POST error messages and beep codes

Introduction to POST error messages

The error messages and codes in this section include all messages generated by ProLiant servers. Some messages are informational only and do not indicate any error. A server generates only the codes that are applicable to its configuration and options.

HP ProLiant p-Class server blades do not have speakers and thus do not support audio output. Disregard the audible beeps information if the server falls into this category.

IMPORTANT: This guide provides information for multiple servers. Some information may not apply to the server you are troubleshooting. Refer to the server documentation for information on procedures, hardware options, software tools, and operating systems supported by the server.

WARNING: To avoid potential problems, ALWAYS read the warnings and cautionary information in the server documentation before removing, replacing, reseating, or modifying system components.
Non-numeric messages or beeps only

Advanced Memory Protection mode: Advanced ECC

Audible Beeps: None
Possible Cause: Advanced ECC support is enabled.
Action: None.

Advanced Memory Protection mode: Advanced ECC with hot-add support

Audible Beeps: None
Possible Cause: Advanced ECC with Hot-Add support is enabled.
Action: None.

Advanced Memory Protection mode: Online spare with Advanced ECC

...Xxxx MB System memory and xxxx MB memory reserved for Online Spare.

Audible Beeps: None
Possible Cause: This message indicates Online Spare Memory is enabled and indicates the amount of memory reserved for this feature.
Action: None.

Advanced Memory Protection mode: Multi-board mirrored memory with Advanced ECC

...Xxxx MB System memory and xxxx MB memory reserved for Mirroring.

Audible Beeps: None
Possible Cause: This message indicates Mirrored Memory is enabled and indicates the amount of memory reserved for this feature.
Action: None.

Advanced Memory Protection mode: RAID memory with Advanced ECC

...Xxxx MB System memory and xxxx MB memory reserved for RAID.

Audible Beeps: None
Possible Cause: This message indicates RAID Memory is enabled and indicates the amount of memory reserved for this feature.
Action: None.

An Unexpected Shutdown occurred prior to this power-up

Audible Beeps: None
Possible Cause: The server shut down because of an unexpected event on the previous boot.
Action: Check the System Management Log or OS Event Log for details on the failure.
Critical Error Occurred Prior to this Power-Up

**Audible Beeps:** None

**Possible Cause:** A catastrophic system error, which caused the server to crash, has been logged.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

Fan Solution Not Fully Redundant

**Audible Beeps:**

**Possible Cause:** The minimum number of required fans is installed, but some redundant fans are missing or failed.

**Action:** Install fans or replace failed fans to complete redundancy.

Fan Solution Not Sufficient

**Audible Beeps:**

**Possible Cause:** The minimum number of required fans is missing or failed.

**Action:** Install fans or replace any failed fans.

Fatal DMA Error

**Audible Beeps:** None

**Possible Cause:** The DMA controller has experienced a critical error that has caused an NMI.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

Fatal Express Port Error

**Audible Beeps:** None

**Possible Cause:** A PCI Express port has experienced a fatal error that caused an NMI.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace the failed PCI Express boards or reseat loose PCI Express boards.

Fatal Front Side Bus Error

**Audible Beeps:** None

**Possible Cause:** The processor front-side bus experienced a fatal error.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace any failed processors or reseat any loose processors.
Fatal Global Protocol Error

**Audible Beeps:** None  
**Possible Cause:** The system experienced a critical error that caused an NMI.  
**Action:** Run Insight Diagnostics (“HP Insight Diagnostics” on page 75) and replace failed components as indicated.

Fatal Hub Link Error

**Audible Beeps:** None  
**Possible Cause:** The hub link interface has experienced a critical failure that caused an NMI.  
**Action:** Run Insight Diagnostics (“HP Insight Diagnostics” on page 75) and replace failed components as indicated.

FATAL ROM ERROR: The System ROM is not Properly Programmed.

**Audible Beeps:** 1 long, 1 short  
**Possible Cause:** The System ROM is not properly programmed.  
**Action:** Replace the physical ROM part.

Fibre Channel Mezzanine/Balcony Not Supported.

**Audible Beeps:** 2 short  
**Description:** The Fibre Channel adapter is not supported on the server.  
**Action:** Install the supported Fibre Channel adapter.

High Temperature Condition detected by Processor X

**Audible Beeps:** None  
**Possible Cause:** Ambient temperature exceeds recommended levels, fan solution is insufficient, or fans have failed.  
**Action:** Adjust the ambient temperature, install fans, or replace the failed fans.

Illegal Opcode - System Halted

**Audible Beeps:** None  
**Possible Cause:** The server has entered the Illegal Operator Handler because of an unexpected event. This error is often software-related and does not necessarily indicate a hardware issue.  
**Action:** Run Insight Diagnostics (“HP Insight Diagnostics” on page 75) and replace any failed components as indicated. Be sure that all software is installed properly.
iLO Generated NMI

**Audible Beeps:** None

**Possible Cause:** The iLO controller generated an NMI.

**Action:** Check the iLO logs for details of the event.

Internal CPU Check - Processor

**Audible Beeps:** None

**Possible Cause:** A processor has experienced an internal error.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace any failed components as indicated, including processors and PPMs.

Invalid memory types were found on the same node. Please check DIMM compatibility. - Some DIMMs may not be used

**Description:** Invalid or mixed memory types were detected during POST.

**Action:** Use only supported DIMM pairs when populating memory sockets. Refer to the applicable server user guide memory requirements.

Invalid Password - System Halted!

**Audible Beeps:** None

**Possible Cause:** An invalid password was entered.

**Action:** Enter a valid password to access the system.

Invalid Password - System Restricted!

**Audible Beeps:** None

**Possible Cause:** A valid password that does not have permissions to access the system has been entered.

**Action:** Enter a valid password with the correct permissions.

Memory found on unpopulated Node. — Processor is required to be installed for memory to be used.

**Description:** The system detects DIMMs, but is unable to use the DIMMs because a processor is not installed in the corresponding socket.

**Action:** To use the installed DIMMs, install a processor in the corresponding socket.
Mismatched power supplies not supported

**Audible Beeps:** 1 long, 1 short

**Possible Cause:** The power supplies installed in the server are not supported in the current configuration. The server does not support installing more than one type of power supply.

**Action:** Install supported power supplies in a supported configuration.

For supported power supply configurations, see the server documentation on the HP website (http://www.hp.com/support).

Mixed processor speeds detected. Please make sure that all processors are the same speed. — System Halted!

**Audible Beeps:** 1 long, 1 short

**Description:** Mixed processor speeds are not supported.

**Action:** Refer to the server documentation for supported processors. Be sure that all installed processors are the same speed.

Network Server Mode Active and No Keyboard Attached

**Audible Beeps:** None

**Possible Cause:** A keyboard is not connected. An error has not occurred, but a message is displayed to indicate the keyboard status.

**Action:** No action is required.

NMI - Button Pressed!

**Audible Beeps:** None

**Possible Cause:** The NMI button was pressed, initiating a memory dump for crash dump analysis.

**Action:** Reboot the server.

NMI - Undetermined Source

**Audible Beeps:** None

**Possible Cause:** An NMI event has occurred.

**Action:** Reboot the server.

Node Interleaving disabled - Invalid memory configuration

**Description:** Each node must have the same memory configuration to enable interleaving.

**Action:** Populate each node with the same memory configuration and enable interleaving in RBSU.
No Floppy Drive Present

**Audible Beeps:** None

**Possible Cause:** No diskette drive is installed or a diskette drive failure has occurred.

**Action:**
1. Power down the server.
2. Replace a failed diskette drive.
3. Be sure a diskette drive is cabled properly, if a diskette drive exists.

No Keyboard Present

**Audible Beeps:** None

**Possible Cause:** A keyboard is not connected to the server or a keyboard failure has occurred.

**Action:**
1. Power down the server, and then reconnect the keyboard.
2. Be sure no keys are depressed or stuck.
3. If the failure reoccurs, replace the keyboard.

Parity Check 2 - System DIMM Memory

**Audible Beeps:** None

**Possible Cause:** An uncorrectable error memory event occurred in a memory DIMM.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) to identify failed DIMMs. Then, use the DIMM LEDs to identify failed DIMMs and replace the DIMMs.

PCI Bus Parity Error, PCI Slot X

**Audible Beeps:** None

**Possible Cause:** A PCI device has generated a parity error on the PCI bus.

**Action:** For plug-in PCI cards, remove the card. For embedded PCI devices, run Insight Diagnostics and replace any failed components as indicated.

Power Fault Detected in Hot-Plug PCI Slot X

**Audible Beeps:** 2 short

**Possible Cause:** A PCI-X hot-plug expansion slot was not powered up properly.

**Action:** Reboot the server.
Power Supply Solution Not Fully Redundant

**Audible beeps:** None

**Possible cause:** The minimum power supply requirement is installed, but a redundant power supply is missing or failed.

