitor Matrixes

## Business Process Monitor 9.26 System Support Matrix

For complete BPM support information, see the BPM Deployment Guide and Release Notes.

Operating System	BPM	VuGen
Red Hat Enterprise Linux (RHEL) 7.0 – 64-bit	√	
Red Hat Enterprise Linux (RHEL) 6.4 – 32/64-bit	√	
Oracle Enterprise Linux (OEL) 7.0 UEK (Unbreakable Enterprise Kernel ) – 64-bit	√	
Oracle Enterprise Linux (OEL) 6.4 UEK (Unbreakable Enterprise Kernel ) – 64-bit	√	
Microsoft Windows Server 2012 R2 (64-bit) Standard and Data Center Edition	√	√
Microsoft Windows Server 2008 R2 SP1 (64-bit) Standard and Enterprise Editions	√	√
Microsoft Windows 8.1	√	√
Microsoft Windows 7 SP1 (32/64-bit)	√	√

## Business Process Monitor Compatibility Matrix

For each BPM version, the latest supported HP Virtual User Generator (VuGen) version is mentioned. All previous versions, with the exception of VuGen 11.04, are also supported.

**Note:** BSM 9.01 is not supported.

Compatibility Matrix	HP Business Service Management 9.x	HP Business Availability Center 8.x
BPM 9.26 (LR Replay 12.50)	√ (Recommended)	√
BPM 9.25 (LR Replay 12.02)	√ (Recommended)	√
BPM 9.24 IP1 (LR Replay 12.01)	√ (Recommended)	√
BPM 9.24 (LR Replay 12.00)	√ (Recommended)	√
BPM 9.23 (LR Replay 11.50 SP 2)	√ (Recommended)	√
BPM 9.22 (LR Replay 11.50 SP 1)	√ (Recommended)	√
BPM 9.13 (LR Replay 11 SP 3)	√ (Recommended)	√

## Business Process Monitor-QuickTest Professional (QTP) /Unified Functional Testing (UFT) Compatibility Matrix

Compatibility Matrix	BPM 9.26	BPM 9.25	BPM 9.24 IP1	BPM 9.24	BPM 9.23	BPM 9.22
UFT 12.50	√ (recommended, see notes below)	X	X	X	X	X
UFT 12.02	√	√	X	X	X	X
UFT 12.01	√	√	√	√	X	X
UFT 12.00	√	√	√	√	X	X

Compatibility Matrix	BPM 9.26	BPM 9.25	BPM 9.24 IP1	BPM 9.24	BPM 9.23	BPM 9.22
UFT 11.50 SP2	√	√	√	√	√	X

**Notes:** We do not recommend using UFT 12.50 on Windows 7 32-bit due to possible performance issues. We recommend using a different version of Windows such as Windows 7 64-bit.

## Business Process Monitor Protocol Support Matrix

The following table describes the BPM 9.26 supported protocols.

Protocol	Windows	Linux
.NET	√	X
Ajax - Click and Script	√	X
C VUser	√	√
Citrix	√	X
COM/DCOM	√	X
DNS (Domain Name Resolution)	√	X
Flex	√	X
FTP	√	X
IMAP	√	X
JAVA over HTTP	√	X
JAVA Record\Replay	√	X
Java Vuser	√	X
LDAP (Listing Directory Service)	√	X
MAPI (Microsoft Exchange)	√	X
Mobile Application (HTML/HTTP)	√	√
MMS (Media Player)	√	X
MMS (Multimedia messaging Service)	√	X
ODBC	√	X
Oracle (2-tier)	√	X

Protocol	Windows	Linux
Oracle NCA	√	√
Oracle - Web	√	√
POP 3 (Post Office Protocol)	√	X
RDP	√	X
RTE (Remote Terminal Emulator)	√	X
SAP Click and Script	√	X
SAP GUI	√	X
SAP Web	√	√
Siebel – Web	√	X
Silverlight	√	X
SMTP	√	X
SOAP (Web Services)	√	X
TruClient - Firefox	√	X
TruClient - Internet Explorer	√	X
TruClient - Mobile Web	√	X
TruClient - Native Mobile	√	X
TruClient Web (includes Internet Explorer, Firefox, and Chromium)	√	X
Web [HTTP/HTML]	√	√
Windows sockets	√	X

**Note:** Some of the protocols require the installation of additional software components and therefore are platform dependent.

