

High Availability Monitors Version A.03.20.01 Release Notes for HP-UX 11i



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1 High Availability Monitors Version A.03.20.01 Release Notes for HP-UX 11i

Announcements

Version A.03.20.01 of High Availability Monitors (B5736DA) includes media, license, and manual. Version A.03.20.01 runs on HP-UX 11i. The following high-availability monitors are included in this bundle:

- HA Database Monitor checks the status of Oracle 8 databases and Informix 7 and their application servers.
- HA Disk Monitor checks the status of LVM managed disks and detects disconnected busses, power-failed or missing disks, and stale or missing mirrors. It provides summary status for both physical and logical volumes in a volume group and for individual status for each disk and logical volume.
- The MIB Monitors:
 - HA Cluster Monitor checks the status of ServiceGuard clusters, nodes, packages, and services.
 - HA Network Interface Monitor reports the status of LAN interfaces.
 - HA System Resource Monitor checks the number of users, the system load, and the amount of file system space.

The High Availability Monitors (HA Monitors) bundle depends on, and includes, the Event Monitoring Service (EMS) (B7609BA). When you install HA Monitors, the install process automatically installs EMS.

The Event Monitoring Service has two main parts:

- The EMS graphical user interface (GUI) that runs under SAM and allows you to create, modify, and remove monitoring requests. It also displays a list of all current monitors and monitoring requests.

- The EMS framework queries monitors, accepts status messages, interprets them according to your configured monitoring requests, and sends notification when and where you request.

Define monitoring requests through either the EMS GUI or with high-availability software, such as MC/ServiceGuard and ServiceGuard OPS Edition. The EMS framework (either through the EMS GUI or through MC/ServiceGuard) shows you a list of all the configured monitoring requests. To add a monitoring request, you navigate through the list of discovered and available resources.

Using either the MC/ServiceGuard or the EMS GUI you can configure more than one request for each HA Monitor. For example, you may want to send notification to syslog at one value and also send an email message at another value.

All HA Monitors can be used with enterprise system management software such as HP OpenView.

To use HA Monitors using the EMS GUI:

- Log on to the system as root and enter `sam` to open the HP-UX System Administration Manager. In SAM, you double-click an icon to open Resource Management, then double-click another icon to start EMS.
- Use the EMS GUI to configure a monitoring request to warn you before a failure. This warning gives you time to take action to prevent application downtime.

To use HA Monitors using the MC/ServiceGuard or ServiceGuard OPS Edition:

- Log on to the system as root and enter `sam`. In SAM, double-click the icons to open Volume Groups (`/vg`) or Databases (`/rdbsms`).
- Through MC/ServiceGuard or ServiceGuard OPS Edition you can configure an HA Monitor's resource as part of a package dependency. If the resource fails, MC/ServiceGuard may restart the package on the local system or an alternate system.

What's New in this Version

The A.03.20.01 Version of High Availability Monitors is a minor release, for HP-UX 11i. It runs on HP-UX, Version 11i B.11.11 or later.

What Manuals are Available for This Version

The following manuals are shipped with the High Availability Monitors A.03.20.01:

- *Using High Availability Monitors* (HP Part Number B5736-90025)
- *Using the Event Monitoring Service* (HP Part Number B7612-90015)

To view or print these documents, go to <http://www.docs.hp.com> and click High Availability.

Further Information

Printable documents are found at <http://docs.hp.com>. Click HP-UX for operating system information. Click High Availability for information about Event Monitoring Service, HA Monitors, MC/ServiceGuard and ServiceGuard OPS Edition.

Support information is available from the Hewlett-Packard Electronic Support Center:

<http://us-support.external.hp.com> (US and Asia Pacific)
<http://europe-support.external.hp.com> (Europe)

Compatibility Information and Installation Requirements

The HA Monitors software should be installed on each node that you want to monitor. It does not need to be installed on the management station, unless you want to also monitor the management station itself.