**Action:** Do one of the following:
- Install a power supply.
- Replace failed power supplies to complete redundancy.

Processor X Unsupported Wattage.

**Audible beeps:** 1 long, 1 short

**Possible cause:** Processor not supported by current server.

**Action:** Refer to the server documentation for supported processors. If the processor is supported, remove the processor, update the system to latest ROM, and then reinstall the processor.

Redundant ROM Detected - This system contains a valid backup system ROM.

**Audible Beeps:** None

**Possible Cause:** The system recognizes both the system ROM and redundant ROM as valid. This is not an error.

**Action:** None

REDUNDANT ROM ERROR: Backup ROM Invalid. - ...

...run ROMPAQ to correct error condition.

**Audible Beeps:** None

**Possible Cause:** The backup system ROM is corrupted. The primary ROM is valid.

**Action:** Run ROMPaq Utility to flash the system so that the primary and backup ROMs are valid.

REDUNDANT ROM ERROR: Bootblock Invalid. - ...

...contact HP Representative.

**Audible Beeps:** None

**Possible Cause:** ROM bootblock is corrupt.

**Action:** Contact an authorized service provider.

REDUNDANT ROM ERROR: Primary ROM invalid. Booting Backup ROM. - ...

...run ROMPAQ to correct error condition

**Audible Beeps:** None

**Possible Cause:** The primary system ROM is corrupt. The system is booting from the redundant ROM.

**Action:** Run ROMPaq Utility to restore the system ROM to the correct version.
Temperature violation detected - system Shutting Down in X seconds

Audible Beeps: 1 long, 1 short
Possible Cause: The system has reached a cautionary temperature level and is shutting down in X seconds.
Action: Adjust the ambient temperature, install fans, or replace any failed fans.

There must be a first DIMM in pair if second DIMM in pair is populated. Second DIMM in pair ignored.

Description: The first DIMM socket in the pair is not populated. The second DIMM in the pair is not recognized or used.
Action: Populate the DIMM socket.

This DIMM does not support thermal monitoring...

A less efficient cooling solution with fans running at higher speeds will be utilized to allow the system to operate with this DIMM installed.

Audible Beeps: None
Possible Cause: Unsupported DIMMs are installed that do not contain a temperature sensor. All supported DIMMs for this platform include internal temperature sensors.
Action: See the server documentation for supported DIMMs. Install only DIMMs supported by the server.

This system only supports 667 MHz Front Side Bus Speed Processors. One or more 800 MHz Front Side Bus Speed Processors have been initialized at 667 MHz.

System Halted!

Audible beeps: 1 long, 1 short
Possible cause: One or more 800-MHz front side bus speed processors have been initialized at 667-MHz.
Action: Correct the processor configuration.

Unsupported DIMM(s) found in system. - DIMM(s) may not be used

Description: Unsupported memory types found in system.
Action: Refer to the applicable server user guide memory requirements and replace with supported DIMMs.

Unsupported PCI Card Detected Remove PCI Card from Slot

Audible beeps: 2 short
Possible cause: The PCI card installed in the slot referenced in the message is strictly not supported on this system.
Action: Remove the card from the slot reported in the message.
Unsupported power supply detected in bay X

**Audible Beeps:** 1 long, 1 short

**Possible Cause:** The power supply in bay X is not supported by the server.

**Action:** Install a supported power supply in bay X.

For supported power supplies, see the server documentation on the HP website (http://www.hp.com/support).

Unsupported Processor Detected System will ONLY boot ROMPAQ Utility. System Halted.

**Audible Beeps:** 1 long, 1 short

**Possible Cause:** Processor and/or processor stepping is not supported by the current system ROM.

**Action:** Refer to the server documentation for supported processors. If a ROM version exists that supports the processor,

1. Power down the server.
2. Insert a Systems ROMPAQ diskette containing the latest ROM version.
3. Boot the system to flash the system to the latest ROM version. Allow 15 minutes for the process to complete. Successful completion is indicated by a series of beeps of increasing pitch.

USB Tape-based One button Disaster Recovery (OBDR) drive detected.

<<Press F8 for configuration options>>

Select a configuration option:
1. Enable OBDR
2. Exit

**Audible Beeps:** None

**Possible Cause:** A USB tape device that supports One Button Disaster Recovery (OBDR) is installed in the system.

**Action:**
1. Press 1 or 2.
   - Pressing 2 exits the configuration.
   - Pressing 1 starts the configuration. The following message appears
     Attempting to enable OBDR for the attached USB tape drive...

2. Observe the configuration progress. The following error may appear:
   Error - USB tape drive not in Disaster Recovery mode.

3. Follow the onscreen directions:
   Remove power to USB drive and reboot.
   The following message should appear:
   OBDR is now enabled for the attached USB tape drive.

**WARNING:** A Type 2 Header PCI Device Has Been Detected...

The BIOS will not configure this card.
It must be configured properly by the OS or driver.
**Audible Beeps**: 2 short

**Possible Cause**: Only Type 0 and Type 1 Header PCI Devices are configured by the system ROM. The device will not work unless the OS or device driver properly configure the card. Typically this message only occurs when PCI cards with a PCI to PCMCIA bridge are installed.

**Action**: Refer to the operating system documentation or the device driver information that ships with the Type 2 PCI device.

**WARNING - iLO 2 not responding. System health monitoring has been disabled.**

**Audible Beeps**: None

**Possible Cause**: The iLO 3 firmware is not responding. The iLO 3 Firmware may be corrupt.

**Action**: If the iLO 3 firmware is corrupt, update the iLO 3 firmware using the Firmware Maintenance CD.

**WARNING - Mixed Stepping Processors were detected. System cannot proceed.**

**Audible beeps**: 1 long, 1 short

**Possible cause**: One or more 800-MHz front side bus speed processors have been initialized at 667-MHz.

**Action**: Correct the processor configuration.

**WARNING**: ProLiant Demand Based Power Management cannot be supported with the following processor configuration. The system will run in Full Performance mode.

**Audible Beeps**: None

**Possible Cause**: The system is configured for HP Static Low mode and the current processor cannot support this mode.

**Action**: For more information about the Power Regulator for ProLiant option, see the *HP ROM-Based Setup Utility User Guide* on the Documentation CD or the HP website (http://www.hp.com/support/smartstart/documentation).

### 100 Series

#### 101-I/O ROM Error

**Audible Beeps**: None

**Possible Cause**: Options ROM on a PCI, PCI-X, or PCI Express device is corrupt.

**Action**: If the device is removable, remove the device and verify that the message disappears. Update Option ROM for a failed device.
101-ROM Error

Audible Beeps: 1 long, 1 short
Possible Cause: System ROM checksum.
Action: Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

101-Option ROM Checksum Error...
...An add-in card in your system is not working correctly. If you have recently added new hardware, remove it and see if the problem remains. If this message goes away after you remove your new hardware, there may be a problem with the add-in card.

Audible Beeps: 1 long, 1 short
Possible Cause: An expansion board in the system is not working correctly.
Action: If you have recently added new hardware, remove it and see if the problem persists. If this message goes away after you remove the new hardware, there may be a problem with the expansion board. Review the expansion board documentation, and then try reinstalling the board.

102-System Board Failure

Audible Beeps: None
Possible Cause: 8237 DMA controllers, 8254 timers, and similar devices.

⚠️ **CAUTION:** Only authorized technicians trained by HP should attempt to remove the system board. If you believe the system board requires replacement, contact HP Technical Support ("Contacting HP" on page 173) before proceeding.

Action: Replace the system board. Run the server setup utility.

102-System Board Failure, CMOS Test Failed.

Audible Beeps: None
Possible Cause: 8237 DMA controllers, 8254 timers, and similar devices.

⚠️ **CAUTION:** Only authorized technicians trained by HP should attempt to remove the system board. If you believe the system board requires replacement, contact HP Technical Support ("Contacting HP" on page 173) before proceeding.

Action: Contact an authorized service provider for system board replacement.

102-System Board Failure, DMA Test Failed

Audible Beeps: None
Possible Cause: 8237 DMA controllers, 8254 timers, and similar devices.

⚠️ **CAUTION:** Only authorized technicians trained by HP should attempt to remove the system board. If you believe the system board requires replacement, contact HP Technical Support ("Contacting HP" on page 173) before proceeding.

Action: Contact an authorized service provider for system board replacement.
102-System Board Failure, Timer Test Failed

**Audible Beeps:** None

**Possible Cause:** 8237 DMA controllers, 8254 timers, and similar devices.

⚠️ **CAUTION:** Only authorized technicians trained by HP should attempt to remove the system board. If you believe the system board requires replacement, contact HP Technical Support ("Contacting HP" on page 173) before proceeding.