BPM also supports all the protocols available through add-ins for the supported versions of QTP and UFT.

## BPM/VuGen - Citrix Compatibility Matrix

BPM 9.26 can only coexist with VuGen 12.50. You must uninstall any previous versions of VuGen before installing BPM.

**Note:** LoadRunner Java protocols require JDK 7 installed on the BPM server.

Set the JAVA\_HOME system parameter to the JDK 7 path, or for each individual script set the replay setting parameter to the JDK 7 path.

Java protocols include Java Record\Replay, Java Over HTTP, Java Vuser, Oracle – Web, and Oracle NCA.

## BPM/VuGen - Citrix Compatibility Matrix

**LoadRunner 12.50 / BPM 9.26 (Citrix ICA with Receiver for Windows)**

Supported Client Version	Supported Server
12.x	Citrix XenApp 5.5, 5.6, 6.0, 6.5, 7.0, 7.5
13.x	Citrix XenDesktop 7.0
14.x	Citrix XenDesktop 7.5
14.1.200	Citrix XenDesktop 7.6
	Citrix Access Gateway (with Receiver 13.x and above)



## SiteScope Matrixes

### SiteScope Compatibility Matrix

Compatibility Matrix	HP BSM 9.26	HP BSM 9.2x	HP BSM 9.1x	HP BSM 9.0x	HP BAC 8.x
SiteScope 11.3x	√ <sup>1</sup>	√	√	√	√
SiteScope 11.2x	√	√ <sup>1</sup>	√	√	√
SiteScope 11.1x	√	√	√ <sup>1</sup>	√	√

<sup>1</sup>Recommended

### SiteScope 11.30 System Support Matrix

<b>SiteScope – Operating Systems</b>	<b>Windows</b>	<ul style="list-style-type: none"> <li>• Microsoft Windows Server 2008 R2 SP1 Standard/Enterprise/Datacenter Edition (64-bit)</li> <li>• Microsoft Windows Server 2012 Standard/Datacenter Edition (64-bit)</li> <li>• Microsoft Windows Server 2012 R2 Standard Edition (64-bit)</li> </ul> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• Installing SiteScope on a 32-bit Windows operating system, or as a 32-bit application on a 64-bit Windows operating system is no longer supported. SiteScope can only be installed and run as a 64-bit application.</li> <li>• Using VMware and Hyper-V virtual machines is supported for all the supported operating systems.</li> <li>• For better performance and stability, especially in a highly-loaded SiteScope environment, it is recommended to use physical hardware.</li> <li>• For VMware, VMware tools must be installed on the guest operating system.</li> </ul>
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	<p><b>Linux</b></p>	<ul style="list-style-type: none"> <li>• *Oracle Linux (OEL) 6.0-6.5 (64-bit)</li> <li>• *CentOS 6.2 (64-bit)</li> <li>• Red Hat ES Linux 5.5-5.8, 6.0-6.5 (6.0, 6.2, 6.4, 6.5 are certified) (64-bit)</li> </ul> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• *This environment must be manually configured before installing SiteScope. For details, see the SiteScope Deployment Guide.</li> <li>• The Red Hat Linux 6.x server must be manually configured before installing the HP Operations agent. For details, see the SiteScope Deployment Guide.</li> <li>• Red Hat Linux 9 with Native POSIX Threading Library (NPTL) is not supported.</li> <li>• To be able to monitor CPU and memory usage on SiteScope or a remote server running on a Red Hat Linux environment, the <b>sysstat</b> package must be installed on the SiteScope server and on all remote servers being monitored (it is not included out-of-the-box).</li> <li>• When SiteScope is installed on Red Hat Linux, the SiteScope Server Health monitor requires valid output of sar -W and sar -B commands for the SwapIns/sec, SwapOuts/sec, PageIns/sec, and PageOuts/sec counters. If these commands do not work, no errors are thrown and these counters are shown as <b>n/a</b>. To enable them to run, edit the crontab by adding the command "/usr/local/lib/sa/sadc -" to run once a day.</li> </ul>
	<p><b>Solaris</b></p>	<p>Running SiteScope on a Solaris platform was deprecated, and the Solaris Installer is no longer available.</p>

