

HP-UX WBEM SAS Provider Release Notes

HP-UX 11i v2, HP-UX 11i v3

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HP secure development lifecycle

Starting with HP-UX 11i v3 March 2013 update release, HP secure development lifecycle provides the ability to authenticate HP-UX software. Software delivered through this release has been digitally signed using HP's private key. You can now verify the authenticity of the software before installing the products, delivered through this release.

To verify software signatures in signed depot, version B.11.31.1303 or later of Software Distributor (SD) and version A.01.01.07 or later of HP-UX Whitelisting (WhiteListInf) must be installed on your system.

To verify the signatures, run: `swwsign -v -s`

For more information, see Software Distributor documentation at <http://www.hp.com/go/sd-docs> and Ignite-UX documentation at <http://www.hp.com/go/ignite-ux-docs>.

1 SAS provider release notes for September 2013 release

This document discusses the most recent product information on HP-UX WBEM SAS provider, which is supported on HP-UX 11i v2 and HP-UX 11i v3 Itanium-based systems. [Table 1 \(page 5\)](#) lists the product versions for which the document is applicable.

Table 1 Documentation support for SAS provider

Operating system	Version
HP-UX 11i v3	B.11.31.1309.07.01

Announcement

Web-Based Enterprise Management (WBEM) is an industry wide initiative to unify the management of system, networks, and applications across multiple and diverse vendor environments. The WBEM clients use the mass storage providers to gather information about various subsystems. The WBEM standard enables the WBEM clients to subscribe to indications, and indication consumers to receive indications on the occurrence of events of interest on the managed system. This release supports HP-UX WBEM SAS provider which is part of a suite of Mass Storage IO WBEM providers. The other providers in this suite supported in the current release are:

- HP-UX WBEM Fibre-Channel provider
- HP-UX WBEM RAIDSA provider
- HP-UX WBEM LAN provider
- HP-UX WBEM DAS provider

HP-UX WBEM SAS provider

HP-UX WBEM SAS provider is used by client applications to retrieve information about SAS HBAs present on the system. Using this provider, the WBEM clients can retrieve details about various attributes of SAS HBAs.

The features of SAS provider are described below:

- Reports data for the subsystem.
- Supports HP-UX WBEM services to provide web access to HP-UX data for management clients.
- Used by HP Software Management clients, HP System Insight Manager (SIM), HP System Management Home Page (SMH), and others.
- Supports WBEM 2.5 services security features to control access to HP-UX data.
- Provides consolidated status of SAS HBAs present on the system using SAS-CS provider.
- Supports Indication provider (IP) feature on HP-UX 11i v1, HP-UX 11i v2 and HP-UX 11i v3 OS. This feature generates indication in WBEM format and delivers the events to cimserver.

Installing the HP-UX WBEM SAS provider

The WBEM SAS provider depot is available for download on the OE media and web. Starting from HP-UX 11i v3 September 2011 release, all the products namely ProviderSvcsBase, SysFaultMgmt, the I/O Providers namely HP-UX WBEM RAIDSA Provider, HP-UX WBEM SAS Provider, HP-UX WBEM Fibre-Channel Provider, HP-UX WBEM Direct Attached Storage Provider (DASProvider) must be installed together to maintain compatibility among the diagnostic products.

On web:

September 2011 web release onwards, all the HP-UX 11i v3 version of WBEM providers and Diagnostics products, are available for download on the *WBEM*

Management bundle for HP-UX 11i v3 bundle page at <https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=WBEMMgmtBundle>.

NOTE: HP's WBEM Management bundle is released only on the web. All the products from the WBEM Management bundle must be installed together. This is due to product interdependency. These products might not work if they are installed individually.

Hardware requirements and OS support

Table 2 and Table 3 lists the OS and platform support information for the SAS provider.

Table 2 SAS provider OS requirement

Provider	Product name	Supported OS	Mode of delivery
SAS Provider	SAS-PROVIDER	HP-UX 11i v2, HP-UX 11i v3	ISU
SAS indication provider (IP)	SAS-PROVIDER	HP-UX 11i v3	ISU
SAS Consolidated Status Provider (CSP)	SAS-PROVIDER	HP-UX 11i v2, HP-UX 11i v3	ISU

Table 3 SAS provider supported platforms

Provider Name	Product name	Supported platforms
SAS Provider	SAS-PROVIDER	HP Integrity servers <ul style="list-style-type: none"> • cx2600 • cx2620 • rx1600 • rx1620 • rx2600 • rx2620 • rx2660 • rx3600 • rx4640 • rx5670 • rx6600 • rx7620 • rx7640 • rx8620 • rx8640 • SD16A, SD32A, SD64A • SD16B, SD32B, SD64B • BL60p HP Server Blade • BL860c HP Server Blade • BL870c HP Server Blade • BL860c i2, BL870c i2 & BL890c i2 • rx2800 i2 • Superdome 2

Table 3 SAS provider supported platforms (continued)

Provider Name	Product name	Supported platforms
		<ul style="list-style-type: none"> • BL860c i4, BL870c i4, BL890c i4 • rx2800 i4 • rx2900 i4 <p>NOTE: Wrapper indication provider is supported on HP 9000 servers. Native indication provider is supported on Next Generation Integrity servers.</p>

Software requirements

The provider requires certain software products to be installed on the managed system. [Table 4 \(page 7\)](#) lists the software product requirement for the provider.

