

HP Operations Orchestration Software

Software Version: 9.00

System Requirements

Document Release Date: June 2010

Software Release Date: June 2010



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 Notices

© Copyright 2005-2010 Hewlett-Packard Development Company, L.P.

Trademark Notices

For information on open-source and third-party software acknowledgements, see in the documentation set for this release, Open-Source and Third-Party Software Acknowledgements (3rdPartyOpenNotices.pdf)

On the Web: Finding OO support and documentation

There are two Web sites where you can find support and documentation, including updates to OO Help systems, guides, and tutorials:

- The OO Support site
- BSA Essentials Network

Support

Documentation enhancements are a continual project at Hewlett-Packard Software. You can obtain or update the HP OO documentation set and tutorials at any time from the HP Software Product Manuals Web site. You will need an HP Passport to log in to the Web site.

To obtain HP OO documentation and tutorials

1. Go to the HP Software Product Manuals Web site (<http://support.openview.hp.com/selfsolve/manuals>).
2. Log in with your HP Passport user name and password.
OR

If you do not have an HP Passport, click **New users – please register** to create an HP Passport, then return to this page and log in.

If you need help getting an HP Passport, see your HP OO contact.

3. In the **Product** list box, scroll down to and select **Operations Orchestration**.
4. In the **Product Version** list, click the version of the manuals that you're interested in.
5. In the **Operating System** list, click the relevant operating system.
6. Click the **Search** button.
7. In the **Results** list, click the link for the file that you want.

BSA Essentials Network

For support information, including patches, troubleshooting aids, support contract management, product manuals and more, visit the following site: <http://www.hp.com/go/bsaessentialsnetwork>

This is the **BSA Essentials Network** Web page. To sign in:

1. Click **Login Now**.
2. On the **HP Passport sign-in** page, enter your HP Passport user ID and password and then click **Sign-in**.
3. If you do not already have an HP Passport account, do the following:
 - a. On the **HP Passport sign-in** page, click **New user registration**.
 - b. On the **HP Passport new user registration** page, *enter the required information and then click **Continue***.
 - c. On the confirmation page that opens, check your information and then click **Register**.
 - d. On the **Terms of Service** page, read the Terms of use and legal restrictions, select the **Agree** button, and then click **Submit**.
4. On the **BSA Essentials Network** page, click **Operations Orchestration Community**.

The Operations Orchestration Community page contains links to announcements, discussions, downloads, documentation, help, and support.

Note: Contact your OO contact if you have any difficulties with this process.

In OO: How to find Help, PDFs, and tutorials

The HP Operations Orchestration software (HP OO) documentation set is made up of the following:

- Help for Central

Central Help provides information to the following:

- Finding and running flows
- For HP OO administrators, configuring the functioning of HP OO
- Generating and viewing the information available from the outcomes of flow runs

The Central Help system is also available as a PDF document in the HP OO home directory, in the \Central\docs subdirectory.

- Help for Studio

Studio Help instructs flow authors at varying levels of programming ability.

The Studio Help system is also available as a PDF document in the HP OO home directory, in the \Studio\docs subdirectory.

- Animated tutorials for Central and Studio

HP OO tutorials can each be completed in less than half an hour and provide basic instruction on the following:

- In Central, finding, running, and viewing information from flows
- In Studio, modifying flows

The tutorials are available in the Central and Studio subdirectories of the HP OO home directory.

- Self-documentation for operations and flows in the Accelerator Packs and ITIL folders

Self-documentation is available in the descriptions of the operations and steps that are included in the flows.

Table of Contents

Warranty	ii
Restricted Rights Legend	ii
Trademark Notices	ii
On the Web: Finding OO support and documentation.....	iii
Support	iii
BSA Essentials Network.....	iii
In OO: How to find Help, PDFs, and tutorials.....	iv
System Requirements.....	5
HP OO Central and database server(s).....	6
Hardware	6
Software for Windows systems	7
Software for Linux systems	8
HP OO Remote Action Services installed separately from Central	9
Hardware for standalone RAS installations	9
Software for standalone RAS installations.....	10
Central client.....	11
Hardware for the Central client	11
Software.....	12
HP OO Studio installed on its own machine.....	13
Hardware	13
Software.....	13
Virtual systems.....	14
Index	15

System Requirements

Following are the minimum hardware and software requirements for servers and clients running Hewlett-Packard Software Operations Orchestration (HP OO).

