



**Hewlett Packard
Enterprise**

Active Health System Viewer 2.10

User Guide

Abstract

This document provides information on the Active Health System Viewer GUI and provides users with instructions on how to view event logs and provide these logs to Hewlett Packard Enterprise support as needed.

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Active Health System overview

The HPE Active Health System (AHS) monitors and records changes in the server hardware and system configuration on every HPE Gen8, Gen9, and Gen10 server that is released with iLO. AHS assists in diagnosing problems and delivering rapid resolution when system failures occur. AHS does not collect information about your operations, finances, customers, employees, partners, or datacenter (for example, IP addresses, host names, user names, and passwords). The AHS log holds up to 1 GB of data. When this limit is reached, new data is written over the oldest data in the log.

Examples of data collected include:

- Server model and serial number
- Processor model and speed
- Storage capacity and speed
- Memory capacity and speed
- Firmware/BIOS and Driver versions and settings

NOTE:

AHS complies with Hewlett Packard Enterprise data privacy standards and policies and does not collect User accounts, passwords, or complete memory/crash dumps.

AHS collects information from seven key providers:

- Integrated Lights-Out (iLO)
- Onboard Administrator (OA)
- Agentless Management Service (AMS)
- Network Interface Controller (NIC)
- Complex Programmable Logic Drive (CPLD)
- System ROM
- Smart Array

Active Health System Viewer

Active Health System Viewer (AHSV) is an online tool used to read, diagnose, and resolve server issues quickly using AHS uploaded data. AHSV provides Hewlett Packard Enterprise recommended repair actions based on experience and best practices.

Logging in to Active Health System Viewer

Procedure

1. To access the AHSV web page, go to <http://www.hpe.com/servers/ahsv> in a supported browser. Supported browsers include:
 - Internet Explorer 11
 - Chrome 51 or later
 - Firefox 46 or later
2. Enter your **User ID** (email address) and **Password** and click **Sign In**.

NOTE:

To log in using an HPE Passport account, or to create an HPE Passport account, go to <http://www.hpe.com/info/insightonline>. In most cases, your HPE Passport account is the same as the email address you used during the HPE Passport account registration process. If you changed your user ID in the Hewlett Packard Enterprise Support Center, be sure to log in with your user ID and not your email address.

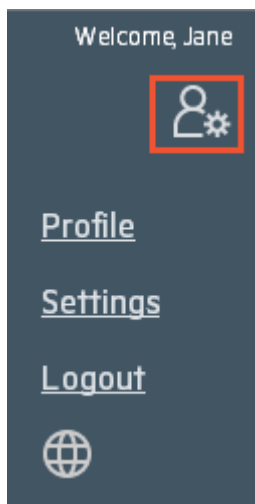
NOTE:

To have the system remember your log in credentials, select **Remember Me** before clicking **Sign In**.

Logging out of AHSV

Procedure

1. To log out of AHSV, click the user settings menu.



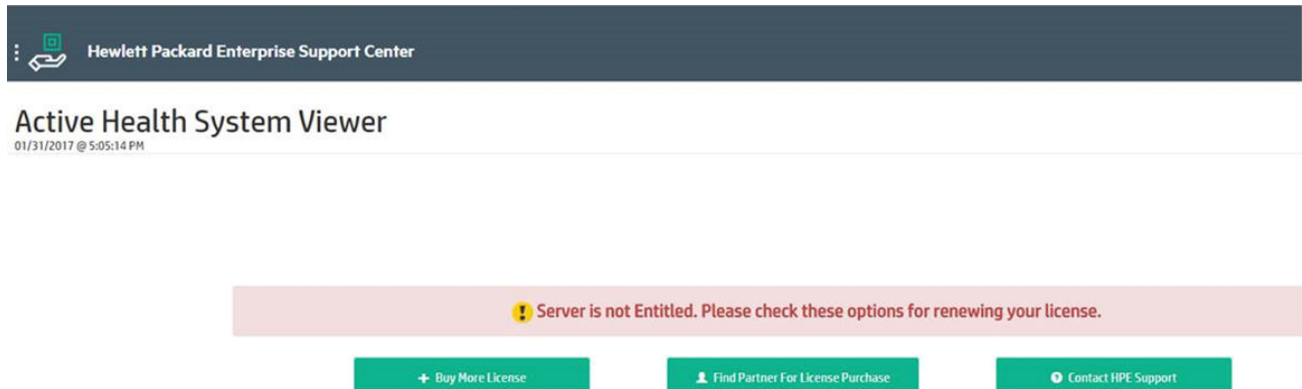
2. Click **Logout**. You will be logged off and the log in page is displayed.

Loading an AHS log file

❗ IMPORTANT:

The server that the AHS log was created from, must have a valid warranty. If the server is out of warranty, an error message is displayed, stating "Server is not Entitled. Please check these options for renewing your license." The options include:

- Buy More Licenses
- Find Partner for License Purchase
- Contact HPE Support



- To load an AHS log file through AHSV, select **Upload AHS Log**. Navigate to your log file and click **Open**.

NOTE:

Maximum file size limit is 250 MB. For logs greater than 250 MB, contact the HPE Support Center.

- A window is displayed that shows parsing and log loading states. To cancel the load process, click **Cancel**.
- This window also displays videos for different platforms. You can search and play different videos while you are waiting for the log file to load.
- As the AHS log loads, the screen displays the estimated time of completion.
- Search for an existing AHS log.
 - Under **Search AHS viewer for uploaded AHS log**, enter the AHS log name or System Serial Number, and then click the search icon.
 - Click the log file that you want to open.
- To view a previously loaded AHS log file, select the log file from the table.

Navigating the AHSV dashboard

The AHSV dashboard provides an overview of the current configuration of the server with different subsystems.

Active Health System Viewer
02/06/2017 @ 11:47:08 PM

hp_5GH49WT3_20160331_2345_Tedd116c-f61-402e-9f9b-1c7c95937a2a2ab0
Product: BL-8000 Gen2
Serial Number: 5GH49WT3
SKU Number: 727021-021
PCA Part Number: Unavailable
Boot Session
3/31/2016 5:22:01 AM

System Board

Processors
Intel(R) Xeon(R) CPU E5-2680 v3 @ 2.50GHz 0 2500 MHz
Stepping: Haswell C.0/C.1
Intel(R) Xeon(R) CPU E5-2680 v3 @ 2.50GHz 1 2500 MHz
Stepping: Haswell C.0/C.1

Memory
10x 16 GB 2133 MHz (Smart Memory)

Power Supply
Power Supply 1 @ 2450 Watts
Power Supply 2 @ 2450 Watts
Power Supply 3 @ 2450 Watts
Power Supply 4 @ 2450 Watts
Power Supply 5 @ 2450 Watts
Power Supply 6 @ 2450 Watts

Storage
P244br Array Controller in slot 0
Firmware: 2.52
2x 300 GB SAS HDD Hard Drive(s)

Networking

System BIOS
BIOS Vendor: HPE
BIOS Version: I36

iLO
iLO 4 v2.20p43 built on May 20 2015

Onboard Administrator
BladeSystem c7000 DDR2 Onboard Administrator with KVM

1. Above the Navigation menu, the following information is available:

- AHS log file name
- System type
- System serial number
- PCA Part Number
- Boot Session box—Click down arrow to select boot session that you want to view.