Table 4 SAS provider software requirement

Product	Product version	Supported platform
ProviderSvcBase	C.13.00.03.01, September 2012 release or later	HP-UX 11i v3 Integrity system
SysMgmtPlus	A.01.00	HP-UX 11i v3 Integrity system
WBEM Services	A.02.09.04 or later	HP-UX 11i v2, and HP-UX 11i v3 Integrity system

Disk space requirement

[Table 5](#) lists the disk space requirement for the SAS provider.

Table 5 SAS provider Disk space requirement

Provider	Disk space required
SAS provider (includes CS and IP providers)	1.1 MB

Mapping provider module with provider name, type, events

[Table 6 \(page 7\)](#) lists the provider names, type, bundle names, name in events and supported platforms.

Table 6 Mapping provider module with provider name, type, events

Bundle Name	Provider Type	Supported on IA/PA	Provider Name	Provider Name in Events
SASProvider	Instance Provider	IA	HPUXSASProviderModule	
	Consolidated Status Provider (CSP)	IA	HPUXSASCSPProviderModule	
	Native Provider & RecordLog Provider (RLP)	IA	HPUXSASNativeIndicationProviderModule	HPUXSASIndicationProvider
	Wrapper Provider	IA	HPUXSASIndicationProviderModule	

Adaptor list for the events supported by the provider

For more information about the adaptor events supported by the provider on HP-UX 11i v2 and HP-UX 11i v3 OS, see <http://bizsupport2.austin.hp.com/bc/docs/support/SupportManual/c02620794/c02620794.pdf>.

Defects fixed in the version

This section describes the WBEM SAS provider defects fixed in the HP-UX 11i v2 and HP-UX 11i v3 operating systems.

Table 7 Defects fixed in the HP-UX 11i v2 OS

Defect ID	Description
Defect fix in B.11.23.1012 release	
QXCR1001039271	In the previous version, property details of SAS HBA is not displayed on HP SMH web page under the <code>Storage</code> subsystem. In the current release, this defect is fixed. Property details of SAS HBA is displayed on HP SMH web page under the <code>Storage</code> subsystem.

Table 8 Defects fixed in the HP-UX 11i v3 OS

Defect ID	Description
Defect fix in B.11.31.0909 release	
QXCR1000904989	In the previous version, the deviceID property of the SAS HBA was not displayed on the HP SMH web page of the subsystem. In the current version, the deviceID property of the SAS HBA is displayed on the HP SMH web page of the subsystem.
Defects fixed in B.11.31.1004 release	
QXCR1001013221	In the previous release, events generated by all I/O indication providers were logged in SAS provider database <code>SASPROVDB</code> , available at: <code>/var/opt/psb/db/pgsql</code> . In the current release, events generated only by SAS indication provider gets logged in the <code>SASPROVDB</code> database, available at: <code>/var/opt/psb/db/pgsql</code> .
QXCR1001009142	In the previous release, to generate SAS Indications, <code>OnlineDiag</code> monitor <code>dm_sas_adapter</code> needs to be restarted several times. In the current release, this defect is fixed.
QXCR1001012655 / QXCR1000996830	In the previous release, the following fields were not populated with appropriate values from the indications generated by <code>HPUXSASIndicationProviderModule</code> and <code>HPUXSASNativeIndicationProviderModule</code> : <ul style="list-style-type: none">• Event Threshold• Event TimeWindow• SystemSerialNumber• SystemFirmwareVersion• SystemGUID In the current release, these fields are populated from the indications generated by <code>HPUXSASIndicationProviderModule</code> and <code>HPUXSASNativeIndicationProviderModule</code> .
QXCR1001001392	In the previous release, after OE install, reboot, or upgrade, the SAS indication module times-out while registering with EMS. In the current release, this defect is fixed by increasing the time-out value of EMS registration.

