
System Fault Management B.07.05.01.02 Release Notes HP-UX 11i v2 August 2011

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System Fault Management B.07.05.01.02 Release Notes HP-UX 11i v2 August 2011

Announcement

System Fault Management (SFM) is a collection of tools used to monitor the health of HP servers and receive information about hardware such as memory, CPU, power supplies, and cooling devices. SFM operates in the Web-Based Enterprise Management (WBEM) environment.

SFM includes the following tools:

- SFM providers
- EVWEB

NOTE:

- HP-UX need not be rebooted upon upgrade/install of this version.
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This document contains the following sections:

- SFM providers
 - What is new in this version
 - Supported EMS hardware monitors
 - Defect fixes
- EVWEB
 - What is EVWEB
 - Benefits
 - Features
 - Limitations
- System requirements

- Supported browsers
- Limitation and workaround
- Product documentation
- Software and documentation availability in native languages
- Product structure
- Reporting defects

SFM providers

SFM providers are tools that gather information related to various hardware devices and report to the Common Interface Model Object Manager (CIMOM).

Table 1 lists the SFM providers, and their respective functions

Providers	Functions
CPU instance provider	Retrieves information about processor inventory and consolidated health of the processor subsystem.
Memory instance provider	Gathers information about memory inventory and consolidated health of the memory subsystem.
EMS wrapper provider	Translates events generated by the EMS hardware monitors into indications and reports those indications to the CIMOM.
Filter Metadata (FMD) provider	Provides the facility to predefine the important filter in a repository. FMD also ensures that all important or chosen indications are logged to the local event archive. FMD creates HP-advised subscriptions when SFM is installed.
Environmental providers	Retrieve information about cooling devices (fans) and power supply (bulk power supply and AC input lines) on HP servers. They also retrieve consolidated health of cooling, power, system temperature, and system voltage subsystems on HP servers.
SFMIndicationProvider	Generates WBEM indications when an abnormal activity is detected on the monitored devices and reports these WBEM indications to the EMS framework.
Firmware revision instance provider	Retrieves information about the firmware revision of system hardware components, such as system firmware version and Management Processor (MP) firmware version.
Disk Instance Provider	Retrieves information about the consolidated health status and inventory information of direct attached disk drives, such as SCSI drives.
MP instance provider	Retrieves information about the management processor of the system.
Enclosure instance provider	Retrieves information about the Onboard Administrator (OA), such as OA description, OA IP address, OA MAC address, and the URL to launch the OA.
Record log provider	Enables event analysis tools such as Web-Based Enterprise Services (WEBES) to access details of indications generated by the SFMIndicationProvider that are available in the SFM database, for event analysis.
Machine Check Abort (MCA) Indication Provider	Generates an indication when Machine Check Abort (MCA) logs are present due to an MCA.
Temperature provider	Provides details such as the processor temperature and the memory board temperature.

NOTE: The Enclosure Instance Provider is available on HP Integrity BL860c Server Blade and HP Integrity BL870c Server Blade only.

What is new in this version

None

For information about the defect fixes, see [Defect fixes](#).

Supported EMS hardware monitors

The following EMS monitors are supported on HP 9000 systems running the HP-UX 11i v2 operating system:

- LPMC (now CPU) (lpmc_em)
- Memory (dm_memory)
- Core HW (dm_core_hw)
- Chassis Code (dm_chassis)
- Disk (disk_em)
- IPMI Forward Progress Log Monitor (fpl_em)

The following EMS hardware monitors are supported on HP Integrity® servers running the HP-UX 11i v2 operating system:

- Corrected platform error monitor (cpe_em)
- IPMI forward progress log monitor (fpl_em)
- CMC monitor (cmc_em)
- Itanium core hardware monitor (ia64_corehw)
- SCSI Disk Monitor (disk_em)
- Itanium memory monitor (memory_ia64)

Defect fixes

- QXCR1001101860
Temporary files are created in the `/var/tmp` directory when archiving of evweb database records takes place.
This problem is fixed.
- QXCR1001089861
The memory leaks were identified in SFM.
This problem is fixed.