Support for 64-bit architecture is available on Windows/Linux configurations for the Central, Studio, Scheduler, JRAS, and cluster components of HP OO.

HP OO Central and database server(s)

The hard-drive space requirements differ depending on whether you install the database and Central on the same machine.

Hardware

For 64-bit Windows systems, OO supports the AMD64 and Intel64 servers.

Component	Requirement per server
CPU	3 Gigahertz (GHz) for single-processor systems or 2 GHz for multi-processor systems
Memory (RAM)	3 Gigabyte (GB)
Hard-drive space	<p>Database server: As described in your database system requirements</p> <p>HP OO Central server: 4 GB (This includes room for the flows and operations that are included in the installation and for their rolling backups.)</p> <p>When the database and Central are installed on the same machine, sum the requirements for the database and the Central servers.</p> <p>Add 100KB for each flow that you have created and its rolling backups.</p> <p>Add 10.2MB if you install HP OO Load Balancer.</p>

The following software requirements are broken out into those for Windows systems and those for Linux systems.

Note: If the Central server and database server are on different physical server:

- A Central server that is installed on a Linux operating system can now use a SQL Server database.
- A Central server that is installed on a Windows operating system can now use an Oracle database. If the Oracle database is resides on an Oracle RAC, incorporate the Guide to Installing HP OO with RAC (InstallingHPOO_RACGuide.pdf) into your HP OO installation planning and procedures.

Software for Windows systems

Component	Requirement
Operating system	<p>One of the following:</p> <ul style="list-style-type: none"> • Microsoft Windows 2003 Server (Standard, Enterprise, or Datacenter edition) Service Pack (SP) 2, 32-bit or 64-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems applied. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839. • Microsoft Windows 2008 R2, Server (Standard, Enterprise, or Datacenter edition) SP 2, 32-bit or 64-bit.
Runtime environments	<p>Microsoft .NET Framework 2.0 Service Pack 1 (SP 1) and either 3.0 or 3.5 SP 1, with ASP.NET enabled for either</p> <p>Important: If you have .NET Framework 3.0 or 3.5 SP 1 installed, you must also install .NET Framework 2.0 SP 1, side by side with version 3.0 or 3.5 SP 1.</p>
Database management system	<p>One of the following:</p> <ul style="list-style-type: none"> • Microsoft SQL Server 2000 Service Pack 3a or later, SQL Server 2005 SP 3, or SQL Server 2008 SP 1. • Oracle (one of the following): <ul style="list-style-type: none"> • 10g Standard R2 • 10g Enterprise R2 • 11g Standard R2 • 11g Enterprise R2 • 11g RAC R2 • Sun Microsystems MySQL 5.0.41 or 5.1.30.
Web browser s	<p>One of the following:</p> <ul style="list-style-type: none"> • Microsoft Internet Explorer 6.x, 7.x, or 8.x • FireFox 1.5, 2.x, or 3.x
Scriptlet language support	<p>If you run a flow that contains a Perl scriptlet operation, ActivePerl 5.8.8.824 is required. When installing ActivePerl, select the option to add its path to the PATH environmental variable.</p>
Flash animation support	<p>Adobe Flash Player version 10.0</p>