2. Navigation

- System Dashboard
- **Fault Detection Analytics**
- **Event Logs**
- **Driver and Firmware Inventory**
- **System Board**
- **Processor**
- **Memory**
- **Power Supplies**
- **Smart Array and Embedded SD Cards**
- **Networking**
- **Onboard Administrator and C-class Enclosure**
- **OS**
- **Thermal and fan**
- **Creating a support case**

3. System Dashboard Information Tiles—Provides an overview of the current configuration of the server with the following subsystems:

- System Board—Displays manufacture date, PCA part number, PCI information, and any other pertinent information.
- Processors—Displays processor type, speed, and stepping for each processor.
- Memory—Displays the size, MT/s, and type of memory installed.
- Power Supply—Displays wattage of each power supply and any Smart Storage Batteries installed.

- Storage—Displays firmware for each smart array controller, type, slot, and hard drives for each, if a smart array controller is found. For hard drives, the capacity and type are displayed.
- Networking—Displays adapter type, firmware, serial number, and driver information for each networking adapter installed.
- System BIOS—Displays BIOS vendor, version, and date information.
- iLO—Displays firmware, version, license, and serial number for the iLO.
- Onboard Administrator—Displays the firmware, part number, spare part number, hardware version is displayed for each OA. Specifically for Blade servers and the configuration of the following:
 - OA Enclosure
 - OA Onboard Administrator
 - OA Power Supplies
 - OA Enclosure

Fault Detection Analytics

Fault Detection Analytics is a two part solution that:

- Identifies error conditions based on rules defined by Hewlett Packard Enterprise.
- Evaluates error codes and events and provides repair actions.

Procedure

1. To access the fault detection analytics information, click **Fault Detection Analytics** from the **Navigation** menu. The **Fault Detection Analytics** page is displayed.

Fault Detection Analytics

Please select any row for device details:

Severity	Device	Title
Critical	PROC 3 DIMM 8	ECC errors detected on a single DIMM slot
Critical	Intel(R) Xeon(R) CPU E5-4640 v3 @ 1.90GHz	Uncorrectable machine check exception on Bank 0
Critical	Intel(R) Xeon(R) CPU E5-4640 v3 @ 1.90GHz	Uncorrectable machine check exception on Bank 3a
Critical	HP Smart Storage Batt 96	HPE Smart Storage Battery X Failure on HPE ProLiant BL660c Gen9

<< < 1 > >> Go to page: 1 Row count: 10 Showing 1-4 of 4

Device	Fault Information
Product Name: HP Smart Storage Batt 96 Connection Number: 0 Manufacturer Name: SMP Serial Number: 6EMYC0AWY7P0DE FRU Version: 05/12/14 Spare Part Number: 750450-001 Option Kit: 727258-B21	Title: HPE Smart Storage Battery X Failure on HPE ProLiant BL660c Gen9 Symptom: A POST error message is received indicating that the HPE Smart Storage Battery is not charged sufficiently or is faulty.
Supporting Documentation	Recommended Action
<ul style="list-style-type: none">• Hewlett Packard Enterprise Information Library (c05102640)• Customer Advisory (http://www.hpe.com/info/enterprise/docs)• HPE ProLiant BL660c Gen9 Server Blade Maintenance and Service Guide (http://www.hpe.com/info/enterprise/docs)• HPE ProLiant Gen9 Troubleshooting Guide, Volume 1 (http://www.hpe.com/info/gen9-troubleshooting)• User Guide (http://www.hpe.com/info/enterprise/docs)• Customer Self Repair (http://www.hpe.com/support/selfrepair)• Customer Self Repair Services Media Library (http://thesml.hp.com)	For removal and replacement instructions for the DIMM baffles and HPE 12W Smart Storage Battery follow the guidelines in the HPE ProLiant BL660c Gen9 Server Blade Maintenance and Service Guide. 1. Power down the server. IMPORTANT: When the server is in standby mode, auxiliary power is still being provided to the system. 2. Remove the server.

2. From the table, click a severity to view additional information, including **Device information**, **Fault Information**, **Supporting Documentation**, and **Recommended Action**.

The table displays the severity (Caution or Critical), device, and error title.

3. (Optional) Click **Create Support Case** in the **Navigation** menu to create a support case to send to Hewlett Packard Enterprise for this problem.
4. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Common fault detection analytics tasks



Applications on my server are extremely slow. Is there an issue with my hardware?



I receive a POST error indicating that the HPE Smart Storage Battery is not sufficiently charged.

Table Continued



I receive a POST error indicating an uncorrectable machine check exception.

- ① Create and download AHS log. For more information, see [Downloading the AHS log](#).
- ② Load AHS log file to AHSV. For more information, see [Loading an AHS log file](#).
- ③ **Fault Detection Analytics** from the **Navigation** menu, and then click each critical event. For more information, see [Fault Detection Analytics](#).
- ④ **Fault Detection Analytics** page, click **Event Logs** from the **Navigation** menu. For more information, see [Event Logs](#).
- ⑤ If you are unable to self repair, create a support case and send to Hewlett Packard Enterprise Support. For more information, see [Creating a support case](#).



While I am away from office I receive an email alert that one of my servers does not power on.

- ① Download AHS logs using the iLO application on a mobile device. For more information, see the HPE iLO user guide at <http://www.hpe.com/info/enterprise/docs>.
- ② Log in to AHSV. For more information, see [Logging in to Active Health System Viewer](#).
- ③ Load AHS log file to AHSV. For more information, see [Loading an AHS log file](#).
- ④ **Fault Detection Analytics** from the **Navigation** menu, and then click each critical event. For more information, see [Fault Detection Analytics](#).
- ⑤ If you are unable to self repair, create a support case and send to Hewlett Packard Enterprise Support. For more information, see [Creating a support case](#).



Based on the recommendation of AHSV, I need a part replaced and need to create a support case.

- ① Fault Detection Analytics button in the navigation pane may provide recommendations for issue resolution.
- ② If the recommendation requires intervention of HPE support as in the case of part replacements, you can create a support case from the AHS Viewer.
- ③ If no recommendations are available, click **Create Support Case** from the **Navigation** menu to create a support case. For more information, see [Creating a support case](#).

Event Logs

This window displays all critical and caution events in the Integrated Management Log (IML) and iLO Event Log for the system hardware. The **Event Logs** window displays the following information:

- **Severity**—Severity of the event. Can be critical or caution.
- **Timestamp**—The date and time of the event.
- **Description**—Description of the event. Can be server resets, power restored, firmware resets, and so on.

