
HP Service Activator

Release Notes

Edition: V51-1A

for Microsoft Windows Server 2008 R2®, HP-UX 11i v3, Solaris 10,
and Red Hat Enterprise Linux 5.4 operating systems



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Introduction

This document provides late-breaking information about the *HP Service Activator V51-1A* product. It specifies the system requirements as well as known issues and workarounds.

Note that you must read the *HP Service Activator Installation Guide* prior to installing the Service Activator product. This guide can be found on the distribution DVD in the `/Doc` directory.

The *HP Service Activator* DVD is organized as follows:

- `/Unix`:
Contains the HP-UX and Solaris installation SD depots for *HP Service Activator*, Auto Pass licensing, JBoss, and TeMIP Liaison
- `/Windows`:
Contains the Windows installation for *HP Service Activator*, Auto Pass licensing, and JBoss
- `/Doc`:
Product documentation
- `/ReadMe`:
Location of end user license agreement as well as 3rd-party licenses
- `/3rd-party`:
Contains source code and licenses for 3rd party libraries used in Service Activator.

Required Hardware and Software

This section describes the system requirements that must be considered prior to installing and running *HP Service Activator*. Below are the minimum requirements for Service Activator, AutoPass and JBoss. The disk space requirements for Oracle, the Java SDK, Cygwin and Secure Shell can be found in the product literature for those applications.

Activation Server, Database Server and Web Browser Client Systems

Hardware Requirements (HP-UX)

The activation server system must meet the following minimum requirements:

- Itanium system
- 2 GB of memory
- Available disk space as follows:
 - 1 GB under `/opt`
 - 1 GB under `/etc`
 - 1 GB under `/var`
- The database requirements are described in the *Database Requirements* section below

Hardware Requirements (Solaris)

The activation server system must meet the following minimum requirements:

- Sun SPARC system
- 2 GB of memory
- Available disk space as follows:
 - 1 GB under `/opt`
 - 1 GB under `/etc`
 - 1 GB under `/var`
- The database requirements are described in the *Database Requirements* section below

Hardware Requirements (Linux)

The activation server system must meet the following minimum requirements:

- x86-64 system
- 2 GB of memory
- Available disk space as follows:

- 1 GB under /opt
 - 1 GB under /etc
 - 1 GB under /var
- The database requirements are described in the *Database Requirements* section below

Hardware Requirements (Windows)

The activation server system must meet the following minimum requirements:

- Microsoft Windows Server 2008 R2 system
- 1 GB of memory
- 1 GB on the drive where Service Activator is installed
- The database requirements are described in the *Database Requirements* section below

Database Requirements

Service Activator requires that an Oracle instance is created before installing Service Activator. The supported versions are Oracle 10g and Oracle 11g (including RAC). The Oracle instance may be local on the activation server or may be accessed remotely. You may use an existing instance from another application.

Software Requirements

The activation server should have the following software installed and configured. For additional installation and configuration information please refer to the *HP Service Activator Installation Guide*.

- HP-UX 11i v3, Red Hat Enterprise Linux 5.4 (64-bit), Solaris 10, or Microsoft Windows Server 2008 R2. Windows XP and Vista are supported for development only. In all cases, all the latest OS patches should be installed.
- Microsoft Internet Explorer 8.0 or Firefox 3.6 to access the web based user interface of *HP Service Activator*.
- Java™ SE Development Kit (JDK) 1.5.0.20 for HP-UX, 1.5.0_22 (32-bit) for Windows, 1.5.0_22 for Linux, and 1.5.0_22 for Solaris or later (1.5-based version, but not 1.6-based version). See the *HP Service Activator Installation Guide* for the exact Java versions required based on your activation server platform.
- Secure Shell server (including scp), functionality equivalent to OpenSSH version 3.6 or later is recommended. See the *HP Service Activator Installation Guide* for the exact versions required based on your activation server platform.
- Oracle 10g or Oracle 11g. The Oracle database does not need to be installed on the Service Activator server; it can be installed on any server that is accessible to the Service Activator server. Please also refer to the section *Database Requirements* above. Oracle RAC is also supported.

Note: The Service Activator Installation includes the JBoss application server and the Apache Tomcat web container used by Service Activator. The versions of JBoss and Tomcat needed by Service Activator are included on your installation DVD and will be installed automatically in the appropriate location when Service Activator is installed. You do not need to install JBoss and Tomcat separately. Use of any other version of JBoss or Tomcat is not supported.

Target System

See the HP Service Activator Installation Guide for information on the various target system requirements.

Changes and Defect Fixes

This section provides a list of changes to the product since HP Service Activator 5.0 (V50-1C) that are visible to end users and/or system integrators. It also lists defect fixes.

Changes

The following list highlights the new and noteworthy features in HP Service Activator 5.1.