Compatibility with HP-UX Releases

HA Monitors Version A.03.20.01 runs on HP-UX 11i only.

Software Requirements

HA Monitors A.03.20.01 is dependent on Event Monitoring Service, Version A.03.20.01 or later. When you order the HA Monitors product, EMS software and documentation is automatically included.

Note: EMS is also included with other monitoring products. If you should install one of these monitors later, your present EMS software may be replaced with a later version. Documentation for all versions of EMS is on the <http://www.docs.hp.com> web site, under High Availability.

Requirements for MC/ServiceGuard and ServiceGuard OPS Edition users:

When you have ServiceGuard installed and want HA Monitors to be part of a package, specify the monitor as a package resource dependency when you configure the package.

The following versions of ServiceGuard are compatible with Version A.03.20.01 of HA Monitors:

- HP-UX 11i, MC/ServiceGuard Version A.11.09 or higher
- HP-UX 11i, ServiceGuard OPS Edition Version A.11.09 or higher

The HA Database Monitor is supported with MC/ServiceGuard A.11.09 or higher on HP-UX 11.11 systems only. Please refer to the *MC/ServiceGuard Version A.11.09 Release Notes* for information on using the deferred resource feature when configuring in MC/ServiceGuard. (You can see and print the Release Notes at: <http://www.docs.hp.com> -> High Availability.)

Requirements for HP OpenView Users:

Configure templates into HP OpenView ITO or NNM to see the status of HA Monitors. To configure, download the latest templates from the <http://software.hp.com> web site. Click High Availability, then Event Monitoring Service Developers' Kit. The templates are in a list near the bottom of the Developers' Kit page.

Requirements for Database Monitor Users:

The Database Monitor is supported for the Oracle Enterprise Server Version 8.0.5 and Informix Version 7.3.0. Before you begin to monitor your database services, you must install and have executing, the following components:

- For Oracle:
 - Oracle Net8 (for networking)
 - Oracle Intelligent Agent (for SNMP support) and any patches

The HA Database Monitor depends on Oracle Net8 TCP/IP protocol adapter, the Oracle Intelligent Agent, the Oracle SNMP Master Agent (`master_peer` and `start_peer`), the Oracle database subagent (`dbsnmp`), the Oracle Listener (`tnslsnr`), and the values in the public RDBMS MIB (based on RFC 1697). For more information, please consult the Oracle 8 Enterprise Server documentation, particularly *Oracle 8 Installation Guide*, *Oracle SNMP Support Reference*, and *Oracle Net8 Administrator's Guide*.

- For Informix:
 - Informix SNMP subagent

The Informix SNMP subagent, `onsnmp`, can be started by issuing the following command:

```
$INFORMIXDIR/bin/onsrvapd -k0 -rall
```

This command causes the SNMP subagent to remain up even though the Informix database may be stopped and restarted. The subagent must be active in order to be able to access the values in the `rdbsms` public MIB, on which the HA Database Monitor reports.

Requirements for HA Disk Monitor Users:

There are two cases where the HA Disk Monitor has software requirements: NIO bus and Fibre Channel.

To use the HA Disk Monitor with disks connected by an NIO bus or by Fibre Channel, you must configure the SCSI pass-thru driver, `spt0`, into the kernel. Add `spt0` to the `/stand/system` file, rebuild the kernel, and reboot.

Hardware Requirements

High Availability Monitors run on the HP 9000 series 800 servers.

The disk monitor supports SCSI SE (single-ended) and F/W (fast/wide) disks, including:

- Hewlett-Packard High Availability Disk Array, Models 10 and 20
- Hewlett-Packard Disk Array with AutoRAID, Models 12 and 12H
- EMC Symmetrix arrays for both fibre channel and SCSI disks
- Hewlett-Packard High Availability Storage System
- Single-spindle SCSI disks
- HP High Availability Disk Array, Model 30 Fibre Channel
- HP SureStore E Disk Array XP256 for Fibre Channel and SCSI
- HP SureStore E Disk System, models FC10 and FC60

The disk monitor does *not* support HP-IB or HP-FL disks.