EVWEB

This section describes EVWEB.

What Is EVWEB

EVWEB is a tool that can be used to view and administer WBEM indications generated on the HP-UX 11i v2 system.

The EVWEB tool includes the following components:

- **Event subscription administrator**
Event subscription administrator enables users to subscribe to an indication and view it. In addition, users with administrative privileges can also modify, and delete subscriptions. By subscribing to an indication, users can obtain detailed information about various WBEM indications.

As a part of event subscription, users must specify event subscription criteria. Users must also select one or more destinations to receive information about indications.

Users can select one or more destination from the following list:

- Event archive: The path of Event archive is `/var/opt/sfmdb/pgsql` for PA-RISC and `/var/opt/psb/db/pgsql/` for Itanium. Event archive is the default destination.
- Email: Event notification will be emailed to the specified email address. Users can specify multiple email addresses.

- **Event viewer**

The event viewer enables users to view the indications stored in the Event archive. In addition, users with administrative privileges can also delete these indications. By default, HP-advised subscriptions are stored in the Event archive. The event viewer also enables users to search for an indication logged in the Event Archive.

- **Log viewer**

Log Viewer enables users to view low level logs that are generated on an HP-UX system. The low level logs are stored in the log database and contain information such as Log Id, Log Index, Device Id, Device Type, and Time of occurrence.

Benefits

Following lists the benefits of EVWEB:

- Enables users to manage all WBEM indications that are supported by SFM.
- Provides an option to customize the indication destination to receive information about HP-advised subscriptions.
- Enables users to view the command-line equivalent of an action performed using the GUI, thereby, educating users about the usage of various commands.

Features

EVWEB offers the following features:

- Provides both quick search and advanced search mechanisms to view events from the Event Archive
- Provides both simple and advanced search mechanism to search for low level logs from the log viewer.
- Generates a list of events in a printer-friendly format (GUI only).
- Enables users with administrative privileges to create, modify, and delete indications.
- Enables users with administrative privileges to create, modify, and delete throttling configurations. This feature is available on HP 9000 and HP Integrity systems.
- Enables users to view subscriptions created using EVWEB
- Enables users to view externally created subscriptions.
Subscriptions created by using tools other than EVWEB are termed as externally created event subscriptions.
- Enables users to view HP-advised subscriptions. HP-advised subscriptions are provided by default by HP.
- Evweb Logviewer displays the summary information of an event in the following order: Log ID, Log Index, Log Type, Device ID, Device Type, Time of occurrence.

NOTE: EVWEB supports these features on browser-based GUI and the CLI.

Limitations

- When an HP-advised subscription is copied to create or modify another subscription, the subscription criteria is not copied. However, only destinations are copied to the new subscription.
- Event details displayed in EVWEB event viewer and embedded in the EVWEB email notification may not have similar readability or formatting as provided by the EMS event notification. However, this issue is not applicable to HP_DeviceIndication class indications.
- The `-T` option to create and manage throttling configuration is no longer supported and the feature is not available in the HP-UX 11i v2 systems.

System requirements

SFM is supported on the following systems running the HP-UX 11i v2 operating system:

- HP 9000 servers
 - rp3410
 - rp3440
 - rp4410
 - rp4440
 - rp7400
 - rp7410
 - rp7420
 - rp7440
 - rp8400
 - rp8420
 - rp8440
 - SD16, SD32, SD64
 - SD16A, SD32A, SD64A
 - SD16B, SD32B, SD64B
 - 9000/800/A400-44
 - 9000/800/A400-6x
 - 9000/800/A500-7x
 - 9000/800/L1000-36
 - 9000/800/L2000-36
 - 9000/800/L1500-7x
 - 9000/800/L1500-8x
 - 9000/800/L3000-6x

