IBM NeXtScale nx360 M4
Type 5455

Installation and Service Guide

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Type 5455

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Safety

Before installing this product, read the Safety Information.

قبل تركيب هذا المنتج، يجب قراءة الملاحظات الآمنية

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 Safety Information
(安全信息)。

安裝本產品之前，請先閱讀「安全資訊」。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας
(safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

ᠡᠨᠡ ᠵᠦᠢᠯ ᠢ ᠤᠭᠰᠠᠷᠠᠬᠤ ᠠᠴᠠ ᠡᠮᠦᠨᠡ ᠠᠶᠤᠯ ᠦᠭᠡᠢ ᠮᠡᠳᠡᠭᠡᠯᠡᠯ ᠢ ᠤᠩᠰᠢᠭᠠᠷᠠᠢ᠃
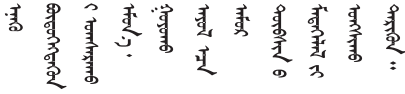
Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się
z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по
технике безопасности.

Pred inštaláciou tohto zariadenia si pečítaje Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto, lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

ཐོན་རྫས་འདི་བདེ་སྐྱིད་མ་བྱས་གོང་། སྐོར་གྱི་ཡིད་གཟབ་
བྱ་འདུ་མིན་ཡོད་པའི་འོད་སྐྱེར་བལྟ་དགོས།

Bu ürünü kurmadan önce güvenlik bilgilerini okuyun.

مەزكۇر مەھسۇلاتنى ئورنتششتن بۇرۇن بخەتەرلىك ئۇچۇرلىرىنى ئوقۇپ چىقىڭ.

Youq mwngz yungh canjbinj neix gaxgonq, itdingh aeu doeg aen
canjbinj soengq cungj vahgangj ancien siusik.

Guidelines for trained service technicians

This section contains information for trained service technicians.

Inspecting for unsafe conditions

Use this information to help you identify potential unsafe conditions in an IBM®
product that you are working on.

Each IBM product, as it was designed and manufactured, has required safety items
to protect users and service technicians from injury. The information in this section
addresses only those items. Use good judgment to identify potential unsafe
conditions that might be caused by non-IBM alterations or attachment of non-IBM
features or optional devices that are not addressed in this section. If you identify

an unsafe condition, you must determine how serious the hazard is and whether you must correct the problem before you work on the product.

Consider the following conditions and the safety hazards that they present:

- Electrical hazards, especially primary power. Primary voltage on the frame can cause serious or fatal electrical shock.
- Explosive hazards, such as a damaged CRT face or a bulging capacitor.
- Mechanical hazards, such as loose or missing hardware.

To inspect the product for potential unsafe conditions, complete the following steps:

1. Make sure that the power is off and the power cords are disconnected.
2. Make sure that the exterior cover is not damaged, loose, or broken, and observe any sharp edges.
3. Check the power cords:
   - Make sure that the third-wire ground connector is in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and the frame ground.
   - Make sure that the power cords are the correct type.
   - Make sure that the insulation is not frayed or worn.
4. Remove the cover.
5. Check for any obvious non-IBM alterations. Use good judgment as to the safety of any non-IBM alterations.
6. Check inside the system for any obvious unsafe conditions, such as metal filings, contamination, water or other liquid, or signs of fire or smoke damage.
7. Check for worn, frayed, or pinched cables.
8. Make sure that the power-supply cover fasteners (screws or rivets) have not been removed or tampered with.

Guidelines for servicing electrical equipment

Observe these guidelines when you service electrical equipment.

- Check the area for electrical hazards such as moist floors, nongrounded power extension cords, and missing safety grounds.
- Use only approved tools and test equipment. Some hand tools have handles that are covered with a soft material that does not provide insulation from live electrical current.
- Regularly inspect and maintain your electrical hand tools for safe operational condition. Do not use worn or broken tools or testers.
- Do not touch the reflective surface of a dental mirror to a live electrical circuit. The surface is conductive and can cause personal injury or equipment damage if it touches a live electrical circuit.
- Some rubber floor mats contain small conductive fibers to decrease electrostatic discharge. Do not use this type of mat to protect yourself from electrical shock.
- Do not work alone under hazardous conditions or near equipment that has hazardous voltages.
- Locate the emergency power-off (EPO) switch, disconnecting switch, or electrical outlet so that you can turn off the power quickly in the event of an electrical accident.
- Disconnect all power before you perform a mechanical inspection, work near power supplies, or remove or install main units.

- Before you work on the equipment, disconnect the power cord. If you cannot disconnect the power cord, have the customer power-off the wall box that supplies power to the equipment and lock the wall box in the off position.
- Never assume that power has been disconnected from a circuit. Check it to make sure that it has been disconnected.
- If you have to work on equipment that has exposed electrical circuits, observe the following precautions:
  - Make sure that another person who is familiar with the power-off controls is near you and is available to turn off the power if necessary.
  - When you work with powered-on electrical equipment, use only one hand. Keep the other hand in your pocket or behind your back to avoid creating a complete circuit that could cause an electrical shock.
  - When you use a tester, set the controls correctly and use the approved probe leads and accessories for that tester.
  - Stand on a suitable rubber mat to insulate you from grounds such as metal floor strips and equipment frames.
- Use extreme care when you measure high voltages.
- To ensure proper grounding of components such as power supplies, pumps, blowers, fans, and motor generators, do not service these components outside of their normal operating locations.
- If an electrical accident occurs, use caution, turn off the power, and send another person to get medical aid.

Safety statements

These statements provide the caution and danger information that is used in this documentation.

Important:

Each caution and danger statement in this documentation is labeled with a number. This number is used to cross reference an English-language caution or danger statement with translated versions of the caution or danger statement in the *Safety Information* document.

For example, if a caution statement is labeled `Statement 1`, translations for that caution statement are in the *Safety Information* document under `Statement 1`.

Be sure to read all caution and danger statements in this documentation before you perform the procedures. Read any additional safety information that comes with your system or optional device before you install the device.

Statement 1

DANGER

> Electrical current from power, telephone, and communication cables is hazardous.
>
> To avoid a shock hazard:
> - Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
> - Connect all power cords to a properly wired and grounded electrical outlet.
> - Connect to properly wired outlets any equipment that will be attached to this product.
> - When possible, use one hand only to connect or disconnect signal cables.
> - Never turn on any equipment when there is evidence of fire, water, or structural damage.
> - Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
> - Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.

To Connect:	To Disconnect:
1. Turn everything OFF.	1. Turn everything OFF.
2. First, attach all cables to devices.	2. First, remove power cords from outlet.
3. Attach signal cables to connectors.	3. Remove signal cables from connectors.
4. Attach power cords to outlet.	4. Remove all cables from devices.
5. Turn device ON.	

Statement 2

CAUTION:
When replacing the lithium battery, use only IBM Part Number 33F8354 or an equivalent type battery recommended by the manufacturer. If your system has a module containing a lithium battery, replace it only with the same module type made by the same manufacturer. The battery contains lithium and can explode if not properly used, handled, or disposed of.

Do not:
- Throw or immerse into water
- Heat to more than 100°C (212°F)
- Repair or disassemble

Dispose of the battery as required by local ordinances or regulations.

Statement 3

CAUTION:
When laser products (such as CD-ROMs, DVD drives, fiber optic devices, or transmitters) are installed, note the following:

• Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.

• Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

DANGER

Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following.

Laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam.

Class 1 Laser Product
Laser Klasse 1
Laser Klass 1
Luokan 1 Laserlaite
Appareil À Laser de Classe 1

Statement 4

CAUTION:
Use safe practices when lifting.
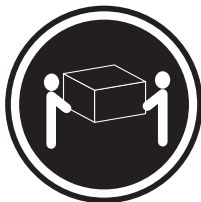
≥ 18 kg (39.7 lb)   ≥ 32 kg (70.5 lb)   ≥ 55 kg (121.2 lb)

Statement 5

CAUTION:
The power control button on the device and the power switch on the power supply do not turn off the electrical current supplied to the device. The device also might have more than one power cord. To remove all electrical current from the device, ensure that all power cords are disconnected from the power source.
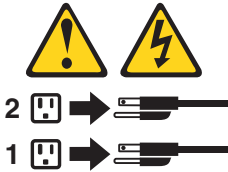
Statement 6

CAUTION:
If you install a strain-relief bracket option over the end of the power cord that is connected to the device, you must connect the other end of the power cord to an easily accessible power source.

Statement 8

CAUTION:
Never remove the cover on a power supply or any part that has the following label attached.

Hazardous voltage, current, and energy levels are present inside any component that has this label attached. There are no serviceable parts inside these components. If you suspect a problem with one of these parts, contact a service technician.

Statement 12

CAUTION:
The following label indicates a hot surface nearby.

Statement 26

CAUTION:
Do not place any object on top of rack-mounted devices.

Statement 27

CAUTION:
Hazardous moving parts are nearby.

Rack Safety Information, Statement 2

DANGER

- **Always lower the leveling pads on the rack cabinet.**
- **Always install stabilizer brackets on the rack cabinet.**
- **Always install servers and optional devices starting from the bottom of the rack cabinet.**
- **Always install the heaviest devices in the bottom of the rack cabinet.**

Chapter 1. The IBM NeXtScale nx360 M4 Compute Node Type 5455

The IBM NeXtScale nx360 M4 Compute Node Type 5455 is a high-availability, scalable compute node that is optimized to support the next-generation microprocessor technology and is ideally suited for medium and large businesses.

The IBM NeXtScale nx360 M4 Compute Node Type 5455 is supported in the IBM NeXtScale n1200 Enclosure only.

This documentation provides the following information about setting up and troubleshooting the compute node:
- Starting and configuring the compute node
- Installing the operating system
- Diagnosing problems
- Installing, removing, and replacing components

Packaged with the compute node are software CDs that help you configure hardware, install device drivers, and install the operating system.

If firmware and documentation updates are available, you can download them from the IBM website. The server might have features that are not described in the documentation that comes with the server, and the documentation might be updated occasionally to include information about those features, or technical updates might be available to provide additional information that is not included in the server documentation. To check for updates, go to http://www.ibm.com/supportportal.

The compute node comes with a limited warranty. For information about the terms of the warranty and getting service and assistance, see the *Warranty Information* document for your compute node.

You can download the IBM *ServerGuide Setup and Installation* CD to help you configure the hardware, install device drivers, and install the operating system.

For a list of supported optional devices for the server, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.

See the *Rack Installation Instructions* document on the IBM *System x Documentation* CD for complete rack installation and removal instructions.

You can obtain up-to-date information about the server and other IBM server products at http://www.ibm.com/systems/x. At http://www.ibm.com/supportportal, you can create a personalized support page by identifying IBM products that are of interest to you. From this personalized page, you can subscribe to weekly email notifications about new technical documents, search for information and downloads, and access various administrative services.

The compute node might have features that are not described in the documentation that comes with the compute node. The documentation might be updated occasionally to include information about those features. Technical updates might also be available to provide additional information that is not

included in the compute node documentation. To obtain the most up-to-date documentation for this product, go to http://publib.boulder.ibm.com/infocenter/ flexsys/information/index.jsp.

You can subscribe to information updates that are specific to your compute node at http://www.ibm.com/support/mynotifications.

The model number and serial number are on the ID label on the bezel on the front of the compute node, and on a label on the bottom of the compute node that is visible when the compute node is not in the IBM NeXtScale n1200 Enclosure. If the compute node comes with an RFID tag, the RFID tag covers the ID label on the bezel on the front of the compute node, but you can open the RFID tag to see the ID label behind it.

Note: The illustrations in this document might differ slightly from your hardware.
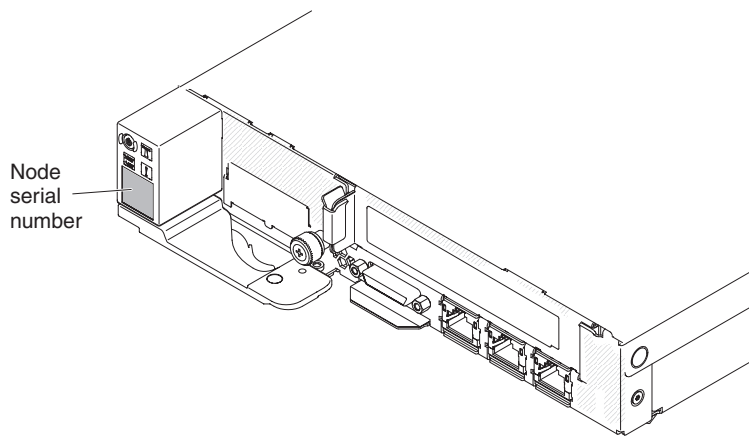
Figure 1. NeXtScale nx360 M4 compute node

In addition, the system service label, which is on the cover of the server, provides a QR code for mobile access to service information. You can scan the QR code using a QR code reader and scanner with a mobile device and get quick access to the IBM Service Information website. The IBM Service Information website provides additional information for parts installation and replacement videos, and error codes for server support.

The following illustration shows the QR code (http://ibm.co/1hrOZP0):

Figure 2. QR code

The IBM Documentation CD

The IBM *Documentation* CD contains documentation for the server in Portable Document Format (PDF) and includes the IBM Documentation Browser to help you find information quickly.

Hardware and software requirements

The hardware and software requirements of the IBM *Documentation* CD.

The IBM *Documentation* CD requires the following minimum hardware and software:
- Microsoft Windows or Red Hat Linux
- 100 MHz microprocessor
- 32 MB of RAM
- Adobe Acrobat Reader 3.0 (or later) or xpdf, which comes with Linux operating systems

The Documentation Browser

Use the Documentation Browser to browse the contents of the CD, read brief descriptions of the documents, and view documents, using Adobe Acrobat Reader or xpdf.

The Documentation Browser automatically detects the regional settings in use in your server and displays the documents in the language for that region (if available). If a document is not available in the language for that region, the English-language version is displayed. Use one of the following procedures to start the Documentation Browser:
- If Autostart is enabled, insert the CD into the CD or DVD drive. The Documentation Browser starts automatically.
- If Autostart is disabled or is not enabled for all users, use one of the following procedures:
  - If you are using a Windows operating system, insert the CD into the CD or DVD drive and click **Start** > **Run**. In the Open field, type:

    `e:\win32.bat`

    where *e* is the drive letter of the CD or DVD drive, and click **OK**.
  - If you are using Red Hat Linux, insert the CD into the CD or DVD drive; then, run the following command from the `/mnt/cdrom` directory:

    `sh runlinux.sh`

Select the server from the **Product** menu. The **Available Topics** list displays all the documents for the server. Some documents might be in folders. A plus sign (+) indicates each folder or document that has additional documents under it. Click the plus sign to display the additional documents.

When you select a document, a description of the document is displayed under **Topic Description**. To select more than one document, press and hold the Ctrl key while you select the documents. Click **View Book** to view the selected document or documents in Acrobat Reader or xpdf. If you selected more than one document, all the selected documents are opened in Acrobat Reader or xpdf.

To search all the documents, type a word or word string in the **Search** field and click **Search**. The documents in which the word or word string appears are listed in order of the most occurrences. Click a document to view it, and press Crtl+F to use the Acrobat search function, or press Alt+F to use the xpdf search function within the document.

Click **Help** for detailed information about using the Documentation Browser.

Related documentation

This *Installation and Service Guide* contains general information about the server including how to set up and cable the server, how to install supported optional devices, how to configure the server, and information to help you solve problems yourself and information for service technicians.

The following documentation also comes with the server:

- *Warranty Information*

  This document is in printed format and comes with the server. It contains warranty terms and a pointer to the IBM Statement of Limited Warranty on the IBM website.

- *Important Notices*

  This document is in printed format and comes with the server. It contains information about the safety, environmental, and electronic emission notices for your IBM product.

- *Environmental Notices and User Guide*

  This document is in PDF format on the IBM *Documentation* CD. It contains translated environmental notices.

- *IBM License Agreement for Machine Code*

  This document is in PDF on the IBM *Documentation* CD. It provides translated versions of the *IBM License Agreement for Machine Code* for your product.

- *Licenses and Attributions Document*

  This document is in PDF on the IBM *Documentation* CD. It provides the open source notices.

- *Safety Information*

  This document is in PDF on the IBM *Documentation* CD. It contains translated caution and danger statements. Each caution and danger statement that appears in the documentation has a number that you can use to locate the corresponding statement in your language in the *Safety Information* document.

Depending on the server model, additional documentation might be included on the IBM *Documentation* CD.

The ToolsCenter for System x and BladeCenter is an online information center that contains information about tools for updating, managing, and deploying firmware, device drivers, and operating systems. The ToolsCenter for System x and BladeCenter is at http://publib.boulder.ibm.com/infocenter/toolsctr/v1r0/.

The server might have features that are not described in the documentation that you received with the server. The documentation might be updated occasionally to include information about those features, or technical updates might be available to provide additional information that is not included in the server documentation. These updates are available from the IBM website. To check for updates, go to http://www.ibm.com/supportportal.

Notices and statements in this document

The caution and danger statements in this document are also in the multilingual *Safety Information* document, which is on the IBM *Documentation* CD. Each statement is numbered for reference to the corresponding statement in your language in the *Safety Information* document.

The following notices and statements are used in this document:

- **Note:** These notices provide important tips, guidance, or advice.
- **Important:** These notices provide information or advice that might help you avoid inconvenient or problem situations.
- **Attention:** These notices indicate potential damage to programs, devices, or data. An attention notice is placed just before the instruction or situation in which damage might occur.
- **Caution:** These statements indicate situations that can be potentially hazardous to you. A caution statement is placed just before the description of a potentially hazardous procedure step or situation.
- **Danger:** These statements indicate situations that can be potentially lethal or extremely hazardous to you. A danger statement is placed just before the description of a potentially lethal or extremely hazardous procedure step or situation.

Features and specifications

Use this information to view specific information about the compute node, such as compute node hardware features and the dimensions of the compute node.

Notes:

1. Power, cooling, and chassis systems management are provided by the IBM NeXtScale n1200 Enclosure chassis.
2. The operating system in the compute node must provide USB support for the compute node to recognize and use USB media drives and devices. The IBM NeXtScale n1200 Enclosure chassis uses USB for internal communication with these devices.

The following table is a summary of the features and specifications of the NeXtScale nx360 M4 compute node.

Table 1. Features and specifications

Microprocessor (depending on the model):	Size:

• Supports up to two multi-core microprocessors (one installed)
• Level-3 cache
• Two QuickPath Interconnect (QPI) links speed up to 8.0 GT per second
 	
Notes:
• Use the Setup utility program to determine the type and speed of the microprocessors.
• For a list of supported microprocessors, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.
 	
Integrated functions:
• Integrated Management Module II (IMM2), which consolidates multiple management functions in a single chip.
• Concurrent COM/VGA/2x USB (KVM)
• System error LEDs
• Software RAID supportability for RAID level-0, RAID level-1, or RAID level-10
• Hardware RAID supportability for RAID level-0, RAID level-1, RAID level-5, or RAID level-10
• Wake on LAN (WOL)
 	
Memory:
• 8 dual inline memory module (DIMM) connectors
• Type: Low-profile (LP) double-data rate (DDR3) DRAM
• Supports 4 GB, 8 GB, and 16 GB DIMMs with up to 128 GB of total memory on the system board
• Support for UDIMMs and RDIMMs (combining is not supported)
 	
Drives: Supports up to eight 3.5-inch SATA (if the storage tray is installed, up to 7 in the storage tray and 1 in the compute node), two 2.5-inch SATA/SAS, or four 1.8-inch solid-state drives.[1]
 	
Upgradeable firmware: All firmware is field upgradeable.
 	
Expansion slots:
• Compute node
  – PCI Express x16 (x8 mechanically) slots (PCIe3.0, full-height, half-length)
• GPU tray
  – Two PCI Express x16 (x16 mechanically) slots (PCIe3.0, full-height, full-length)
	• Compute node
	  – Height: 41 mm (1.6 in)
	  – Depth: 658.8 mm (25.9 in)
	  – Width: 216 mm (8.5 in)
	  – Weight estimation (based on the LFF HDD within computer node): 6.05 kg (13.31 lb)
	• storage tray
	  – Height: 58.3 mm (2.3 in)
	  – Depth: 659 mm (25.9 in)
	  – Width: 216 mm (8.5 in)
	  – Weight estimation (with 7 hard disk drives installed): 8.64 kg (19 lb)
	
	Environment:
	
	The NeXtScale nx360 M4 compute node complies with ASHRAE class A3 specifications.
	• Power on[2]:
	  – Temperature: 5°C - 40°C (41°F - 104°F)[3]
	  – Humidity, non-condensing: -12°C dew point (10.4°F) and 8% - 85% relative humidity[4,5]
	  – Maximum dew point: 24°C (75°F)
	  – Maximum altitude: 3048 m (10,000 ft)
	  – Maximum rate of temperature change: 5°C/hr (41°F/hr)[6]
	• Power off[7]:
	  – Temperature: 5°C to 45°C (41°F - 113°F)
	  – Relative humidity: 8% - 85%
	  – Maximum dew point: 27°C (80.6°F)
	• Storage (non-operating):
	  – Temperature: 1°C to 60°C (33.8°F - 140°F)
	  – Altitude: 3050 m (10,006 ft)
	  – Relative humidity: 5% - 80%
	  – Maximum dew point: 29°C (84.2°F)
	• Shipment (non-operating)[8]:
	  – Temperature: -40°C to 60°C (-40°F - 140°F)
	  – Altitude: 10,700 m (35,105 ft)
	  – Relative humidity: 5% - 100%
	  – Maximum dew point: 29°C (84.2°F)[9]
	• Particulate contamination
	
	  Attention:
	  – Design to ASHRAE Class A3, temperature: 36°C - 40°C (96.8°F - 104°F), with relaxed support:
	    - Support cloud such as workload with no performance degradation acceptable (turbo-off)
	    - Under no circumstance, can any combination of the worst case workload and configuration result in system shutdown or design exposure at 40°C
	    - The worst case workload (such as linpack and turbo-on) may have performance degradation
	  – Airborne particulates and reactive gases acting alone or in combination with other environmental factors such as humidity or temperature might pose a risk to the compute node. For information about the limits for particulates and gases, see "Particulate contamination" on page 377.

Table 1. Features and specifications (continued)

1. Onboard LSI software SATA RAID supports SATA drives and Solid state drives (SSD). SAS drives are not supported for software RAID. The booting and use of internal drives with VMware is not supported with the ServeRAID C100 (software RAID) controller.
2. Chassis is powered on.
3. A3 - Derate maximum allowable temperature 1°C/175 m above 950 m.
4. The minimum humidity level for class A3 is the higher (more moisture) of the -12°C dew point and the 8% relative humidity. These intersect at approximately 25°C. Below this intersection (~25°C), the dew point (-12°C) represents the minimum moisture level; above the intersection, relative humidity (8%) is the minimum.
5. Moisture levels lower than 0.5°C DP, but not lower -10 °C DP or 8% relative humidity, can be accepted if appropriate control measures are implemented to limit the generation of static electricity on personnel and equipment in the data center. All personnel and mobile furnishings and equipment must be connected to ground via an appropriate static control system. The following items are considered the minimum requirements:
    a. Conductive materials (conductive flooring, conductive footwear on all personnel who go into the datacenter; all mobile furnishings and equipment will be made of conductive or static dissipative materials).
    b. During maintenance on any hardware, a properly functioning wrist strap must be used by any personnel who contacts IT equipment.
6. 5°C/hr for data centers employing tape drives and 20°C/hr for data centers employing disk drives.
7. Chassis is removed from original shipping container and is installed but not in use, for example, during repair, maintenance, or upgrade.
8. The equipment acclimation period is 1 hour per 20°C of temperature change from the shipping environment to the operating environment.
9. Condensation, but not rain, is acceptable.

What your compute node offers

Your compute node offers features such as the integrated management module II, hard disk drive support, systems-management support, microprocessor technology, integrated network support, I/O expansion, large system-memory capacity, light path diagnostics LEDs, PCI Express®, and power throttling.

- **Features on Demand**

    If a Features on Demand feature is integrated in the compute node or in an optional device that is installed in the compute node, you can purchase an activation key to activate the feature. For information about Features on Demand, see /http://www.ibm.com/systems/x/fod/.

- **Flexible network support**

    The compute node provides flexible network capabilities:

    – **Models with embedded Ethernet**

        The server comes with an integrated dual-port Intel Gigabit Ethernet controller, which supports connection to a 10 Mbps, 100 Mbps, or 1000 Mbps network.

    – **Models without embedded Ethernet**

        The compute node has connectors on the system board for optional expansion adapters for adding network communication capabilities to the compute node. This provides the flexibility to install expansion adapters that support a variety of network communication technologies.

- **Hard disk drive support**

    The compute node supports up to one 3.5-inch simple-swap SATA, two 2.5-inch simple-swap SATA/SAS, or four 1.8-inch simple-swap solid-state drives. You can implement RAID 0, RAID 1, RAID 5, or RAID 10 for the drives with hardware RAID. 2.5-inch SATA and Solid state drives (SSD) support software RAID as well.

- **IBM** *ServerGuide Setup and Installation* **CD**

    The *ServerGuide Setup and Installation* CD, which you can download from the web, provides programs to help you set up the server and install a Windows

operating system. The ServerGuide program detects installed optional hardware devices and provides the correct configuration programs and device drivers. For more information about the *ServerGuide Setup and Installation* CD, see "Using the ServerGuide Setup and Installation CD" on page 24.

- **Integrated management module II (IMM2)**

  The integrated management module II (IMM2) combines service processor functions, video controller, and remote presence and blue-screen capture features in a single chip. The IMM provides advanced service-processor control, monitoring, and alerting function. If an environmental condition exceeds a threshold or if a system component fails, the IMM lights LEDs to help you diagnose the problem, records the error in the IMM event log, and alerts you to the problem. Optionally, the IMM also provides a virtual presence capability for remote server management capabilities. The IMM provides remote server management through the following industry-standard interfaces:

  - Intelligent Platform Management Interface (IPMI) version 2.0
  - Simple Network Management Protocol (SNMP) version 3.0
  - Common Information Model (CIM)
  - Web browser

  For additional information, see "Using the integrated management module" on page 33 and the *Integrated Management Module II User's Guide* at the http://www.ibm.com/supportportal.

- **Large system-memory capacity**

  The compute node supports up to 128 GB of system memory. The memory controller provides support for up to 8 industry-standard registered ECC DDR3 on low-profile (LP) DIMMs on the system board. For the most current list of supported DIMMs, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.

- **Light path diagnostics**

  Light path diagnostics provides LEDs to help you diagnose problems. For more information about light path diagnostics and the LEDs, see "Compute node controls, connectors, and LEDs" on page 12.

- **Microprocessor technology**

  The compute node supports up to two multi-core Intel Xeon microprocessors. For more information about supported microprocessors and their part numbers, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.

  Note: The optional microprocessors that IBM supports are limited by the capacity and capability of the compute node. Any microprocessor that you install must have the same specifications as the microprocessor that came with the compute node.

- **Mobile access to IBM Service Information website**

  The server provides a QR code on the system service label, which is on the cover of the server, that you can scan using a QR code reader and scanner with a mobile device to get quick access to the IBM Service Information website. The IBM Service Information website provides additional information for parts installation and replacement videos, and error codes for server support. For the QR code, see Chapter 1, "The IBM NeXtScale nx360 M4 Compute Node Type 5455," on page 1.

- **PCI Express**

  PCI Express is a serial interface that is used for chip-to-chip interconnect and expansion adapter interconnect. You can add optional I/O and storage devices.

Optional expansion nodes are available to provide a cost-effective way for you to increase and customize the capabilities of the compute node. Expansion nodes support a wide variety of industry-standard PCI Express, network, storage, and graphics adapters. For additional information, see .

- **Power throttling**

  By enforcing a power policy known as power-domain oversubscription, the IBM NeXtScale n1200 Enclosure can share the power load between twelve power supplies to ensure sufficient power for each device in the IBM NeXtScale n1200 Enclosure. This policy is enforced when the initial power is applied to the IBM NeXtScale n1200 Enclosure or when a compute node is inserted into the IBM NeXtScale n1200 Enclosure.

  The following settings for this policy are available:
  - Basic power management
  - Power module redundancy
  - Power module redundancy with compute node throttling allowed

Reliability, availability, and serviceability features

Three of the most important features in compute node design are reliability, availability, and serviceability (RAS). These RAS features help to ensure the integrity of the data that is stored in the compute node, the availability of the compute node when you need it, and the ease with which you can diagnose and correct problems.

The compute node has the following RAS features:
- Advanced Configuration and Power Interface (ACPI)
- Automatic server restart (ASR)
- Built-in diagnostics using DSA Preboot
- Built-in monitoring for temperature, voltage, and hard disk drives
- Customer support center 24 hours per day, 7 days a week[1]
- Customer upgrade of flash ROM-resident code and diagnostics
- Customer-upgradeable Unified Extensible Firmware Interface (UEFI) code and diagnostics
- ECC protected DDR3 DIMMs
- ECC protection on the L2 cache
- Error codes and messages
- Integrated management module II (IMM2)
- Light path diagnostics
- Memory parity testing
- Microprocessor built-in self-test (BIST) during power-on self-test (POST)
- Microprocessor serial number access
- Processor presence detection
- ROM-resident diagnostics
- System-error logging
- Vital product data (VPD) on memory
- Wake on LAN capability
- Wake on PCI (PME) capability

Major components of the compute node

Use this information to locate the major components on the compute node.

---

1. Service availability varies by country. Response time varies depending on the number and nature of incoming calls.

The following illustration shows the major components of the compute node.
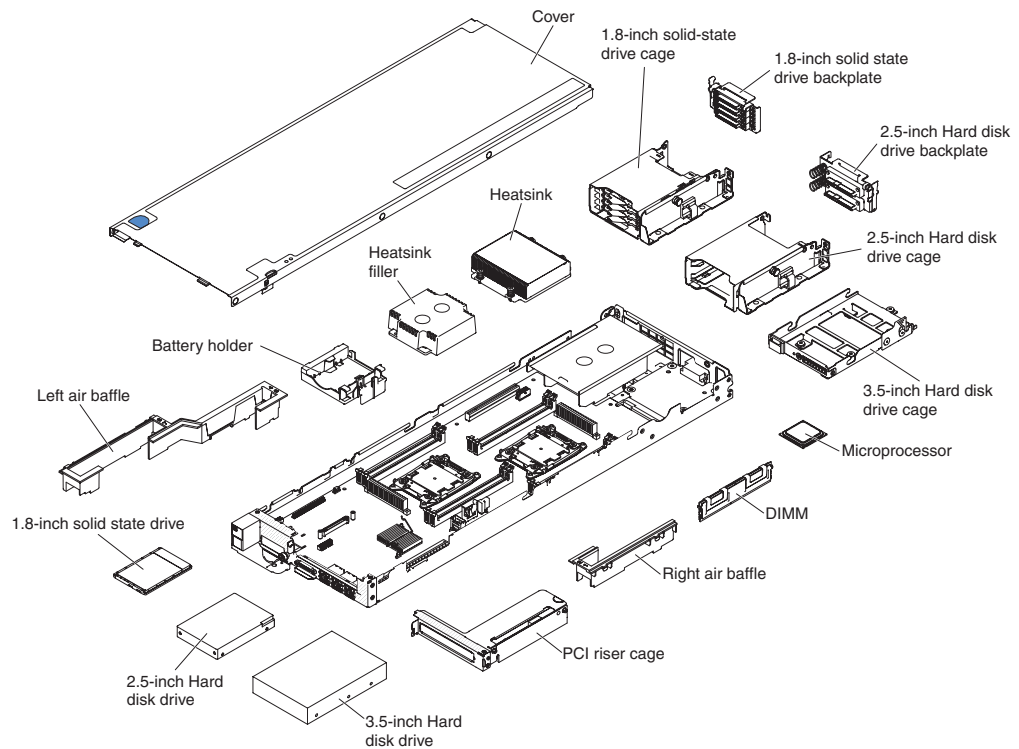
Figure 3. Major components of the compute node

Major components of the storage tray

Use this information to locate the major components on the storage tray.

The storage tray is installed on the top of a compute node. Each storage tray supports up to seven 3.5-inch LFF SATA hard disk drives.

The ServeRAID adapter can be connects from compute node via PCIe interface to support RAID level-0, RAID level-1, RAID level-5, or RAID level-10.

The following illustration shows the major components of the storage tray.
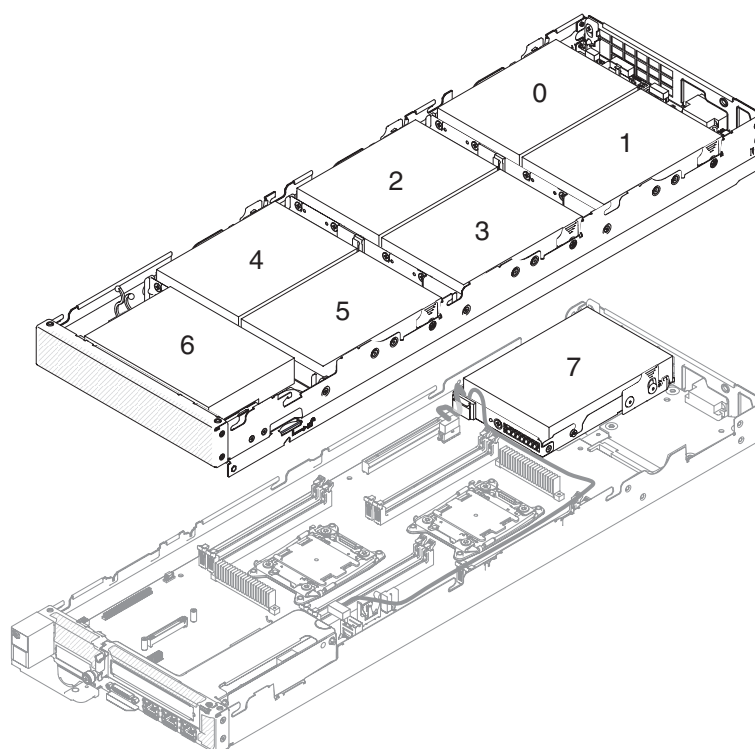
Figure 4. Major components of the storage tray

Major components of the GPU tray

Use this information to locate the major components on the GPU tray.

The GPU tray is installed on the top of a compute node. Each GPU tray supports up to two Graphics Processing Unit (GPU) enclosure (full-height, full-length).

The following illustration shows the major components of the GPU tray.
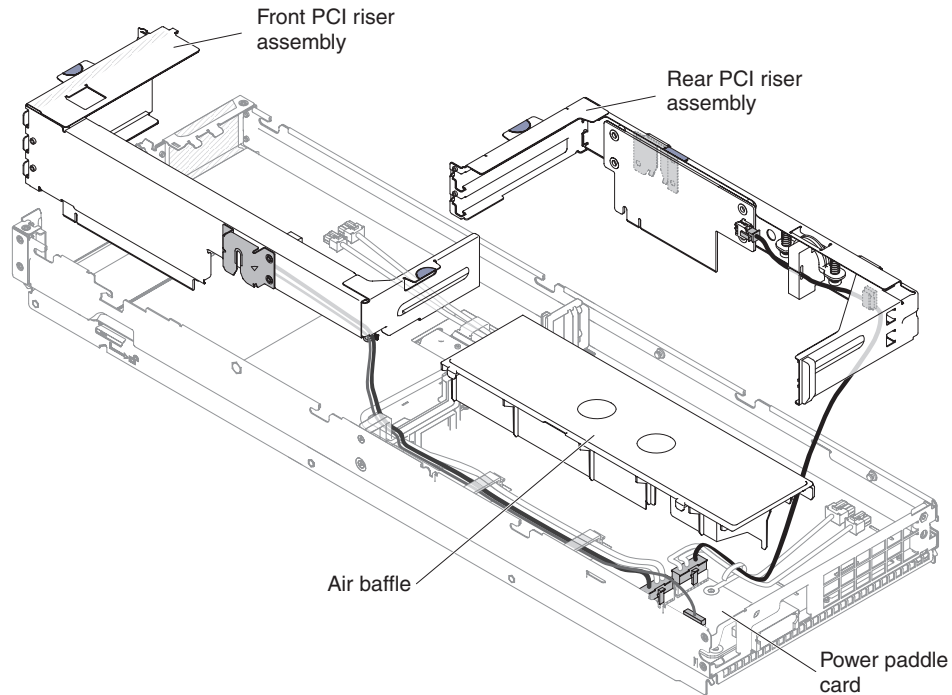
Figure 5. Major components of the GPU tray

Power, controls, and indicators

Use this information to view power features, turn on and turn off the compute node, and view the functions of the controls and indicators.

Compute node controls, connectors, and LEDs

Use this information for details about the controls, connectors, and LEDs.

The following illustration identifies the buttons, connectors, and LEDs on the control panel.
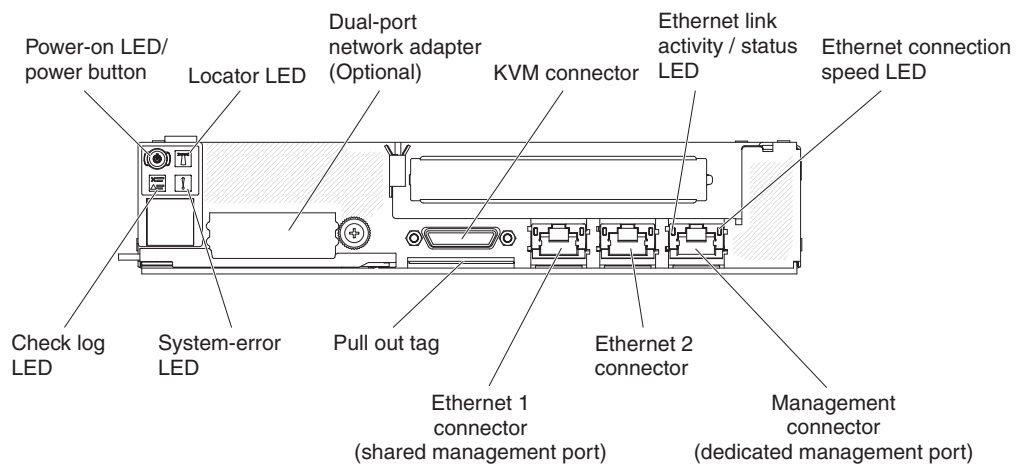
Figure 6. Compute node control panel buttons, connectors, and LEDs

Power button/LED

When the compute node is connected to power through the IBM NeXtScale n1200 Enclosure, press this button to turn on or turn off the compute node.

This button is also the power LED. This green LED indicates the power status of the compute node:

- **Flashing rapidly**: The LED flashes rapidly for the following reasons:
  - The compute node has been installed in a chassis. When you install the compute node, the LED flashes rapidly for up to 90 seconds while the integrated management module II (IMM2) in the compute node is initializing.
  - The IBM NeXtScale n1200 Enclosure does not have enough power to turn on the compute node.
  - The IMM2 in the compute node is not communicating with the Chassis Management Module.
- **Flashing slowly**: The compute node is connected to power through the IBM NeXtScale n1200 Enclosure and is ready to be turned on.
- **Lit continuously**: The compute node is connected to power through the IBM NeXtScale n1200 Enclosure and is turned on.

When the compute node is on, pressing this button causes an orderly shutdown of the compute node so that it can be removed safely from the chassis. This includes shutting down the operating system (if possible) and removing power from the compute node.

If an operating system is running, you might have to press the button for approximately 4 seconds to initiate the shutdown.

Attention: Pressing the button for 4 seconds forces the operating system to shut down immediately. Data loss is possible.

Locator LED

The system administrator can remotely light this blue LED to aid in visually locating the compute node.

Check log LED

When this yellow LED is lit, it indicates that a system error has occurred. Check the "Event logs" on page 55 for additional information.

System error LED

When this yellow LED is lit, it indicates that a system error has occurred. A system-error LED is also on the rear of the server. An LED on the light path diagnostics panel on the operator information panel or on the system board is also lit to help isolate the error. This LED is controlled by the IMM.

KVM connector

Connect the console breakout cable to this connector (see "Console breakout cable" on page 14 for more information).

Note: It is best practice to connect the console breakout cable to only one compute node at a time in each IBM NeXtScale n1200 Enclosure.

Ethernet connectors

Use either of these connectors to connect the server to a network. When you enable shared Ethernet for IMM2 in the Setup utility, you can access the IMM2 using either the Ethernet 1 or the system-management Ethernet (default) connector. See Using the Setup utility for more information.

Ethernet link activity/status LED
When any of these LEDs is lit, they indicate that the server is transmitting to or receiving signals from the Ethernet LAN that is connected to the Ethernet port that corresponds to that LED.

Management connector
Use this connector to connect the server to a network for full systems-management information control. This connector is used only by the Integrated Management Module II (IMM2). A dedicated management network provides additional security by physically separating the management network traffic from the production network. You can use the Setup utility to configure the server to use a dedicated systems management network or a shared network.

Console breakout cable

Use this information for details about the console breakout cable.

Use the console breakout cable to connect external I/O devices to the compute node. The console breakout cable connects through the KVM connector (see "Compute node controls, connectors, and LEDs" on page 12). The console breakout cable has connectors for a display device (video), two USB connectors for a USB keyboard and mouse, and a serial interface connector.

The following illustration identifies the connectors and components on the console breakout cable.
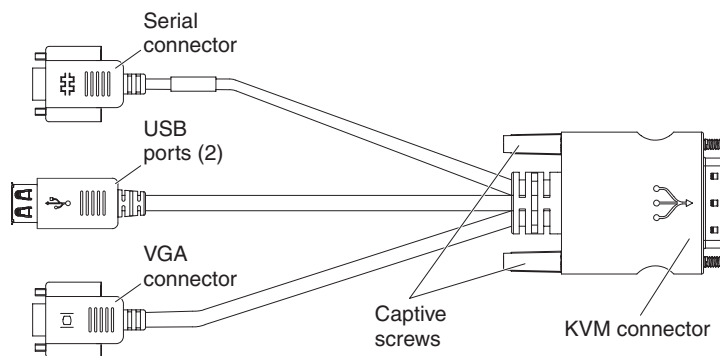
Figure 7. Console breakout cable

Note: When you install the KVM cable, gently press down the pull out tag a little to prevent interfere with the KVM cable.

Turning on the compute node

Use this information for details about turning on the compute node.

After you connect the compute node to power through the IBM NeXtScale n1200 Enclosure, the compute node can be started in any of the following ways:

- You can press the power button on the front of the compute node (see "Compute node controls, connectors, and LEDs" on page 12) to start the compute node. The power button works only if local power control is enabled for the compute node.

  Notes:

1. Wait until the power LED on the compute node flashes slowly before you press the power button. While the IMM2 in the compute node is initializing and synchronizing with the Chassis Management Module, the power LED flashes rapidly, and the power button on the compute node does not respond. This process can take approximately 90 seconds after the compute node has been installed.
2. While the compute node is starting, the power LED on the front of the compute node is lit and does not flash. See "Compute node controls, connectors, and LEDs" on page 12 for the power LED states.

- You can turn on the compute node through the Wake on LAN feature. The compute node must be connected to power (the power LED is flashing slowly) and must be communicating with the Chassis Management Module. The operating system must support the Wake on LAN feature, and the Wake on LAN feature must be enabled through the Chassis Management Module web interface.

Turning off the compute node

Use this information for details about turning off the compute node.

When you turn off the compute node, it is still connected to power through the IBM NeXtScale n1200 Enclosure. The compute node can respond to requests from the IMM2, such as a remote request to turn on the compute node. To remove all power from the compute node, you must remove it from the IBM NeXtScale n1200 Enclosure.

Before you turn off the compute node, shut down the operating system. See the operating-system documentation for information about shutting down the operating system.

The compute node can be turned off in any of the following ways:

- You can press the power button on the compute node (see "Compute node controls, connectors, and LEDs" on page 12). This starts an orderly shutdown of the operating system, if this feature is supported by the operating system.
- If the operating system stops functioning, you can press and hold the power button for more than 4 seconds to turn off the compute node.

  Attention: Pressing the power button for 4 seconds forces the operating system to shut down immediately. Data loss is possible.

System-board layouts

Use this information to locate the connectors, LEDs, jumpers, and switches on the system board.

System-board internal connectors

The following illustrations show the internal connectors on the system board.
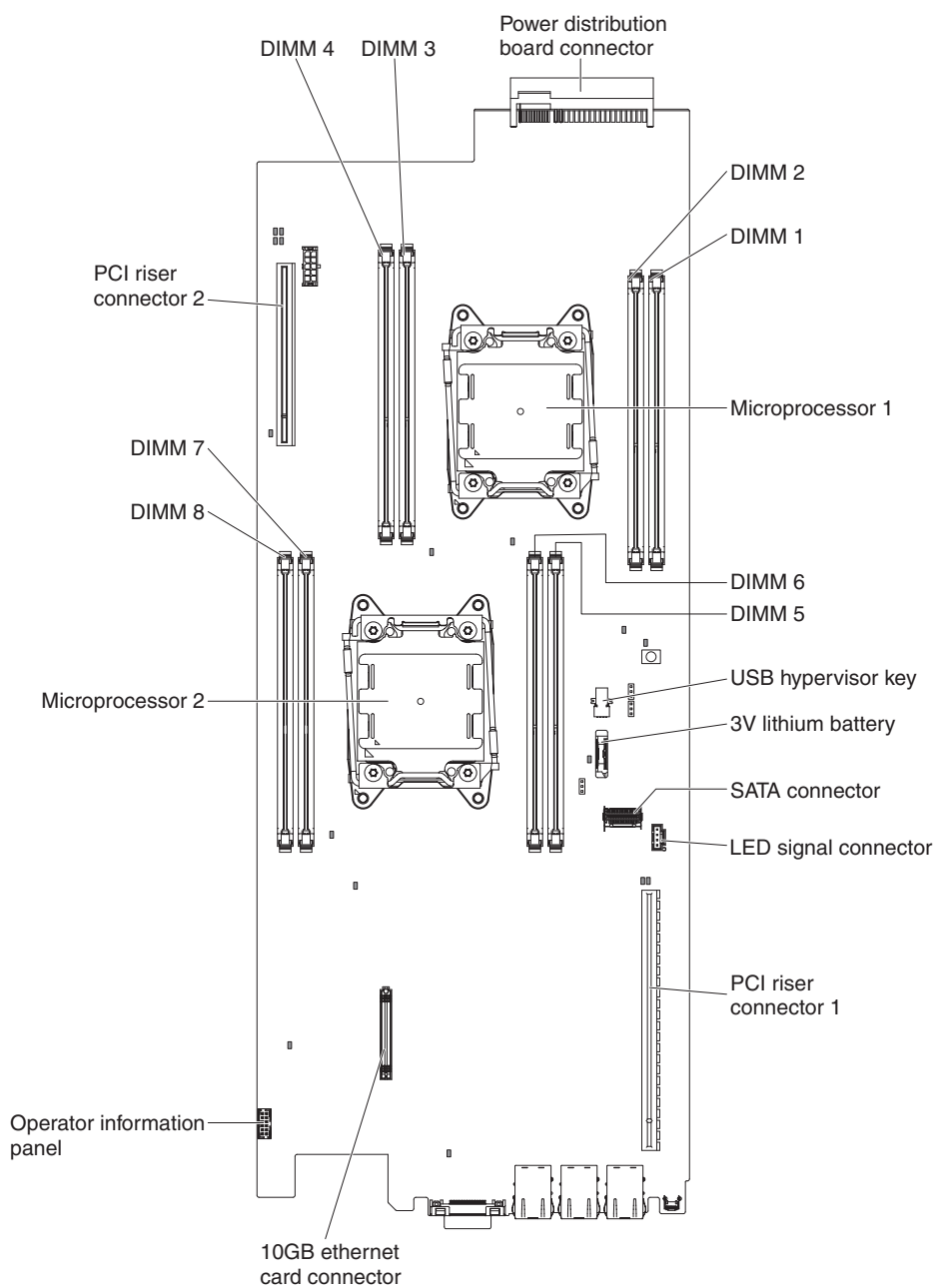
Figure 8. Internal connectors on system board

System-board external connectors

The following illustration shows the external connectors on the system board.

KVM connector   Ethernet 1   Ethernet 2   Management
               connector   connector   connector
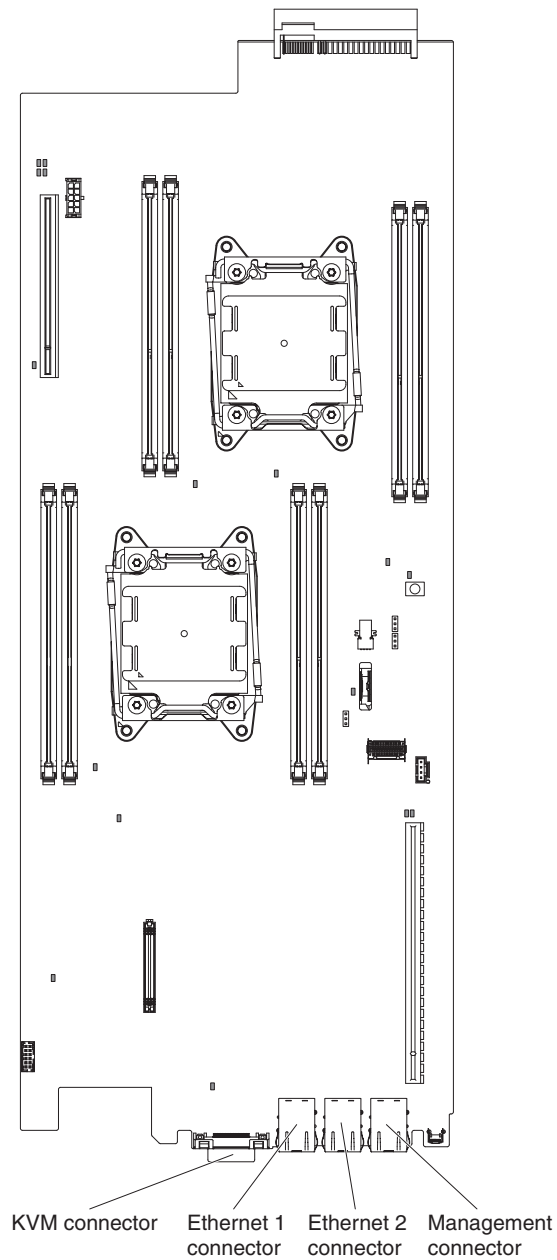
Figure 9. External connectors on system board

System-board switches and jumpers

The following illustration shows the location and description of the switches and jumpers.
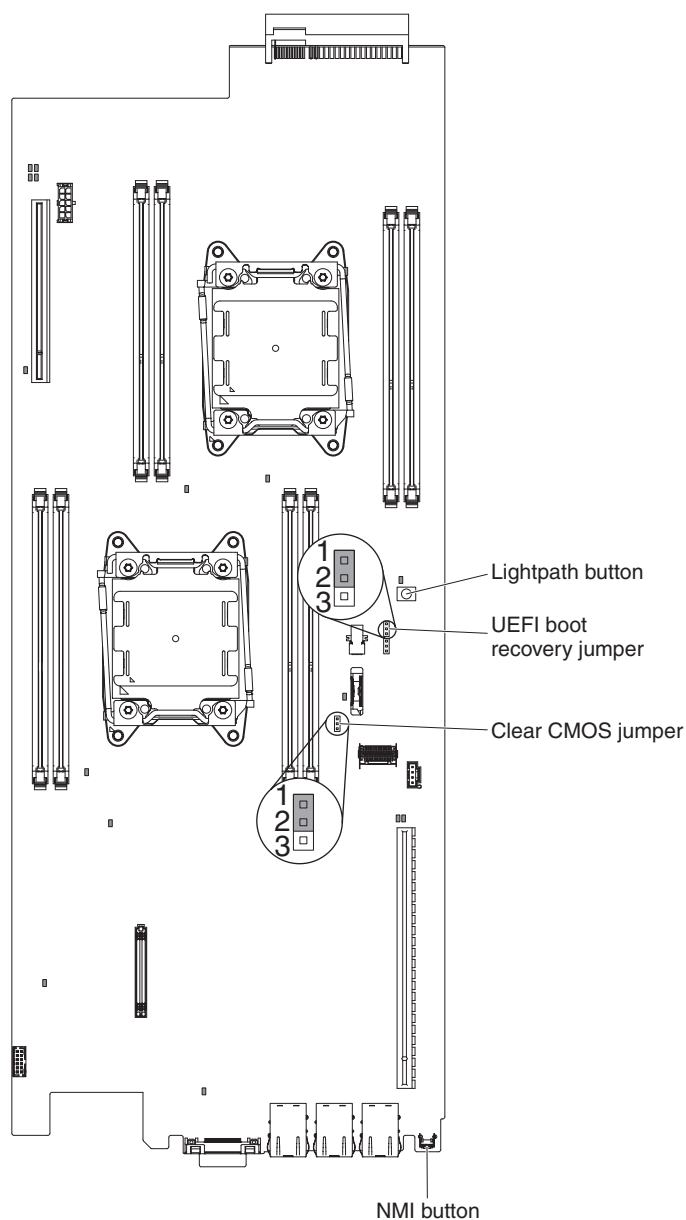
Figure 10. Location and description of switches and jumpers

Note: If there is a clear protective sticker on the top of the switch blocks, you must remove and discard it to access the switches.

Note:

1. Before you change any switch settings or move any jumpers, turn off the server. Review the information in "Safety" on page vii, "Installation guidelines" on page 91, "Handling static-sensitive devices" on page 93, and "Turning off the compute node" on page 15.

2. Any system-board switch or jumper block that is not shown in the illustrations in this document are reserved.

System-board LEDs and controls

The following illustration shows the light-emitting diodes (LEDs) on the system board.

Any error LED can be lit after ac power has been removed from the system-board tray so that you can isolate a problem. After ac power has been removed from the system-board tray, power remains available to these LEDs for up to 90 seconds. To view the error LEDs, press and hold the light path button on the system board to light the error LEDs. The error LEDs that were lit while the system-board tray was running will be lit again while the button is pressed.

The following illustration shows the LEDs and controls on the system board.
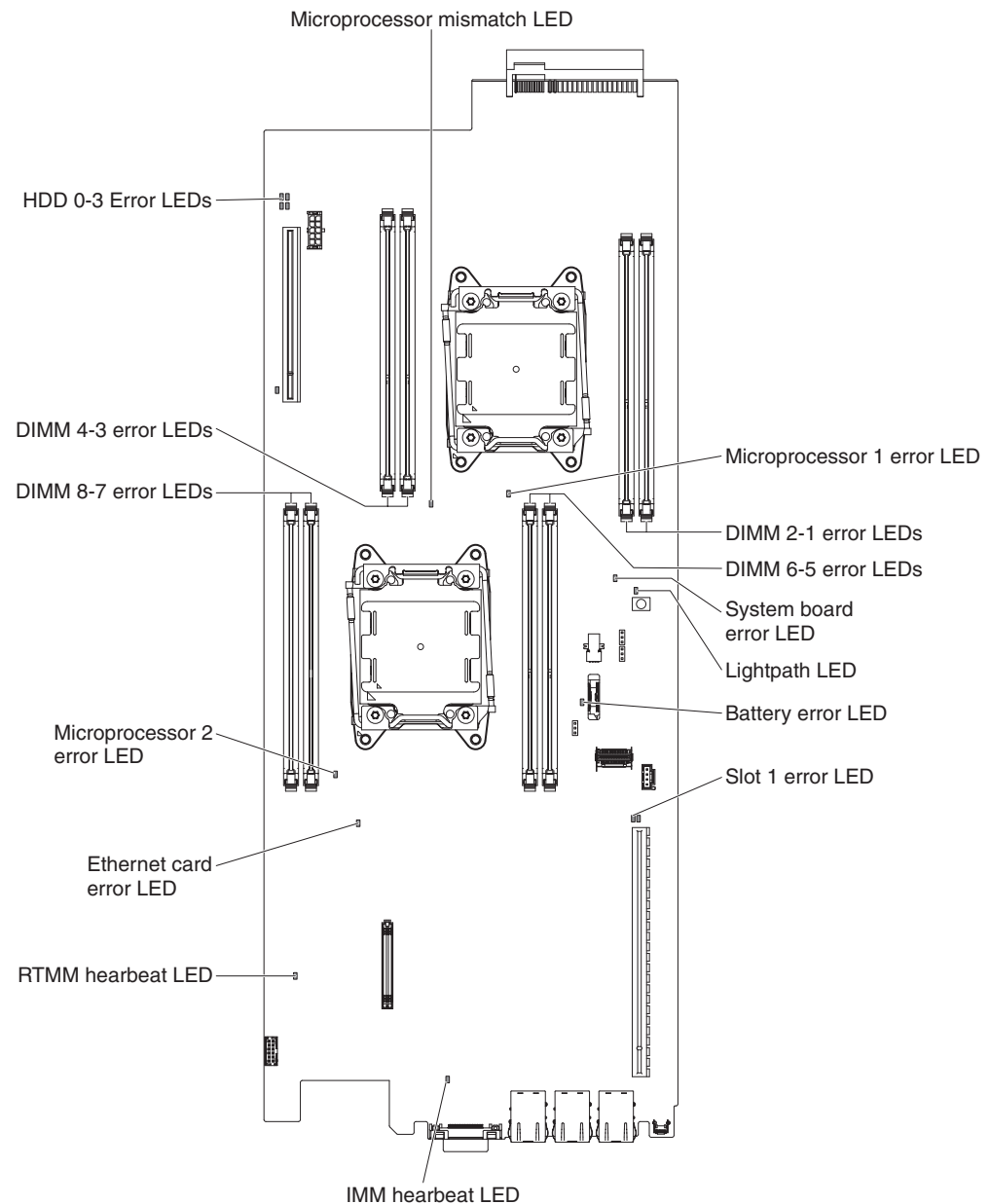
Figure 11. LEDs and controls on system board

Chapter 2. Configuration information and instructions

This chapter provides information about updating the firmware and using the configuration utilities.

Updating the firmware

Use this information to update the system firmware.

Important:

1. Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

2. Before you update the firmware, be sure to back up any data that is stored in the Trusted Platform Module (TPM), in case any of the TPM characteristics are changed by the new firmware. For instructions, see your encryption software documentation.

3. Installing the wrong firmware or device-driver update might cause the server to malfunction. Before you install a firmware or device-driver update, read any readme and change history files that are provided with the downloaded update. These files contain important information about the update and the procedure for installing the update, including any special procedure for updating from an early firmware or device-driver version to the latest version.

You can install code updates that are packaged as an Update*Xpress* System Pack or Update*Xpress* CD image. An Update*Xpress* System Pack contains an integration-tested bundle of online firmware and device-driver updates for your server. Use Update*Xpress* System Pack Installer to acquire and apply Update*Xpress* System Packs and individual firmware and device-driver updates. For additional information and to download the Update*Xpress* System Pack Installer, go to the ToolsCenter for System x and BladeCenter at http://www.ibm.com/support/entry/portal/docdisplay?lndocid=TOOL-CENTER and click **UpdateXpress System Pack Installer**.

When you click an update, an information page is displayed, including a list of the problems that the update fixes. Review this list for your specific problem; however, even if your problem is not listed, installing the update might solve the problem.

Be sure to separately install any listed critical updates that have release dates that are later than the release date of the Update*Xpress* System Pack or Update*Xpress* image.

The firmware for the server is periodically updated and is available for download on the IBM website. To check for the latest level of firmware, such as the UEFI firmware, device drivers, and integrated management module (IMM) firmware, go to http://www.ibm.com/support/fixcentral.

Download the latest firmware for the server; then, install the firmware, using the instructions that are included with the downloaded files.

When you replace a device in the server, you might have to update the firmware that is stored in memory on the device or restore the pre-existing firmware from a CD or DVD image.

The following list indicates where the firmware is stored:
- UEFI firmware is stored in ROM on the system board.
- IMM2 firmware is stored in ROM on the system board.
- Ethernet firmware is stored in ROM on the Ethernet controller and on the system board.
- ServeRAID firmware is stored in ROM on the system board and the RAID adapter (if one is installed).
- SAS/SATA firmware is stored in ROM on the SAS/SATA controller on the system board.