Procedure

1. To access the event logs, click **Event Logs** from the **Navigation** menu. The event logs are displayed.

Event Logs

Severity: Description: EventType:

Start Date: End Date:

Severity	Timestamp	Description
Caution	12/10/2014 00:22:05	1: POST Error: 1785-Slot X Drive Array Not Configured
Caution	12/27/2013 19:51:03	524: Power restored to iLO.
Caution	12/27/2013 19:52:14	531: Power restored to iLO.
Caution	12/27/2013 19:52:14	533: iLO network link down.
Caution	12/10/2014 00:19:39	539: Server reset.
Caution	12/10/2014 00:20:43	544: Server reset.
Caution	12/10/2014 00:20:56	546: Server reset.
Caution	12/10/2014 00:21:20	547: Server reset.
Caution	12/10/2014 00:21:25	548: Server reset.
Caution	12/10/2014 00:26:23	551: Server reset.
Caution	12/10/2014 00:29:28	553: Firmware reset by infrastructure for network modifications.
Caution	12/10/2014 00:30:26	556: Firmware reset by infrastructure for network modifications.
Caution	12/10/2014 00:32:07	598: Server reset.
Caution	12/25/2014 22:39:17	600: Server reset.
Caution	12/29/2014 11:54:14	601: Power restored to iLO.
Caution	12/29/2014 11:56:56	607: Server reset.
Caution	12/29/2014 11:57:11	609: Server reset.
Caution	12/29/2014 11:57:16	614: Server reset.
Caution	12/30/2014 15:41:19	616: Server reset.
Caution	12/30/2014 15:41:24	617: Firmware reset by infrastructure for network modifications.
Caution	12/31/2014 11:11:10	635: Power restored to iLO.

2. (Optional) The following can be used to filter the event log to determine the frequency and source of the errors.
 - a. Select the **Severity** from the drop-down list. The default is All Errors.
 - b. Select a **Description** from the drop-down list, if available. Shows the date and time of the event.
 - c. Select a **Start Date** from the drop-down list.
 - d. Select an **End Date** from the drop-down list.
 - e. Select an **Event Type**, either iLO or IML, from the drop-down list. The default is All Events.
3. Click **Load Events**.
4. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Driver and Firmware Inventory

The driver and firmware inventory window displays firmware and driver information for each component installed for a specific boot session, and includes all versions of components installed on the server with the associated released SPP version.

Procedure

1. To access the driver and firmware Inventory information, click **Driver and Firmware Inventory** from the **Navigation** menu. The **Firmware Inventory** and **Driver Inventory** page is displayed.

Firmware Inventory

Boot Session		SPP Version
2016-03-31		2016.04.0
Component	Version	Version
BIOS	05/06/2015	2.00_12-28-2015
iLO	iLO 4 v2.20p43 built on May 20 2015	2.40
Onboard Administrator	4.30 Jul 08 2014	4.50
Smart Array Controller P244br in Slot 0 - PDZVU0FLM7J0WH	2.52	3.56
SAS hard drive 0 at Port 11:Box 1:Bay 1 - EH0300FCBVC	HPD4	HPD4
SAS hard drive 0 at Port 11:Box 1:Bay 1 - EH0300FCBVC	HPD4	HPD4
SAS hard drive 1 at Port 11:Box 1:Bay 2 - EH0300FCBVC	HPD4	HPD4
SAS hard drive 1 at Port 11:Box 1:Bay 2 - EH0300FCBVC	HPD4	HPD4

Driver Inventory

Component	Version	Version
Smart Array P244br Controller - HpCIS5s3.sys	63.10.0.64	63.12.0.64

2. (Optional) To filter the inventory lists, select the following.
 - a. Select the **Boot Session** from the drop-down list.
 - b. Select the **SPP Version** from the drop-down list.
3. In the **Version** column, click the version number hyperlink. The **SPP Details** window appears showing the following information. To close the window, click **Cancel**.
 - a. Component and version
 - b. Download Product

Click the operating system hyperlink that you want to update. The Hewlett Packard Enterprise Support page opens where you can download the latest ROM Flash Component.
 - c. Fix Notes that include items, such as:
 - Important Notes
 - Firmware Dependencies
 - Problems Fixed
 - Known Issues

SPP Details



Component: SAS hard drive 1 at Port 1I:Box 1:Bay 2 - EH0300FCBVC

Version: HPD4

 [Download Product](#)

[Windows](#)

[Windows 64](#)

[Linux 64](#)

[VMware](#)



Enhancements



Fix Notes

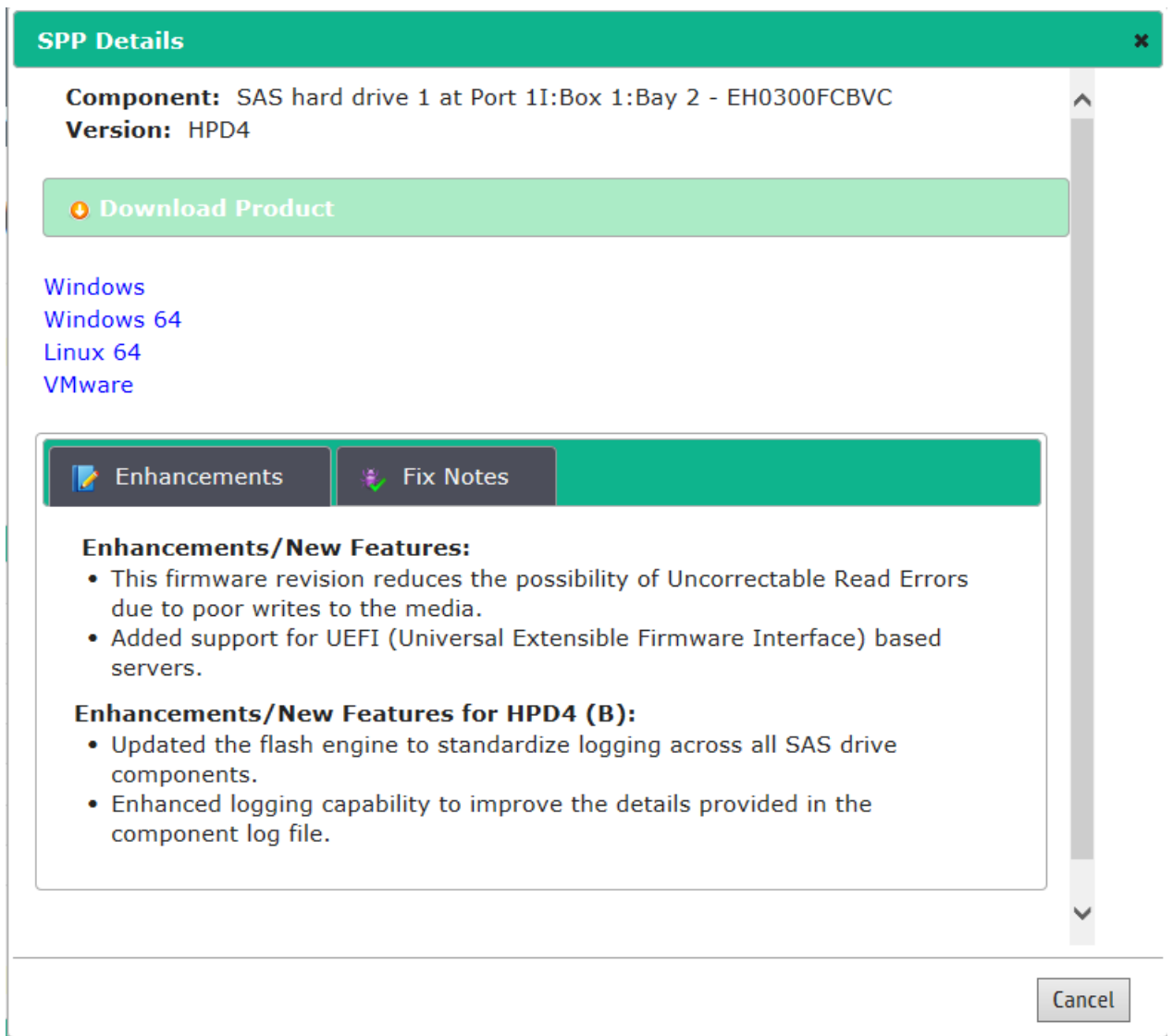
Problems Fixed for HPD4 (C):

- The component would fail to flash drive firmware on a server with a Trusted Platform Module (TPM) enabled when using the /tpmbypass switch.