## System Health Support

BSM 9.26 uses System Health for BSM 9.26.

System Health for BSM 9.26 will only work with BSM 9.26 and not with any earlier versions of BSM.

The supported operating systems for System Health are the same as those of [BSM](#).

Minimum system hardware requirements for System Health are the same as those for SiteScope 9.2x:

- Computer/Processor: 1 core / 2000 MHZ minimum
- Memory: 2 GB minimum
- Free Hard Disk Space: 10 GB

## Real User Monitor Matrixes

### Real User Monitor 9.26 System Support Matrix

<b>Real User Monitor Sniffer Probe – Operating Systems</b>	<b>Windows</b>	Microsoft Windows Server 2012 (64-bit) Standard Edition  Microsoft Windows Server 2012 R2 (64-bit) Standard Edition  Microsoft Windows Server 2008 SP2 (64-bit) Standard and Enterprise editions  Microsoft Windows Server 2008 R2 (64-bit) Standard and Enterprise editions  Microsoft Windows Server 2008 R2 SP1 (64-bit) Standard and Enterprise editions
	<b>Linux</b>	Red Hat Enterprise Linux Version 7.x (RHEL7) 64-bit version  Red Hat Enterprise Linux Version 6.x (RHEL6) 64-bit version
<b>Real User Monitor Client Monitor Probe – Operating Systems</b>	<b>Windows</b>	Microsoft Windows Server 2012 (64-bit) Standard Edition  Microsoft Windows Server 2012 R2 (64-bit) Standard Edition  Microsoft Windows Server 2008 SP2 (64-bit) Standard and Enterprise Editions  Microsoft Windows Server 2008 R2 (64-bit) Standard and Enterprise Editions  Microsoft Windows Server 2008 R2 SP1 (64-bit) Standard and Enterprise Editions

<b>Real User Monitor Engine – Operating Systems</b>	<b>Windows</b>	Microsoft Windows Server 2012 (64-bit) Standard Edition  Microsoft Windows Server 2012 R2 (64-bit) Standard Edition  Microsoft Windows Server 2008 SP2 (64-bit) Standard and Enterprise editions  Microsoft Windows Server 2008 R2 (64-bit) Standard and Enterprise editions  Microsoft Windows Server 2008 R2 SP1 (64-bit) Standard and Enterprise editions
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## Real User Monitor Supported Virtualized Environments

	Brand	Version
Real User Monitor 9.26 Probe	VMware ESX	3.x 4.x 5.x
Real User Monitor 9.26 Engine	VMware ESX	3.x 4.x 5.x

## Real User Monitor Compatibility Matrix

Compatibility Matrix	BSM 9.26	BSM 9.25	BSM 9.24	BSM 9.23	BSM 9.22	BSM 9.21	BSM 9.20	BSM 9.13	BSM 9.12	BSM 9.10	BSM 9.0x
RUM 9.26	√	√	√	√	√	√	√	X	X	X	X
RUM 9.25	X	√	√	√	√	√	√	√	√	√	X
RUM 9.24	X	X	√	√	√	√	√	√	√	√	X
RUM 9.23	X	X	X	√	√	√	√	√	√	√	X
RUM 9.22	X	X	X	X	√	√	√	√	√	√	X
RUM 9.21	X	X	X	X	X	√	√	√	√	√	X
RUM 9.20	X	X	X	X	X	X	√	√	√	√	X
RUM 9.13	X	X	X	X	X	X	X	√	√	√	X
RUM 9.12	X	X	X	X	X	X	X	X	√	√	X
RUM 9.10	X	X	X	X	X	X	X	X	X	√	X
RUM 9.02	X	X	X	X	X	X	X	X	X	X	√
RUM 9.01	X	X	X	X	X	X	X	X	X	X	√
RUM 9.00	X	X	X	X	X	X	X	X	X	X	√