Software for Linux systems

Component	Requirement
Operating system	<p>On 32-bit server: Red Hat Enterprise Linux 4.x or 5.x</p> <p>On 64-bit server: Red Hat Enterprise Linux AS 4.x or 5.x for 86-64 architecture</p>
Runtime environment	Java Runtime Environment version 1.6 (listed as 6.0 on the Sun Web site)
Database management system	<p>One of the following:</p> <ul style="list-style-type: none"> • Oracle (one of the following): <ul style="list-style-type: none"> • 10g Standard R2 • 10g Enterprise R2 • 11g Standard R2 • 11g Enterprise R2 • 11g RAC R2 • MySQL 5.0.41 or 5.1.30 • SQL Server 2000 Service Pack 3a or later • SQL Server 2005 SP 3 • SQL Server 2008 SP 1
Web browser	Firefox 1.5, 2.x, or 3.x
Scriptlet language support	If you run a flow that contains a Perl scriptlet operation, Perl 5.8.8.824 is required. If you did not install Perl when installing the operating system, make sure that the path to Perl is included in the PATH environmental variable.
RAS support for Windows systems	Standalone RAS installed on a Windows system (see the section below, HP OO remote action services installed separately from Central).
Flash animation support	Adobe Flash Player version 10.0

HP OO Remote Action Services installed separately from Central

Installations of the Remote Action Service (RAS) for the Central Web application do not have additional hardware requirements for the Web server. The software requirements for computers on which RAS is installed are as follows:

Important! Although RAS supports both Java- and .NET-based operations, Linux operating systems do not support .NET operations. Therefore, RAS installed on a Linux operating system cannot support .NET operations. (RAS installed on a Windows operating system supports both Java- and .NET-based operations.)

Hardware for standalone RAS installations

For 64-bit Windows systems, OO supports the AMD64 and Intel64 servers.

Component	Requirement
CPU	2 GHz for single- or multi-processor systems
Memory (RAM)	1 GB
Hard-drive space	4 GB (This includes room for the flows and operations that are included in the installation.) Add 100KB for each flow that you have created.

Software for standalone RAS installations

Component	Requirement
Operating system, on 32-bit server	<p>One of the following:</p> <ul style="list-style-type: none"> • Red Hat Enterprise Linux 4.x or 5.x Important! When installed on a Linux operating system, RAS cannot support .NET-based operations. • Windows 2003 Server (Standard, Enterprise, or Datacenter edition) SP 2, 32-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems applied. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839. • Microsoft Windows 2008 R2 Server (Standard, Enterprise, or Datacenter edition) SP 2, 32-bit. • Windows XP SP 2, with the December 2008 cumulative time zone update for Microsoft Windows operating systems applied. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839. • Windows Vista Enterprise Edition, SP 2 • Windows 7, Professional or Enterprise • Solaris 10.x (SunOS 5.10). If using Solaris 10.x, the server can be a 32-bit SPARC server or a 32-bit x86 server.
Operating system, on 64-bit server	<p>One of the following:</p> <ul style="list-style-type: none"> • Red Hat Enterprise Linux AS 4.x or 5.x for 86-64 architecture • Windows 2003 Server (Standard, Enterprise, or Datacenter edition), 64-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems applied. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839. • Microsoft Windows 2008 R2 Server (Standard, Enterprise, or Datacenter edition) SP 2, 64-bit.

Component	Requirement
Runtime environments	<ul style="list-style-type: none"> <li data-bbox="625 205 1466 373">• Microsoft .NET Framework 2.0 Service Pack 1 (SP 1) and either 3.0 or 3.5 SP 1, with ASP.NET enabled for either Important: If you have .NET Framework 3.0 or 3.5 SP 1 installed, you must also install .NET Framework 2.0 SP 1, side by side with version 3.0 or 3.5 SP 1. <li data-bbox="625 394 1466 655">• Java Runtime Environment (JRE) version 1.6 (listed as 6.0 on the Sun Web site) Note: JRE 1.6 is installed with the installation of the standalone RAS for Linux and Windows operating systems, but not for Solaris. If you are installing on a machine with a Solaris operating system, you must obtain the appropriate version of JRE 1.6 and install it in the Java home directory.

Central client

Hardware for the Central client

For 64-bit Windows systems, OO supports the AMD64 and Intel64 servers.

Web client machines for Central must meet the hardware requirements for their Web browser.