Cancel

d. Enhancements that include added, updated, and deleted support for the available version.

- Important Notes
- Firmware Dependencies
- Enhancements/New Features
- Problems fixed
- Known Issues



4. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Example firmware/software and SPP alignment task



On the recommendation of AHSV, I need to update my firmware to a particular SPP version. What versions of the SPP are available, and what is the easiest way to update my firmware?

① To verify how each driver and firmware is aligned against different versions of SPP, click **Driver and Firmware Inventory**. For more information, see [Driver and Firmware Inventory](#).

② Click the SPP version, and then click **Fix Notes**. For more information, see step 3 of the previous procedure.



TIP:

Links are provided that direct you to the relevant page on the [HPE Support Center](#) where the latest SPP version can be downloaded.

System Board

Procedure

1. To access the system board information, click **System Board** from the **Navigation** menu. The **System Board Information** page is displayed.
2. The **System Board** tab includes information on each slot in the system board, you can click each slot individually, or click **Expand All** to expand all slots at once.



System Board Information

System Board

Serial Number: Unavailable

SKU Number:SKU Number Malformed

PCA Part Number: Unavailable

Manufacturing

- PCA Fab:

PCA TimeStamp: Unavailable

- System Assembly:

Build Date :11/23/2011 09:20:55

Expand All

PCI-E Slot 1

3. The **USB Devices** tab displays USB information, such as port name, location, speed capability and device information such as device name, vendor, and product.

System Board

USB Devices

USB PORT 1 : Device Attached Yes

Port Name: USB PORT 1

Port Location: HPE NAND Controller

Port Speed Capability: USB 2.0 High Speed

Device

Device Name: USB Hub

Device Vendor: Standard Microsystems Corp

Device Product: Standard Microsystems Hub

Device USB Class: USB Hub

Device USB Sub Class: USB Hub

Device USB Protocol: Hi-speed hub with single translation translator

USB PORT 6 : Device Attached Yes

4. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Processor

The **Processor Information** window displays information for each processor installed for bootlog and displays processor type and configuration.

Procedure

1. To access the processor information, click **Processor** from the **Navigation** menu. The processor information is displayed.

Processor Information

		+ Expand All
Processor 1 : Intel(R) Xeon(R) CPU E5-2620 0 @ 2.00GHz		
Version: Intel(R) Xeon(R) CPU E5-2620 0 @ 2.00GHz		
Family: Intel Xeon processor		
Configured Speed: 2000 MHz		
Maximum Speed: 4800 MHz		
Core Count: 6		
Cores Enabled: 6		
Stepping: Sandybridge C.2		
Processor 2 : Intel(R) Xeon(R) CPU E5-2620 0 @ 2.00GHz		

2. You can expand each processor individually by clicking the processor name, or open information on all processors at one time by clicking **Expand All**. The following information is available for each processor:
 - Version
 - Family
 - Configured Speed
 - Maximum Speed
 - Core Count
 - Cores Enabled
 - Stepping
3. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Memory

The **Memory** window displays descriptions of each DIMM type installed on the server and its configuration.

Procedure

1. To access the memory information, click **Memory** from the **Navigation** menu. The **Memory Information** page is displayed.

Memory Information

4 DIMMS for 32 GB of Memory

PROC 1 DIMM 1 : Slot 1 : Size 8.19 GB : CE 0 : UCE 0 : HP Smart Memory Yes

Component: PROC 1 DIMM 1

Size: 8.19 GB

Type: DDR3

Technology: RDIMM

Is HP Memory: Yes

HP SmartMemory: Yes

Current Speed: 1333 MHz

Maximum Speed: 1333 MHz

Module Serial number: 1779160E

Correctable Threshold error count: 0

Uncorrectable threshold error count: 0

HP Part Number: 647650-071

PROC 1 DIMM 3 : Slot 3 : Size 8.19 GB : CE 0 : UCE 0 : HP Smart Memory Yes

Component: PROC 1 DIMM 3

Size: 8.19 GB

Type: DDR3

Technology: RDIMM

Is HP Memory: Yes

HP SmartMemory: Yes

Current Speed: 1333 MHz

Maximum Speed: 1333 MHz

Module Serial number: 17691616

Correctable Threshold error count: 0

Uncorrectable threshold error count: 0

HP Part Number: 647650-071

2. You can expand each DIMM individually by clicking the DIMM name, or open information on all DIMMs at one time by clicking **Expand All**.
3. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

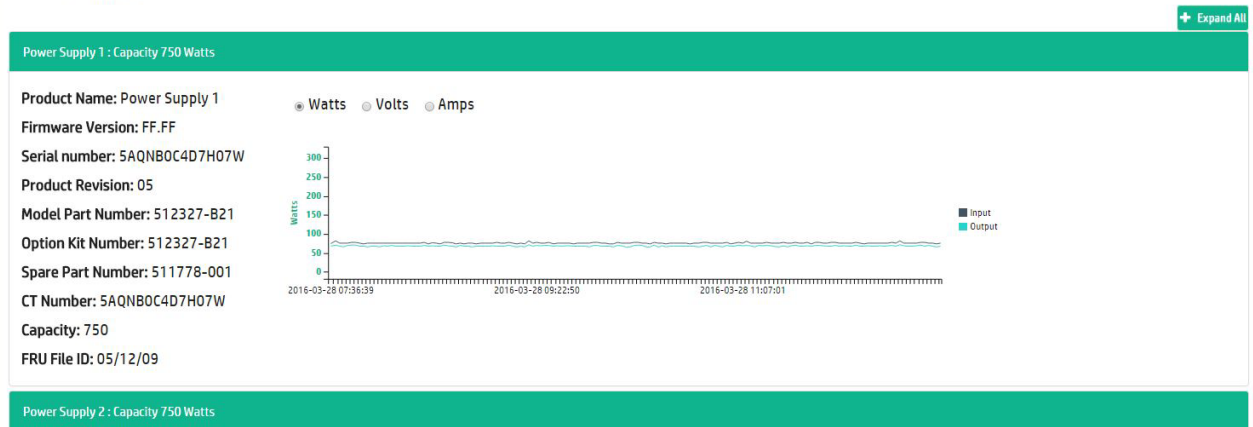
Power Supplies

This window displays configuration information for each power supply on the server.

Procedure

1. To access the power supply information, click **Power Supplies** from the **Navigation** menu. The **Power Supply Information** page is displayed.