- 9000/800/L3000-7x
- 9000/800/L3000-8x
- HP Integrity servers
 - cx2600
 - cx2620
 - rx1600
 - rx1620–2
 - rx2600
 - rx2620
 - rx2620–2
 - rx2660
 - rx3600
 - rx4640
 - rx5670
 - rx6600
 - rx7620
 - rx7640
 - rx8620
 - rx8640
 - rx9610
 - SD16A, SD32A, SD64A
 - SD16B, SD32B, SD64B
 - BL60p HP Server Blade
 - BL860c HP Server Blade
 - BL870c HP Server Blade
 - Integrity Virtual Machine

Following lists the software requirements for using SFM:

- HP-UX 11i v2
 - September 2004 11i v2 Operating Environment
 - May 2005 11i v2 Operating Environment (or later version required for vPars enablement)
- BUNDLE11i – B.11.23.0409.3 (September 2004 or later)
- HWEnable11i – (For specific HW support)
- WBEM Services A.02.09.04 or later

- SysMgmtWeb A.2.2.7 (December 2007) or later
- OpenSSL A.00.09.07i.012 (or later required by WBEMServices)
- OnlineDiag B.11.23.14.02 or later

EMS Version	A.04.20.23
STM Version	C.58.00

Following is a co-requisite for using SFM:

- PHKL_34795 IPMI patch

NOTE:

- WBEM Services, Online Diagnostics, SysMgmtWeb, and HP SIM are available on the Operating Environment (OE) media and can be selected for install during the SFM installation.
- The listed versions of the software are the minimum supported requirements. Subsequent versions are compatible with this version of SFM unless otherwise noted.
- System Management Homepage (SMH) – bundled in SysMgmtWeb – is an optional install. However, without it you can not access the Event Viewer (EvWEB) user interface.
- HP recommends using the latest available HP Systems Insight Manager (HP SIM) to remotely administer indications and instances. The minimum requirements are the April/May 2007 release: HP SIM 5.1 with Update 1 - HP-UX (C.05.01.00.01)
- Minimum Patch Requirements (Required if QPKBASE is not installed):
 - PHKL_36288 - 11.23 Cumulative diag2 driver and vPars enablement
 - PHKL_34795 - 11.23 Cumulative IPMI driver patch
 - PHSS_35055 - aC++ Runtime (IA: A.06.10, PA: A.03.71)
 - PHSS_36345 - 11.23 Integrity Unwind Library
Available from the QPKBASE B.11.23.0712.070a Base Quality Pack Bundle (December 2007)
 - PHSS_37947- linker + fdp cumulative patch
 - PHSS_37947 is recommended due to a critical patch warning for PHSS_34860
 - PHSS_37552 - Aries cumulative patch
 Available from the QPKBASE B.11.23.0812.076 Base Quality Pack Bundle (December 2008).

Supported browsers

Following lists the browsers supported by SFM:

- Internet explorer version 6.0 and above
- Mozilla version 1.5 and above

Limitations

- If the default log directory is deleted, log messages are not logged. A message is logged in syslog stating that the SFM log file could not be opened. Only a root user can remove this directory. HP recommends that users do not delete this default log directory.
- After the system is rebooted or the CIMOM is restarted, the first request to SFM hardware inventory providers such as the CPU Instance Provider, Memory Provider, and the Environmental

Providers may fail with the generation of the CIM_ERR_FAILED status code. Also, a message is displayed on the client system that states " Inventory information is being built currently. Please try after some time" . However, on subsequent requests, the SFM hardware inventory providers respond with requested information instantaneously.

- Hardware inventory providers are not supported on HP Virtual Machines. For indication providers, only FPL and ia64_corehw indications are generated on HPVM guests.
- The errors processed by the SFMIndicationProvider cannot be sent to the EMS monitors when you switch from the SFMIndicationProvider to EMS monitors.