- **Common Network Resource Model**
 - A Common Network Resource Model is included which is suitable for typical next generation networks. The model works together with a new dataload module and NNM integration.
- **Integration with Network Node Manager (NNMi)**
 - Dataload is supported from NNMi. A new dataload module makes it possible to populate and maintain the Common Resource model by reading data from NNMi.
 - Two-way cross launch is possible; from Service Activator inventory view to NNMi's topology view and from NNMi to Service Activator's service order view and inventory view.
 - Service Activator can initiate host rediscovery.
 - Service Activator can annotate NNMi objects with service/customer information and can create NNMi interface groups.
 - Three new workflow nodes have been added for the integration with NNMi.
 - Two new modules have been added to support the integration: NNMRequestModule and NNMiDataloadModule.
- **Integration with Network Automation (NA)**
 - Several workflow nodes have been added to setup NA to enforce configuration set-up on devices for services.
 - Cross-launch can be done from Service Activator inventory to NA.
 - A new workflow module, NAResultModule, has been added to support this functionality.
- **Clustering**
 - Support for virtual IP addresses. HPSA can be configured to allocate virtual IP addresses, also known as floating IP addresses on UNIX cluster nodes. Upon failure of the cluster node, its virtual IP address will migrate to another node in the cluster.
 - A watch dog process can be configured on UNIX to restart Service Activator in the event of a Service Activator crash.
- **Disaster Recovery**
 - Service Activator can be configured in a disaster recovery setup. Service Activator servers can be organized in cluster which, in turn, can be organized into "primary" or "standby" sites. Sites will typically be located in different geographical regions.
 - In the event of a failure in the primary site, a standby site can be brought online and be turned into the new primary site. There can be only one primary site. The servers in a standby site will not execute any workflows.
- **Deployment Manager**
 - Support for setting the "execute" bit on files (UNIX only)
 - Support for deleting files and database components (only applicable for deployment of patches and customizations)
 - Deployment of roles, relations between roles, operation types, inventory trees, and branch types
 - Deployment of Web Services
 - Support for inter-solution dependencies
 - Support for multiple database connections
 - The element <DTD> in deployment descriptor has changed to <Config>
 - Extra script parameters #VERSION and #FORCE
 - Version-based "depend" feature for some of the elements in the deployment descriptor
 - Service Activator version dependency

- The <backup> element has been removed from the deployment descriptor
 - Import/export of patches/customizations/solutions to and from DM
- **Inventory Subsystem**
 - The inventory subsystem has been enhanced in a number of ways. The resource definition files support new XML tags and attributes reducing the need for customizing the auto-generated JSPs and Java beans.
 - The usability of the inventory UI has improved considerably. Advanced search can now be saved. Also a new filter functionality has been added
 - For more information refer to the *Inventory Subsystem* document.
- **Web Service Designer**
 - New graphical tool to create Web Service interfaces for Service Activator
- **User Management**
 - The user management component has been enhanced to also support teams.
 - A new utility has been added to import/export roles and relations between inventory trees, operation types, branch types and roles.
- **Support for Oracle 11g**
 - Oracle 10g and 11g are now supported, including RAC.
- **New workflow nodes**
 - SendSNMPTrap, PAYG, PPU, InvokeMethod, MethodRule, and ActivateAtomicTask.
 - For more information refer to the *Workflow and the Workflow Manager* document.
- **New Workflow modules**
 - AtomicActivationModule, SelfMonitoringModule, SNMPSenderModule, JMSTListenerModule, and JMSSenderModule.
 - For more information refer to the *Workflow and the Workflow Manager* document.
- **Workflow Manager**
 - Support for more running multiple workflow nodes in the same worker thread for improved performance.
 - New engine queue named “WeightedEngineQueue”. This engine queue treats workflows with negative priorities in a “highest-priority first” manner (similar to the PriorityEngineQueue), while workflow with non-negative priorities are scheduled using a starvation-free algorithm.
- **GenericCLI Plug-in**
 - Callouts to Java methods is supported
 - Support for sending control characters
 - Prompt-line can now be checked for error patterns
 - Major performance improvements in cases where the response from the target device is large
 - Support for saving activation dialog to the database
 - New “proxy” attribute that is useful if the target device is access through a proxy
 - Support for setting the terminal type for Telnet as well as setting Telnet options
- **User Interface**
 - The “Tools” area in the left menu can now be customized similar to customization of the “Work Area”.
 - Service Order View is enhanced to also show outstanding activations.
 - Support for Single Sign-on by using Light-Weight Single Sign-on.
 - Support for automatic logout due to user inactivity; the logout timeout is configurable in the “web.xml”.
- **HTTP authentication on the Web Service interface**
 - Authentication can now be done by means of providing the user name and passwords as parameters in the method calls (as in 5.0) or on HTTP level.
 - The access control to the JBoss Web and JMX consoles is now using the authentication module configured in Service Activator
- **Enhanced scheduler functionality**
 - It is possible to specify whether the start time for repeating scheduled jobs should be based on the start time of the previous job or whether it should be started at an absolute time.
 - Scheduled jobs can be configured to either be started when Service Activator is started (if the time has elapsed while Service Activator has been down) or to wait for the next scheduled time.