Table 8 Defects fixed in the HP-UX 11i v3 OS (continued)

Defect ID	Description
QXCR1000947233	<p>In the previous release, system log configuration file for SAS provider available at: /opt/sas/provider/conf is termed as PSBLoggerConfig.xml.</p> <p>In the current release, the log configuration file for SAS provider available at: /opt/sas/provider/conf is termed as SASLoggerConfig.xml.</p>
QXCR1001016011	<p>In the previous release, Memory leak encountered due to ComponentData indication properties of HPUXSASIndicationProviderModule.</p> <p>In the current release, this defect is fixed.</p>
Defects fixed in B.11.31.1009 release	
QXCR1001021614	<p>In the previous release, the HPUXSASIndicationProviderModule dumps core when ComponentData indication properties are not retrieved successfully.</p> <p>In the current release, this defect is fixed and HPUXSASIndicationProviderModule does not dump core.</p>
QXCR1000993005	<p>In the previous release, SAS provider event details were not formatted correctly on legacy systems. This defect is fixed in the current release.</p>
QXCR1001022697	<p>In the previous release, SAS indication and Consolidated Status provider displays erroneous data on HP Virtual Machine guest systems.</p> <p>In the current release, SAS indication and Consolidated Status provider is disabled on HP Virtual Machine guest systems.</p>
QXCR1000996827 / QXCR1001023213	<p>In the previous release, SAS indication provider does not display multiple IP addresses of a system.</p> <p>In the current release, SAS indication provider displays multiple IP addresses of a system.</p>
Defects fixed in B.11.31.1103 release	
QXCR1001058688	<p>In the previous release, on BL870c i2 platform, the SAS disk test command: #/opt/sas/provider/bin/SAS_Provider_Test -d fails to generate events for all SAS disks available on the system if the first instance of the disk is not supported by the HPUXSASNativeIndicationProviderModule.</p> <p>This defect is fixed in the current release on BL870c i2 platform. The disk test is enhanced to send events for all the monitored paths even if the first instance of the disk is not supported by the HPUXSASNativeIndicationProviderModule.</p>
QXCR1001048021	<p>In the previous release, the HPUXSASIndicationProviderModule displays incorrect severity value after registering with EMS sub-system on HP-UX 11i v3 OS. The moncheck utility output, used to view the status of OnlineDiag monitors, displays incorrect severity value.</p> <p>This defect is fixed in the current release. The HPUXSASIndicationProviderModule displays appropriate severity value after registering with EMS sub-system on HP-UX 11i v3 OS.</p>
QXCR1001068706	<p>In the previous release on HP-UX 11i v3 OS, enumeration of classes available in SAS Instance provider and SAS Consolidated Status provider fails for a user with non-root privileges.</p> <p>This defect is fixed in the current release. Enumeration of classes available in SAS Instance provider and SAS Consolidated Status provider is successful even for a normal user.</p>
QXCR1001078598	<p>In the previous release on the BL870c i2 platform, when the cimserver / HPUXSASNativeIndicationProviderModule is restarted, the Indication Identifier index is reset. If the evweb current database already has events with the same event number or Indication Identifier index, such duplicate events are not logged in the evweb database. When events with same event IDs are reported</p>

Table 8 Defects fixed in the HP-UX 11i v3 OS (continued)

Defect ID	Description
	<p>frequently, the events will be logged in the <code>/var/opt/sfm/log/event.log</code> file and the <code>syslog</code> file.</p> <p>In the current release on the BL870c i2 platform, when the <code>cimserver / NativeFCIndicationProvider</code> is restarted, the Indication Identifier is concatenated with a timestamp along with the event number and Index. With this modification, the Indication Identifier can never be duplicated and all the event IDs generated by the <code>HPUXSASNativeIndicationProviderModule</code> are unique, which gets logged in the <code>evweb</code> database.</p>
Defects fixed in B.11.31.1109 release	
QXCR1001051369	<p>In the previous release, core file generated by <code>cimprovagt</code>, program terminated with signal 11, resulting in segmentation fault.</p> <p>This defect is fixed in the current release.</p>
QXCR1001053727	<p>In the previous release, the <code>HPUXSASIndicationProviderModule</code> data had junk values at the end in <code>evweb</code> o/p under "Error Details/Component Data".</p> <p>This defect is fixed in the current release. Void Pointer is passed to the EMS API which fills the "Error Details/Component Data".</p>
Defects fixed in B.11.31.1203 release	
QXCR1001133148	<p>The install logs present under the <code>/var/opt/</code> directory displays unwanted messages during cold install for RAIDSA, SAS, DAS, and FC providers</p> <p>This defect is fixed in the current release. The <code>createtable.sh</code> script is modified to check the cold install and database accordingly.</p>
Defects fixed in version B.11.31.1203.05.02	
QXCR1001188297	<p>Upgrade of provider fails on a machine that has a database with large number of record set and the system runs out of memory while executing the query to fetch all records. The upgrade fails with the following errors</p> <pre>ERROR: database "SASPROVDB" already exists ERROR: Operation: createdb SASPROVDB failed</pre> <p>This issue is fixed in this release.</p>
Defects fixed in version B.11.31.1209.06.01	
QXCR1001200700	<p>When the SAS provider, having large number of records in the database is upgraded, the provider upgrade fails.</p> <p>This issue is fixed in this release.</p>
QXCR1001198841	<p>During multiple system reboot, past provider events get reported for SAS provider. This issue is fixed in this release. When the past provider events get reported, the following warning message is seen in the provider log:</p> <p>WARNING! Started processing old osel log files. Old events may get reported. You can safely ignore this message.</p>
Defects fixed in version B.11.31.1209.08.02	
QXCR1001221295	<p>When the first node of the hostname is changed to a name that has more than 8 characters, the SASProvider fails to report the events.</p> <p>This issue is fixed in this release. The events get generated even after changing the first node of system name to more than 8 characters.</p>
QXCR1001230102	<p>The event suppression in <code>HPUXSASNativeIndicationProvider</code> is not getting reset after the system reboot.</p> <p>This issue is fixed in this release.</p>