Configuring the server

The following configuration programs come with the server:
- **Setup utility**

  The Setup utility is part of the UEFI firmware. Use it to perform configuration tasks such as changing interrupt request (IRQ) settings, changing the startup-device sequence, setting the date and time, and setting passwords. For information about using this program, see "Using the Setup utility" on page 25.
- **Boot Manager program**

  The Boot Manager is part of the UEFI firmware. Use it to override the startup sequence that is set in the Setup utility and temporarily assign a device to be first in the startup sequence. For more information about using this program, see "Using the Boot Manager" on page 32.
- **IBM** *ServerGuide Setup and Installation* **CD**

  The ServerGuide program provides software-setup tools and installation tools that are designed for the server. Use this CD during the installation of the server to configure basic hardware features, such as an integrated SAS/SATA controller with RAID capabilities, and to simplify the installation of your operating system. For information about using this CD, see "Using the ServerGuide Setup and Installation CD" on page 24.
- **Integrated management module**

  Use the integrated management module II (IMM2) for configuration, to update the firmware and sensor data record/field replaceable unit (SDR/FRU) data, and to remotely manage a network. For information about using the IMM, see "Using the integrated management module" on page 33 and the *Integrated Management Module II User's Guide* at http://www-947.ibm.com/support/entry/portal/docdisplay?lndocid=migr-5086346.
- **VMware ESXi embedded hypervisor**

  An optional USB flash device with VMware ESXi embedded hypervisor software is available for purchase. Hypervisor is virtualization software that enables multiple operating systems to run on a host system at the same time. The USB embedded hypervisor flash device can be installed in USB connectors 3 and 4 on the system board. For more information about using the embedded hypervisor, see "Using the embedded hypervisor" on page 36.
- **Remote presence capability and blue-screen capture**

  The remote presence and blue-screen capture features are integrated functions of the integrated management module (IMM2). The remote presence feature provides the following functions:

– Remotely viewing video with graphics resolutions up to 1600 x 1200 at 75 Hz, regardless of the system state
– Remotely accessing the server, using the keyboard and mouse from a remote client
– Mapping the CD or DVD drive, diskette drive, and USB flash drive on a remote client, and mapping ISO and diskette image files as virtual drives that are available for use by the server
– Uploading a diskette image to the IMM memory and mapping it to the server as a virtual drive

The blue-screen capture feature captures the video display contents before the IMM restarts the server when the IMM detects an operating-system hang condition. A system administrator can use the blue-screen capture feature to assist in determining the cause of the hang condition. For more information, see "Using the remote presence and blue-screen capture features" on page 34.

- **Ethernet controller configuration**

  For information about configuring the Ethernet controller, see "Configuring the Ethernet controller" on page 37.

- **Features on Demand software Ethernet software**

  The server provides Features on Demand software Ethernet support. You can purchase a Features on Demand software upgrade key for Fibre Channel over Ethernet (FCoE) and iSCSI storage protocols. For more information, see "Enabling Features on Demand Ethernet software" on page 37.

- **Features on Demand software RAID software**

  The server provides Features on Demand software RAID support. You can purchase a Features on Demand software upgrade key for RAID. For more information, see "Enabling Features on Demand RAID software" on page 37.

- **IBM Advanced Settings Utility (ASU) program**

  Use this program as an alternative to the Setup utility for modifying UEFI settings and IMM settings. Use the ASU program online or out of band to modify UEFI settings from the command line without the need to restart the server to run the Setup utility. For more information about using this program, see "IBM Advanced Settings Utility program" on page 38.

- **Configuring RAID arrays**

  For information about configuring RAID arrays, see "Configuring RAID arrays" on page 38.

  The following table lists the different server configurations and the applications that are available for configuring and managing RAID arrays.

Table 2. Server configuration and applications for configuring and managing RAID arrays

Server configuration	RAID array configuration (before operating system is installed)	RAID array management (after operating system is installed)
ServeRAID-H1110 adapter	LSI Utility (Setup utility, press Ctrl+C), ServerGuide, Human Interface Infrastructure (HII)	MegaRAID Storage Manager (MSM), SAS2IRCU (Command Line) Utility for Storage Management
ServeRAID-M1115 adapter	MegaRAID BIOS Configuration Utility (press Ctrl+H to start), pre-boot CLI (press Ctrl+P to start), ServerGuide, HII	MegaRAID Storage Manager (MSM), MegaCLI (Command Line Interface), and IBM Director

Table 2. Server configuration and applications for configuring and managing RAID arrays (continued)

Server configuration	RAID array configuration (before operating system is installed)	RAID array management (after operating system is installed)
ServeRAID-C100	HII	MegaRAID Storage Manager (MSM), MegaCLI, and IBM Director

Notes:

1. For more information about the Human Interface Infrastructure (HII) and SAS2IRCU, go to http://www-947.ibm.com/support/entry/portal/docdisplay?lndocid=MIGR-5088601.

2. For more information about the MegaRAID, go to http://www-947.ibm.com/support/entry/portal/docdisplay?lndocid=MIGR-5073015.

Using the ServerGuide Setup and Installation CD

Use this information as an overview for using the ServerGuide Setup and Installation CD.

The *ServerGuide Setup and Installation* CD provides software setup tools and installation tools that are designed for your server. The ServerGuide program detects the server model and optional hardware devices that are installed and uses that information during setup to configure the hardware. The ServerGuide simplifies the operating-system installations by providing updated device drivers and, in some cases, installing them automatically.

You can download a free image of the *ServerGuide Setup and Installation CD* from http://www.ibm.com/support/entry/portal/docdisplay?lndocid=SERV-GUIDE.

In addition to the *ServerGuide Setup and Installation* CD, you must have your operating-system CD to install the operating system.

ServerGuide features

This information provides an overview of the ServerGuide features.

Features and functions can vary slightly with different versions of the ServerGuide program. To learn more about the version that you have, start the *ServerGuide Setup and Installation* CD and view the online overview. Not all features are supported on all server models.

The ServerGuide program has the following features:
* An easy-to-use interface
* Diskette-free setup, and configuration programs that are based on detected hardware
* Device drivers that are provided for the server model and detected hardware
* Operating-system partition size and file-system type that are selectable during setup

The ServerGuide program performs the following tasks:
* Sets system date and time
* Detects installed hardware options and provides updated device drivers for most adapters and devices
* Provides diskette-free installation for supported Windows operating systems

- Includes an online readme file with links to tips for your hardware and operating-system installation

Setup and configuration overview

Use this information for the ServerGuide setup and configuration.

When you use the *ServerGuide Setup and Installation* CD, you do not need setup diskettes. You can use the CD to configure any supported IBM server model. The setup program provides a list of tasks that are required to set up your server model. On a server with a ServeRAID adapter or SAS/SATA controller with RAID capabilities, you can run the SAS/SATA RAID configuration program to create logical drives.

Note: Features and functions can vary slightly with different versions of the ServerGuide program.

Typical operating-system installation

This section details the ServerGuide typical operating-system installation.

The ServerGuide program can reduce the time it takes to install an operating system. It provides the device drivers that are required for your hardware and for the operating system that you are installing. This section describes a typical ServerGuide operating-system installation.

Note: Features and functions can vary slightly with different versions of the ServerGuide program.

1. After you have completed the setup process, the operating-system installation program starts. (You will need your operating-system CD to complete the installation.)
2. The ServerGuide program stores information about the server model, service processor, hard disk drive controllers, and network adapters. Then, the program checks the CD for newer device drivers. This information is stored and then passed to the operating-system installation program.
3. The ServerGuide program presents operating-system partition options that are based on your operating-system selection and the installed hard disk drives.
4. The ServerGuide program prompts you to insert your operating-system CD and restart the server. At this point, the installation program for the operating system takes control to complete the installation.

Installing your operating system without using ServerGuide

Use this information to install the operating system on the server without using ServerGuide.

If you have already configured the server hardware and you are not using the ServerGuide program to install your operating system, you can download operating-system installation instructions for the server from http://www.ibm.com/supportportal.

Using the Setup utility

Use these instructions to start the Setup utility.

Use the Unified Extensible Firmware Interface (UEFI) Setup Utility program to perform the following tasks:

- View configuration information

- View and change assignments for devices and I/O ports
- Set the date and time
- Set and change passwords
- Set the startup characteristics of the server and the order of startup devices
- Set and change settings for advanced hardware features
- View, set, and change settings for power-management features
- View and clear error logs
- Change interrupt request (IRQ) settings
- Resolve configuration conflicts

Starting the Setup utility

Use this information to start up the Setup utility.

To start the Setup utility, complete the following steps:

1. Turn on the server.

   Note: Approximately 5 to 10 seconds after the server is connected to power, the power-control button becomes active.

2. When the prompt **<F1> Setup** is displayed, press F1. If you have set an administrator password, you must type the administrator password to access the full Setup utility menu. If you do not type the administrator password, a limited Setup utility menu is available.

3. Select settings to view or change.

Setup utility menu choices

Use the Setup utility main menu to view and configure server configuration data and settings.

The following choices are on the Setup utility main menu for the UEFI. Depending on the version of the firmware, some menu choices might differ slightly from these descriptions.

- **System Information**

  Select this choice to view information about the server. When you make changes through other choices in the Setup utility, some of those changes are reflected in the system information; you cannot change settings directly in the system information. This choice is on the full Setup utility menu only.

  – **System Summary**

    Select this choice to view configuration information, including the ID, speed, and cache size of the microprocessors, machine type and model of the server, the serial number, the system UUID, and the amount of installed memory. When you make configuration changes through other options in the Setup utility, the changes are reflected in the system summary; you cannot change settings directly in the system summary.

  – **Product Data**

    Select this choice to view the system-board identifier, the revision level or issue date of the firmware, the integrated management module and diagnostics code, and the version and date.

  This choice is on the full Setup utility menu only.

- **System Settings**

  Select this choice to view or change the server component settings.

  – **Adapters and UEFI Drivers**

Select this choice to view information about the UEFI 1.10 and UEFI 2.0 compliant adapters and drivers installed in the server.

– **Processors**

Select this choice to view or change the processor settings.

– **Memory**

Select this choice to view or change the memory settings.

– **Devices and I/O Ports**

Select this choice to view or change assignments for devices and input/output (I/O) ports. You can configure the serial ports, configure remote console redirection, enable or disable integrated Ethernet controllers, the SAS/SATA controllers, SATA optical drive channels, PCI slots, and video controller. If you disable a device, it cannot be configured, and the operating system will not be able to detect it (this is equivalent to disconnecting the device).

– **Power**

Select this choice to view or change power capping to control consumption, processors, and performance states.

– **Operating Modes**

Select this choice to view or change the operating profile (performance and power utilization).

– **Legacy Support**

Select this choice to view or set legacy support.

- **Force Legacy Video on Boot**

Select this choice to force INT video support, if the operating system does not support UEFI video output standards.

- **Rehook INT 19h**

Select this choice to enable or disable devices from taking control of the boot process. The default is **Disable**.

- **Legacy Thunk Support**

Select this choice to enable or disable UEFI to interact with PCI mass storage devices that are non-UEFI compliant. The default is **Enable**.

- **Infinite Boot Retry**

Select this choice to enable or disable UEFI to infinitely retry the legacy boot order. The default is **Disable**.

- **BBS Boot**

Select this choice to enable or disable legacy boot in BBS manner. The default is **Enable**.

– **System Security**

Select this choice to view or configure Trusted Platform Module (TPM) support.

– **Integrated Management Module**

Select this choice to view or change the settings for the integrated management module.

- **Power Restore Policy**

Select this choice to set the mode of operation after the power lost.

- **Commands on USB Interface**

Select this choice to enable or disable the Ethernet over USB interface on IMM. The default is **Enable**.

- **Network Configuration**

  Select this choice to view the system management network interface port, the IMM MAC address, the current IMM IP address, and host name; define the static IMM IP address, subnet mask, and gateway address, specify whether to use the static IP address or have DHCP assign the IMM2 IP address, save the network changes, and reset the IMM.

- **Reset IMM to Defaults**

  Select this choice to view or reset IMM to the default settings.

- **Reset IMM**

  Select this choice to reset IMM.

– **Recovery**

  Select this choice to view or change the system recovery parameters.

- **POST Attempts**

  Select this choice to view or change the number of attempts to POST.

  • **POST Attempts Limit**

    Select this choice to view or change the Nx boot failure parameters.

- **System Recovery**

  Select this choice to view or change system recovery settings.

  • **POST Watchdog Timer**

    Select this choice to view or enable the POST watchdog timer.

  • **POST Watchdog Timer Value**

    Select this choice to view or set the POST loader watchdog timer value.

  • **Reboot System on NMI**

    Select this choice to enable or disable restarting the system whenever a nonmaskable interrupt (NMI) occurs. **Enable** is the default.

  • **Halt on Severe Error**

    Select this choice to enable or disable the system from booting into OS, displaying the POST event viewer whenever a severe error was detected. **Disable** is the default.

– **Storage**

  Select this choice to view or change the storage device settings.

– **Network**

  Select this choice to view or change the network device options, such as iSCSI.

– **Drive Health**

  Select this choice to view the status of the controllers installed in the server.

• **Date and Time**

  Select this choice to set the date and time in the server, in 24-hour format (*hour*:*minute*:*second*).

  This choice is on the full Setup utility menu only.

• **Start Options**

  Select this choice to view or change the start options, including the startup sequence, keyboard NumLock state, PXE boot option, and PCI device boot priority. Changes in the startup options take effect when you start the server.

  The startup sequence specifies the order in which the server checks devices to find a boot record. The server starts from the first boot record that it finds. If the server has Wake on LAN hardware and software and the operating system supports Wake on LAN functions, you can specify a startup sequence for the

Wake on LAN functions. For example, you can define a startup sequence that checks for a disc in the CD-RW/DVD drive, then checks the hard disk drive, and then checks a network adapter.

This choice is on the full Setup utility menu only.

- **Boot Manager**

  Select this choice to view, add, delete, or change the device boot priority, boot from a file, select a one-time boot, or reset the boot order to the default setting.

- **System Event Logs**

  Select this choice to enter the System Event Manager, where you can view the POST event log and the system-event log. You can use the arrow keys to move between pages in the error log. This choice is on the full Setup utility menu only.

  The POST event log contains the most recent error codes and messages that were generated during POST.

  The system-event log contains POST and system management interrupt (SMI) events and all events that are generated by the baseboard management controller that is embedded in the integrated management module (IMM).

  Important: If the system-error LED on the front of the server is lit but there are no other error indications, clear the system-event log. Also, after you complete a repair or correct an error, clear the system-event log to turn off the system-error LED on the front of the server.

  - **POST Event Viewer**

    Select this choice to enter the POST event viewer to view the POST error messages.

  - **System Event Log**

    Select this choice to view the system event log.

  - **Clear System Event Log**

    Select this choice to clear the system event log.

- **User Security**

  Select this choice to set, change, or clear passwords. See "Passwords" on page 30 for more information.

  This choice is on the full and limited Setup utility menu.

  - **Set Power-on Password**

    Select this choice to set or change a power-on password. See "Power-on password" on page 30 for more information.

  - **Clear Power-on Password**

    Select this choice to clear a power-on password. See "Power-on password" on page 30 for more information.

  - **Set Administrator Password**

    Select this choice to set or change an administrator password. An administrator password is intended to be used by a system administrator; it limits access to the full Setup utility menu. If an administrator password is set, the full Setup utility menu is available only if you type the administrator password at the password prompt. See "Administrator password" on page 32 for more information.

  - **Clear Administrator Password**

    Select this choice to clear an administrator password. See "Administrator password" on page 32 for more information.

- **Save Settings**

Select this choice to save the changes that you have made in the settings.

- **Restore Settings**

    Select this choice to cancel the changes that you have made in the settings and restore the previous settings.

- **Load Default Settings**

    Select this choice to cancel the changes that you have made in the settings and restore the factory settings.

- **Exit Setup**

    Select this choice to exit from the Setup utility. If you have not saved the changes that you have made in the settings, you are asked whether you want to save the changes or exit without saving them.

Passwords

From the **User Security** menu choice, you can set, change, and delete a power-on password and an administrator password.

The **User Security** menu choice is on the full Setup utility menu only.

If you set only a power-on password, you must type the power-on password to complete the system startup and to have access to the full Setup utility menu.

An administrator password is intended to be used by a system administrator; it limits access to the full Setup utility menu. If you set only an administrator password, you do not have to type a password to complete the system startup, but you must type the administrator password to access the Setup utility menu.

If you set a power-on password for a user and an administrator password for a system administrator, you must type the power-on password to complete the system startup. A system administrator who types the administrator password has access to the full Setup utility menu; the system administrator can give the user authority to set, change, and delete the power-on password. A user who types the power-on password has access to only the limited Setup utility menu; the user can set, change, and delete the power-on password, if the system administrator has given the user that authority.

Power-on password:

If a power-on password is set, when you turn on the server, you must type the power-on password to complete the system startup. You can use any combination of 6 - 20 printable ASCII characters for the password.

When a power-on password is set, you can enable the Unattended Start mode, in which the keyboard and mouse remain locked but the operating system can start. You can unlock the keyboard and mouse by typing the power-on password.

If you forget the power-on password, you can regain access to the server in any of the following ways:

- If an administrator password is set, type the administrator password at the password prompt. Start the Setup utility and reset the power-on password.

    Attention: If you set an administrator password and then forget it, there is no way to change, override, or remove it. You must replace the system board.

- Remove the battery from the server, wait 30 seconds, and then reinstall it.

• Change the position of the power-on password switch (enable switch 3 of the system board switch block (SW4) to bypass the password check (see "System-board switches and jumpers" on page 17 for more information).
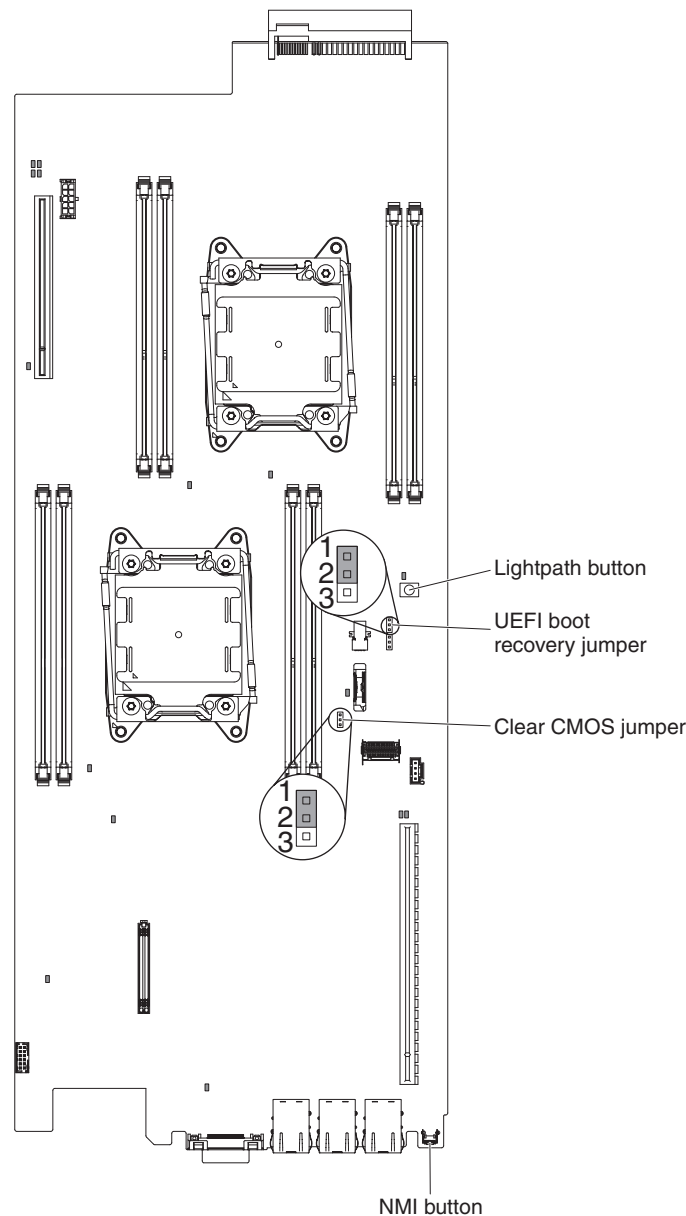
Figure 12. Power-on password switch

Attention: Before you change any switch settings or move any jumpers, turn off the server; then, disconnect all power cords and external cables. See the safety information that begins "Safety" on page vii. Do not change settings or move jumpers on any system-board switch or jumper blocks that are not shown in this document.

The default for all of the switches on switch block SW3 is Off.

While the server is turned off, move switch 4 of the switch block SW3 to the On position to enable the power-on password override. You can then start the Setup utility and reset the power-on password. You do not have to return the switch to the previous position.

The power-on password override switch does not affect the administrator password.

Administrator password:

If an administrator password is set, you must type the administrator password for access to the full Setup utility menu. You can use any combination of 6 to 20 printable ASCII characters for the password.

Attention: If you set an administrator password and then forget it, there is no way to change, override, or remove it. You must replace the system board.

Using the Boot Manager

Use this information for the Boot Manager.

The Boot Manager program is a built-in, menu-driven configuration utility program that you can use to temporarily redefine the first startup device without changing settings in the Setup utility.

To use the Boot Manager program, complete the following steps:
1. Turn off the server.
2. Restart the server.
3. When the prompt `<F12> Select Boot Device` is displayed, press F12.
4. Use the Up arrow and Down arrow keys to select an item from the menu and press Enter.

The next time the server starts, it returns to the startup sequence that is set in the Setup utility.

Starting the backup server firmware

Use this information to start the backup server firmware.

The system board contains a backup copy area for the server firmware. This is a secondary copy of the server firmware that you update only during the process of updating the server firmware. If the primary copy of the server firmware becomes damaged, use this backup copy.

To force the server to start from the backup copy, turn off the server; then, change the position of the UEFI boot backup switch (change switch 1 of the SW4 to the on position) to enable the UEFI recovery mode.

Use the backup copy of the server firmware until the primary copy is restored. After the primary copy is restored, turn off the server; then, change back the position of the UEFI boot backup switch (change switch 1 of the SW4 to the off position).

The Update*Xpress* System Pack Installer

The Update*Xpress* System Pack Installer detects supported and installed device drivers and firmware in the server and installs available updates.

For additional information and to download the Update*Xpress* System Pack Installer, go to the ToolsCenter for System x and BladeCenter at http://publib.boulder.ibm.com/infocenter/toolsctr/v1r0/ and click **UpdateXpress System Pack Installer**.

Changing the Power Policy option to the default settings after loading UEFI defaults

The default settings for the Power Policy option are set by the IMM2.

To change the Power Policy option to the default settings, complete the following steps.

1. Turn on the server.

   Note: Approximately 20 seconds after the server is connected to AC power, the power-control button becomes active.

2. When the prompt `<F1> Setup` is displayed, press F1. If you have set an administrator password, you must type the administrator password to access the full Setup utility menu. If you do not type the administrator password, a limited Setup utility menu is available.

3. Select **System Settings** > **Integrated Management Module**, then set **Power Restore Policy** setting to `Restore`.

4. Go back to **System Configuration and Boot Management** > **Save Settings**.

5. Go back and check the **Power Policy** setting to verify that it is set to `Restore` (the default).

Attention: If you set an administrator password and then forget it, there is no way to change, override, or remove it. You must replace the system board.

Using the integrated management module

The integrated management module (IMM) is a second generation of the functions that were formerly provided by the baseboard management controller hardware. It combines service processor functions, video controller, and remote presence function in a single chip.

The IMM supports the following basic systems-management features:

- Active Energy Manager.
- Alerts (in-band and out-of-band alerting, PET traps - IPMI style, SNMP, e-mail).
- Auto Boot Failure Recovery (ABR).
- Automatic microprocessor disable on failure and restart in a two-microprocessor configuration when one microprocessor signals an internal error. When one of the microprocessors fail, the server will disable the failing microprocessor and restart with the other microprocessor.
- Automatic Server Restart (ASR) when POST is not complete or the operating system hangs and the operating system watchdog timer times-out. The IMM might be configured to watch for the operating system watchdog timer and reboot the system after a timeout, if the ASR feature is enabled. Otherwise, the IMM allows the administrator to generate a nonmaskable interrupt (NMI) by pressing an NMI button on the light path diagnostics panel for an operating-system memory dump. ASR is supported by IPMI.
- Boot sequence manipulation.
- Command-line interface.
- Configuration save and restore.
- DIMM error assistance. The Unified Extensible Firmware Interface (UEFI) disables a failing DIMM that is detected during POST, and the IMM lights the associated system error LED and the failing DIMM error LED.

- Environmental monitor with fan speed control for temperature, voltages, fan failure, power supply failure, and power backplane failure.
- Intelligent Platform Management Interface (IPMI) Specification V2.0 and Intelligent Platform Management Bus (IPMB) support.
- Invalid system configuration (CONFIG) LED support.
- Light path diagnostics LEDs indicators to report errors that occur with fans, power supplies, microprocessor, hard disk drives, and system errors.
- Local firmware code flash update
- Nonmaskable interrupt (NMI) detection and reporting.
- Operating-system failure blue screen capture.
- PCI configuration data.
- Power/reset control (power-on, hard and soft shutdown, hard and soft reset, schedule power control).
- Query power-supply input power.
- ROM-based IMM firmware flash updates.
- Serial over LAN (SOL).
- Serial port redirection over telnet or ssh.
- SMI handling
- System event log (SEL) - user readable event log.

The IMM also provides the following remote server management capabilities through the OSA SMBridge management utility program:

- **Command-line interface (IPMI Shell)**

  The command-line interface provides direct access to server management functions through the IPMI 2.0 protocol. Use the command-line interface to issue commands to control the server power, view system information, and identify the server. You can also save one or more commands as a text file and run the file as a script.

- **Serial over LAN**

  Establish a Serial over LAN (SOL) connection to manage servers from a remote location. You can remotely view and change the UEFI settings, restart the server, identify the server, and perform other management functions. Any standard Telnet client application can access the SOL connection.

For more information about IMM, see the *Integrated Management Module II User's Guide* at http://www-947.ibm.com/support/entry/portal/docdisplay?lndocid=migr-5086346.

Using the remote presence and blue-screen capture features

The remote presence and blue-screen capture features are integrated functions of the integrated management module II (IMM2).

The remote presence feature provides the following functions:
- Remotely viewing video with graphics resolutions up to 1600 x 1200 at 75 Hz, regardless of the system state
- Remotely accessing the server, using the keyboard and mouse from a remote client
- Mapping the CD or DVD drive, diskette drive, and USB flash drive on a remote client, and mapping ISO and diskette image files as virtual drives that are available for use by the server

- Uploading a diskette image to the IMM memory and mapping it to the server as a virtual drive

The blue-screen capture feature captures the video display contents before the IMM restarts the server when the IMM detects an operating-system hang condition. A system administrator can use the blue-screen capture to assist in determining the cause of the hang condition.

Obtaining the IMM host name

Use this information to obtain the IMM host name.

If you are logging on to the IMM for the first time after installation, the IMM defaults to DHCP. If a DHCP server is not available, the IMM uses a static IP address of 192.168.70.125. The default IPv4 host name is "IMM-" (plus the last 12 characters on the IMM MAC address). The default host name also comes on the IMM network access tag that comes attached to the power supply on the rear of the server. The IMM network access tag provides the default host name of the IMM and does not require you to start the server.

The IPv6 link-local address (LLA) is derived from the IMM default host name. The IMM LLA is on the IMM network access tag is on the power supply on the rear of the server. To derive the link-local address, complete the following steps:
1. Take the last 12 characters on the IMM MAC address (for example, 5CF3FC5EAAD0).
2. Separate the number into pairs of hexadecimal characters (for example, 5C:F3:FC:5E:AA:D0).
3. Separate the first six and last six hexadecimal characters.
4. Add "FF" and "FE" in the middle of the 12 characters (for example, 5C F3 FC FF FE 5E AA D0).
5. Convert the first pair of hexadecimal characters to binary (for example, 5=0101, C=1100, which results in 01011100 F3 FC FF FE 5E AA D0).
6. Flip the 7th binary character from left (0 to 1 or 1 to 0), which results in 01011110 F3 FF FE 5E AA D0.
7. Convert the binary back to hexadecimal (for example, 5E F3FCFFFE5EAAD0).

Obtaining the IP address for the IMM

Use this information to obtain the IP address for the IMM.

To access the web interface to use the remote presence feature, you need the IP address or host name of the IMM. You can obtain the IMM IP address through the Setup utility and you can obtain the IMM host name from the IMM network access tag. The server comes with a default IP address for the IMM of 192.168.70.125.

To obtain the IP address, complete the following steps:
1. Turn off the server.

    Note: Approximately 5 to 10 seconds after the server is connected to power, the power-control button becomes active.
2. When the prompt `<F1> Setup` is displayed, press F1. (This prompt is displayed on the screen for only a few seconds. You must press F1 quickly.) If you have set both a power-on password and an administrator password, you must type the administrator password to access the full Setup utility menu.
3. From the Setup utility main menu, select **System Settings**.

4. On the next screen, select **Integrated Management Module**.
5. On the next screen, select **Network Configuration**.
6. Find the IP address and write it down.
7. Exit from the Setup utility.

Logging on to the web interface
Use this information to log on to the web interface.

To log on to the IMM web interface, complete the following steps:

1. On a system that is connected to the server, open a web browser. In the **Address** or **URL** field, type the IP address or host name of the IMM to which you want to connect.

   Note: If you are logging on to the IMM for the first time after installation, the IMM defaults to DHCP. If a DHCP host is not available, the IMM assigns a static IP address of 192.168.70.125. The IMM network access tag provides the default host name of the IMM and does not require you to start the server.

2. On the Login page, type the user name and password. If you are using the IMM for the first time, you can obtain the user name and password from your system administrator. All login attempts are documented in the system-event log.

   Note: The IMM is set initially with a user name of USERID and password of PASSW0RD (with a zero, not a the letter O). You have read/write access. You must change the default password the first time you log on.

3. Click **Log in** to start the session. The System Status and Health page provides a quick view of the system status.

Note: If you boot to the operating system while in the IMM GUI and the message "Booting OS or in unsupported OS" is displayed under **System Status** > **System State**, disable Windows 2008 firewall or type the following command in the Windows 2008 console. This might also affect blue-screen capture features.

```
netsh firewall set icmpsetting type=8 mode=ENABLE
```

By default, the icmp packet is blocked by Windows firewall. The IMM GUI will then change to "OS booted" status after you change the setting as indicated above in both the Web and CLI interfaces.

Using the embedded hypervisor

The VMware ESXi embedded hypervisor software is available on the optional IBM USB flash device with embedded hypervisor.

The USB flash device can be installed in USB connectors on the system board (see "Internal cable routing and connectors" on page 178 for the location of the connectors). Hypervisor is virtualization software that enables multiple operating systems to run on a host system at the same time. The USB flash device is required to activate the hypervisor functions.

To start using the embedded hypervisor functions, you must add the USB flash device to the startup sequence in the Setup utility.

To add the USB flash device to the startup sequence, complete the following steps:

1. Turn on the server.

> **Note:** Approximately 5 to 10 seconds after the server is connected to power, the power-control button becomes active.

2. When the prompt `<F1> Setup` is displayed, press F1.
3. From the Setup utility main menu, select **Boot Manager**.
4. Select **Add Boot Option**; then, select **Generic Boot Option** > **Embedded Hypervisor**. Press Enter, and then select Esc.
5. Select **Change Boot Order** > **Change the order**. Use the Up arrow and Down Arrow keys to select **Embedded Hypervisor** and use the plus (+) and minus (-) keys to move Embedded Hypervisor in the boot order. When **Embedded Hypervisor** is in the correct location in the boot order, press Enter. Select **Commit Changes** and press Enter.
6. Select **Save Settings** and then select **Exit Setup**.

If the embedded hypervisor flash device image becomes corrupt, you can download the image from http://www-03.ibm.com/systems/x/os/vmware/esxi/.

For additional information and instructions, see VMware vSphere 4.1 Documentation at http://www.vmware.com/support/pubs/vs_pages/vsp_pubs_esxi41_e_vc41.html or the *VMware vSphere Installation and Setup Guide* at http://pubs.vmware.com/vsphere-50/topic/com.vmware.ICbase/PDF/vsphere-esxi-vcenter-server-50-installation-setup-guide.pdf.

Configuring the Ethernet controller

Use this information to configure the Ethernet controller.

The Ethernet controllers are integrated on the system board. They provide an interface for connecting to a 10 Mbps, 100 Mbps, or 1 Gbps network and provide full-duplex (FDX) capability, which enables simultaneous transmission and reception of data on the network. If the Ethernet ports in the server support auto-negotiation, the controllers detect the data-transfer rate (10BASE-T, 100BASE-TX, or 1000BASE-T) and duplex mode (full-duplex or half-duplex) of the network and automatically operate at that rate and mode.

You do not have to set any jumpers or configure the controllers. However, you must install a device driver to enable the operating system to address the controllers.

To find device drivers and information about configuring the Ethernet controllers, go to http://www.ibm.com/supportportal.

Enabling Features on Demand Ethernet software

Use this information to enable Features on Demand Ethernet software.

You can activate the Features on Demand (FoD) software upgrade key for Fibre Channel over Ethernet (FCoE) and iSCSI storage protocols that is integrated in the integrated management module. For more information and instructions for activating the Features on Demand Ethernet software key, see the *IBM Features on Demand User's Guide*. To download the document, go to /http://www.ibm.com/systems/x/fod/, log in, and click **Help**.

Enabling Features on Demand RAID software

Use this information to enable Features on Demand RAID software.

You can activate the Features on Demand (FoD) software upgrade key for RAID that is integrated in the integrated management module. For more information and instructions for activating the Features on Demand RAID software key, see the *IBM Features on Demand User's Guide*. To download the document, go to /http://www.ibm.com/systems/x/fod/, log in, and click **Help**.

Configuring RAID arrays

Use the Setup utility to configure RAID arrays.

The specific procedure for configuring arrays depends on the RAID controller that you are using. For details, see the documentation for your RAID controller. To access the utility for your RAID controller, complete the following steps:

1. Turn on the server.

   Note: Approximately 10 seconds after the server is connected to power, the power-control button becomes active.

2. When prompted, <F1 Setup> is displayed, press F1. If you have set an administrator password, you must type the administrator password to access the full Setup utility menu. If you do not type the administrator password, a limited Setup utility menu is available.

3. Select **System Settings** > **Storage**.

4. Press Enter to refresh the list of device drivers.

5. Select the device driver for your RAID controller and press Enter.

6. Follow the instructions in the documentation for your RAID controller.

IBM Advanced Settings Utility program

The IBM Advanced Settings Utility (ASU) program is an alternative to the Setup utility for modifying UEFI settings.

Use the ASU program online or out of band to modify UEFI settings from the command line without the need to restart the system to access the Setup utility.

You can also use the ASU program to configure the optional remote presence features or other IMM2 settings. The remote presence features provide enhanced systems-management capabilities.

In addition, the ASU program provides IMM LAN over USB interface configuration through the command-line interface.

Use the command-line interface to issue setup commands. You can save any of the settings as a file and run the file as a script. The ASU program supports scripting environments through a batch-processing mode.

For more information and to download the ASU program, go to http://www.ibm.com/support/entry/portal/docdisplay?lndocid=TOOL-ASU.

Updating IBM Systems Director

Use this information to update the IBM Systems Director.

If you plan to use IBM Systems Director to manage the server, you must check for the latest applicable IBM Systems Director updates and interim fixes.

Note: Changes are made periodically to the IBM website. The actual procedure might vary slightly from what is described in this document.

Installing a newer version

To locate and install a newer version of IBM Systems Director, complete the following steps:

1. Check for the latest version of IBM Systems Director:
   a. Go to http://www-03.ibm.com/systems/software/director/resources.html.
   b. If a newer version of IBM Systems Director than what comes with the server is shown in the drop-down list, follow the instructions on the web page to download the latest version.
2. Install the IBM Systems Director program.

Installing updates with your management server is connected to the Internet

If your management server is connected to the Internet, to locate and install updates and interim fixes, complete the following steps:

1. Make sure that you have run the Discovery and Inventory collection tasks.
2. On the Welcome page of the IBM Systems Director web interface, click **View updates**.
3. Click **Check for updates**. The available updates are displayed in a table.
4. Select the updates that you want to install, and click Install to start the installation wizard.

Installing updates with your management server is not connected to the Internet

If your management server is not connected to the Internet, to locate and install updates and interim fixes, complete the following steps:

1. Make sure that you have run the Discovery and Inventory collection tasks.
2. On a system that is connected to the Internet, go to http://www.ibm.com/support/fixcentral.
3. From the **Product family** list, select **IBM Systems Director**.
4. From the **Product** list, select **IBM Systems Director**.
5. From the **Installed version** list, select the latest version, and click **Continue**.
6. Download the available updates.
7. Copy the downloaded files to the management server.
8. On the management server, on the Welcome page of the IBM Systems Director web interface, click the **Manage** tab, and click **Update Manager**.
9. Click **Import updates** and specify the location of the downloaded files that you copied to the management server.
10. Return to the Welcome page of the Web interface, and click **View updates**.
11. Select the updates that you want to install, and click **Install** to start the installation wizard.

Updating the Universal Unique Identifier (UUID)

The Universal Unique Identifier (UUID) must be updated when the system board is replaced. Use the Advanced Settings Utility to update the UUID in the UEFI-based server.

The ASU is an online tool that supports several operating systems. Make sure that you download the version for your operating system. You can download the ASU from the IBM Web site. To download the ASU and update the UUID, complete the following steps.

Note: Changes are made periodically to the IBM website. The actual procedure might vary slightly from what is described in this document.

1. Download the Advanced Settings Utility (ASU):

   a. Go to http://www.ibm.com/supportportal.

   b. Click on the **Downloads** tab at the top of the panel.

   c. Under **ToolsCenter**, select **View ToolsCenter downloads**.

   d. Select **Advanced Settings Utility (ASU)**.

   e. Scroll down and click on the link and download the ASU version for your operating system.

2. ASU sets the UUID in the Integrated Management Module (IMM). Select one of the following methods to access the Integrated Management Module (IMM) to set the UUID:

   - Online from the target system (LAN or keyboard console style (KCS) access)

   - Remote access to the target system (LAN based)

   - Bootable media containing ASU (LAN or KCS, depending upon the bootable media)

3. Copy and unpack the ASU package, which also includes other required files, to the server. Make sure that you unpack the ASU and the required files to the same directory. In addition to the application executable (asu or asu64), the following files are required:

   - For Windows based operating systems:

     – *ibm_rndis_server_os.inf*

     – *device.cat*

   - For Linux based operating systems:

     – *cdc_interface.sh*

4. After you install ASU, use the following command syntax to set the UUID: `asu set SYSTEM_PROD_DATA.SysInfoUUID <uuid_value> [access_method]`

   Where:

   <uuid_value>

   > Up to 16-byte hexadecimal value assigned by you.

   [access_method]

   > The access method that you selected to use from the following methods:

   - Online authenticated LAN access, type the command:

     `[host <imm_internal_ip>] [user <imm_user_id>][password <imm_password>]`

     Where:

     imm_internal_ip

     > The IMM internal LAN/USB IP address. The default value is 169.254.95.118.

     imm_user_id

     > The IMM `account` (1 of 12 accounts). The default value is USERID.

imm_password
> The IMM account password (1 of 12 accounts). The default value is
> PASSW0RD (with a zero 0 not an O).

Note: If you do not specify any of these parameters, ASU will use the default values. When the default values are used and ASU is unable to access the IMM using the online authenticated LAN access method, ASU will automatically use the unauthenticated KCS access method.

The following commands are examples of using the userid and password default values and not using the default values:

Example that does not use the userid and password default values:
```
asu set SYSTEM_PROD_DATA.SYsInfoUUID <uuid_value> --user <user_id>
--password <password>
```
Example that does use the userid and password default values:
```
asu set SYSTEM_PROD_DATA.SysInfoUUID <uuid_value>
```

* Online KCS access (unauthenticated and user restricted):

  You do not need to specify a value for *access_method* when you use this access method.

  Example:
  ```
  asu set SYSTEM_PROD_DATA.SysInfoUUID <uuid_value>
  ```
  The KCS access method uses the IPMI/KCS interface. This method requires that the IPMI driver be installed. Some operating systems have the IPMI driver installed by default. ASU provides the corresponding mapping layer. See the *Advanced Settings Utility Users Guide* for more details. You can access the ASU Users Guide from the IBM website.

  Note: Changes are made periodically to the IBM website. The actual procedure might vary slightly from what is described in this document.

  a. Go to http://www.ibm.com/supportportal.

  b. Click on the **Downloads** tab at the top of the panel.

  c. Under **ToolsCenter**, select **View ToolsCenter downloads**.

  d. Select **Advanced Settings Utility (ASU)**.

  e. Scroll down and click on the link and download the ASU version for your operating system. Scroll down and look under **Online Help** to download the *Advanced Settings Utility Users Guide*.

* Remote LAN access, type the command:

  Note: When using the remote LAN access method to access IMM using the LAN from a client, the *host* and the *imm_external_ip* address are required parameters.
  ```
  host <imm_external_ip> [user <imm_user_id>][password <imm_password>]
  ```
  Where:

  imm_external_ip
  > The external IMM LAN IP address. There is no default value. This
  > parameter is required.

  imm_user_id
  > The IMM `account` (1 of 12 accounts). The default value is USERID.

imm_password

> The IMM account password (1 of 12 accounts). The default value is PASSW0RD (with a zero 0 not an O).

The following commands are examples of using the userid and password default values and not using the default values:

Example that does not use the userid and password default values:
```
asu set SYSTEM_PROD_DATA.SYsInfoUUID <uuid_value> --host <imm_ip>
--user <user_id> --password <password>
```

Example that does use the userid and password default values:
```
asu set SYSTEM_PROD_DATA.SysInfoUUID <uuid_value> --host <imm_ip>
```

- Bootable media:

  You can also build a bootable media using the applications available through the ToolsCenter website at http://www.ibm.com/support/entry/portal/docdisplay?lndocid=TOOL-CENTER. From the **IBM ToolsCenter** page, scroll down for the available tools.

5. Restart the server.

Updating the DMI/SMBIOS data

Use this information to update the DMI/SMBIOS data.

The Desktop Management Interface (DMI) must be updated when the system board is replaced. Use the Advanced Settings Utility to update the DMI in the UEFI-based server. The ASU is an online tool that supports several operating systems. Make sure that you download the version for your operating system. You can download the ASU from the IBM website. To download the ASU and update the DMI, complete the following steps.

Note: Changes are made periodically to the IBM website. The actual procedure might vary slightly from what is described in this document.

1. Download the Advanced Settings Utility (ASU):
   a. Go to http://www.ibm.com/supportportal.
   b. Click on the **Downloads** tab at the top of the panel.
   c. Under **ToolsCenter**, select **View ToolsCenter downloads**.
   d. Select **Advanced Settings Utility (ASU)**.
   e. Scroll down and click on the link and download the ASU version for your operating system.

2. ASU sets the DMI in the Integrated Management Module (IMM). Select one of the following methods to access the Integrated Management Module (IMM) to set the DMI:
   - Online from the target system (LAN or keyboard console style (KCS) access)
   - Remote access to the target system (LAN based)
   - Bootable media containing ASU (LAN or KCS, depending upon the bootable media)

3. Copy and unpack the ASU package, which also includes other required files, to the server. Make sure that you unpack the ASU and the required files to the same directory. In addition to the application executable (asu or asu64), the following files are required:
   - For Windows based operating systems:
     - *ibm_rndis_server_os.inf*

– *device.cat*
- For Linux based operating systems:
  – *cdc_interface.sh*
4. After you install ASU, Type the following commands to set the DMI:

```
asu set SYSTEM_PROD_DATA.SysInfoProdName <m/t_model> [access_method]
asu set SYSTEM_PROD_DATA.SysInfoSerialNum <s/n> [access_method]
asu set SYSTEM_PROD_DATA.SysEncloseAssetTag <asset_tag> [access_method]
```

Where:

<m/t_model>
> The server machine type and model number. Type mtm xxxxyyy, where *xxxx* is the machine type and *yyy* is the server model number.

<s/n>   The serial number on the server. Type sn zzzzzzz, where *zzzzzzz* is the serial number.

<asset_method>
> The server asset tag number. Type asset aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa, where *aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa* is the asset tag number.

[access_method]
> The access method that you select to use from the following methods:

- Online authenticated LAN access, type the command:

```
[host <imm_internal_ip>] [user <imm_user_id>][password <imm_password>]
```

Where:

imm_internal_ip
> The IMM internal LAN/USB IP address. The default value is 169.254.95.118.

imm_user_id
> The IMM account (1 of 12 accounts). The default value is USERID.

imm_password
> The IMM account password (1 of 12 accounts). The default value is PASSW0RD (with a zero 0 not an O).

Note: If you do not specify any of these parameters, ASU will use the default values. When the default values are used and ASU is unable to access the IMM using the online authenticated LAN access method, ASU will automatically use the unauthenticated KCS access method.

The following commands are examples of using the userid and password default values and not using the default values:

Examples that do not use the userid and password default values:
```
asu set SYSTEM_PROD_DATA.SysInfoProdName <m/t_model>
--user <imm_user_id> --password <imm_password>
asu set SYSTEM_PROD_DATA.SysInfoSerialNum <s/n> --user <imm_user_id>
--password <imm_password>
asu set SYSTEM_PROD_DATA.SysEncloseAssetTag <asset_tag>
--user <imm_user_id> --password <imm_password>
```

Examples that do use the userid and password default values:
```
asu set SYSTEM_PROD_DATA.SysInfoProdName <m/t_model>
```

```
asu set SYSTEM_PROD_DATA.SysInfoSerialNum <s/n>
asu set SYSTEM_PROD_DATA.SysEncloseAssetTag <asset_tag>
```

- Online KCS access (unauthenticated and user restricted):

  You do not need to specify a value for *access_method* when you use this access method.

  The KCS access method uses the IPMI/KCS interface. This method requires that the IPMI driver be installed. Some operating systems have the IPMI driver installed by default. ASU provides the corresponding mapping layer. To download the *Advanced Settings Utility Users Guide*, complete the following steps:

  Note: Changes are made periodically to the IBM website. The actual procedure might vary slightly from what is described in this document.

  a. Go to http://www.ibm.com/supportportal.

  b. Click on the **Downloads** tab at the top of the panel.

  c. Under **ToolsCenter**, select **View ToolsCenter downloads**.

  d. Select **Advanced Settings Utility (ASU)**.

  e. Scroll down and click on the link and download the ASU version for your operating system. Scroll down and look under **Online Help** to download the *Advanced Settings Utility Users Guide*.

- The following commands are examples of using the userid and password default values and not using the default values:

  Examples that do not use the userid and password default values:
  ```
  asu set SYSTEM_PROD_DATA.SysInfoProdName <m/t_model>
  asu set SYSTEM_PROD_DATA.SysInfoSerialNum <s/n>
  asu set SYSTEM_PROD_DATA.SysEncloseAssetTag <asset_tag>
  ```

- Remote LAN access, type the command:

  Note: When using the remote LAN access method to access IMM using the LAN from a client, the *host* and the *imm_external_ip* address are required parameters.
  ```
  host <imm_external_ip> [user <imm_user_id>][password <imm_password>]
  ```
  Where:

  imm_external_ip
  > The external IMM LAN IP address. There is no default value. This parameter is required.

  imm_user_id
  > The IMM `account` (1 of 12 accounts). The default value is USERID.

  imm_password
  > The IMM account password (1 of 12 accounts). The default value is PASSW0RD (with a zero 0 not an O).

  The following commands are examples of using the userid and password default values and not using the default values:

  Examples that do not use the userid and password default values:
  ```
  asu set SYSTEM_PROD_DATA.SysInfoProdName <m/t_model> --host <imm_ip>
  --user <imm_user_id> --password <imm_password>
  asu set SYSTEM_PROD_DATA.SysInfoSerialNum <s/n> --host <imm_ip>
  --user <imm_user_id> --password <imm_password>
  asu set SYSTEM_PROD_DATA.SysEncloseAssetTag <asset_tag> --host <imm_ip>
  ```

```
--user <imm_user_id> --password <imm_password>
```

Examples that do use the userid and password default values:
```
asu set SYSTEM_PROD_DATA.SysInfoProdName <m/t_model> --host <imm_ip>
asu set SYSTEM_PROD_DATA.SysInfoSerialNum <s/n> --host <imm_ip>
asu set SYSTEM_PROD_DATA.SysEncloseAssetTag <asset_tag> --host <imm_ip>
```

- Bootable media:

  You can also build a bootable media using the applications available through the ToolsCenter website at http://www.ibm.com/support/entry/portal/docdisplay?lndocid=TOOL-CENTER. From the **IBM ToolsCenter** page, scroll down for the available tools.

5. Restart the server.

Chapter 3. Troubleshooting

This chapter describes the diagnostic tools and troubleshooting information that are available to help you solve problems that might occur in the server.

If you cannot diagnose and correct a problem by using the information in this chapter, see Appendix D, "Getting help and technical assistance," on page 371 for more information.

Start here

You can solve many problems without outside assistance by following the troubleshooting procedures in this documentation and on the World Wide Web.

This document describes the diagnostic tests that you can perform, troubleshooting procedures, and explanations of error messages and error codes. The documentation that comes with your operating system and software also contains troubleshooting information.

Diagnosing a problem

Before you contact IBM or an approved warranty service provider, follow these procedures in the order in which they are presented to diagnose a problem with your server.

1. **Return the server to the condition it was in before the problem occurred.** If any hardware, software, or firmware was changed before the problem occurred, if possible, reverse those changes. This might include any of the following items:
   - Hardware components
   - Device drivers and firmware
   - System software
   - UEFI firmware
   - System input power or network connections

2. **View the light path diagnostics LEDs and event logs.** The server is designed for ease of diagnosis of hardware and software problems.
   - **Light path diagnostics LEDs:** See **Fan and power controller indicators, controls, and connectors** of the IBM NeXtScale n1200 Enclosure Type 5456 Installation and Service Guide for information about using light path diagnostics LEDs.
   - **Event logs:** See "Event logs" on page 55 for information about notification events and diagnosis.
   - **Software or operating-system error codes:** See the documentation for the software or operating system for information about a specific error code. See the manufacturer's website for documentation.

3. **Run IBM Dynamic System Analysis (DSA) and collect system data.** Run Dynamic System Analysis (DSA) to collect information about the hardware, firmware, software, and operating system. Have this information available when you contact IBM or an approved warranty service provider. For instructions for running DSA, see the *Dynamic System Analysis Installation and User's Guide*.

To download the latest version of DSA code and the *Dynamic System Analysis Installation and User's Guide*, go to http://www.ibm.com/support/entry/portal/docdisplay?lndocid=SERV-DSA.

4. **Check for and apply code updates.** Fixes or workarounds for many problems might be available in updated UEFI firmware, device firmware, or device drivers. To display a list of available updates for the server, go to http://www.ibm.com/support/fixcentral.

   Attention: Installing the wrong firmware or device-driver update might cause the server to malfunction. Before you install a firmware or device-driver update, read any readme and change history files that are provided with the downloaded update. These files contain important information about the update and the procedure for installing the update, including any special procedure for updating from an early firmware or device-driver version to the latest version.

   Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

   a. **Install UpdateXpress system updates.** You can install code updates that are packaged as an UpdateXpress System Pack or UpdateXpress CD image. An UpdateXpress System Pack contains an integration-tested bundle of online firmware and device-driver updates for your server. In addition, you can use IBM ToolsCenter Bootable Media Creator to create bootable media that is suitable for applying firmware updates and running preboot diagnostics. For more information about UpdateXpress System Packs, see and "Updating the firmware" on page 21. For more information about the Bootable Media Creator, see http://www.ibm.com/support/entry/portal/docdisplay?lndocid=TOOL-BOMC.

      Be sure to separately install any listed critical updates that have release dates that are later than the release date of the UpdateXpress System Pack or UpdateXpress image (see step 4b).

   b. **Install manual system updates.**
      1) **Determine the existing code levels.**

         In DSA, click **Firmware/VPD** to view system firmware levels, or click **Software** to view operating-system levels.
      2) **Download and install updates of code that is not at the latest level.**

         To display a list of available updates for the server, go to http://www.ibm.com/support/fixcentral.

         When you click an update, an information page is displayed, including a list of the problems that the update fixes. Review this list for your specific problem; however, even if your problem is not listed, installing the update might solve the problem.

5. **Check for and correct an incorrect configuration.** If the server is incorrectly configured, a system function can fail to work when you enable it; if you make an incorrect change to the server configuration, a system function that has been enabled can stop working.

   a. **Make sure that all installed hardware and software are supported.** See http://www.ibm.com/systems/info/x86servers/serverproven/compat/us to verify that the server supports the installed operating system, optional devices, and software levels. If any hardware or software component is not supported, uninstall it to determine whether it is causing the problem. You must remove nonsupported hardware before you contact IBM or an approved warranty service provider for support.

b. **Make sure that the server, operating system, and software are installed and configured correctly.** Many configuration problems are caused by loose power or signal cables or incorrectly seated adapters. You might be able to solve the problem by turning off the server, reconnecting cables, reseating adapters, and turning the server back on. For information about performing the checkout procedure, see "About the checkout procedure" on page 50. For information about configuring the server, see Chapter 2, "Configuration information and instructions," on page 21.

6. **See controller and management software documentation.** If the problem is associated with a specific function (for example, if a RAID hard disk drive is marked offline in the RAID array), see the documentation for the associated controller and management or controlling software to verify that the controller is correctly configured.

   Problem determination information is available for many devices such as RAID and network adapters.

   For problems with operating systems or IBM software or devices, go to http://www.ibm.com/supportportal.

7. **Check for troubleshooting procedures and RETAIN tips.** Troubleshooting procedures and RETAIN tips document known problems and suggested solutions. To search for troubleshooting procedures and RETAIN tips, go to http://www.ibm.com/supportportal.

8. **Use the troubleshooting tables.** See "Troubleshooting by symptom" on page 61 to find a solution to a problem that has identifiable symptoms.

   A single problem might cause multiple symptoms. Follow the troubleshooting procedure for the most obvious symptom. If that procedure does not diagnose the problem, use the procedure for another symptom, if possible.

   If the problem remains, contact IBM or an approved warranty service provider for assistance with additional problem determination and possible hardware replacement. To open an online service request, go to http://www.ibm.com/support/entry/portal/Open_service_request. Be prepared to provide information about any error codes and collected data.

Undocumented problems

If you have completed the diagnostic procedure and the problem remains, the problem might not have been previously identified by IBM. After you have verified that all code is at the latest level, all hardware and software configurations are valid, and no light path diagnostics LEDs or log entries indicate a hardware component failure, contact IBM or an approved warranty service provider for assistance.

To open an online service request, go to http://www.ibm.com/support/entry/portal/Open_service_request. Be prepared to provide information about any error codes and collected data and the problem determination procedures that you have used.

Service bulletins

IBM continually updates the support website with the latest tips and techniques that you can use to solve problem that you might have with the IBM NeXtScale nx360 M4 Compute Node server.

To find service bulletins that are available for the IBM NeXtScale nx360 M4 Compute Node server, go to and search for `Type 5455`, and `retain`.

Checkout procedure

The checkout procedure is the sequence of tasks that you should follow to diagnose a problem in the server.

About the checkout procedure

Before you perform the checkout procedure for diagnosing hardware problems, review the following information:

- Read the safety information that begins on page "Safety" on page vii.
- IBM Dynamic System Analysis (DSA) provides the primary methods of testing the major components of the server, such as the system board, Ethernet controller, keyboard, mouse (pointing device), serial ports, and hard disk drives. You can also use them to test some external devices. If you are not sure whether a problem is caused by the hardware or by the software, you can use the diagnostic programs to confirm that the hardware is working correctly.
- When you run DSA, a single problem might cause more than one error message. When this happens, correct the cause of the first error message. The other error messages usually will not occur the next time you run DSA.

  Exception: If multiple error codes or light path diagnostics LEDs indicate a microprocessor error, the error might be in the microprocessor or in the microprocessor socket. See "Microprocessor problems" on page 66 for information about diagnosing microprocessor problems.

- Before you run DSA, you must determine whether the failing server is part of a shared hard disk drive cluster (two or more servers sharing external storage devices). If it is part of a cluster, you can run all diagnostic programs except the ones that test the storage unit (that is, a hard disk drive in the storage unit) or the storage adapter that is attached to the storage unit. The failing server might be part of a cluster if any of the following conditions is true:
  - You have identified the failing server as part of a cluster (two or more servers sharing external storage devices).
  - One or more external storage units are attached to the failing server and at least one of the attached storage units is also attached to another server or unidentifiable device.
  - One or more servers are located near the failing server.

  Important: If the server is part of a shared hard disk drive cluster, run one test at a time. Do not run any suite of tests, such as "quick" or "normal" tests, because this might enable the hard disk drive diagnostic tests.

- If the server is halted and a POST error code is displayed, see Appendix B, "UEFI (POST) error codes," on page 307. If the server is halted and no error message is displayed, see "Troubleshooting by symptom" on page 61 and "Solving undetermined problems" on page 77.
- For information about power-supply problems, see "Solving power problems" on page 74, "Power problems" on page 71, and "Power-supply LEDs" on page 53.
- For intermittent problems, check the event log; see "Event logs" on page 55 and Appendix C, "DSA diagnostic test results," on page 319.

Performing the checkout procedure

Use this information to perform the checkout procedure.

To perform the checkout procedure, complete the following steps:

1. Is the server part of a cluster?
   - **No:** Go to step 2.
   - **Yes:** Shut down all failing servers that are related to the cluster. Go to step 2.
2. Complete the following steps:
   a. Check the power supply LEDs (see "Power-supply LEDs" on page 53).
   b. Turn off the server and all external devices.
   c. Check all internal and external devices for compatibility at http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.
   d. Check all cables and power cords.
   e. Set all display controls to the middle positions.
   f. Turn on all external devices.
   g. Turn on the server. If the server does not start, see "Troubleshooting by symptom" on page 61.
   h. Check the system-error LED on the operator information panel. If it is lit, check the light path diagnostics LEDs (see "Compute node controls, connectors, and LEDs" on page 12).
   i. Check for the following results:
      - Successful completion of POST (see "POST" on page 58 for more information)
      - Successful completion of startup, which is indicated by a readable display of the operating-system desktop
3. Is there a readable image on the monitor screen?
   - **No:** Find the failure symptom in "Troubleshooting by symptom" on page 61; if necessary, see "Solving undetermined problems" on page 77.
   - **Yes:** Run DSA (see "Running DSA Preboot diagnostic programs" on page 59).
      - If DSA reports an error, follow the instructions in Appendix C, "DSA diagnostic test results," on page 319.
      - If DSA does not report an error but you still suspect a problem, see "Solving undetermined problems" on page 77.

Diagnostic tools

The section introduces available tools to help you diagnose and solve hardware-related problems.

- **Light path diagnostics**

  Use light path diagnostics to diagnose system errors quickly. See Light path diagnostics for more information.

- **Event logs**

  The event logs list the error codes and messages that are generated when an error is detected for the subsystems IMM2, POST, DSA, and the server baseboard management controller. See "Event logs" on page 55 for more information.

- **Integrated management module II**

The integrated management module II (IMM2) combines service processor functions, video controller, and remote presence and blue-screen capture features in a single chip. The IMM provides advanced service-processor control, monitoring, and alerting function. If an environmental condition exceeds a threshold or if a system component fails, the IMM lights LEDs to help you diagnose the problem, records the error in the IMM event log, and alerts you to the problem. Optionally, the IMM also provides a virtual presence capability for remote server management capabilities. The IMM provides remote server management through the following industry-standard interfaces:

– Intelligent Platform Management Protocol (IPMI) version 2.0

– Simple Network Management Protocol (SNMP) version 3

– Common Information Model (CIM)

– Web browser

For more information about the integrated management module II (IMM2), see "Using the integrated management module" on page 33, Appendix A, "Integrated Management Module II (IMM2) error messages," on page 183, and the *Integrated Management Module II User's Guide* at http://www-947.ibm.com/support/entry/portal/docdisplay?lndocid=migr-5086346.

- **IBM Dynamic System Analysis**

  Two editions of IBM Dynamic System Analysis (DSA) are available for diagnosing problems, DSA Portable and DSA Preboot:

  – DSA Portable

    DSA Portable collects and analyzes system information to aid in diagnosing server problems. DSA Portable runs on the server operating system and collects the following information about the server:

    - Drive health information

    - Event logs for ServeRAID controllers and service processors

    - Installed hardware, including PCI and USB information

    - Installed applications and hot fixes

    - Kernel modules

    - Light path diagnostics status

    - Microprocessor, input/out hub, and UEFI error logs

    - Network interfaces and settings

    - RAID controller configuration

    - Service processor (integrated management module) status and configuration

    - System configuration

    - Vital product data, firmware, and UEFI configuration

    DSA Portable creates a DSA log, which is a chronologically ordered merge of the system-event log (as the IPMI event log), the integrated management module (IMM) event log (as the ASM event log), and the operating-system event logs. You can send the DSA log as a file to IBM Support (when requested by IBM Support) or view the information as a text file or HTML file.