- **Automatic assignment of Service ID when starting a workflow**
 - A service id can be automatically assigned if configured in the Workflow Manager configuration file.
- **The following workflow manager modules have been changed**
 - KeepAliveModule: A number of new configuration methods have been added.

Defect Fixes

- Fixed an issue that could cause the JVM to crash during license check
- Fixed an issue that could cause the KeepAliveModule to leak database connections under extreme conditions
- The GenericCLI plug-in can now handle huge responses (<10 megabytes) from the issued commands

Known Issues and Defects

This section presents issues you may encounter when using the *HP Service Activator* product.

General

AutoPass HP-UX and Solaris

AutoPass is the tool which Service Activator uses to check the license and this tool is used for all HP products. AutoPass is installed along with Service Activator if it is not already installed. However Service Activator does not have a dependency on AutoPass which means that there can be cases where another HP product deinstall AutoPass. In this case the AutoPass kit must be manually re-installed. The AutoPass kit can be found in the Unix directory on the Service Activator DVD.

Running Service Activator under a non-English locale

- On Windows Server 2008 R2 Multi-Language Version, Service Activator always starts in an English locale after reboot, even when English is not the system default locale. Service Activator must be restarted after boot-up in order to have it running under a non-English locale. This issue can manifest itself in a variety of ways. The Operator UI might incorrectly display non-ASCII characters or an atomic task may fail to interpret non-ASCII data correctly. This issue will sometimes occur on an HP-UX system as well. Stop and start Service Activator to avoid the problem.
- The License handling tool AutoPass only accepts 7-bit ASCII characters.

HP-UX Asian Locales

Java applications, in general, may fail on HP-UX if run in the `ja_JP.utf8` locale.

File Selection Dialog on Windows Server 2008 R2

On Windows Server 2008 R2 the file selection dialogs for the Service Activator utilities are missing some action buttons in the top-right corner. There is no work-around for this issue; however, the file selection dialog is almost fully functional even without these buttons.

Localization (L10N)

If you create a localized version of the resource bundle “`ejbRB_en.properties`” you must keep the original value for message number 38. If the message is changed, it will not be possible to deploy plugins and compound tasks.

In addition, if you want to localize the Jobs view, the Messages View, the Audit Messages view, the Track Activations view, and the Logs view, you also need to localize the parameters “`job_field_order`”, “`messages_field_order`”, “`audit_field_order`”, “`active_transactions_field_order`”, and “`log_field_order`” in the “`web.xml`” file (located in “`$JBOSS_DEPLOY/hpovact.sar/activator.war/WEB-INF`”). Make sure that you use a UTF-8 aware editor.

Workflow Manager and Workflows

Workflow Debugger

If you use the Workflow Debugger, you should set the value of the parameter `<Max-Nodes-Per-Thread>` to 1. Otherwise you will not be able to set breakpoints in all workflow nodes.

NullPointerException in a Workflow

Some workflow nodes do not properly handle a condition in which a case packet variable exists but does not have a value. This will show up as a `NullPointerException` during workflow execution. The workaround is to give the problematic variable an initial case packet value.

Workflow Hang (HP-UX only)

Spawning many dynamic worker threads, within the Workflow Manager (i.e., by simultaneously starting many workflows) may lead to some of the worker threads hanging during execution.

To workaroud this issue, you should run the `hpjconfig` program referred to in the *Installation Guide* and modify your kernel configuration per its recommendations.

Unable to stop or modify scheduled job

You should not create a scheduled job with a reoccurrence interval less than 10 seconds unless you are very sure that you do not need to stop this job again. It can be very difficult to stop a reoccurring scheduled job with a very rapid reoccurrence interval because the job id for the scheduled job changes.

Timeouts for Sleep, AskFor, and GenericUIDialog nodes

Timeout periods are reset if a cluster node crashes and a workflow job is taken over by another node in the cluster.

InvokeInventoryMethod node

The documentation describing the `InvokeInventoryMethod` workflow node is incomplete and misleading. For a more precise description of the node and its parameters, please see the file `“InvokeInventoryMethod.xml”` located in the `$ACTIVATOR_ETC/designer/nodes/builtin` directory.

User Interface

Debug UI

A race condition in the debug user interface can lead to an exception (displayed on the UI and written to the JBoss `“server.log”`). This can happen if the `“Workflow View”` tab is clicked before the debug view page is finished rendering.