Disk Space and Memory Requirements

The High Availability Monitors product requires 4.45 Mb of disk space to install, and a minimum of 32 Mb of RAM to execute.

Installing High Availability Monitors

The High Availability Monitors product can be installed on a running system in multi-user mode.

Use the software management tools in SAM or the `swinstall` command to install HA Monitors. For details see *Using High Availability Monitors* (HP Part Number B5736-90025).

The HA Monitors Version A.03.20.01 bundle (Part number B5736DA) contains the following file sets:

- EMS-MIBMonitor.MIBMON-RUN — the MIB (Management

Information Base) monitors for cluster, networking interface, and system resources.

- EMS-DiskMonitor.DISKMON-RUN — Disk monitor for physical and logical volume resources configured by LVM.
- EMS-RdbmsMon.RDBMSMON-RUN — Database monitor for MIB resources.

Patches and Fixes in this Version

This section describes patches that are required and defects that have been fixed in version A.03.20.01 of H. A. Monitors.

Required and Recommended Patches

No patches are required for HA Monitors Version A.03.20.01.

NOTE

Before using the HA Database Monitor, be sure you have applied all patches recommended by Oracle, particularly for the Oracle Intelligent Agent product (Oracle SNMP), and specifically any patches pertaining to `master_peer` (Oracle SNMP master agent) and to `start_peer`.

Fixes and Changes

Table 1-3 lists defects that have been fixed in HA Monitors A.03.20.01.

Table 1-1

Corrected Defects

Defect number	Problem and Resolution
JAGad06311	<p>Previously, Disk Monitor marked PV/VG down on CHECK_CONDITION errors on XP256. When doing operations on the XP256 on different LUNs, the disk monitor prints check_condition errors in api.log and marks VG as DOWN.</p> <p>Version A.03.20.01, HA Monitors modified code for the disk monitor to retry any valid check__conditions and also to print out an additional sense byte.</p>

Known Problems and Workarounds

The following are known problems with the HA Monitors product or with Event Monitoring Service:

JAGab04570: Delay in changing resource state

What is the problem? When SNMP connectivity to dbsnmp (Oracle SNMP) fails, EMS correctly reports that there are “no instances” of the `/rdbms/server/status` resource. However, the “no instance” error can persist for up to 60 seconds after corrective action has been taken, restarting Oracle SNMP. This can cause errors in processes that are monitoring the `/rdbms/server/status` resource. For example, it can cause premature package failures when a package resource dependency (`RESOURCE_NAME`) is specified.

What is the workaround? When you set up a monitoring request, avoid polling intervals that are less than 60 seconds. In package configuration files, this is controlled by the `RESOURCE_POLLING_INTERVAL` directive.

JAGab77759: ServiceGuard package service status is reported incorrectly

What is the problem? `/cluster/package/service_status/<package_name>/<service_name>` may be incorrectly reported. If monitoring the service status of a package running locally when the ServiceGuard coordinator node is not the same node, service status may incorrectly be reported as UNKNOWN or DOWN when it is really UP. The output of `cmviewcl` shows the service is UP.

What is the workaround? Configure package and service status monitoring on each node in the cluster. Then correlate the data reported on each node. The coordinator node will report status of UNKNOWN for the remote service. (UNKNOWN means that the service is up and running somewhere in the cluster.)

JAGad03512: Events could be lost when EMS and HA Monitors are upgraded

What is the problem? When updating the Event Monitoring Services,

notifications for monitors with active persistent requests can be lost. This can happen for up to two minutes from the update. This cannot happen with a new install, only an update.

What is the workaround? Before updating, find out which monitors are active. Enter the `ps -ef |grep resmon` command. In the output, check any of the monitors listed in the table below.

Now, update the software.

Immediately after the update, activate the monitor to re-register all of its active persistent requests. Use the commands in the table below.