    Note: Use the latest available version of DSA to make sure you are using the most recent configuration data. For documentation and download information for DSA, see http://www.ibm.com/systems/management.

    For additional information, see "IBM Dynamic System Analysis" on page 58 and DSA messages.

– DSA Preboot

DSA Preboot diagnostic program is stored in the integrated USB memory on the server. DSA Preboot collects and analyzes system information to aid in diagnosing server problems, as well as offering a rich set of diagnostic tests of the major components of the server. DSA Preboot collects the following information about the server:

- Drive health information
- Event logs for ServeRAID controllers and service processors
- Installed hardware, including PCI and USB information
- Light path diagnostics status
- Microprocessor, input/output hub, and UEFI error logs
- Network interfaces and settings
- RAID controller configuration
- Service processor (integrated management module) status and configuration
- System configuration
- Vital product data, firmware, and UEFI configuration

DSA Preboot also provides diagnostics for the following system components (when they are installed):

1. Emulex network adapter
2. IMM I2C bus
3. Light path diagnostics panel
4. Memory modules
5. Microprocessors
6. Optical devices (CD or DVD)
7. SAS or SATA drives

See "Running DSA Preboot diagnostic programs" on page 59 for more information on running the DSA Preboot program on the server.

- **Troubleshooting by symptom**

These tables list problem symptoms and actions to correct the problems. See "Troubleshooting by symptom" on page 61 for more information.

Power-supply LEDs

The following minimum configuration is required for the server to start.
- One microprocessor in microprocessor socket 1
- One 2 GB DIMM on the system board
- One power supply
- Power cord
- Four cooling fans
- One PCI riser-card assembly in PCI connector 1

AC power-supply LEDs

Use this information to view AC power-supply LEDs.

The following minimum configuration is required for the DC LED on the power supply to be lit:
- Power supply
- Power cord

Note: You must turn on the server for the DC LED on the power supply to be lit.

The following illustration shows the locations of the power-supply LEDs on the ac power supply.

AC power   DC power   Power-supply
LED (green)   LED (green)   error LED (yellow)
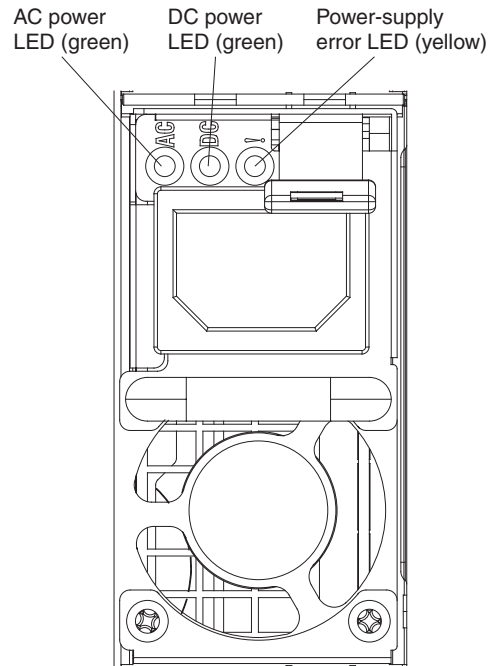
Figure 13. AC power-supply LEDs

The following table describes the problems that are indicated by various combinations of the power-supply LEDs on an ac power supply and suggested actions to correct the detected problems.

AC power-supply LEDs			Description	Action	Notes
AC	DC	Error (!)			
On	On	Off	Normal operation.		
Off	Off	Off	No ac power to the server or a problem with the ac power source.	1. Check the ac power to the server. 2. Make sure that the power cord is connected to a functioning power source. 3. Restart the server. If the error remains, check the power-supply LEDs. 4. If the problem remains, replace the power-supply.	This is a normal condition when no ac power is present.
Off	Off	On	The power supply has failed.	Replace the power supply.	
Off	On	Off	The power supply has failed.	Replace the power supply.	
Off	On	On	The power supply has failed.	Replace the power supply.	

AC power-supply LEDs					
AC	DC	Error (!)	Description	Action	Notes
On	Off	Off	Power-supply not fully seated, faulty system board, or the power supply has failed.	1. Reseat the power supply. 2. Follow actions in "Power problems" on page 71. 3. Follow actions in "Solving power problems" on page 74 until the problem is solved.	Typically indicates a power-supply is not fully seated.
On	Off	On	The power supply has failed.	Replace the power supply.	
On	On	On	The power supply has failed.	Replace the power supply.	

System pulse LEDs

Use this information to view the system pulse LEDs.

The following LEDs are on the system board and monitor the system power-on and power-off sequencing and boot progress (see "System-board LEDs and controls" on page 18 for the location of these LEDs).

Table 3. System pulse LEDs

LED	Description	Action
RTMM heartbeat	Power-on and power-off sequencing.	1. If the LED blinks at 1Hz, it is functioning properly and no action is necessary. 2. If the LED is not blinking, (trained technician only) replace the system board.
IMM2 heartbeat	IMM2 heartbeat boot process.	The following steps describe the different stages of the IMM2 heartbeat sequencing process. 1. When this LED is blinking fast (approximately 4Hz), this indicates, that the IMM2 code is in the loading process. 2. When this LED goes off momentarily, this indicates that the IMM2 code has loaded completely. 3. When this LED goes off momentarily and then starts blinking slowing (approximately 1Hz), this indicates that IMM2 is fully operational. You can now press the power-control button to power-on the server. 4. If this LED does not blink within 30 seconds of connecting a power source to the server, (trained technician only) replace the system board.

Event logs

Error codes and messages displayed in POST event log, system-event log, integrated management module (IMM2) event log, and DSA event log.

- **POST event log:** This log contains the most recent error codes and messages that were generated during POST. You can view the contents of the POST event

log from the Setup utility (see "Starting the Setup utility" on page 26). For more information about POST error codes, see UEFI/POST error codes.

- **System-event log:** This log contains POST and system management interrupt (SMI) events and all events that are generated by the baseboard management controller that is embedded in the integrated management module (IMM). You can view the contents of the system-event log through the Setup utility and through the Dynamic System Analysis (DSA) program (as IPMI event log).

  The system-event log is limited in size. When it is full, new entries will not overwrite existing entries; therefore, you must periodically clear the system-event log through the Setup utility. When you are troubleshooting an error, you might have to save and then clear the system-event log to make the most recent events available for analysis. For more information about the system-event log, see Integrated management module II (IMM2) error messages.

  Messages are listed on the left side of the screen, and details about the selected message are displayed on the right side of the screen. To move from one entry to the next, use the Up Arrow (↑) and Down Arrow (↓) keys.

  Some IMM sensors cause assertion events to be logged when their setpoints are reached. When a setpoint condition no longer exists, a corresponding deassertion event is logged. However, not all events are assertion-type events.

- **Integrated management module II (IMM2) event log:** This log contains a filtered subset of all IMM, POST, and system management interrupt (SMI) events. You can view the IMM event log through the IMM web interface. For more information, see "Logging on to the web interface" on page 36. You can also view the IMM event log through the Dynamic System Analysis (DSA) program (as the ASM event log). For more information about IMM error messages, see Integrated management module II (IMM2) error messages.

- **DSA event log:** This log is generated by the Dynamic System Analysis (DSA) program, and it is a chronologically ordered merge of the system-event log (as the IPMI event log), the IMM chassis-event log (as the ASM event log), and the operating-system event logs. You can view the DSA event log through the DSA program (see "Viewing event logs without restarting the server"). For more information about DSA and DSA messages, see "IBM Dynamic System Analysis" on page 58 and DSA messages.

Viewing event logs through the Setup utility

To view the POST event log or system-event log, complete the following steps:

1. Turn on the server.
2. When the prompt `<F1> Setup` is displayed, press F1. If you have set both a power-on password and an administrator password, you must type the administrator password to view the event logs.
3. Select **System Event Logs** and use one of the following procedures:
   - To view the POST event log, select **POST Event Viewers**.
   - To view the system-event log, select **System Event Log**.

Viewing event logs without restarting the server

If the server is not hung and the IMM is connected to a network, methods are available for you to view one or more event logs without having to restart the server.

If you have installed Dynamic System Analysis (DSA) Portable, you can use it to view the system-event log (as the IPMI event log), or the IMM event log (as the ASM event log), the operating-system event logs, or the merged DSA log. You can also use DSA Preboot to view these logs, although you must restart the server to

use DSA Preboot. To install DSA Portable or check for and download a later version of DSA Preboot CD image, go to http://www.ibm.com/support/entry/portal/docdisplay?lndocid=SERV-DSA.

If IPMItool is installed in the server, you can use it to view the system-event log. Most recent versions of the Linux operating system come with a current version of IPMItool. For an overview of IPMI, go to http://www.ibm.com/developerworks/linux/blueprints/ and click **Using Intelligent Platform Management Interface (IPMI) on IBM Linux platforms**.

You can view the IMM event log through the **Event Log** link in the integrated management module II (IMM2) web interface. For more information, see "Logging on to the web interface" on page 36.

The following table describes the methods that you can use to view the event logs, depending on the condition of the server. The first three conditions generally do not require that you restart the server.

Table 4. Methods for viewing event logs

Condition	Action
The server is not hung and is connected to a network (using an operating system controlled network ports).	Use any of the following methods: • Run DSA Portable to view the diagnostic event log (requires IPMI driver) or create an output file that you can send to IBM service and support (using ftp or local copy). • Use IPMItool to view the system-event log (requires IPMI driver). • Use the web browser interface to the IMM to view the system-event log locally (requires RNDIS USB LAN driver).
The server is not hung and is not connected to a network (using an operating system controlled network ports).	• Run DSA Portable to view the diagnostic event log (requires IPMI driver) or create an output file that you can send to IBM service and support (using ftp or local copy). • Use IPMItool to view the system-event log (requires IPMI driver). • Use the web browser interface to the IMM to view the system-event log locally (requires RNDIS USB LAN driver).
The server is not hung and the integrated management module II (IMM2) is connected to a network.	In a web browser, type the IP address for the IMM2 and go to the **Event Log** page. For more information, see "Obtaining the IMM host name" on page 35 and "Logging on to the web interface" on page 36.
The server is hung, and no communication can be made with the IMM.	• If DSA Preboot is installed, restart the server and press F2 to start DSA Preboot and view the event logs (see "Running DSA Preboot diagnostic programs" on page 59 for more information). • Alternatively, you can restart the server and press F1 to start the Setup utility and view the POST event log or system-event log. For more information, see "Viewing event logs through the Setup utility" on page 56.

Clearing the event logs

Use this information to clear the event logs.

To clear the event logs, complete the following steps:

Note: The POST error log is automatically cleared each time the server is restarted.

1. Turn on the server.
2. When the prompt `<F1> Setup` is displayed, press F1. If you have set both a power-on password and an administrator password, you must type the administrator password to view the event logs.
3. To clear the IMM system-event log, select **System Event Logs** > **Clear System Event Log**, then, press **Enter** twice.

POST

When you turn on the server, it performs a series of tests to check the operation of the server components and some optional devices in the server. This series of tests is called the power-on self-test, or POST.

Note: This server does not use beep codes for server status.

If a power-on password is set, you must type the password and press **Enter** (when you are prompted), for POST to run.

If POST detects a problem, an error message is displayed. See UEFI/POST error codes for more information.

If POST detects a problem, an error message is sent to the POST event log, see "Event logs" on page 55 for more information.

IBM Dynamic System Analysis

IBM Dynamic System Analysis (DSA) collects and analyzes system information to aid in diagnosing server problems.

DSA collects the following information about the server:
- Drive health information
- Event logs for ServeRAID controllers and service processors
- Hardware inventory, including PCI and USB information
- Installed applications and hot fixes (available in DSA Portable only)
- Kernel modules (available in DSA Portable only)
- Light path diagnostics status
- Network interfaces and settings
- Performance data and details about processes that are running
- RAID controller configuration
- Service processor (integrated management module) status and configuration
- System configuration
- Vital product data and firmware information

For system-specific information about the action that you should take as a result of a message that DSA generates, see DSA messages.

If you cannot find a problem by using DSA, see "Solving undetermined problems" on page 77 for information about testing the server.

Note: DSA Preboot might appear to be unresponsive when you start the program. This is normal operation while the program loads.

Make sure that the server has the latest version of the DSA code. To obtain DSA code and the *Dynamic System Analysis Installation and User's Guide*, go to http://www.ibm.com/support/entry/portal/docdisplay?lndocid=SERV-DSA.

DSA editions

Two editions of Dynamic System Analysis are available.

- **DSA Portable**

  DSA Portable Edition runs within the operating system; you do not have to restart the server to run it. It is packaged as a self-extracting file that you download from the web. When you run the file, it self-extracts to a temporary folder and performs comprehensive collection of hardware and operating-system information. After it runs, it automatically deletes the temporary files and folder and leaves the results of the data collection and diagnostics on the server.

  If you are able to start the server, use DSA Portable.

- **DSA Preboot**

  DSA Preboot runs outside of the operating system; you must restart the server to run it. It is provided in the flash memory on the server, or you can create a bootable media such as a CD, DVD, ISO, USB, or PXE using the IBM ToolsCenter Bootable Media Creator (BoMC). For more details, see the BoMC *Installation and User's Guide* at http://www.ibm.com/support/entry/portal/docdisplay?lndocid=TOOL-BOMC. In addition to the capabilities of the other editions of DSA, DSA Preboot includes diagnostic routines that would be disruptive to run within the operating-system environment (such as resetting devices and causing loss of network connectivity). It has a graphical user interface that you can use to specify which diagnostics to run and to view the diagnostic and data collection results.

  DSA Preboot provides diagnostics for the following system components, if they are installed:

  - Emulex network adapter
  - Optical devices (CD or DVD)
  - Tape drives (SCSI, SAS, or SATA)
  - Memory
  - Microprocessor
  - Checkpoint panel
  - I2C bus
  - SAS and SATA drives

  If you are unable to restart the server or if you need comprehensive diagnostics, use DSA Preboot.

For more information and to download the utilities, go to http://www.ibm.com/support/entry/portal/docdisplay?lndocid=SERV-DSA.

Running DSA Preboot diagnostic programs

Use this information to run the DSA Preboot diagnostic programs.

Note: The DSA memory test might take up to 30 minutes to run. If the problem is not a memory problem, skip the memory test.

To run the DSA Preboot diagnostic programs, complete the following steps:
1. If the server is running, turn off the server and all attached devices.
2. Turn on all attached devices; then, turn on the server.
3. When the prompt **<F2> Diagnostics** is displayed, press F2.

   Note: The DSA Preboot diagnostic program might appear to be unresponsive for an unusual length of time when you start the program. This is normal operation while the program loads. The loading process may take up to 10 minutes.
4. Optionally, select **Quit to DSA** to exit from the stand-alone memory diagnostic program.

   Note: After you exit from the stand-alone memory diagnostic environment, you must restart the server to access the stand-alone memory diagnostic environment again.
5. Type **gui** to display the graphical user interface, or type **cmd** to display the DSA interactive menu.
6. Follow the instructions on the screen to select the diagnostic test to run.

If the diagnostic programs do not detect any hardware errors but the problem remains during normal server operation, a software error might be the cause. If you suspect a software problem, see the information that comes with your software.

A single problem might cause more than one error message. When this happens, correct the cause of the first error message. The other error messages usually will not occur the next time you run the diagnostic programs.

If the server stops during testing and you cannot continue, restart the server and try running the DSA Preboot diagnostic programs again. If the problem remains, replace the component that was being tested when the server stopped.

Diagnostic text messages
Diagnostic text messages are displayed while the tests are running.

A diagnostic text message contains one of the following results:
   Passed: The test was completed without any errors.
   Failed: The test detected an error.
   Aborted: The test could not proceed because of the server configuration.

Additional information concerning test failures is available in the extended diagnostic results for each test.

Viewing the test log results and transferring the DSA collection
Use this information to view the test log results and transferring the DSA collection.

To view the test log for the results when the tests are completed, click the **Success** link in the Status column, if you are running the DSA graphical user interface, or type **:x** to exit the Execute Tests menu, if you are running the DSA interactive

menu, or select **Diagnostic Event Log** in the graphical user interface. To transfer DSA Preboot collections to an external USB device, type the `copy` command in the DSA interactive menu.

- If you are running the DSA graphical user interface (GUI), click the **Success** link in the Status column.
- If you are running the DSA interactive menu (CLI), type `:x` to exit the Execute Tests menu; then, select **completed tests** to view the results.

You can also send the DSA error log to IBM support to aid in diagnosing the server problems.

Automated service request (call home)

IBM provides tools that can automatically collect and send data or call IBM Support when an error is detected. These tools can help IBM Support speed up the process of diagnosing problems.

The following sections provide information about the call home tools.

IBM Electronic Service Agent

IBM Electronic Service Agent monitors, tracks, and captures system hardware errors and hardware and software inventory information, and reports serviceable problems directly to IBM Support. You can also choose to collect data manually. It uses minimal system resources, and can be downloaded from the IBM website.

For more information and to download IBM Electronic Service Agent, go to http://www-01.ibm.com/support/esa/.

Error messages

This section provides the list of error codes and messages for UEFI/POST, IMM, and DSA that are generated when a problem is detected.

See UEFI/POST error codes, Integrated management module II (IMM2) error messages, and DSA messages for more information.

Error messages

This section provides the list of error codes and messages for UEFI/POST, IMM, and DSA that are generated when a problem is detected.

See UEFI/POST error codes, Integrated management module II (IMM2) error messages, and DSA messages for more information.

Troubleshooting by symptom

Use the troubleshooting tables to find solutions to problems that have identifiable symptoms.

If you cannot find a solution to the problem in these tables, see DSA messages for information about testing the server and "Running DSA Preboot diagnostic programs" on page 59 for additional information about running DSA Preboot program. For additional information to help you solve problems, see "Start here" on page 47.

If you have just added new software or a new optional device and the server is not working, complete the following steps before you use the troubleshooting tables:

1. Check the system-error LED on the operator information panel; if it is lit, check the light path diagnostics LEDs (see Light path diagnostics).
2. Remove the software or device that you just added.
3. Run IBM Dynamic System Analysis (DSA) to determine whether the server is running correctly (for information about using DSA, see DSA messages).
4. Reinstall the new software or new device.

General problems

Use this information to solve general problems.

• Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved. • If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician. • Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.	
Symptom	**Action**
A cover latch is broken, an LED is not working, or a similar problem has occurred.	If the part is a CRU, replace it. If the part is a microprocessor or the system board, the part must be replaced by a trained technician.
The server is hung while the screen is on. Cannot start the Setup utility by pressing F1.	1. See "Nx-boot failure" on page 82 for more information. 2. See "Recovering the server firmware (UEFI update failure)" on page 79 for more information.

Hard disk drive problems

Table 5. Hard disk drive symptoms and actions

• Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved. • If an action step is preceded by "(Trained technician only)", that step must be performed only by a trained technician. • Go to the IBM support website at http://www.ibm.com/supportportal to check for technical information, hints, tips, and new device drivers or to submit a request for information.	
Symptom	**Action**
Not all drives are recognized by the hard disk drive diagnostic tests.	Remove the drive that is indicated by the diagnostic tests; then, run the hard disk drive diagnostic tests again. If the remaining drives are recognized, replace the drive that you removed with a new one.
The server stops responding during the hard disk drive diagnostic test.	Remove the hard disk drive that was being tested when the server stopped responding, and run the diagnostic test again. If the hard disk drive diagnostic test runs successfully, replace the drive that you removed with a new one.
A hard disk drive was not detected while the operating system was being started.	Reseat all hard disk drives and cables; then, run the hard disk drive diagnostic tests again.
A hard disk drive passes the diagnostic Fixed Disk Test, but the problem remains.	Run the diagnostic SCSI Fixed Disk Test (see "Running DSA Preboot diagnostic programs" on page 59). **Note:** This test is not available on servers that have RAID arrays or servers that have SATA hard disk drives.

Hypervisor problems

Use this information to solve hypervisor problems.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**
• **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**
• **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**

Symptom	Action
If an optional embedded hypervisor flash device is not listed in the expected boot order, does not appear in the list of boot devices, or a similar problem has occurred.	1. Make sure that the optional embedded hypervisor flash device is selected on the boot manager `<F12> Select Boot Device` at startup. 2. Make sure that the embedded hypervisor flash device is seated in the connector correctly (see "Removing the USB flash drive" on page 160 and "Installing the USB flash drive" on page 161). 3. See the documentation that comes with the optional embedded hypervisor flash device for setup and configuration information. 4. Make sure that other software works on the server.

Intermittent problems

Use this information to solve intermittent problems.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**
• **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**
• **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**

Symptom	Action

A problem occurs only occasionally and is difficult to diagnose.	1. Make sure that:
	  • All cables and cords are connected securely to the rear of the server and attached devices.
	  • When the server is turned on, air is flowing from the fan grille. If there is no airflow, the fan is not working. This can cause the server to overheat and shut down.
	2. Check the system-error log or IMM event logs (see "Event logs" on page 55).

The server resets (restarts) occasionally.	1. If the reset occurs during POST and the POST watchdog timer is enabled (click **System Settings** > **Recovery** > **System Recovery** > **POST Watchdog Timer** in the Setup utility to see the POST watchdog setting), make sure that sufficient time is allowed in the watchdog timeout value (**POST Watchdog Timer**). If the server continues to reset during POST, see UEFI/POST error codes and DSA messages. 2. If neither condition applies, check the system-error log or IMM system-event log (see "Event logs" on page 55).

Keyboard, mouse, or USB-device problems

Use this information to solve keyboard, mouse, or USB-device problems.

- **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**
- **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**
- **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**

Symptom	Action

All or some keys on the keyboard do not work.	1. Make sure that:
	  • The keyboard cable is securely connected.
	  • The server and the monitor are turned on.
	2. If you are using a USB keyboard, run the Setup utility and enable keyboardless operation.
	3. If you are using a USB keyboard and it is connected to a USB hub, disconnect the keyboard from the hub and connect it directly to the server.
	4. Replace the keyboard.

The mouse or USB-device does not work.	1. Make sure that:
	
	  • The mouse or USB device cable is securely connected to the server.
	
	  • The mouse or USB device drivers are installed correctly.
	
	  • The server and the monitor are turned on.
	
	  • The mouse option is enabled in the Setup utility.
	2. If you are using a USB mouse or USB device and it is connected to a USB hub, disconnect the mouse or USB device from the hub and connect it directly to the server.
	3. Replace the mouse or USB-device.

Memory problems

Use this information to solve memory problems.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**	
• **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**	
• **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**	

Symptom	Action

The amount of system memory that is displayed is less than the amount of installed physical memory.	**Note:** Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.
	1. Make sure that:
	  • No error LEDs are lit on the operator information panel.
	  • No DIMM error LEDs are lit on the system board.
	  • Memory mirrored channel does not account for the discrepancy.
	  • The memory modules are seated correctly.
	  • You have installed the correct type of memory.
	  • If you changed the memory, you updated the memory configuration in the Setup utility.
	  • All banks of memory are enabled. The server might have automatically disabled a memory bank when it detected a problem, or a memory bank might have been manually disabled.
	  • There is no memory mismatch when the server is at the minimum memory configuration.
	2. Reseat the DIMMs, and then restart the server.
	3. Check the POST error log:
	  • If a DIMM was disabled by a systems-management interrupt (SMI), replace the DIMM.
	  • If a DIMM was disabled by the user or by POST, reseat the DIMM; then, run the Setup utility and enable the DIMM.
	4. Check that all DIMMs are initialized in the Setup utility; then, run memory diagnostics (see "Running DSA Preboot diagnostic programs" on page 59).
	5. Reverse the DIMMs between the channels (of the same microprocessor), and then restart the server. If the problem is related to a DIMM, replace the failing DIMM.
	6. Re-enable all DIMMs using the Setup utility, and then restart the server.
	7. (Trained technician only) Install the failing DIMM into a DIMM connector for microprocessor 2 (if installed) to verify that the problem is not the microprocessor or the DIMM connector.
	8. (Trained technician only) Replace the system board.

• Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.	
• If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.	
• Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.	

Symptom	Action
Multiple DIMMs in a channel are identified as failing.	**Note:** Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.
	1. Reseat the DIMMs; then, restart the server.
	2. Remove the highest-numbered DIMM of those that are identified and replace it with an identical known good DIMM; then, restart the server. Repeat as necessary. If the failures continue after all identified DIMMs are replaced, go to step 4.
	3. Return the removed DIMMs, one at a time, to their original connectors, restarting the server after each DIMM, until a DIMM fails. Replace each failing DIMM with an identical known good DIMM, restarting the server after each DIMM replacement. Repeat step 3 until you have tested all removed DIMMs.
	4. Replace the highest-numbered DIMM of those identified; then, restart the server. Repeat as necessary.
	5. Reverse the DIMMs between the channels (of the same microprocessor), and then restart the server. If the problem is related to a DIMM, replace the failing DIMM.
	6. (Trained technician only) Install the failing DIMM into a DIMM connector for microprocessor 2 (if installed) to verify that the problem is not the microprocessor or the DIMM connector.
	7. (Trained technician only) Replace the system board.

Microprocessor problems

Use this information to solve microprocessor problems.

• Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.	
• If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.	
• Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.	

Symptom	Action
The server goes directly to the POST Event Viewer when it is turned on.	1. Correct any errors that are indicated by the light path diagnostics LEDs (see Light path diagnostics).
	2. Make sure that the server supports all the microprocessors and that the microprocessors match in speed and cache size. To view the microprocessor information, run the Setup utility and select **System Information** > **System Summary** > **Processor Details**.
	3. (Trained technician only) Make sure that microprocessor 1 is seated correctly.
	4. (Trained technician only) Remove microprocessor 2 and restart the server.
	5. Replace the following components one at a time, in the order shown, restarting the server each time:
	a. (Trained technician only) Microprocessor
	b. (Trained technician only) System board

Monitor and video problems

Use this information to solve monitor and video problems.

Some IBM monitors have their own self-tests. If you suspect a problem with your monitor, see the documentation that comes with the monitor for instructions for testing and adjusting the monitor. If you cannot diagnose the problem, call for service.

- **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**
- **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**
- **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**

Symptom	Action
Testing the monitor.	1. Make sure that the monitor cables are firmly connected. 2. Try using a different monitor on the server, or try using the monitor that is being tested on a different server. 3. Run the diagnostic programs. If the monitor passes the diagnostic programs, the problem might be a video device driver. 4. (Trained technician only) Replace the system board.

The screen is blank.	1. If the server is attached to a KVM switch, bypass the KVM switch to eliminate it as a possible cause of the problem: connect the monitor cable directly to the correct connector on the rear of the server.
	2. The IMM2 remote presence function is disabled if you install an optional video adapter. To use the IMM2 remote presence function, remove the optional video adapter.
	3. If the server installed with the graphical adapters while turning on the server, the IBM logo displays on the screen after approximately 3 minutes. This is normal operation while the system loads.
	4. Make sure that:
	  • The server is turned on. If there is no power to the server, see "Power problems" on page 71.
	  • The monitor cables are connected correctly.
	  • The monitor is turned on and the brightness and contrast controls are adjusted correctly.
	5. Make sure that the correct server is controlling the monitor, if applicable.
	6. Make sure that damaged server firmware is not affecting the video; see "Updating the firmware" on page 21.
	7. Observe the checkpoint LEDs on the system board; if the codes are changing, go to step 6.
	8. Replace the following components one at a time, in the order shown, restarting the server each time:
	  a. Monitor
	  b. Video adapter (if one is installed)
	  c. (Trained technician only) System board.
	9. See "Solving undetermined problems" on page 77.

- **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**
- **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**
- **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**

Symptom	Action

The monitor works when you turn on the server, but the screen goes blank when you start some application programs.	1. Make sure that:
	  • The application program is not setting a display mode that is higher than the capability of the monitor.
	  • You installed the necessary device drivers for the application.
	2. Run video diagnostics (see "Running DSA Preboot diagnostic programs" on page 59).
	  • If the server passes the video diagnostics, the video is good; see "Solving undetermined problems" on page 77.
	  • (Trained technician only) If the server fails the video diagnostics, replace the system board.

The monitor has screen jitter, or the screen image is wavy, unreadable, rolling, or distorted.	1. If the monitor self-tests show that the monitor is working correctly, consider the location of the monitor. Magnetic fields around other devices (such as transformers, appliances, fluorescents, and other monitors) can cause screen jitter or wavy, unreadable, rolling, or distorted screen images. If this happens, turn off the monitor.
	Attention: Moving a color monitor while it is turned on might cause screen discoloration.
	Move the device and the monitor at least 305 mm (12 in.) apart, and turn on the monitor.
	Notes:
	  a. To prevent diskette drive read/write errors, make sure that the distance between the monitor and any external diskette drive is at least 76 mm (3 in.).
	  b. Non-IBM monitor cables might cause unpredictable problems.
	2. Reseat the monitor cable.
	3. Replace the components listed in step 2 one at a time, in the order shown, restarting the server each time:
	  a. Monitor cable
	  b. Video adapter (if one is installed)
	  c. Monitor
	  d. (Trained technician only) System board.

Wrong characters appear on the screen.	1. If the wrong language is displayed, update the server firmware to the latest level (see "Updating the firmware" on page 21) with the correct language.
	2. Reseat the monitor cable.
	3. Replace the components listed in step 2 one at a time, in the order shown, restarting the server each time:
	  a. Monitor cable
	  b. Video adapter (if one is installed)
	  c. Monitor
	  d. (Trained technician only) System board.

Network connection problems

Use this information to solve network connection problems.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**	
• **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**	
• **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**	

Symptom	Action

Unable to wake the server using the Wake on LAN feature.	1. If you are using the dual-port network adapter and the server is connected to the network using Ethernet 5 connector, check the system-error log or IMM2 system event log (see "Event logs" on page 55), make sure:
	
	  a. Fan 3 is running in standby mode, if Emulex dual port 10GBase-T embedded adapter is installed.
	
	  b. The room temperature is not too high (see "Features and specifications" on page 5).
	
	  c. The air vents are not blocked.
	
	  d. The air baffle is installed securely.
	
	2. Reseat the dual-port network adapter.
	
	3. Turn off the server and disconnect it from the power source; then, wait 10 seconds before restarting the server.
	
	4. If the problem still remains, replace the dual-port network adapter.

Log in failed by using LDAP account with SSL enabled.	1. Make sure the license key is valid. 2. Generate a new license key and log in again.

Optional-device problems

Use this information to solve optional-device problems.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**	
• **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**	
• **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**	

Symptom	Action

An IBM optional device that was just installed does not work.	1. Make sure that:
	  • The device is designed for the server (see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us).
	  • You followed the installation instructions that came with the device and the device is installed correctly.
	  • You have not loosened any other installed devices or cables.
	  • You updated the configuration information in the Setup utility. Whenever memory or any other device is changed, you must update the configuration.
	
	2. Reseat the device that you just installed.
	
	3. Replace the device that you just installed.

• Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.	
• If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.	
• Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.	

Symptom	Action
An IBM optional device that worked previously does not work now.	1. Make sure that all of the cable connections for the device are secure.
	2. If the device comes with test instructions, use those instructions to test the device.
	3. If the failing device is a SCSI device, make sure that:
	• The cables for all external SCSI devices are connected correctly.
	• The last device in each SCSI chain, or the end of the SCSI cable, is terminated correctly.
	• Any external SCSI device is turned on. You must turn on an external SCSI device before you turn on the server.
	4. Reseat the failing device.
	5. Replace the failing device.

Power problems

Use this information to solve power problems.

- **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**
- **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**
- **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**

Symptom	Action

The power-control button does not work, and the reset button does not work (the server does not start).
 	
Note: The power-control button will not function until approximately 5 to 10 seconds after the server has been connected to power.
	1. Make sure that the power-control button is working correctly:
	  a. Disconnect the server power cords.
	  b. Reconnect the power cords.
	  c. (Trained technician only) Reseat the operator information panel cable, and then repeat steps 1a and 1b.
	    • (Trained technician only) If the server starts, reseat the operator information panel. If the problem remains, replace the operator information panel.
	    • If the server does not start, bypass the power-control button by using the force power-on jumper. If the server starts, reseat the operator information panel. If the problem remains, replace the operator information panel.
	2. Make sure that the reset button is working correctly:
	  a. Disconnect the server power cords.
	  b. Reconnect the power cords.
	  c. (Trained technician only) Reseat the operator information panel cable, and then repeat steps 2a and 2b.
	    • (Trained technician only) If the server starts, replace the operator information panel.
	    • If the server does not start, go to step 3.
	3. Make sure that both power supplies installed in the server are of the same type. Mixing different power supplies in the server will cause a system error (the system-error LED on the front panel turns on).
	4. Make sure that:
	  • The power cords are correctly connected to the server and to a working electrical outlet.
	  • The type of memory that is installed is correct.
	  • The DIMMs are fully seated.
	  • The LEDs on the power supply do not indicate a problem.
	  • The microprocessors are installed in the correct sequence.
	5. Reseat the following components:
	  a. Operator information panel connector
	  b. Power supplies
	6. Replace the components listed in step 5 one at a time, in the order shown, restarting the server each time.
	7. If you just installed an optional device, remove it, and restart the server. If the server now starts, you might have installed more devices than the power supply supports.
	8. See "Power-supply LEDs" on page 53.
	9. See "Solving undetermined problems" on page 77.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.** • **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.** • **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**	

Symptom	Action

The server does not turn off.	1. Determine whether you are using an Advanced Configuration and Power Interface (ACPI) or a non-ACPI operating system. If you are using a non-ACPI operating system, complete the following steps:
	   a. Press `Ctrl+Alt+Delete`.
	   b. Turn off the server by pressing the power-control button and hold it down for 5 seconds.
	   c. Restart the server.
	   d. If the server fails POST and the power-control button does not work, disconnect the power cord for 20 seconds; then, reconnect the power cord and restart the server.
	2. If the problem remains or if you are using an ACPI-aware operating system, suspect the system board.

The server unexpectedly shuts down, and the LEDs on the operator information panel are not lit.	See "Solving undetermined problems" on page 77.

Serial-device problems

Use this information to solve serial-device problems.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.** • **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.** • **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**	

Symptom	Action

The number of serial ports that are identified by the operating system is less than the number of installed serial ports.	1. Make sure that:
	   • Each port is assigned a unique address in the Setup utility and none of the serial ports is disabled.
	   • The serial-port adapter (if one is present) is seated correctly.
	2. Reseat the serial port adapter.
	3. Replace the serial port adapter.

• Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.	
• If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.	
• Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.	

Symptom	Action

A serial device does not work.	1. Make sure that:
	   • The device is compatible with the server.
	   • The serial port is enabled and is assigned a unique address.
	   • The device is connected to the correct connector (see "System-board internal connectors" on page 15).
	
	 2. Reseat the following components:
	   a. Failing serial device
	   b. Serial cable
	
	 3. Replace the components listed in step 2 one at a time, in the order shown, restarting the server each time.
	
	 4. (Trained technician only) Replace the system board.

ServerGuide problems

Use this information to solve ServerGuide problems.

• Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.	
• If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.	
• Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.	

Symptom	Action
The MegaRAID Storage Manager program cannot view all installed drives, or the operating system cannot be installed.	1. Make sure that the hard disk drive is connected correctly. 2. Make sure that the SAS/SATA hard disk drive cables are securely connected.
The operating-system installation program continuously loops.	Make more space available on the hard disk.
The ServerGuide program will not start the operating-system CD.	Make sure that the operating-system CD is supported by the ServerGuide program. For a list of supported operating-system versions, go to http://www.ibm.com/support/entry/portal/docdisplay?lndocid=SERV-GUIDE, click the link for your ServerGuide version, and scroll down to the list of supported Microsoft Windows operating systems.
The operating system cannot be installed; the option is not available.	Make sure that the server supports the operating system. If it does, either no logical drive is defined (SCSI RAID servers), or the ServerGuide System Partition is not present. Run the ServerGuide program and make sure that setup is complete.

Software problems

Use this information to solve software problems.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**	
• **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**	
• **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**	

Symptom	Action

You suspect a software problem.	1. To determine whether the problem is caused by the software, make sure that:
	   • The server has the minimum memory that is needed to use the software. For memory requirements, see the information that comes with the software. If you have just installed an adapter or memory, the server might have a memory-address conflict.
	   • The software is designed to operate on the server.
	   • Other software works on the server.
	   • The software works on another server.
	2. If you received any error messages when using the software, see the information that comes with the software for a description of the messages and suggested solutions to the problem.
	3. Contact the software vendor.

Universal Serial Bus (USB) port problems

Use this information to solve Universal Serial Bus (USB) port problems.

• **Follow the suggested actions in the order in which they are listed in the Action column until the problem is solved.**	
• **If an action step is preceded by "(Trained technician only)," that step must be performed only by a trained technician.**	
• **Go to the IBM support website at to check for technical information, hints, tips, and new device drivers or to submit a request for information.**	

Symptom	Action

A USB device does not work.	1. Make sure that:
	   • The correct USB device driver is installed.
	   • The operating system supports USB devices.
	2. Make sure that the USB configuration options are set correctly in the Setup utility (see "Using the Setup utility" on page 25 for more information).
	3. If you are using a USB hub, disconnect the USB device from the hub and connect it directly to the server.

Video problems

Use this information to solve video problems.

See "Monitor and video problems" on page 67.

Solving power problems

Use this information to solve power problems.

Power problems can be difficult to solve. For example, a short circuit can exist anywhere on any of the power distribution buses. Usually, a short circuit will cause the power subsystem to shut down because of an overcurrent condition. To diagnose a power problem, use the following general procedure:

1. Turn off the server and disconnect all power cords.

2. Check for loose cables in the power subsystem. Also check for short circuits, for example, if a loose screw is causing a short circuit on a circuit board.

3. Check the lit LEDs on the operator information panel (see Light path diagnostics).

4. If the check log LED on the light path diagnostics panel is lit, check the IMM event log for faulty Pwr rail and complete the following steps. Table 6 identifies the components that are associated with each Pwr rail and the order in which to troubleshoot the components.

   a. Disconnect the cables and power cords to all internal and external devices (see "Internal cable routing and connectors" on page 178). Leave the power-supply cords connected.

   b. For Pwr rail A error, complete the following steps:

      1) (Trained technician only) Replace the system board.

      2) (Trained technician only) Replace the microprocessor.

   c. For other rail errors (Pwr rail A error, see step 4b), remove each component that is associated with the faulty Pwr rail, one at a time, in the sequence indicated in Table 6, restarting the server each time, until the cause of the overcurrent condition is identified.

Table 6. Components associated with power rail errors

Pwr rail error in the IMM event log	Components
Pwr rail A error	• Microprocessor 1
Pwr rail B error	• Microprocessor 2
Pwr rail C error	• Adapter (if one is installed) in PCI riser-card assembly 1 • PCI riser-card assembly 1 • Fan 1 • DIMMs 1 through 6
Pwr rail D error	• Dual-port network adapter • Fan 2 • DIMMs 7 through 12
Pwr rail E error	• Hard disk drives • DIMMs 13 through 18
Pwr rail F error	• Adapter (if one is installed) in PCI riser-card assembly 1 • PCI riser-card assembly 1 • Fan 4 • DIMMs 19 through 24
Pwr rail G error	• PCI adaptor power cable (if one is present) • Fan 3 • Hard disk drives • Hard disk drive backplane assembly

Table 6. Components associated with power rail errors (continued)

Pwr rail error in the IMM event log	Components
Pwr rail H error	• Hard disk drive power cable • Hard disk drives • Hard disk drive backplane or • PCI adapter power cable • Adapter installed in PCI riser-card assembly 2 • PCI riser-card assembly 2

   d. Replace the identified component.

5. Remove the adapters and disconnect the cables and power cords to all internal and external devices until the server is at the minimum configuration that is required for the server to start (see "Power-supply LEDs" on page 53 for the minimum configuration).

6. Reconnect all power cords and turn on the server. If the server starts successfully, reseat the adapters and devices one at a time until the problem is isolated.

If the server does not start from the minimum configuration, see "Power-supply LEDs" on page 53 to replace the components in the minimum configuration one at a time until the problem is isolated.

Solving Ethernet controller problems

Use this information to solve Ethernet controller problems.

The method that you use to test the Ethernet controller depends on which operating system you are using. See the operating-system documentation for information about Ethernet controllers, and see the Ethernet controller device-driver readme file.

Try the following procedures:
• Make sure that the correct device drivers, which come with the server are installed and that they are at the latest level.
• Make sure that the Ethernet cable is installed correctly.
    – The cable must be securely attached at all connections. If the cable is attached but the problem remains, try a different cable.
    – If you set the Ethernet controller to operate at 100 Mbps, you must use Category 5 cabling.
    – If you directly connect two servers (without a hub), or if you are not using a hub with X ports, use a crossover cable. To determine whether a hub has an X port, check the port label. If the label contains an X, the hub has an X port.
• Determine whether the hub supports auto-negotiation. If it does not, try configuring the integrated Ethernet controller manually to match the speed and duplex mode of the hub.
• Check the Ethernet controller LEDs on the rear panel of the server. These LEDs indicate whether there is a problem with the connector, cable, or hub.
    – The Ethernet link status LED is lit when the Ethernet controller receives a link pulse from the hub. If the LED is off, there might be a defective connector or cable or a problem with the hub.

– The Ethernet transmit/receive activity LED is lit when the Ethernet controller sends or receives data over the Ethernet network. If the Ethernet transmit/receive activity is off, make sure that the hub and network are operating and that the correct device drivers are installed.

• Check the LAN activity LED on the rear of the server. The LAN activity LED is lit when data is active on the Ethernet network. If the LAN activity LED is off, make sure that the hub and network are operating and that the correct device drivers are installed.

• Check for operating-system-specific causes of the problem.

• Make sure that the device drivers on the client and server are using the same protocol.

If the Ethernet controller still cannot connect to the network but the hardware appears to be working, the network administrator must investigate other possible causes of the error.

Solving undetermined problems

If Dynamic System Analysis (DSA) did not diagnose the failure or if the server is inoperative, use the information in this section.

If you suspect that a software problem is causing failures (continuous or intermittent), see "Software problems" on page 74.

Corrupted data in CMOS memory or corrupted UEFI firmware can cause undetermined problems. To reset the CMOS data, use the CMOS clear jumper (JP1) to clear the CMOS memory and override the power-on password; see "System-board switches and jumpers" on page 17 for more information. If you suspect that the UEFI firmware is corrupted, see "Recovering the server firmware (UEFI update failure)" on page 79.

If the power supplies are working correctly, complete the following steps:

1. Turn off the server.

2. Make sure that the server is cabled correctly.

3. Remove or disconnect the following devices, one at a time, until you find the failure. Turn on the server and reconfigure it each time.
   • Any external devices.
   • Surge-suppressor device (on the server).
   • Printer, mouse, and non-IBM devices.
   • Each adapter.
   • Hard disk drives.
   • Memory modules. The minimum configuration requirement is 2 GB DIMM in slot 1.

4. Turn on the server.

If the problem is solved when you remove an adapter from the server but the problem recurs when you reinstall the same adapter, suspect the adapter; if the problem recurs when you replace the adapter with a different one, suspect the riser card.

If you suspect a networking problem and the server passes all the system tests, suspect a network cabling problem that is external to the server.

Problem determination tips

Because of the variety of hardware and software combinations that can encounter, use the following information to assist you in problem determination.

If possible, have this information available when requesting assistance from IBM.

The model name and serial number are located on the ID label on the front of the server as shown in the following illustration.

Note: The illustrations in this document might differ slightly from your hardware.
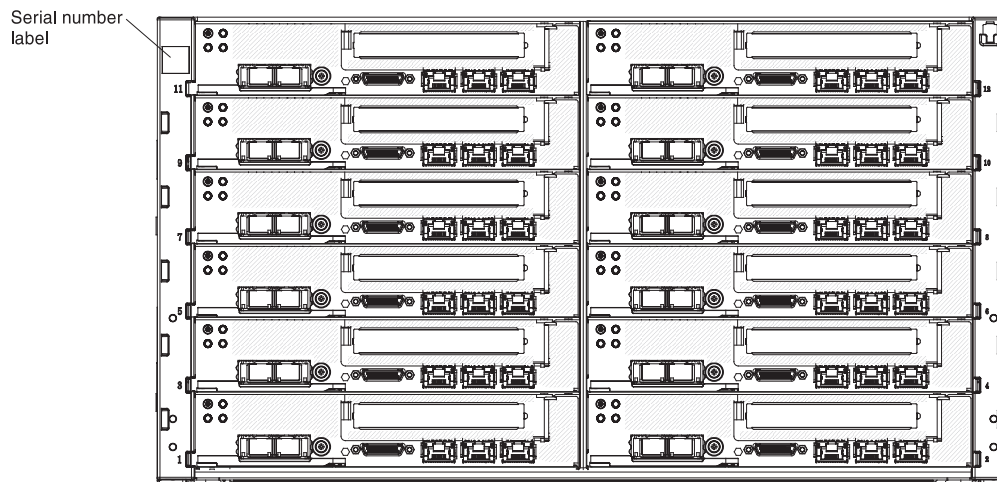
Figure 14. ID label

- Machine type and model
- Microprocessor or hard disk drive upgrades
- Failure symptom
  - Does the server fail the diagnostic tests?
  - What occurs? When? Where?
  - Does the failure occur on a single server or on multiple servers?
  - Is the failure repeatable?
  - Has this configuration ever worked?
  - What changes, if any, were made before the configuration failed?
  - Is this the original reported failure?
- Diagnostic program type and version level
- Hardware configuration (print screen of the system summary)
- UEFI firmware level
- IMM firmware level
- Operating system software

You can solve some problems by comparing the configuration and software setups between working and nonworking servers. When you compare servers to each other for diagnostic purposes, consider them identical only if all the following factors are exactly the same in all the servers:

- Machine type and model
- UEFI firmware level

- IMM firmware level
- Adapters and attachments, in the same locations
- Address jumpers, terminators, and cabling
- Software versions and levels
- Diagnostic program type and version level
- Configuration option settings
- Operating-system control-file setup

See Appendix D, "Getting help and technical assistance," on page 371 for information about calling IBM for service.

Recovering the server firmware (UEFI update failure)

Use this information to recover the server firmware.

Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

If the server firmware has become corrupted, such as from a power failure during an update, you can recover the server firmware in the following way:
- **In-band method:** Recover server firmware, using either the boot block jumper (Automated Boot Recovery) and a server Firmware Update Package Service Pack.
- **Out-of-band method:** Use the IMM web interface to update the firmware, using the latest server firmware update package.

Note: You can obtain a server update package from one of the following sources:
- Download the server firmware update from the World Wide Web.
- Contact your IBM service representative.

To download the server firmware update package from the World Wide Web, go to
.

The flash memory of the server consists of a primary bank and a backup bank. You must maintain a bootable UEFI firmware image in the backup bank. If the server firmware in the primary bank becomes corrupted, you can either manually boot the backup bank with the UEFI boot backup jumper (JP2), or in the case of image corruption, this will occur automatically with the Automated Boot Recovery function.

In-band manual recovery method

Use this information to recover the server firmware and restore the server operation to the primary bank.

To recover the server firmware and restore the server operation to the primary bank, complete the following steps:
1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server, and disconnect all power cords and external cables.
3. Remove the cover (see "Removing the compute node cover" on page 108).

4. Locate the UEFI boot backup jumper (JP2) on the system board.
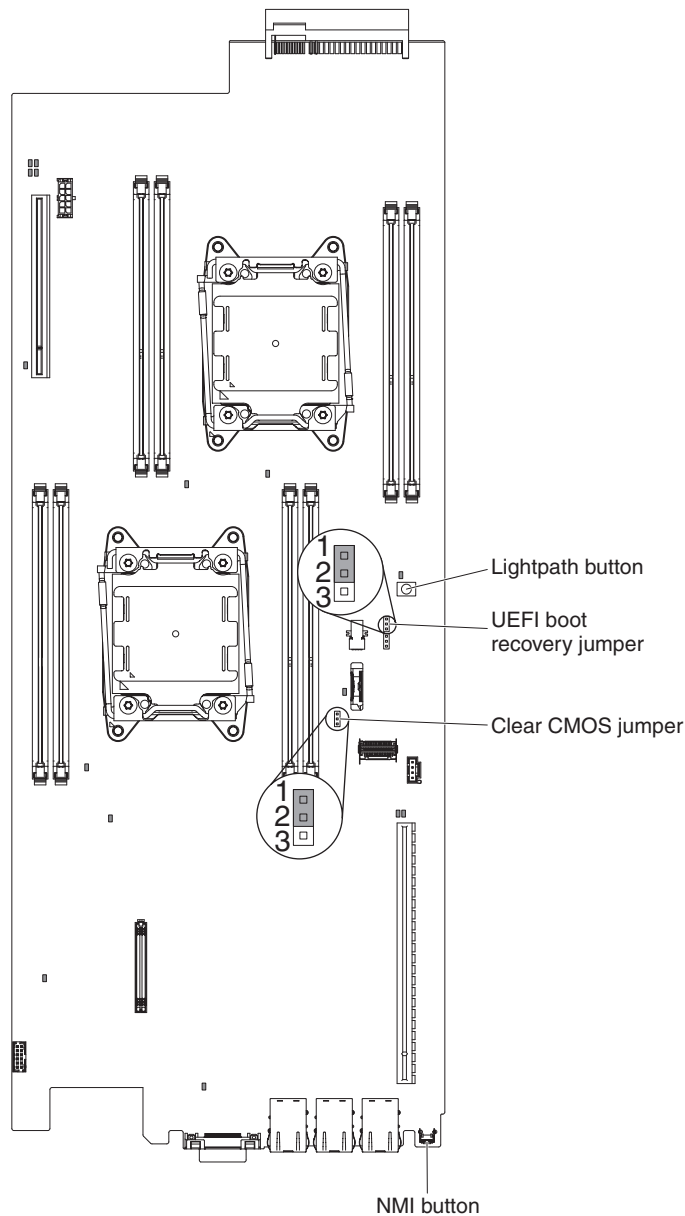
Figure 15. UEFI boot backup jumper (JP2) location

5. Move the UEFI boot backup jumper (JP2) from pins 1 and 2 to pins 2 and 3 to enable the UEFI recovery mode.
6. Reinstall the server cover; then, reconnect all power cords.
7. Restart the server. The system begins the power-on self-test (POST).
8. Boot the server to an operating system that is supported by the firmware update package that you downloaded.
9. Perform the firmware update by following the instructions that are in the firmware update package readme file.
10. Turn off the server and disconnect all power cords and external cables, and then remove the cover (see "Removing the compute node cover" on page 108).
11. Move the UEFI boot backup jumper (JP2) from pins 2 and 3 back to the primary position (pins 1 and 2).

12. Reinstall the cover (see "Installing the compute node cover" on page 109).
13. Reconnect the power cord and any cables that you removed.
14. Restart the server. The system begins the power-on self-test (POST). If this does not recover the primary bank, continue with the following steps.
15. Remove the cover (see "Removing the compute node cover" on page 108).
16. Reset the CMOS by removing the system battery (see "Removing the system battery" on page 128).
17. Leave the system battery out of the server for approximately 5 to 15 minutes.
18. Reinstall the system battery (see "Replacing the system battery" on page 129).
19. Reinstall the cover (see "Installing the compute node cover" on page 109).
20. Reconnect the power cord and any cables that you removed.
21. Restart the server. The system begins the power-on self-test (POST).
22. If these recovery efforts fail, contact your IBM service representative for support.

In-band automated boot recovery method

Use this information to use the in-band automated boot recovery method.

Note: Use this method if the system-error LED on the operator information panel is lit and there is a log entry or `Booting Backup Image` is displayed on the firmware splash screen; otherwise, use the in-band manual recovery method.

1. Boot the server to an operating system that is supported by the firmware update package that you downloaded.
2. Perform the firmware update by following the instructions that are in the firmware update package readme file.
3. Restart the server.
4. At the firmware splash screen, press F3 when prompted to restore to the primary bank. The server boots from the primary bank.

Out-of-band method

Use this information to use the out-of-band method.

See the IMM2 documentation (*Integrated Management Module II User's Guide*) at http://www-947.ibm.com/support/entry/portal/docdisplay?lndocid=migr-5086346.

Automated boot recovery (ABR)

While the server is starting, if the integrated management module II detects problems with the server firmware in the primary bank, the server automatically switches to the backup firmware bank and gives you the opportunity to recover the firmware in the primary bank.

For instructions for recovering the UEFI firmware, see "Recovering the server firmware (UEFI update failure)" on page 79. After you have recovered the firmware in the primary bank, complete the following steps:

1. Restart the server.
2. When the prompt `Press F3 to restore to primary` is displayed, press F3 to start the server from the primary bank.

Nx-boot failure

Configuration changes, such as added devices or adapter firmware updates, and firmware or application code problems can cause the server to fail POST (the power-on self-test).

If this occurs, the server responds in either of the following ways:

- The server restarts automatically and attempts POST again.
- The server hangs, and you must manually restart the server for the server to attempt POST again.

After a specified number of consecutive attempts (automatic or manual), the Nx-boot failure feature causes the server to revert to the default UEFI configuration and start the Setup utility so that you can make the necessary corrections to the configuration and restart the server. If the server is unable to successfully complete POST with the default configuration, there might be a problem with the system board.

To specify the number of consecutive restart attempts that will trigger the Nx-boot failure feature, in the Setup utility, click **System Settings** > **Recovery** > **POST Attempts** > **POST Attempts Limit**. The available options are 3, 6, 9, and 255 (disable Nx-boot failure).

Chapter 4. Parts listing, IBM NeXtScale nx360 M4 Compute Node Type 5455

The parts listing of IBM NeXtScale nx360 M4 Compute Node Type 5455.

The following replaceable components are available for the IBM NeXtScale nx360 M4 Compute Node Type 5455 server, except as specified otherwise in "Replaceable server components." For an updated parts listing, go to http://www.ibm.com/supportportal.

Replaceable server components

The replaceable server components for IBM NeXtScale nx360 M4 Compute Node Type 5455.

Replaceable components consist of structural parts, and field replaceable units (FRUs):

- **Structural parts:** Purchase and replacement of structural parts (components, such as chassis assembly, top cover, and bezel) is your responsibility. If IBM acquires or installs a structural component at your request, you will be charged for the service. See "Structural parts" on page 87 for the list of structural parts.
- **Tier 1 customer replaceable unit (CRU):** Replacement of Tier 1 CRUs is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation.
- **Tier 2 customer replaceable unit:** You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge, under the type of warranty service that is designated for your server.

For information about the terms of the warranty and getting service and assistance, see the *Warranty Information* document that comes with the server. For more information about getting service and assistance, see Appendix D, "Getting help and technical assistance," on page 371.

Visit the IBM ServerProven website for the latest options supporting plan.

The following illustration shows the major components in the server. The illustrations in this document might differ slightly from your hardware. For a list of structural parts, see "Structural parts" on page 87.
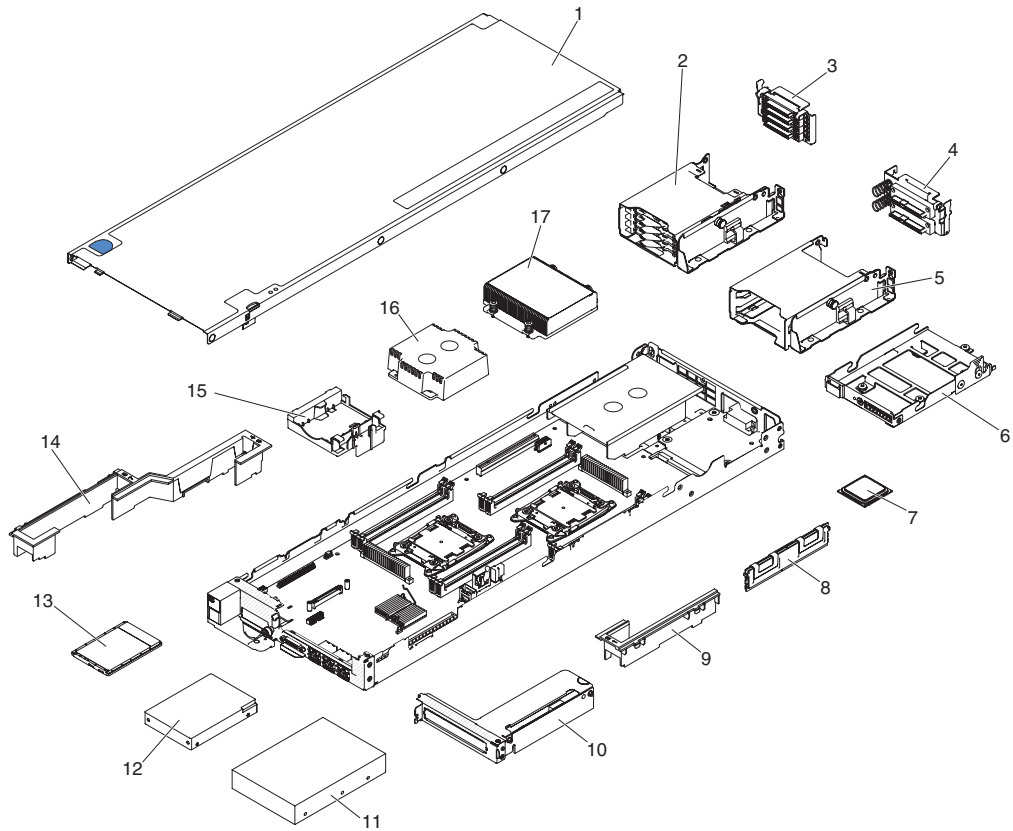
Figure 16. Server components

The following table lists the part numbers for the server replaceable components.