Power Supply Information



2. You can expand each power supply individually by clicking the power supply name, or open information on all power supplies at one time by clicking **Expand All**.
3. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Smart Array and Embedded SD Cards

This window displays a categorized hierarchy of Array Controller, Logical Volume, and the drives installed in each volume.

Procedure

1. To access storage information, click **Smart Array and Embedded SD Cards** from the **Navigation** menu. The **Smart Array and Embedded SD Cards Information** page is displayed.

Smart Array and Embedded SD Cards Information

The screenshot shows the 'Smart Array and Embedded SD Cards Information' page with the 'Smart Array Controller and Drive Information' tab selected. The page displays storage information for the P244br Array Controller in Slot 0. A green bar at the top of the content area contains the controller name and an 'Expand All' button. Below this, the following details are listed: Controller ID: P244br, ROM Firmware Version: 2.52, Board Serial Number: PDZVU0FLM7JOWH, License Key: (blank), Cache-Super Cap Count: 1, and Number of Logical Units: 1. A light green bar at the bottom indicates 'Logical Drive: 0'.

Smart Array Controller and Drive Information	Embedded SD Card
Storage Information	
P244br Array Controller in Slot 0 Expand All	
Controller ID: P244br	
ROM Firmware Version: 2.52	
Board Serial Number: PDZVU0FLM7JOWH	
License Key:	
Cache-Super Cap Count: 1	
Number of Logical Units: 1	
Logical Drive: 0	

2. You can expand each array controller individually by clicking the array controller name, or open information on all array controllers at one time by clicking **Expand All**.
3. To see information on the embedded SD card, click **Embedded SD Card**.

Smart Array and Embedded SD Cards Information

The screenshot shows the 'Smart Array and Embedded SD Cards Information' page with the 'Embedded SD Card' tab selected. The page displays information for the HP08G0 device. A green bar at the top of the content area contains the device name. Below this, the following details are listed: Device Name: HP08G0, Device Revision: 3.0, Manufacturer: 39, Manufacturing Date: 14/2005, Serial Number: 6280D57C, Logical Blocks: 15564800, and Capacity: 8 GB.

Smart Array Controller and Drive Information	Embedded SD Card
Embedded SD Card	
Device Name: HP08G0	
Device Revision: 3.0	
Manufacturer: 39	
Manufacturing Date: 14/2005	
Serial Number: 6280D57C	
Logical Blocks: 15564800	
Capacity: 8 GB	

4. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Networking

This window displays descriptions of the adapters in each slot on the system.

Procedure

1. To access networking information, click **Networking** from the **Navigation** menu. The **Network Information** page is displayed.

Network Information

⊕ Expand All

Slot 1 : HP FlexFabric 10Gb 2-port 554FLB Adapter : 10.2.477.10

Serial Number: H3524567BZ

Firmware Revision: 10.2.477.10

Slot Number: 1

2. You can expand each slot individually by clicking the slot name, or open information on all slots at one time by clicking **Expand All**.
3. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Frame Link Module

Procedure

1. To access the driver and firmware Inventory information, click **Frame Link Module** from the **Navigation** menu. The Frame Link Module (FLM) information is displayed. The tabs include enclosure, interconnect, power supply, fan, and blade information.
2. The **Enclosure/FLM Information** tab displays information the enclosures and each bay in the server.

The screenshot shows the 'Enclosure/FLM Information' tab selected in a navigation bar. Below the tab, there are two sections: 'Enclosure Information' and 'Frame Link Module Information'. The 'Enclosure Information' section lists: Model Number: Not Available, Part Number: 797740-B21, Serial Number: MXQ7010BL9, Enclosure Status: OK, Manufacturer: HPE, and UUID: 797740MXQ7010BL9. The 'Frame Link Module Information' section lists: Bay 1: Synergy Frame Link Module, Product Name: Synergy Frame Link Module, Status: OK, Role: Standby, Serial Number: CN7646V08R, and Firmware Version: 1.01.00 08/25/2016 19:50:56 CDT.

Enclosure/FLM Information	Interconnect Information	Power Supply Information	Fan Information	Blade Information
Enclosure Information				
Model Number: Not Available				
Part Number: 797740-B21				
Serial Number: MXQ7010BL9				
Enclosure Status: OK				
Manufacturer: HPE				
UUID: 797740MXQ7010BL9				
Frame Link Module Information				
Bay 1: Synergy Frame Link Module				
Product Name: Synergy Frame Link Module				
Status: OK				
Role: Standby				
Serial Number: CN7646V08R				
Firmware Version: 1.01.00 08/25/2016 19:50:56 CDT				

3. The **Interconnect Information** tab displays interconnect information such as the bay number, product name, status, and power state.

The screenshot shows the 'Interconnect Information' tab selected in a navigation bar. Below the tab, there are two sections: 'Virtual Connect SE 40Gb F8 Module for Synergy' and 'Synergy 20Gb Interconnect Link Module'. The 'Virtual Connect SE 40Gb F8 Module for Synergy' section lists: Bay Number: 3, Product Name: Virtual Connect SE 40Gb F8 Module for Synergy, Status: OK, Serial Number: 2TV6510067, App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release, Boot CAN Micro Firmware: 305.200.101-Release, Power State: On, Power Allocated: 220 watts, and Fan Speed: 38%. The 'Synergy 20Gb Interconnect Link Module' section lists: Bay Number: 6, Product Name: Synergy 20Gb Interconnect Link Module, Status: OK, Serial Number: 7C964700DD, App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release, Boot CAN Micro Firmware: 305.200.101-Release, Power State: On, Power Allocated: 17 watts, and Fan Speed: 18%.

Enclosure/FLM Information	Interconnect Information	Power Supply Information	Fan Information	Blade Information
Virtual Connect SE 40Gb F8 Module for Synergy				
Bay Number: 3				
Product Name: Virtual Connect SE 40Gb F8 Module for Synergy				
Status: OK				
Serial Number: 2TV6510067				
App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release				
Boot CAN Micro Firmware: 305.200.101-Release				
Power State: On				
Power Allocated: 220 watts				
Fan Speed: 38%				
Synergy 20Gb Interconnect Link Module				
Bay Number: 6				
Product Name: Synergy 20Gb Interconnect Link Module				
Status: OK				
Serial Number: 7C964700DD				
App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release				
Boot CAN Micro Firmware: 305.200.101-Release				
Power State: On				
Power Allocated: 17 watts				
Fan Speed: 18%				

4. The **Power Supply Information** tab displays power supply information such as power supply name, capacity, and status. To see information for one power supply, click the bay number. To see information on

all power supplies at one time, click **Expand All**.

Enclosure/FLM InformationInterconnect InformationPower Supply InformationFan InformationBlade Information

Expand All

Power Supply in Bay 1 : Capacity 2650 Watts

Power Supply in Bay 2 : Capacity 2650 Watts

Power Supply Name: 2650W AC Titanium Hot Plug Power Supply
Capacity: 2650 Watts
Status: OK
Serial Number: 9C4614006N
App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release
Boot CAN Micro Firmware: 305.200.101-Release

Power Supply in Bay 3 : Capacity 2650 Watts

Power Supply in Bay 4 : Capacity 2650 Watts

Power Supply in Bay 5 : Capacity 2650 Watts

Power Supply in Bay 6 : Capacity 2650 Watts

5. The **Fan Information** tab displays fan information such as fan name, status, and power consumed. To see information for one fan, click the fan number. To see information on all fans at one time, click **Expand All**.