Known Problems and Workarounds

- **Problem:** CIM_AlertIndication.NetworkAddresses does not contain all assigned IP addresses.
Description: Indication delivered by SFM does not display all the IP addresses in NetworkAddresses property of CIM_AlertIndication class when a new IP address is configured or an old IP address is changed at runtime.
Workaround: To reflect newly configured IP Addresses in SFM Indication, disable and enable SFMProviderModule using the following commands:

```
cimprovider -dm SFMProviderModule
cimprovider -em SFMProviderModule
```

- **Problem:** OSELReader reading from wrong file causes missing events
Description: This problem is seen when OnlineDiag product is upgraded from any version prior to B.11.23.13.02 to B.11.23.13.02 or later version. Creation of duplicate OSEL files causes this issue wherein few events could get missed.

Caution: Before upgrading OnlineDiag product from any version to B.11.23.13.02 or later version, perform the following the steps:

- # cp /opt/sfm/conf/fm_diaglogd_cfg.bin /var/opt/sfm/conf/
- # ls -l /var/opt/sfm/conf/fm_diaglogd_cfg.bin

Workaround: If the steps mentioned in Caution were not followed prior to upgrade of OnlineDiag product from any version to B.11.23.13.02 or later version, then perform the following steps:

- # cimprovider -dm SFMProviderModule
- # strings /var/opt/sfm/data/last_read_state.sav

Output: This will give the name of the OSEL file to be deleted.

- # rm <give the name of the osel file got from the above output>
- # rm /var/opt/sfm/data/last_read_state.sav
- # cimprovider -em SFMProviderModule

Product documentation

For more information on SFM, see the following documents at:

www.hp.com/go/hpux-diagnostics-sfm-docs

- Frequently Asked Questions (FAQs)
- Administrator's and User's Guide for SFM HP-UX 11i v3
- SFM Provider Data Sheets
- SFM Tables of Versions

- SFM Patch Descriptions
- SFM Event Descriptions

Software and documentation availability in native languages

SFM software and documents are available only in the English language.

Product structure

The SFM product, consisting of SFM providers and EVWEB, is installed as part of the SysFaultMgmt bundle.

Following are the commands you must use to obtain the bundle, product, sub-product, and the fileset information about the SysFaultMgmt depot. The generated output are examples from HP 9000 systems:

- **Bundle**

```
$ swlist -s <SysFaultMgmt Depot Location>
# SysFaultMgmt B.07.05.01.02 HPUX System Fault Management
  SysFaultMgmt.SFM-CORE B.07.05.01 HPUX System Fault Management
  SysFaultMgmt.SFMDB B.07.05.01 HP System Management Database (SFMDB)
```

- **Product(s)**

```
$ swlist -l product -s <SysFaultMgmt Depot Location>
# SysFaultMgmt B.07.05.01.02 HPUX System Fault Management
  SysFaultMgmt.SFM-CORE B.07.05.01 HPUX System Fault Management
  SysFaultMgmt.SFMDB B.07.05.01 HP System Management Database (SFMDB)
```

- **Sub-product(s)**

```
$ swlist -l subproduct -s <SysFaultMgmt Depot Location>
# SysFaultMgmt B.07.05.01.02 HPUX System Fault Management
# SysFaultMgmt.SFM-CORE B.07.05.01 HPUX System Fault Management
  SysFaultMgmt.SFM-CORE.ERROR-MGMT Error Management Technology
  SysFaultMgmt.SFM-CORE.EVWEB Event Manager Web
  SysFaultMgmt.SFM-CORE.FMD-PROVIDER FMD-PROVIDER
  SysFaultMgmt.SFM-CORE.GS GS
  SysFaultMgmt.SFM-CORE.HS-PROVIDER HS-PROVIDER
  SysFaultMgmt.SFM-CORE.SFM-HAS SFM-HAS
  SysFaultMgmt.SFM-CORE.SFM-PROVIDER SFM-PROVIDER
  SysFaultMgmt.SFMDB B.07.05.01 HP System Management Database (SFMDB)
```