Index	Description	CRU part number (Tier 1)	CRU part number (Tier 2)
3	1.8-inch SSD cable assembly (software RAID)	00AM452	
3	1.8-inch SSD cable assembly (hardware RAID)	00AM453	
4	2.5-inch HDD 2x cable vertical cable assembly (hardware RAID)	00FL148	
4	2.5-inch HDD 2x cable right angle cable assembly (software RAID)	00FL149	
7	Microprocessor, Intel Xeon E5-2618L v2 2.0 GHz, 15 MB, 1333 MHz, 50 W (6 core)		00AE522
7	Microprocessor, Intel Xeon E5-2648L v2 2.0 GHz, 25 MB, 1866 MHz, 70 W (10 core)		00AE523
7	Microprocessor, Intel Xeon E5-2658 v2 2.4 GHz, 25 MB, 1866 MHz, 95 W (10 core)		00AE524
7	Microprocessor, Intel Xeon E5-2628L v2 2.2 GHz, 20 MB, 1600 MHz, 70 W (8 core)		00AE525
7	Microprocessor, Intel Xeon E5-2695 v2 2.4 GHz, 30 MB, 1866 MHz, 115 W (12 core)		00Y2776
7	Microprocessor, Intel Xeon E5-2697 v2 2.7 GHz, 30 MB, 1866 MHz, 130 W (12 core)		00Y2777
7	Microprocessor, Intel Xeon E5-2603 v2 1.8 GHz, 10 MB, 1333 MHz, 80 W (4 core)		00Y2778
7	Microprocessor, Intel Xeon E5-2609 v2 2.5 GHz, 10 MB, 1333 MHz, 80 W (4 core)		00Y2779

Index	Description	CRU part number (Tier 1)	CRU part number (Tier 2)
7	Microprocessor, Intel Xeon E5-2620 v2 2.1 GHz, 15 MB, 1600 MHz, 80 W (6 core)		00Y2780
7	Microprocessor, Intel Xeon E5-2630 v2 2.6 GHz, 15 MB, 1600 MHz, 80 W (6 core)		00Y2781
7	Microprocessor, Intel Xeon E5-2640 v2 2.0 GHz, 20 MB, 1600 MHz, 95 W (8 core)		00Y2782
7	Microprocessor, Intel Xeon E5-2650 v2 2.6 GHz, 20 MB, 1866 MHz, 95 W (8 core)		00Y2783
7	Microprocessor, Intel Xeon E5-2660 v2 2.2 GHz, 25 MB, 1866 MHz, 95 W (10 core)		00Y2784
7	Microprocessor, Intel Xeon E5-2670 v2 2.5 GHz, 25 MB, 1866 MHz, 115 W (10 core)		00Y2785
7	Microprocessor, Intel Xeon E5-2680 v2 2.8 GHz, 25 MB, 1866 MHz, 115 W (10 core)		00Y2786
7	Microprocessor, Intel Xeon E5-2690 v2 3.0 GHz, 25 MB, 1866 MHz, 130 W (10 core)		00Y2787
7	Microprocessor, Intel Xeon E5-2637 v2 3.5 GHz, 15 MB, 1866 MHz, 130 W (4 core)		00Y2789
7	Microprocessor, Intel Xeon E5-2643 v2 3.5 GHz, 25 MB, 1866 MHz, 130 W (6 core)		00Y2790
7	Microprocessor, Intel Xeon E5-2667 v2 3.3 GHz, 25 MB, 1866 MHz, 130 W (8 core)		00Y2791
7	Microprocessor, Intel Xeon E5-2630L v2 2.4 GHz, 15 MB, 1600 MHz, 60 W (6 core)		00Y2792
7	Microprocessor, Intel Xeon E5-2650L v2 1.7 GHz, 25 MB, 1600 MHz, 70 W (10 core)		00Y2793
8	Memory, 4 GB dual-rank 1.35 V, DDR3, 1600 MHz, UDIMM	00D5014	
8	Memory, 4 GB single-rank 1.35 V, DDR3, 1600 MHz, RDIMM	00D5026	
8	Memory, 8 GB dual-rank 1.5 V, DDR3, 1866 MHz, RDIMM	00D5042	
8	Memory, 8 GB dual-rank 1.35 V, DDR3, 1600 MHz, RDIMM	00D5046	
8	Memory, 4 GB dual-rank 1.5 V, DDR3, 1866 MHz, RDIMM	00D5030	
8	Memory, 8 GB single-rank 1.35 V, DDR3, 1600 MHz, RDIMM	00D5038	
8	Memory, 4 GB dual-rank 1.35 V, DDR3, 1600 MHz, RDIMM	46W0737	
8	Memory, 16 GB dual-rank 1.5 V, DDR3, 1866 MHz, RDIMM	46W0670	
8	Memory, 16 GB dual-rank 1.35 V, DDR3, 1600 MHz, RDIMM	46W0674	
10	PCI riser bracket assembly	00AM446	
11	Hard disk drive, 3.5-inch 500 GB, 6 Gbps SATA non-hot-swap	00AD006	
11	Hard disk drive, 3.5-inch 1 TB, 6 Gbps SATA non-hot-swap	00AD011	
11	Hard disk drive, 3.5-inch 2 TB, 6 Gbps SATA non-hot-swap	00AD016	
11	Hard disk drive, 3.5-inch 3 TB, 6 Gbps SATA non-hot-swap	00AD021	
11	Hard disk drive, 3.5-inch 4 TB, 6 Gbps SATA non-hot-swap	00AD026	
12	Hard disk drive, 2.5-inch 250 GB, 6 Gbps SATA non-hot-swap	00AD031	
12	Hard disk drive, 2.5-inch 500 GB, 6 Gbps SATA non-hot-swap	00AD036	
12	Hard disk drive, 2.5-inch 1 TB, 6 Gbps SATA non-hot-swap	00AD041	

Index	Description	CRU part number (Tier 1)	CRU part number (Tier 2)
12	Hard disk drive, 2.5-inch 146 GB, 15K 6 Gbps SAS non-hot-swap	00AD046	
12	Hard disk drive, 2.5-inch 300 GB, 15K 6 Gbps SAS non-hot-swap	00AD051	
12	Hard disk drive, 2.5-inch 300 GB 10K 6 Gbps SAS non-hot-swap	00AD056	
12	Hard disk drive, 2.5-inch 600 GB 10K 6 Gbps SAS non-hot-swap	00AD061	
12	Hard disk drive, 2.5-inch 900 GB, 10K 6 Gbps SAS non-hot-swap	00AD066	
12	Hard disk drive, 2.5-inch 600 GB, 15K 6 Gbps SAS non-hot-swap	00AJ291	
12	Hard disk drive, 2.5-inch 600 GB, 10K 6 Gbps SAS non-hot-swap	00AJ316	
12	Hard disk drive, 2.5-inch 1.2 TB, 10K 6 Gbps SAS non-hot-swap	00FN041	
12	Hard disk drive, 2.5-inch 2 TB, 7.2K 6 Gbps SAS non-hot-swap	46W0563	
13	Solid state drive, 1.8-inch, SATA, 100 GB	00W1121	
13	Solid state drive, 1.8-inch, SATA, 256 GB	00W1228	
13	Solid state drive, 1.8-inch, SATA, 64 GB	49Y5835	
17	Heat sink		00Y7930
17	Heat sink		00Y7931
	Storage tray	00AM425	
	GPU tray	00Y8668	
	Air baffle hard disk drive cage assembly	46W2801	
	Battery, 3.0 volt	33F8354	
	ServeRAID M1115 SAS/SATA controller	46C8928	
	N2115 SAS/SATA HBA	46C8989	
	N2125 SAS/SATA HBA	46C9011	
	NVIDIA Tesla K10 video adapter	00D4192	
	NVIDIA Tesla K20X PCI Express x 16 video adapter	90Y2351	
	NVIDIA VGX K1 PCI Express x 16 video adapter	90Y2355	
	NVIDIA VGX K2 PCI Express x 16 video adapter	90Y2359	
	NVIDIA Tesla K40 video adapter	90Y2412	
	Intel Xeon Phi 7120P	90Y2363	
	Intel Xeon Phi 5110P PCI Express x16	90Y2367	
	ServeRAID H1110 SAS/SATA controller	81Y4494	
	FDR10 Infinite band mezz module	00AM518	
	FDR14 Infinit band mezz dual port embedded adapter	00J6248	
	Node planar tray		46W2916
	Node planar tray TLA		00KA917
	Configuration cable	00AM460	
	Memory key, blank USB for VMWare ESXi downloads	42D0545	
	T8 torx screwdriver (provided on the back of the chassis)	00FK488	
	Thermal grease kit		41Y9292
	Alcohol wipe		59P4739

Structural parts

Structural parts are not covered by the IBM Statement of Limited Warranty. You can place an order on the structural parts from the IBM retail store.

The following structural parts are available for purchase from the retail store.

Table 7. Structural parts, Type Type 5455

Index	Description	Part number
1	Top cover	00AM442
2	1.8-inch SSD cage assembly	00AM451
5	2.5-inch HDD cage assembly	00AM450
6	3.5-inch HDD cage assembly	00AM449
9	Air baffle	00AM441
14	Air baffle, long	00AM440
15	Battery holder	00AM443
16	Microprocessor blank filler	00AM448
	Cable cover	00AM459
	Filler, dual-port 10 Gb adapter	00AM444
	Hard disk drive cage	00AM461
	Hard disk drive filler	00AM462
	Power/LEDs bezel	00AM445
	PCI dummy	00AM447
	Label, GBM	00AM454
	Miscellaneous kit, compute node	00AM457
	Miscellaneous kit, storage tray	00AM463
	3U bracket kit	94Y7628

To order a structural part, complete the following steps:

Note: Changes are made periodically to the IBM website. The actual procedure might vary slightly from what is described in this document.

1. Go to http://www.ibm.com.
2. From the **Products** menu, select **Upgrades, accessories & parts**.
3. Click **Obtain maintenance parts**; then, follow the instructions to order the part from the retail store.

If you need help with your order, call the toll-free number that is listed on the retail parts page, or contact your local IBM representative for assistance.

Power cords

For your safety, a power cord with a grounded attachment plug is provided to use with this product. To avoid electrical shock, always use the power cord and plug with a properly grounded outlet.

IBM power cords used in the United States and Canada are listed by Underwriter's Laboratories (UL) and certified by the Canadian Standards Association (CSA).

For units intended to be operated at 115 volts: Use a UL-listed and CSA-certified cord set consisting of a minimum 18 AWG, Type SVT or SJT, three-conductor cord, a maximum of 15 feet in length and a parallel blade, grounding-type attachment plug rated 15 amperes, 125 volts.

For units intended to be operated at 230 volts (U.S. use): Use a UL-listed and CSA-certified cord set consisting of a minimum 18 AWG, Type SVT or SJT, three-conductor cord, a maximum of 15 feet in length and a tandem blade, grounding-type attachment plug rated 15 amperes, 250 volts.

For units intended to be operated at 230 volts (outside the U.S.): Use a cord set with a grounding-type attachment plug. The cord set should have the appropriate safety approvals for the country in which the equipment will be installed.

Power cords for a specific country or region are usually available only in that country or region.

Power cord part number	Used in these countries and regions
39M5206	China
39M5102	Australia, Fiji, Kiribati, Nauru, New Zealand, Papua New Guinea
39M5123	Afghanistan, Albania, Algeria, Andorra, Angola, Armenia, Austria, Azerbaijan, Belarus, Belgium, Benin, Bosnia and Herzegovina, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo (Democratic Republic of), Congo (Republic of), Cote D'Ivoire (Ivory Coast), Croatia (Republic of), Czech Republic, Dahomey, Djibouti, Egypt, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Finland, France, French Guyana, French Polynesia, Germany, Greece, Guadeloupe, Guinea, Guinea Bissau, Hungary, Iceland, Indonesia, Iran, Kazakhstan, Kyrgyzstan, Laos (People's Democratic Republic of), Latvia, Lebanon, Lithuania, Luxembourg, Macedonia (former Yugoslav Republic of), Madagascar, Mali, Martinique, Mauritania, Mauritius, Mayotte, Moldova (Republic of), Monaco, Mongolia, Morocco, Mozambique, Netherlands, New Caledonia, Niger, Norway, Poland, Portugal, Reunion, Romania, Russian Federation, Rwanda, Sao Tome and Principe, Saudi Arabia, Senegal, Serbia, Slovakia, Slovenia (Republic of), Somalia, Spain, Suriname, Sweden, Syrian Arab Republic, Tajikistan, Tahiti, Togo, Tunisia, Turkey, Turkmenistan, Ukraine, Upper Volta, Uzbekistan, Vanuatu, Vietnam, Wallis and Futuna, Yugoslavia (Federal Republic of), Zaire
39M5130 39M5179	Denmark
39M5144	Bangladesh, Lesotho, Macao, Maldives, Namibia, Nepal, Pakistan, Samoa, South Africa, Sri Lanka, Swaziland, Uganda
39M5151	Abu Dhabi, Bahrain, Botswana, Brunei Darussalam, Channel Islands, China (Hong Kong S.A.R.), Cyprus, Dominica, Gambia, Ghana, Grenada, Iraq, Ireland, Jordan, Kenya, Kuwait, Liberia, Malawi, Malaysia, Malta, Myanmar (Burma), Nigeria, Oman, Polynesia, Qatar, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Seychelles, Sierra Leone, Singapore, Sudan, Tanzania (United Republic of), Trinidad and Tobago, United Arab Emirates (Dubai), United Kingdom, Yemen, Zambia, Zimbabwe
39M5158	Liechtenstein, Switzerland
39M5165	Chile, Italy, Libyan Arab Jamahiriya
39M5172	Israel

Power cord part number	Used in these countries and regions
39M5095	220 - 240 V Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Caicos Islands, Canada, Cayman Islands, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guam, Guatemala, Haiti, Honduras, Jamaica, Mexico, Micronesia (Federal States of), Netherlands Antilles, Nicaragua, Panama, Peru, Philippines, Saudi Arabia, Thailand, Taiwan, United States of America, Venezuela
39M5081	110 - 120 V Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Caicos Islands, Canada, Cayman Islands, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guam, Guatemala, Haiti, Honduras, Jamaica, Mexico, Micronesia (Federal States of), Netherlands Antilles, Nicaragua, Panama, Peru, Philippines, Saudi Arabia, Thailand, Taiwan, United States of America, Venezuela
39M5076 39M5512	United States of America
39M5463	Taiwan
39M5087	Thailand
39M5219	Korea (Democratic People's Republic of), Korea (Republic of)
39M5199	Japan
39M5068	Argentina, Paraguay, Uruguay
39M5226	India
39M5240 39M5241	Brazil
39M5375 39M5378 39M5509	Canada, Germany, United States of America

Chapter 5. Removing and replacing components

Use this information to remove and replace the server components.

The types of replaceable components are:

- **Structural parts:** Purchase and replacement of structural parts (components, such as chassis assembly, top cover, and bezel) is your responsibility. If IBM acquires or installs a structural component at your request, you will be charged for the service.
- **Tier 1 customer replaceable unit (CRU):** Replacement of Tier 1 CRUs is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation.
- **Tier 2 customer replaceable unit:** You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge, under the type of warranty service that is designated for your server.

See Chapter 4, "Parts listing, IBM NeXtScale nx360 M4 Compute Node Type 5455," on page 83 to determine whether a component is a structural part, Tier 1 CRU, or Tier 2 CRU.

For information about the terms of the warranty, see the *Warranty Information* document that comes with the server.

For more information about getting service and assistance, see Appendix D, "Getting help and technical assistance," on page 371.

Installation tools

The following tools are required to remove or replace parts on the IBM NeXtScale nx360 M4 Compute Node

- Phillips screwdriver
- T8 torx screwdriver (part number 00FK488, provided on the back of the chassis)
- Flat-blade screwdriver

Installing an optional device

Some compute node components are available as both optional devices and replaceable components. The installation procedure is the same for the optional device and the replaceable component.

Installation guidelines

Use this information for installation.

Attention: Static electricity that is released to internal compute node components when the compute node is powered-on might cause the system to halt, which might result in the loss of data. To avoid this potential problem, always use an electrostatic-discharge wrist strap or other grounding system when removing or installing a hot-swap device.

Before you install optional devices, read the following information:

- Read the safety information in "Safety" on page vii and "Handling static-sensitive devices" on page 93. This information will help you work safely.
- Make sure that the devices that you are installing are supported. For a list of supported optional devices for the compute node, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.
- When you install your new compute node, take the opportunity to download and apply the most recent firmware updates. This step will help to ensure that any known issues are addressed and that your compute node is ready to function at maximum levels of performance. To download firmware updates for your compute node, go to http://www.ibm.com/support/fixcentral.

  Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

  For additional information about tools for updating, managing, and deploying firmware, see the ToolsCenter for System x and BladeCenter at http://publib.boulder.ibm.com/infocenter/toolsctr/v1r0/.
- Before you install optional hardware, make sure that the compute node is working correctly. Start the compute node, and make sure that the operating system starts, if an operating system is installed, or that a 19990305 error code is displayed, indicating that an operating system was not found but the compute node is otherwise working correctly. If the compute node is not working correctly, see "Running DSA Preboot diagnostic programs" on page 59 for information about how to run diagnostics.
- Observe good housekeeping in the area where you are working. Place removed covers and other parts in a safe place.
- Do not attempt to lift an object that you think is too heavy for you. If you have to lift a heavy object, observe the following precautions:
  - Make sure that you can stand safely without slipping.
  - Distribute the weight of the object equally between your feet.
  - Use a slow lifting force. Never move suddenly or twist when you lift a heavy object.
  - To avoid straining the muscles in your back, lift by standing or by pushing up with your leg muscles.
- Make sure that you have an adequate number of properly grounded electrical outlets for the compute node, monitor, and other devices.
- Back up all important data before you make changes to disk drives.
- Have a small flat-blade screwdriver, a small Phillips screwdriver, and a T8 torx screwdriver (provided on the back of the chassis) available.
- To view the error LEDs on the system board and internal components, leave the compute node connected to power.
- You do not have to turn off the compute node to install or replace hot-swap power supplies, hot-swap fans, or hot-plug Universal Serial Bus (USB) devices. However, you must turn off the compute node before you perform any steps that involve removing or installing adapter cables and you must disconnect the power source from the compute node before you perform any steps that involve removing or installing a riser card.
- Blue on a component indicates touch points, where you can grip the component to remove it from or install it in the compute node, open or close a latch, and so on.
- Orange on a component or an orange label on or near a component indicates that the component can be hot-swapped, which means that if the compute node

and operating system support hot-swap capability, you can remove or install the component while the compute node is running. (Orange can also indicate touch points on hot-swap components.) See the instructions for removing or installing a specific hot-swap component for any additional procedures that you might have to perform before you remove or install the component.

- When you are finished working on the compute node, reinstall all safety shields, guards, labels, and ground wires.

System reliability guidelines

To help ensure proper system cooling and system reliability, make sure that the following requirements are met.

- Each of the drive bays has a drive or a filler panel and electromagnetic compatibility (EMC) shield installed in it.
- Each of the power-supply bays has a power supply or a filler installed in it.
- If the compute node has redundant power, each of the power-supply bays has a power supply installed in it.
- There is adequate space around the compute node to allow the compute node cooling system to work properly. Leave approximately 50 mm (2.0 in.) of open space around the front and rear of the compute node. Do not place objects in front of the fans. For proper cooling and airflow, replace the compute node cover before you turn on the compute node. Operating the compute node for extended periods of time (more than 30 minutes) with the compute node cover removed might damage compute node components.
- You have followed the cabling instructions that come with optional adapters.
- You have replaced a failed fan within 48 hours.
- You have replaced a hot-swap fan within 30 seconds of removal.
- You have replaced a hot-swap drive within 2 minutes of removal.
- You have replaced a failed hot-swap power supply within 2 minutes of removal.
- You do not operate the compute node without the air baffle installed. Operating the compute node without the air baffle might cause the microprocessor to overheat.
- Microprocessor socket 2 always contains either a socket cover or a microprocessor and heat sink.
- You have installed the fourth and sixth fans when you installed the second microprocessor option.

Handling static-sensitive devices

Use this information to handle static-sensitive devices.

Attention: Static electricity can damage the compute node and other electronic devices. To avoid damage, keep static-sensitive devices in their static-protective packages until you are ready to install them.

To reduce the possibility of damage from electrostatic discharge, observe the following precautions:

- Limit your movement. Movement can cause static electricity to build up around you.
- The use of a grounding system is recommended. For example, wear an electrostatic-discharge wrist strap, if one is available. Always use an electrostatic-discharge wrist strap or other grounding system when working inside the compute node with the power on.

- Handle the device carefully, holding it by its edges or its frame.
- Do not touch solder joints, pins, or exposed circuitry.
- Do not leave the device where others can handle and damage it.
- While the device is still in its static-protective package, touch it to an unpainted metal surface on the outside of the compute node for at least 2 seconds. This drains static electricity from the package and from your body.
- Remove the device from its package and install it directly into the compute node without setting down the device. If it is necessary to set down the device, put it back into its static-protective package. Do not place the device on the compute node cover or on a metal surface.
- Take additional care when handling devices during cold weather. Heating reduces indoor humidity and increases static electricity.

Returning a device or component

If you are instructed to return a device or component, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Updating the compute node configuration

Use this information to update the compute node configuration.

When the compute node starts for the first time after you add or remove an internal device, you might receive a message that the configuration has changed. The Setup utility automatically starts so that you can save the new configuration settings. See "Using the Setup utility" on page 25 for more information about the Setup utility.

Some devices have device drivers that you must install. See the documentation that comes with each device for information about installing device drivers.

The compute node operates as a symmetric multiprocessing (SMP) compute node, regardless of how many microprocessors are installed. For optimum performance, you must upgrade the operating system to support SMP. See your operating-system documentation for additional information.

Removing a compute node from a chassis

Use this information to remove a compute node from a NeXtScale nx360 M4 compute node.

Before you remove a compute node, complete the following steps:
1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is operating, shut down the operating system.
3. Press the power button to turn off the compute node (see "Turning off the compute node" on page 15 for more information).

To remove the compute node from a chassis, complete the following steps:
1. Open the front handle as shown in the illustration. The compute node moves out of the node bay approximately 0.6 cm (0.25 inch).

Handle
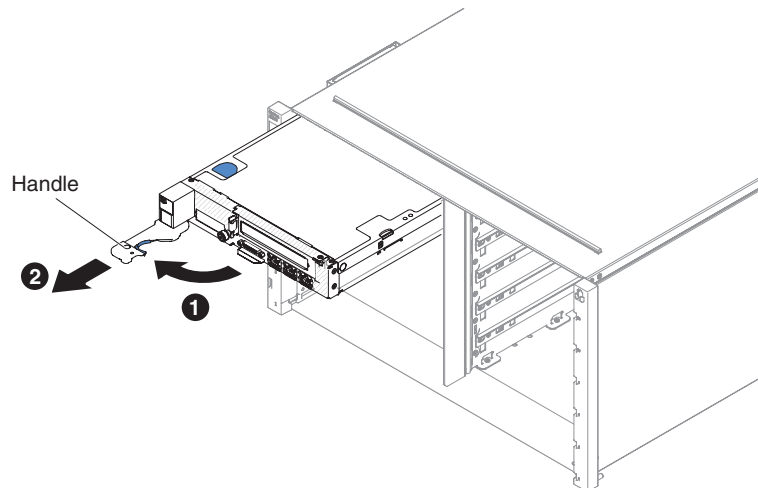
Figure 17. Removal of a NeXtScale nx360 M4 compute node from a chassis

Attention:

- To maintain proper system cooling, do not operate the IBM NeXtScale n1200 Enclosure without a compute node or node bay filler installed in each node bay.
- When you remove the compute node, note the node bay number. Reinstalling a compute node into a different node bay from the one it was removed from can have unintended consequences. Some configuration information and update options are established according to node bay number. If you reinstall the compute node into a different node bay, you might have to reconfigure the compute node.

2. Pull the compute node out of the node bay.

3. Install either a node bay filler or another compute node in the node bay within 1 minute.

If you are instructed to return the compute node, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing a compute node in a chassis

Use this information to install a compute node in a IBM NeXtScale n1200 Enclosure.

Before you install the compute node in a chassis, read "Safety" on page vii and "Installation guidelines" on page 91.

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CAUTION:
Hazardous energy is present when the compute node is connected to the power source. Always replace the compute node cover before installing the compute node.

If you are installing a compute node model without an integrated Ethernet controller, you must install a network interface adapter before you install the compute node in the chassis for management network communication. For a list of supported optional devices for the compute node, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.

The following tables provide an indication of the quantity of nodes that can be installed in a chassis for specific processor types assuming nodes have all DIMM slots, PCIe slots, and hard disk drives populated. The tables are based on 900-watt or 1300-watt power supplies and the indicated power settings. However, when building a NeXtScale n1200 Enclosure solution, you are required to validate the power requirements for your configuration using the latest version of the IBM Power Configurator to ensure that the number of power supplies selected are adequate for supporting your chassis configuration. Failure to validate the configuration with the IBM Power Configurator tool could result in system errors, failure to power on, or microprocessor throttling, and limiting system's ability to leverage all of the microprocessor performance. The Power Configurator tool can be found at http://www-03.ibm.com/systems/bladecenter/resources/powerconfig.html. If there are questions or issues regarding a configuration and Power Configurator, please send them to power@us.ibm.com.

Table 8. Compute nodes supported (high-line AC input, with 900-watt power supply x6)

Microprocessor SKU (W)	# of microprocessors	Non-redundant or N+1 with OVS[1], N=5	N+1 redundant, N=5	N+N redundant, N=3	N+N redundant with OVS[1], N=3
50	1	12	12	12	12
	2	12	12	11	12
60	1	12	12	12	12
	2	12	12	10	12
70	1	12	12	12	12
	2	12	12	8	11
80	1	12	12	11	12
	2	12	12	8	9
95	1	12	12	10	12
	2	12	12	6	10
115	1	12	12	8	10
	2	12	10	5	8
130	1	12	12	7	9
	2	10	8	4	7

Note: 1. OVS (Oversubscription) of the power system allows for more efficient use of the available system power.

Table 9. Compute nodes supported (low-line AC input, with 900-watt power supply x6)

Microprocessor SKU (W)	# of microprocessors	Non-redundant or N+1 with OVS[1], N=5	N+1 redundant, N=5	N+N redundant, N=3	N+N redundant with OVS[1], N=3
50	1	12	12	9	11
	2	12	12	6	10
60	1	12	12	7	9
	2	12	9	5	7
70	1	12	12	7	9
	2	12	9	5	7
80	1	12	12	6	8
	2	10	9	5	7
95	1	12	11	6	7
	2	9	7	4	6
115	1	11	9	5	6
	2	7	6	3	5
130	1	9	8	4	5
	2	6	5	3	4

Note: 1. OVS (Oversubscription) of the power system allows for more efficient use of the available system power.

Table 10. Compute nodes supported (high-line AC input, with 1300-watt power supply x6)

Microprocessor SKU (W)	# of microprocessors	Non-redundant or N+1 with OVS[1], N=5	N+1 redundant, N=5	N+N redundant, N=3	N+N redundant with OVS[1], N=3
50	1	12	12	12	12
	2	12	12	12	12
60	1	12	12	12	12
	2	12	12	12	12
70	1	12	12	12	12
	2	12	12	12	12
80	1	12	12	12	12
	2	12	12	12	12
95	1	12	12	12	12
	2	12	12	10	12
115	1	12	12	12	12
	2	12	12	8	12
130	1	12	12	12	12
	2	12	12	7	11

Note: 1. OVS (Oversubscription) of the power system allows for more efficient use of the available system power.

Table 11. Compute nodes + two 130-watt[2] GPUs supported (high-line AC input, with 1300-watt power supply x6)

Microprocessor SKU (W)	# of microprocessors	Non-redundant or N+1 with OVS[1], N=5	N+1 redundant, N=5	N+N redundant, N=3	N+N redundant with OVS[1], N=3
50	1	6	6	6	6
	2	6	6	6	6
60	1	6	6	6	6
	2	6	6	6	6
70	1	6	6	6	6
	2	6	6	6	6
80	1	6	6	6	6
	2	6	6	6	6
95	1	6	6	6	6
	2	6	6	5 + 1 microprocessor node	6
115	1	6	6	6	6
	2	6	6	5	6
130	1	6	6	5 + 1 microprocessor node	6
	2	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node

Notes:

1. OVS (Oversubscription) of the power system allows for more efficient use of the available system power.
2. The 130-watt GPU is IBM option part number 00J6165.

Table 12. Compute nodes + two 225-watt[2] GPUs supported (high-line AC input, with 1300-watt power supply x6)

Microprocessor SKU (W)	# of microprocessors	Non-redundant or N+1 with OVS[1], N=5	N+1 redundant, N=5	N+N redundant, N=3	N+N redundant with OVS[1], N=3
50	1	6	6	5 + 1 microprocessor node	6
	2	6	6	5	6

Microprocessor SKU (W)	# of microprocessors	Non-redundant or N+1 with OVS[1], N=5	N+1 redundant, N=5	N+N redundant, N=3	N+N redundant with OVS[1], N=3
60	1	6	6	5	6
	2	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node
70	1	6	6	5	6
	2	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node
80	1	6	6	5	6
	2	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node
95	1	6	6	4 + 2 microprocessor node	6
	2	6	6	4	5
115	1	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node
	2	6	6	3 + 1 microprocessor node	4 + 1 microprocessor node
130	1	6	6	4 + 1 microprocessor node	5
	2	6	6	3 + 1 microprocessor node	4 + 1 microprocessor node

Notes:

1. OVS (Oversubscription) of the power system allows for more efficient use of the available system power.
2. The 225-watt GPUs include IBM option part numbers 00D4192, 00J6161, 00J6163, and 00J6165.

Table 13. Compute nodes + two 235-watt[2] GPUs supported (high-line AC input, with 1300-watt power supply x6)

Microprocessor SKU (W)	# of microprocessors	Non-redundant or N+1 with OVS[1], N=5	N+1 redundant, N=5	N+N redundant, N=3	N+N redundant with OVS[1], N=3
50	1	6	6	5 + 1 microprocessor node	6
	2	6	6	4 + 1 microprocessor node	6
60	1	6	6	5	6
	2	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node
70	1	6	6	5	6
	2	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node
80	1	6	6	5	6
	2	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node
95	1	6	6	4 + 2 microprocessor node	5 + 1 microprocessor node
	2	6	6	4	5
115	1	6	6	4 + 1 microprocessor node	5 + 1 microprocessor node
	2	6	6	3 + 1 microprocessor node	4 + 1 microprocessor node
130	1	6	6	4	5
	2	6	6	3 + 1 microprocessor node	4

Notes:

1. OVS (Oversubscription) of the power system allows for more efficient use of the available system power.
2. The 235-watt GPU is IBM option part number 00FL133.

Table 14. Compute nodes + two 300-watt[2] GPUs supported (high-line AC input, with 1300-watt power supply x6)

Microprocessor SKU (W)	# of microprocessors	Non-redundant or N+1 with OVS[1], N=5	N+1 redundant, N=5	N+N redundant, N=3	N+N redundant with OVS[1], N=3
50	1	6	6	4 + 2 microprocessor node	5 + 1 microprocessor node
	2	6	6	4	5
60	1	6	6	4	5
	2	6	6	3 + 2 microprocessor node	4 + 2 microprocessor node
70	1	6	6	4	5
	2	6	6	3 + 2 microprocessor node	4 + 2 microprocessor node
80	1	6	6	4	5
	2	6	6	3 + 2 microprocessor node	4 + 2 microprocessor node
95	1	6	6	4	4 + 2 microprocessor node
	2	6	6	3 + 1 microprocessor node	4 + 1 microprocessor node
115	1	6	6	3 + 2 microprocessor node	4 + 2 microprocessor node
	2	6	5 + 1 microprocessor node	3	3 + 2 microprocessor node
130	1	6	6	3 + 2 microprocessor node	4 + 1 microprocessor node
	2	6	5 + 1 microprocessor node	3	3 + 2 microprocessor node

Notes:

1. OVS (Oversubscription) of the power system allows for more efficient use of the available system power.
2. The 300-watt GPU is IBM option part number 00J6162.

1300-watt power supply supportability
The following table provides the 1300-watt power supply supportability to have better performance and power efficiency.

Table 15. 1300-watt power supply supportability

Quantity of 1300-watt power supplies	FPC power bank		
	Non-redundant	N+1 redundant	N+N redundant
2	Support		Non-support
3			
4			
5			
6			Support

Note: When setting power redundancy through FPC after nodes are powered on, it is possible that the current power bank is not sufficient to allow N+1 or N+N configuration. Remove some or all of the nodes or lighten nodes configuration before the redundancy policy can be applied.

To install the compute node in a chassis, complete the following steps.

Handle
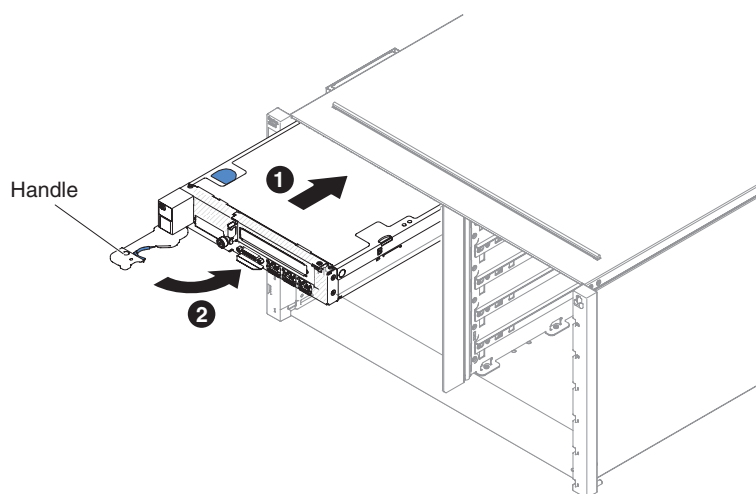
Figure 18. Installing the compute node in a IBM NeXtScale n1200 Enclosure

1. Select the node bay.

   Notes:
   a. If you are reinstalling a compute node that you removed, you must install it in the same node bay from which you removed it. Some compute node configuration information and update options are established according to node bay number. Reinstalling a compute node into a different node bay can have unintended consequences. If you reinstall the compute node into a different node bay, you might have to reconfigure the compute node.
   b. To maintain proper system cooling, do not operate the IBM NeXtScale n1200 Enclosure without a compute node or node bay filler in each node bay.

2. Make sure that the front handle on the compute node is in the open position.

3. Slide the compute node into the node bay until it stops.

4. Push the front handle on the front of the compute node to the closed position.

   Note: After the compute node is installed, the IMM2 in the compute node initializes and synchronizes with the Chassis Management Module. This

process takes approximately 90 seconds. The power LED flashes rapidly, and the power button on the compute node does not respond until this process is complete.

5. Turn on the compute node (see "Turning on the compute node" on page 14 for instructions).

6. Make sure that the power LED on the compute node control panel is lit continuously, indicating that the compute node is receiving power and is turned on.

7. If you have other compute nodes to install, do so now.

8. You can place identifying information on the labeling tabs that are accessible from the front of the compute node.

If this is the initial installation of the compute node in the chassis, you must configure the compute node through the Setup utility and install the compute node operating system (see "Updating the compute node configuration" on page 94).

If you have changed the configuration of the compute node or if you are installing a different compute node from the one that you removed, you must configure the compute node through the Setup utility, and you might have to install the compute node operating system (see "Using the Setup utility" on page 25).

Removing a storage tray from a compute node

Use this information to remove a storage tray from a NeXtScale nx360 M4 compute node.

Before you remove a storage tray from a compute node, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.

2. If the compute node is operating, shut down the operating system.

3. Press the power button to turn off the compute node (see "Turning off the compute node" on page 15 for more information).

To remove the storage tray from a compute node, complete the following steps:

1. Remove the easy-swap hard disk drive #6 (see "Removing a 3.5-inch hard disk drive" on page 143).

2. Disconnect the configuration cable, the hardware RAID (signal) cable, and the mini-SAS cable from the storage tray.

3. Press on the release latch and slide the storage tray toward the rear of the compute node.
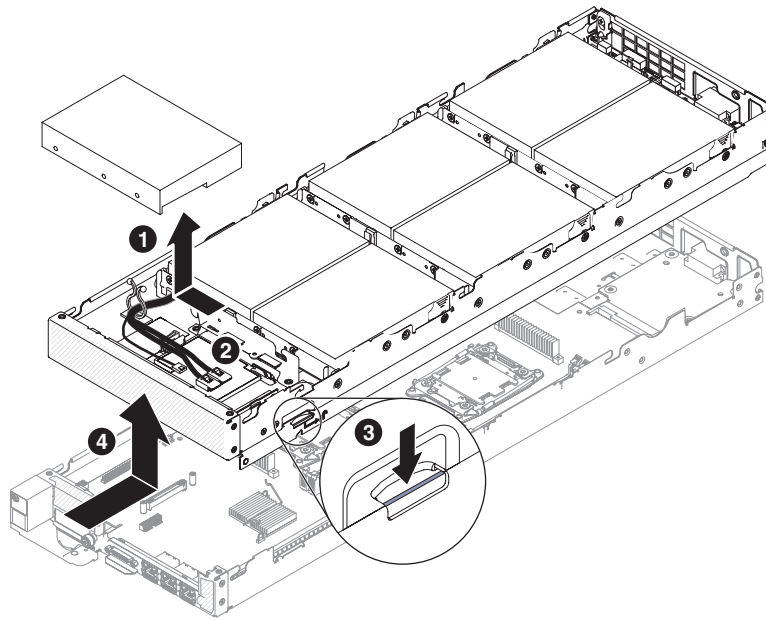
Figure 19. Removal of a storage tray

4. Pull the storage tray out of the compute node.

If you are instructed to return the storage tray, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing a storage tray into a compute node

Use this information to install a storage tray in a NeXtScale nx360 M4 compute node.

Before you install the compute node in a chassis, read "Safety" on page vii and "Installation guidelines" on page 91.

To install the storage tray to compute node, complete the following steps:
Hard disk drive fillers must be installed by referring the following table when the hard disk drives are not fully populated.

Table 16. Hard disk drive configuration for storage tray

Legend: HDD=> hard disk drive									
Internal storage node	**HDD quantity**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**0**
	Drive bay 0	HDD	HDD	HDD	HDD	HDD	HDD	HDD	Filler
	Drive bay 1	HDD	HDD	HDD	HDD	HDD	HDD	Filler	Filler
	Drive bay 2	HDD	HDD	HDD	HDD	HDD	Filler	Filler	Filler
	Drive bay 3	HDD	HDD	HDD	HDD	Filler	Filler	Filler	Filler
	Drive bay 4	HDD	HDD	HDD	Blank	Blank	Blank	Blank	Blank
	Drive bay 5	HDD	HDD	Blank	Blank	Blank	Blank	Blank	Blank
	Drive bay 6	HDD	Blank	Blank	Blank	Blank	Blank	Blank	Blank

If a hard disk drive fails, it is recommended to keep the failed hard disk drive in the storage tray until installing a new hard disk drive or a filler.

1. Carefully lay the storage tray on a flat, static-protective surface, orienting the storage tray with the release latch near your right hand side.

2. Connect the configuration cable, the hardware RAID (signal) cable, and the mini-SAS cable to the storage tray.

3. Install the easy-swap hard disk drive #6 (see "Installing a 3.5-inch hard disk drive" on page 144).

4. Orient the storage tray so that the posts on the inside of the storage tray slide into the slots on the compute node.

   Note: Before you install the storage tray, make sure that the air baffles and all components are installed and seated correctly and that you have not left loose tools or parts inside the compute node.
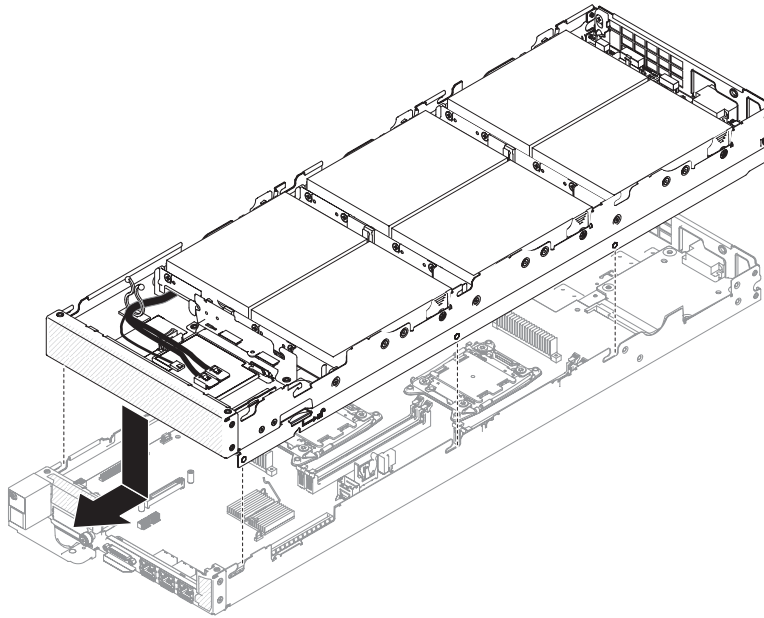
Figure 20. Storage tray installation

5. Hold the front of the compute node and slide the storage tray forward to the closed position, until it clicks into place.

Removing a GPU tray from a compute node

Use this information to remove a GPU tray from a NeXtScale nx360 M4 compute node.

Before you remove a GPU tray from a compute node, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is operating, shut down the operating system.
3. Press the power button to turn off the compute node (see "Turning off the compute node" on page 15 for more information).

To remove the GPU tray from a compute node, complete the following steps:

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Remove the PCI riser-cage assembly in the GPU tray (see "Removing a PCI riser-cage assembly in the GPU tray" on page 154).
3. Press on the release latch and slide the GPU tray toward the rear of the compute node.
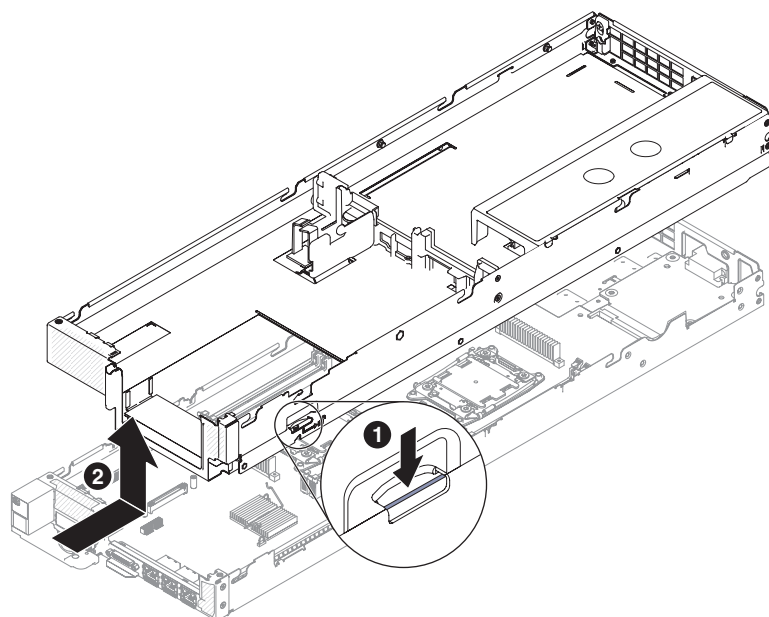
Figure 21. Removal of a GPU tray

4. Pull the GPU tray out of the compute node.

If you are instructed to return the GPU tray, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing a GPU tray into a compute node

Use this information to install a GPU tray in a NeXtScale nx360 M4 compute node.

Important: When you install the new GPU tray, you must update the GPU tray with the latest firmware. Make sure that you have the latest firmware before you proceed. See "Updating the firmware" on page 21 for more information.

Note: The GPU tray supports only 1300-watt power supply unit with high-line Vin (AC 200 volt to 240 volt).

Before you install the compute node in a chassis, read "Safety" on page vii and "Installation guidelines" on page 91.

To install the GPU tray to compute node, complete the following steps:

1. Carefully lay the GPU tray on a flat, static-protective surface, orienting the GPU tray with the release latch near your right hand side.
2. Connect the cables that were disconnected from the GPU tray.
3. Orient the GPU tray so that the posts on the inside of the GPU tray slide into the slots on the compute node.

   Note: Before you install the GPU tray, make sure that the air baffles and all components are installed and seated correctly and that you have not left loose tools or parts inside the compute node.
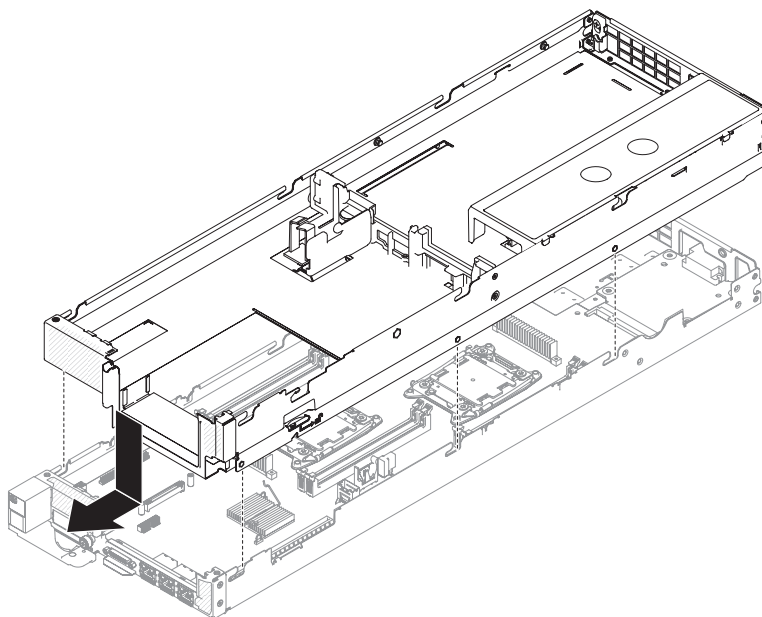
Figure 22. GPU tray installation

4. Hold the front of the compute node and slide the GPU tray forward to the closed position, until it clicks into place.
5. Reinstall the PCI riser-cage assembly in the GPU tray (see "Replacing a PCI riser-cage assembly in the GPU tray" on page 155).
6. Replace the cover (see "Installing the compute node cover" on page 109).

Removing and replacing structural parts

Use this information to remove and replace consumable and structural parts.

Replacement of structural parts is your responsibility. If IBM installs a structural part at your request, you will be charged for the installation.

The illustrations in this document might differ slightly from your hardware.

Removing the compute node cover

Use this information to remove the cover from a compute node.

Before you remove the compute node cover, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

Statement 12

CAUTION:
The following label indicates a hot surface nearby.

Statement 21

CAUTION:
Hazardous energy is present when the compute node is connected to the power source. Always replace the compute node cover before installing the compute node.

To remove the compute node cover, complete the following steps:

1. Press on the release latch and the push point at the same time and slide the cover toward the rear of the compute node.
2. Lift the cover away from the compute node.
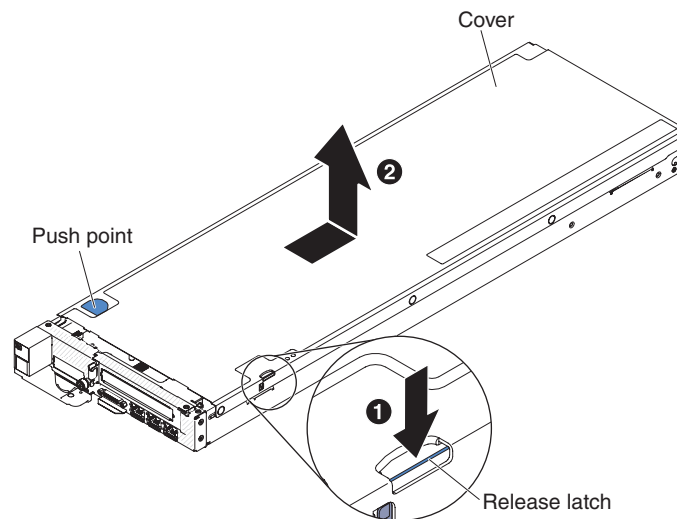
Figure 23. Remove the compute node cover

> **Attention:** Do not use any tools or sharp objects to press on the release latch. Doing so might result in permanent damage to the release latch.

3. Lay the cover flat or store it for future use.

If you are instructed to return the cover, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing the compute node cover

Use this information to install the compute node cover.

Before you install the compute node cover, read "Safety" on page vii and "Installation guidelines" on page 91.

If you are replacing (installing) a cover, be sure to have the system service label kit available for use during the procedure, (see Chapter 4, "Parts listing, IBM NeXtScale nx360 M4 Compute Node Type 5455," on page 83).

Attention: You cannot insert the compute node into the IBM NeXtScale n1200 Enclosure until the cover is installed and closed. Do not attempt to override this protection.

Statement 21

CAUTION:
Hazardous energy is present when the compute node is connected to the power source. Always replace the compute node cover before installing the compute node.

To install the compute node cover, complete the following steps:

1. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.
2. Orient the cover so that the posts on the inside of the cover slide into the slots on the compute node.

   Note: Before you close the cover, make sure that the air baffles and all components are installed and seated correctly and that you have not left loose tools or parts inside the compute node.
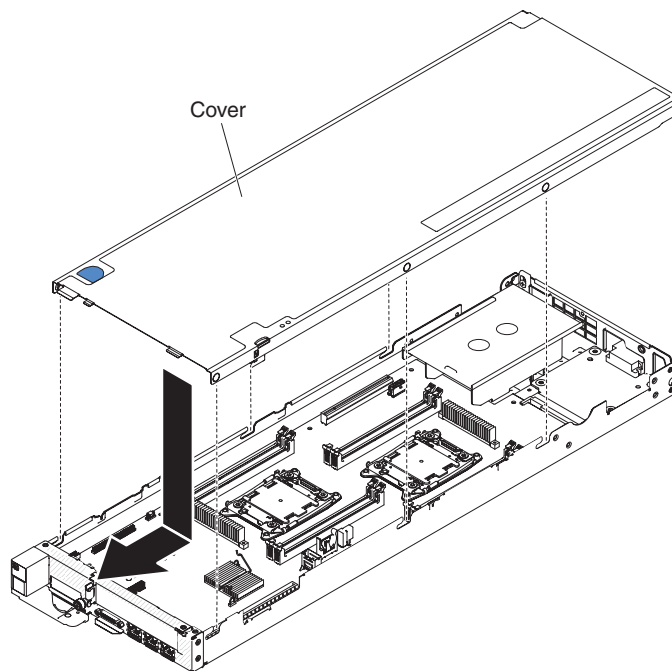
Cover

Figure 24. Installing the compute node cover

3. Hold the front of the compute node and slide the cover forward to the closed position, until it clicks into place.

After you install the compute node cover, install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing the air baffle

Use this information to remove the air baffle.

To remove the air baffle, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect the power cords and all external cables (see "Turning off the compute node" on page 15).
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Grasp the air baffle, disengage pins from pin holes; then, lift the air baffle up.
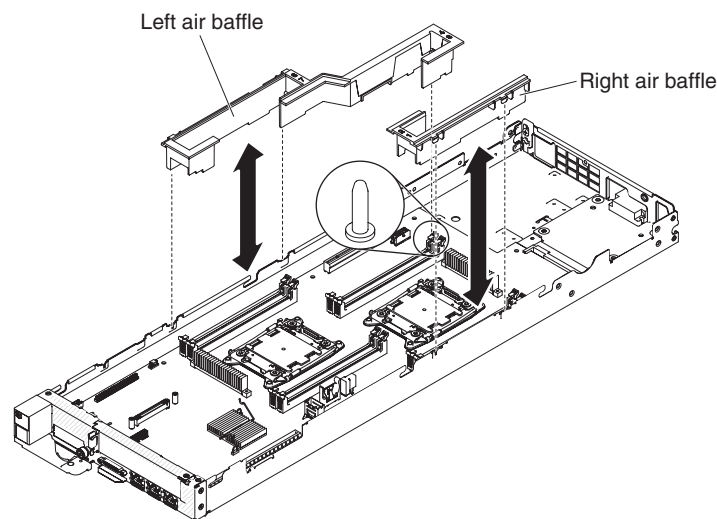
Figure 25. Air baffle removal (compute node)
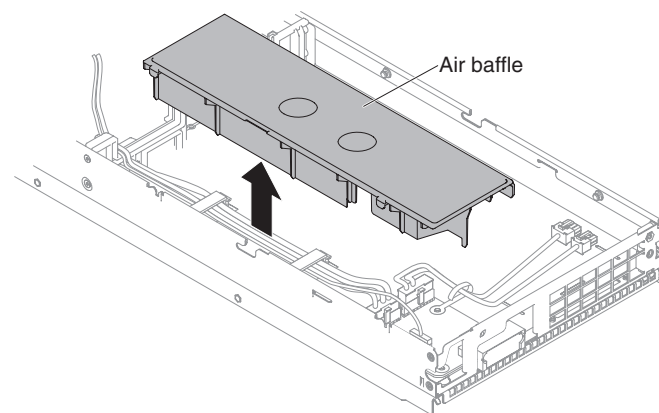
Figure 26. Air baffle removal (GPU tray)

5. Remove the air baffle from the compute node/GPU tray and set it aside.

   Attention: For proper cooling and airflow, replace the air baffle before you turn on the compute node. Operating the compute node with the air baffle removed might damage compute node components.

Replacing the air baffle

Use this information to install the air baffle.

To install the air baffle, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect the power cords and all external cables.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Align the air baffle pins with the baffle pin holes on the left hand side of the chassis for the left air baffle; then, lower the air baffles into the compute node. Press the air baffles down until it is securely seated.

   Note: Close the retaining clip on each end of the DIMM connector before installing the air baffle for proper cooling.
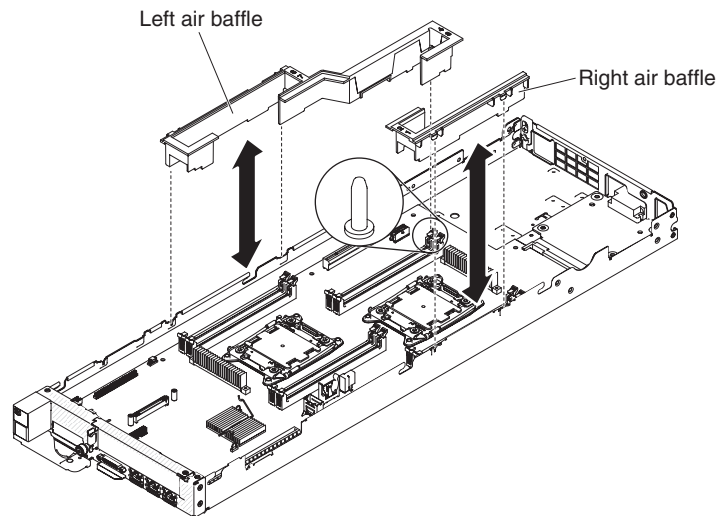
Figure 27. Air baffle installation (compute node)
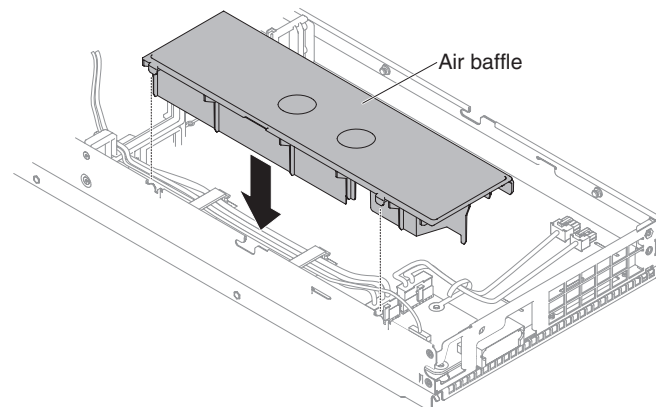
Figure 28. Air baffle installation (GPU tray)

5. Reinstall the cover (see "Installing the compute node cover" on page 109).
6. Slide the compute node into the rack.
7. Reconnect the power cords and any cables that you removed.

8. Turn on the peripheral devices and the compute node.

Removing a RAID adapter battery holder

Use this information to remove a RAID adapter battery holder.

If a RAID adapter battery is installed remotely near the fan cage and you need to replace it, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect all power cords; then, remove the cover (see "Removing the compute node cover" on page 108).
3. Remove the remotely installed RAID adapter battery (see Remove the remotely installed RAID adapter battery section).
4. Lift the battery holder up to remove the battery holder from the system tray.
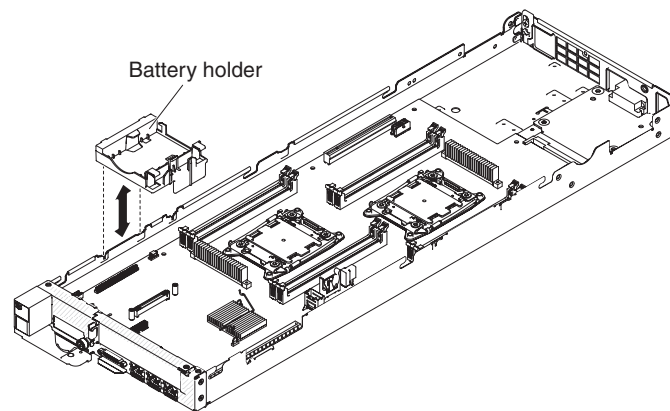
Battery holder

Figure 29. RAID adapter battery holder removal

If you are instructed to return the RAID adapter battery holder, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Replacing a RAID adapter battery holder

Use this information to install a RAID adapter battery holder.

To install a RAID adapter battery holder, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect all power cords and external devices; then, remove the cover (see "Removing the compute node cover" on page 108).
3. Align the battery holder and place the battery holder on the system tray.
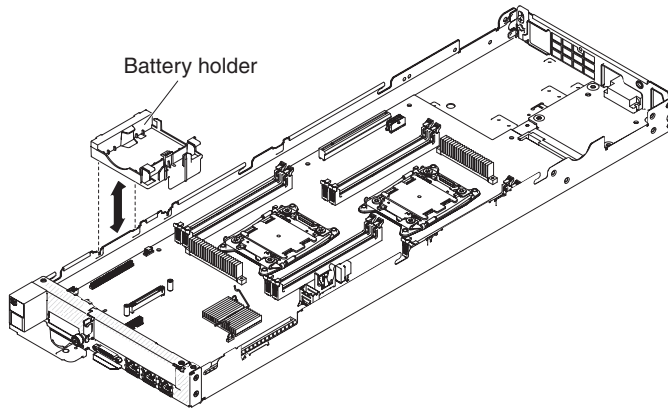
Figure 30. RAID adapter battery holder installation

4. Replacing the cover (see "Installing the compute node cover" on page 109).
5. Slide the server into the rack.
6. Reconnect the power cords and all external cables, and turn on the server and peripheral devices.

Removing the PCI riser filler

Use this information to remove the PCI riser filler.

To remove the PCI riser filler, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect the power cords and all external cables (see "Turning off the compute node" on page 15).
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Grasp the PCI riser filler and lift the PCI riser filler up.
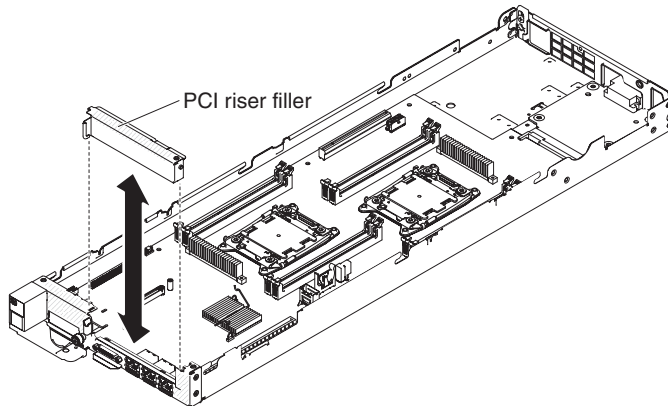
Figure 31. PCI riser filler removal

5. Remove the PCI riser filler from the compute node and set it aside.

   Attention: For proper cooling and airflow, replace the PCI riser filler before you turn on the compute node. Operating the compute node with the PCI riser filler removed might damage compute node components.

Replacing the PCI riser filler

Use this information to install the PCI riser filler.

To install the PCI riser filler, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect the power cords and all external cables.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Align the PCI riser filler pin with the baffle pin hole on the right side of the chassis; then, lower the PCI riser filler into the compute node. Press the PCI riser filler down until it is securely seated.
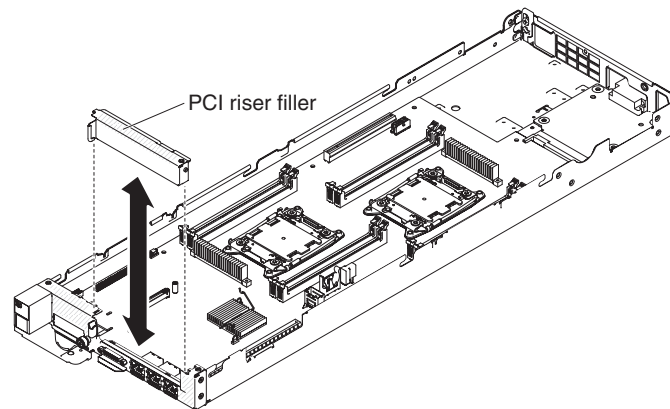
Figure 32. PCI riser filler installation

5. Reinstall the cover (see "Installing the compute node cover" on page 109).
6. Slide the compute node into the rack.
7. Reconnect the power cords and any cables that you removed.
8. Turn on the peripheral devices and the compute node.

Removing the filler from the GPU tray

Use this information to remove the filler from the GPU tray.

To remove the filler from the GPU tray, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect the power cords and all external cables (see "Turning off the compute node" on page 15).
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Press on the touch point of the filler and lift the filler up.
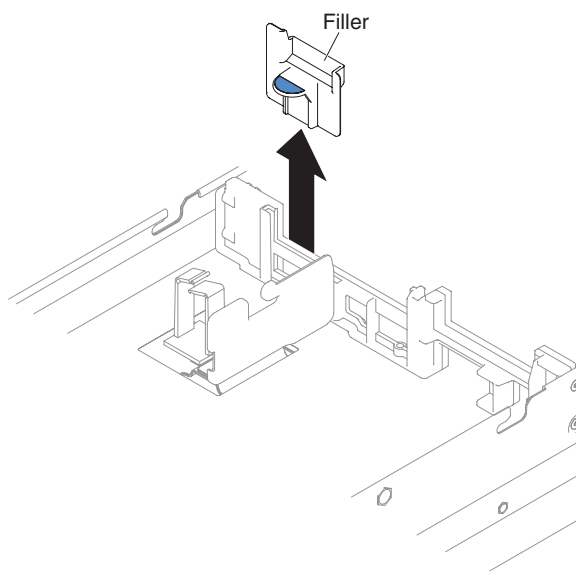
Filler

Figure 33. Filler removal

5. Remove the filler from the GPU tray and set it aside.

   Attention: For proper cooling and airflow, replace the filler before you turn on the compute node. Operating the compute node with the filler removed might damage GPU tray components.