Software

Web Browser	Required operating system
<p>Microsoft Internet Explorer 6.x, 7.x, or 8.x, 32-bit or 64-bit</p>	<p>One of the following:</p> <ul style="list-style-type: none"> • Microsoft Windows XP Professional Edition, Service Pack 2 or higher, 32-bit or 64-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems applied. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839. • Windows 2003 Server (Standard, Enterprise, or Datacenter edition) SP 2, 32-bit or 64-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems applied. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839. • Windows 2008 R2 Server (Standard, Enterprise, or Datacenter edition) SP 2, 32-bit or 64-bit. • Windows Vista Enterprise SP 2, 32-bit or 64-bit. • Windows 7, Professional or Enterprise.
<p>Firefox 1.5, 2.x, or 3.x</p>	<p>One of the following:</p> <ul style="list-style-type: none"> • Microsoft Windows XP Professional Edition, SP 2 or higher, 32-bit or 64-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems applied. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839. • Windows 2003 Server (Standard, Enterprise, or Datacenter edition) SP 2, 32-bit or 64-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems applied. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839. • Windows 2008 R2 Server (Standard, Enterprise, or Datacenter edition) SP 2, 32-bit or 64-bit. • Windows Vista SP 2, 32-bit or 64-bit. • Windows 7, Professional or Enterprise. • Red Hat Enterprise Linux 4.x or 5.x, 32-bit or 64-bit

Note: If you run the Central client on a Linux operating system, the Web browser must be Firefox. Using Microsoft Internet Explorer for the Central client's Web browser is not supported on a Linux operating system.

Other software requirements:

- To play the tutorial flash animations, Macromedia Flash Player 8.0

HP OO Studio installed on its own machine

Hardware

Machines on which you install Studio must meet the hardware requirements for their Web browser or the following, whichever is greater.

Component	Requirement
CPU	2 Gigahertz (GHz) for single- or multi-processor systems
Memory (RAM)	2 GB (This is the amount of memory that the Studio process requires.)
Hard-drive space	2 GB (This includes room for the flows and operations that are included in the installation.) Add 100KB for each flow that you have created.

Software

Component	Requirement
Operating system	One of the following: <ul style="list-style-type: none">• Microsoft Windows XP Professional Edition, Service Pack (SP) 2, 32-bit or 64-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839.• Windows 2003 Server (Standard, Enterprise, or Datacenter edition) SP 2, 32-bit or 64-bit, with the December 2008 cumulative time zone update for Microsoft Windows operating systems. For information on applying the time zone update, see support.microsoft.com, Knowledge Base article 955839.• Windows 2008 R2 Server (Standard, Enterprise, or Datacenter edition), 32-bit or 64-bit.• Vista Enterprise edition SP 2, 32-bit or 64-bit.• Windows 7, Professional or Enterprise.
Flash animation player for tutorials	Macromedia Flash Player 8.0
Scriptlet language support	If you run a flow that contains a Perl scriptlet operation, ActivePerl 5.8.8.824 is required.

Virtual systems

Installation of the OO components on guest systems hosted by the following hypervisors is supported, as long as the guest systems meet the requirements described in this System Requirements document:

- VMWare ESX Server, version 3.0, 3.2, 3.5, 3i, or 4.0
- Microsoft Hyper-V (comes with Windows 2008 R2)

Index

- Central client
 - hardware requirements for, 11, 13
 - software requirements for, 11, 12, 13
- copyright notices, ii
- database servers, system requirements, 6
- hardware requirements
 - for Central client, 11, 13
 - for database servers, 6
 - for HP OO Central, 6
 - for standalone RAS installations, 9
- HP OO Central, system requirements, 6
- HP OO remote action services, installed separately from Central, 9
- legal notices, ii
 - copyright, ii
 - restricted rights, ii
 - trademark, ii
- warranty, ii
- Linux systems, software requirements for, 8
- restricted rights legend, ii
- software requirements
 - for Central client, 11, 12, 13
 - for Linux systems, 8
 - for standalone RAS installations, 10
 - for Windows systems, 7
- standalone RAS installations, 9
 - hardware requirements for, 9
 - software requirements for, 10
- system requirements, v
- trademark notices, ii
- virtual systems, 14
- warranty, ii
- Windows systems, software requirements for, 7