## RUM Probe–RUM Engine Compatibility

- **RUM Sniffer Probe.** The RUM Sniffer Probe version must be the same as the RUM Engine version.
- **RUM Client Monitor Probe.** The RUM Client Monitor Probe version must be the same as the RUM Engine version.

## RUM Protocol Support

For a list of the RUM supported protocols, see "Supporting Specific Protocols" in the Real User Monitor Administration Guide.

## HP Operations Manager (HPOM) and Agent Support

### BSM 9.2x/HPOM Support Matrix

HPOM Product	Version	Required Patches and Agents
HP Operations Manager for Windows	8.16	Server Patch OMW_00090 or later  Accessories Patch OMW_00092 or later  HPOM Server Node: One of the following HP Operations Agent versions: <ul style="list-style-type: none"> <li>HP Operations Agent 11.02.011 or later</li> </ul>
	9.00	HPOM Server Node: One of the following HP Operations Agent versions: <ul style="list-style-type: none"> <li>HP Operations Agent 11.02.011 or later</li> </ul>
HP Operations Manager for UNIX or Linux	9.1x	PHSS_41692 or later for HPOM 9.10 for HP-UX  OML_00034 or later for HPOM 9.10 for Linux  ITOSOL_00748 or later for HPOM 9.10 for Solaris  HPOM Server Node: One of the following HP Operations Agent versions: <ul style="list-style-type: none"> <li>HP Operations Agent 11.02.011 or later</li> </ul>
	9.20	<ul style="list-style-type: none"> <li>HP Operations Agent 11.02.011 or later</li> </ul>

If you are currently using HPOM for UNIX or HPOM for Windows in an HPOM manager of managers scenario you can use the following strategies to integrate information from these installations to BSM:

- **Topology Synchronization**

- With an OMi-ready SPI on HPOM, use Configuration Upload to transfer topology information to a supported version of HPOM. Then use Basic or Dynamic Topology Synchronization to synchronize with BSM.
- Use other discovery technologies such as HP Data Flow Management (formerly known as the HP Discovery and Dependency Mapping) using the Data Flow Probe.

- **Event Forwarding**

- Events may be sent from an HPOM system to a supported version of HPOM, and from there to BSM. Note that events can only be related to CIs and set ETIs if they contain corresponding information, and if the CIs exist in the RTSM.

## BSM 9.2x/HP Operations Agent Support

The following versions of the HP Operations Agent (HPOA) can co-exist with BSM on the BSM server:

**11.14.084 or higher**



## HP Operations Smart Plug-ins Supported with BSM 9.26

**Note:** To use Content Packs with HP Operations Smart Plug-ins (SPIs), you must install the corresponding SPI patches on the HP Operations Manager (HPOM) management server that is connected to BSM. Download the latest patches from the [HP Software Support Online](#) patches site.