**Action:** Contact an authorized service provider for a system board replacement.

104-ASR Timer Failure

**Audible Beeps:** None

**Possible Cause:** System board failure.

⚠️ **CAUTION:** Only authorized technicians trained by HP should attempt to remove the system board. If you believe the system board requires replacement, contact HP Technical Support ("Contacting HP" on page 173) before proceeding.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

162-System Options Not Set

**Audible Beeps:** 2 long

**Possible Cause:** Configuration is incorrect. The system configuration has changed since the last boot (addition of a hard drive, for example) or a loss of power to the real-time clock has occurred. The real-time clock loses power if the onboard battery is not functioning correctly.

**Action:** Press the F1 key to record the new configuration. Run the server setup utility to change the configuration. If this message persists, you may need to replace the onboard battery.

163-Time & Date Not Set

**Audible Beeps:** 2 long

**Possible Cause:** Invalid time or date in configuration memory.

**Action:** Run the server setup utility and correct the time or date.

172-1-Configuration Non-volatile Memory Invalid

**Audible Beeps:** None

**Possible Cause:** Nonvolatile configuration corrupted.

**Action:** Run the server setup utility and correct the configuration.
180-Log Reinitialized

**Audible Beeps:** None

**Possible Cause:** The IML ("Integrated Management Log" on page 76) has been reinitialized due to corruption of the log.

**Action:** Event message, no action is required.

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200 Series

201-Memory Error

**Audible Beeps:** None

**Possible Cause:** Memory failure detected.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

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203-Memory Address Error

**Audible Beeps:** None

**Possible Cause:** Memory failure detected.

**Action:** Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

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207 - Invalid Memory Configuration Detected. DIMMs installed when no corresponding processor is detected.

**Description:** Processor is required to be installed for memory to be used.

**Action:** Populate the processor socket or remove the DIMM.

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207-Invalid Memory Configuration - DIMMs must be installed in pairs or sequentially

**Audible beeps:** 1 long, 1 short

**Possible cause:** The system is configured with only one FBDIMM and the system does not support single FBDIMM mode, or multiple FBDIMMs are installed but were not installed in the proper order.

**Action:** Do one of the following:
- Install a valid FBDIMM pair if the system does not support single channel memory mode.
- Remove and install FBDIMMs in the proper order.

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207-Invalid Memory Configuration - DIMMs Must be Installed Sequentially

**Audible Beeps:** 1 long, 1 short

**Possible Cause:** Installed DIMMs are not sequentially ordered.

**Action:** Reinstall DIMMs in proper order.
207-Invalid Memory Configuration - DIMM Size Parameters Not Supported.

Audible Beeps: 1 long, 1 short
Possible Cause: Installed memory module is an unsupported size.
Action: Install a memory module of a supported size.

207-Invalid Memory Configuration - Incomplete Bank Detected in Bank X

Audible Beeps: 1 long, 1 short
Possible Cause: Bank is missing one or more DIMMs.
Action: Fully populate the memory bank.

207-Invalid Memory Configuration - Insufficient Timings on DIMM

Audible Beeps: 1 long, 1 short
Possible Cause: The installed memory module is not supported.
Action: Install a memory module of a supported type.

207-Invalid Memory Configuration - Mismatched DIMMs within DIMM Bank

Audible Beeps: 1 long, 1 short
Possible Cause: Installed DIMMs in the same bank are of different sizes.
Action: Install correctly matched DIMMs.

207-Invalid Memory Configuration - Mismatched DIMMs within DIMM Bank...
...Memory in Bank X Not Utilized.

Audible Beeps: 1 long, 1 short
Possible Cause: Installed DIMMs in the same bank are of different sizes.
Action: Install correctly matched DIMMs.

207-Invalid Memory Configuration - Mismatched DIMMs within DIMM Bank...
...Memory in Board X Bank X Not Utilized.

Audible Beeps: 1 long, 1 short
Possible Cause: Installed DIMMs in the same bank are of different sizes.
Action: Install correctly matched DIMMs.

207-Invalid Memory Configuration - Unsupported DIMM in Bank X

Audible Beeps: 1 long, 1 short
Possible Cause: One of the DIMMs in bank X is of an unsupported type.
Action: Install supported DIMMs to fill the bank.
207-Invalid Memory Configuration - Single channel memory...
...mode supports a single DIMM installed in DIMM socket 1. Please remove all other DIMMs or install memory in valid pairs. System Halted.

- **Audible Beeps**: 1 long, 1 short
- **Possible Cause**: DIMMs are installed in pairs, but the server is in single channel memory mode.
- **Action**: Remove all other DIMMs or install memory in valid pairs and change the memory mode.

207-Invalid Memory Configuration - Unsupported DIMM in Socket X

- **Audible Beeps**: 1 long, 1 short
- **Possible Cause**: Unregistered DIMMs or insufficient DIMM timings.
- **Action**: Install registered ECC DIMMs.

207-Memory Configuration Warning - DIMM In Socket X does not have Primary Width of 4 and only supports standard ECC.

Advanced ECC does not function when mixing DIMMs with Primary Widths of x4 and x8.

- **Audible Beeps**: 1 long, 1 short, or none
- **Possible Cause**: Installed DIMMs have a primary width of x8.
- **Action**: Install DIMMs that have a primary width of x4 if Advanced ECC memory support is required.

209-Online Spare Memory Configuration - No Valid Banks for Online Spare

- **Audible Beeps**: 1 long, 1 short
- **Possible Cause**: Two valid banks are not available to support an online spare memory configuration.
- **Action**: Install or reinstall DIMMs to support online spare configuration.

209-Online Spare Memory Configuration - Spare Bank is Invalid

- **Audible Beeps**: 1 long, 1 short
- **Possible Cause**: Installed DIMMs for online spare bank are of a size smaller than another bank.
- **Action**: Install or reinstall DIMMs to support online spare configuration.

209-Hot-add Memory Configuration - Boards must be installed sequentially.

- **Audible Beeps**: 1 long, 1 short
- **Possible Cause**: Memory boards are not installed sequentially.
- **Action**: Install or reinstall memory boards sequentially.

209-Invalid Lockstep memory configuration

- **Audible Beeps**: 1 long, 1 short
- **Possible Cause**: The memory is not installed properly to support Lockstep mode.
- **Action**: See the server documentation for supported Lockstep memory configurations.
209-Mirror Memory Configuration - Memory Sizes on boards X and Y do not match

Audible Beeps: 1 long, 1 short
Possible Cause: The overall size of two boards participating in a mirrored configuration does not match.
Action: Install or reinstall DIMMs to support mirrored mode.

209-RAID Memory Configuration - Memory Sizes on boards X and Y do not match

Audible Beeps: 1 long, 1 short
Possible Cause: The overall size of two boards participating in a RAID does not match.
Action: Install or reinstall DIMMs to support RAID mode.

210-Memory Board Power Fault on board X

Audible Beeps: 1 long, 1 short
Possible Cause: A problem exists with a memory board powering up properly.
Action: Exchange DIMMs and retest. Replace the memory board if problem persists.

210-Memory Board Failure on board X

Audible Beeps: 1 long, 1 short
Possible Cause: A problem exists with a memory board powering up properly.
Action: Exchange DIMMs and retest. Replace the memory board if problem persists.

212-Processor Failed, Processor X

Audible Beeps: 1 short
Possible Cause: Processor in slot X failed.
Action: Run Insight Diagnostics (“HP Insight Diagnostics” on page 75) and replace failed components as indicated.

214-Processor PPM Failed, Module X

Audible Beeps: None
Possible Cause: Indicated PPM failed.
Action: Run Insight Diagnostics (“HP Insight Diagnostics” on page 75) and replace failed components as indicated.
**300 Series**

**301-Keybord Error**

*Audible Beeps:* None  
*Possible Cause:* Keyboard failure occurred.

*Action:*
1. Power down the server, and then reconnect the keyboard.
2. Be sure no keys are depressed or stuck.
3. If the failure reoccurs, replace the keyboard.

**301-Keybord Error or Test Fixture Installed**

*Audible Beeps:* None  
*Possible Cause:* Keyboard failure occurred.

*Action:*
1. Power down the server, and then reconnect the keyboard.
2. Be sure no keys are depressed or stuck.
3. If the failure reoccurs, replace the keyboard.

**303-Keyboard Controller Error**

*Audible Beeps:* None  
*Possible Cause:* System board, keyboard, or mouse controller failure occurred.

*Action:*
1. Be sure the keyboard and mouse are connected.

⚠️ **CAUTION:** Only authorized technicians trained by HP should attempt to remove the system board. If you believe the system board requires replacement, contact HP Technical Support ("Contacting HP" on page 173) before proceeding.

2. Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

**304-Keyboard or System Unit Error**

*Audible Beeps:* None  
*Possible Cause:* Keyboard, keyboard cable, mouse controller, or system board failure.

