HP-UX Event Monitoring Service (EMS) Hardware Monitors Release Notes
Version: B.11.23.15.03 for HP-UX 11i v2

Contents

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 the software signatures in signed depot, the following products must be installed on your system:

- B.11.31.1303 or later of SD (Software Distributor)
- A.01.02.00 or later of HP-UX Whitelisting (`WhiteListInf`)

To verify the signatures, run: `/usr/sbin/swsign -v -s <depot_path>`

For more information, see Software Distributor documentation at http://www.hp.com/go/sd-docs.

NOTE: Ignite-UX software delivered with HP-UX 11i v3 March 2014 release or later supports verification of the software signatures in signed depot or media, during cold installation. For more information, see Ignite-UX documentation at http://www.hp.com/go/ignite-ux-docs.

About this document

This document provides details of the currently supported features, enhancement, installation, patches, bugs fixed across releases (if any), known problems, issues, their workarounds, policy details, and documentation details for Event Monitoring Service (EMS) Release Notes.

Revision history of the document (Current release)

Table 1 (page 5) lists all the details about this document and its release history.

Table 1 Revision history of the document: Event Monitoring Service (EMS) (Current release)

Document manufacturing part number	Edition number	Publication date	Supported operating systems
834958-001	1 (Original edition)	September 2015 (Current version of the document)	HP-UX 11i v2

1 Event Monitoring Service (EMS) release notes for HP-UX 11i v2, September 2015 web release

This chapter provides the most recent product information on Event Monitoring Service (EMS) as a product, which is supported on HP-UX 11i v2 operating system. Table 2 (page 6) lists the product versions for which the document is applicable.

Table 2 Documentation support for Event Monitoring Service (EMS)

Operating system	Version
HP-UX 11i v2	**B.11.23.15.03**

What is new in this version

In this version of HP-UX Event Monitoring Service (EMS), enhanced licensing support for Event Monitoring Service (EMS) tools is provided.

Online Diagnostics

The Online Diagnostics software is a collection of tools that enables you to monitor and test server hardware. It comprises the Event Monitoring Service (EMS) framework, the EMS Hardware Monitors, and the Support Tools Manager (STM).

The Online Diagnostics tools are all contained in a Software Depot (SD) bundle, called the OnlineDiag bundle. This bundle is distributed in the following ways:

- OE media

- HP Software Depot Web site

The following generic command lists various levels of content of the depot:

```
swlist -l <level> -s /<mount_point>/DIAGNOSTICS/<os_release>

where <level>
        = bundle         Bundle level listing
        = product        Product level listing
        = subproduct     Sub-product level listing
        = fileset        File set listing

    <mount_point>        Location where the CD file system
                         is mounted.

    <os_release>         The OS contents of the depot.
        = B.11.00
```

For OnlineDiag on HP-UX 11i v2 January 2011 release, the following apply:

- All diagnostic defect repairs and enhancements as of November 2007, are included. Any future patches dated after November 2007 must be loaded after this version of OnlineDiag.

- The new hardware resources in all active releases as of December 1, 2007 are supported.

Prerequisites

Following is the software pre-requisite for installing Diagnostics and Support Tools:

- EMS version A.04.20.23 or later

Note: The requirements are available on the Operating Environment (OE) media.

Required and Recommended Patches

- Not Applicable

The pervious patch bundles are available at the following locations:

- OE media
- [HP Software Depot Web site](#)

Loading Patches

You can install the patches in one of the following ways:

Method 1:

Install the entire Hardware Enablement Bundle (HWE) or Quality Pack (QPK) patch bundle for your system. This is a simple and tested process. However, the volume of the patch bundle can be big.

Method 2:

Install only the individual patches required from the patch bundle available on the OE media. This method is advantageous because the size of the patches is small. However, you must select and install patches manually.

Method 3:

Install individual patches from the HP IT Resource Center at:

http://us.itrc.hp.com/

Notes:

- After installing individual patches from the HP IT Resource Center, you must restart your system.
- You must install the patches mentioned before installing Online Diagnostics.

EMS Hardware Monitors Overview

EMS Hardware Monitors are a set of tools for maintaining system availability. They enable you to monitor the operation of a wide variety of hardware resources and be alerted immediately if any failure or other unusual event occurs.

Hardware event monitoring provides a high level of protection against system hardware failure. By using hardware event monitoring, you can eliminate the most undetected hardware failures that could interrupt system operation or cause data loss.