Enclosure/FLM InformationInterconnect InformationPower Supply InformationFan InformationBlade Information

Collapse All

Fan 1

Fan Name: Synergy Fan Module
Status: OK
Serial Number: 7C66091312
App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release RPM
Boot CAN Micro Firmware: 305.200.101-Release
Power Consumed: 11 watts

Fan 2

Fan Name: Synergy Fan Module
Status: OK
Serial Number: 7C66091311
App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release RPM
Boot CAN Micro Firmware: 305.200.101-Release
Power Consumed: 11 watts

Fan 3

Fan Name: Synergy Fan Module
Status: OK
Serial Number: 7C66091264
App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release RPM
Boot CAN Micro Firmware: 305.200.101-Release
Power Consumed: 11 watts

6. The **Blade Information** tab displays blade information such as status, power allocated, and fan speed. To see information for one blade, click the blade name. To see information on all blades at one time, click

Expand All.

Enclosure/FLM Information	Interconnect Information	Power Supply Information	Fan Information	Blade Information
<div>Collapse All</div>				
Blade in Bay 0 : Synergy 480 Gen9 Compute Module				
<div>Status: OK</div> <div>Serial Number:</div> <div>App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release</div> <div>Boot CAN Micro Firmware: 305.201.100-Release</div> <div>Power Allocated: 0 watts</div> <div>Fan Speed: 100%</div>				
Blade in Bay 0 : Synergy 480 Gen9 Compute Module				
<div>Status: OK</div> <div>Serial Number:</div> <div>App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release</div> <div>Boot CAN Micro Firmware: 305.201.100-Release</div> <div>Power Allocated: 0 watts</div> <div>Fan Speed: 12%</div>				
Blade in Bay 0 : Synergy 480 Gen9 Compute Module				
<div>Status: Warning</div> <div>Serial Number:</div> <div>App CAN Micro Firmware: ae03454d9ebb758e14cc112a3505a43fac9a5586-Release</div> <div>Boot CAN Micro Firmware: 305.201.100-Release</div> <div>Power Allocated: 0 watts</div> <div>Fan Speed: 100%</div>				

7. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

OS

The **OS Information** window displays the system operating system and version

Procedure

1. To access operating system information, click **OS** from the **Navigation** menu. The OS information is displayed.

OS Information

Operating System Information

Operating System: Windows Server 2012 R2 x64 Standard Edition

Operating System Version: 6.3.9600

2. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Thermal and fan

This window displays Temperature Sensors and Fan Speed Information for each fan on the server.

Procedure

1. To access the Thermal and Fan information, click **Thermal and Fan** from the **Navigation** menu.

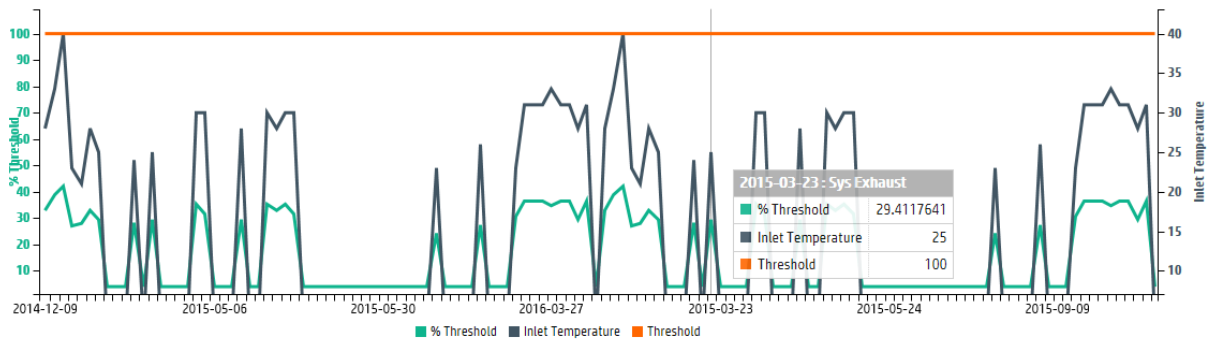


2. The Temperature Sensors section displays the Percentage Threshold, Inlet Temperature, and the temperature Threshold. Select **Critical** or **Caution** to view the percentage to threshold information for each.

Hover over one of the lines to receive information for that particular time stamp, including the sensor the data relates to.

Temperature Sensors

% Threshold to ☒ Critical ☐ Caution



The green line indicates the aggregate percentage temperature of the all sensors inside the server closest to crossing the critical or caution threshold and is plotted on the left axis of the graph. The blue line is the real temperature value of the Inlet temperature and is plotted on the right axis of the graph. The orange line represents the thermal threshold. Thermal shutdown can occur if the green or blue line go above the thermal threshold.

3. The Fan Speed Information displays the maximum fan speed over the life of the log file.

If you compare the Temperature Sensors and the Fan Speed Information graphs, you can see when the server ran hot and how the fans responded to keep the server cool.

Creating a support case

This window enables you to create and submit a support case to Hewlett Packard Enterprise Support for the AHS log loaded in AHSV.

Procedure

1. To access **Case Creation** window, click **Create Support Case** from the **Navigation** menu. The **Case Creation** window is displayed.

Case Creation

Device Information:			
Server	Serial Number	SKU Number	
ProLiant BL460c Gen9	SGH449WTT3	727021-B21	

Contact Information:		Language: English	
First Name *	<input type="text" value="Fullname"/>	Last Name *	<input type="text" value="Key"/>
Contact Title	<input type="text"/>	Company	<input type="text" value="HPE"/>
Address1	<input type="text" value="Houston, TX, 77060"/>	Address2	<input type="text"/>
City	<input type="text" value="Houston"/>	State/Province	<input type="text"/>
Country *	<input type="text" value="--Select Country--"/>	Zip/Postal Code	<input type="text"/>
Work Phone	<input type="text"/>	Email Address	<input type="text" value="fullname_key@hpe.com"/>

Issue:	
Problem Description	<input type="text"/>
Case Comments *	<input type="text"/>

Submit

2. Enter the following information:

- Fullname
- Contact Title
- Company
- Address Line1
- Address Line2
- City
- State/Province
- Country
- Zip/Postal Code

- Work Phone
 - Email Address
3. In the Issue section, enter:
 - Problem Description
 - Case Comments
 4. Click **Submit**. The support case will be submitted to Hewlett Packard Enterprise Support for advanced diagnosis and troubleshooting.

If you have missed any information, the block will be displayed with a red border and a popup window stating what should be added.
 5. HPE support will resolve the issue and report back to you.