Replacing the filler on to the GPU tray

Use this information to install the filler on to the GPU tray.

To install the filler on to the GPU tray, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect the power cords and all external cables.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Align the filler with the bracket on the middle of the GPU tray; then, lower the filler into the GPU tray. Press the filler down until it is securely seated.

Figure 34. Filler installation

5. Reinstall the cover (see "Installing the compute node cover" on page 109).
6. Slide the compute node into the rack.
7. Reconnect the power cords and any cables that you removed.
8. Turn on the peripheral devices and the compute node.

Removing the front handle

Use this information to remove the front handle.

Before you remove the front handle, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface with the cover side down, orienting the compute node with the bezel pointing toward you.

To remove the front handle, complete the following steps.
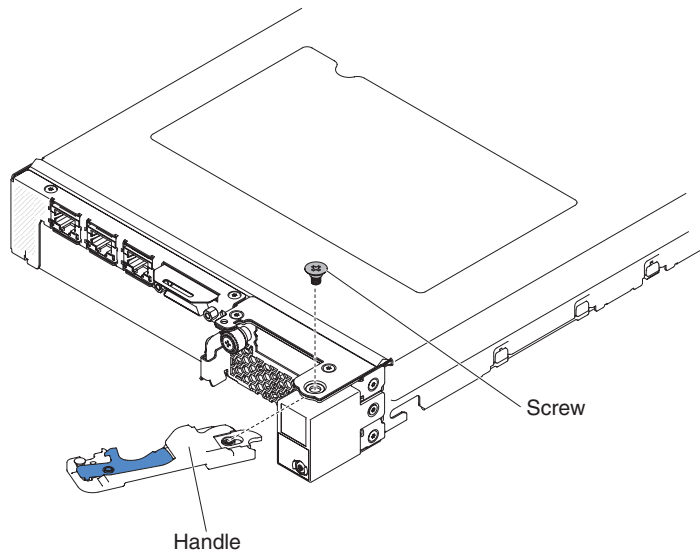
Figure 35. Removal of the front handle

1. Locate the screw that attaches the handle to the compute node.
2. Using a Phillips screwdriver, remove the screw from the front handle and save the screw in a safe place. Use the same screw when you install a front handle.

If you are instructed to return the front handle, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing the front handle

Use this information to install the front handle.

Before you install the front handle, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface with the cover side down, orienting the compute node with the bezel pointing toward you.

To install the front handle, complete the following steps.
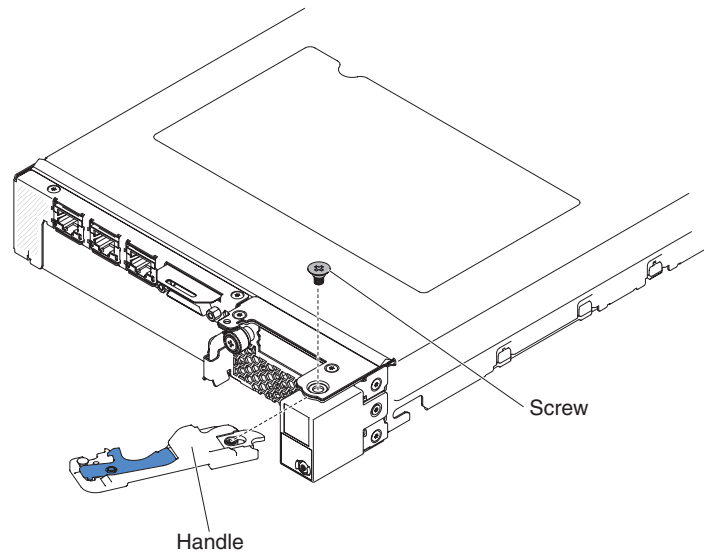
Figure 36. Installation of the front handle

1. Orient the front handle so that the blue release latch is toward the middle of the compute node.
2. Align the hole in the handle with the hole on the compute node where the handle is installed.
3. Using a Phillips screwdriver, install the Phillips #2 screw that secures the handle. Install the screw that you removed when you removed the handle.

After you install the front handle, install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing the hard disk drive cage

Use this information to remove the hard disk drive cage.

Before you remove the hard disk drive cage, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

To remove the hard disk drive cage, complete the following steps.

Figure 37. Removing a hard disk drive cage (3.5-inch)
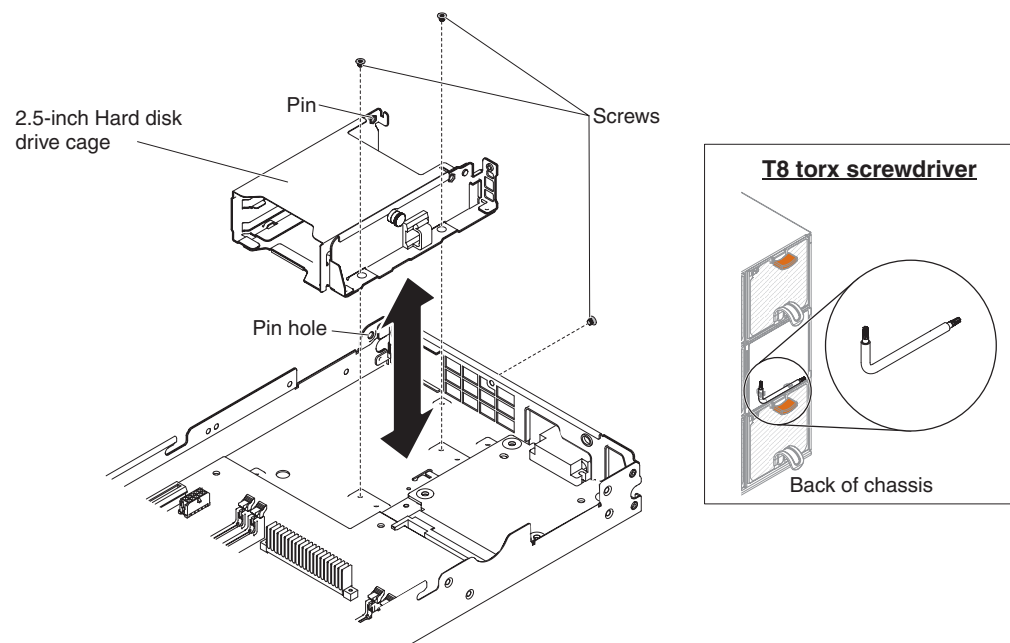
Figure 38. Removing a hard disk drive cage (2.5-inch)
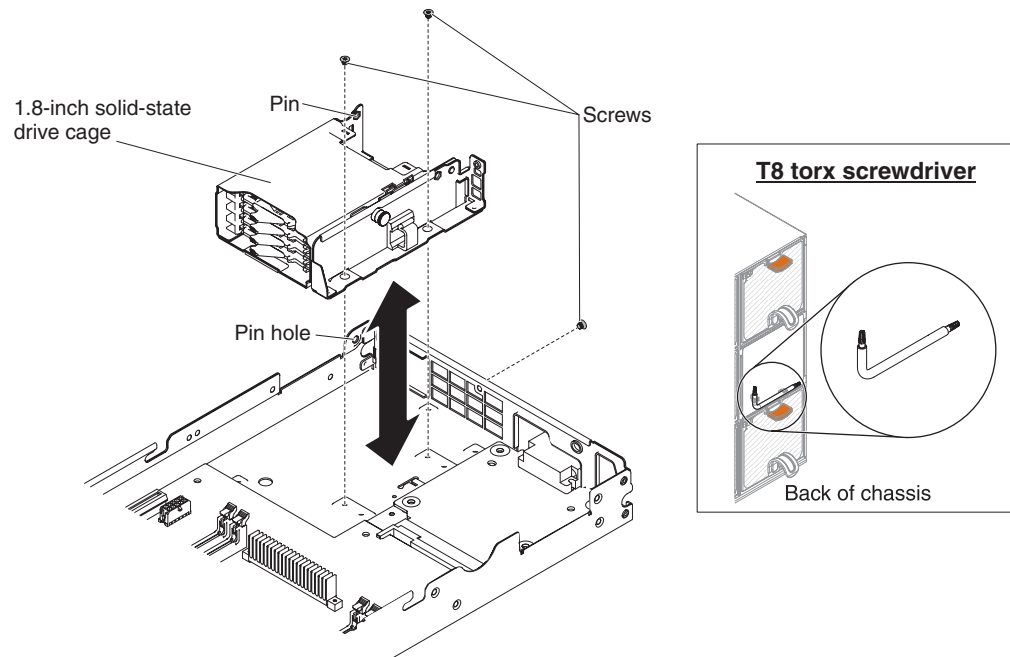
Figure 39. Removing a hard disk drive cage (1.8-inch)

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Remove the easy-swap hard disk drives and hard disk drive bay fillers (see "Removing and installing drives" on page 143).
3. Remove the hard disk drive backplate (see "Removing the hard disk drive backplate" on page 140).
4. Using a Phillips (for 3.5-inch hard disk drive cage) or T8 torx (part number 00FK488, for 2.5-inch or 1.8-inch hard disk drive cage, provided on the back of the chassis) screwdriver, remove the screws (four for 3.5-inch or 2.5-inch hard disk drive cage and three for 1.8-inch hard disk drive cage) from the cage and rotate the cage from under the bezel; then, remove the cage from the compute node at an angle.

If you are instructed to return the hard disk drive cage, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing the hard disk drive cage

Use this information to install the hard disk drive cage.

Before you install the hard disk drive cage, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

To install the hard disk drive cage, complete the following steps.

Figure 40. Installing a hard disk drive cage (3.5-inch)
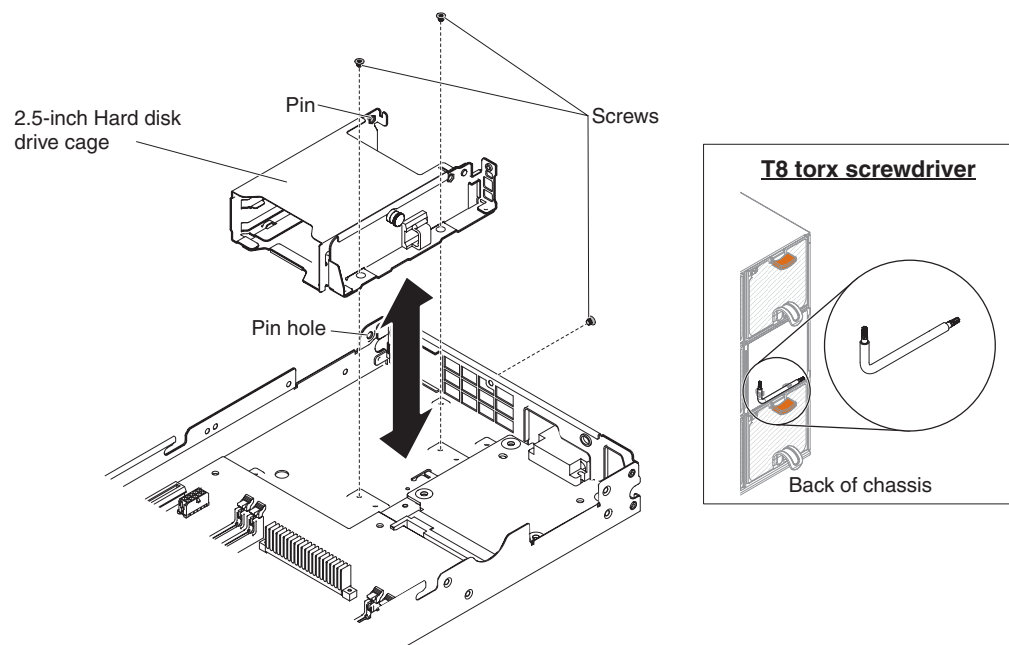
Figure 41. Installing a hard disk drive cage (2.5-inch)
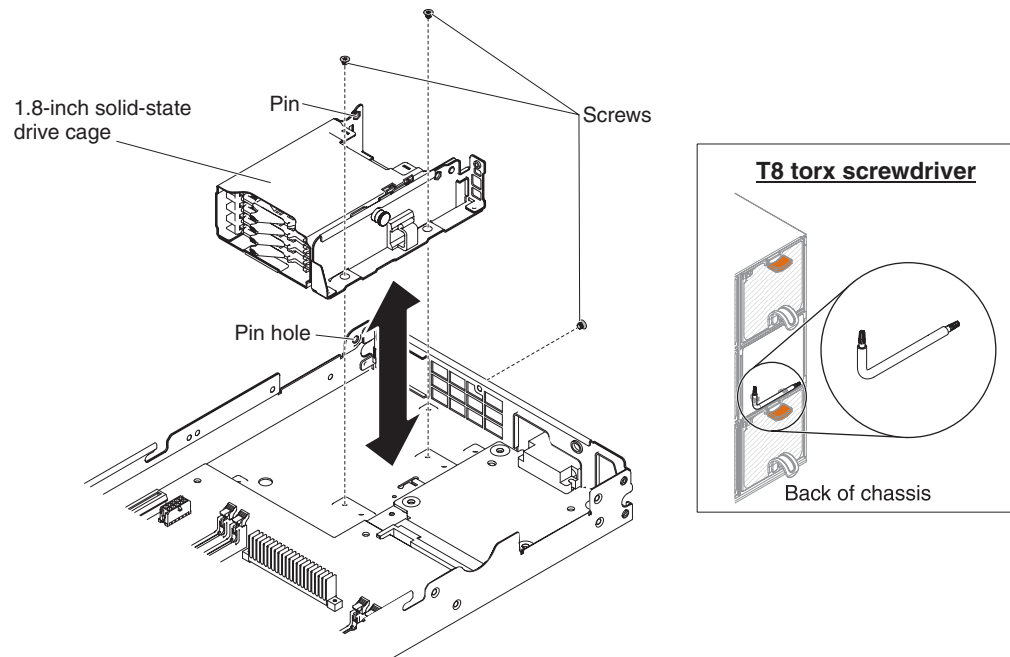
Figure 42. Installing a hard disk drive cage (1.8-inch)

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Position the cage in the bezel at an angle and rotate the cage into position on the system board.
3. Align the cage with the screw holes on the system board.
4. Using a Phillips (for 3.5-inch hard disk drive cage) or T8 torx (part number 00FK488, for 2.5-inch or 1.8-inch hard disk drive cage, provided on the back of the chassis) screwdriver, insert the screws (four for 2.5-inch hard disk drive cage and three for 1.8-inch hard disk drive cage) and secure the cage in the compute node.
5. Install the hard disk drive backplate (see "Installing the hard disk drive backplate" on page 141).
6. Insert the easy-swap hard disk drives and hard disk drive bay fillers (see "Removing and installing drives" on page 143).

After you install the hard disk drive cage, complete the following steps:

1. Install the cover onto the compute node (see "Installing the compute node cover" on page 109 for instructions).
2. Install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing and replacing Tier 1 CRUs

Replacement of Tier 1 CRUs is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation.

The illustrations in this document might differ slightly from your hardware.

Removing the operator information panel

Use this information to remove the operator information panel.

Before you remove the operator information panel, read "Safety" on page vii and "Installation guidelines" on page 91.

To remove the operator information panel, complete the following steps.

1. Use a T8 torx (part number 00FK488, provided on the back of the chassis) screwdriver to remove the screw from the operator information panel. Place it in a safe place.
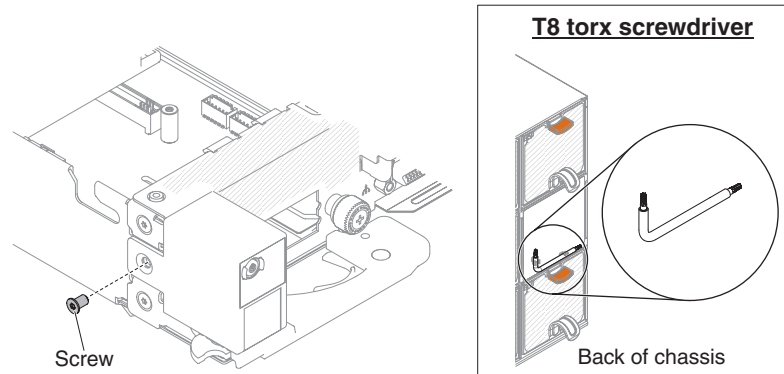
Figure 43. Screw removal

2. Pull out the connector from the system board.
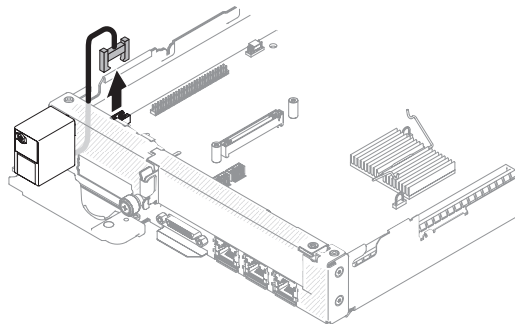
Figure 44. Connector pull out

3. Carefully pull the operator information panel outward a little to make a space for removal.
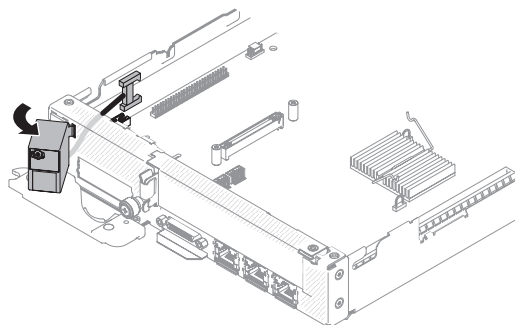
Figure 45. Pull the operator information panel

4. Lift the operator information panel from the compute node.

Operator
information
panel
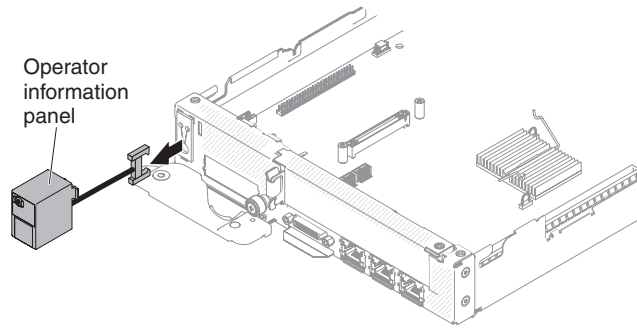
Figure 46. Lift the operator information panel

If you are instructed to return the operator information panel, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing the operator information panel

Use this information to install the operator information panel.

Before you install the operator information panel, read "Safety" on page vii and "Installation guidelines" on page 91.

To install the operator information panel, complete the following steps.

1. Position the operator information panel on the front of the compute node.

Operator
information
panel
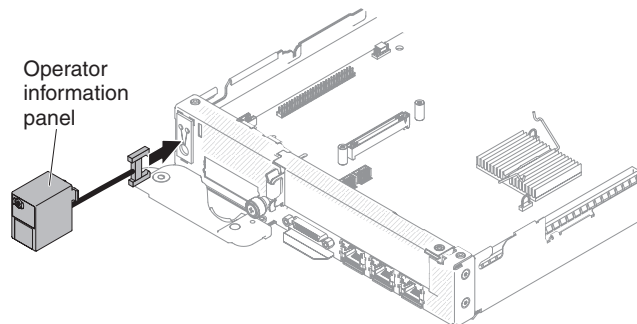
Figure 47. Position the operator information panel

2. Press the operator information panel securely against the compute node.
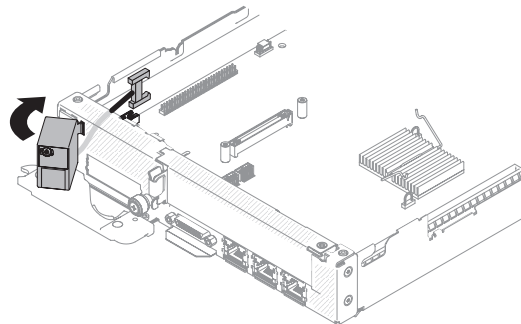
Figure 48. Installation of an operator information panel

3. Install the connector of the operator information panel on the system board.
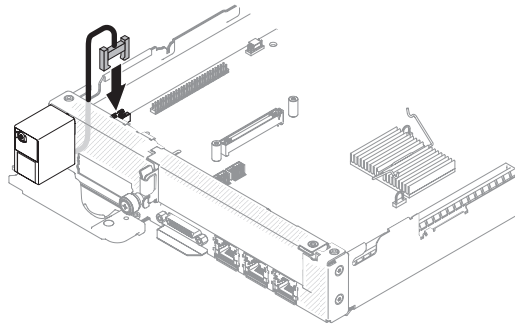
Figure 49. Installation of the connector of an operator information panel

4. Use a T8 torx (part number 00FK488, provided on the back of the chassis) screwdriver to install the screw to the operator information panel.
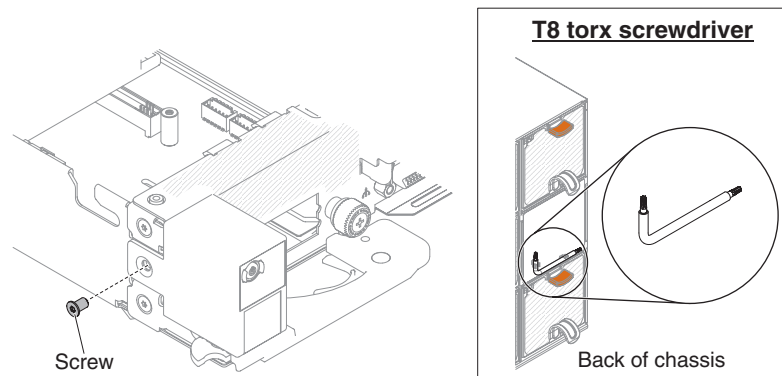
Figure 50. Screw installation

Removing the power paddle card from the GPU tray

Use this information to remove the paddle card from the GPU tray.

To remove the paddle card from the GPU tray, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect the power cords and all external cables (see "Turning off the compute node" on page 15).
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Remove the air baffle (see "Removing the air baffle" on page 111).
5. Make a note of where cables are attached to the power paddle card; then, disconnect them.
6. Remove the four screws that secure the power paddle card to the GPU tray and save them for future use.
7. Slide the power paddle card out of the GPU tray.
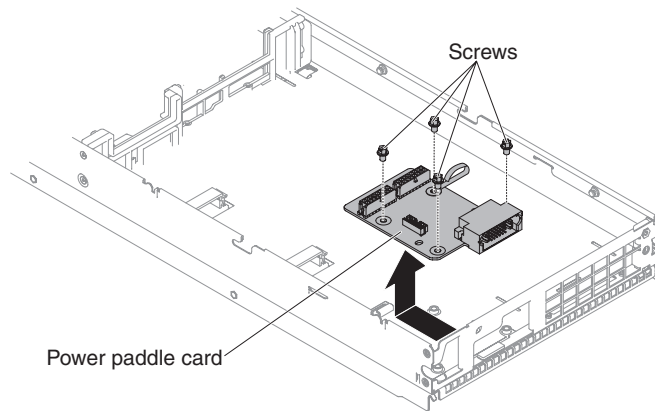
Figure 51. Power paddle card removal

8. If you are instructed to return the power paddle card, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Replacing the power paddle card on to the GPU tray

Use this information to install the power paddle card on to the GPU tray.

To install the power paddle card on to the GPU tray, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect the power cords and all external cables.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Place the power paddle card on the mounting studs in the GPU tray and install the four screws. Then, slide the power paddle card into the GPU tray.
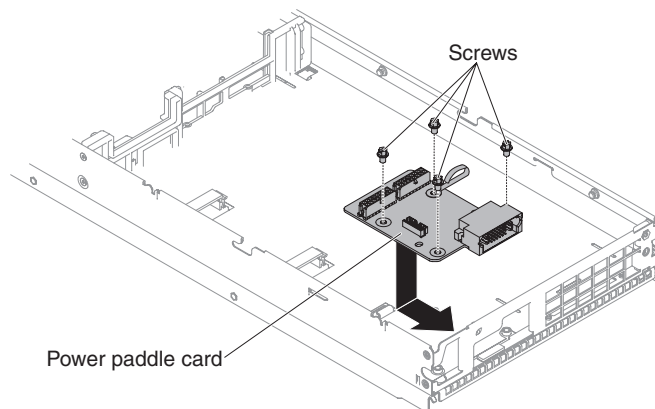
Figure 52. Power paddle card installation

5. Reconnect the power paddle card cables.
6. Reinstall the air baffle (see "Replacing the air baffle" on page 112).
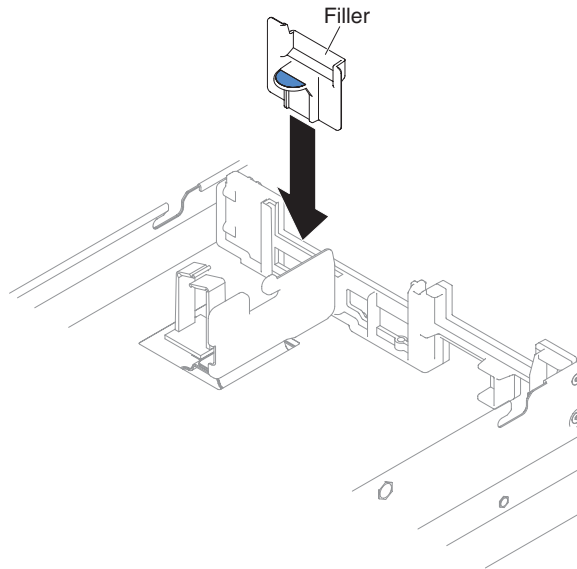7. Reinstall the cover (see "Installing the compute node cover" on page 109).
8. Slide the compute node into the rack.
9. Reconnect the power cords and any cables that you removed.
10. Turn on the peripheral devices and the compute node.

Removing the system battery

Use this information to remove the CMOS battery.

The following notes describe information that you must consider when replacing the battery.

- IBM has designed this product with your safety in mind. The lithium battery must be handled correctly to avoid possible danger. If you replace the battery, you must adhere to the following instructions.

  Note: In the U. S., call 1-800-IBM-4333 for information about battery disposal.

- If you replace the original lithium battery with a heavy-metal battery or a battery with heavy-metal components, be aware of the following environmental consideration. Batteries and accumulators that contain heavy metals must not be disposed of with normal domestic waste. They will be taken back free of charge by the manufacturer, distributor, or representative, to be recycled or disposed of in a proper manner.

- To order replacement batteries, call 1-800-IBM-SERV within the United States, and 1-800-465-7999 or 1-800-465-6666 within Canada. Outside the U.S. and Canada, call your support center or business partner.

  Note: After you replace the battery, you must reconfigure the server and reset the system date and time.

  Statement 2

  CAUTION:
  When replacing the lithium battery, use only IBM Part Number 33F8354 or an equivalent type battery recommended by the manufacturer. If your system has a module containing a lithium battery, replace it only with the same module type made by the same manufacturer. The battery contains lithium and can explode if not properly used, handled, or disposed of.

  Do not:
  - **Throw or immerse into water**
  - **Heat to more than 100°C (212°F)**
  - **Repair or disassemble**

  Dispose of the battery as required by local ordinances or regulations.

To remove the system battery, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect the power cords and all external cables, if necessary.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. If necessary, lift the PCI riser-card assembly 2 out of the way (see "Removing a PCI riser-cage assembly" on page 152).
5. Remove the system battery:
   a. If there is a rubber cover on the battery holder, use your fingers to lift the battery cover from the battery connector.

b. Use one finger to tilt the battery horizontally out of its socket, pushing it away from the socket.

Attention: Neither tilt nor push the battery by using excessive force.
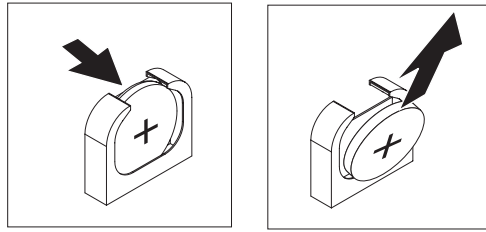
Figure 53. System battery removal

c. Use your thumb and index finger to lift the battery from the socket.

Attention: Do not lift the battery by using excessive force. Failing to remove the battery properly may damage the socket on the system board. Any damage to the socket may require replacing the system board.

6. Dispose of the battery as required by local ordinances or regulations. See the *IBM Environmental Notices and User's Guide* on the IBM *Documentation* CD for more information.

Replacing the system battery

The following notes describe information that you must consider when replacing the system battery in the server.

- When replacing the system battery, you must replace it with a lithium battery of the same type from the same manufacturer.
- To order replacement batteries, call 1-800-426-7378 within the United States, and 1-800-465-7999 or 1-800-465-6666 within Canada. Outside the U.S. and Canada, call your IBM marketing representative or authorized reseller.
- After you replace the system-board battery, you must reconfigure the server and reset the system date and time.
- To avoid possible danger, read and follow the following safety statement.

Statement 2

CAUTION:
When replacing the lithium battery, use only IBM Part Number 33F8354 or an equivalent type battery recommended by the manufacturer. If your system has a module containing a lithium battery, replace it only with the same module type made by the same manufacturer. The battery contains lithium and can explode if not properly used, handled, or disposed of.

Do not:
- **Throw or immerse into water**
- **Heat to more than 100°C (212°F)**
- **Repair or disassemble**

Dispose of the battery as required by local ordinances or regulations.

To install the replacement system battery, complete the following steps:

1. Follow any special handling and installation instructions that come with the replacement battery.
2. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
3. Turn off the server and peripheral devices and disconnect the power cords and all external cables, if necessary.
4. Remove the cover (see "Removing the compute node cover" on page 108).
5. If necessary, lift the PCI riser-card assembly 2 out of the way (see "Removing a PCI riser-cage assembly" on page 152).
6. Insert the new battery:
   a. Tilt the battery so that you can insert it into the socket on the side opposite the battery clip.

Figure 54. System battery installation

   b. Press the battery down into the socket until it clicks into place. Make sure that the battery clip holds the battery securely.
   c. If you removed a rubber cover from the battery holder, use your fingers to install the battery cover on top of the battery connector.
7. Reinstall the PCI riser-card assembly 2 (see "Replacing a PCI riser-cage assembly" on page 153), if necessary.
8. Install the cover (see "Installing the compute node cover" on page 109).
9. Slide the server into the rack.
10. Reconnect the external cables; then, reconnect the power cords and turn on the peripheral devices and the server.
11. Start the Setup utility and reset the configuration.
    - Set the system date and time.
    - Set the power-on password.
    - Reconfigure the server.

    See "Using the Setup utility" on page 25 for details.

Removing a memory module

Use this information to remove a memory module.

To remove a dual inline memory module (DIMM), complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect all power cords.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Remove the air baffle (see "Removing the air baffle" on page 111).

5. Carefully open the retaining clips on each end of the DIMM connector and remove the DIMM.

   Attention: To avoid breaking the retaining clips or damaging the DIMM connectors, open and close the clips gently.

Alignment slot

DIMM

Retaining clip

Alignment tab
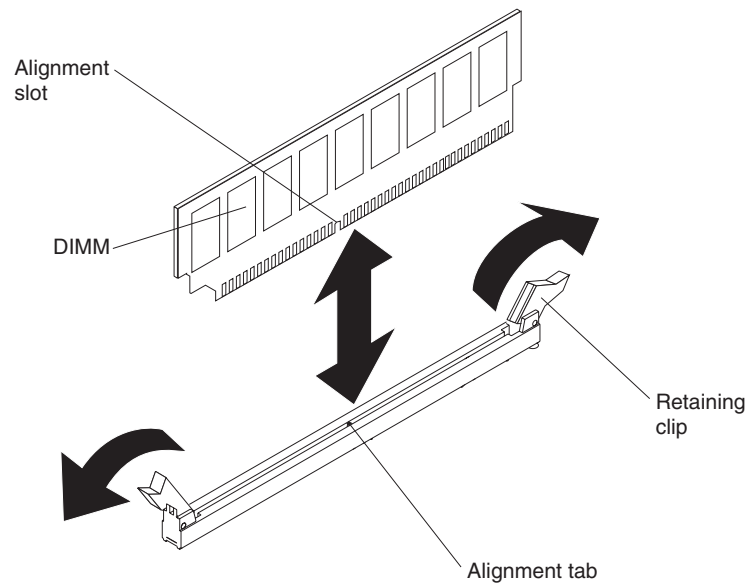
Figure 55. DIMM removal

6. If you are instructed to return the DIMM, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing a memory module

The following notes describe the types of DIMMs that the compute node supports and other information that you must consider when you install DIMMs.

- When you install or remove DIMMs, the compute node configuration information changes. When you restart the compute node, the system displays a message that indicates that the memory configuration has changed.

- The compute node supports only industry-standard double-data-rate 3 (DDR3), 1066, 1333, 1600, or 1866 MHz, PC3-8500, PC3-10600, PC3-12800, or PC3-14900 registered or unbuffered, synchronous dynamic random-access memory (SDRAM) dual inline memory modules (DIMMs) with error correcting code (ECC). See http://www.ibm.com/systems/info/x86servers/serverproven/ compat/us for a list of supported memory modules for the compute node.

  – The specifications of a DDR3 DIMM are on a label on the DIMM, in the following format.

    ggggg eRxff PC3*v-wwwwwm-aa-bb-ccd*

    where:

    - *ggggg* is the total capacity of the DIMM (for example, 1 GB, 2 GB, or 4 GB)
    - *eR* is the number of ranks

         1R = single-rank

         2R = dual-rank

         4R = quad-rank

    - *xff* is the device organization (bit width)

         x4 = x4 organization (4 DQ lines per SDRAM)

> x8 = x8 organization
>
> x16 = x16 organization

- *v* is the SDRAM and support component supply voltage (VDD)
  - Blank = 1.5 V specified
  - L = 1.35 V specified, 1.5 V operable

  > **Note:** Values for these voltages are "specified" which means the device characteristics such as timing are supported at this voltage. Values are "operable" which means that the devices can be operated safely at this voltage. However, device characteristics such as timing may not be guaranteed. All devices must be "tolerant" of the highest DDR3 nominal voltage of 1.5 V, meaning that they may not operate at 1.5 V but may be powered at that voltage without damage to the devices.

- *wwwww* is the DIMM bandwidth, in MBps

  > 6400 = 6.40 GBps (DDR3-800 SDRAMs, 8-byte primary data bus)
  >
  > 8500 = 8.53 GBps (DDR3-1066 SDRAMs, 8-byte primary data bus)
  >
  > 10600 = 10.66 GBps (DDR3-1333 SDRAMs, 8-byte primary data bus)
  >
  > 12800 = 12.80 GBps (DDR3-1600 SDRAMs, 8-byte primary data bus)
  >
  > 14900 = 14.93 GBps (DDR3-1866 SDRAMs, 8-byte primary data bus)

- *m* is the DIMM type

  > E = Unbuffered DIMM (UDIMM) with ECC (x72-bit module data bus)
  >
  > L = Load Reduction DIMM (LRDIMM)
  >
  > R = Registered DIMM (RDIMM)
  >
  > U = Unbuffered DIMM with no ECC (x64-bit primary data bus)

- *aa* is the CAS latency, in clocks at maximum operating frequency
- *bb* is the JEDEC SPD Revision Encoding and Additions level
- *cc* is the reference design file for the design of the DIMM
- *d* is the revision number of the reference design of the DIMM

Note: To determine the type of a DIMM, see the label on the DIMM. The information on the label is in the format xxxxx *n*Rxxx PC3v-xxxxxx-xx-xx-xxx. The numeral in the sixth numerical position indicates whether the DIMM is single-rank (*n*=1), dual-rank (*n*=2), or quad-rank (*n*=4).

- The following rules apply to DDR3 RDIMM speed as it relates to the number of RDIMMs in a channel:
  - When you install 1 RDIMM per channel, the memory runs at 1866 MHz
  - When you install 2 RDIMMs per channel, the memory runs at 1600 MHz
  - When you install 3 RDIMMs per channel, the memory runs at 1066 MHz
  - All channels in a compute node run at the fastest common frequency
  - Do not install registered, unbuffered, and load reduction DIMMs in the same compute node
- The maximum memory speed is determined by the combination of the microprocessor, DIMM speed, DIMM type, Operating Modes in UEFI settings, and the number of DIMMs installed in each channel.
- In two-DIMM-per-channel configuration, the compute node automatically operates with a maximum memory speed of up to 1600 MHz when the following condition is met:
  - Two 1.35 V single-rank, dual-ranl, or quad-rank UDIMMs, RDIMMs or LRDIMMs are installed in the same channel. In the Setup utility, **Memory**

speed is set to **Max performance** and **LV-DIMM power** is set to **Enhance performance** mode. The 1.35 V UDIMMs, RDIMMs or LRDIMMs will function at 1.5 V.

- The compute node supports a maximum of 8 dual-rank UDIMMs. The compute node supports up to one UDIMMs per channel.
- The compute node supports a maximum of 8 dual-rank RDIMMs. The compute node supports up to one RDIMMs per channel.
- The following table shows an example of the maximum amount of memory that you can install using ranked DIMMs:

Table 17. Maximum memory installation using ranked DIMMs

Number of DIMMs	DIMM type	DIMM size	Total memory
8	Dual-rank UDIMM	4 GB	32 GB
8	Single-rank RDIMM	4 GB	32 GB
8	Dual-rank RDIMM	4 GB	32 GB
8	Single-rank RDIMM	8 GB	64 GB
8	Dual-rank RDIMM	8 GB	64 GB
8	Dual-rank RDIMM	16 GB	128 GB

- The UDIMM option that is available for the compute node is 4 GB. The compute node supports a minimum of 4 GB and a maximum of 32 GB of system memory using UDIMMs.
- The RDIMM options that are available for the compute node are 4 GB, 8 GB, and 16 GB. The compute node supports a minimum of 4 GB and a maximum of 128 GB of system memory using RDIMMs.
- A minimum of one DIMM must be installed for each microprocessor. For example, you must install a minimum of two DIMMs if the compute node has two microprocessors installed. However, to improve system performance, install a minimum of four DIMMs for each microprocessor.
- DIMMs in the compute node must be the same type (RDIMM or UDIMM) to ensure that the compute node will operate correctly.
- When you install one quad-rank DIMM in a channel, install it in the DIMM connector furthest away from the microprocessor.

Notes:

1. You can install DIMMs for microprocessor 2 as soon as you install microprocessor 2; you do not have to wait until all of the DIMM slots for microprocessor 1 are filled.
2. DIMM slots 5-8 are reserved for microprocessor 2; thus, DIMM slots 5-8 are enabled when microprocessor 2 is installed.

The following illustration shows the location of the DIMM connectors on the system board.
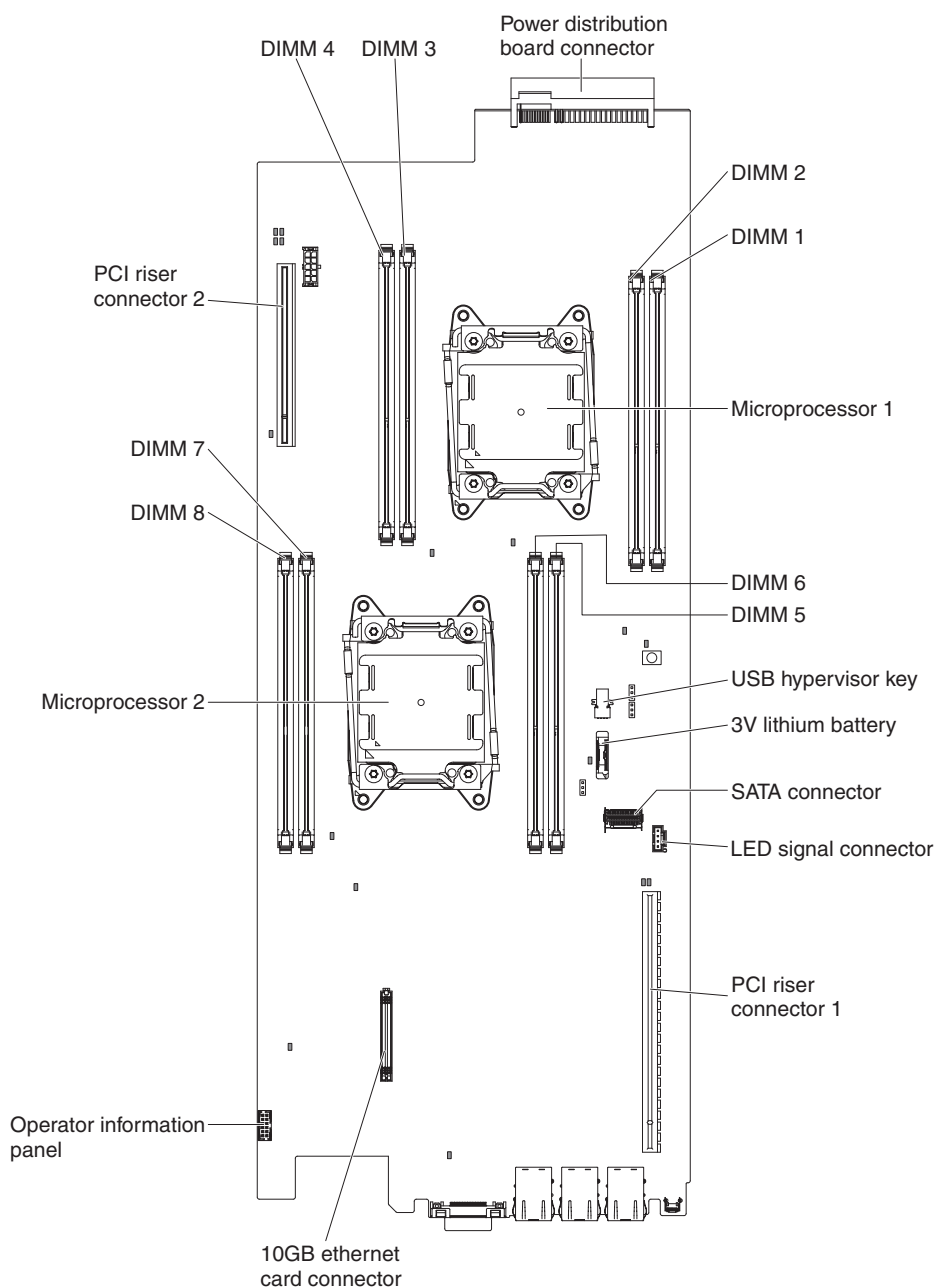
Figure 56. DIMM connectors location

DIMM installation sequence

Depending on the server model, the server may come with a minimum of one 4 GB DIMM installed in slot 4. When you install additional DIMMs, install them in the order shown in the following table to optimize system performance.

In general, all channels on the memory interface for each microprocessor can be populated in any order and have no matching requirements.

Table 18. Normal mode DIMM installation sequence

Number of installed microprocessor	DIMM connector population sequence
One microprocessor installed	4, 3, 1, 2
Two microprocessors installed	4, 5, 3, 6, 1, 8, 2, 7

Memory mirrored channel

Memory mirrored channel mode replicates and stores data on two pairs of DIMMs within two channels simultaneously.

If a failure occurs, the memory controller switches from the primary pair of memory DIMMs to the backup pair of DIMMs. To enable memory mirrored channel through the Setup utility, select **System Settings** > **Memory**. For more information, see "Using the Setup utility" on page 25. When you use the memory mirrored channel feature, consider the following information:

- When you use memory mirrored channel, you must install a pair of DIMMs at a time. The two DIMMs in each pair must be identical in size, type, and rank (single, dual, or quad), and organization, but not in speed. The channels run at the speed of the slowest DIMM in any of the channels.
- The maximum available memory is reduced to half of the installed memory when memory mirrored channel is enabled. For example, if you install 8 GB of memory using RDIMMs, only 4 GB of addressable memory is available when you use memory mirrored channel.

The following table shows the installation sequence for memory mirrored channel mode:

Table 19. Memory mirrored channel mode DIMM population sequence

Number of installed microprocessor	DIMM connector population sequence
One microprocessor installed	4, 3, 1, 2
Two microprocessors installed	4, 3, 5, 6, 1, 2, 8, 7

Replacing a memory module

Use this information to install a DIMM.

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect the power cords and all external cables, if necessary.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Remove the air baffle (see "Removing the air baffle" on page 111).
5. Carefully open the retaining clips on each end of the DIMM connector and remove the DIMM.

   Attention: To avoid breaking the retaining clips or damaging the DIMM connectors, open and close the clips gently.
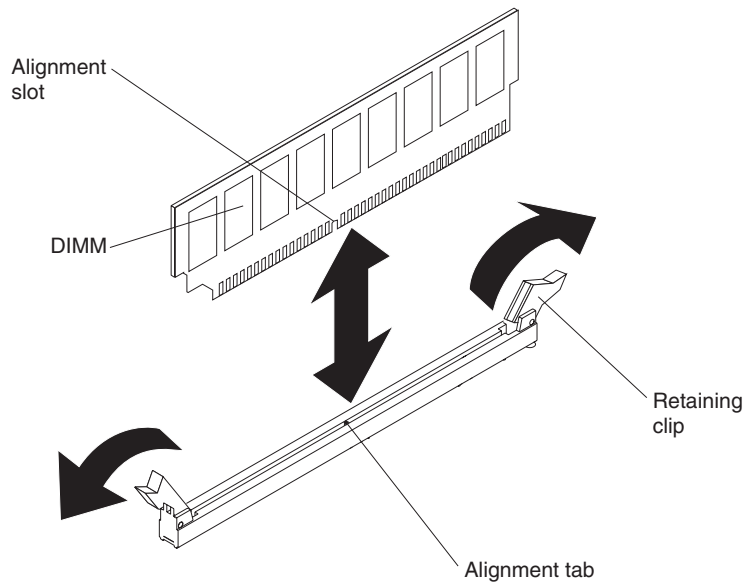
Figure 57. DIMM installation

6. Touch the static-protective package that contains the DIMM to any unpainted metal surface on the outside of the server. Then, remove the DIMM from the package.
7. Turn the DIMM so that the alignment slot align correctly with the alignment tab.
8. Insert the DIMM into the connector by aligning the edges of the DIMM with the slots at the ends of the DIMM connector.
9. Firmly press the DIMM straight down into the connector by applying pressure on both ends of the DIMM simultaneously. The retaining clips snap into the locked position when the DIMM is firmly seated in the connector.

   Note: If there is a gap between the DIMM and the retaining clips, the DIMM has not been correctly inserted; open the retaining clips, remove the DIMM, and then reinsert it.
10. Replace the air baffle (see "Replacing the air baffle" on page 112).

    Note: Close all the retaining clips even for slots without DIMMs installed before replacing the air baffle.
11. Replace the cover (see "Installing the compute node cover" on page 109).
12. Reconnect the power cords and any cables that you removed.
13. Turn on the peripheral devices and the server.

Removing the optional 3.5-inch hard disk drive hardware RAID cage

Use this information to remove the optional 3.5-inch hard disk drive hardware RAID cage.

Before you remove the optional 3.5-inch hard disk drive hardware RAID cage, complete the following steps:
1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).

3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

To remove the optional 3.5-inch hard disk drive hardware RAID cage, complete the following steps.
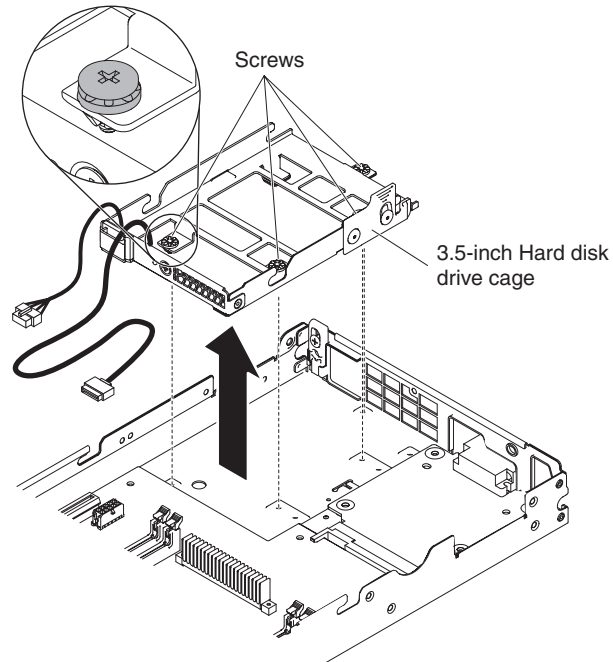
Figure 58. Removing a 3.5-inch hard disk drive hardware RAID cage

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Disconnect the power cable and the mini-SAS cable from the system-board and the storage tray respectively (see "Cabling hard disk drive with ServeRAID SAS/SATA controller" on page 179).
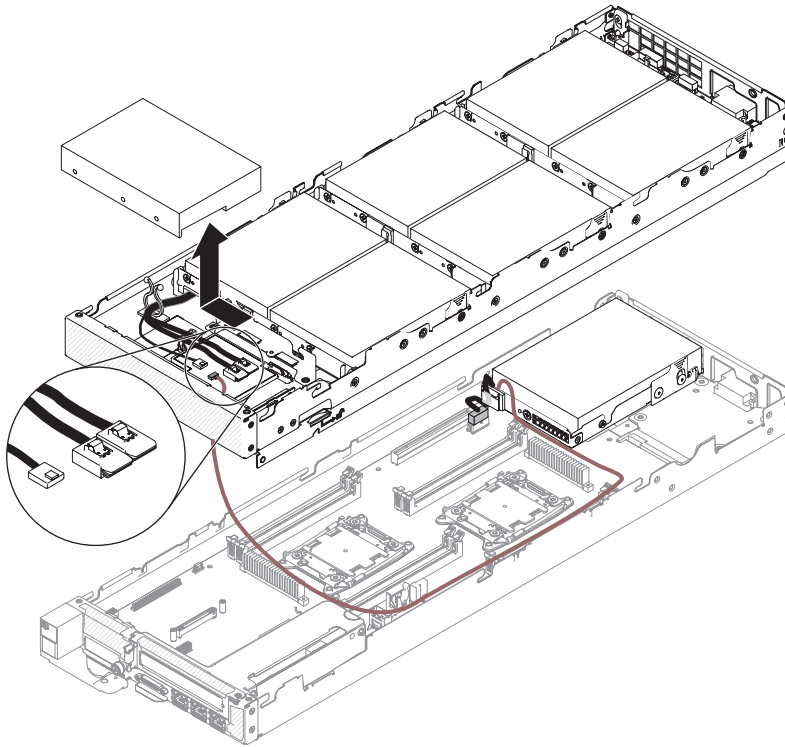
Figure 59. Disconnect the mini-SAS cable from the storage tray

3. Remove the easy-swap hard disk drive #7 (see "Removing a 3.5-inch hard disk drive" on page 143).

4. Using a Phillips screwdriver, remove the four screws from the cage and rotate the cage from under the bezel; then, remove the cage from the compute node at an angle.

If you are instructed to return the hard disk drive cage, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing the optional 3.5-inch hard disk drive hardware RAID cage

Use this information to install the optional 3.5-inch hard disk drive hardware RAID cage.

Before you install the hard disk drive cage, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.

2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).

3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

To install the optional 3.5-inch hard disk drive hardware RAID cage, complete the following steps.
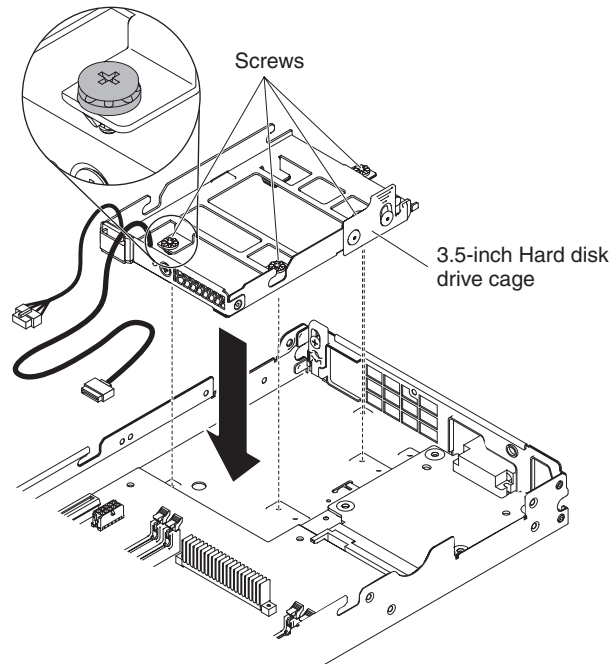
Figure 60. Installing a 3.5-inch hard disk drive hardware RAID cage

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Position the hardware RAID cage in the bezel at an angle and rotate the cage into position on the system board.
3. Align the cage with the screw holes on the system board.
4. Using a Phillips screwdriver, insert the 4 screws and secure the cage in the compute node.
5. Install the easy-swap hard disk drive #7 (see "Installing a 3.5-inch hard disk drive" on page 144).
6. Connect the power cable and the mini-SAS cable on the system-board and the storage tray respectively (see "Cabling hard disk drive with ServeRAID SAS/SATA controller" on page 179).
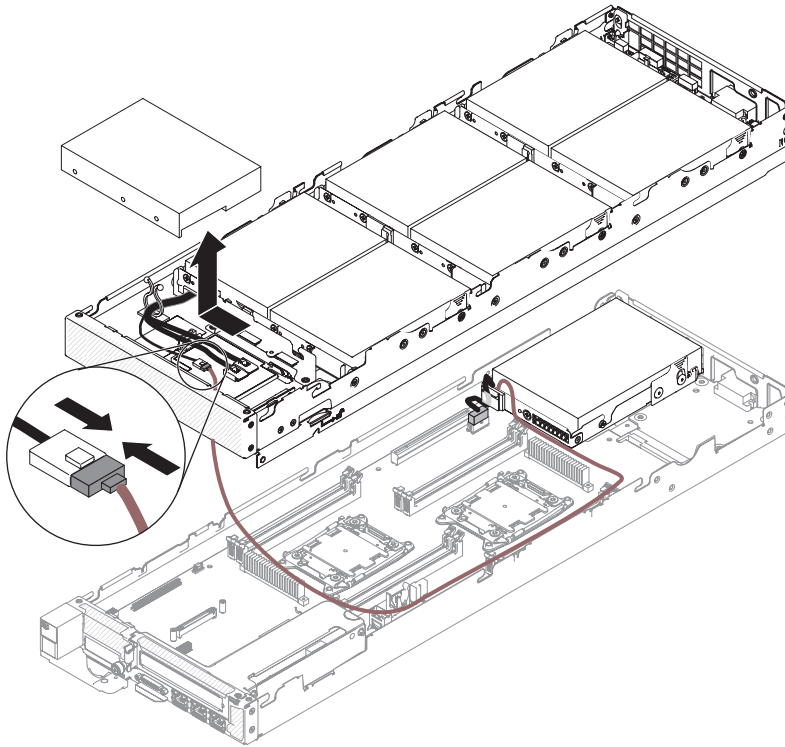
Figure 61. Connect the mini-SAS cable to the storage tray

After you install the hard disk drive cage, complete the following steps:

1. Install the cover onto the compute node (see "Installing the compute node cover" on page 109 for instructions).
2. Install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing the hard disk drive backplate

Use this information to remove the hard disk drive backplate.

Before you remove the hard disk drive backplate, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

To remove the hard disk drive backplate, complete the following steps.

Figure 62. Removal of HDD backplate for 2.5-inch and 1.8-inch respectively

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Unlatch and slide out slightly the easy-swap hard disk drive and hard disk drive bay filler, (just enough to disengage the drive or filler).
3. Unlatch the release latch and lift out the hard disk drive backplate.

If you are instructed to return the hard disk drive backplate, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing the hard disk drive backplate

Use this information to install the hard disk drive backplate.

Before you install the hard disk drive backplate, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).

3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

To install the hard disk drive backplate, complete the following steps.

Figure 63. Installing backplate for 2.5-inch
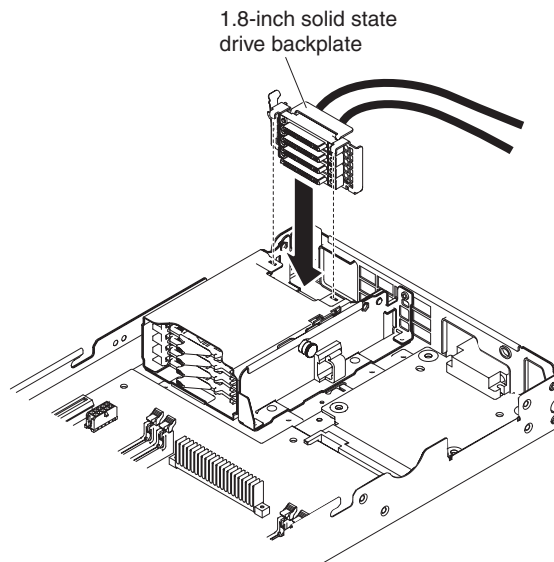
Figure 64. Installing backplate for 1.8-inch

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Align the backplate with the hard disk drive cage and the connector on the system board and press the backplate into position until it is fully seated in the connector.
3. Close the release latch.
4. Slide the hard disk drive into the bay until it is firmly seated in the connector.
5. Lock the hard disk drive into place by closing the release lever.

After you install the hard disk drive backplate, complete the following steps:

1. Install the cover onto the compute node (see "Installing the compute node cover" on page 109 for instructions).
2. Install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing and installing drives

Use this information to remove and install drives.

The following notes describe the type of hard disk drives that the server supports and other information that you must consider when you install a hard disk drive. For a list of supported hard disk drives, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us/.

- Locate the documentation that comes with the hard disk drive and follow those instructions in addition to the instructions in this chapter.
- Make sure that you have all the cables and other equipment that are specified in the documentation that comes with the drive.
- Select the bay in which you want to install the drive.
- Check the instructions that come with the drive to determine whether you have to set any switches or jumpers on the drive. If you are installing a SAS or SATA hard disk drive, be sure to set the SAS or SATA ID for that device.
- The compute node supports up to one 3.5-inch, two 2.5-inch, or four 1.8-inch easy-swap SAS or SATA hard disk drives.
- For a complete list of supported optional devices for the server, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us/ http://www.ibm.com/systems/info/x86servers/serverproven/compat/us/.

Removing a 3.5-inch hard disk drive

Use this information to remove a 3.5-inch SAS/SATA hard disk drive.

To remove a 3.5-inch SAS/SATA hard disk drive, complete the following steps.
1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.
4. Remove the cover (see "Removing the compute node cover" on page 108).
5. Press down the release latch.
6. Push outward and lift the hard disk drive out of the bay.

3.5-inch Hard disk drive

Release latch

3.5-inch Hard disk drive cage
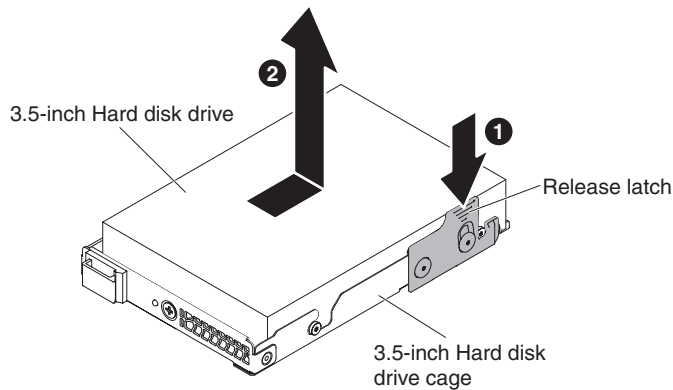
Figure 65. 3.5-inch hard disk drive removal

If you are instructed to return the component or optional device, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing a 3.5-inch hard disk drive

Use this information to install a 3.5-inch SAS/SATA hard disk drive.

Before installing a 3.5-inch hard disk drive, read the following information:
- Inspect the drive tray for signs of damage.
- To maintain proper system cooling, do not operate the server for more than 10 minutes without either a drive or a filler panel installed in each drive bay.

To install a 3.5-inch SAS/SATA hard disk drive, complete the following steps.
1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.
4. Remove the cover (see "Removing the compute node cover" on page 108).
5. Remove the filler panel, if one is present.
6. Touch the static-protective package that contains the disk drive to any unpainted metal surface on the server; then, remove the disk drive from the package and place it on a static-protective surface.
7. Align the drive with the guide rails in the bay; then, carefully slide the drive assembly into the drive bay until the drive snaps into place.