Smart Plug-in
Microsoft Active Directory, version 7.00
Microsoft Exchange Server, version 13.x
Microsoft Enterprise Server, version 08.02
Microsoft SQL Server, version 12.00
Oracle Database, version 12.00
WebLogic, version 07.00
WebSphere, version 7.00
Infrastructure, version 11.10
SAP SPI 12.04

## BSM 9.26 Performance Grapher Compatibility Matrix

Component	Supported Versions
HP Operations Agent	11.03, 11.10, 11.11, 11.12, 11.13, 11.14
SiteScope	11.x
Business Process Monitor	All versions supported by BSM 9.2x
Real User Monitor	All versions supported by BSM 9.2x
HP Diagnostics	9.2x
BSM Connector	All versions supported by BSM 9.21 or later

## BSM Connector Compatibility Matrix

	BSM Connector 9.2x	BSM Integration Adapter 9.1x
BSM 9.2x	√ <sup>1</sup>	√
BSM 9.1x	X	√ <sup>1</sup>
BSM 9.0x	X	√ <sup>1</sup>

<sup>1</sup> Recommended

**Note:** For additional compatibility information, see the "Limitations" section in the BSM Connector Release Notes.

## Data Flow Probe Requirements

### Data Flow Probe Compatibility

Data Flow Probe support for any given BSM release is limited to use of the version of the Probe that is associated with the version of BSM you are using.

For major/minor releases (for example, 9.00 or 9.20), this file is available on the DVD that comes with the BSM media kit, or you can download it from the Software Updates page.

For minor-minor patch releases (for example, 9.13 or 9.23), you download this file from the [HP Software Support](#) site. Make sure to select the latest probe that is associated with the BSM patch you are installing. To do so, go to the [HP Software Support](https://softwaresupport.hp.com) web site (<https://softwaresupport.hp.com>) and sign in. Click **Search** and select the relevant product, version, and operating system (for example, **Application Performance Management (BAC) > 9.26 > Windows**). Under Document Type, select **Patches**. Perform a search and make sure to select the latest probe associated with the BSM version.

The Software Updates and Software Patches can both be accessed from the [HP Software Support](#) web site (<https://softwaresupport.hp.com>).

## Data Flow Probe 9.05 System Support Matrixes

### Hardware Requirements

<b>Computer/processor</b>	<b>Windows/Linux</b> Pentium IV 2.4 GHz or later processor <b>Recommended:</b> Dual Core
<b>Memory</b>	<b>Windows/Linux:</b> Minimum 1 GB RAM (Recommended: 2 GB RAM)
<b>Memory swap file</b>	<b>Windows:</b> Minimum 2 GB RAM <b>Linux:</b> Minimum 1 GB RAM <b>Note:</b> <ul style="list-style-type: none"><li>• The virtual memory for Windows should be at least double the size of the physical memory.</li><li>• The Linux swap file size should be equal in size to the physical memory.</li></ul>
<b>Free hard disk space</b>	<b>Windows/Linux:</b> Minimum 4 GB (at least 4 GB for database software and data files) (Recommended: 20 GB hard disk)

<b>Display</b>	<b>Windows/Linux:</b> Color palette setting of at least 256 colors (32,000 colors recommended)
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## Software Requirements

Hardware Platform	OS Type	OS Version and Edition	Supported	Recommended
x86	Windows 2008	SP2, Standard/Enterprise editions, 32-bit	Yes	
x86-64	Windows 2008	SP2, Standard/Enterprise editions, 64-bit	Yes	Yes
x86-64	Windows 2008	R2 and R2 SP1, Standard/Enterprise editions, 64-bit	Yes	
x86	Windows 2003	SP2 and R2 SP2, Standard/Enterprise editions, 32-bit	Yes	
x86-64	Windows 2003	SP2 and R2 SP2, Standard/Enterprise editions, 64-bit	Yes	
x86-64	Red Hat Linux 5	Enterprise/Advanced, 64-bit	Yes	
	Windows 7	Professional/Enterprise	No	
	Windows 2000		No	

## Supported Databases

Database	Version and Edition	Recommended	Comments
MySQL	5.1.46	Yes	This database comes bundled with the Probe installation.