*Action:*
1. Be sure the keyboard and mouse are connected.

⚠️ **CAUTION:** Only authorized technicians trained by HP should attempt to remove the system board. If you believe the system board requires replacement, contact HP Technical Support ("Contacting HP" on page 173) before proceeding.
2. Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

400 Series

40X-Parallel Port X Address Assignment Conflict

Audible Beeps: 2 short
Possible Cause: Both external and internal ports are assigned to parallel port X.
Action: Run the server setup utility and correct the configuration.

404-Parallel Port Address Conflict Detected...

A hardware conflict in your system is keeping some system components from working correctly. If you have recently added new hardware remove it to see if it is the cause of the conflict. Alternatively, use Computer Setup or your operating system to insure that no conflicts exist.

Audible Beeps: 2 short
Possible Cause: A hardware conflict in the system is preventing the parallel port from working correctly.
Action:
1. If you have recently added new hardware, remove it to see if the hardware is the cause of the conflict.
2. Run the server setup utility to reassign resources for the parallel port and manually resolve the resource conflict.
3. Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

600 Series

601-Diskette Controller Error

Audible Beeps: None
Possible Cause: Diskette controller circuitry failure occurred.
Action:
1. Be sure the diskette drive cables are connected.
2. Replace the diskette drive, the cable, or both.
3. Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

602-Diskette Boot Record Error

Audible Beeps: None
Possible Cause: The boot sector on the boot disk is corrupt.
Action:
1. Remove the diskette from the diskette drive.
2. Replace the diskette in the drive.
3. Reformat the diskette.

**605-Diskette Drive Type Error.**

- **Audible Beeps:** 2 short
- **Possible Cause:** Mismatch in drive type occurred.
- **Action:** Run the server setup utility to set the diskette drive type correctly.

**611-Primary Floppy Port Address Assignment Conflict**

- **Audible Beeps:** 2 short
- **Possible Cause:** A hardware conflict in the system is preventing the diskette drive from operating properly.
- **Action:**
  1. Run the server setup utility to configure the diskette drive port address and manually resolve the conflict.
  2. Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

**612-Secondary Floppy Port Address Assignment Conflict**

- **Audible Beeps:** 2 short
- **Possible Cause:** A hardware conflict in the system is preventing the diskette drive from operating properly.
- **Action:**
  1. Run the server setup utility to configure the diskette drive port address and manually resolve the conflict.
  2. Run Insight Diagnostics ("HP Insight Diagnostics" on page 75) and replace failed components as indicated.

**1100 Series**

**1151-Com Port 1 Address Assignment Conflict**

- **Audible Beeps:** 2 short
- **Possible Cause:** Both external and internal serial ports are assigned to COM X.
- **Action:** Run the server setup utility and correct the configuration.

**1600 Series**

**1609 - The server may have a failed system battery. Some...**

...configuration settings may have been lost and restored to defaults. Refer to server documentation for more information. If you have just replaced the system battery, disregard this message.
Audible Beeps: None

Possible Cause: Real-time clock system battery has lost power. The system will lose its configuration every time AC power is removed (when the system is unplugged from AC power source) and this message displays again if a battery failure has occurred. However, the system will function and retain configuration settings if the system is connected to the AC power source.

Action: Replace battery (or add external battery).

1610-Temperature Violation Detected. - Waiting 5 Minutes for System to Cool
...Press Esc key to resume booting without waiting for the system to cool.
WARNING: Pressing Esc is NOT recommended as the system may shutdown unexpectedly.

Audible Beeps: None

Possible Cause: The temperature measured by one of the system temperature sensors has exceeded acceptable levels. In many cases, this is due to the ambient inlet air temperature exceeding acceptable levels.

Action: Be sure to follow all of the environmental requirements for the server.

- Space and airflow
  - Always allow adequate ventilation.
  - Always populate the racks with blanking panels and the enclosures with blade blanks.
  - Always populate the server with air baffles, blanks, and heatsinks.
  - Always operate the server with the access panel installed.
- Temperature
  Only operate the server in a room where the temperature does not exceed the recommended temperature for the server.

For more information about the optimum environment for the server, see the server user guide on the HP website (http://www.hp.com/support).

1611-CPU Zone Fan Assembly Failure Detected. Either...
...the Assembly is not installed or multiple fans have failed in the CPU zone.

Audible Beeps: None

Possible Cause: Required fans are missing or not spinning.

Action:
1. Check the fans to be sure they are installed and working.
2. Be sure the assembly is properly connected and each fan is properly seated.
3. If the problem persists, replace the failed fans.
4. If a known working replacement fan is not spinning, replace the assembly.

1611-CPU Zone Fan Assembly Failure Detected. Single fan...
...failure. Assembly will provide adequate cooling.
**Audible Beeps**: None

**Possible Cause**: Required fan is not spinning.

**Action**: Replace the failed fan to provide redundancy, if applicable.

**1611-Fan Failure Detected**

**Audible Beeps**: 2 short

**Possible Cause**: Required fan is not installed or spinning.

**Action**:
1. Check the fans to be sure they are working.
2. Be sure each fan cable is properly connected and each fan is properly seated.
3. If the problem persists, replace the failed fans.

**1611-Fan x Failure Detected (Fan Zone CPU)**

**Audible Beeps**: 2 short

**Possible Cause**: Required fan is not installed or spinning.

**Action**:
1. Check the fans to be sure they are working.
2. Be sure each fan cable is properly connected, if applicable, and each fan is properly seated.
3. If the problem persists, replace the failed fans.

**1611-Fan x Failure Detected (Fan Zone I/O)**

**Audible Beeps**: 2 short

**Possible Cause**: Required fan is not installed or spinning.

**Action**:
1. Check the fans to be sure they are working.
2. Be sure each fan cable is properly connected, if applicable, and each fan is properly seated.
3. If the problem persists, replace the failed fans.

**1611-Fan x Not Present (Fan Zone CPU)**

**Audible Beeps**: 2 short

**Possible Cause**: Required fan is not installed or spinning.

**Action**:
1. Check the fans to be sure they are working.
2. Be sure each fan cable is properly connected, if applicable, and each fan is properly seated.
3. If the problem persists, replace the failed fans.
1611-Fan x Not Present (Fan Zone I/O)

**Audible Beeps:** 2 short

**Possible Cause:** Required fan is not installed or spinning.

**Action:**
1. Check the fans to be sure they are working.
2. Be sure each fan cable is properly connected, if applicable, and each fan is properly seated.
3. If the problem persists, replace the failed fans.

1611- Power Supply Zone Fan Assembly Failure Detected. Either…
…the Assembly is not installed or multiple fans have failed.

**Audible Beeps:** None

**Possible Cause:** Required fans are missing or not spinning.

**Action:**
1. Check the fans to be sure they are installed and working.
2. Be sure the assembly is properly connected and each fan is properly seated.
3. If the problem persists, replace the failed fans.
4. If a known working replacement fan is not spinning, replace the assembly.

1611-Power Supply Zone Fan Assembly Failure Detected. Single fan…
…failure. Assembly will provide adequate cooling.

**Audible Beeps:** None

**Possible Cause:** Required fan is not spinning.

**Action:** Replace the failed fan to provide redundancy, if applicable.

1611-Primary Fan Failure (Fan Zone System)

**Audible Beeps:** None

**Possible Cause:** A required fan is not spinning.

**Action:** Replace the failed fan.

1611-Redundant Fan Failure (Fan Zone System)

**Audible Beeps:** None

**Possible Cause:** A redundant fan is not spinning.

**Action:** Replace the failed fan.

1612-Primary Power Supply Failure

**Audible Beeps:** 2 short

**Possible Cause:** Primary power supply has failed.

**Action:** Replace power supply.
**1615-Power Supply Configuration Error**

**Audible Beeps:** None

**Possible Cause:** The server configuration requires an additional power supply. A moving bar is displayed, indicating that the system is waiting for another power supply to be installed.

**Action:** Install the additional power supply.

---

**1615-Power Supply Configuration Error**

- A working power supply must be installed in Bay 1 for proper cooling.
- System Halted!

**Audible Beeps:** None

**Possible Cause:** The server configuration requires an additional power supply. A moving bar is displayed, indicating that the system is waiting for another power supply to be installed.

**Action:** Install the additional power supply.

---

**1615-Power Supply Failure, Power Supply Unplugged, or Power Supply Fan Failure in Bay X**

**Audible Beeps:** None

**Possible Cause:** The power supply has failed, or it is installed but not connected to the system board or AC power source.

**Action:** Reseat the power supply firmly and check the power cable or replace power supply.

---

**1616-Power Supply Configuration Failure**

- A working power supply must be installed in Bay 1 for proper cooling.
- System Halted!