Downloading the AHS log

There are multiple ways to download the AHS log, including:

- iLO—For information about downloading the AHS log with iLO, see [Downloading the AHS log using iLO](http://www.hpe.com/info/ilo/docs) and the HPE iLO user guide at <http://www.hpe.com/info/ilo/docs>.
- Intelligent Provisioning—For information about downloading the log with Intelligent Provisioning, see the Intelligent Provisioning user guide at <http://www.hpe.com/info/intelligentprovisioning/docs>.
- curl—For information about downloading the AHS log with curl, see the HPE iLO user guide at <http://www.hpe.com/info/ilo/docs>.
- AHS download CLI tool
 - For information about downloading the AHS log through the CLI on a Windows system, go to [Active Health System Log Download CLI for Windows](#).
 - For information about downloading the AHS log through the CLI on a Linux system, go to [Active Health System \(AHS\) Log Download CLI for Linux](#).
- Onboard Administrator—For more information about downloading the AHS log through OA, see [Downloading AHS log file in OA](#).

Downloading the AHS log using iLO

- [Downloading the AHS Log for a data range](#)
- [Downloading the entire AHS log](#)

Downloading the AHS Log for a data range

NOTE:

Refer to the HPE iLO user guide at <http://www.hpe.com/info/ilo/docs> for additional information.

Procedure

1. If you are using iLO 4, navigate to the **Information > Active Health System Log** page.
If you are using iLO 5, click **Information** in the navigation tree, and then click the **Active Health System Log** tab.

The Active Health System Log is inaccessible when it is being used by Intelligent Provisioning or the Active Health System download CLI tool.
2. Enter the range of days to include in the log. The default value is seven days.
 - a. Click the **From** box.
A calendar is displayed.
 - b. Select the range start date on the calendar.
 - c. Click the **To** box.
A calendar is displayed.
 - d. Select the range end date on the calendar.
3. Optional: Enter the following information to include in the downloaded file:
 - Support case number
 - Contact name
 - Phone number

- E-mail address
- Company name

The contact information you provide will be treated in accordance with the Hewlett Packard Enterprise privacy statement. This information is not written to the log data stored on the server.

4. Click **Download**.

5. Save the file. The default filename is HP_<server_serial_number>_<date>.ahs.

Downloading the entire AHS log

NOTE:

Refer to the HPE iLO user guide at <http://www.hpe.com/info/ilo/docs> for additional information.

It might take a long time to download the entire Active Health System Log. If you must upload the Active Health System Log for a technical issue, Hewlett Packard Enterprise recommends downloading the log for the specific range of dates in which the problem occurred.

Procedure

1. If you are using iLO 4, navigate to the **Information > Active Health System Log** page.

If you are using iLO 5, click **Information** in the navigation tree, and then click **Active Health System Log**.

The Active Health System Log is inaccessible when it is being used by Intelligent Provisioning or the Active Health System download CLI tool.

2. Click **Show Advanced Settings**.

3. Optional: Enter the following information to include in the downloaded file:

- Support case number
- Contact name
- Phone number
- E-mail address
- Company name

The contact information that you provide will be treated in accordance with the Hewlett Packard Enterprise privacy statement. This information is not written to the log data stored on the server.

4. Click **Download Entire Log**.

5. Save the file.

Downloading the AHS log through IP

For more information, see the Intelligent Provisioning user guide at <http://www.hpe.com/info/intelligentprovisioning/docs>.

Procedure

1. Open **Intelligent Provisioning [F10]** at boot-up.

2. Click **Perform Maintenance**.

3. Click **Active Health System download**.

4. Leave the range as the default or as instructed by the Hewlett Packard Enterprise technician.

5. Click **Download**.

Downloading AHS log file in OA

Procedure

1. Log in to the OA web interface.
2. Navigate to the **Enclosure Settings > Remote Support > Data Collections** page.
3. Click **Send Data Collection**.
4. When the transmission is completed, the **Last Data Collection Transmission** and **Last Data Collection Status** are updated. The date and time are based on the configured time zone.
5. (Optional) Check Insight Online to verify that the data collection time stamp is accurate.
6. (Optional) Check the Insight RS Console to verify that the data collection information is displayed.

Downloading the AHS log using the AHS CLI for Windows

Procedure

1. Download the AHS download utility from the [Hewlett Packard Enterprise Support Center](#).
2. Install the package to the server.
3. Run `AHSdownload` from the command line.
The AHS log is downloaded to the server.
4. Transfer the log to your local PC.

Downloading the AHS Log using the AHS CLI for Linux

Procedure

1. Download the AHS download utility from the [Hewlett Packard Enterprise Support Center](#).
2. Install the package to the server.
3. Run `AHSdownload` from the command line.
The AHS log is downloaded to the server.
4. Transfer the log to your local PC.

Onboard Administrator and C-class Enclosure

This window displays information specifically for Blade servers, configuration for Onboard Administrator (OA), OA Power Supplies, and OA Enclosures. The OA information is displayed only if the machine is a blade.

Procedure

1. To access OA information, click **Onboard Administrator and C-class Enclosure** from the **Navigation** menu. The OA information is displayed.
2. From the **Enclosure/OA Information** tab, you can expand the **OA Information** section by clicking the OA name, or open information on all OAs at one time by clicking **Expand All**. This window displays information relating to the Enclosure, such as Enclosure Type, Part Number, Serial Number, and Enclosure Status. OA information is also displayed, including Product Name, Part Number, Spare Part Number, Serial Number, and Firmware version.

Enclosure/OA Information

Enclosure Interconnect Information

Enclosure Power Supply Information

Enclosure Fan Information

Enclosure Information

Enclosure Type: BladeSystem c7000 Enclosure G3
Part Number: 763850-B21
Serial Number: OA49CK0584
Enclosure Status: OK

OA Information

Collapse All

OA 1: BladeSystem c7000 DDR2 Onboard Administrator with KVM

Product Name: BladeSystem c7000 DDR2 Onboard Administrator with KVM
Part Number: 711994-001
Serial Number: OA49CK0584
Manufacturer: HP
Firmware Version: 4.30 Jul 08 2014

3. The **Enclosure Interconnect Information** tab displays Enclosure Interconnect information including Product Name, Width, Part Number, Spare Part Number, Serial Number, and Firmware Version.

Enclosure/OA Information	Enclosure Interconnect Information	Enclosure Power Supply Information	Enclosure Fan Information
Collapse All			
<div> <div>Ethernet : HP VC Flex-10/10D Module</div> <div> <p>Product Name: HP VC Flex-10/10D Module</p> <p>Width: Single</p> <p>Part Number: 638526-B21</p> <p>Spare Part Number: 639852-001 RPM</p> <p>Serial Number: 7C944502HB</p> <p>Firmware Version: 4.41</p> </div> </div>			
<div> <div>Ethernet : HP VC Flex-10/10D Module</div> <div> <p>Product Name: HP VC Flex-10/10D Module</p> <p>Width: Single</p> <p>Part Number: 638526-B21</p> <p>Spare Part Number: 639852-001 RPM</p> <p>Serial Number: 7C944502H3</p> </div> </div>			

- You can expand each enclosure interconnect option individually by clicking the Ethernet name, or open information on all enclosure interconnect options at one time by clicking **Expand All**.
- The **Enclosure Power Supply Information** tab displays Power Supply information, including Status, Capacity, Current Power Output, Serial Number, Product Name, Part Number, and Spare Part Number.