3.5-inch Hard disk drive

3.5-inch Hard disk drive cage
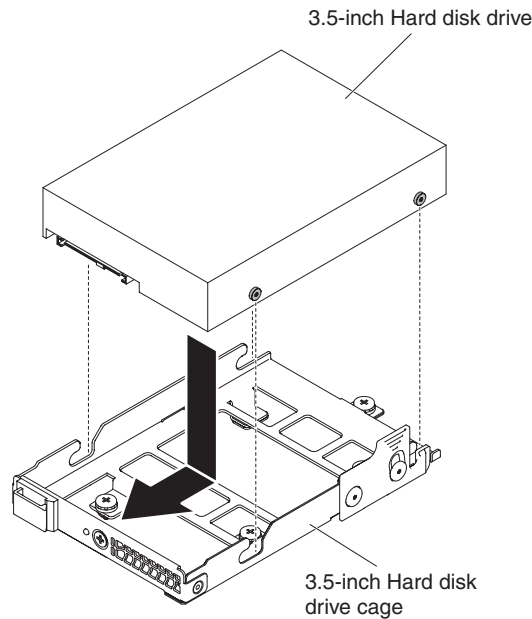
Figure 66. 3.5-inch hard disk drive installation

8. Check the hard disk drive status indicator to make sure that the hard disk drive is operating correctly. After you replace a failed hard disk drive, the green activity LED flashes as the disk spins up. The yellow LED turns off after approximately 1 minute. If the new drive starts to rebuild, the yellow LED flashes slowly, and the green activity LED remains lit during the rebuild process. If the yellow LED remains lit, see the "Hard disk drive problems" on page 62 for more information.

   Note: You might have to reconfigure the disk arrays after you install hard disk drives. See the RAID documentation on the IBM website at http://www.ibm.com/supportportal for information about RAID adapters.

After you install the hard disk drive backplate, complete the following steps:

1. Install the cover onto the compute node (see "Installing the compute node cover" on page 109 for instructions).

2. Install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing a 2.5-inch hard disk drive

Use this information to remove a 2.5-inch hard disk drive.

Attention: Static electricity that is released to internal server components when the server is powered-on might cause the server to halt, which might result in the loss of data. To avoid this potential problem, always use an electrostatic-discharge wrist strap or other grounding system when you work inside the server with the power on.

To remove a 2.5-inch hard disk drive, complete the following steps.

1. Read "Safety" on page vii and "Installation guidelines" on page 91.

2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).

3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

4. Remove the cover (see "Removing the compute node cover" on page 108).
5. Pull the plunger of the 2.5-inch hard disk drive cage outward and rotate the cage upward.

2.5-inch Hard disk
drive cage

Figure 67. Lift the 2.5-inch hard disk drive cage upward

6. Push this latch gently outward a little to let the screw un-hold by the latch hole. Then, remove the hard disk drive.

Release latch
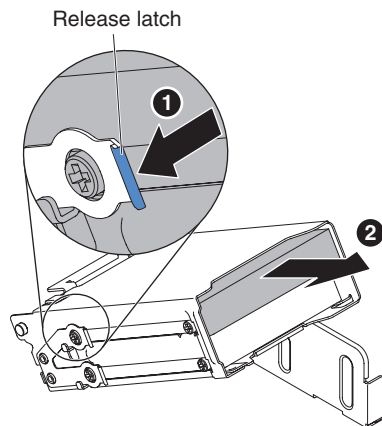
Figure 68. 2.5-inch hard disk drive removal

7. Pull the plunger of the 2.5-inch hard disk drive cage outward and rotate the cage downward until the cage snaps into place.
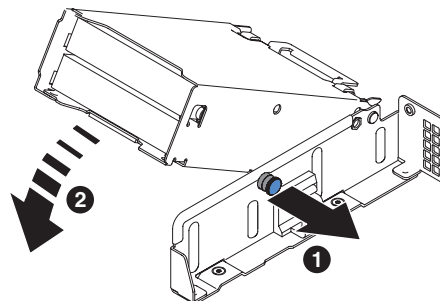
Figure 69. Put the 2.5-inch hard disk drive cage downward

If you are instructed to return the component or optional device, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing a 2.5-inch hard disk drive

Use this information to install a 2.5-inch hard disk drive.

The following notes describe the types of hard disk drives that the server supports and other information that you must consider when you install a hard disk drive:

- Depending on the model, the compute node supports up to two 2.5-inch SAS/SATA hard disk drives in the bays.
- For a list of supported optional devices for the server, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.
- Inspect the drive and drive bay for signs of damage.
- Make sure that the drive is correctly installed in the drive bay.
- See the documentation for the ServeRAID adapter for instructions for installing a hard disk drive.
- All drives in the server must have the same throughput speed rating; using drives with different speed ratings might cause all drives to operate at the speed of the slowest drive.
- You must turn off the compute node when you perform any steps that involve installing or removing cables.

Attention: Static electricity that is released to internal server components when the server is powered-on might cause the server to halt, which might result in the loss of data. To avoid this potential problem, always use an electrostatic-discharge wrist strap or other grounding system when you work inside the server with the power on.

To install a 2.5-inch hard disk drive, complete the following steps.

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.
4. Remove the cover (see "Removing the compute node cover" on page 108).
5. Pull the plunger of the 2.5-inch hard disk drive cage outward and rotate the cage upward.

Figure 70. Lift the 2.5-inch hard disk drive cage upward

6. Remove the filler panel, if one is present.
7. Touch the static-protective package that contains the disk drive to any unpainted metal surface on the server; then, remove the disk drive from the package.
8. Align the drive with the bay of the hard disk drive cage; then, carefully slide the drive into the drive bay until the drive snaps into place.
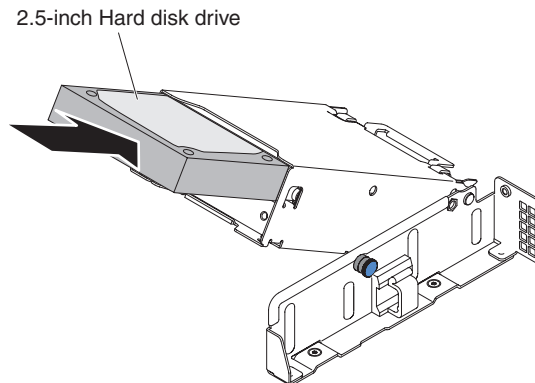
Figure 71. 2.5-inch hard disk drive installation

9. Pull the plunger of the 2.5-inch hard disk drive cage outward and rotate the cage downward until the cage snaps into place.
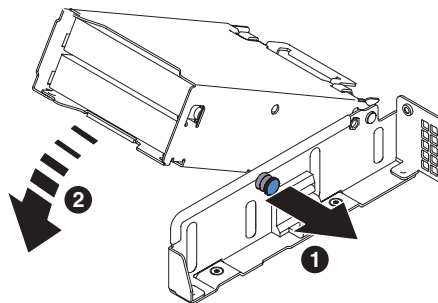
Figure 72. Put the 2.5-inch hard disk drive cage downward

Note:

a. After you install the hard disk drive, check the disk drive status LEDs to verify that the hard disk drive is operating correctly. If the yellow hard disk drive status LED is lit continuously, that drive is faulty and must be replaced. If the green hard disk drive activity LED is flashing, the drive is being accessed.

b. If the server is configured for RAID operation through an optional ServeRAID adapter, you might have to reconfigure your disk arrays after you install hard disk drives. See the ServeRAID documentation on the *IBM ServeRAID Support* CD for additional information about RAID operation and complete instructions for using ServeRAID manager.

After you install the hard disk drive backplate, complete the following steps:

1. Install the cover onto the compute node (see "Installing the compute node cover" on page 109 for instructions).

2. Install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing a 1.8-inch hard disk drive

Use this information to remove a 1.8-inch hard disk drive.

Attention: Static electricity that is released to internal server components when the server is powered-on might cause the server to halt, which might result in the loss of data. To avoid this potential problem, always use an electrostatic-discharge wrist strap or other grounding system when you work inside the server with the power on.

To remove a 1.8-inch hard disk drive, complete the following steps.

1. Read "Safety" on page vii and "Installation guidelines" on page 91.

2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).

3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

4. Remove the cover (see "Removing the compute node cover" on page 108).

5. Pull the plunger of the 1.8-inch hard disk drive cage outward and rotate the cage upward.

1.8-inch SSD cage

Figure 73. Lift the 1.8-inch hard disk drive cage upward

6. Push the release latch inward to open the drive handle; then, pull the drive out of the drive bay.

Handle
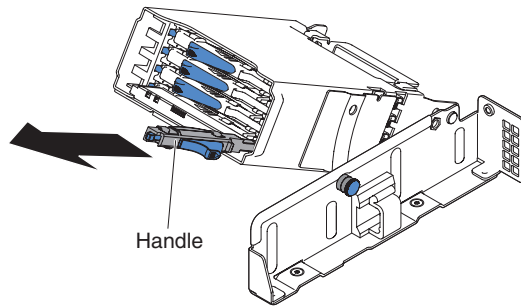
Figure 74. 1.8-inch hard disk drive removal

7. Pull the plunger of the 1.8-inch hard disk drive cage outward and rotate the cage downward until the cage snaps into place.
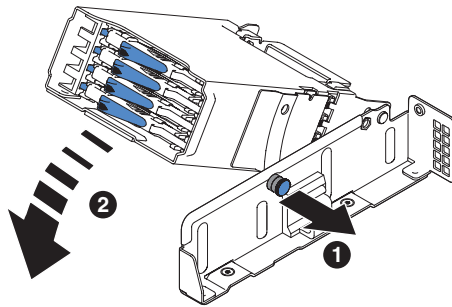
Figure 75. Put the 1.8-inch hard disk drive cage downward

If you are instructed to return the component or optional device, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing a 1.8-inch hard disk drive

Use this information to install a 1.8-inch hard disk drive.

The following notes describe the types of hard disk drives that the server supports and other information that you must consider when you install a hard disk drive:

- Depending on the model, the compute node supports up to four 1.8-inch SAS/SATA hard disk drives in the bays.
- For a list of supported optional devices for the server, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us.
- Inspect the drive and drive bay for signs of damage.
- Make sure that the drive is correctly installed in the drive bay.
- See the documentation for the ServeRAID adapter for instructions for installing a hard disk drive.
- All drives in the server must have the same throughput speed rating; using drives with different speed ratings might cause all drives to operate at the speed of the slowest drive.
- You must turn off the compute node when you perform any steps that involve installing or removing cables.

Attention: Static electricity that is released to internal server components when the server is powered-on might cause the server to halt, which might result in the loss of data. To avoid this potential problem, always use an electrostatic-discharge wrist strap or other grounding system when you work inside the server with the power on.

To install a 1.8-inch hard disk drive, complete the following steps.

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.
4. Remove the cover (see "Removing the compute node cover" on page 108).
5. Pull the plunger of the 1.8-inch hard disk drive cage outward and rotate the cage upward.

Figure 76. Lift the 1.8-inch hard disk drive cage upward

6. Remove the filler panel, if one is present.
7. Touch the static-protective package that contains the disk drive to any unpainted metal surface on the server; then, remove the disk drive from the package.
8. Make sure that the tray handle is open; then, carefully slide the drive into the drive bay until the drive snaps into place.
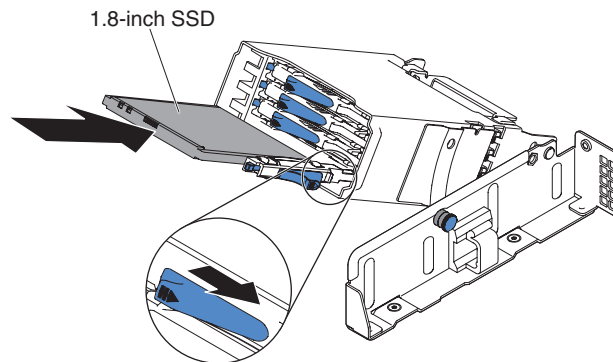
Figure 77. 1.8-inch hard disk drive installation

9. Pull the plunger of the 1.8-inch hard disk drive cage outward and rotate the cage downward until the cage snaps into place.
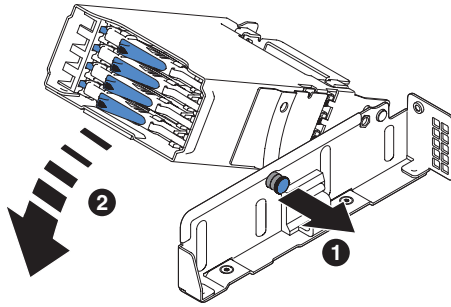
Figure 78. Put the 1.8-inch hard disk drive cage downward

> **Note:**
>
> a. After you install the hard disk drive, check the disk drive status LEDs to verify that the hard disk drive is operating correctly. If the yellow hard disk drive status LED is lit continuously, that drive is faulty and must be replaced. If the green hard disk drive activity LED is flashing, the drive is being accessed.
>
> b. If the server is configured for RAID operation through an optional ServeRAID adapter, you might have to reconfigure your disk arrays after you install hard disk drives. See the ServeRAID documentation on the *IBM ServeRAID Support* CD for additional information about RAID operation and complete instructions for using ServeRAID manager.

After you install the hard disk drive backplate, complete the following steps:

1. Install the cover onto the compute node (see "Installing the compute node cover" on page 109 for instructions).
2. Install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing a PCI riser-cage assembly

Note: PCI riser-cage brackets must be installed even if you do not install an adapter.

To remove a PCI riser-cage assembly, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect the power cords and all external cables.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Grasp the rear side of the PCI riser-cage touch point and the front PCI rise-cage suitable location of the PCI riser-cage assembly. Use your thumb to press down the right hand side bezel (a tiny square surface) of the compute node; then lift it out of the PCI riser-cage slot on the system board.
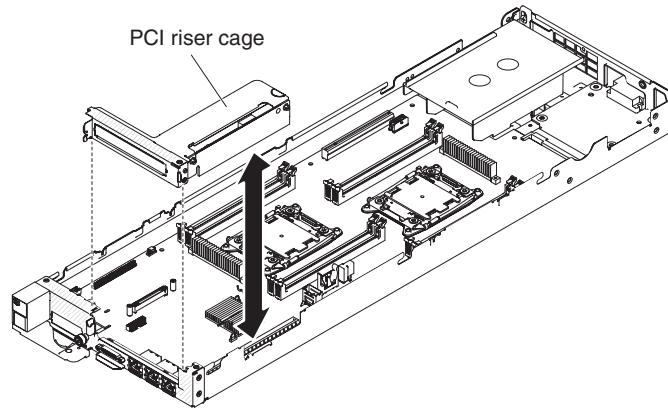
PCI riser cage

Figure 79. PCI riser-cage assembly removal

5. If an adapter is installed in the PCI riser-cage assembly, disconnect any cables that are connected to the adapter.

6. Remove the adapter, if one is present, from the PCI riser-cage assembly (see "Removing an adapter/GPU adapter" on page 157).

7. Set the adapter and the PCI riser-cage assembly aside.

8. If you are instructed to return the PCI riser-cage assembly, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Replacing a PCI riser-cage assembly

Note: PCI riser-cage brackets must be installed even if you do not install an adapter.

To install a PCI riser-cage assembly, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.

2. Turn off the server and peripheral devices and disconnect all power cords.

3. Remove the cover (see "Removing the compute node cover" on page 108).

4. Install the adapter in the new PCI riser-cage assembly (see "Replacing an adapter/GPU adapter" on page 158).

5. Set any jumpers or switches on the adapter as directed by the adapter manufacturer.

6. Remove the PCI filler panel, if one is present, from the front of the server.

7. Align the PCI riser-cage assembly with the PCI riser connector on the system board; then, grasp the rear side of the PCI riser-cage touch point and the front PCI rise- cage suitable location of the PCI riser-cage assembly.

8. Press down firmly until the PCI riser-cage assembly is seated correctly in the connector on the system board.
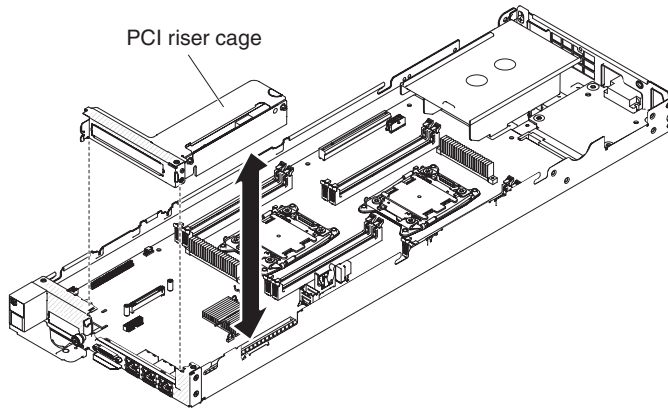
Figure 80. PCI riser-cage assembly installation

9. Replace the cover (see "Installing the compute node cover" on page 109).
10. Slide the server into the rack.
11. Reconnect the power cords and any cables that you removed.
12. Turn on the peripheral devices and the server.

Removing a PCI riser-cage assembly in the GPU tray

Note: PCI riser-cage brackets must be installed even if you do not install a GPU adapter.

To remove a PCI riser-cage assembly in the GPU tray, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect the power cords and all external cables.
3. Remove the GPU tray from the compute node (see "Removing a GPU tray from a compute node" on page 106).
4. Remove the cover (see "Removing the compute node cover" on page 108).
5. Remove the air baffle (see "Removing the air baffle" on page 111) if you are removing the rear PCI riser-cage assembly.
6. Grasp the rear side of the PCI riser-cage touch point and the front PCI rise-cage suitable location of the PCI riser-cage assembly. Use your thumb to press down the right hand side bezel (a tiny square surface) of the compute node; then lift it out of the PCI riser-cage slot on the system board.
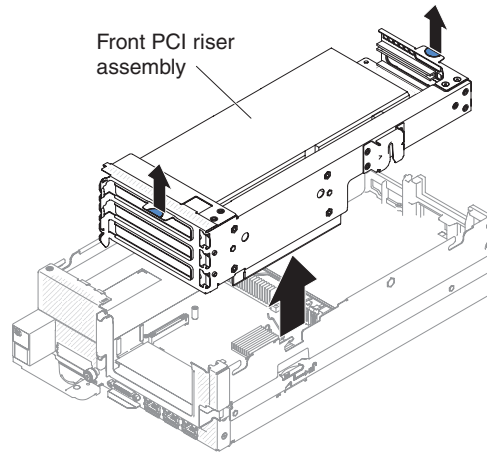
Figure 81. Front PCI riser-cage assembly removal
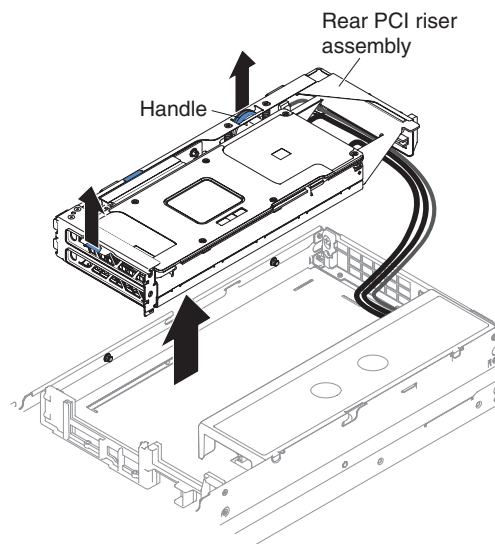
Figure 82. Rear PCI riser-cage assembly removal

7. If a GPU adapter is installed in the PCI riser-cage assembly, disconnect any cables that are connected to the adapter.

8. Remove the GPU adapter, if one is present, from the PCI riser-cage assembly (see "Removing an adapter/GPU adapter" on page 157).

9. Set the GPU adapter and the PCI riser-cage assembly aside.

10. If you are instructed to return the PCI riser-cage assembly, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Replacing a PCI riser-cage assembly in the GPU tray

Note: PCI riser-cage brackets must be installed even if you do not install a GPU adapter.

To install a PCI riser-cage assembly in the GPU tray, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.

2. Turn off the server and peripheral devices and disconnect all power cords.

3. Remove the cover (see "Removing the compute node cover" on page 108).

4. Install the GPU adapter in the new PCI riser-cage assembly (see "Replacing an adapter/GPU adapter" on page 158).

5. Remove the PCI filler panel, if one is present, from the server.

6. Align the PCI riser-cage assembly with the PCI riser connector on the system board; then, grasp the rear side of the PCI riser-cage touch point and the front PCI rise- cage suitable location of the PCI riser-cage assembly.

7. Press down firmly until the PCI riser-cage assembly is seated correctly in the connector on the system board.
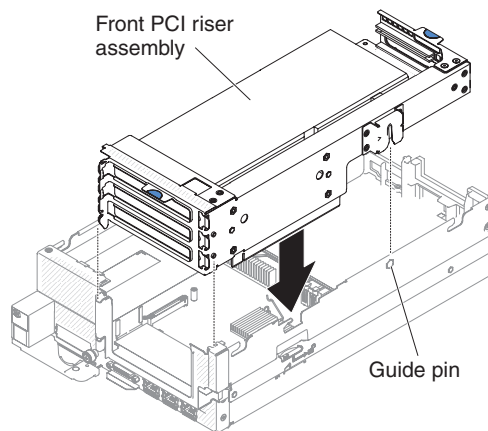
Figure 83. Front PCI riser-cage assembly installation
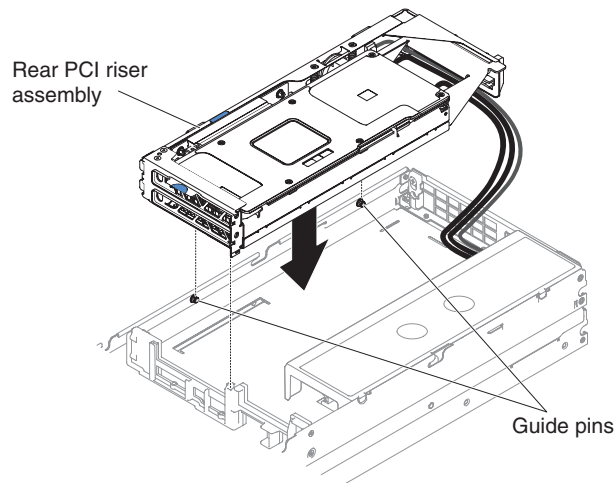
Figure 84. Rear PCI riser-cage assembly installation

8. Re-install the GPU tray into the compute node (see "Installing a GPU tray into a compute node" on page 107).

9. Reinstall the air baffle (see "Replacing the air baffle" on page 112) if you are installing the rear PCI-riser cage assembly.

10. Replace the cover (see "Installing the compute node cover" on page 109).

11. Slide the server into the rack.

12. Reconnect the power cords and any cables that you removed.

13. Turn on the peripheral devices and the server.

Removing an adapter/GPU adapter

Use this information to remove an adapter/GPU adapter.

To remove an adapter/GPU adapter, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect all power cords; then, remove the cover (see "Removing the compute node cover" on page 108).
3. Grasp the PCI riser-cage assembly at the blue tabs and lift to remove the PCI riser-cage assembly.
4. Disconnect any cables from the adapter/GPU adapter.
5. Place the PCI riser-cage assembly on a flat and static-protective surface.
6. Carefully grasp the adapter/GPU adapter by its top edge or upper corners, and pull the adapter/GPU adapter from the PCI riser-cage assembly.
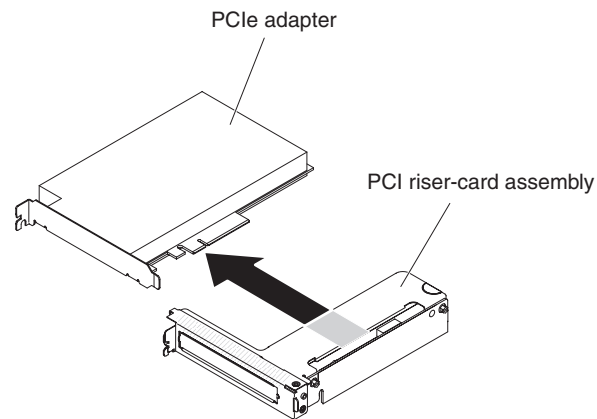
Figure 85. Adapter removal
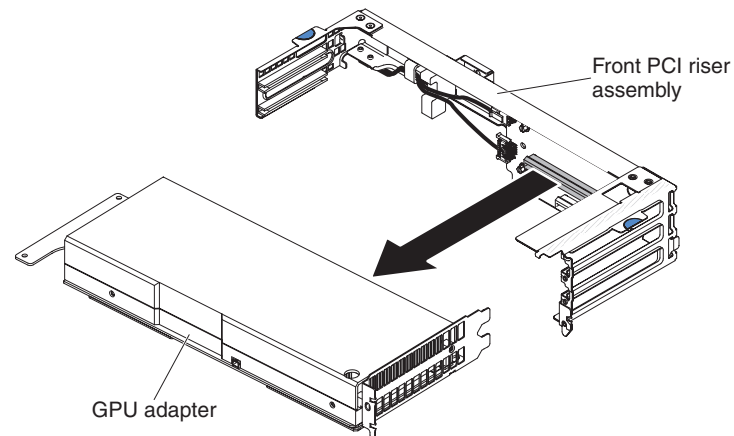
Figure 86. GPU adapter removal (with front PCI riser assembly)

Rear PCI riser assembly
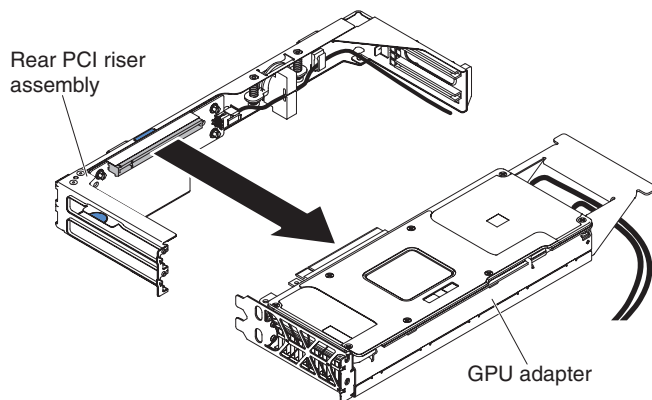
GPU adapter

Figure 87. GPU adapter removal (with rear PCI riser assembly)

If you are instructed to return the adapter/GPU adapter, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Replacing an adapter/GPU adapter

The following notes describe the types of adapters that the server supports and other information that you must consider when you install an adapter.

- Locate the documentation that comes with the adapter and follow those instructions in addition to the instructions in this section.
- For configuration information, see the ServeRAID documentation at .
- When you install the new GPU adapter, you must update the GPU adapter with the latest firmware. Make sure that you have the latest firmware before you proceed. See "Updating the firmware" on page 21 for more information.
- When you install any PCI adapter, the power cords must be disconnected from the power source before you remove the PCI Express riser-cage assembly. Otherwise, the active power management event signal will be disabled by the system-board logic, and the Wake on LAN feature might not work. However, after the server is powered-on locally, the active power manager active power management event signal will be enabled by the system-board logic.

To install an adapter/GPU adapter, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect the power cords and all external cables.
3. Remove the server cover (see "Removing the compute node cover" on page 108).
4. Follow the cabling instructions, if any come with the adapter/GPU adapter. Route the adapter cables before you install the adapter/GPU adapter.
5. Insert the adapter/GPU adapter into the PCI riser-cage assembly, aligning the edge connector on the adapter/GPU adapter with the connector on the PCI riser-cage assembly. Press the edge of the connector *firmly* into the PCI riser-cage assembly. Make sure that the adapter/GPU adapter snaps into the PCI riser-cage assembly securely.
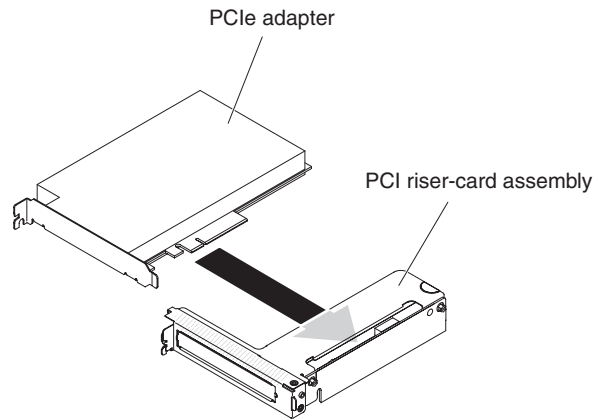
Figure 88. Adapter installation
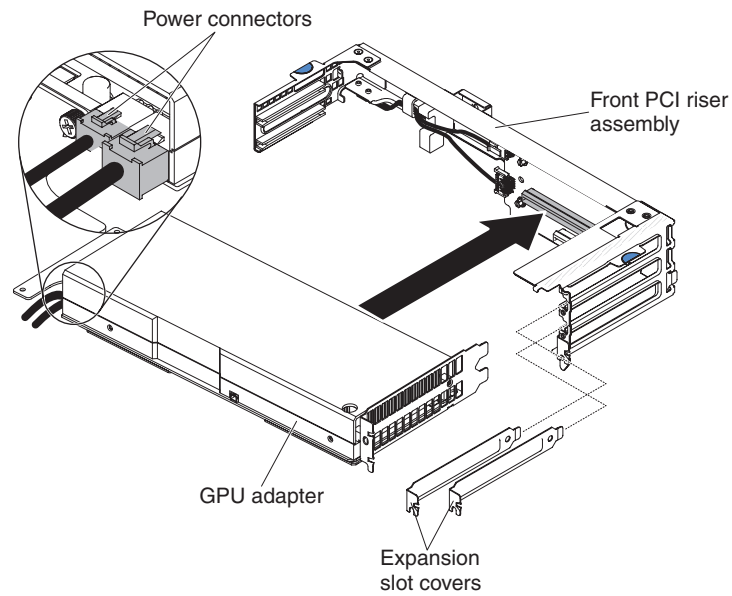
Figure 89. GPU adapter installation (with front PCI riser assembly)
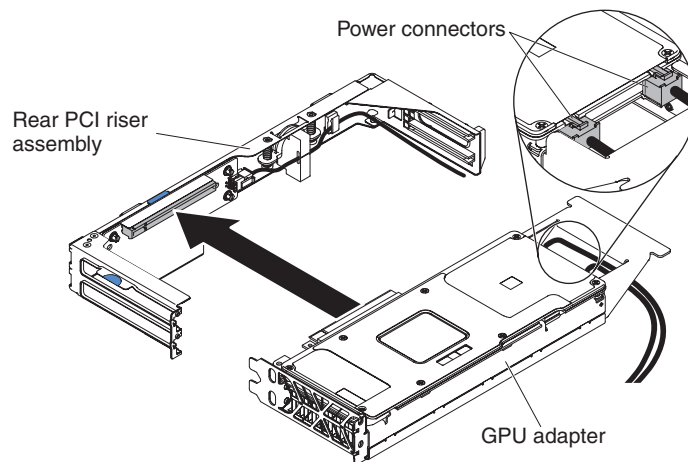
Figure 90. GPU adapter installation (with rear PCI riser assembly)

Attention: When you install an adapter/GPU adapter, make sure that the adapter/GPU adapter is correctly seated in the riser-cage assembly and that the riser-cage assembly is securely seated in the riser-cage connector on the system board before you turn on the server. An incorrectly seated adapter might cause damage to the system board, the riser-cage assembly, or the adapter/GPU adapter.

6. Install the PCI riser-cage assembly in the server (see "Replacing a PCI riser-cage assembly" on page 153).
7. Connect the cable to the newly-installed adapter/GPU adapter.
8. Perform any configuration tasks that are required for the adapter/GPU adapter.
9. Reinstall the cover (see "Installing the compute node cover" on page 109).
10. Slide the server into the rack.
11. Reconnect the power cords and any cables that you removed.
12. Turn on the peripheral devices and the server.

Removing the USB flash drive

Use this information to remove the USB flash drive.

Before you remove the USB flash drive, complete the following steps:
1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

To remove the USB flash drive, complete the following steps.

USB hypervisor key
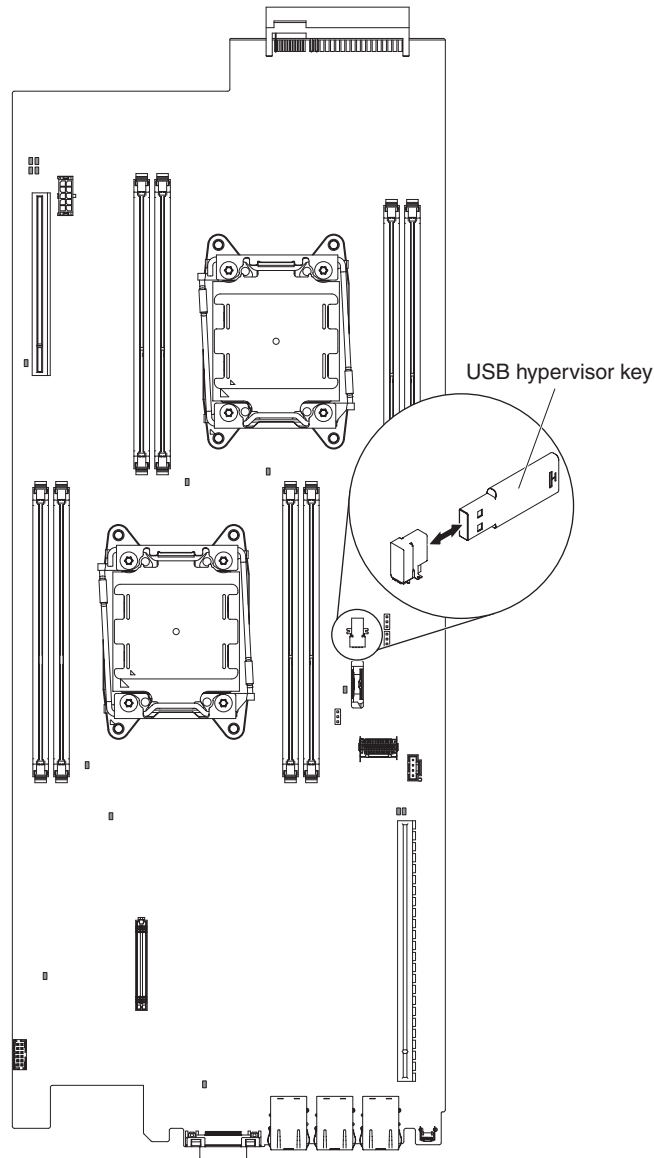
Figure 91. USB flash drive removal

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Locate the USB connector on the system board (see "System-board internal connectors" on page 15).
3. Pull the USB flash drive out of the connector.

If you are instructed to return the USB flash drive, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing the USB flash drive

Use this information to install the USB flash drive.

Before you install the USB flash drive, complete the following steps:
1. Read "Safety" on page vii and "Installation guidelines" on page 91.

2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

This component can be installed as an optional device or as a CRU. The installation procedure is the same for the optional device and the CRU.

To install the USB flash drive, complete the following steps.

USB hypervisor key
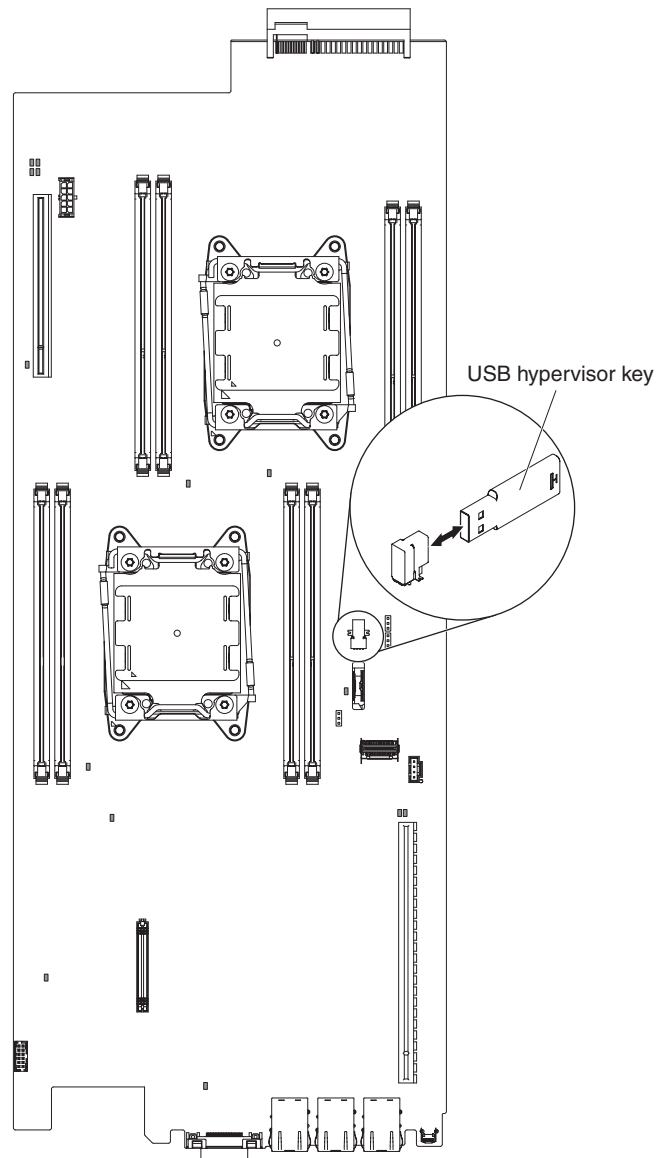
Figure 92. Installing USB flash drive

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Locate the USB connector on the system-board (see "System-board internal connectors" on page 15).
3. Push the USB flash drive into the connector.

After you install the USB flash drive, complete the following steps:

1. Install the cover onto the compute node (see "Installing the compute node cover" on page 109 for instructions).
2. Install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).

Removing and replacing Tier 2 CRUs

You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge, under the type of warranty service that is designated for your server.

The illustrations in this document might differ slightly from your hardware.

Removing a microprocessor and heat sink

Use this information to remove a microprocessor and heat sink.

- Microprocessors are to be removed only by trained technicians.

  Important: Always use the microprocessor installation tool to remove a microprocessor. Failing to use the microprocessor installation tool may damage the microprocessor sockets on the system board. Any damage to the microprocessor sockets may require replacing the system board.
- Be extremely careful, the microprocessor socket contacts are very fragile. Do not touch the microprocessor socket contacts. Contaminants on the microprocessor contacts or microprocessor socket contacts, such as oil from your skin, can cause connection failures between the contacts and the socket.
- Do not allow the thermal grease on the microprocessor and heat sink to come in contact with anything. Contact with any surface can contaminate the thermal grease and the microprocessor socket.
- Do not use any tools or sharp objects to lift the locking levers on the microprocessor socket. Doing so might result in permanent damage to the system board.
- Each microprocessor socket must always contain either a socket cover or a microprocessor and heat sink.
- Be sure to use only the installation tools provided with the new microprocessor to remove or install the microprocessor. Do not use any other tool.
- When installing multiple microprocessors, open one microprocessor socket at a time to avoid damaging other microprocessor socket contacts.
- The microprocessor installation tool has the microprocessor installed on the tool, and may have a protective cover over the microprocessor. Do not use the tool, or remove the cover until you are instructed to do so.

Note: The installation tool has two settings for installing two different sizes of microprocessors. The settings that are marked on tool are "L" for smaller low core microprocessors, and "H" for larger high core microprocessors. Installation tool supports the following families of microprocessors: E5-26xx, E5-46xx, E5-26xx v2, E5-46xx v2.

To remove a microprocessor and heat sink, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the compute node and peripheral devices and disconnect all power cords.
3. Remove the cover (see "Removing the compute node cover" on page 108).

4. Remove the air baffle (see "Removing the air baffle" on page 111).
5. Locate the microprocessor to be removed (see "System-board internal connectors" on page 15).
6. Remove the heat sink.

   Attention: Do not touch the thermal material on the bottom of the heat sink. Touching the thermal material will contaminate it. If the thermal material on the microprocessor or heat sink becomes contaminated, you must wipe off the contaminated thermal material on the microprocessor or heat sink with the alcohol wipes and reapply clean thermal grease to the heat sink.

   a. Loosen the four screws on the corners of the microprocessor retainer.
   b. Lift the heat sink out of the server. After removal, place the heat sink (with the thermal grease side up) on a clean, flat surface.
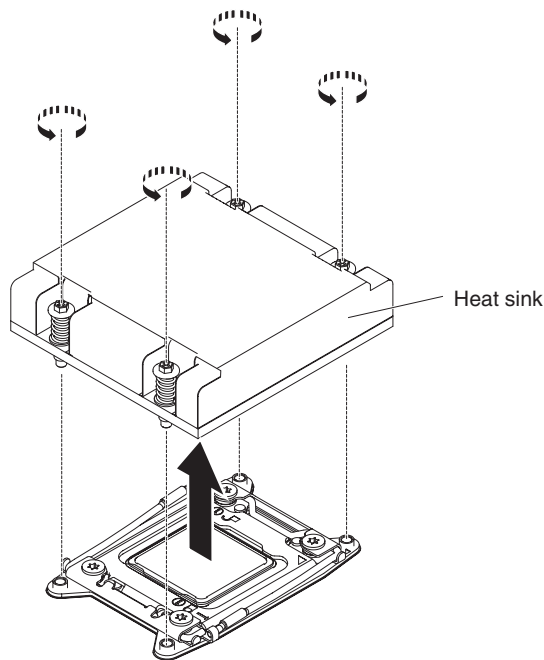
Figure 93. Heat sink removal

7. Open the microprocessor socket release levers and retainer.
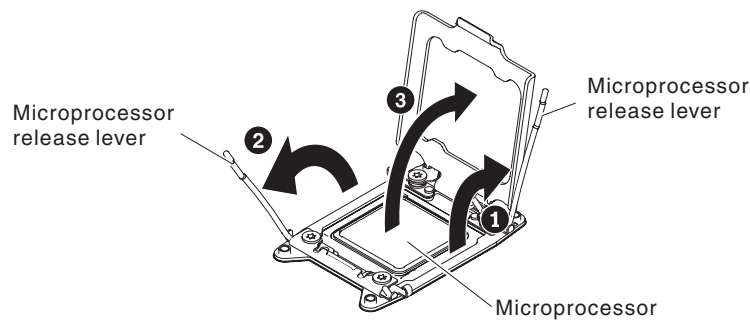
Figure 94. Microprocessor socket levers and retainer disengagement

   a. Identify which release lever is labeled as the first release lever to open and open it.
   b. Open the second release lever on the microprocessor socket.

c. Open the microprocessor retainer.

Attention: Do not touch the microprocessor contacts. Contaminants on the microprocessor contacts, such as oil from your skin, can cause connection failures between the contacts and the socket.

8. Remove the microprocessor from the socket.

a. Select the empty installation tool and ensure that the handle is in the open position. If the installation tool handle is not in the open position, **1** lift the interlock latch and hold it up while you **2** twist the microprocessor installation tool handle counterclockwise to the open position, and then release the interlock latch. The following illustration of the installation tool shows the location of the interlock latch and counterclockwise rotation of the handle before loading the microprocessor.
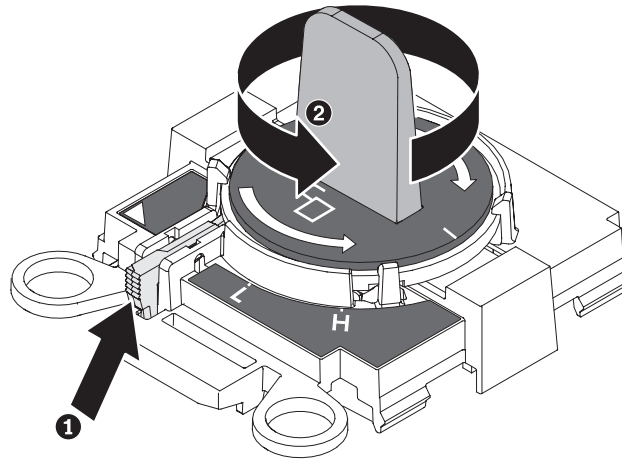
Figure 95. Installation tool handle adjustment

b. Align the installation tool with the screws, as shown in the following graphic, and lower the installation tool on the microprocessor. The installation tool rests flush on the socket only when it is aligned correctly.
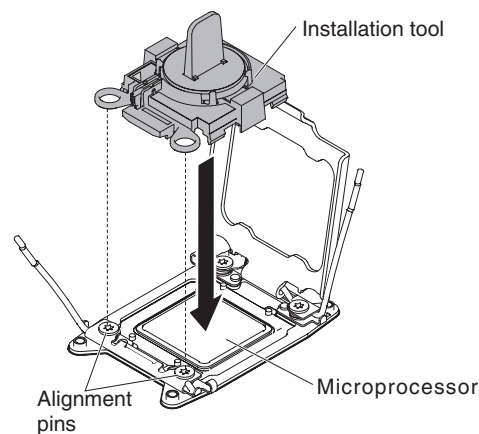
Figure 96. Microprocessor installation

c. Gently twist the handle of the installation tool clockwise until it locks in the "H" or "L" position, depending on the size of microprocessor, and then lift the microprocessor out of the socket.
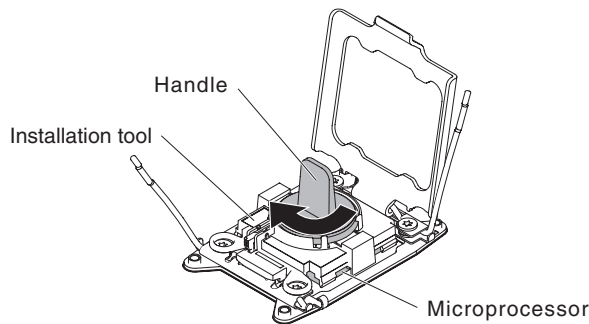
Figure 97. Installation tool handle adjustment

    d. Lift the microprocessor out of the socket.
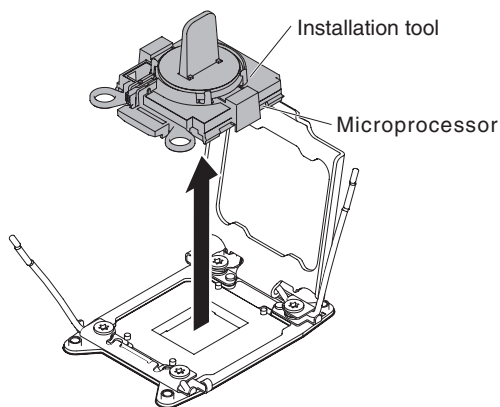
Figure 98. Installation tool removal

9. Install the new microprocessor (see "Replacing a microprocessor and heat sink").

   Attention: If you are replacing a microprocessor, use the empty installation tool that comes with the new microprocessor to remove the microprocessor.

10. If you do not intend to install a microprocessor on the socket, install the socket cover that you removed in step 8 on page 170 on the microprocessor socket.

   Attention: The pins on the socket are fragile. Any damage to the pins may require replacing the system board.

If you are instructed to return the microprocessor, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Replacing a microprocessor and heat sink

The following notes describe the type of microprocessor that the server supports and other information that you must consider when you install a microprocessor and heat sink.

- Microprocessors are to be installed only by trained technicians.

   Important: Always use the microprocessor installation tool to install a microprocessor. Failing to use the microprocessor installation tool may damage the microprocessor sockets on the system board. Any damage to the microprocessor sockets may require replacing the system board.

- Be extremely careful, the microprocessor socket contacts are very fragile. Do not touch the microprocessor socket contacts. Contaminants on the microprocessor contacts or microprocessor socket contacts, such as oil from your skin, can cause connection failures between the contacts and the socket.
- Do not allow the thermal grease on the microprocessor and heat sink to come in contact with anything. Contact with any surface can contaminate the thermal grease and the microprocessor socket.
- Do not use any tools or sharp objects to lift the locking levers on the microprocessor socket. Doing so might result in permanent damage to the system board.
- Each microprocessor socket must always contain either a socket cover or a microprocessor and heat sink.
- Be sure to use only the installation tools provided with the new microprocessor to remove or install the microprocessor. Do not use any other tool.
- When installing multiple microprocessors, open one microprocessor socket at a time to avoid damaging other microprocessor socket contacts.
- The microprocessor installation tool has the microprocessor installed on the tool, and may have a protective cover over the microprocessor. Do not use the tool, or remove the cover until you are instructed to do so.

  Note: Be sure to use the installation tool that comes with your microprocessor installation tool assembly.
- The server supports up to two multi-core microprocessors. See http://www.ibm.com/systems/info/x86servers/serverproven/compat/us for a list of supported microprocessors.
- The first microprocessor must always be installed in microprocessor socket 1 on the system board.
- When one microprocessor is installed, the air baffle must be installed to provide proper system cooling.
- Do not remove the first microprocessor from the system board when you install the second microprocessor.
- When you install the second microprocessor, you must also install additional memory, the fourth and sixth fans. See "Installing a memory module" on page 131 for details about the installation sequence.
- Do not mix microprocessors with different cores in the same server.
- To ensure proper server operation when you install an additional microprocessor, use microprocessors that have the same QuickPath Interconnect (QPI) link speed, integrated memory controller frequency, core frequency, power segment, internal cache size, and type.
- Mixing microprocessors of different stepping levels within the same server model is supported.
- When mixing microprocessors with different stepping levels within the same server model, you do not have to install the microprocessor with lowest stepping level and features in microprocessor socket 1.
- Both microprocessor voltage regulator modules are integrated on the system board.
- Read the documentation that comes with the microprocessor to determine whether you have to update the server firmware. To download the latest level of server firmware and other code updates for your server, go to http://www.ibm.com/support/fixcentral.

- The microprocessor speeds are automatically set for this server; therefore, you do not have to set any microprocessor frequency-selection jumpers or switches.
- If the thermal-grease protective cover (for example, a plastic cap or tape liner) is removed from the heat sink, do not touch the thermal grease on the bottom of the heat sink or set down the heat sink. For more information about applying or working with thermal grease, see "Thermal grease" on page 173.

  Note: Removing the heat sink from the microprocessor destroys the even distribution of the thermal grease and requires replacing the thermal grease.

- To order an additional optional microprocessor, contact your IBM sales representative or IBM reseller.

The installation tool has two settings for installing two different sizes of microprocessors. The settings that are marked on tool are "L" for smaller low core microprocessors, and "H" for larger high core microprocessors. Installation tool supports the following families of microprocessors: E5-26xx, E5-46xx, E5-26xx v2, E5-46xx v2.

To replace a microprocessor and heat sink, complete the following steps:

1. Read the safety information that begins on "Safety" on page vii and "Installation guidelines" on page 91.
2. Turn off the server and peripheral devices and disconnect the power cords and all external cables.

   Attention: When you handle static-sensitive devices, take precautions to avoid damage from static electricity. For details about handling these devices, see "Handling static-sensitive devices" on page 93.
3. Remove the cover (see "Removing the compute node cover" on page 108).
4. Remove the air baffle (see "Removing the air baffle" on page 111).
5. Loosen the four screws on the corners of the microprocessor retainer.
6. Open the microprocessor socket release levers and retainer:
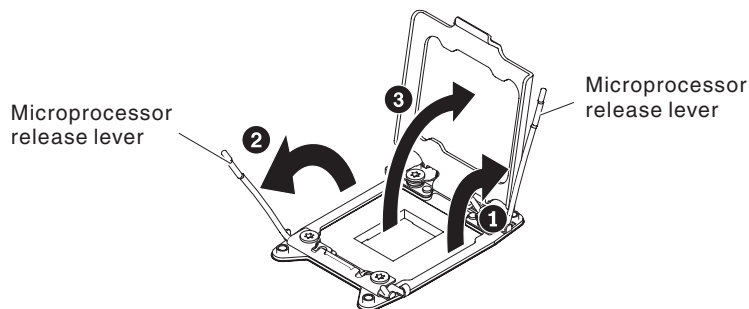
Figure 99. Microprocessor socket levers and retainer disengagement

   a. Identify which release lever is labeled as the first release lever to open and open it.
   b. Open the second release lever on the microprocessor socket.
   c. Open the microprocessor retainer.

      Attention: Do not touch the connectors on the microprocessor and the microprocessor socket.
7. Install the microprocessor in the microprocessor socket:

a. Open the packaging that contains the new microprocessor installation tool assembly and carefully remove the installation tool assembly from the package.

   Note: Do not touch the microprocessor contacts. Contaminants on the microprocessor contacts, such as oil from your skin, can cause connection failures between the contacts and the socket.

b. Remove the microprocessor protective cover if one is present. The microprocessor is preinstalled on the installation tool.
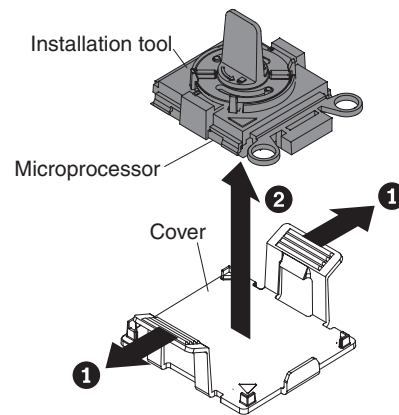
Figure 100. Installation tool cover removal

c. Align the installation tool with the microprocessor socket. The installation tool rests flush on the socket only if properly aligned.
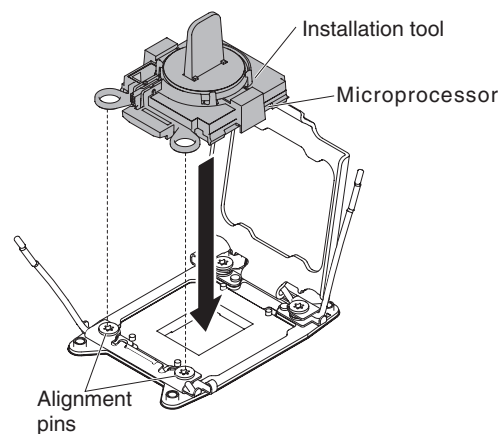
Figure 101. Installation tool alignment

d. Twist the handle of the installation tool assembly counterclockwise until the microprocessor is inserted into the socket, and lift the installation tool out of the socket. The following illustration shows the tool handle in the open position.
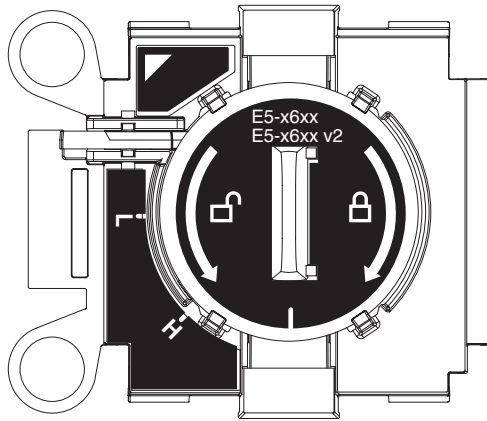
Figure 102. Installation Tool
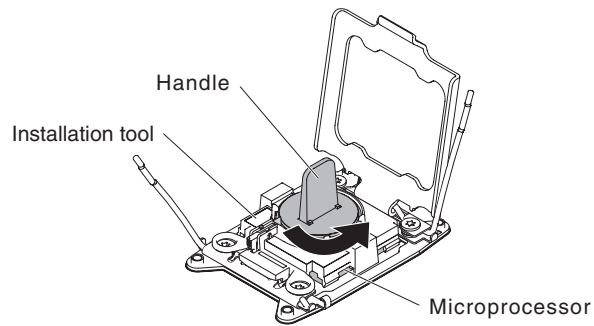
Figure 103. Installation tool handle adjustment

Attention:

- Do not press the microprocessor into the socket.
- Make sure that the microprocessor is oriented and aligned correctly in the socket before you try to close the microprocessor retainer.
- Do not touch the thermal material on the bottom of the heat sink or on top of the microprocessor. Touching the thermal material will contaminate it.

8. Remove the microprocessor socket cover, tape, or label from the surface of the microprocessor socket, if one is present. Store the socket cover in a safe place.
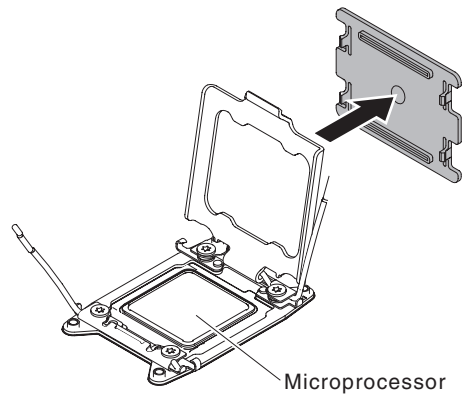
Figure 104. Socket cover removal

> **Attention:** When you handle static-sensitive devices, take precautions to avoid damage from static electricity. For details about handling these devices, see "Handling static-sensitive devices" on page 93.

9. Close the microprocessor socket release levers and retainer:
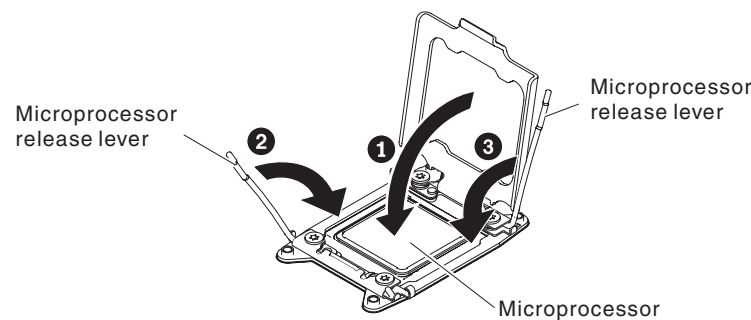
Figure 105. Microprocessor socket levers and retainer engagement

  a. Close the microprocessor retainer on the microprocessor socket.
  b. Identify which release lever is labeled as the first release lever to close and close it.
  c. Close the second release lever on the microprocessor socket.

   Attention:
   - If you are installing a new heat sink, do not set down the heat sink after you remove the plastic cover.
   - Do not touch the thermal grease on the bottom of the heat sink. Touching the thermal grease will contaminate it.

10. Install the heat sink.

   Attention:
   - Do not set down the heat sink after you remove the plastic cover.
   - Do not touch the thermal grease on the bottom of the heat sink after you remove the plastic cover. Touching the thermal grease will contaminate it. See "Thermal grease" on page 173 for more information.
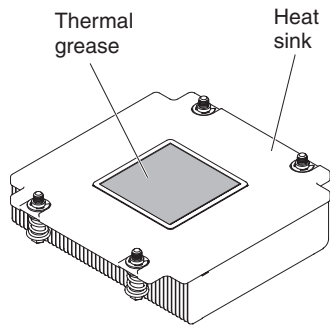
Figure 106. Thermal grease

    a. Remove the plastic protective cover from the bottom of the heat sink.

    b. Position the heat sink over the microprocessor. The heat sink is keyed to assist with proper alignment.
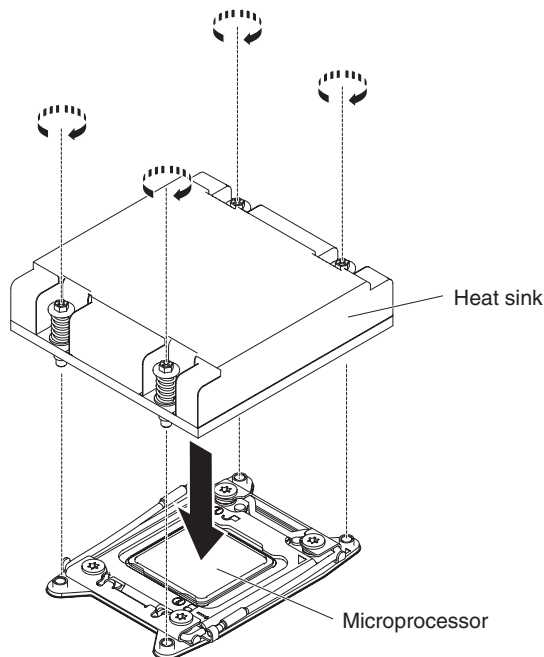
Figure 107. Heat sink installation

    c. Align and place the heat sink on top of the microprocessor in the retention bracket, thermal material side down.

    d. Press firmly on the heat sink.

    e. Tighten the four screws on the corners of the microprocessor retainer

11. Reinstall the air baffle (see "Replacing the air baffle" on page 112).
12. Install the cover (see "Installing the compute node cover" on page 109).
13. Slide the server into the rack.
14. Reconnect the power cords and any cables that you removed.
15. Turn on the peripheral devices and the server.