**Audible Beeps:** None

**Possible Cause:** Power supply is improperly configured.

**Action:** Run the server setup utility and correct the configuration.

---

**1700 Series**

**1704-Unsupported Virtual Mode Disk Operation DOS Driver Required**

**Audible Beeps:** None

**Possible Cause:** The operating system currently running does not support virtual DMA service.

**Action:** Load or update the SCSI device driver appropriate for the operating system.

---

**1706-Smart Array Controller Extended BIOS Data Area Memory Corrupted.**

...Int 13h BIOS Cannot Continue - System Halted.
Audible Beeps: None
Possible Cause: An application has overwritten memory reserved by the Smart Array controller.
Action: If this occurs when a particular application is loaded, check for an updated version of that application.

1707 - Slot X Drive Array Controller - Bootstrap NVRAM checksum failed
The second line of the message includes one of the following lines of text:

( unrecoverable error )

or

(no suitable backup found)

Audible Beeps: None
Possible Cause: The Bootstrap NVRAM on the specified Smart Array controller is corrupt or invalid.
Action:
1. Update the controller with the latest firmware version.
2. If the problem still exists, replace the controller.

1708 - Slot X Drive Array Controller - Bootstrap NVRAM restored from backup. System restart required
Audible Beeps: None
Possible Cause: The specified Smart Array controller Bootstrap NVRAM was restored in one of the following ways:
- It was detected as corrupt, and the backup copy was restored.
- It was automatically updated because a newer version was available.
Action:
1. Reboot the server.
2. If the problem still exists, update the controller to the latest firmware version.

1711-Slot X Drive Array - RAID ADG logical drive(s) configured but Array Accelerator size <= 32 MB
...This configuration is not recommended. Consider migrating logical drive(s) to RAID 5 or upgrading the Array Accelerator module.
Audible Beeps: None
Possible Cause: This configuration is not recommended.
Action: Migrate logical drives to RAID 5 or upgrade to a larger array accelerator module.

1711-Slot X Drive Array - Stripe size too large for RAID 5/6 logical drive(s)
...This configuration is not recommended due to transfer buffer usage. Consider migrating to lower stripe size via Array Configuration Utility.
1712-Slot X Drive Array - RAID 5 logical drive(s) configured with 56 Drives, but Array Accelerator size <= 32 MB...

This configuration is not recommended. Consider migrating logical drive(s) to RAID 0 or 1, reducing the number of drives in the array, or upgrading the Array Accelerator module.

Possible Cause: Upgrade the Array Accelerator module to a larger size.
Action: Migrate logical drives to RAID 0 or 1, reduce the number of drives in the array, or upgrade to a larger-size array accelerator module.

1713-Slot X Drive Array Controller - Redundant ROM Reprogramming Failure

Replace the controller if this error persists after restarting system.

Possible Cause: Flash ROM is failing. The controller detects a checksum failure, but is unable to reprogram the backup ROM.
Action:
1. Update the controller to the latest firmware version ("Firmware maintenance" on page 80).
2. If the problem persists, replace the controller.

1714-Slot X Drive Array Controller - Redundant ROM Reprogramming Failure

Backup ROM has automatically been activated. Check firmware version.

Possible Cause: The controller flash operation is interrupted by a power cycle, or flash ROM is failing. The controller detects a ROM checksum error and automatically switches to the backup ROM image.
Action: If this backup ROM image is a lower version than the originally running image, update the controller to the latest firmware version.

1715-Slot X Drive Array Controller - Memory Error(s) Occurred

Warning: Corrected Memory Error(s) were detected during controller memory self-test...

Possible Cause: The memory is beginning to fail.
Action: If this error persists, replace the controller.

1716-Slot X Drive Array Controller - Unrecoverable Media Errors Detected on Drives_GenericTSG_POST Error Message

Errors will be fixed automatically when these sectors are overwritten. Backup and restore recommended.
Audible Beeps: None

Possible Cause: A media error is detected on a drive and cannot be corrected because of degraded fault tolerance or a media error at the same location on another drive in the same array. An unrecoverable read error is returned to the operating system when this block address is read.

Action: Backup and restore the data on the drive. Sequential write operations to the affected blocks should resolve the media errors.

1717-Slot X Drive Array Controller - Disk Drive(s) Reporting OVERHEATED Condition

Audible Beeps: None

Possible Cause: The drives listed in this message are currently in an overheated state.

Action: Check the fans and be sure the air flows over the drive. Install the access panel, if removed.

1718-Slot X Drive Array Controller - Device discovery found more devices attached to this controller than firmware currently supports...

...Some devices are ignored.

Audible Beeps: None

Possible Cause: The firmware does not support the number of devices currently attached to the controller.

Action:
- If release notes indicate that support for additional devices has been added, upgrade to the latest version of controller firmware.
- Remove some of the devices attached to the controller.

1719-Slot X Drive Array - A controller failure event occurred prior to this power-up (previous lock-up code = 0x####)

Audible Beeps: None

Possible Cause: A controller failure event occurred before the server powered up.

Action: Install the latest version of controller firmware. If the condition persists, then replace the controller.

1720-Slot X Drive Array - S.M.A.R.T. Hard Drive(s) Detect Imminent Failure SCSI: Port Y: SCSI ID Z

Audible Beeps: None

Possible Cause: A hard drive SMART predictive failure condition is detected. It may fail at some time in the future.

Action:
- If this drive is part of a non-fault-tolerant configuration, back up all data before replacing the drive and restore all data afterward.
- If this drive is part of a fault-tolerant configuration, do not replace this drive unless all other drives in the array are online.
1720-S.M.A.R.T. Hard Drive Detects Imminent Failure

Audible Beeps: None

Possible Cause: A hard drive SMART predictive failure condition is detected. It may fail at some time in the future.

Action:
- If configured as a non-RAID 0 array, replace the failing or failed drive. Refer to the server documentation.
- If configured as a RAID 0 array or non-RAID setup, back up the drive or drives, replace the drive, and restore the system.

1721-Slot X Drive Array - Drive Parameter Tracking Predicts Imminent Failure...
...The following devices should be replaced when conditions permit. Do not replace drive unless all other drives in the array are on-line! Back up data before replacing drive(s) if using RAID 0.

Audible Beeps: None

Possible Cause: Drive parameter tracking reports a predictive-failure condition on the indicated drive. It may fail at some time in the future.

Action:
- If the drive is part of a non-fault-tolerant configuration, back up all data before replacing the drive and restore all data afterward.
- If the drive is part of a fault-tolerant configuration, do not replace the drive unless all other drives in the array are online.

1724-Slot X Drive Array - Physical Drive Position Change(s) Detected - ...
...Logical drive configuration has automatically been updated.

Audible Beeps: None

Possible Cause: The logical drive configuration has been updated automatically following physical drive position changes.

Action: No action is required.

1725-Slot X Drive Array-Optional SIMM Failure Detected

Audible Beeps: None

Possible Cause: SIMM has been automatically disabled due to memory errors or unsupported SIMM type installed.

Action: Replace the SIMM memory module on the indicated controller.

1726-Slot X Drive Array - Array Accelerator Memory Size Change Detected. - ...
...Array Accelerator configuration has automatically been updated.
Audible Beeps: None

Possible Cause: The array accelerator configuration has been updated automatically due to replacement of the array accelerator (or controller) with one having different cache memory size.

Action: Run the ACU ("Array Configuration Utility" on page 70) to change the default cache read/write allocation ratio.

1726-Slot X Drive Array - Cache Memory Size or Battery Presence Has Changed
...Array Accelerator configuration has automatically been updated.

Audible Beeps: None

Possible Cause: The array accelerator configuration has been updated automatically due to replacement of the array accelerator (or controller) with one having different cache memory size. This message may also appear following removal or installation of the cache battery back.

Action: To change the default cache read/write allocation ratio, run the ACU ("Array Configuration Utility" on page 70).

1727-Slot X Drive Array - New Logical Drive(s) Attachment Detected...
...If more than 32 logical drives, this message will be followed by: “Auto-configuration failed: Too many logical drives.”

Audible Beeps: None

Possible Cause: The controller has detected an additional array of drives that was connected when the power was off. The logical drive configuration information has been updated to add the new logical drives. The maximum number of logical drives supported is 32. Additional logical drives will not be added to the configuration.

Action: No action is required.

1729-Slot X Drive Array - Performance Optimization Scan In Progress
...RAID 4/5/ADG performance may be higher after completion.

Audible Beeps: None

Possible Cause: One or more RAID 4/5/ADG parity drives are being initialized. Performance of the controller improves after the parity data has been initialized by ARM, an automatic process that runs in the background on the controller.

Action: No action is required.

1732-Slot X Drive Array - Array Accelerator Battery Pack Missing...
...Array Accelerator Posted-Write Cache is permanently disabled. Array Accelerator will be reenabled when additional battery packs are installed.