Enclosure/OA Information	Enclosure Interconnect Information	Enclosure Power Supply Information	Enclosure Fan Information
Collapse All			
<div> <div>Power Supply 1 : Capacity 2450 Watts</div> <div> <p>Status: OK</p> <p>Capacity: 2450 Watts</p> <p>Current Power Output: 1284 Watts AC</p> <p>Serial Number: 5BGXK0D4D7K10N</p> <p>Product Name: HP 2400W 80 PLUS PLATINUM</p> <p>Part Number: 763850-B21</p> <p>Spare Part Number: 711994-001</p> </div> </div>			

- You can expand each power supply individually by clicking the power supply name, or open information on all power supplies at one time by clicking **Expand All**.
- The **Enclosure Fan Information** tab displays Enclosure Fan information, including Status, Capacity, Speed, Maximum Speed, Power Consumed, Product Name, Part Number, and Spare Part Number.

Enclosure/OA Information
Enclosure Interconnect Information
Enclosure Power Supply Information
Enclosure Fan Information

Fan 1

Status: OK
Speed: 36 percent of Maximum speed
Maximum Speed: 18000 RPM
Minimum Speed: 600 RPM
Power Consumed: 10
Product Name: Active Cool 200 Fan
Part Number: 412140-B21
Spare Part Number: 413996-001

Fan 2

Fan 3

Cheatham, Mona

8. You can expand each fan individually by clicking the fan name, or open information on all fans at one time by clicking **Expand All**.
9. To return to the System Dashboard, click **System Dashboard** from the **Navigation** menu.

Clearing the AHS log using iLO

If the log file is corrupt, clear and restart logging, use the following procedure. You must have the `Configure iLO Settings` privilege to perform this procedure.

Procedure

1. If you are using iLO 4, navigate to the **Information > Active Health System Log** page.
If you are using iLO 5, click **Information** in the navigation tree, and then click the **Active Health System Log** tab.
2. Click **Show Advanced Settings**.
3. Scroll to the **Clear Log** section, and then click the **Clear** button.
4. Click **Show Advanced Settings**.
5. Scroll to the **Clear Log** section, and then click **Clear**.
6. Click **OK**.

iLO notifies you that the log is being cleared.

7. Reset iLO.

Resetting iLO after cleaning the AHS log is required because some AHS data is recorded to the log only during iLO startup. Performing this step ensures that a complete set of data is available in the log.

8. Reboot the server.



IMPORTANT:

Rebooting the server after clearing the AHS Log is required because some information, such as the operating system name and version, is logged at server startup. Performing this step ensures that a complete set of data is available in the log.

For more information, see the HPE iLO User Guide at <http://www.hpe.com/info/enterprise/docs>.

Identifying and confirming system errors

Procedure

1. From the AHSV Dashboard page, click **Event Logs** from the **Navigation** menu.
2. Scroll down until you see the critical error highlighted in orange.

For more information about identifying and confirming a drive failure, see [**Driver and Firmware Inventory**](#).

For more information about identifying and confirming a DIMM failure, see [**Memory**](#).

Troubleshooting

Amber LED on datacenter drive

Symptom

Amber LED on datacenter drive.

Action

1. Download AHS logs using iLO, Intelligent Provisioning, or the AHS CLI.
2. Upload logs to AHSV.
3. To receive recommendations to resolve the issue, click **Fault Detection Analytics** from the **Navigation** menu.
4. To determine if the system status is degraded, click **Smart Array and Embedded SD Cards** from the **Navigation** menu.
5. If no recommendations are available, click **Event Logs** from the **Navigation** menu to see the time-stamped server events along with severity.
6. Click the event. Select the option to create a support case.
7. Hewlett Packard Enterprise Support will resolve the issue and report back to you.

FAQ

I do not have an HPE Passport account, or cannot remember my HPE Passport ID. Where can I go for assistance?

- To create an HPE Passport Account, go to <https://hpp12.passport.hpe.com/hppcf/createuser.do>
- To recover an HPE Passport ID, go to <https://hpp12.passport.hpe.com/hppcf/forgotuserid.do>
- If you forgot your HPE Passport ID, go to <https://hpp12.passport.hpe.com/hppcf/forgotpwd.do>

What is the typical time to upload an .ahs log file for viewing?

- Upload and parse times vary based on the size of the log file and the content. In general, times upload or display the file depend on the size. You can expect log files of less than 10 MB to load in about one minute. Log files of 20 MG take about two minutes. Files of 200 MB can take upwards of 20 minutes to complete the processes.
- When creating the
 .ahs
logs, consider the date range you select for creation. Hewlett Packard Enterprise recommends that you use the default date range of seven days. By decreasing the date range, the size of the log file decreases.

How do I receive support for this tool?

You receive support through the [Hewlett Packard Enterprise Support Center](#).

Websites

General websites

Hewlett Packard Enterprise Information Library

www.hpe.com/info/EIL

Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix

www.hpe.com/storage/spock

Storage white papers and analyst reports

www.hpe.com/storage/whitepapers

For additional websites, see [Support and other resources](#).

Support and other resources

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:
<http://www.hpe.com/assistance>
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:
<http://www.hpe.com/support/hpesc>

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates:

Hewlett Packard Enterprise Support Center

www.hpe.com/support/hpesc

Hewlett Packard Enterprise Support Center: Software downloads

www.hpe.com/support/downloads

Software Depot

www.hpe.com/support/softwaredepot

- To subscribe to eNewsletters and alerts:
www.hpe.com/support/e-updates
- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:
www.hpe.com/support/AccessToSupportMaterials

ⓘ IMPORTANT:

Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Passport set up with relevant entitlements.

Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience.

Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

<http://www.hpe.com/support/selfrepair>

Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

Remote support and Proactive Care information

HPE Get Connected

www.hpe.com/services/getconnected

HPE Proactive Care services

www.hpe.com/services/proactivecare

HPE Proactive Care service: Supported products list

www.hpe.com/services/proactivecaresupportedproducts

HPE Proactive Care advanced service: Supported products list

www.hpe.com/services/proactivecareadvancedsupportedproducts

Proactive Care customer information

Proactive Care central

www.hpe.com/services/proactivecarecentral

Proactive Care service activation

www.hpe.com/services/proactivecarecentralgetstarted

Warranty information

To view the warranty for your product, see the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products* document, available at the Hewlett Packard Enterprise Support Center:

www.hpe.com/support/Safety-Compliance-EnterpriseProducts

Additional warranty information

HPE ProLiant and x86 Servers and Options

www.hpe.com/support/ProLiantServers-Warranties

HPE Enterprise Servers

www.hpe.com/support/EnterpriseServers-Warranties

HPE Storage Products

www.hpe.com/support/Storage-Warranties

HPE Networking Products

www.hpe.com/support/Networking-Warranties

Regulatory information

To view the regulatory information for your product, view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at the Hewlett Packard Enterprise Support Center:

www.hpe.com/support/Safety-Compliance-EnterpriseProducts

Additional regulatory information

Hewlett Packard Enterprise is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at:

www.hpe.com/info/reach

For Hewlett Packard Enterprise product environmental and safety information and compliance data, including RoHS and REACH, see:

www.hpe.com/info/ecodata

For Hewlett Packard Enterprise environmental information, including company programs, product recycling, and energy efficiency, see:

www.hpe.com/info/environment

Documentation feedback

Hewlett Packard Enterprise 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@hpe.com**). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.