Configuring Hardware Monitoring

The EMS Hardware Monitors are installed at the same time as STM. Once the monitoring software is installed, monitoring is automatically enabled.

By default, events with severity levels MAJOR WARNING, MINOR WARNING, SERIOUS, or CRITICAL that are generated by the monitors are notified in the following ways:

- Written to `/var/adm/syslog/syslog.log`
- Sent to the superuser's E-mail address.

All events generated by all the monitors are stored in the `/var/opt/resmon/log/event.log` file. To configure, enable, or disable hardware event monitoring, run the `/etc/opt/resmon/lbin/monconfig` monitoring request manager.

The Peripheral Status Monitor (PSM) and the Kernel Resource Monitor (krmond) are configured differently. They use the EMS GUI. For more information, see:

http://www.hp.com/go/hpux-diag-ems-gui-doc

Changes

Changes made to the EMS Hardware Monitors for the January 2011 release include the following:

- Changes to Monitoring
- Changes to Monitors
- Changes to Platform and Interface
- Customer-Viewable Interface Changes
- **Changes to Monitoring**

  Starting with the HP-UX 11i v2 March 2008 release, SFM is the default monitoring mode. However, it is possible to switch to the OnlineDiag monitoring mode. For information on how to switch to the OnlineDiag mode, see the SFM Administrator's Guide at:

http://www.hp.com/go/hpux-diagnostics-docs

- **Changes to Monitors**

  This section describes the changes made to individual monitors. Monitors are listed in alphabetical order.

  ○ Chassis Code Monitor (dm_chassis)
    – Not applicable

  ○ CMC Monitor (cmc_em)
    – Not applicable

  ○ Core Hardware (dm_core_hw)
    – Not applicable

  ○ Core Hardware for Itanium (ia64_corehw)
    – Not applicable

  ○ Core Hardware Monitor - Asama (ipfcorehw_asama)
    – Not applicable

  ○ Core Hardware Monitor - Hitachi (ipfcorehw_hitachi)
    – Not applicable

  ○ CPE Monitor (cpe_em)
    – Not applicable

  ○ CPU Monitor (lpmc_em)
    – Not applicable

  ○ CPU Monitor - Hitachi (cmc_em_hitachi)
    – Not applicable

  ○ Disk Array FC60 Monitor (fc60mon)
    – Not applicable

  ○ Disk Monitor (disk_em)
    – Not applicable

  ○ DS2500 Enclosure Monitor (gazemon)
    – Not applicable

  ○ Fibre Channel Adapter (dm_ql_adapter)
    – Not applicable

  ○ Fibre Channel Adapter Model A5158 Monitor (dm_TL_adapter)
    – Not applicable

  ○ Fibre Channel Switch (dm_fc_sw)
    – Not applicable

  ○ Forward Progress Log (FPL) Monitor (fpl_em)
    – Not applicable

- High Availability Disk Array Monitor (ha_disk_array)
  - Not applicable

- High Availability Storage System (dm_ses_enclosure)
  - Not applicable

- iSCSI Driver Subsystem Monitor (dm_iscsi_adapter)
  - Not applicable

- Kernel Resource Monitor (krmond)
  - Not applicable

- Memory (dm_memory)
  - Not applicable

- Memory IA64 (memory_ia64)
  - Not applicable

- Memory Monitor -- Hitachi (ipfmemory_hitachi)
  - Not applicable

- MSA1000/MSA30 Storage Disk Array Monitor (msamon)
  - Not applicable.

- Peripheral Status Monitor (psmmon)
  - Not applicable

- RAID Adapter (dm_raid_adapter)
  - Not applicable

- Remote Monitor (RemoteMonitor)
  - Not applicable

- SCSI Disk Monitor (scsi_disk)
  - Not applicable

- System Status Monitor (sysstat_em)
  - Not applicable

- UPS Monitor (dm_ups)
  - Not applicable

- **Changes to Platform and Interface**
  - Not applicable

- **Customer-Viewable Interface Changes**
  - Not applicable

Known Problems

- The severity of disk_em Event #102676 should be SERIOUS. But the default_disk_em.clcfg displays a different severity. The severity should be changed manually from CRITICAL to

SERIOUS by entering the following command:

```
# vi /var/stm/config/tools/monitor/default_disk_em.clcfg
```

```
EQ:102676:CRITICAL:TRUE:1440:ANY:1:NONE:NO_OP:NO_OP:NONE
```

```
=>
```

```
EQ:102676:SERIOUS:TRUE:1440:ANY:1:NONE:NO_OP:NO_OP:NONE
```

- If System Fault Management (SFM) is installed on your system, you must complete the following steps before and after installing Online Diagnostics.