Audible Beeps: None

Possible Cause: Battery packs are detached from the controller or have failed.

Action: Check the battery pack to be sure the connection is secure. If the condition persists, then install a replacement battery pack.
1733-Slot X Drive Array - Storage Enclosure Firmware Upgrade Problem
Detected...
...Port x box y: Enclosure firmware upgrade needed - run Flash Components.
Port x box y: Unable to read firmware version of one or more components

**Audible Beeps:** None

**Possible Cause:** An incorrect enclosure firmware version is installed, or an enclosure firmware upgrade is needed.

**Action:**
- Upgrade the enclosure firmware and the controller firmware.
- If the condition persists, then replace the enclosure components.

For more information, see the *HP BladeSystem c-Class Enclosure Troubleshooting Guide* on the HP website (http://www.hp.com/support/BladeSystem_Enclosure_TSG_en).

1735-Slot z Drive Array - Unsupported Redundant Cabling Configuration
Detected...
...Multiple paths to the same enclosure/drives are not supported by this Smart Array firmware version. Access to all drives has been disabled until redundant SAS cable(s) are detached, or firmware is updated to a version that supports dual-domain.

**Audible Beeps:** None

**Possible Cause:** An unsupported redundant cabling configuration for the Smart Array firmware version is installed.

**Action:** Disconnect the redundant SAS cables, and then update the Smart Array firmware to the correct version.

1736-HP Trusted Platform Module Error

**Audible Beeps:** 2 short

**Possible Cause:** A TPM is installed, but the System ROM is unable to communicate with the TPM.

**Action:** Request a new system board and TPM board from an HP authorized service provider ("Contacting HP technical support or an authorized reseller" on page 173).

When installing or replacing a TPM, observe the following guidelines:

- Do not remove an installed TPM. Once installed, the TPM becomes a permanent part of the system board.
- When installing or replacing hardware, HP service providers cannot enable the TPM or the encryption technology. For security reasons, only the customer can enable these features.
- When returning a system board for service replacement, do not remove the TPM from the system board. When requested, HP Service provides a TPM with the spare system board.
- Any attempt to remove an installed TPM from the system board breaks or disfigures the TPM security rivet. Upon locating a broken or disfigured rivet on an installed TPM, administrators should consider the system compromised and take appropriate measures to ensure the integrity of the system data.
- When using BitLocker™, always retain the recovery key/password. The recovery key/password is required to enter Recovery Mode after BitLocker™ detects a possible compromise of system integrity.
• HP is not liable for blocked data access caused by improper TPM use. For operating instructions, see the encryption technology feature documentation provided by the operating system.

1737-Slot X Drive Array - Redundant Cabling Configuration has excess Device Paths...
...Redundant I/O paths to some devices attached to the controller are exceeding per device limit by firmware. These excess paths are ignored.

Audible Beeps: None

Possible Cause: The redundant cabling configuration creates more redundant I/O paths than the firmware allows.

Action: Update the firmware to the correct version. Verify the redundant cabling configuration.

1738-Slot X Drive Array - Storage Enclosure Redundant Cabling Problem Detected
...Check storage box I/O module and cable to restore redundant paths to the following disk drive(s):
Select “F1” to post this message on reboots if problem persists
Select “F2” to disable this message on reboots if problem persists with logical drive(s) corresponding to these disk drives

Audible Beeps: None

Possible Cause: A problem exists with the storage enclosure redundant cabling. A single path was found to drives that were previously connected redundantly.

Action: Check the storage box I/O module and cable to restore redundant paths to the drives, then do one of the following:
• If the redundant cables/paths were not purposefully removed, press F1 to display this message on reboot until the problem is resolved. The drives should be accessible through the remaining path.
• If the redundant paths were purposefully removed, press F2 to disable this message on all subsequent reboots.

1739-Slot X Drive Array - Redundant Cabling Configuration is not as recommended...
...Refer to product user guide.

Audible Beeps: None

Possible Cause: Incorrect redundant cabling configuration

Action: For information on how to cable the device in a supported manner for dual-domain redundant path support, see the product user guide.

1742-Slot X Drive Array - Previously Ejected Drive(s) Detected...
Select “F1” to continue ignoring these physical drives.
Select “F2” to add these physical & logical drive(s) to this controller.
Audible Beeps: None

Possible Cause: The system detects that the drives are still present during POST and that the user previously requested the drives to be removed from the controller configuration information.

Action: Do one of the following:
- If the drives will be removed at a later time, press F1 to continue ignoring the physical drives.
- To cancel the remove request and add these physical and logical drives back to the controller, press F2.

1743-Slot X Drive Array - Logical Drive Erase Operation in Progress...
...Drives being erased are temporarily offline.

Audible Beeps: None

Possible Cause: The drives being erased are offline.

Action: Do one of the following:
- Wait for the erase process to complete before using the logical drive.
- Abort the erase process using ACU ("Array Configuration Utility" on page 70).

1744-Slot X Drive Array - Drive Erase Operation In Progress or Queued...
...The following disk drive(s) will be blank upon completion: (followed by a list of drives)

Audible Beeps: None

Possible Cause: A drive erase operation was previously initiated by the user and is in progress or is scheduled for all drives in the list.

Action: None required

1745-Slot X Drive Array - Drive Erase Operation Completed...
...The following disk drive(s) have been erased and will remain offline until hot-replaced or re-enabled by the Array Configuration Utility:
(followed by a list of drives)

Audible Beeps: None

Possible Cause: The drive erase operation was successfully completed, and the drives are being held in an offline state to ensure that the drives remain blank until re-enabled by the user.

Action: Replace each drive in the list or re-enable each drive in the list using one of the following methods:
- Use the Array Configuration Utility (on page 70) (all drive types).
- Perform hot-plug removal and reinstallation (hot-plug hard drives only).

1746-Slot X Drive Array - Unsupported Storage Connection Detected...
...SAS connection via expander is not supported on this controller model. Access to all storage has been disabled. Upgrade controller or detach the expander based storage connections.
**Audible Beeps:** None

**Possible Cause:** The controller or firmware version does not support the attached drive enclosure.

**Action:** Upgrade the controller, or detach the expander-based storage connections.

### 1747-Slot X Drive Array - Unsupported Array Configuration Detected...

...Followed by one of many possible reasons, including the following:

* More logical drives are configured than this controller can support when the memory module is detached.
* One or more logical drives are configured in positions that this controller does not support when the memory module is detached.
* Configuration information indicates one or more hard drives are located in drive bays that are inaccessible when the memory module is detached.
* Capacity Expansion operations are pending but cannot continue because the Array Accelerator memory module has been detached.
* Drive Erase operations are pending but cannot be completed because the Array Accelerator memory module has been detached.

All logical drives have been disabled. To avoid data loss, re-attach drives to original controller or upgrade controller. To discard all data and create a new configuration, run the Array Configuration Utility.

**Audible Beeps:** None

**Possible Causes:**

- The Array Accelerator memory module was removed or is defective.
- The drives were moved to a controller that does not have an Array Accelerator memory module attached.

**Action:** Attach an Array Accelerator memory module to this controller, or move the drives back to the original controller. If Capacity Expansion operations are pending, be sure that the original Array Accelerator module is attached.

### 1748-Slot X Drive Array - Unsupported Array Accelerator Battery Attached...

...Please install battery pack(s) with the correct part number.

**Audible Beeps:** None

**Possible Cause:** The current battery pack is not supported on this Array Accelerator module.

**Action:** Install only supported battery packs with the correct part number.

### 1753-Slot X Drive Array - Array Controller Maximum Operating Temperature Exceeded During Previous Power Up

**Audible Beeps:** None

**Possible Cause:** The controller is overheating.

**Action:** Be sure adequate system cooling and sufficient airflow across the controller are available.
1754-Slot X Drive Array - RAID ADG configured but ADG is not supported on this controller model.

**Audible Beeps:** None

**Possible Cause:** RAID ADG configured by ADG is not supported on this controller model.

**Action:** Replace the controller with a model that supports RAID ADG.

1754-Slot X Drive Array - One or more RAID levels are configured...

...but are not supported due to controller model or an inactive/missing license key. Please re-attach drives to original controller or enter license key.

**Audible Beeps:** None

**Possible Cause:** The controller model does not support the configuration on the drives, or the license key is inactive or missing.

**Action:** Re-attach drives to the original controller, or enter a license key.

1757-Slot X Array Accelerator module Incompatible with this controller...

...Please replace Array Accelerator module.

**Audible Beeps:** None

**Possible Cause:** The current Array Accelerator is not supported.

**Action:** Replace the Array Accelerator module with the correct model for this controller. If this occurs after upgrading to a larger module, update the controller firmware before attaching the new module.