Thermal grease

The thermal grease must be replaced whenever the heat sink has been removed from the top of the microprocessor and is going to be reused or when debris is found in the grease.

When you are installing the heat sink on the same microprocessor that it was removed from, make sure that the following requirements are met:

- The thermal grease on the heat sink and microprocessor is not contaminated.
- Additional thermal grease is not added to the existing thermal grease on the heat sink and microprocessor.

Notes:

- Read the safety information that begins on "Safety" on page vii.
- Read the "Installation guidelines" on page 91.
- Read "Handling static-sensitive devices" on page 93.

To replace damaged or contaminated thermal grease on the microprocessor and heat sink, complete the following steps:

1. Place the heat sink on a clean work surface.
2. Remove the cleaning pad from its package and unfold it completely.
3. Use the cleaning pad to wipe the thermal grease from the bottom of the heat sink.

   Note: Make sure that all of the thermal grease is removed.

4. Use a clean area of the cleaning pad to wipe the thermal grease from the microprocessor; then, dispose of the cleaning pad after all of the thermal grease is removed.
5. Use the thermal-grease syringe to place 9 uniformly spaced dots of 0.02 ml each on the top of the microprocessor. The outermost dots must be within approximately 5 mm of the edge of the microprocessor; this is to ensure uniform distribution of the grease.
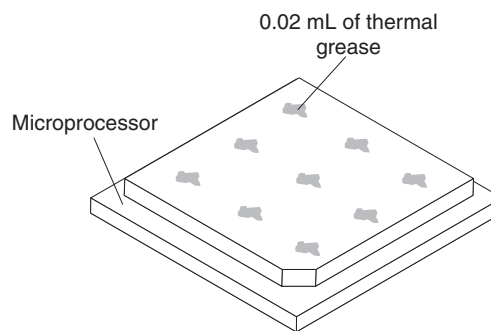
Figure 108. Thermal grease distribution

   Note: If the grease is properly applied, approximately half of the grease will remain in the syringe.
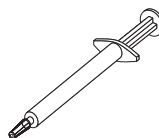
Figure 109. Syringe

6. Install the heat sink onto the microprocessor as described in 10 on page 171.

Removing the compute node

Use this information to remove the compute node.

Note:
1. This procedure should be performed only by trained service technicians.
2. Before you replace the system board, make sure that you backup any features on demand (FoD) keys that were enabled. Reactivate any Features on Demand features after replacing the system board. Instructions for automating the activation of features and installing activation keys is in the *IBM Features on Demand User's Guide*. To download the document, go to /http:// www.ibm.com/systems/x/fod/, log in, and click **Help**.
3. When you replace the system board, you must either update the server with the latest firmware or restore the pre-existing firmware that the customer provides on a diskette or CD image. Make sure that you have the latest firmware or a copy of the pre-existing firmware before you proceed.
4. When you replace the system board, make sure that you remove the Integrated Management Module Advanced Upgrade and place it on the new system board. For information about the Advanced Upgrade, see "Using the remote presence and blue-screen capture features" on page 34

   Note: You have to reactivate the Features on Demand (FoD) after replacing the system board.

Before you remove the compute node, complete the following steps:
1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.
4. Obtain the following for use during the replacement procedure (see Chapter 4, "Parts listing, IBM NeXtScale nx360 M4 Compute Node Type 5455," on page 83).
   - Alcohol wipes (part number 59P4739)
   - RFID tag (required only if the compute node came with a RFID tag attached to the bezel)
   - T8 torx screwdriver (part number 00FK488, provided on the back of the chassis)
   - Thermal grease kit (part number 41Y9292)

Important: When you replace the system board, you must update the compute node with the latest firmware or restore the preexisting firmware. Make sure that you have the latest firmware or a copy of the preexisting firmware before you proceed.

See "System-board layouts" on page 15 for more information about the locations of the connectors, jumpers, and LEDs on the system board.

To remove the compute node, complete the following steps:
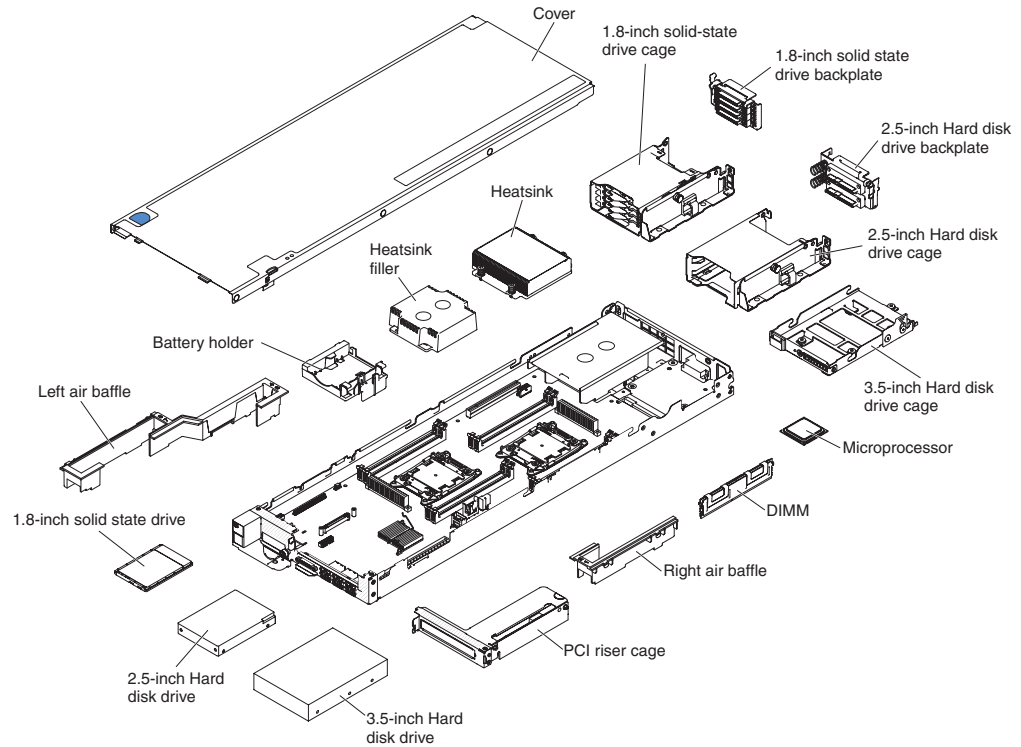
Figure 110. Major components of the compute node

1. Remove the cover (see "Removing the compute node cover" on page 108).
2. Remove all of the installed components in the following list from the compute node; then, place them on a static-protective surface or install them on the new compute node.
   - DIMMs (see "Removing a memory module" on page 130).
   - Air baffles (see "Removing the air baffle" on page 111).
   - Hard disk drives and hard disk drive bay fillers (see "Removing a 3.5-inch hard disk drive" on page 143, "Removing a 2.5-inch hard disk drive" on page 145, and "Removing a 1.8-inch hard disk drive" on page 149).
   - Microprocessors, heat sinks, and microprocessor heat-sink fillers. Use the microprocessor installation tool that comes with the replacement microprocessor to remove each microprocessor from the compute node and install each one immediately in the new compute node (see "Removing a microprocessor and heat sink" on page 163 and "Replacing a microprocessor and heat sink" on page 166).
   - Hard disk drive backplate (see "Removing the hard disk drive backplate" on page 140).

If you are instructed to return the compute node, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing the compute node

Use this information to install the compute node.

Note: This procedure should be performed only by trained service technicians.

Before you install the compute node, complete the following steps:

1. Read "Safety" on page vii and "Installation guidelines" on page 91.
2. If the compute node is installed in an IBM NeXtScale n1200 Enclosure, remove it (see "Removing a compute node from a chassis" on page 94 for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.
4. Obtain the following for use during the replacement procedure (see Chapter 4, "Parts listing, IBM NeXtScale nx360 M4 Compute Node Type 5455," on page 83).
   - Alcohol wipes (part number 59P4739)
   - Bezel
   - RFID tag (required only if the compute node came with a RFID tag attached to the bezel)
   - T8 torx screwdriver (part number 00FK488, provided on the back of the chassis)
   - Thermal grease kit (part number 41Y9292)

Important: When you replace the system board, you must update the compute node with the latest firmware or restore the preexisting firmware. Make sure that you have the latest firmware or a copy of the preexisting firmware before you proceed. See "Updating the firmware" on page 21 for more information.

To install the compute node, complete the following steps.
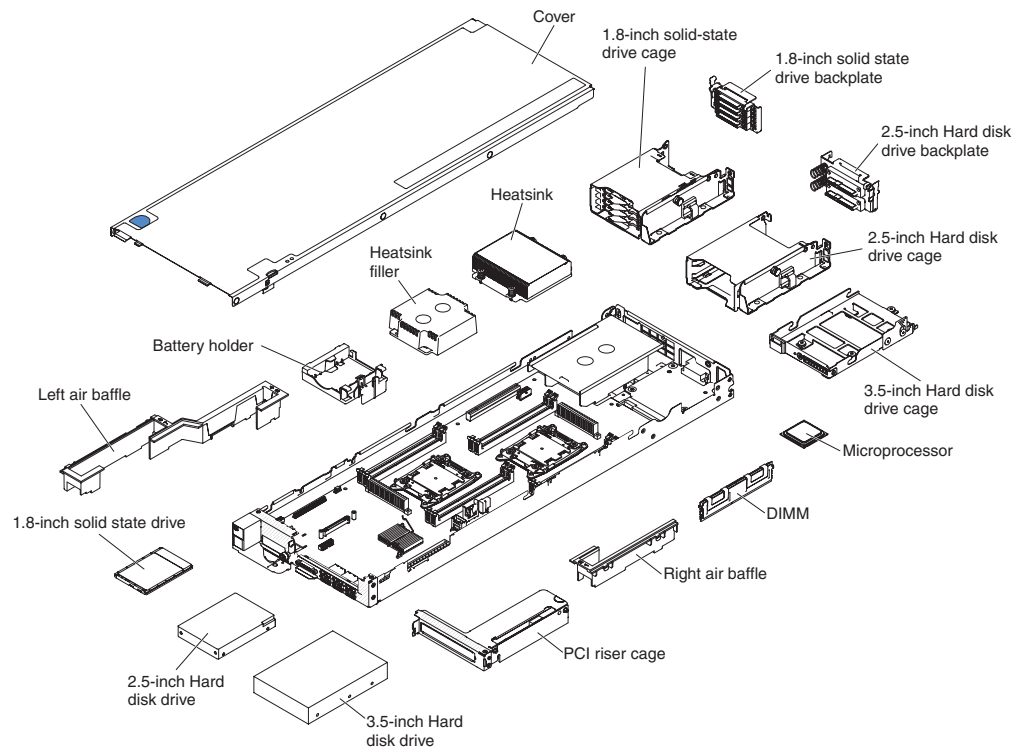
Figure 111. Major components of the compute node

Install all of the components in the following list that you removed from the old compute node onto the new compute node:

- DIMMs (see "Installing a memory module" on page 131).
- Air baffles (see "Replacing the air baffle" on page 112).
- Hard disk drives and hard disk drive fillers (see "Installing a 3.5-inch hard disk drive" on page 144, "Installing a 2.5-inch hard disk drive" on page 147, and "Installing a 1.8-inch hard disk drive" on page 150).
- Microprocessors, heat sinks, and microprocessor heat-sink fillers. Use the microprocessor installation tool that comes with the replacement microprocessor to remove each microprocessor from the compute node and install each one immediately in the new compute node (see "Removing a microprocessor and heat sink" on page 163 and "Replacing a microprocessor and heat sink" on page 166).
- Hard disk drive backplate (see "Installing the hard disk drive backplate" on page 141).

After you install the compute node, complete the following steps:

1. Install the cover onto the compute node (see "Installing the compute node cover" on page 109 for instructions).
2. Install the compute node into the chassis (see "Installing a compute node in a chassis" on page 95 for instructions).
3. If any Features on Demand (FOD) features are installed in the compute node, see the instructions in the *IBM Feature on Demand User's Guide* to reactivate these features. To download this document, go to /http://www.ibm.com/systems/x/fod/, log in, and click **Help**.

4. Update the Universal Unique Identifier (UUID) and the Vital Product Data (VPD). Use the Advanced Settings Utility to update the UUID and VPD in the UEFI-based compute node (see "Updating the Universal Unique Identifier (UUID)" on page 39).

5. Update the compute node with the latest firmware or restore the preexisting firmware (see "Updating the firmware" on page 21 for more information).

Internal cable routing and connectors

This section provides information about routing the cables when you install some components in the IBM NeXtScale nx360 M4 Compute Node.

For more information about the requirements for cables and connecting devices, see the documentation that comes with these devices.

Cabling hard disk drive with software RAID signal cable

The internal routing and connectors for the hard disk drive with software RAID signal cable.

The following illustrations show the internal routing and connectors for the hard disk drive with software RAID signal cable.

Note: Make sure the relevant cables pass through the cable clips.
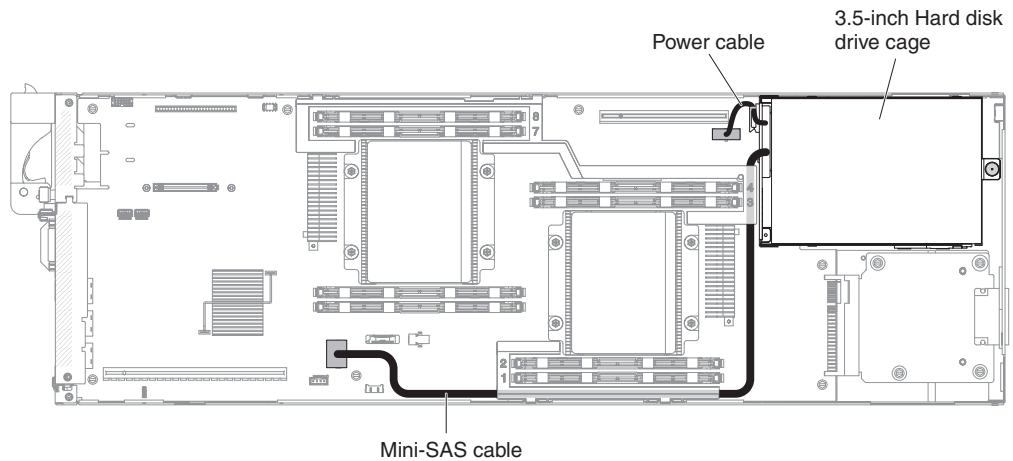
Figure 112. 3.5-inch hard disk drive with software RAID signal cable connection
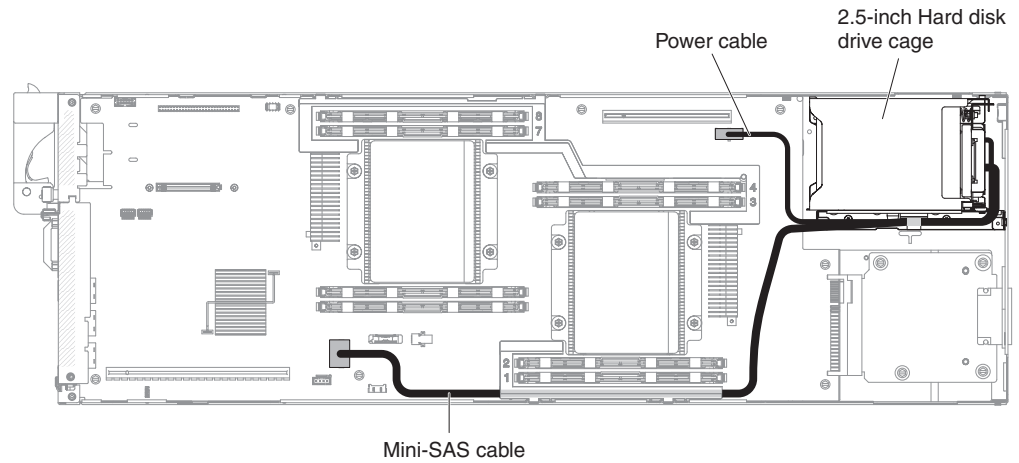
Figure 113. 2.5-inch hard disk drive with software RAID signal cable connection
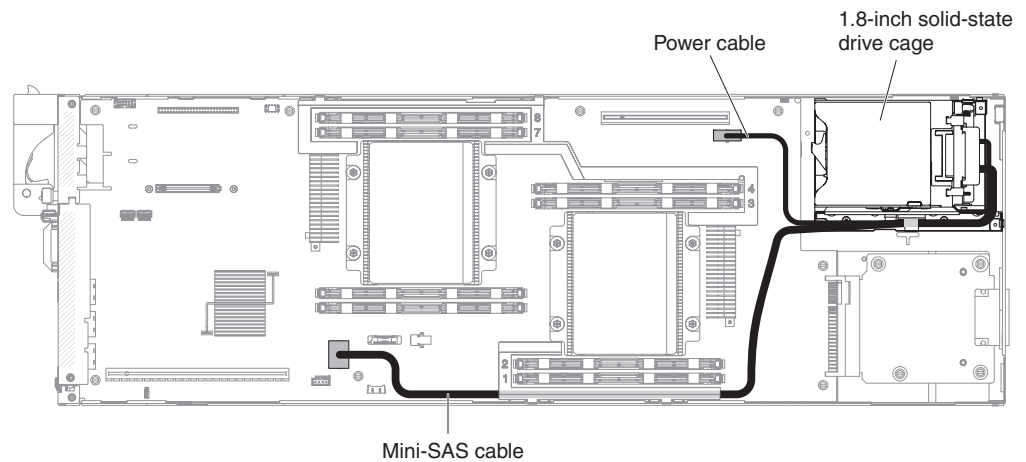
Figure 114. 1.8-inch hard disk drive with software RAID signal cable connection

Cabling hard disk drive with ServeRAID SAS/SATA controller

The internal routing and connectors for the hard disk drive with ServeRAID SAS/SATA controller.

The following illustrations show the internal routing and connectors for the 3.5-inch, 2.5-inch, and 1.8-inch hard disk drive models respectively with ServeRAID SAS/SATA controller.

Note: Make sure the relevant cables pass through the cable clips.
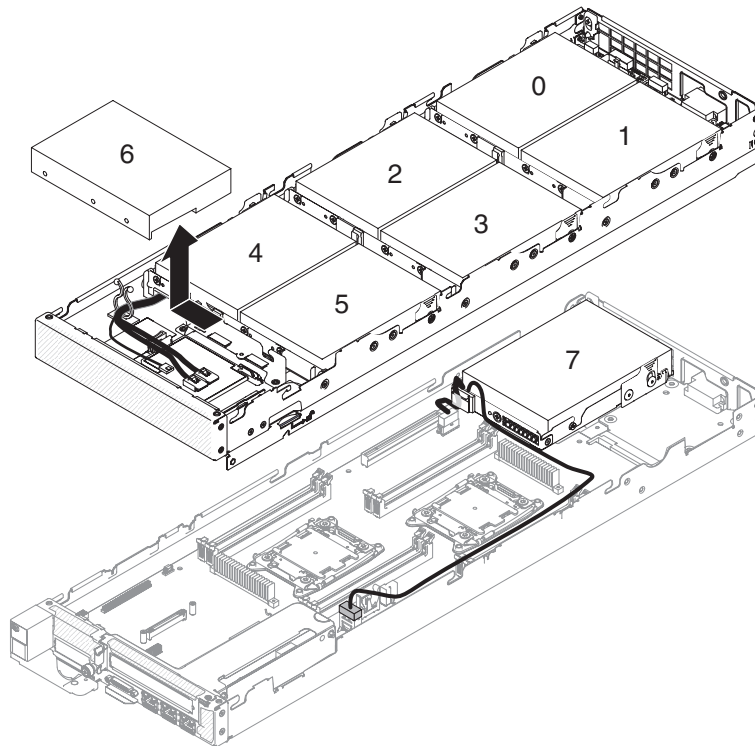
Figure 115. 3.5-inch hard disk drive with ServeRAID SATA controller cable connection (no hardware RAID support for hard disk drive #7)
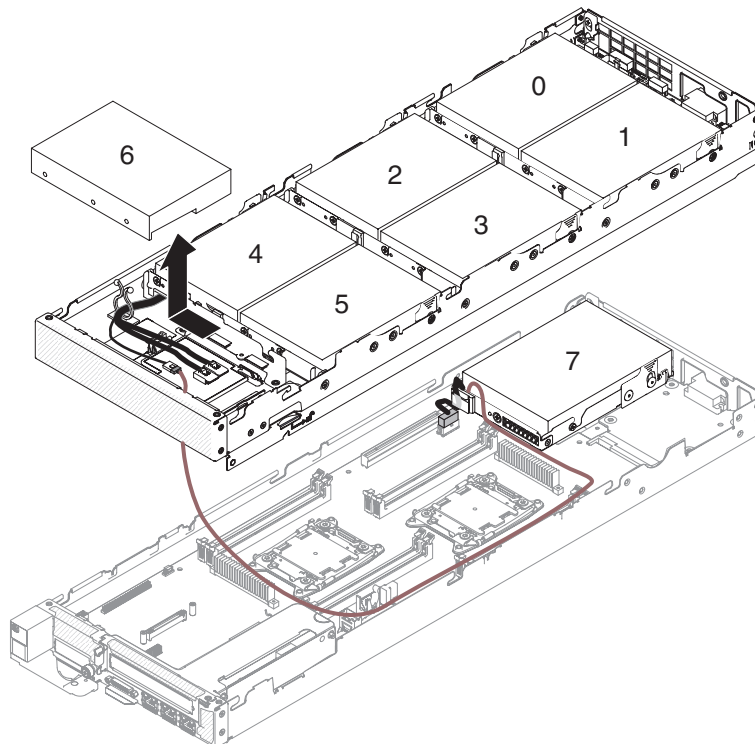
Figure 116. 3.5-inch hard disk drive with ServeRAID SATA controller cable connection (hardware RAID is supported for all hard disk drives)

Notes:

1. For 3.5-inch hard disk drive model, the ServeRAID SATA controller is available only with the storage tray installed.
2. You must remove hard disk drive #6 (if there is one installed) before connecting/disconnecting the configuration cable. See "Major components of the storage tray" on page 10 for the drive bay series of the hard disk drives.
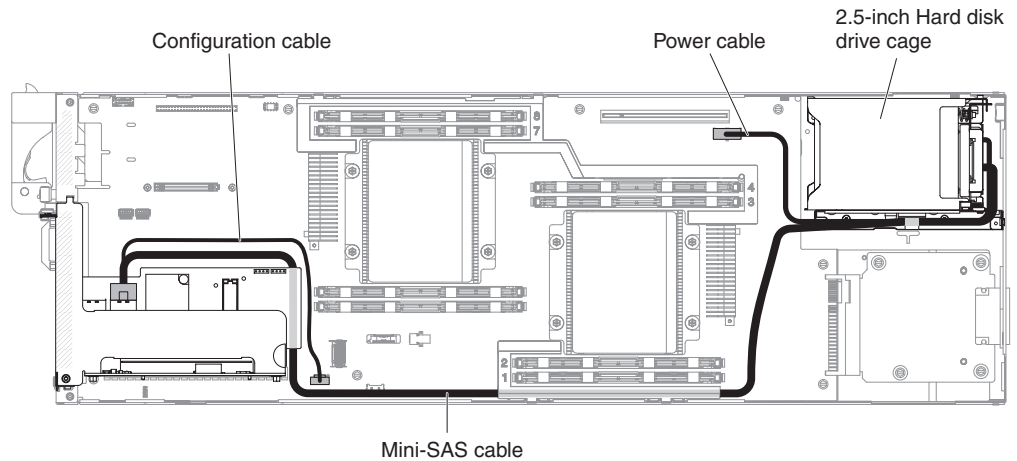
Figure 117. 2.5-inch hard disk drive with ServeRAID SAS/SATA controller cable connection
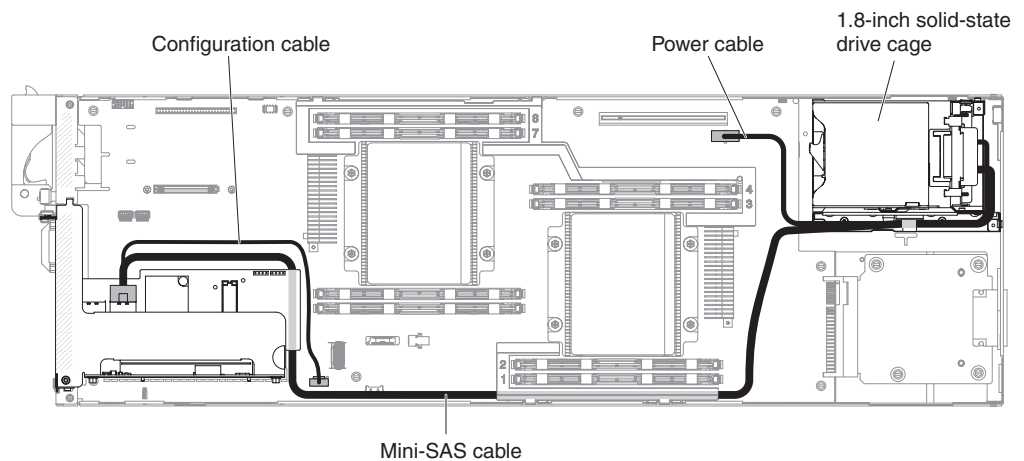
Figure 118. 1.8-inch hard disk drive with ServeRAID SAS/SATA controller cable connection

Appendix A. Integrated Management Module II (IMM2) error messages

This section details the Integrated Management Module II (IMM2) error messages.

When a hardware event is detected by the Integrated Management Module II (IMM2) on the server, the Integrated Management Module II (IMM2) logs that event in the system-event log in the server.

For each event code, the following fields are displayed:

Event identifier
A hexadecimal identifier that uniquely identifies an event or class of events. In this documentation, the event identifiers are prefixed with 0x and followed by eight characters.

Event description
The logged message string that appears for an event. When the event string is displayed in the event log, information such as a specific component is displayed. In this documentation, that additional information appears as variables, such as [arg1] or [arg2].

Explanation
Provides additional information to explain why the event occurred.

Severity
An indication of the level of concern for the condition. In the system-event log, severity is abbreviated to the first character. The following severities can be displayed.

Info: The event was recorded for audit purposes, usually a user action or a change of states that is normal behavior.

Warning:
The event is not as severe as an error, but if possible, the condition should be corrected before it becomes an error. It might also be a condition that requires additional monitoring or maintenance.

Error: The event is a failure or critical condition that impairs service or an expected function.

Alert Category
Similar events are grouped together in categories. The alert category is in the following format:

severity - device

severity is one of the following severity levels:

- **Critical:** A key component in the server is no longer functioning.
- **Warning:** The event might progress to a critical level.
- **System:** The event is the result of a system error or a configuration change.

device is the specific device in the server that caused the event to be generated.

Serviceable
Specifies whether user action is required to correct the problem.

CIM Information

Provides the prefix of the message ID and the sequence number that is used by the CIM message registry.

SNMP Trap ID

The SNMP trap ID that is found in the SNMP alert management information base (MIB).

Automatically contact Service

If this field is set to **Yes**, and you have enabled Electronic Service Agent™ (ESA), IBM Support will be notified automatically if the event is generated.

While you wait for IBM Support to call, you can perform the recommended actions for the event.

User response

Indicates what actions you should perform to solve the event.

Perform the steps listed in this section in the order shown until the problem is solved. After you perform all of the actions that are described in this field, if you cannot solve the problem, contact IBM Support.

Note: This list includes error codes and messages that might not apply to this machine type and model.

The following is the list of Integrated Management Module II (IMM2) error messages and suggested actions to correct the detected server problems. For more information about Integrated Management Module II (IMM2), see the *Integrated Management Module II User's Guide* at http://www-947.ibm.com/support/entry/portal/docdisplay?lndocid=migr-5086346.

40000001-00000000   Management Controller [arg1] Network Initialization Complete.

Explanation: This message is for the use case where a Management Controller network has completed initialization.

Severity: Info

Alert Category: System - IMM Network event

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0001

SNMP Trap ID: 37

Automatically notify Support: No

User response: Information only; no action is required.

40000002-00000000   Certificate Authority [arg1] has detected a [arg2] Certificate Error.

Explanation: This message is for the use case when there is an error with an SSL Server, SSL Client, or SSL Trusted CA Certificate.

Severity: Error

Alert Category: System - SSL certification

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0002

SNMP Trap ID: 22

Automatically notify Support: No

User response: Make sure that the certificate that you are importing is correct and properly generated.

40000003-00000000   Ethernet Data Rate modified from [arg1] to [arg2] by user [arg3].

Explanation: This message is for the use case where a user modifies the Ethernet Port data rate.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0003

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000004-00000000   Ethernet Duplex setting modified from [arg1] to [arg2] by user [arg3].

Explanation: This message is for the use case where A

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user modifies the Ethernet Port duplex setting.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0004

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000005-00000000   Ethernet MTU setting modified from [arg1] to [arg2] by user [arg3].

Explanation: This message is for the use case where a user modifies the Ethernet Port MTU setting.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0005

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000006-00000000   Ethernet locally administered MAC address modified from [arg1] to [arg2] by user [arg3].

Explanation: This message is for the use case where a user modifies the Ethernet Port MAC address setting.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0006

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000007-00000000   Ethernet interface [arg1] by user [arg2].

Explanation: This message is for the use case where a user enables or disabled the ethernet interface.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0007

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000008-00000000   Hostname set to [arg1] by user [arg2].

Explanation: This message is for the use case where user modifies the Hostname of a Management Controller.

Severity: Info

Alert Category: System - IMM Network event

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0008

SNMP Trap ID: 37

Automatically notify Support: No

User response: Information only; no action is required.

40000009-00000000   IP address of network interface modified from [arg1] to [arg2] by user [arg3].

Explanation: This message is for the use case where user modifies the IP address of a Management Controller.

Severity: Info

Alert Category: System - IMM Network event

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0009

SNMP Trap ID: 37

Automatically notify Support: No

User response: Information only; no action is required.

4000000a-00000000   IP subnet mask of network interface modified from [arg1] to [arg2] by user [arg3].

Explanation: This message is for the use case where a user modifies the IP subnet mask of a Management Controller.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0010

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000000b-00000000 IP address of default gateway modified from [arg1] to [arg2] by user [arg3].

Explanation: This message is for the use case where a user modifies the default gateway IP address of a Management Controller.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0011

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000000c-00000000 OS Watchdog response [arg1] by [arg2] .

Explanation: This message is for the use case where an OS Watchdog has been enabled or disabled by a user.

Severity: Warning

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0012

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000000d-00000000 DHCP[[arg1]] failure, no IP address assigned.

Explanation: This message is for the use case where a DHCP server fails to assign an IP address to a Management Controller.

Severity: Warning

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0013

SNMP Trap ID:

Automatically notify Support: No

User response: Complete the following steps until the problem is solved:

1. Make sure that the IMM network cable is connected.
2. Make sure that there is a DHCP server on the network that can assign an IP address to the IMM.

4000000e-00000000 Remote Login Successful. Login ID: [arg1] from [arg2] at IP address [arg3].

Explanation: This message is for the use case where a user successfully logs in to a Management Controller.

Severity: Info

Alert Category: System - Remote Login

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0014

SNMP Trap ID: 30

Automatically notify Support: No

User response: Information only; no action is required.

4000000f-00000000 Attempting to [arg1] server [arg2] by user [arg3].

Explanation: This message is for the use case where a user is using the Management Controller to perform a power function on the system.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0015

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000010-00000000 Security: Userid: [arg1] had [arg2] login failures from WEB client at IP address [arg3].

Explanation: This message is for the use case where a user has failed to log in to a Management Controller from a web browser.

Severity: Warning

Alert Category: System - Remote Login

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0016

SNMP Trap ID: 30

Automatically notify Support: No

User response: Complete the following steps until the problem is solved:

1. Make sure that the correct login ID and password are being used.
2. Have the system administrator reset the login ID or password.

40000011-00000000 Security: Login ID: [arg1] had [arg2] login failures from CLI at [arg3].

Explanation: This message is for the use case where a user has failed to log in to a Management Controller from the Legacy CLI.

Severity: Warning

Alert Category: System - Remote Login

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0017

SNMP Trap ID: 30

Automatically notify Support: No

User response: Complete the following steps until the problem is solved:

1. Make sure that the correct login ID and password are being used.
2. Have the system administrator reset the login ID or password.

40000012-00000000 Remote access attempt failed. Invalid userid or password received. Userid is [arg1] from WEB browser at IP address [arg2].

Explanation: This message is for the use case where a remote user has failed to establish a remote control session from a Web browser session.

Severity: Info

Alert Category: System - Remote Login

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0018

SNMP Trap ID: 30

Automatically notify Support: No

User response: Make sure that the correct login ID and password are being used.

40000013-00000000 Remote access attempt failed. Invalid userid or password received. Userid is [arg1] from TELNET client at IP address [arg2].

Explanation: This message is for the use case where a user has failed to log in to a Management Controller from a telnet session.

Severity: Info

Alert Category: System - Remote Login

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0019

SNMP Trap ID: 30

Automatically notify Support: No

User response: Make sure that the correct login ID and password are being used.

40000014-00000000 The [arg1] on system [arg2] cleared by user [arg3].

Explanation: This message is for the use case where a Management Controller Event Log on a system is cleared by a user.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0020

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000015-00000000 Management Controller [arg1] reset was initiated by user [arg2].

Explanation: This message is for the use case where a Management Controller reset is initiated by a user.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0021

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000016-00000000 ENET[[arg1]] DHCP-HSTN=[arg2], DN=[arg3], IP@=[arg4], SN=[arg5], GW@=[arg6], DNS1@=[arg7] .

Explanation: This message is for the use case where a Management Controller IP address and configuration has been assigned by the DHCP server.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0022

40000017-00000000 • 4000001c-00000000

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000017-00000000 ENET[[arg1]] IP-Cfg:HstName=[arg2], IP@=[arg3] ,NetMsk=[arg4], GW@=[arg5] .

Explanation: This message is for the use case where a Management Controller IP address and configuration has been assigned statically using user data.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0023

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000018-00000000 LAN: Ethernet[[arg1]] interface is no longer active.

Explanation: This message is for the use case where a Management Controller ethernet interface is no longer active.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0024

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000019-00000000 LAN: Ethernet[[arg1]] interface is now active.

Explanation: This message is for the use case where a Management Controller ethernet interface is now active.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0025

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000001a-00000000 DHCP setting changed to [arg1] by user [arg2].

Explanation: This message is for the use case where a user changes the DHCP setting.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0026

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000001b-00000000 Management Controller [arg1]: Configuration restored from a file by user [arg2].

Explanation: This message is for the use case where a user restores a Management Controller configuration from a file.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0027

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000001c-00000000 Watchdog [arg1] Screen Capture Occurred .

Explanation: This message is for the use case where an operating system error has occurred and the screen was captured.

Severity: Info

Alert Category: System - other

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0028

SNMP Trap ID: 22

Automatically notify Support: No

User response: If there was no operating-system error, complete the following steps until the problem is solved:

1. Reconfigure the watchdog timer to a higher value.

2. Make sure that the IMM Ethernet-over-USB interface is enabled.

3. Reinstall the RNDIS or cdc_ether device driver for the operating system.

4. Disable the watchdog.

If there was an operating-system error, check the integrity of the installed operating system.

4000001d-00000000   Watchdog [arg1] Failed to Capture Screen.

Explanation: This message is for the use case where an operating system error has occurred and the screen capture failed.

Severity: Error

Alert Category: System - other

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0029

SNMP Trap ID: 22

Automatically notify Support: No

User response: Complete the following steps until the problem is solved:

1. Reconfigure the watchdog timer to a higher value.

2. Make sure that the IMM Ethernet over USB interface is enabled.

3. Reinstall the RNDIS or cdc_ether device driver for the operating system.

4. Disable the watchdog. Check the integrity of the installed operating system.

5. Update the IMM firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

4000001e-00000000   Running the backup Management Controller [arg1] main application.

Explanation: This message is for the use case where a Management Controller has resorted to running the backup main application.

Severity: Warning

Alert Category: System - other

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0030

SNMP Trap ID: 22

Automatically notify Support: No

User response: Update the IMM firmware. Important:

Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

4000001f-00000000   Please ensure that the Management Controller [arg1] is flashed with the correct firmware. The Management Controller is unable to match its firmware to the server.

Explanation: This message is for the use case where a Management Controller firmware version does not match the server.

Severity: Error

Alert Category: System - other

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0031

SNMP Trap ID: 22

Automatically notify Support: No

User response: Update the IMM firmware to a version that the server supports. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

40000020-00000000   Management Controller [arg1] Reset was caused by restoring default values.

Explanation: This message is for the use case where a Management Controller has been reset due to a user restoring the configuration to default values.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0032

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000021-00000000   Management Controller [arg1] clock has been set from NTP server [arg2].

Explanation: This message is for the use case where a Management Controller clock has been set from the Network Time Protocol server.

Severity: Info

40000022-00000000 • 40000026-00000000

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0033

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000022-00000000 SSL data in the Management Controller [arg1] configuruation data is invalid. Clearing configuration data region and disabling SSL.

Explanation: This message is for the use case where a Management Controller has detected invalid SSL data in the configuration data and is clearing the configuration data region and disabling the SSL.

Severity: Error

Alert Category: System - other

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0034

SNMP Trap ID: 22

Automatically notify Support: No

User response: Complete the following steps until the problem is solved:

1. Make sure that the certificate that you are importing is correct.
2. Try to import the certificate again.

40000023-00000000 Flash of [arg1] from [arg2] succeeded for user [arg3] .

Explanation: This message is for the use case where a user has successfully flashed the firmware component (MC Main Application, MC Boot ROM, BIOS, Diagnostics, System Power Backplane, Remote Expansion Enclosure Power Backplane, Integrated System Management Processor, or Remote Expansion Enclosure Processor) from the interface and IP address (%d.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0035

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000024-00000000 Flash of [arg1] from [arg2] failed for user [arg3].

Explanation: This message is for the use case where a user has not flashed the firmware component from the interface and IP address due to a failure.

Severity: Info

Alert Category: System - other

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0036

SNMP Trap ID: 22

Automatically notify Support: No

User response: Information only; no action is required.

40000025-00000000 The [arg1] on system [arg2] is 75% full.

Explanation: This message is for the use case where a Management Controller Event Log on a system is 75% full.

Severity: Info

Alert Category: System - Event Log 75% full

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0037

SNMP Trap ID: 35

Automatically notify Support: No

User response: Information only; no action is required.

40000026-00000000 The [arg1] on system [arg2] is 100% full.

Explanation: This message is for the use case where a Management Controller Event Log on a system is 100% full.

Severity: Info

Alert Category: System - Event Log 75% full

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0038

SNMP Trap ID: 35

Automatically notify Support: No

User response: To avoid losing older log entries, save the log as a text file and clear the log.

40000027-00000000 Platform Watchdog Timer expired for [arg1].

Explanation: This message is for the use case when an implementation has detected a Platform Watchdog Timer Expired

Severity: Error

Alert Category: System - OS Timeout

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0039

SNMP Trap ID: 21

Automatically notify Support: No

User response: Complete the following steps until the problem is solved:
1. Reconfigure the watchdog timer to a higher value.
2. Make sure that the IMM Ethernet-over-USB interface is enabled.
3. Reinstall the RNDIS or cdc_ether device driver for the operating system.
4. Disable the watchdog.
5. Check the integrity of the installed operating system.

40000028-00000000 Management Controller Test Alert Generated by [arg1].

Explanation: This message is for the use case where a user has generated a Test Alert.

Severity: Info

Alert Category: System - other

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0040

SNMP Trap ID: 22

Automatically notify Support: No

User response: Information only; no action is required.

40000029-00000000 Security: Userid: [arg1] had [arg2] login failures from an SSH client at IP address [arg3].

Explanation: This message is for the use case where a user has failed to log in to a Management Controller from SSH.

Severity: Info

Alert Category: System - Remote Login

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0041

SNMP Trap ID: 30

Automatically notify Support: No

User response: Complete the following steps until the problem is solved:
1. Make sure that the correct login ID and password are being used.
2. Have the system administrator reset the login ID or password.

4000002a-00000000 [arg1] firmware mismatch internal to system [arg2]. Please attempt to flash the [arg3] firmware.

Explanation: This message is for the use case where a specific type of firmware mismatch has been detected.

Severity: Error

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0042

SNMP Trap ID: 22

Automatically notify Support: No

User response: Reflash the IMM firmware to the latest version.

4000002b-00000000 Domain name set to [arg1].

Explanation: Domain name set by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0043

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000002c-00000000 Domain Source changed to [arg1] by user [arg2].

Explanation: Domain source changed by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0044

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000002d-00000000 • 40000033-00000000

4000002d-00000000 DDNS setting changed to [arg1] by user [arg2].

Explanation: DDNS setting changed by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0045

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000002e-00000000 DDNS registration successful. The domain name is [arg1].

Explanation: DDNS registation and values

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0046

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000002f-00000000 IPv6 enabled by user [arg1] .

Explanation: IPv6 protocol is enabled by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0047

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000030-00000000 IPv6 disabled by user [arg1] .

Explanation: IPv6 protocol is disabled by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0048

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000031-00000000 IPv6 static IP configuration enabled by user [arg1].

Explanation: IPv6 static address assignment method is enabled by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0049

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000032-00000000 IPv6 DHCP enabled by user [arg1].

Explanation: IPv6 DHCP assignment method is enabled by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0050

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000033-00000000 IPv6 stateless auto-configuration enabled by user [arg1].

Explanation: IPv6 statless auto-assignment method is enabled by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0051

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000034-00000000   IPv6 static IP configuration disabled by user [arg1].

Explanation: IPv6 static assignment method is disabled by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0052

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000035-00000000   IPv6 DHCP disabled by user [arg1].

Explanation: IPv6 DHCP assignment method is disabled by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0053

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000036-00000000   IPv6 stateless auto-configuration disabled by user [arg1].

Explanation: IPv6 statless auto-assignment method is disabled by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0054

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000037-00000000   ENET[[arg1]] IPv6-LinkLocal:HstName=[arg2], IP@=[arg3] ,Pref=[arg4] .

Explanation: IPv6 Link Local address is active

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0055

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000038-00000000   ENET[[arg1]] IPv6-Static:HstName=[arg2], IP@=[arg3] ,Pref=[arg4], GW@=[arg5] .

Explanation: IPv6 Static address is active

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0056

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000039-00000000   ENET[[arg1]] DHCPv6-HSTN=[arg2], DN=[arg3], IP@=[arg4], Pref=[arg5].

Explanation: IPv6 DHCP-assigned address is active

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0057

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000003a-00000000   IPv6 static address of network interface modified from [arg1] to [arg2] by user [arg3].

Explanation: A user modifies the IPv6 static address of a Management Controller

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0058

SNMP Trap ID:

4000003b-00000000 • 40000040-00000000

Automatically notify Support: No

User response: Information only; no action is required.

4000003b-00000000   DHCPv6 failure, no IP address assigned.

Explanation: S DHCP6 server fails to assign an IP address to a Management Controller.

Severity: Warning

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0059

SNMP Trap ID:

Automatically notify Support: No

User response: Complete the following steps until the problem is solved:

1. Make sure that the IMM network cable is connected.
2. Make sure that there is a DHCPv6 server on the network that can assign an IP address to the IMM.

4000003c-00000000   Platform Watchdog Timer expired for [arg1].

Explanation: An implementation has detected an OS Loader Watchdog Timer Expired

Severity: Error

Alert Category: System - Loader timeout

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0060

SNMP Trap ID: 26

Automatically notify Support: No

User response:

1. Reconfigure the watchdog timer to a higher value.
2. Make sure that the IMM Ethernet over USB interface is enabled.
3. Reinstall the RNDIS or cdc_ether device driver for the operating system.
4. Disable the watchdog.
5. Check the integrity of the installed operating system.

4000003d-00000000   Telnet port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the telnet port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0061

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000003e-00000000   SSH port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the SSH port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0062

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000003f-00000000   Web-HTTP port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the Web HTTP port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0063

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000040-00000000   Web-HTTPS port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the Web HTTPS port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0064

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000041-00000000 CIM/XML HTTP port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the CIM HTTP port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0065

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000042-00000000 CIM/XML HTTPS port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the CIM HTTPS port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0066

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000043-00000000 SNMP Agent port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the SNMP Agent port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0067

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000044-00000000 SNMP Traps port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the SNMP Traps port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0068

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000045-00000000 Syslog port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the Syslog receiver port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0069

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000046-00000000 Remote Presence port number changed from [arg1] to [arg2] by user [arg3].

Explanation: A user has modified the Remote Presence port number

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0070

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000047-00000000 • 4000004d-00000000

40000047-00000000 LED [arg1] state changed to [arg2] by [arg3].

Explanation: A user has modified the state of an LED

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0071

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000048-00000000 Inventory data changed for device [arg1], new device data hash=[arg2], new master data hash=[arg3] .

Explanation: Something has caused the physical inventory to change

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0072

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000049-00000000 SNMP [arg1] enabled by user [arg2] .

Explanation: A user enabled SNMPv1 or SNMPv3 or Traps

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0073

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000004a-00000000 SNMP [arg1] disabled by user [arg2] .

Explanation: A user disabled SNMPv1 or SNMPv3 or Traps

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0074

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000004b-00000000 SNMPv1 [arg1] set by user [arg2]: Name=[arg3], AccessType=[arg4], Address=[arg5], .

Explanation: A user changed the SNMP community string

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0075

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000004c-00000000 LDAP Server configuration set by user [arg1]: SelectionMethod=[arg2], DomainName=[arg3], Server1=[arg4], Server2=[arg5], Server3=[arg6], Server4=[arg7].

Explanation: A user changed the LDAP server configuration

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0076

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000004d-00000000 LDAP set by user [arg1]: RootDN=[arg2], UIDSearchAttribute=[arg3], BindingMethod=[arg4], EnhancedRBS=[arg5], TargetName=[arg6], GroupFilter=[arg7], GroupAttribute=[arg8], LoginAttribute=[arg9].

Explanation: A user configured an LDAP Miscellaneous setting

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0077

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000004e-00000000 Serial Redirection set by user [arg1]: Mode=[arg2], BaudRate=[arg3], StopBits=[arg4], Parity=[arg5], SessionTerminateSequence=[arg6].

Explanation: A user configured the Serial Port mode

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0078

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000004f-00000000 Date and Time set by user [arg1]: Date=[arg2], Time-[arg3], DST Auto-adjust=[arg4], Timezone=[arg5].

Explanation: A user configured the Date and Time settings

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0079

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000050-00000000 Server General Settings set by user [arg1]: Name=[arg2], Contact=[arg3], Location=[arg4], Room=[arg5], RackID=[arg6], Rack U-position=[arg7].

Explanation: A user configured the Location setting

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0080

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000051-00000000 Server Power Off Delay set to [arg1] by user [arg2].

Explanation: A user configured the Server Power Off Delay

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0081

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000052-00000000 Server [arg1] scheduled for [arg2] at [arg3] by user [arg4].

Explanation: A user configured a Server Power action at a specific time

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0082

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000053-00000000 Server [arg1] scheduled for every [arg2] at [arg3] by user [arg4].

Explanation: A user configured a recurring Server Power Action

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0083

SNMP Trap ID:

Automatically notify Support: No

40000054-00000000 • 4000005a-00000000

User response: Information only; no action is required.

40000054-00000000 Server [arg1] [arg2] cleared by user [arg3].

Explanation: A user cleared a Server Power Action.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0084

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000055-00000000 Synchronize time setting by user [arg1]: Mode=[arg2], NTPServerHost=[arg3]:[arg4],NTPUpdateFrequency=[arg5].

Explanation: A user configured the Date and Time synchronize settings

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0085

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000056-00000000 SMTP Server set by user [arg1] to [arg2]:[arg3].

Explanation: A user configured the SMTP server

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0086

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000057-00000000 Telnet [arg1] by user [arg2].

Explanation: A user enables or disables Telnet services

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0087

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000058-00000000 DNS servers set by user [arg1]: UseAdditionalServers=[arg2], PreferredDNStype=[arg3], IPv4Server1=[arg4], IPv4Server2=[arg5], IPv4Server3=[arg6], IPv6Server1=[arg7], IPv6Server2=[arg8], IPv6Server3=[arg9].

Explanation: A user configures the DNS servers

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0088

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000059-00000000 LAN over USB [arg1] by user [arg2].

Explanation: A user configured USB-LAN

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0089

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000005a-00000000 LAN over USB Port Forwarding set by user [arg1]: ExternalPort=[arg2], USB-LAN port=[arg3].

Explanation: A user configured USB-LAN port forwarding

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0090

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000005b-00000000 Secure Web services (HTTPS) [arg1] by user [arg2].

Explanation: A user enables or disables Secure web services

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0091

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000005c-00000000 Secure CIM/XML(HTTPS) [arg1] by user [arg2].

Explanation: A user enables or disables Secure CIM/XML services

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0092

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000005d-00000000 Secure LDAP [arg1] by user [arg2].

Explanation: A user enables or disables Secure LDAP services

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0093

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000005e-00000000 SSH [arg1] by user [arg2].

Explanation: A user enables or disables SSH services

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0094

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000005f-00000000 Server timeouts set by user [arg1]: EnableOSWatchdog=[arg2], OSWatchdogTimout=[arg3], EnableLoaderWatchdog=[arg4], LoaderTimeout=[arg5].

Explanation: A user configures Server Timeouts

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0095

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000060-00000000 License key for [arg1] added by user [arg2].

Explanation: A user installs License Key

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0096

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000061-00000000   License key for [arg1] removed by user [arg2].

Explanation: A user removes a License Key

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0097

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000062-00000000   Global Login General Settings set by user [arg1]: AuthenticationMethod=[arg2], LockoutPeriod=[arg3], SessionTimeout=[arg4].

Explanation: A user changes the Global Login General Settings

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0098

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000063-00000000   Global Login Account Security set by user [arg1]: PasswordRequired=[arg2], PasswordExpirationPeriod=[arg3], MinimumPasswordReuseCycle=[arg4], MinimumPasswordLength=[arg5], MinimumPasswordChangeInterval=[arg6], MaxmumLoginFailures=[arg7], LockoutAfterMaxFailures=[arg8], MinimumDifferentCharacters=[arg9], DefaultIDExpired=[arg10], ChangePasswordFirstAccess=[arg11].

Explanation: A user changes the Global Login Account Security Settings to Legacy

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0099

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000064-00000000   User [arg1] created.

Explanation: A user account was created

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0100

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000065-00000000   User [arg1] removed.

Explanation: A user account was deleted

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0101

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000066-00000000   User [arg1] password modified.

Explanation: A user account was changed

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0102

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000067-00000000   User [arg1] role set to [arg2].

Explanation: A user account role assigned

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0103

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000068-00000000 User [arg1] custom privileges set: [arg2].

Explanation: User account priveleges assigned

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0104

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000069-00000000 User [arg1] for SNMPv3 set: AuthenticationProtocol=[arg2], PrivacyProtocol=[arg3], AccessType=[arg4], HostforTraps=[arg5].

Explanation: User account SNMPv3 settings changed

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0105

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000006a-00000000 SSH Client key added for user [arg1].

Explanation: User locally defined an SSH Client key

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0106

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000006b-00000000 SSH Client key imported for user [arg1] from [arg2].

Explanation: User imported an SSH Client key

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0107

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000006c-00000000 SSH Client key removed from user [arg1].

Explanation: User removed an SSH Client key

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0108

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000006d-00000000 Management Controller [arg1]: Configuration saved to a file by user [arg2].

Explanation: A user saves a Management Controller configuration to a file.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0109

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000006e-00000000 Alert Configuration Global Event Notification set by user [arg1]: RetryLimit=[arg2], RetryInterval=[arg3], EntryInterval=[arg4].

Explanation: A user changes the Global Event Notification settings.

Severity: Info

4000006f-00000000 • 40000074-00000000

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0110

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000006f-00000000 Alert Recipient Number [arg1] updated: Name=[arg2], DeliveryMethod=[arg3], Address=[arg4], IncludeLog=[arg5], Enabled=[arg6], EnabledAlerts=[arg7], AllowedFilters=[arg8].

Explanation: A user adds or updates an Alert Recipient

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0111

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000070-00000000 SNMP Traps enabled by user [arg1]: EnabledAlerts=[arg2], AllowedFilters=[arg3] .

Explanation: A user enabled the SNMP Traps configuration

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0112

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000071-00000000 The power cap value changed from [arg1] watts to [arg2] watts by user [arg3].

Explanation: Power Cap values changed by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0113

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000072-00000000 The minimum power cap value changed from [arg1] watts to [arg2] watts.

Explanation: Minimum Power Cap value changed

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0114

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000073-00000000 The maximum power cap value changed from [arg1] watts to [arg2] watts.

Explanation: Maximum Power Cap value changed

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0115

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000074-00000000 The soft minimum power cap value changed from [arg1] watts to [arg2] watts.

Explanation: Soft Minimum Power Cap value changed

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0116

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000075-00000000   The measured power value exceeded the power cap value.

Explanation: Power exceeded cap

Severity: Warning

Alert Category: Warning - Power

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0117

SNMP Trap ID: 164

Automatically notify Support: No

User response: Information only; no action is required.

40000076-00000000   The new minimum power cap value exceeded the power cap value.

Explanation: Minimum Power Cap exceeds Power Cap

Severity: Warning

Alert Category: Warning - Power

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0118

SNMP Trap ID: 164

Automatically notify Support: No

User response: Information only; no action is required.

40000077-00000000   Power capping was activated by user [arg1].

Explanation: Power capping activated by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0119

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000078-00000000   Power capping was deactivated by user [arg1].

Explanation: Power capping deactivated by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0120

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000079-00000000   Static Power Savings mode has been turned on by user [arg1].

Explanation: Static Power Savings mode turned on by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0121

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000007a-00000000   Static Power Savings mode has been turned off by user [arg1].

Explanation: Static Power Savings mode turned off by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0122

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000007b-00000000   Dynamic Power Savings mode has been turned on by user [arg1].

Explanation: Dynamic Power Savings mode turned on by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: Prefix: IMM and **ID:** 0123

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000007c-00000000   Dynamic Power Savings mode has been turned off by user [arg1].

Explanation: Dynamic Power Savings mode turned off by user

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0124

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000007d-00000000   Power cap and external throttling occurred.

Explanation: Power cap and external throttling occurred

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0125

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000007e-00000000   External throttling occurred .

Explanation: External throttling occurred

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0126

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

4000007f-00000000   Power cap throttling occurred.

Explanation: Power cap throttling occurrred

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0127

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000080-00000000   Remote Control session started by user [arg1] in [arg2] mode.

Explanation: Remote Control session started

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0128

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000081-00000000   PXE boot requested by user [arg1].

Explanation: PXE boot requested

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0129

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000082-00000000   The measured power value has returned below the power cap value.

Explanation: Power exceeded cap recovered

Severity: Info

Alert Category: Warning - Power

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0130

SNMP Trap ID: 164

Automatically notify Support: No

User response: Information only; no action is required.

40000083-00000000   The new minimum power cap value has returned below the power cap value.

Explanation: Minimum Power Cap exceeds Power Cap recovered

Severity: Info

Alert Category: Warning - Power

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0131

SNMP Trap ID: 164

Automatically notify Support: No

User response: Information only; no action is required.

40000084-00000000   IMM firmware mismatch between nodes [arg1] and [arg2]. Please attempt to flash the IMM firmware to the same level on all nodes.

Explanation: A mismatch of IMM firmware has been detected between nodes

Severity: Error

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0132

SNMP Trap ID: 22

Automatically notify Support: No

User response: Attempt to flash the IMM firmware to the same level on all nodes.

40000085-00000000   FPGA firmware mismatch between nodes [arg1] and [arg2]. Please attempt to flash the FPGA firmware to the same level on all nodes.

Explanation: A mismatch of FPGA firmware has been detected between nodes

Severity: Error

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0133

SNMP Trap ID: 22

Automatically notify Support: No

User response: Attempt to flash the FPGA firmware to the same level on all nodes.

40000086-00000000   Test Call Home Generated by user [arg1].

Explanation: Test Call Home generated by user.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0134

SNMP Trap ID:

Automatically notify Support: Yes

User response: Information only; no action is required.

40000087-00000000   Manual Call Home by user [arg1]: [arg2].

Explanation: Manual Call Home by user.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0135

SNMP Trap ID:

Automatically notify Support: Yes

User response: IBM Support will address the problem.

40000088-00000000   Management Controller [arg1]: Configuration restoration from a file by user [arg2] completed.

Explanation: This message is for the use case where a user restores a Management Controller configuration from a file and it completes.

Severity: Info

Alert Category: none

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0136

SNMP Trap ID:

Automatically notify Support: No

User response: Information only; no action is required.

40000089-00000000   Management Controller [arg1]: Configuration restoration from a file by user [arg2] failed to complete.

Explanation: This message is for the use case where a user restores a Management Controller configuration from a file and the restoration fails to complete.

Severity: Error

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0137

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Turn off the server and disconnect it from the power source. You must disconnect the server from ac power to reset the IMM.
2. After 45 seconds, reconnect the server to the power source and turn on the server.
3. Retry the operation.

4000008a-00000000 Management Controller [arg1]: Configuration restoration from a file by user [arg2] failed to start.

Explanation: This message is for the use case where a user restores a Management Controller configuration from a file and the restoration fails to start.

Severity: Error

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0138

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Turn off the server and disconnect it from the power source. You must disconnect the server from ac power to reset the IMM.
2. After 45 seconds, reconnect the server to the power source and turn on the server.
3. Retry the operation.

4000008b-00000000 One or more of the Storage Management IP addresses has changed.

Explanation: This message is for the use case where an IP address for the Storage Management has changed

Severity: Info

Alert Category: System - IMM Network event

Serviceable: No

CIM Information: **Prefix:** IMM and **ID:** 0139

SNMP Trap ID: 37

Automatically notify Support: No

User response: Information only; no action is required.

80010002-0701ffff Numeric sensor [NumericSensorElementName] going low (lower non-critical) has asserted. (CMOS Battery)

Explanation: This message is for the use case when an implementation has detected a Lower Non-critical sensor going low has asserted.

Severity: Warning

Alert Category: Warning - Voltage

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0476

SNMP Trap ID: 13

Automatically notify Support: No

User response: Replace the system battery.

80010202-0701ffff Numeric sensor [NumericSensorElementName] going low (lower critical) has asserted.

Explanation: This message is for the use case when an implementation has detected a Lower Critical sensor going low has asserted.

Severity: Error

Alert Category: Critical - Voltage

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0480

SNMP Trap ID: 1

Automatically notify Support: Yes

User response: If the specified sensor is CMOS battery, replace the system battery. If the specified sensor is Planar 3.3V or Planar 5V, (trained technician only) replace the system board. If the specified sensor is Planar 12V, complete the following steps until the problem is solved:
1. Check power supply n LED.
2. Remove the failing power supply.
3. Follow actions in "Power Problems and Solving Power Problems".
4. (Trained technician only) Replace the system board. (n = power supply number)

80010701-0701ffff Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-0702ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (DIMM AB Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-0703ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (CPU1 VR Temp VCO)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical

sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-0704ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (HDD Inlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-1001ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (PCI Riser 1 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:
1.   Make sure there is a node filler correctly installed for the empty node slot.
2.   Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3.   Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4.   Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-1002ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (PCI Riser 2 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:
1.   Make sure there is a node filler correctly installed for the empty node slot.
2.   Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3.   Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4.   Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-1501ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (PIB Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:
1.   Make sure there is a node filler correctly installed for the empty node slot.
2.   Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3.   Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4.   Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-1502ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (GPU Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:
1.   Make sure there is a node filler correctly installed for the empty node slot.
2.   Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-1a01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (HDD Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-2c01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (Mezz Card Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.

2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010701-2d01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has asserted. (PCH Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has asserted.

Severity: Warning

Alert Category: Warning - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0490

SNMP Trap ID: 12

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-0701ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-0702ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (DIMM AB Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-0703ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (CPU1 VR Temp VCO)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-0704ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (HDD Inlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-1001ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (PCI Riser 1 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-1002ffff **Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (PCI Riser 2 Temp)**

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-1501ffff **Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (PIB Ambient Temp)**

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-1502ffff **Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (GPU Outlet Temp)**

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-1a01ffff **Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (HDD Outlet Temp)**

Explanation: This message is for the use case when an

implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-2c01ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (Mezz Card Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010901-2d01ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted. (PCH Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010902-0701ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has asserted.

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has asserted.