Table 8 Defects fixed in the HP-UX 11i v3 OS (continued)

Defect ID	Description
Defects fixed in version B.11.31.1303.05.01	
QXCR1001232692	During the unconfiguration of SASProvider, the native library gets deleted. Therefore, configuring of SASProvider fails. This issue is fixed in this release.
QXCR1001228957	The following error message is logged in SASProvider log: SFM: ERROR: invalid input syntax for type timestamp with time zone: "" This issue is fixed in this release.

Known problems, workaround, and limitations

Following is the known problem tabulated from the current release.

Problem: After the installation of SAS Provider, couple of initial events are not generated.

Workaround: After installation run `/opt/raidsaprovider/bin/SAS_Provider_Test -a` twice.

The following known problems are tabulated from the previous release.

- Problem:** The events are lost when diagnostic products are upgraded on a DRD cloned disk.

Description: Prior to September 2012 release version of diagnostics product, the postgres 7.4.2 version was supported. However version 8.4.8 is shipped from September 2012 release. Due to the missing data compatibility between PostgreSQL version 7.4.2 (prior to September 2012) and 8.4.8 (September 2012 release or later) when diagnostics products are upgraded from prior to September 2012 release to September 2012 web release and later, the postgres data need to be migrated to 8.4.8 format. Data migration involves backup in 7.4.2 version using the `pg_dumpall` and restore in 8.4.8 version using the `psql` operations. Both of these operations requires a running postgres service. But in the DRD environment there is a limitation that no service can be run on the cloned disk when products are either installed or upgraded. This limits diagnostics product upgrade steps from taking the backup of the postgres 7.4.2 data. As a result, the data such as events and error records is lost during such circumstances.

Workaround: You can select any of the following two alternatives:

 - To install the product on the DRD cloned disk as a normal upgrade scenario. The scenario will be same as fresh installation and user may refer to `event.log` for historical event data.
 - To have a seamless migration of the data from postgres 7.4.2 version. In this case, the user is required to perform the manual steps listed in the *Installation scenarios of Postgres 8.4.8* guide at www.hp.com/go/hpux-diagnostics-sfm-docs.

Following is the limitation of the SAS provider:

- SAS is a read-only provider and hence does not allow users to modify, create, or delete instances.
- When SAS provider B.11.31.1106 or later is installed on legacy Integrity systems, `dm_sas_adapter` is never launched regardless of the diag mode. `HPUXSASNativeIndicationProviderModule` always monitors natively the hardware and generates WBEM events. The reverse wrapper, `sas_Wbemwrapper`, may be launched depending on the connected hardware. This reverse wrapper converts the WBEM event to the corresponding EMS event.

The introduction of this native support adds to support the following EMS resource path:

`/adapters/events/sas_wrapper_wbem`

On the other hand, as the process for `dm_sas_adapter` is never launched, the corresponding EMS resource path is not monitored:

Related documentation

Table 9 lists the available documentation for the WBEM providers:

Table 9 WBEM provider related documents

Description	Location
CIM Tutorial	http://www.dmtf.org/standards/cim
Information about HP WBEM Services	http://software.hp.com and http://www.hp.com
Overview of the indication schema	http://www.openpegasus.org/uploads/40/3452/WBEMIndications.pdf
Provider Datasheets	Datasheets of all the providers are installed along with the product at the following location on the system: /opt/<provider-name>/doc The datasheets are also available at the following location: www.hp.com/go/hpux-networking-docs and select HP-UX 11i WBEM Software collection.

Localized version of the software

The product is supported only in English locale (LANG=C). Behavior of the product is unpredictable when LANG value is set to any other language code other than C. Documentation support for this product is also available only in English locale.

2 Documentation feedback

HP is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (docsfeedback@hp.com). Include the document title and part number, version number, or the URL when submitting your feedback.