1762-Slot X Drive Array - Controller Firmware Upgrade Needed

...(Unsupported Array Accelerator Attached)

**Audible Beeps:** None

**Possible Cause:** The current controller firmware does not support the attached Array Accelerator module type.

**Action:** Upgrade the controller firmware, or replace the Array Accelerator module.

1763-Array Accelerator Daughtercard is Detached; Please Reattach

**Audible Beeps:** None

**Possible Cause:** Array accelerator module is loose, missing, or defective.

**Action:**
1. Reseat array accelerator module.
2. If the problem persists, replace the array accelerator module.

1764-Slot X Drive Array - Capacity Expansion Process is Temporarily Disabled...

(followed by one of the following)

...Expansion will resume when Array Accelerator has been reattached.
Expansion will resume when Array Accelerator has been replaced.
Expansion will resume when Array Accelerator RAM allocation is successful.
Expansion will resume when Array Accelerator battery reaches full charge.
Expansion will resume when automatic data recovery has been completed.

Audible Beeps: None
Possible Cause: The capacity expansion process has been temporarily disabled.
Action: Follow the action that is displayed onscreen to resume the capacity expansion process.

**1768-Slot X Drive Array - Resuming Logical Drive Expansion Process**

Audible Beeps: None
Possible Cause: Power was lost while a logical expansion operation was performed. A controller reset or power cycle occurs while array expansion is in progress.
Action: No action is required.

**1769-Slot X Drive Array - Drive(s) Disabled Due to Failure During Capacity Expansion**

...Select F1 to continue with logical drives disabled. Select F2 to accept data loss and to re-enable logical drives.

Audible Beeps: None
Possible Cause: Data was lost while the array was expanded; therefore, the drives have been temporarily disabled. Capacity expansion failed due to:
- Array accelerator or hard drive failed or was removed; expansion progress data lost
- Expansion progress data could not be read from array accelerator
- Expansion aborted due to unrecoverable drive errors
- Expansion aborted due to array accelerator errors
Action:
- Press the F2 key to accept the data loss and re-enable the logical drives.
- Restore data from backup.
- Replace drive or array accelerator, as appropriate.

**1770-Slot X Drive Array - SCSI Drive Firmware Update Recommended - ...**

...Please upgrade firmware on the following drive(s) using ROM Flash Components (download from www.hp.com/support/proliantstorage): Model XYZ (minimum version = ####)

Audible Beeps: None
Possible Cause: Drive firmware update needed.
Action: The indicated drives are running firmware that is known to cause intermittent problems. Update all drives to the latest firmware version ("Firmware maintenance" on page 80).
1774-Slot X Drive Array - Obsolete Data Found in Array Accelerator

**Audible Beeps:** None

**Possible Cause:** Drives were used on another controller and reconnected to the original controller while data was in the original controller cache. Data found in the array accelerator is older than data found on the drives and has been automatically discarded.

**Action:** Check the file system to determine whether any data has been lost.

1775-Slot X Drive Array - ProLiant Storage System Not Responding SCSI Port Y:

...Check storage system power switch and cables. Turn the system power off while checking the ProLiant power and cable connections, then turn the system power back on to retry.

**Audible Beeps:** None

**Possible Cause:** Storage system problem detected. A SCSI enclosure seems to be connected to the specified SCSI bus, but no drives or SCSI backplane processor were detected on this bus.

**Action:**
1. Power down the server.
2. Check the external ProLiant power switch. External drives must all be powered up before the main system is.
3. Be sure the cables are connected properly and securely.
4. Update the storage device to the latest firmware version ("Firmware maintenance" on page 80).
5. If the problem persists, replace the cable, backplane, or Smart Array Controller.

1775-Slot X Drive Array - Storage Enclosure Cabling Problem Detected - OUT port of this box is attached to OUT port of previous box.

...Turn system and storage box power OFF and check cables. Drives in this box and connections beyond it will not be available until the cables are attached correctly.

**Audible Beeps:** None

**Action:** For cabling configuration information, see the storage enclosure documentation.

1776-Slot X Drive Array - SCSI Bus Termination Error

...Internal and external drives cannot both be attached to the same SCSI port. SCSI port Y: Check cables

**Audible Beeps:** None

**Possible Cause:** External and internal connectors of the specified SCSI ports are connected to drives. The indicated SCSI bus is disabled until this problem is resolved.

**Action:** The SCSI bus is not properly terminated when internal and external drives are connected concurrently to the same SCSI bus.
1. Power down the server.
2. Be sure the cables to the specified port are connected properly and securely ("Loose connections" on page 18).
3. Reconfigure the drives to different SCSI ports.
1776-Slot X Drive Array - Shared SAS Port Connection Conflict Detected - Ports 1I, 1E: Storage connections detected on both shared internal and external ports.

...Controller selects internal port until connection is removed from one of the ports.

**Audible Beeps:** None

**Action:** For cable configuration information, refer to the controller documentation.

1776-Drive Array Reports Improper SCSI Port 1 Cabling

**Audible Beeps:** None

**Possible Cause:**
- The integrated array enabler board failed.
- The I/O board, drive backplane fan board, or drive backplane failed.

**Action:**
1. Replace the integrated array enabler board.
2. Update the integrated Smart Array option to the latest firmware version ("Firmware maintenance" on page 80).

⚠️ **CAUTION:** Only authorized technicians trained by HP should attempt to remove the I/O board. If you believe the I/O board requires replacement, contact HP Technical Support ("Contacting HP" on page 173) before proceeding.

3. Reboot the server after replacing each item:
   a. Drive backplane fan board
   b. Drive backplane
   c. I/O board

1777-Slot X Drive Array - Storage Enclosure Problem Detected (followed by one or more of the following):

(followed by one or more of the following):
...SCSI Port Y: Cooling Fan Malfunction Detected
SCSI Port Y: Overheated Condition Detected
SCSI Port Y: Side-Panel must be Closed to Prevent Overheating
SCSI Port Y: Redundant Power Supply Malfunction Detected
SCSI Port Y: Wide SCSI Transfer Failed
SCSI Port Y: Interrupt Signal Inoperative
SCSI Port y: Unsupported ProLiant Storage System Detected

**Audible Beeps:** None

**Possible Cause:** Environment threshold was violated on the drive enclosure.

**Action:**
- Check the cooling fan operation by placing a hand over the fan.
- Be sure the internal plenum cooling fan in tower servers or storage systems is operational. If the fan is not operating, check for obstructions and check all internal connections.
- Replace the unit side panel if removed.
- Check the LEDs. If the ProLiant Storage System power LED is amber instead of green, this indicates a redundant power supply failure.
- If the message indicates to check SCSI cables, do the following:
  a. Compare the cabling against the diagrams in the *HP Smart Array Controller User Guide*.
  b. If the routing is correct, replace cables on the specified port until the POST error message is eliminated.

1778-Drive Array Resuming Automatic Data Recovery Process

**Audible Beeps:** None  
**Possible Cause:** A controller reset or power cycle occurred while Automatic Data Recovery was in progress.  
**Action:** No action is required.

1779-Slot X Drive Array - Replacement drive(s) detected OR previously failed drive(s) now operational:...

...Port Y: SCSI ID Z:  
Restore data from backup if replacement drive X has been installed.

**Audible Beeps:** None  
**Possible Cause:** More drives failed (or were replaced) than the fault-tolerance level allows. Unable to rebuild array. If drives have not been replaced, this message indicates an intermittent drive failure.  
**Action:** Be sure the system is always powered up and down correctly:
- When powering up the system, all external storage systems must be powered up before (or at the same time as) the server.
- When powering down the system, the server must be powered down before powering down any external storage systems.

1783-Slot X Drive Array Controller Failure

**Audible Beeps:** None  
**Possible Cause:** The controller failed.  
**Action:**  
1. Reseat the array accelerator module.  
2. Reseat the controller in the PCI slot.  
3. Update the controller to the latest firmware version ("Firmware maintenance" on page 80).  
4. If the problem persists, replace the controller.
1784-Slot X Drive Array Drive Failure. The Following SCSI Drive(s) Should Be Replaced: SCSI Port Y: SCSI ID Z

**Audible Beeps:** None  
**Possible Cause:** Defective drive or SCSI cables detected.  
**Action:**
1. Be sure all cables are connected properly and securely.
2. Be sure all drives are fully seated.
3. Replace defective cables, drive X, or both.

1785-Slot X Drive Array Not Configured...  
(followed by one of the following):
...(1) Run Array Configuration Utility  
(2) No drives detected  
(3) Drive positions appear to have changed – Run Drive Array Advanced Diagnostics if previous positions are unknown. Then turn system power OFF and move drives to their original positions.  
(4) Configuration information indicates drive positions beyond the capability of this controller. This may be due to drive movement from a controller that supports more drives than the current controller.  
(5) Configuration information indicates drives were configured on a controller with a newer firmware version.