## Virtual Environment Requirements

Platform	OS Version and Edition	Supported	Recommended
VMware ESXi 5.0	<ul style="list-style-type: none"> <li>Windows 2003 Standard/Enterprise editions SP2 and R2 SP2, 32/64-bit</li> <li>Windows 2008 Standard/Enterprise SP2, 32/64-bit and R2, 64-bit</li> <li>Red Hat Linux 5 Enterprise/Advanced, 64-bit</li> </ul>	Yes	
VMware ESX 4.0, 4.1	<ul style="list-style-type: none"> <li>Windows 2003 Standard/Enterprise editions SP2 and R2 SP2, 32/64-bit</li> <li>Windows 2008 Standard/Enterprise SP2, 32/64-bit and R2, 64-bit</li> <li>Red Hat Linux 5 Enterprise/Advanced, 64-bit</li> </ul>	Yes	Yes
VMware ESX 3.x	<ul style="list-style-type: none"> <li>Windows 2003 Standard/Enterprise editions SP2 and R2 SP2, 32/64-bit</li> <li>Windows 2008 Standard/Enterprise SP2, 32/64-bit and R2, 64-bit</li> <li>Red Hat Linux 5 Enterprise/Advanced, 64-bit</li> </ul>	Yes	
Microsoft Hyper-V Server 2008 R2 SP1	<ul style="list-style-type: none"> <li>Windows 2003 Standard/Enterprise editions SP2 and R2 SP2, 32/64-bit</li> <li>Windows 2008 Standard/Enterprise SP2, 32/64-bit and R2, 64-bit</li> </ul>	Yes	
Pre ESX 3.5 (like 3.0.x versions)	<ul style="list-style-type: none"> <li>May not provide adequate performance</li> <li>Does not support Windows 2008 or Windows 7</li> </ul>	No	
VMware ESXi 4.1 and earlier	All platforms	No	
Xen Hypervisor 3.x	All platforms	No	

## UCMDB Support Matrixes

### BSM-CMS Synchronization Integration Matrix

BSM version	Integration Type	HP UCMDB (CMS) version
BSM 9.00, 9.01, 9.1x	Population synchronization from HP UCMDB (CMS) to BSM	9.01 or later
BSM 9.2x	Population synchronization from HP UCMDB (CMS) to BSM	later than 9.01
BSM 9.22 or later	Push synchronization from HP UCMDB (CMS) to BSM	10.01 CUP 5 and up
BSM 9.00, 9.01, 9.1x	Population synchronization from BSM to HP UCMDB (CMS)	9.01 or later
BSM 9.2x	Population synchronization from BSM to HP UCMDB (CMS)	later than 9.01

### BSM-BSM Synchronization Matrix

Target BSM version	Synchronization Type	Source BSM Version
BSM 9.0x, 9.1x	Population from source to target	BSM 9.01 and later
BSM 9.2x	Population from source to target	Later than BSM 9.01

### UCMDB Content Pack Support in BSM 9.26

CP 11.13	CP 11.09	CP 11.05	CP 11.03.720
√ Default CP with BSM 9.26	√	√	√

## Service Health Analyzer (SHA) Data Collector Matrixes

### SHA Data Collector 9.20 System Requirements

SHA Data Collector	System Requirements
SHA Data Collector for NNMi	SHA Data Collector and NNM iSPI Performance for Metrics must be installed on separate servers. The SHA Data collector must have read-write access to a shared directory on the NNMi Server.
SHA Data Collector for Operation Agent/Performance Agent	Identical to <a href="#">BSM Server requirements</a> and <a href="#">memory and CPU requirements</a> , with the following exceptions: <ul style="list-style-type: none"> <li>• <b>Memory:</b> 2 GB</li> <li>• <b>CPU:</b> 2 CPU cores. Minimum 2.4 GHz.</li> <li>• <b>Virtual Memory/Swap Space:</b> 2 GB</li> </ul>

### SHA Data Collector 9.20 Compatibility Matrixes (for BSM 9.2x)

#### SHA Data Collector for Operation Agent/Performance Agent

Component	Supported Versions
HPOM Operations Agent	11.0 and later
HPOM Performance Agent	5.0 and later

#### SHA Data Collector for Network Node Manager i

Component	Supported Versions
HP NNMi	9.20 and later

## Diagnostics Compatibility with BSM 9.26

Diagnostics 9.23, 9.24, and 9.26 are compatible with BSM 9.26.