  1. To shut down the SFM subsystem, enter the following command at the HP-UX prompt:

     ```
     # /sbin/init.d/cimserver stop
     ```

  2. Install Online Diagnostics.
  3. To restart the SFM subsystem after the installation is completed, enter the following command at the HP-UX prompt:

     ```
     # /sbin/init.d/cimserver start
     ```

- If the maxssiz_64bit kernel parameter is set below the default value of 0x800000, it can cause the lpmc_em monitor to abort.

- The Memory Page Deallocation (MPD), which runs on most current HP-UX systems, does not work on rx4610 systems. The activity log for memlogd includes a message that reads unsupported device.

  MPD cannot be implemented on the rx4610 system because the system's design does not allow the memlogd daemon to run on it.

- You cannot access online help on Itanium-based systems.

  Cause: You require a browser to view online help using the cstm, mstm, and xstm interfaces. The default supported browser is Mozilla. If you are using any other browser, you must configure STM for the interfaces.

  Note: You do not require a browser to access online help on PA-RISC-based systems.

  Action:

  To configure the browser for the xstm and mstm interfaces, complete the following steps:

  1. To start xstm, enter the following command at the HP-UX prompt:

     # /usr/sbin/xstm

  2. Select **Options->General Options**.
  3. Enter the full path of the browser.
  4. Click **OK**.

     The browser is configured.

  To configure the browser for the cstm interface, complete the following steps:

  1. Enter the following command at the HP-UX prompt.

     # gop

     A list of options is displayed.

  2. Select the appropriate options.
  3. Select the browser of your choice.

     The browser is configured.

  Note: You can also view online help for xstm, mstm, and cstm at:

  http://www.hp.com/go/hpux-diag-stm-onlinehelp-doc

Monitors Provided

For HP-UX 11i v2 January 2011 release, the following monitors are provided:

- CMC Monitor (cmc_em)
- Core Hardware (dm_core_hw)
- Core Hardware for Itanium (ia64_corehw)
- Core Hardware Monitor -- Asama (ipfcorehw_asama)
- Core Hardware Monitor -- Hitachi (ipfcorehw_hitachi)
- CPE Monitor (cpe_em)
- CPU Monitor (lpmc_em)
- CPU Monitor -- Hitachi (cmc_em_hitachi)
- Disk (disk_em)
- Disk Array FC60 (fc60mon)
- DS2500 Enclosure Monitor (gazemon)
- Emulex PCI-e Fibre Channel Mass Storage Adapter (dm_fclp_adapter)
- Fibre Channel Adapter (dm_ql_adapter)
- Fibre Channel Adapter Model A5158 (dm_TL_adapter)
- Forward Progress Log (FPL) Monitor (fpl_em)
- High Availability Disk Array (ha_disk_array)
- High Availability Storage System (dm_ses_enclosure)
- iSCSI Driver Subsystem Monitor (dm_iscsi_adapter)
- Kernel Resource Monitor (krmond)
- Memory (dm_memory)
- Memory IA64 (memory_ia64)
- Memory Monitor -- Hitachi (ipfmemory_hitachi)
- MSA1000/MSA30 Storage Disk Array Monitor (msamon)
- MSA 60 and MSA 70 SAS Enclosure Monitor (msamon_sas)
- Peripheral Status Monitor (psmmon)
- RAID Adapter (dm_raid_adapter)
- Remote Monitor (RemoteMonitor)
- Serial-Attached SCSI (SAS) Mass Storage Adapter monitor (dm_sas_adapter)
- SCSI Disk Monitor (scsi_disk)
- System Status (sysstat_em)
- UPS (dm_ups)

The following monitors are NOT provided:

- dm_FCMS_adapter
- Fibre Channel SCSI Multiplexer (dm_fc_scsi_mux)
- fw_disk_array: hardware not supported on the system
- scsi123_em: hardware not supported on the system