Error messages in JBoss server.log

Logging into the Service Activator web UI will cause 10 error statements to be written to the JBoss `“server.log”`. This may be disturbing but it is completely harmless. The error statements are written because the JSF/Facelets library writes statements to `STDERR` when loading tag libraries.

In addition, stack traces (`javax.faces.FacesException`) may in some situations be written to the JBoss `“server.log”` if Service Activator is restarted while users are logged in; this is caused by the new AJAX-based job counter (in the web UI’s lower-left corner) periodically requesting new information from the server. However, after Service Activator is restarted the session is no longer known on the server-side which causes the server to be unable to restore the JSF view.

Plug-Ins

GenericCLI on windows

When running with the `GenericCLI` on windows you must be sure to that you have a `Disconnect` section in your XML description. The `disconnect` section must as the last action perform the call `“exit”`. This is because of the way the Cygwin Bash shell is working; it is not closing correctly upon an EOF. If the `“exit”` is not inserted, the `GenericCLI` will block until the Bash process spawned by the `sshd` on Windows has stopped, typically after a kill!

GenericCLI

When running with `GenericCLI` the use of the `connect` section cannot be overemphasized. If the `Connect` section is left out, the performance will be dramatically decreased due to the fact that a delay is automatically inserted. This is needed in order to ensure correct synchronization with the server. When connecting to an unauthenticated server or a SSH based server authenticated using keypairs the `connect` section can be setup using a do-nothing command. To issue a do-nothing command write `<Command send_newline=“NO”/>` which will do absolutely nothing. Hereafter wait for the prompt to appear. When the prompt has been found the synchronization is OK and the command execution can begin.

Workflow Designer

Multi-byte Character Issues

Workflow files that are present in directories with non-ASCII names may not load properly (XML parser may not recognize the non-ASCII characters). By default, all workflows reside in a directory called "workflows" which has no non-ASCII characters. Use that directory to avoid the problem.

Note that workflows created in Designer with non-ASCII names will be "encoded" into ASCII-only filenames. This encoding will replace non-ASCII characters with "__" and the integer code value for the character.

Service Builder

Unable to view documentation on UNIX

If you use Service Builder on UNIX and view documentation with the default browser there are currently some issues to be aware of:

- The Default Browser setting assumes Netscape as the browser.
- When viewing documentation from Service Builder it will first attempt to reuse any existing Netscape window. If one is not available, a new browser will be launched. If Netscape gives an error when opening the documentation (and you are sure you have generated documentation for the plug-in or compound task), you should manually launch a new Netscape browser, from the command line, prior to viewing the documentation.

Additionally, documentation can be viewed with a browser of your choice. Browse to the directory you chose for "Home for Projects" in Service Builder and locate the html documentation for the desired plug-in or compound task. These html files can be directly opened with your favourite browser.

Service Builder Files, Pre-Provisioning, and Scripts Elements

When selecting elements from Files, Pre-Provisioning or Scripts in a project archive, Service Builder may display an error dialog reporting "Error opening <filename>". This can happen if Service Builder attempts to display a binary file or a file in a non-UTF8 multi-byte encoding such as SJIS or EUC. Note that the file is actually in the project archive; however, the file contents cannot be displayed from within Service Builder.

If the element file is a non-UTF8 file containing multi byte data, you can use the editor with which you originally created the file to view its contents.

For example, if you add a SJIS-encoded Scripts element "SJISscript.perl" to a plug-in "PI1" in a project "Proj1", you can view this file on a Japanese Windows system using Notepad or the DOS command "more", for example:

```
more < /HP/OpenView/ServiceActivator/var/projects/Proj1/PI1/scripts/SJISscript.perl
```

Project Documentation Containing Multi-Byte Characters

Project documentation created in Service Builder under one character encoding may not be viewable on a system with a different default encoding. For example, Service Builder project documentation created on a Japanese Windows system and containing Japanese characters will not appear correctly in an HP-UX Service Builder running under the ja_JP.eucJP locale.

Plug-in Java Source Code Containing Multi-Byte Characters

If you add Java source code created outside of Service Builder to a Service Builder project and that source code contains un-encoded characters outside of the ASCII range \u0000 to \u007F, that source code must be in UTF-8 encoding. For example, if your source code contains an un-encoded character with an umlaut (such as "ä") or an un-encoded Asian character, the source code must be in UTF-8 encoding. This is needed only if these characters are un-encoded. That is, if "ä" is represented in the source code as the string "\u00E4" (rather than the character itself) and all other similar characters are encoded in this way, then the source code need not be in UTF-8 encoding.

VPN Example

The script `runDemoRouter`

The script “`runDemoRouter`” does not have execution permission when the example is installed. Change the permission by running the command: “`chmod 755 runDemoRouter`”.