You can find further information about supported Diagnostics integrations in the [HP Integrations Catalog](https://softwaresupport.hp.com/group/softwaresupport/search-result/-/facetsearch/document/KM01663677) (<https://softwaresupport.hp.com/group/softwaresupport/search-result/-/facetsearch/document/KM01663677>).

## TransactionVision Matrixes

### TransactionVision Processing Server Compatibility Matrix

BSM Version	TransactionVision Processing Server Version
BSM 9.26	TV 9.26

### TransactionVision Processing Server and Agent Compatibility Matrix

TransactionVision Agent	Versions of Agent Compatible with 9.26 Processing Server	Versions of Processing Server Compatible with 9.26 Agent
Version of Agent Compatible with 9.26 Processing Server	Not applicable	9.26*
HP Diagnostics/TransactionVision Java Agent	8.0x, 9.10, 9.2x	Not applicable
HP Diagnostics/TransactionVision .NET Agent	8.0x, 9.109.2x	Not applicable
WebSphere MQ Agent	8.0x, 9.10, 9.2x	9.2x
CICS, WMQ Batch, WMQ CICS, WMQ IMS, and IMS Bridge Agents on z/OS	8.0x, 9.10, 9.2x	9.2x

\* Processing Server 9.26 and Agent 9.26 are only compatible with each other.



## Business Process Insight Compatibility Matrix

	HP BSM 9.2x	HP BSM 9.1x	HP BAC 8.0x
Business Process Insight 9.2x	√	X	X
Business Process Insight 9.1x	X	√	X
Business Process Insight 8.0x (8.00, 8.01, 8.02, 8.04)	X	X	√

**Note:** BPI 9.26 does not support MSSQL named instances. Make sure you use the default instance of the MSSQL server.

## Chapter 4: Verticals Support Matrixes

### Application Management for SAP Component Support Matrix

Application Management for SAP works with SiteScope 10.x and SiteScope 11.x.

SAP Version	Limitations
SAP R/3 4.6 SAP R/3 4.7	<ul style="list-style-type: none"> <li>Service Health SAP reports do not have unified UI (QCCR1147923)</li> <li>Configuration file page is not displayed through Service Health context menu (QCCR1147837)</li> </ul>
ERP 2004 (ECC 5.0) ERP 2005 (ECC 6.0)	<p>The following reports are not supported:</p> <ul style="list-style-type: none"> <li>Show Impacting SAP Transports</li> <li>Show SAP Transport Impact</li> <li>SAP Transaction Changes</li> <li>SAP Transport Changes</li> </ul>

### Application Management for Siebel Component Support Matrix

Application Management for Siebel works with SiteScope10.x and SiteScope 11.x.

Siebel Version	Solaris Operating System Version for Siebel Servers	Windows Operating System Version for Siebel Servers	Other Operating System Version (on the Siebel Servers)
Siebel 7.5.3	Solaris 5.9  SARM on mixed environment not supported	Windows 2000	
Siebel 7.7	Solaris 9	Windows 2000	

<b>Siebel Version</b>	<b>Solaris Operating System Version for Siebel Servers</b>	<b>Windows Operating System Version for Siebel Servers</b>	<b>Other Operating System Version (on the Siebel Servers)</b>
Siebel 7.8 (to work with SARM you must use SARMAAnalyzer version 7.7)	Solaris 9	Windows 2000	
Siebel 8.0	Solaris 10	Windows 2003 Enterprise Edition Windows 2003 Datacenter edition	IBM AIX 5L version 5.3 HP-UX 11i V2 Red Hat Enterprise Linux 4 Oracle Linux (OEL) 4 Novell SUSE Linux Enterprise Server 9

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