For detailed information about the products and the monitors supporting them, and additional dependencies, see the *Online Diagnostics Administrator's and User's Guide* at:

http://www.hp.com/go/hpux-diagnostics-docs

SD Product Structure

Following are the components of the OnlineDiag bundle:

```
SD Bundle: OnlineDiag
   Description: On-line Diagnostic System (Series 800/700)

   SD PRODUCT: Sup-Tool-Mgr
      Description: Support Tools Manager for HP-UX Systems

      SD SUB-PRODUCT: Manuals
      Description: Support Tools Manager Manual Pages

         FILESET: RELEASE_NOTES
            Description: HPUX STM Release Notes

         FILESET: STM-MAN
            Description: HPUX STM Manual Pages

      SD SUB-PRODUCT: Runtime
      Description: STM Manual Runtime

         FILESET: STM-CATALOGS
            Description: HPUX STM Shared Libraries

         FILESET: STM-SHLIBS
            Description: HPUX STM Shared Libraries

         FILESET: STM-UI-RUN
            Description: HPUX STM User Interface

         FILESET: STM-UUT-RUN
            Description: HPUX STM Unit Under Test Runtime
```

2 Support and other resources

Information to collect before contacting HP

Be sure to have the following information available before you contact HP:

- Software product name
- Hardware product model number
- Operating system type and version
- Applicable error message
- Third-party hardware or software
- Technical support registration number (if applicable)

How to contact HP

Use the following methods to contact HP technical support:

- In the United States, see the Customer Service/Contact HP United States website for contact options:

  http://welcome.hp.com/country/us/en/contact_us.html.

- In the United States, call 1-800-HP-INVENT (1-800-474-6836) to contact HP by telephone.
  This service is available 24 hours a day, 7 days a week.

  For continuous quality improvement, conversations might be recorded or monitored.

- In other locations, see the Contact HP Worldwide website for contact options:

  http://welcome.hp.com/country/us/en/wwcontact.html.

Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:
http://www.hp.com/country/us/en/contact_us.html.

After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

Related information

The following website provides related information for the product Event Monitoring Service (EMS) hardware monitors and all other related products on the HP's Software Depot Homepage: http://h20293.www2.hp.com/.

Typographic conventions

This document uses the following typographical conventions:

$, #	A percent sign represents the C shell system prompt. A dollar sign represents the system prompt for the Bourne, Korn, and **POSIX** shells. A number sign represents the superuser prompt.
Command	A command name or qualified command phrase.
Computer output	Text displayed by the computer.
{}	The contents are required in syntax. If the contents are a list separated by |, you must choose one of the items.
|	Separates items in a list of choices.

NOTE   A note contains additional information to emphasize or supplement important points of the main text.

3 Product documentation

For more information on Event Monitoring Service (EMS) hardware monitors and Support Tools Manager (STM) products, see the following list of documents at: www.hp.com/go/hpux-diagnostics-sfm-docs and http://www.hp.com/go/hpux-diagnostics-docs.

- *HP-UX OnlineDiag (Online Diagnostics) (Event Monitoring Service [EMS] and Support Tools Manager [STM]) Administrator and User Guide*
- *HP-UX OnlineDiag (Online Diagnostics) (Event Monitoring Service [EMS] and Support Tools Manager [STM]) Document for Tables of Versions (ToV)*
- *HP-UX Event Monitoring Service (EMS) Hardware Monitors Release Notes*
- *HP-UX Event Monitoring Service (EMS) Hardware Monitors Event Descriptions*
- *HP-UX Event Monitoring Service (EMS) Hardware Monitors Datasheets*
- *HP-UX Event Monitoring Service (EMS) Hardware Monitors for Hitachi Systems Running HP-UX*
- *HP-UX Support Tools Manager (STM) Release Notes*
- *HP-UX Support Tools Manager (STM) Online Help*
- *HP-UX Support Tools Manager (STM) Patch Descriptions*
- *HP-UX Support Tools Manager (STM) Release Notes for 0912 Support Plus and SPK Release*

Software and documentation availability in native languages

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.

Reporting defects

You can report defects related to Event Monitoring Service (EMS) hardware monitors product.

Contact your local HP representative to file a defect on your behalf.

4 Documentation feedback

HP welcomes your 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. All submissions become the property of HP.

More on Event Monitoring Service (EMS) hardware monitors product documentation

For more information on documentation and other manuals of Diagnostics, see Diagnostics Home.

For more information on documentation and other manuals of Event Monitoring Service (EMS) hardware monitors product, see HP-UX OnlineDiag (Online Diagnostics) Software and look for Event Monitoring Service (EMS) hardware monitors product related documents.

Support policy for HP-UX

For more information about support policy for HP-UX, see HP-UX support policy.