Table 1-2

monitor name listed in output	command to re-register the monitor's active persistent requests
clustermond	<code>resls /cluster/localNode/status</code>
diskmond	<code>resls /vg</code>
fsmond	<code>resls /system/filesystem/availMb</code>
lanmond	<code>resls /net/interfaces/lan/status</code>
mibmond	<code>resls /system/numUsers</code>
pkgmond	<code>resls /cluster/package/package_status</code>
rdbmsmond	<code>resls /rdbms</code>
svcmond	<code>resls /cluster/package/service_status</code>

When a database is not available, an error message indicates that its resource instance is not available

- What is the problem?* If a database is unavailable or its server is down, you may see this error message: Resource `"/rdbms/..."` is not available. The message will pop up in the EMS graphical user interface window when you try to access the following resources: `server_started`, `allowed_max_connects`, `peak_connects`, `usage` (for both server and database), `commits`, `commits_per_sec`, `database_used`, and `database_allocated`.

- *What is the workaround?* Before you try to monitor these particular resources, be sure the database is available and its server has been started.

Only Oracle database monitored when both Oracle and Informix databases installed on same system

- *What is the problem?* Both Oracle and Informix have their own RDMS MIB subagents, and each has its own proprietary method of instrumenting the MIB. The HA Database Monitor relies on values in the MIB to monitor the databases and database servers. Only Oracle databases appear if both subagents are running because of:
 - Oracle’s particular implementation
 - only one rdbms MIB subagent can receive MIB requests
- *What is the workaround?* Install each vendor’s database on different systems. If that is not feasible, and you need to monitor Informix databases, then stop the Oracle SNMP subagent (dbsnmp) and listener (tnslsnr) and run only the Informix SNMP subagent.

Known Problems and Workarounds for Oracle Installations

Misleading value for resource instance /rdbms/server/started/<server_name>

- *What is the problem?* The Oracle implementation of the RDBMS public MIB value for the named resource `rdbmsSrvInfoStartupTime` returns a 12-hour clock time, instead of a 24-hour clock time. Therefore, the HA Database Monitor resource instance `/rdbms/server/started/<server_name>` displays only the 12-hour clock time. As a result, if you are monitoring using the “greater than” notification option, you may not receive events in some cases.
- *What is the workaround?* Monitor the resource for changes only. Since the value represents the time an application server was started, a change to this value is a valid indication that the server was restarted.

Known Problems and Workarounds for Informix Installations

Resource instance `/rdbms/server/uptime<server_name>` is always -1

- *What is the problem?* The uptime resource should be equal to the number of seconds that the database server has been up. For Informix, the uptime value is always -1, which indicates that this value cannot be calculated.
- *What is the workaround?* Monitor a different resource for changes. For example, monitor `/rdbms/server/started/<server_name>` to detect when a server restarts.

Resource instance `/rdbms/server/peak_connects/<server_name>` is invalid

- *What is the problem?* `peak_connects` represents the greatest number of simultaneous connections to the database server since the server started. It currently is not being incremented.
- *What is the workaround?* Monitor a different resource. For example, monitor `/rdgms/server/connects/<server_name>` to identify the current number of simultaneous connections.

Software Availability in Native Languages

- The HA Monitors product is available with documentation in American English or Japanese. (The interface of HA Monitors is available only in American English.)

- B5736 DA HA Monitors for HP-UX 11.11.

- B5736 DA #ABA has documents in American English

- B5736 DA #ABJ has documents in Japanese

The HA Monitors manual, *Using High Availability Monitors*, is available in American English (B5736-90025) and in Japanese (B5736-90026).

- HA Monitors depends on, and includes, the interface provided by Event Monitoring Service (EMS), product number B7609BA.

- B7609BA #ABA EMS has documents in American English

- B7609BA #ABJ EMS has documents in Japanese

The EMS manual, *Using Event Monitoring Service* is available in American English (B7612-90015) and in Japanese (B7612-90016).