- **Fileset(s)**

```
$ swlist -l fileset -s <SysFaultMgmt Depot Location>
# SysFaultMgmt B.07.05.01.02 HPUX System Fault Management
# SysFaultMgmt.SFM-CORE B.07.05.01 HPUX System Fault Management
  SysFaultMgmt.SFM-CORE.CTR_PRO_COMM B.07.05.01 Control Provider Common Fileset
  SysFaultMgmt.SFM-CORE.CTR_PRO_COREIA B.07.05.01 Control Provider Platform Specific Fileset
  SysFaultMgmt.SFM-CORE.EMT_COMM B.07.05.01 EMT Common components
  SysFaultMgmt.SFM-CORE.EMT_COREIA B.07.05.01 EMT core platform specific fileset
  SysFaultMgmt.SFM-CORE.EVWEB_COMM B.07.05.01 Event Manager (EvWEB) Common components
  SysFaultMgmt.SFM-CORE.EVWEB_COREIA B.07.05.01 EvWEB core platform specific fileset
  SysFaultMgmt.SFM-CORE.EVWEB_DOC B.07.05.01 EvWEB Online help fileset
  SysFaultMgmt.SFM-CORE.EVWEB_GUI_COMM B.07.05.01 EvWEB GUI common fileset
  SysFaultMgmt.SFM-CORE.EVWEB_GUI_IA B.07.05.01 EvWEB GUI platform specific fileset
  SysFaultMgmt.SFM-CORE.EVWEB_MAN B.07.05.01 EvWEB Man pages fileset
  SysFaultMgmt.SFM-CORE.FMD_PRO_COMM B.07.05.01 Filter Metadata Instance Provider Common Fileset
  SysFaultMgmt.SFM-CORE.FMD_PRO_COREIA B.07.05.01 Filter Metadata Instance Provider Platform Specific Fileset
  SysFaultMgmt.SFM-CORE.GS_COMM B.07.05.01 General Services Common Fileset
  SysFaultMgmt.SFM-CORE.GS_COREIA B.07.05.01 General Services Platform Specific Fileset
  SysFaultMgmt.SFM-CORE.HAS-IA B.07.05.01 Hardware Access ServicesIA
  SysFaultMgmt.SFM-CORE.HS_PRO_COREIA B.07.05.01 HealthState Instance Provider Platform Specific Fileset
  SysFaultMgmt.SFM-CORE.MISC_COMM B.07.05.01 MISC Common Fileset
  SysFaultMgmt.SFM-CORE.MISC_COREIA B.07.05.01 MISC Platform Specific Fileset
  SysFaultMgmt.SFM-CORE.MISC_TOOLS B.07.05.01 MISC Tools Fileset
  SysFaultMgmt.SFM-CORE.SFM_PRO_COMM B.07.05.01 SysFaultMgmt Provider Module COMMON
  SysFaultMgmt.SFM-CORE.SFM_PRO_IA B.07.05.01 SysFaultMgmt Provider Module IA
# SysFaultMgmt.SFMDB B.07.05.01 HP System Management Database (SFMDB)
  SysFaultMgmt.SFMDB.SMPGSQL-DOC B.07.05.01 PostgreSQL (SFMDB) Documentation Files
  SysFaultMgmt.SFMDB.SMPGSQL-INC B.07.05.01 PostgreSQL (SFMDB) Header Files
  SysFaultMgmt.SFMDB.SMPGSQL-LIB B.07.05.01 PostgreSQL (SFMDB) Library Files (Architecture dependent)
  SysFaultMgmt.SFMDB.SMPGSQL-MAN B.07.05.01 PostgreSQL (SFMDB) Manual Pages
  SysFaultMgmt.SFMDB.SMPGSQL-RUN B.07.05.01 PostgreSQL (SFMDB) Executable Files (Architecture dependent)
  SysFaultMgmt.SFMDB.SMPGSQL-SHA B.07.05.01 PostgreSQL (SFMDB) Share File
```

Reporting defects

You can report defects related to SFM by filing a request on QUIX. The name of the project is `SysFaultMgmt`. If you do not have access to QUIX, contact your local HP representative to file a defect on your behalf.

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