**Audible Beeps:** None  
**Possible Cause:** Drive array configuration not detected.  
**Action:**
- Run ACU ("Array Configuration Utility" on page 70).  
- Power down the system and check SCSI cable connections to be sure the drives are connected properly.  
- Run ADU ("Array diagnostic software" on page 76) if previous positions are unknown. Then, turn the system power off and move the drives to their original positions.  
- To avoid data loss, update the controller firmware to the same or later version on the original controller ("Firmware maintenance" on page 80).

1786-Disk 0 Software RAID Failure, Booting Disk 1

**Audible Beeps:** None  
**Possible Cause:** The operating system has marked the RAID 1 bootable partition on Disk 0 as bad or the hard drive has failed.  
**Action:** The system attempts to boot from Disk 1. Perform one of the following actions:
- Replace the primary drive, if applicable, and re-mirror the data from the secondary drive.  
- Repair the logical drive. Refer to the operating system documentation.

1786-Slot 1 Drive Array Recovery Needed...  
...The following SCSI drive(s) need Automatic Data Recovery: SCSI Port Y: SCSI ID Z
Select F1 to continue with recovery of data to drive. Select F2 to continue without recovery of data to drive.
Audible Beeps: None

Possible Cause: A failed or replacement drive has not yet been rebuilt.

Action:
- Perform one of the following actions:
  - Press the F1 key to continue with recovery of data to the drive. Data will be automatically restored to drive X when a failed drive has been replaced, or to the original drive if it is working again without errors.
  - Press the F2 key to continue without recovery of data to the drive. The failed drive will not be rebuilt and the system will continue to operate in a failed state of Interim Data Recovery Mode.
- Replace the failed drive and press the F1 key to rebuild the array. If the drive rebuild is not successful or is aborted because the system rebooted before the rebuild of the drive completed, another version of the 1786 POST error message will be displayed. Refer to the following message.

1786-Slot 1 Drive Array Recovery Needed. Automatic Data Recovery Previously Aborted!...
...The following SCSI drive(s) need Automatic Data Recovery: SCSI Port Y: SCSI ID Z
Select F1 to retry Automatic Data Recovery to drive. Select F2 to continue without starting Automatic Data Recovery.

Audible Beeps: None

Possible Cause: System is in Interim Data Recovery Mode and a failed or replacement drive has not yet been rebuilt. This message is displayed if the F2 key was pressed during a previous boot or if the F1 key was pressed during a previous boot and the system rebooted before the rebuild of the drive completed.

Action:
- Perform one of the suggested actions:
  - Press the F1 key to retry Automatic Data Recovery to the drive. Data will be automatically restored to drive X when a failed drive has been replaced, or to the original drive if it is working again without errors.
  - Press the F2 key to continue without recovery of data to the drive. The failed drive will not be rebuilt and the system will continue to operate in a failed state of Interim Data Recovery Mode.
- If drive recovery is not successful, run ADU ("Array diagnostic software" on page 76) for more information.
  - If the replacement drive failed, replace with another drive.
  - If the rebuild was aborted due to a read error from another physical drive in the array, back up all readable data on the array, run ADU, and then restore the data.

1787-Drive Array Operating in Interim Recovery Mode...
...Physical drive replacement needed: Drive X

Audible Beeps: None

Possible Cause: Hard drive X failed or cable is loose or defective. Following a system restart, this message notes that drive X is defective and fault tolerance is being used.

Action:
1. Be sure all cables are connected properly and securely.
2. Test and replace defective cables.
3. Replace drive X. (depending on the fault-tolerance level, all data may be lost if another drive fails).

1788-Slot X Drive Array Reports Incorrect Drive Replacement...
...The following SCSI drive(s) should have been replaced: SCSI Port Y: SCSI ID Z.
The following SCSI drive(s) were incorrectly replaced: SCSI Port y: SCSI ID z.
Select F1 to continue – drive array will remain disabled.
Select F2 to reset configuration – all data will be lost.

**Audible Beeps**: None

**Possible Cause**: 
- Replacement drives may have been installed in the wrong drive bays.
- A bad power cable connection to the drive, noise on the data cable, or defective SCSI cable exists.

**Action**: 
- If replacement drives are installed in the wrong bays, properly reinstall the drives as indicated and:
  - Press the **F1** key to restart the server with the drive array disabled.
  - Press the **F2** key to use the drives as configured and lose all the data on them.
- If a bad power cable connection exists:
  - Repair the connection and press the **F2** key.
  - If the problem persists, run ADU ("Array diagnostic software" on page 76) to resolve.
- Be sure the cable is routed properly.

1789-Slot X Drive Array SCSI Drive(s) Not Responding...
...Check cables or replace the following SCSI drives: SCSI Port Y: SCSI ID Z
Select F1 to continue – drive array will remain disabled.
Select F2 to failed drives that are not responding – Interim Recovery Mode will be enabled if configured for fault tolerance.

**Audible Beeps**: None

**Possible Cause**: Drives that were working when the system was last used are now missing or are not starting up. A possible drive problem or loose SCSI cable exists.

**Action**: 
1. Power down the system.
2. Be sure all cables are properly connected.
3. Be sure all drives are fully seated.
4. Power cycle any external SCSI enclosures while the system is off.
5. Power up the server to see if the problem still exists.
6. If configured for fault-tolerant operation and the RAID level can sustain failure of all indicated drives:
   - Press the **F2** key to fail the drives that are not responding
   - Replace the failed drives.
7. Press the **F1** key to start the system with all logical drives on the controller disabled.

Be sure the system is always powered up and down correctly.
- When powering up the system, all external storage systems must be powered up before the server.
When powering down the system, the server must be powered down before external storage systems.

**1792-Drive Array Reports Valid Data Found in Array Accelerator...**

...Data will automatically be written to drive array.

**Audible Beeps:** None

**Possible Cause:** Power was interrupted while data was in the array accelerator memory. Power was then restored within several days, and the data in the array accelerator was flushed to the drive array.

**Action:** No action is required. No data has been lost. Perform orderly system shutdowns to avoid leaving data in the array accelerator.

**1793-Drive Array - Array Accelerator Battery Depleted - Data Lost. (Error message 1794 also displays.)**

**Audible Beeps:** None

**Possible Cause:** Power was interrupted while data was in the array accelerator memory, or the array accelerator batteries failed. Data in array accelerator has been lost.

**Action:**
1. Verify the integrity of the data stored on the drive. Power was not restored within enough time to save the data.
2. Perform orderly system shutdowns to avoid leaving data in the array accelerator.

**1794-Drive Array - Array Accelerator Battery Charge Low...**

...Array Accelerator is temporarily disabled. Array Accelerator will be re-enabled when battery reaches full charge.

**Audible Beeps:** None

**Possible Cause:** The battery charge is below 75 percent. Posted writes are disabled.

**Action:** Replace the array accelerator board if the batteries do not recharge within 36 powered-on hours.

**1795-Drive Array - Array Accelerator Configuration Error...**

...Data does not correspond to this drive array. Array Accelerator is temporarily disabled.

**Audible Beeps:** None

**Possible Cause:** Power was interrupted while data was in the array accelerator memory, or the data stored in the array accelerator does not correspond to this drive array.

**Action:** Match the array accelerator to the correct drive array, or run ACU ("Array Configuration Utility" on page 70) to clear the data in the array accelerator.

**1796-Drive Array - Array Accelerator Not Responding...**

...Array Accelerator is temporarily disabled.
Audible Beeps: None

Possible Cause: Array accelerator is defective or is missing. Depending on the array controller model, the cache may be disabled or the controller might not be usable until this problem is corrected.

Action:
1. Reseat the array accelerator daughter board if the connector is loose.
2. If the problem persists, replace the board.

1797-Drive Array - Array Accelerator Read Error Occurred...
...Data in Array Accelerator has been lost.
Array Accelerator is disabled.

Audible Beeps: None

Possible Cause: Hard parity error detected while reading data from posted-writes memory.

Action: Replace the array accelerator daughter board.

1798-Drive Array - Array Accelerator Self-Test Error Occurred...
...Array Accelerator is disabled.

Audible Beeps: None

Possible Cause: Array accelerator failed self-test. Depending on the array controller model, the cache may be disabled or the controller might not be usable until this problem is corrected.

Action: Replace the array accelerator daughter board.

1799-Drive Array - Drive(s) Disabled Due to Array Accelerator Data Loss...
...Select “F1“ to continue with logical drives disabled.
Select “F2“ to accept data loss and to re-enable logical drives.

Audible Beeps: None

Possible Cause: One or more logical drives failed due to loss of data in posted-writes memory.

Action:
- Press the F1 key to continue with the logical drives disabled.
- Press the F2 key to accept data loss and re-enable logical drives. After pressing the F2 key, check integrity of the file system and restore lost data from backup.