Severity: Error

Alert Category: Critical - Voltage

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0494

SNMP Trap ID: 1

Automatically notify Support: Yes

User response: If the specified sensor is Planar 3.3V or Planar 5V, (Trained technician only) replace the system board. If the specified sensor is Planar 12V, complete the following steps until the problem is solved:
1. Check power supply n LED.
2. Remove the failing power supply.
3. (Trained technician only) Replace the system board. (n = power supply number)

80010b01-0701ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-0702ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (DIMM AB Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-0703ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (CPU1 VR Temp VCO)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-0704ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (HDD Inlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-1001ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (PCI Riser 1 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.

2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-1002ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (PCI Riser 2 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.

2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-1501ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (PIB Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.

2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-1502ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (GPU Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-1a01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (HDD Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-2c01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (Mezz Card Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80010b01-2d01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has asserted. (PCH Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has asserted.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0498

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

80030006-2101ffff   Sensor [SensorElementName] has deasserted. (Sig Verify Fail)

Explanation: This message is for the use case when an implementation has detected a Sensor has deasserted.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0509

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

80030012-0601ffff   Sensor [SensorElementName] has deasserted. (SMM Mode/SMM Monitor)

Explanation: This message is for the use case when an implementation has detected a Sensor has deasserted.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0509

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

80030012-2301ffff   Sensor [SensorElementName] has deasserted. (OS RealTime Mod)

Explanation: This message is for the use case when an implementation has detected a Sensor has deasserted.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0509

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

8007010f-2201ffff   Sensor [SensorElementName] has transitioned from normal to non-critical state. (GPT Status)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-critical from normal.

Severity: Warning

Alert Category: Warning - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0520

SNMP Trap ID: 60

Automatically notify Support: No

User response:
1.   Check the IBM support site for service bulletins or firmware updates that apply to this GPT error.
2.   Set the UEFI setting DISK GPT Recovery to Automatic.
3.   Replace the corrupt disk.

8007010f-2582ffff   Sensor [SensorElementName] has transitioned from normal to non-critical state. (I/O Resources)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-critical from normal.

Severity: Warning

Alert Category: Warning - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0520

SNMP Trap ID: 60

Automatically notify Support: No

User response: Complete the following step to solve PCI I/O resource errors:
1.   Go to F1 Setup
2.   System Settings
3.   Device and I/O ports
4.   PCI 64 bit Resource and choose enable

80070114-2201ffff   Sensor [SensorElementName] has transitioned from normal to non-critical state. (TPM Phy Pres Set)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-critical from normal.

Severity: Warning

Alert Category: Warning - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0520

SNMP Trap ID: 60

Automatically notify Support: No

User response:
1.   Complete the administrative tasks that require the TPM physical presence switch to be in the ON position.
2.   Restore the physical presence switch to the OFF position.
3.   Reboot the system.
4.   (Trained technician only) If the error continues, replace the planar.

80070128-2e01ffff   Sensor [SensorElementName] has transitioned from normal to non-critical state. (ME Recovery)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-critical from normal.

Severity: Warning

Alert Category: Warning - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0520

SNMP Trap ID: 60

Automatically notify Support: No

User response:
1. Restart IMM. If the error doesn't disappear, please proceed step 2.
2. Update to the latest level of iMM/uEFI code, please proceed step 3.
3. Replace node.

80070201-0301ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (CPU 1 OverTemp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)
5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.
6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070201-0302ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (CPU 2 OverTemp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)
5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.
6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070201-1101ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (PCI 1 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)
5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.

6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070201-1102ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (PCI 2 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)
5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.
6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070201-1103ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (PCI 3 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.

2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)
5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.
6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070201-1104ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (PCI 4 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)
5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.
6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070202-0701ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (SysBrd Vol Fault)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Voltage

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 1

Automatically notify Support: No

User response:

1. Check the system-event log.
2. Check for an error LED on the system board.
3. Replace any failing device.
4. Check for a server firmware update. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
5. (Trained technician only) Replace the system board.

80070202-1501ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (PIB Fault)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Voltage

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 1

Automatically notify Support: No

User response: Replace node.

80070202-1502ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (PDB Fault)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Voltage

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 1

Automatically notify Support: No

User response:

1. Check the system-event log.
2. Check for an error LED on the system board.

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3. Replace any failing device.
4. Check for a server firmware update. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
5. (Trained technician only) Replace the system board.

8007020f-2201ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (TXT ACM Module)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 50

Automatically notify Support: No

User response:

1. If enabling TXT is not required, disable TXT from the Setup Utility.
2. If enabling TXT is required, verify that the TPM is enabled and activated from the Setup Utility.
3. If the problem remains, contact your service representative.

8007020f-2582ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (I/O Resources)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 50

Automatically notify Support: No

User response: Complete the following step to solve PCI I/O resource errors:

1. Go to F1 Setup
2. System Settings
3. Device and I/O ports
4. PCI 64 bit Resource and choose enable

80070214-2201ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (TPM Lock)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID:

Automatically notify Support: No

User response:
1.   Update the server firmware (see Recovering the server firmware).
2.   If the problem persists, (trained technician only) replace the system board (see Removing the system board and Installing the system board).

80070219-0701ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (SysBrd Fault)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1.   Check for an error LED on the system board.
2.   Check the system-event log.
3.   Check for the system firmware version and update to the latest version. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4.   Unplug and restore AC power cord, then, perform step 1 and 2 again.
5.   If problems still occurred, (trained technician only) replace the system board.

8007021b-0301ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (CPU 1 QPILinkErr)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1.   Check for a server firmware update.
2.   Make sure that the installed microprocessors are compatible.
3.   Make sure the microprocessor 2 expansion board is installed correctly (see Installing the microprocessor 2 expansion board).
4.   (Trained technician only) Replace microprocessor 2.
5.   (Trained technician only) Replace microprocessor 2 expansion board.

8007021b-0302ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (CPU 2 QPILinkErr)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0522

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1.   Check for a server firmware update.
2.   Make sure that the installed microprocessors are compatible.
3.   Make sure the microprocessor 2 expansion board is installed correctly (see Installing the microprocessor 2 expansion board).
4.   (Trained technician only) Replace microprocessor 2.
5.   (Trained technician only) Replace microprocessor 2 expansion board.

80070228-2e01ffff   Sensor [SensorElementName] has transitioned to critical from a less severe state. (IPMB IO Error)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to critical from less severe.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0522

SNMP Trap ID: 50

Automatically notify Support: No

User response: If the specified sensor is IPMB IO Error, Me Error or ME Flash Error, complete the following steps until the problem is solved:

1. Restart IMM. If the error still appears, proceed step 2.
2. Update the firmware (UEFI and IMM) to the latest level. If the error still appears, proceed step 3.
3. Replace the node.

80070301-0301ffff   Sensor [SensorElementName] has transitioned to non-recoverable from a less severe state. (CPU 1 OverTemp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-recoverable from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0524

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)
5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.
6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070301-0302ffff   Sensor [SensorElementName] has transitioned to non-recoverable from a less severe state. (CPU 2 OverTemp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-recoverable from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0524

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.
2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.
3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).
4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)
5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.
6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070301-1101ffff   Sensor [SensorElementName] has transitioned to non-recoverable from a less severe state. (PCI 1 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-recoverable from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0524

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.

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2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.

6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070301-1102ffff   Sensor [SensorElementName] has transitioned to non-recoverable from a less severe state. (PCI 2 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-recoverable from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0524

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.

2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.

6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070301-1103ffff   Sensor [SensorElementName] has transitioned to non-recoverable from a less severe state. (PCI 3 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-recoverable from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0524

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.

2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.

6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070301-1104ffff   Sensor [SensorElementName] has transitioned to non-recoverable from a less severe state. (PCI 4 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-recoverable from less severe.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0524

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1. Make sure there is a node filler correctly installed for the empty node slot.

2. Make sure the air baffles are placed and correctly installed; and make sure the node cover is installed and completely closed.

3. Make sure the fans are operating, and there are no obstructions to the airflow (both front and rear of the server).

4. Reduce the Ambient temperature. The system must be operating within the specifications. (see Features and specifications for more information)

5. Make sure the PCI adapter is supported by the server. To confirm, see the IBM ServerProven website.

6. Replace the PCI adapter and make sure the PCI adapter is functioning normally.

80070614-2201ffff   Sensor [SensorElementName] has transitioned to non-recoverable. (TPM Phy Pres Set)

Explanation: This message is for the use case when an implementation has detected a Sensor transitioned to non-recoverable.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0530

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1. Update the server firmware (see Recovering the server firmware).
2. If the problem persists, (trained technician only) replace the system board (see Removing the system board and Installing the system board).

8008010f-2101ffff   Device [LogicalDeviceElementName] has been added. (Phy Presence Jmp)

Explanation: This message is for the use case when an implementation has detected a Device was inserted.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0536

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

80080128-2101ffff   Device [LogicalDeviceElementName] has been added. (Low Security Jmp)

Explanation: This message is for the use case when an implementation has detected a Device was inserted.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0536

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

800b010c-2581ffff   Redundancy Lost for [RedundancySetElementName] has asserted. (Backup Memory)

Explanation: This message is for the use case when Redundancy Lost has asserted.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0802

SNMP Trap ID: 41

Automatically notify Support: No

User response:
1. Check the system-event log for DIMM failure events (uncorrectable or PFA) and correct the failures.
2. Re-enable mirroring in the Setup utility.

800b030c-2581ffff   Non-redundant:Sufficient Resources from Redundancy Degraded or Fully Redundant for [RedundancySetElementName] has asserted. (Backup Memory)

Explanation: This message is for the use case when a Redundancy Set has transitioned from Redundancy Degraded or Fully Redundant to Non-redundant:Sufficient.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0806

SNMP Trap ID: 43

Automatically notify Support: No

User response:
1. Check the system-event log for DIMM failure events (uncorrectable or PFA) and correct the failures.
2. Re-enable mirroring in the Setup utility.

800b050c-2581ffff   Non-redundant:Insufficient Resources for [RedundancySetElementName] has asserted. (Backup Memory)

Explanation: This message is for the use case when a Redundancy Set has transitioned to Non-redundant:Insufficient Resources.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0810

SNMP Trap ID: 41

Automatically notify Support: No

User response:
1. Check the system-event log for DIMM failure events (uncorrectable or PFA) and correct the failures.
2. Re-enable mirroring in the Setup utility.

806f0007-0301ffff   [ProcessorElementName] has Failed with IERR. (CPU 1)

Explanation: This message is for the use case when an implementation has detected a Processor Failed - IERR Condition.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0042

SNMP Trap ID: 40

Automatically notify Support: No

User response:
1. Make sure that the latest level of firmware and device drivers are installed for all adapters and standard devices, such as Ethernet, SCSI, and SAS. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
2. Update the firmware (UEFI and IMM) to the latest level (Updating the firmware).
3. Run the DSA program.
4. Reseat the adapter.
5. Replace the adapter.
6. (Trained technician only) Replace microprocessor n.
7. (Trained technician only) Replace the system board. (n = microprocessor number)

806f0007-0302ffff   [ProcessorElementName] has Failed with IERR. (CPU 2)

Explanation: This message is for the use case when an implementation has detected a Processor Failed - IERR Condition.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0042

SNMP Trap ID: 40

Automatically notify Support: No

User response:
1. Make sure that the latest level of firmware and device drivers are installed for all adapters and standard devices, such as Ethernet, SCSI, and SAS. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
2. Update the firmware (UEFI and IMM) to the latest level (Updating the firmware).
3. Run the DSA program.
4. Reseat the adapter.
5. Replace the adapter.
6. (Trained technician only) Replace microprocessor n.
7. (Trained technician only) Replace the system board. (n = microprocessor number)

806f0009-1301ffff   [PowerSupplyElementName] has been turned off. (Host Power)

Explanation: This message is for the use case when an implementation has detected a Power Unit that has been Disabled.

Severity: Info

Alert Category: System - Power Off

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0106

SNMP Trap ID: 23

Automatically notify Support: No

User response: No action; information only.

806f000f-220101ff   The System [ComputerSystemElementName] has detected no memory in the system. (ABR Status)

Explanation: This message is for the use case when an implementation has detected that memory was detected in the system.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0794

SNMP Trap ID: 41

Automatically notify Support: No

User response: This is a UEFI detected event. The

UEFI(POST) error code for this event can be found in the logged IMM message text. Please refer to the UEFI(POST) error code in the "UEFI(POST) error code" section of the Information Center for the appropriate user response. Firmware Error : Sys Boot Status :

806f000f-220102ff   Subsystem [MemoryElementName] has insufficient memory for operation. (ABR Status)

Explanation: This message is for the use case when an implementation has detected that the usable Memory is insufficient for operation.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0132

SNMP Trap ID: 41

Automatically notify Support: No

User response: This is a UEFI detected event. The UEFI(POST) error code for this event can be found in the logged IMM message text. Please refer to the UEFI(POST) error code in the "UEFI(POST) error code" section of the Information Center for the appropriate user response. Firmware Error : Sys Boot Status :

806f000f-220103ff   The System [ComputerSystemElementName] encountered firmware error - unrecoverable boot device failure. (ABR Status)

Explanation: This message is for the use case when an implementation has detected that System Firmware Error Unrecoverable boot device failure has occurred.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0770

SNMP Trap ID: 5

Automatically notify Support: No

User response: This is a UEFI detected event. The UEFI(POST) error code for this event can be found in the logged IMM message text. Please refer to the UEFI(POST) error code in the "UEFI(POST) error code" section of the Information Center for the appropriate user response. Firmware Error : Sys Boot Status :

806f000f-220104ff   The System [ComputerSystemElementName]has encountered a motherboard failure. (ABR Status)

Explanation: This message is for the use case when an implementation has detected that a fatal motherboard failure in the system.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0795

SNMP Trap ID: 50

Automatically notify Support: No

User response: This is a UEFI detected event. The UEFI diagnostic code for this event can be found in the logged IMM message text. Please refer to the UEFI(POST) error code in the "UEFI(POST) error code" section of the Info Center for the appropriate user response. Firmware Error : Sys Boot Status :

806f000f-220107ff   The System [ComputerSystemElementName] encountered firmware error - unrecoverable keyboard failure. (ABR Status)

Explanation: This message is for the use case when an implementation has detected that System Firmware Error Unrecoverable Keyboard failure has occurred.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0764

SNMP Trap ID: 50

Automatically notify Support: No

User response: This is a UEFI detected event. The UEFI(POST) error code for this event can be found in the logged IMM message text. Please refer to the UEFI(POST) error code in the "UEFI(POST) error code" section of the Information Center for the appropriate user response. Firmware Error : Sys Boot Status :

806f000f-22010aff   The System [ComputerSystemElementName] encountered firmware error - no video device detected. (ABR Status)

Explanation: This message is for the use case when an implementation has detected that System Firmware Error No video device detected has occurred.

Severity: Error

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Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0766

SNMP Trap ID: 50

Automatically notify Support: No

User response: This is a UEFI detected event. The UEFI(POST) error for this event can be found in the logged IMM message text. Please refer to the UEFI(POST) error code in the "UEFI(POST) error code" section of the Information Center for the appropriate user response. Firmware Error : Sys Boot Status :

806f000f-22010bff **Firmware BIOS (ROM) corruption was detected on system [ComputerSystemElementName] during POST. (ABR Status)**

Explanation: Firmware BIOS (ROM) corruption was detected on the system during POST.

Severity: Info

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0850

SNMP Trap ID: 40

Automatically notify Support: No

User response:
1. Make sure the server meets the minimum configuration to start (see Power-supply LEDs).
2. Recover the server firmware from the backup page: a. Restart the server. b. At the prompt, press F3 to recover the firmware.
3. Update the server firmware to the latest level (see Updating the firmware). Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4. Remove components one at a time, restarting the server each time, to see if the problem goes away.
5. If the problem remains, (trained service technician) replace the system board.

Firmware Error : Sys Boot Status :

806f000f-22010cff **CPU voltage mismatch detected on [ProcessorElementName]. (ABR Status)**

Explanation: This message is for the use case when an implementation has detected a CPU voltage mismatch with the socket voltage.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0050

SNMP Trap ID: 40

Automatically notify Support: No

User response: This is a UEFI detected event. The UEFI(POST) error code for this event can be found in the logged IMM message text. Please refer to the UEFI(POST) error code in the "UEFI(POST) error code" section of the Info Center for the appropriate user response. Firmware Error : Sys Boot Status :

806f000f-2201ffff **The System [ComputerSystemElementName] encountered a POST Error. (ABR Status)**

Explanation: This message is for the use case when an implementation has detected a Post Error.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0184

SNMP Trap ID: 50

Automatically notify Support: No

User response: This is a UEFI detected event. The UEFI(POST) error code for this event can be found in the logged IMM message text. Please refer to the UEFI(POST) error code in the "UEFI(POST) error code" section of the Information Center for the appropriate user response. Firmware Error : Sys Boot Status :

806f0013-1701ffff **A diagnostic interrupt has occurred on system [ComputerSystemElementName]. (NMI State)**

Explanation: This message is for the use case when an implementation has detected a Front Panel NMI / Diagnostic Interrupt.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0222

SNMP Trap ID: 50

Automatically notify Support: No

User response: If the NMI button has not been pressed, complete the following steps:
1. Make sure that the NMI button is not pressed.
2. Replace the operator information panel cable.
3. Replace the operator information panel.

806f0021-2201ffff   Fault in slot [PhysicalConnectorSystemElementName] on system [ComputerSystemElementName]. (No Op ROM Space)

Explanation: This message is for the use case when an implementation has detected a Fault in a slot.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0330

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1. Check the PCI LED.
2. Reseat the affected adapters and riser card.
3. Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4. Remove both adapters.
5. Replace the riser card.
6. (Trained service technicians only) Replace the system board.

806f0021-2582ffff   Fault in slot [PhysicalConnectorSystemElementName] on system [ComputerSystemElementName]. (All PCI Error)

Explanation: This message is for the use case when an implementation has detected a Fault in a slot.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0330

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1. Check the PCI LED.
2. Reseat the affected adapters and riser card.
3. Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

4. Remove both adapters.
5. Replace the riser card.
6. (Trained service technicians only) Replace the system board.

806f0021-2c01ffff   Fault in slot [PhysicalConnectorSystemElementName] on system [ComputerSystemElementName]. (Mezz Error)

Explanation: This message is for the use case when an implementation has detected a Fault in a slot.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0330

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1. Check the PCI LED.
2. Reseat the affected adapters and riser card.
3. Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4. Remove both adapters.
5. Replace the riser card.
6. (Trained service technicians only) Replace the system board.

806f0021-3001ffff   Fault in slot [PhysicalConnectorSystemElementName] on system [ComputerSystemElementName]. (PCI 1)

Explanation: This message is for the use case when an implementation has detected a Fault in a slot.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0330

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1. Check the PCI LED.
2. Reseat the affected adapters and riser card.

3.   Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

4.   Remove both adapters.

5.   Replace the riser card.

6.   (Trained service technicians only) Replace the system board.

806f0021-3002ffff   Fault in slot [PhysicalConnectorSystemElementName] on system [ComputerSystemElementName]. (PCI 2)

Explanation: This message is for the use case when an implementation has detected a Fault in a slot.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0330

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1.   Check the PCI LED.
2.   Reseat the affected adapters and riser card.
3.   Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4.   Remove both adapters.
5.   Replace the riser card.
6.   (Trained service technicians only) Replace the system board.

806f0021-3003ffff   Fault in slot [PhysicalConnectorSystemElementName] on system [ComputerSystemElementName]. (PCI 3)

Explanation: This message is for the use case when an implementation has detected a Fault in a slot.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0330

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1.   Check the PCI LED.
2.   Reseat the affected adapters and riser card.
3.   Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4.   Remove both adapters.
5.   Replace the riser card.
6.   (Trained service technicians only) Replace the system board.

806f0021-3004ffff   Fault in slot [PhysicalConnectorSystemElementName] on system [ComputerSystemElementName]. (PCI 4)

Explanation: This message is for the use case when an implementation has detected a Fault in a slot.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0330

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1.   Check the PCI LED.
2.   Reseat the affected adapters and riser card.
3.   Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4.   Remove both adapters.
5.   Replace the riser card.
6.   (Trained service technicians only) Replace the system board.

806f0023-2101ffff   Watchdog Timer expired for [WatchdogElementName]. (IPMI Watchdog)

Explanation: This message is for the use case when an implementation has detected a Watchdog Timer Expired.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0368

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f0028-2101ffff   Sensor [SensorElementName] is unavailable or degraded on management system [ComputerSystemElementName]. (TPM Cmd Failures)

Explanation: This message is for the use case when an implementation has detected a Sensor is Unavailable or degraded.

Severity: Warning

Alert Category: Warning - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0398

SNMP Trap ID: 60

Automatically notify Support: No

User response:

1.   Turn off the server and disconnect the power cords. Reconnect the power cords and restart the server.
2.   If the problem remains, (trained technician only) replace the system board.

806f0107-0301ffff   An Over-Temperature Condition has been detected on [ProcessorElementName]. (CPU 1)

Explanation: This message is for the use case when an implementation has detected an Over-Temperature Condition Detected for Processor.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0036

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1.   Make sure that the fans are operating. There are no obstructions to the airflow (front and rear of the server), the air baffles are in place and correctly installed, and the server cover is installed and completely closed.
2.   Make sure that the heat sink for microprocessor n is installed correctly.
3.   (Trained technician only) Replace microprocessor n. (n = microprocessor number)

806f0107-0302ffff   An Over-Temperature Condition has been detected on [ProcessorElementName]. (CPU 2)

Explanation: This message is for the use case when an implementation has detected an Over-Temperature Condition Detected for Processor.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0036

SNMP Trap ID: 0

Automatically notify Support: No

User response:

1.   Make sure that the fans are operating. There are no obstructions to the airflow (front and rear of the server), the air baffles are in place and correctly installed, and the server cover is installed and completely closed.
2.   Make sure that the heat sink for microprocessor n is installed correctly.
3.   (Trained technician only) Replace microprocessor n. (n = microprocessor number)

806f0109-1301ffff   [PowerSupplyElementName] has been Power Cycled. (Host Power)

Explanation: This message is for the use case when an implementation has detected a Power Unit that has been power cycled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0108

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f010c-2001ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

806f010c-2002ffff • 806f010c-2003ffff

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.

3. If the problem follows the DIMM, replace the failing DIMM.

4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

6. (Trained technician only) Replace the affected microprocessor.

7. Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer, disconnect and reconnect the server to the power source and restart the server.

8. (Trained Service technician only) Replace the affected microprocessor.

806f010c-2002ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.

3. If the problem follows the DIMM, replace the failing DIMM.

4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

6. (Trained technician only) Replace the affected microprocessor.

7. Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer, disconnect and reconnect the server to the power source and restart the server.

8. (Trained Service technician only) Replace the affected microprocessor.

806f010c-2003ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.

3. If the problem follows the DIMM, replace the failing DIMM.

4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

6. (Trained technician only) Replace the affected microprocessor.

7. Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer,

disconnect and reconnect the server to the power source and restart the server.
8. (Trained Service technician only) Replace the affected microprocessor.

806f010c-2004ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the problem follows the DIMM, replace the failing DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.
7. Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer, disconnect and reconnect the server to the power source and restart the server.
8. (Trained Service technician only) Replace the affected microprocessor.

806f010c-2005ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the problem follows the DIMM, replace the failing DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.
7. Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer, disconnect and reconnect the server to the power source and restart the server.
8. (Trained Service technician only) Replace the affected microprocessor.

806f010c-2006ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.

3. If the problem follows the DIMM, replace the failing DIMM.

4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

6. (Trained technician only) Replace the affected microprocessor.

7. Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer, disconnect and reconnect the server to the power source and restart the server.

8. (Trained Service technician only) Replace the affected microprocessor.

806f010c-2007ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.

3. If the problem follows the DIMM, replace the failing DIMM.

4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

6. (Trained technician only) Replace the affected microprocessor.

7. Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer, disconnect and reconnect the server to the power source and restart the server.

8. (Trained Service technician only) Replace the affected microprocessor.

806f010c-2008ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.

3. If the problem follows the DIMM, replace the failing DIMM.

4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

6. (Trained technician only) Replace the affected microprocessor.

7. Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer, disconnect and reconnect the server to the power source and restart the server.

8. (Trained Service technician only) Replace the affected microprocessor.

806f010c-2581ffff   Uncorrectable error detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (All DIMMS)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0138

SNMP Trap ID: 41

Automatically notify Support: Yes

User response:
1.   Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2.   Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3.   If the problem follows the DIMM, replace the failing DIMM.
4.   (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5.   (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6.   (Trained technician only) Replace the affected microprocessor.
7.   Manually re-enable all affected DIMMs if the server firmware version is older than UEFI v1.10. If the server firmware version is UEFI v1.10 or newer, disconnect and reconnect the server to the power source and restart the server.
8.   (Trained Service technician only) Replace the affected microprocessor.

806f010d-0401ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (Computer HDD0)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1.   Run the hard disk drive diagnostic test on drive n.
2.   Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3.   Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-0402ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (Computer HDD1)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1.   Run the hard disk drive diagnostic test on drive n.
2.   Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3.   Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-0403ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (Computer HDD2)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

806f010d-0404ffff • 806f010d-0407ffff

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-0404ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (Computer HDD3)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-0405ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (1U Storage HDD0)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-0406ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (1U Storage HDD1)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-0407ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-0408ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-0409ffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-040affff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-040bffff   The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

806f010d-040cffff • 806f0113-0302ffff

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010d-040cffff The Drive [StorageVolumeElementName] has been disabled due to a detected fault. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected a Drive was Disabled due to fault.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0164

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive (wait 1 minute or more before reinstalling the drive) b. Cable from the system board to the backplane
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive b. Cable from the system board to the backplane c. Hard disk drive backplane (n = hard disk drive number)

806f010f-2201ffff The System [ComputerSystemElementName] encountered a firmware hang. (Firmware Error)

Explanation: This message is for the use case when an implementation has detected a System Firmware Hang.

Severity: Error

Alert Category: System - Boot failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0186

SNMP Trap ID: 25

Automatically notify Support: No

User response:
1. Make sure the server meets the minimum configuration to start (see Power-supply LEDs).
2. Update the server firmware on the primary page. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
3. (Trained technician only) Replace the system board.

806f0113-0301ffff A bus timeout has occurred on system [ComputerSystemElementName]. (CPU 1 PECI)

Explanation: This message is for the use case when an implementation has detected a Bus Timeout.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0224

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1. Reseat the microprocessor, and then restart the server.
2. Replace microprocessor n. (n = microprocessor number)

806f0113-0302ffff A bus timeout has occurred on system [ComputerSystemElementName]. (CPU 2 PECI)

Explanation: This message is for the use case when an implementation has detected a Bus Timeout.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0224

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1. Reseat the microprocessor, and then restart the server.
2. Replace microprocessor n. (n = microprocessor number)

806f0123-2101ffff   Reboot of system [ComputerSystemElementName] initiated by [WatchdogElementName]. (IPMI Watchdog)

Explanation: This message is for the use case when an implementation has detected a Reboot by a Watchdog occurred.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0370

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f0125-1001ffff   [ManagedElementName] detected as absent. (PCI Riser 1)

Explanation: This message is for the use case when an implementation has detected a Managed Element is Absent.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0392

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f0125-1002ffff   [ManagedElementName] detected as absent. (PCI Riser 2)

Explanation: This message is for the use case when an implementation has detected a Managed Element is Absent.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0392

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f0125-1f01ffff   [ManagedElementName] detected as absent. (PDB Cable)

Explanation: This message is for the use case when an implementation has detected a Managed Element is Absent.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0392

SNMP Trap ID:

Automatically notify Support: No

User response: If there is no GPU/storage tray installed in the system, then the log event is a normal condition. If there is a GPU/storage tray installed in the system, then check the following two portions:

1.   PDB (Power Distribution Board) cable is correctly connected from riser card to PDB.

2.   Replace another PDB cable.

806f0125-2c01ffff   [ManagedElementName] detected as absent. (Mezz Card)

Explanation: This message is for the use case when an implementation has detected a Managed Element is Absent.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0392

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f0207-0301ffff   [ProcessorElementName] has Failed with FRB1/BIST condition. (CPU 1)

Explanation: This message is for the use case when an implementation has detected a Processor Failed - FRB1/BIST condition.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0044

SNMP Trap ID: 40

Automatically notify Support: Yes

User response:

1. Make sure that the latest levels of firmware and device drivers are installed for all adapters and standard devices, such as Ethernet, SCSI, and SAS. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
2. Update the firmware (UEFI and IMM) to the latest level (Updating the firmware).
3. Run the DSA program.
4. Reseat the adapter.
5. Replace the adapter.
6. (Trained technician only) Replace microprocessor n.
7. (Trained technician only) Replace the system board. (n = microprocessor number)

806f0207-0302ffff   [ProcessorElementName] has Failed with FRB1/BIST condition. (CPU 2)

Explanation: This message is for the use case when an implementation has detected a Processor Failed - FRB1/BIST condition.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0044

SNMP Trap ID: 40

Automatically notify Support: Yes

User response:

1. Make sure that the latest levels of firmware and device drivers are installed for all adapters and standard devices, such as Ethernet, SCSI, and SAS. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
2. Update the firmware (UEFI and IMM) to the latest level (Updating the firmware).
3. Run the DSA program.
4. Reseat the adapter.
5. Replace the adapter.
6. (Trained technician only) Replace microprocessor n.
7. (Trained technician only) Replace the system board. (n = microprocessor number)

806f0207-2584ffff   [ProcessorElementName] has Failed with FRB1/BIST condition. (All CPUs)

Explanation: This message is for the use case when an

implementation has detected a Processor Failed - FRB1/BIST condition.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0044

SNMP Trap ID: 40

Automatically notify Support: Yes

User response:

1. Make sure that the latest levels of firmware and device drivers are installed for all adapters and standard devices, such as Ethernet, SCSI, and SAS. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
2. Update the firmware (UEFI and IMM) to the latest level (Updating the firmware).
3. Run the DSA program.
4. Reseat the adapter.
5. Replace the adapter.
6. (Trained technician only) Replace microprocessor n.
7. (Trained technician only) Replace the system board. (n = microprocessor number)

806f020d-0401ffff   Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (Computer HDD0)

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:

1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-0402ffff Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (Computer HDD1)

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-0403ffff Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (Computer HDD2)

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-0404ffff Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (Computer HDD3)

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-0405ffff Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD0)

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-0406ffff **Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD1)**

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-0407ffff **Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD2)**

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-0408ffff **Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD3)**

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-0409ffff **Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD4)**

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1. Run the hard disk drive diagnostic test on drive n.
2. Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3. Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-040affff   Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1.   Run the hard disk drive diagnostic test on drive n.
2.   Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3.   Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-040bffff   Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1.   Run the hard disk drive diagnostic test on drive n.
2.   Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3.   Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f020d-040cffff   Failure Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected an Array Failure is Predicted.

Severity: Warning

Alert Category: System - Predicted Failure

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0168

SNMP Trap ID: 27

Automatically notify Support: Yes

User response:
1.   Run the hard disk drive diagnostic test on drive n.
2.   Reseat the following components: a. Hard disk drive b. Cable from the system board to the backplane.
3.   Replace the following components one at a time, in the order shown, restarting the server each time: a. Hard disk drive. b. Cable from the system board to the backplane. c. Hard disk drive backplane. (n = hard disk drive number)

806f0223-2101ffff   Powering off system [ComputerSystemElementName] initiated by [WatchdogElementName]. (IPMI Watchdog)

Explanation: This message is for the use case when an implementation has detected a Poweroff by Watchdog has occurred.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0372

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f030c-2001ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

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CIM Information: **Prefix:** PLAT and **ID:** 0136

SNMP Trap ID: 41

Automatically notify Support: No

User response: Note: Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Make sure that the DIMMs are firmly seated and no foreign material is found in the DIMM connector. Then, retry with the same DIMM.
3. If the problem is related to a DIMM, replace the failing DIMM indicated by the error LEDs.
4. If the problem occurs on the same DIMM connector, swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
5. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
6. (Trained service technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
7. (Trained service technician only) If the problem is related to microprocessor socket pins, replace the system board.

806f030c-2002ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0136

SNMP Trap ID: 41

Automatically notify Support: No

User response: Note: Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Make sure that the DIMMs are firmly seated and no foreign material is found in the DIMM connector. Then, retry with the same DIMM.
3. If the problem is related to a DIMM, replace the failing DIMM indicated by the error LEDs.
4. If the problem occurs on the same DIMM connector, swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
5. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
6. (Trained service technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
7. (Trained service technician only) If the problem is related to microprocessor socket pins, replace the system board.

806f030c-2003ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0136

SNMP Trap ID: 41

Automatically notify Support: No

User response: Note: Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Make sure that the DIMMs are firmly seated and no foreign material is found in the DIMM connector. Then, retry with the same DIMM.
3. If the problem is related to a DIMM, replace the failing DIMM indicated by the error LEDs.
4. If the problem occurs on the same DIMM connector, swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
5. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM

connector. If the connector contains any foreign material or is damaged, replace the system board.

6. (Trained service technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

7. (Trained service technician only) If the problem is related to microprocessor socket pins, replace the system board.

806f030c-2004ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0136

SNMP Trap ID: 41

Automatically notify Support: No

User response: Note: Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Make sure that the DIMMs are firmly seated and no foreign material is found in the DIMM connector. Then, retry with the same DIMM.

3. If the problem is related to a DIMM, replace the failing DIMM indicated by the error LEDs.

4. If the problem occurs on the same DIMM connector, swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.

5. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

6. (Trained service technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

7. (Trained service technician only) If the problem is related to microprocessor socket pins, replace the system board.

806f030c-2005ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0136

SNMP Trap ID: 41

Automatically notify Support: No

User response: Note: Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.

2. Make sure that the DIMMs are firmly seated and no foreign material is found in the DIMM connector. Then, retry with the same DIMM.

3. If the problem is related to a DIMM, replace the failing DIMM indicated by the error LEDs.

4. If the problem occurs on the same DIMM connector, swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.

5. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

6. (Trained service technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

7. (Trained service technician only) If the problem is related to microprocessor socket pins, replace the system board.

806f030c-2006ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0136

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SNMP Trap ID: 41

Automatically notify Support: No

User response: Note: Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Make sure that the DIMMs are firmly seated and no foreign material is found in the DIMM connector. Then, retry with the same DIMM.
3. If the problem is related to a DIMM, replace the failing DIMM indicated by the error LEDs.
4. If the problem occurs on the same DIMM connector, swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
5. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
6. (Trained service technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
7. (Trained service technician only) If the problem is related to microprocessor socket pins, replace the system board.

806f030c-2007ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0136

SNMP Trap ID: 41

Automatically notify Support: No

User response: Note: Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Make sure that the DIMMs are firmly seated and no foreign material is found in the DIMM connector. Then, retry with the same DIMM.

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3. If the problem is related to a DIMM, replace the failing DIMM indicated by the error LEDs.
4. If the problem occurs on the same DIMM connector, swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
5. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
6. (Trained service technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
7. (Trained service technician only) If the problem is related to microprocessor socket pins, replace the system board.

806f030c-2008ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0136

SNMP Trap ID: 41

Automatically notify Support: No

User response: Note: Each time you install or remove a DIMM, you must disconnect the server from the power source; then, wait 10 seconds before restarting the server.

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Make sure that the DIMMs are firmly seated and no foreign material is found in the DIMM connector. Then, retry with the same DIMM.
3. If the problem is related to a DIMM, replace the failing DIMM indicated by the error LEDs.
4. If the problem occurs on the same DIMM connector, swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
5. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

6. (Trained service technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

7. (Trained service technician only) If the problem is related to microprocessor socket pins, replace the system board.

806f0313-1701ffff   A software NMI has occurred on system [ComputerSystemElementName]. (NMI State)

Explanation: This message is for the use case when an implementation has detected a Software NMI.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0228

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1. Check the device driver.
2. Reinstall the device driver.
3. Update all device drivers to the latest level.
4. Update the firmware (UEFI and IMM).

806f0323-2101ffff   Power cycle of system [ComputerSystemElementName] initiated by watchdog [WatchdogElementName]. (IPMI Watchdog)

Explanation: This message is for the use case when an implementation has detected a Power Cycle by Watchdog occurred.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0374

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f040c-2001ffff   [PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:
1. Make sure the DIMM is installed correctly.
2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.
3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f040c-2002ffff   [PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:
1. Make sure the DIMM is installed correctly.
2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.
3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f040c-2003ffff   [PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

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Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:

1. Make sure the DIMM is installed correctly.

2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.

3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f040c-2004ffff   [PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:

1. Make sure the DIMM is installed correctly.

2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.

3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f040c-2005ffff   [PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:

1. Make sure the DIMM is installed correctly.

2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.

3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f040c-2006ffff   [PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:

1. Make sure the DIMM is installed correctly.

2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.

3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f040c-2007ffff   [PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:
1. Make sure the DIMM is installed correctly.
2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.
3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f040c-2008ffff **[PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (DIMM 8)**

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:
1. Make sure the DIMM is installed correctly.
2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.
3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f040c-2581ffff **[PhysicalMemoryElementName] Disabled on Subsystem [MemoryElementName]. (All DIMMS)**

Explanation: This message is for the use case when an implementation has detected that Memory has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0131

SNMP Trap ID:

Automatically notify Support: No

User response:
1. Make sure the DIMM is installed correctly.
2. If the DIMM was disabled because of a memory fault (memory uncorrectable error or memory logging limit reached), follow the suggested actions for that error event and restart the server.
3. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory event. If no memory fault is recorded in the logs and no DIMM connector error LED is lit, you can re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

806f0413-2582ffff **A PCI PERR has occurred on system [ComputerSystemElementName]. (PCIs)**

Explanation: This message is for the use case when an implementation has detected a PCI PERR.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0232

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1. Check the PCI LED.
2. Reseat the affected adapters and riser cards.
3. Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4. Remove both adapters.
5. Replace the PCIe adapters.
6. Replace the riser card.

806f0507-0301ffff **[ProcessorElementName] has a Configuration Mismatch. (CPU 1)**

Explanation: This message is for the use case when an implementation has detected a Processor Configuration Mismatch has occurred.

Severity: Error

Alert Category: Critical - CPU

806f0507-0302ffff • 806f050c-2001ffff

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0062

SNMP Trap ID: 40

Automatically notify Support: No

User response:

1. Check the CPU LED. See more information about the CPU LED in Light path diagnostics.
2. Check for a server firmware update. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
3. Make sure that the installed microprocessors are compatible with each other.
4. (Trained technician only) Reseat microprocessor n.
5. (Trained technician only) Replace microprocessor n. (n = microprocessor number)

806f0507-0302ffff **[ProcessorElementName] has a Configuration Mismatch. (CPU 2)**

Explanation: This message is for the use case when an implementation has detected a Processor Configuration Mismatch has occurred.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0062

SNMP Trap ID: 40

Automatically notify Support: No

User response:

1. Check the CPU LED. See more information about the CPU LED in Light path diagnostics.
2. Check for a server firmware update. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
3. Make sure that the installed microprocessors are compatible with each other.
4. (Trained technician only) Reseat microprocessor n.
5. (Trained technician only) Replace microprocessor n. (n = microprocessor number)

806f0507-2584ffff **[ProcessorElementName] has a Configuration Mismatch. (All CPUs)**

Explanation: This message is for the use case when an implementation has detected a Processor Configuration Mismatch has occurred.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0062

SNMP Trap ID: 40

Automatically notify Support: No

User response:

1. Check the CPU LED. See more information about the CPU LED in Light path diagnostics.
2. Check for a server firmware update. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
3. Make sure that the installed microprocessors are compatible with each other.
4. (Trained technician only) Reseat microprocessor n.
5. (Trained technician only) Replace microprocessor n. (n = microprocessor number)

806f050c-2001ffff **Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 1)**

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.

5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

6. (Trained technician only) Replace the affected microprocessor.

806f050c-2002ffff   Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.

806f050c-2003ffff   Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.

806f050c-2004ffff   Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.

6. (Trained technician only) Replace the affected microprocessor.

806f050c-2005ffff   Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.

806f050c-2006ffff   Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.

806f050c-2007ffff   Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.

806f050c-2008ffff   Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:
1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.

806f050c-2581ffff   Memory Logging Limit Reached for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (All DIMMS)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Reached.

Severity: Warning

Alert Category: Warning - Memory

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0144

SNMP Trap ID: 43

Automatically notify Support: Yes

User response:

1. Check the IBM support website for an applicable retain tip or firmware update that applies to this memory error.
2. Swap the affected DIMMs (as indicated by the error LEDs on the system board or the event logs) to a different memory channel or microprocessor.
3. If the error still occurs on the same DIMM, replace the affected DIMM.
4. (Trained technician only) If the problem occurs on the same DIMM connector, check the DIMM connector. If the connector contains any foreign material or is damaged, replace the system board.
5. (Trained technician only) Remove the affected microprocessor and check the microprocessor socket pins for any damaged pins. If a damage is found, replace the system board.
6. (Trained technician only) Replace the affected microprocessor.

806f050d-0401ffff   Array [ComputerSystemElementName] is in critical condition. (Computer HDD0)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-0402ffff   Array [ComputerSystemElementName] is in critical condition. (Computer HDD1)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0174

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SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-0403ffff   Array [ComputerSystemElementName] is in critical condition. (Computer HDD2)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-0404ffff   Array [ComputerSystemElementName] is in critical condition. (Computer HDD3)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:

1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-0405ffff   Array [ComputerSystemElementName] is in critical condition. (1U Storage HDD0)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-0406ffff   Array [ComputerSystemElementName] is in critical condition. (1U Storage HDD1)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.

3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-0407ffff   Array [ComputerSystemElementName] is in critical condition. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-0408ffff   Array [ComputerSystemElementName] is in critical condition. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.

6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-0409ffff   Array [ComputerSystemElementName] is in critical condition. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-040affff   Array [ComputerSystemElementName] is in critical condition. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-040bffff   Array [ComputerSystemElementName] is in critical condition. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f050d-040cffff   Array [ComputerSystemElementName] is in critical condition. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected that an Array is Critical.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0174

SNMP Trap ID: 5

Automatically notify Support: No

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Check backplane cable connection.
5. Replace the RAID adapter.
6. Replace the hard disk drive that is indicated by a lit status LED.

806f0513-2582ffff   A PCI SERR has occurred on system [ComputerSystemElementName]. (PCIs)

Explanation: This message is for the use case when an implementation has detected a PCI SERR.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0234

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1. Check the PCI LED.
2. Reseat the affected adapters and riser card.
3. Update the server firmware (UEFI and IMM) and adapter firmware. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
4. Make sure that the adapter is supported. For a list of supported optional devices, see http://www.ibm.com/systems/info/x86servers/serverproven/compat/us/.
5. Remove both adapters.
6. Replace the PCIe adapters.
7. Replace the riser card.

806f052b-2101ffff   Invalid or Unsupported firmware or software was detected on system [ComputerSystemElementName]. (IMM2 FW Failover)

Explanation: This message is for the use case when an implementation has detected an Invalid/Unsupported Firmware/Software Version.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0446

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1. Make sure the server meets the minimum configuration to start (see Power-supply LEDs).
2. Recover the server firmware from the backup page by restarting the server.
3. Update the server firmware to the latest level (see Updating the firmware). Important: Some cluster solutions require specific code levels or coordinated

code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

4. Remove components one at a time, restarting the server each time, to see if the problem goes away.

5. If the problem remains, (trained service technician) replace the system board.

806f0607-0301ffff   An SM BIOS Uncorrectable CPU complex error for [ProcessorElementName] has asserted. (CPU 1)

Explanation: This message is for the use case when an SM BIOS Uncorrectable CPU complex error has asserted.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0816

SNMP Trap ID: 40

Automatically notify Support: No

User response:

1. Make sure that the installed microprocessors are compatible with each other (see Installing a microprocessor and heat sink for information about microprocessor requirements).

2. Update the server firmware to the latest level (see Updating the firmware).

3. (Trained technician only) Replace the incompatible microprocessor.

806f0607-0302ffff   An SM BIOS Uncorrectable CPU complex error for [ProcessorElementName] has asserted. (CPU 2)

Explanation: This message is for the use case when an SM BIOS Uncorrectable CPU complex error has asserted.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0816

SNMP Trap ID: 40

Automatically notify Support: No

User response:

1. Make sure that the installed microprocessors are compatible with each other (see Installing a microprocessor and heat sink for information about microprocessor requirements).

2. Update the server firmware to the latest level (see Updating the firmware).

3. (Trained technician only) Replace the incompatible microprocessor.

806f0607-2584ffff   An SM BIOS Uncorrectable CPU complex error for [ProcessorElementName] has asserted. (All CPUs)

Explanation: This message is for the use case when an SM BIOS Uncorrectable CPU complex error has asserted.

Severity: Error

Alert Category: Critical - CPU

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0816

SNMP Trap ID: 40

Automatically notify Support: No

User response:

1. Make sure that the installed microprocessors are compatible with each other (see Installing a microprocessor and heat sink for information about microprocessor requirements).

2. Update the server firmware to the latest level (see Updating the firmware).

3. (Trained technician only) Replace the incompatible microprocessor.

806f060d-0401ffff   Array [ComputerSystemElementName] has failed. (Computer HDD0)

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:

1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.

2. Make sure that the SAS cable is connected correctly.

3. Replace the SAS cable.

4. Replace the RAID adapter.

5. Replace the hard disk drive that is indicated by a lit status LED.

**806f060d-0402ffff   Array
[ComputerSystemElementName] has
failed. (Computer HDD1)**

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1.   Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2.   Make sure that the SAS cable is connected correctly.
3.   Replace the SAS cable.
4.   Replace the RAID adapter.
5.   Replace the hard disk drive that is indicated by a lit status LED.

**806f060d-0403ffff   Array
[ComputerSystemElementName] has
failed. (Computer HDD2)**

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1.   Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2.   Make sure that the SAS cable is connected correctly.
3.   Replace the SAS cable.
4.   Replace the RAID adapter.
5.   Replace the hard disk drive that is indicated by a lit status LED.

**806f060d-0404ffff   Array
[ComputerSystemElementName] has
failed. (Computer HDD3)**

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1.   Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2.   Make sure that the SAS cable is connected correctly.
3.   Replace the SAS cable.
4.   Replace the RAID adapter.
5.   Replace the hard disk drive that is indicated by a lit status LED.

**806f060d-0405ffff   Array
[ComputerSystemElementName] has
failed. (1U Storage HDD0)**

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1.   Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2.   Make sure that the SAS cable is connected correctly.
3.   Replace the SAS cable.
4.   Replace the RAID adapter.
5.   Replace the hard disk drive that is indicated by a lit status LED.

**806f060d-0406ffff   Array
[ComputerSystemElementName] has
failed. (1U Storage HDD1)**

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Replace the RAID adapter.
5. Replace the hard disk drive that is indicated by a lit status LED.

806f060d-0407ffff   Array [ComputerSystemElementName] has failed. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Replace the RAID adapter.
5. Replace the hard disk drive that is indicated by a lit status LED.

806f060d-0408ffff   Array [ComputerSystemElementName] has failed. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.

2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Replace the RAID adapter.
5. Replace the hard disk drive that is indicated by a lit status LED.

806f060d-0409ffff   Array [ComputerSystemElementName] has failed. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Replace the RAID adapter.
5. Replace the hard disk drive that is indicated by a lit status LED.

806f060d-040affff   Array [ComputerSystemElementName] has failed. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Replace the RAID adapter.
5. Replace the hard disk drive that is indicated by a lit status LED.

806f060d-040bffff **Array [ComputerSystemElementName] has failed. (1U Storage HDD6)**

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Replace the RAID adapter.
5. Replace the hard disk drive that is indicated by a lit status LED.

806f060d-040cffff **Array [ComputerSystemElementName] has failed. (1U Storage HDD7)**

Explanation: This message is for the use case when an implementation has detected that an Array Failed.

Severity: Error

Alert Category: Critical - Hard Disk drive

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0176

SNMP Trap ID: 5

Automatically notify Support: Yes

User response:
1. Make sure that the RAID adapter firmware and hard disk drive firmware are at the latest level.
2. Make sure that the SAS cable is connected correctly.
3. Replace the SAS cable.
4. Replace the RAID adapter.
5. Replace the hard disk drive that is indicated by a lit status LED.

806f070c-2001ffff **Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 1)**

Explanation: This message is for the use case when an implementation has detected a Memory DIMM

configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology.

806f070c-2002ffff **Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 2)**

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology.

806f070c-2003ffff **Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 3)**

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology.

806f070c-2004ffff   Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology.

806f070c-2005ffff   Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology.

806f070c-2006ffff   Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology.

806f070c-2007ffff   Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology.

806f070c-2008ffff   Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology.

806f070c-2581ffff   Configuration Error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (All DIMMS)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has been corrected.

Severity: Error

Alert Category: Critical - Memory

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0126

SNMP Trap ID: 41

Automatically notify Support: No

User response: Make sure that DIMMs are installed in the correct sequence and have the same size, type, speed, and technology. One of the DIMMs :

806f070d-0401ffff **Rebuild in progress for Array in system [ComputerSystemElementName]. (Computer HDD0)**

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-0402ffff **Rebuild in progress for Array in system [ComputerSystemElementName]. (Computer HDD1)**

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-0403ffff **Rebuild in progress for Array in system [ComputerSystemElementName]. (Computer HDD2)**

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-0404ffff **Rebuild in progress for Array in system [ComputerSystemElementName]. (Computer HDD3)**

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-0405ffff **Rebuild in progress for Array in system [ComputerSystemElementName]. (1U Storage HDD0)**

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-0406ffff **Rebuild in progress for Array in system [ComputerSystemElementName]. (1U Storage HDD1)**

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-0407ffff   Rebuild in progress for Array in system [ComputerSystemElementName]. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-0408ffff   Rebuild in progress for Array in system [ComputerSystemElementName]. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-0409ffff   Rebuild in progress for Array in system [ComputerSystemElementName]. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-040affff   Rebuild in progress for Array in system [ComputerSystemElementName]. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-040bffff   Rebuild in progress for Array in system [ComputerSystemElementName]. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f070d-040cffff   Rebuild in progress for Array in system [ComputerSystemElementName]. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild is in Progress.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0178

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f072b-2101ffff   A successful software or firmware change was detected on system [ComputerSystemElementName]. (IMM Promotion/IMM Recovery)

Explanation: This message is for the use case when an implementation has detected a Successful Software or Firmware Change.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0450

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f072b-2201ffff   A successful software or firmware change was detected on system [ComputerSystemElementName]. (Bkup Auto Update)

Explanation: This message is for the use case when an implementation has detected a Successful Software or Firmware Change.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0450

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only. ROM Recovery :

806f0807-0301ffff   [ProcessorElementName] has been Disabled. (CPU 1)

Explanation: This message is for the use case when an implementation has detected a Processor has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0061

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f0807-0302ffff   [ProcessorElementName] has been Disabled. (CPU 2)

Explanation: This message is for the use case when an implementation has detected a Processor has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0061

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f0807-2584ffff   [ProcessorElementName] has been Disabled. (All CPUs)

Explanation: This message is for the use case when an implementation has detected a Processor has been Disabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0061

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only. One of the CPUs :

806f0813-2581ffff   A Uncorrectable Bus Error has occurred on system [ComputerSystemElementName]. (DIMMs)

Explanation: This message is for the use case when an implementation has detected a Bus Uncorrectable Error.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0240

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:

1. Check the system-event log.
2. Check the DIMM error LEDs.
3. Remove the failing DIMM from the system board.
4. Check for a server firmware update. Important: Some cluster solutions require specific code levels

or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

5. Make sure that the installed DIMMs are supported and configured correctly.

6. (Trained technician only) Replace the system board.

806f0813-2582ffff   A Uncorrectable Bus Error has occurred on system [ComputerSystemElementName]. (PCIs)

Explanation: This message is for the use case when an implementation has detected a Bus Uncorrectable Error.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0240

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1. Check the system-event log.
2. Check the PCI LED.
3. Remove the adapter from the indicated PCI slot.
4. Check for a server firmware update. Important: Some cluster solutions require specific code levels or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.
5. (Trained technician only) Replace the system board.

806f0813-2584ffff   A Uncorrectable Bus Error has occurred on system [ComputerSystemElementName]. (CPUs)

Explanation: This message is for the use case when an implementation has detected a Bus Uncorrectable Error.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0240

SNMP Trap ID: 50

Automatically notify Support: Yes

User response:
1. Check the system-event log.
2. (Trained technician only) Remove the failing microprocessor from the system board (see Removing a microprocessor and heat sink).
3. Check for a server firmware update. Important: Some cluster solutions require specific code levels

or coordinated code updates. If the device is part of a cluster solution, verify that the latest level of code is supported for the cluster solution before you update the code.

4. Make sure that the two microprocessors are matching.

5. (Trained technician only) Replace the system board.

806f0823-2101ffff   Watchdog Timer interrupt occurred for [WatchdogElementName]. (IPMI Watchdog)

Explanation: This message is for the use case when an implementation has detected a Watchdog Timer interrupt occurred.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0376

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

806f090c-2001ffff   [PhysicalMemoryElementName] on Subsystem [MemoryElementName] Throttled. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected Memory has been Throttled.

Severity: Warning

Alert Category: System - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0142

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Reseat the DIMM, and then restart the server.
2. Replace DIMM n. (n = DIMM number)

806f090c-2002ffff   [PhysicalMemoryElementName] on Subsystem [MemoryElementName] Throttled. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected Memory has been Throttled.

Severity: Warning

Alert Category: System - Other

Serviceable: Yes

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CIM Information: **Prefix:** PLAT and **ID:** 0142

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Reseat the DIMM, and then restart the server.
2. Replace DIMM n. (n = DIMM number)

806f090c-2003ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] Throttled. (DIMM 3)**

Explanation: This message is for the use case when an implementation has detected Memory has been Throttled.

Severity: Warning

Alert Category: System - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0142

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Reseat the DIMM, and then restart the server.
2. Replace DIMM n. (n = DIMM number)

806f090c-2004ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] Throttled. (DIMM 4)**

Explanation: This message is for the use case when an implementation has detected Memory has been Throttled.

Severity: Warning

Alert Category: System - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0142

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Reseat the DIMM, and then restart the server.
2. Replace DIMM n. (n = DIMM number)

806f090c-2005ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] Throttled. (DIMM 5)**

Explanation: This message is for the use case when an implementation has detected Memory has been Throttled.

Severity: Warning

Alert Category: System - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0142

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Reseat the DIMM, and then restart the server.
2. Replace DIMM n. (n = DIMM number)

806f090c-2006ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] Throttled. (DIMM 6)**

Explanation: This message is for the use case when an implementation has detected Memory has been Throttled.

Severity: Warning

Alert Category: System - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0142

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Reseat the DIMM, and then restart the server.
2. Replace DIMM n. (n = DIMM number)

806f090c-2007ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] Throttled. (DIMM 7)**

Explanation: This message is for the use case when an implementation has detected Memory has been Throttled.

Severity: Warning

Alert Category: System - Other

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0142

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Reseat the DIMM, and then restart the server.
2. Replace DIMM n. (n = DIMM number)

806f090c-2008ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] Throttled. (DIMM 8)**

Explanation: This message is for the use case when an

implementation has detected Memory has been Throttled.

Severity: Warning

Alert Category: System - Other

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0142

SNMP Trap ID: 22

Automatically notify Support: No

User response:
1. Reseat the DIMM, and then restart the server.
2. Replace DIMM n. (n = DIMM number)

806f0a07-0301ffff [ProcessorElementName] is operating in a Degraded State. (CPU 1)

Explanation: This message is for the use case when an implementation has detected a Processor is running in the Degraded state.

Severity: Warning

Alert Category: Warning - CPU

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0038

SNMP Trap ID: 42

Automatically notify Support: No

User response:
1. Make sure that the fans are operating, that there are no obstructions to the airflow (front and rear of the server), that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2. Check the ambient temperature. You must be operating within the specifications.
3. Make sure that the heat sink for microprocessor n is installed correctly.
4. (Trained technician only) Replace microprocessor n. (n = microprocessor number)

806f0a07-0302ffff [ProcessorElementName] is operating in a Degraded State. (CPU 2)

Explanation: This message is for the use case when an implementation has detected a Processor is running in the Degraded state.

Severity: Warning

Alert Category: Warning - CPU

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0038

SNMP Trap ID: 42

Automatically notify Support: No

User response:
1. Make sure that the fans are operating, that there are no obstructions to the airflow (front and rear of the server), that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2. Check the ambient temperature. You must be operating within the specifications.
3. Make sure that the heat sink for microprocessor n is installed correctly.
4. (Trained technician only) Replace microprocessor n. (n = microprocessor number)

806f0a0c-2001ffff An Over-Temperature Condition has been detected on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Detected.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: Prefix: PLAT and **ID:** 0146

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure that the fans are operating, that there are no obstructions to the airflow, that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2. Make sure that ambient temperature is within the specifications.
3. If a fan has failed, complete the action for a fan failure.
4. Replace DIMM n. (n = DIMM number)

806f0a0c-2002ffff An Over-Temperature Condition has been detected on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Detected.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

806f0a0c-2003ffff • 806f0a0c-2006ffff

CIM Information: **Prefix:** PLAT and **ID:** 0146

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure that the fans are operating, that there are no obstructions to the airflow, that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2. Make sure that ambient temperature is within the specifications.
3. If a fan has failed, complete the action for a fan failure.
4. Replace DIMM n. (n = DIMM number)

806f0a0c-2003ffff   An Over-Temperature Condition has been detected on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Detected.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0146

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure that the fans are operating, that there are no obstructions to the airflow, that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2. Make sure that ambient temperature is within the specifications.
3. If a fan has failed, complete the action for a fan failure.
4. Replace DIMM n. (n = DIMM number)

806f0a0c-2004ffff   An Over-Temperature Condition has been detected on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Detected.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0146

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure that the fans are operating, that there are no obstructions to the airflow, that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2. Make sure that ambient temperature is within the specifications.
3. If a fan has failed, complete the action for a fan failure.
4. Replace DIMM n. (n = DIMM number)

806f0a0c-2005ffff   An Over-Temperature Condition has been detected on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Detected.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: **Prefix:** PLAT and **ID:** 0146

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1. Make sure that the fans are operating, that there are no obstructions to the airflow, that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2. Make sure that ambient temperature is within the specifications.
3. If a fan has failed, complete the action for a fan failure.
4. Replace DIMM n. (n = DIMM number)

806f0a0c-2006ffff   An Over-Temperature Condition has been detected on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Detected.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: Prefix: PLAT and ID: 0146

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1.   Make sure that the fans are operating, that there are no obstructions to the airflow, that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2.   Make sure that ambient temperature is within the specifications.
3.   If a fan has failed, complete the action for a fan failure.
4.   Replace DIMM n. (n = DIMM number)

806f0a0c-2007ffff   An Over-Temperature Condition has been detected on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Detected.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: Prefix: PLAT and ID: 0146

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1.   Make sure that the fans are operating, that there are no obstructions to the airflow, that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2.   Make sure that ambient temperature is within the specifications.
3.   If a fan has failed, complete the action for a fan failure.
4.   Replace DIMM n. (n = DIMM number)

806f0a0c-2008ffff   An Over-Temperature Condition has been detected on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Detected.

Severity: Error

Alert Category: Critical - Temperature

Serviceable: Yes

CIM Information: Prefix: PLAT and ID: 0146

SNMP Trap ID: 0

Automatically notify Support: No

User response:
1.   Make sure that the fans are operating, that there are no obstructions to the airflow, that the air baffles are in place and correctly installed, and that the server cover is installed and completely closed.
2.   Make sure that ambient temperature is within the specifications.
3.   If a fan has failed, complete the action for a fan failure.
4.   Replace DIMM n. (n = DIMM number)

806f0a13-0301ffff   A Fatal Bus Error has occurred on system [ComputerSystemElementName]. (CPU 1 PECI)

Explanation: This message is for the use case when an implementation has detected a Bus Fatal Error.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: Prefix: PLAT and ID: 0244

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1.   Reseat the microprocessor, and then restart the server.
2.   Replace microprocessor n. (n = microprocessor number)

806f0a13-0302ffff   A Fatal Bus Error has occurred on system [ComputerSystemElementName]. (CPU 2 PECI)

Explanation: This message is for the use case when an implementation has detected a Bus Fatal Error.

Severity: Error

Alert Category: Critical - Other

Serviceable: Yes

CIM Information: Prefix: PLAT and ID: 0244

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1.   Reseat the microprocessor, and then restart the server.
2.   Replace microprocessor n. (n = microprocessor number)

81010002-0701ffff   Numeric sensor [NumericSensorElementName] going low (lower non-critical) has deasserted. (CMOS Battery)

Explanation: This message is for the use case when an implementation has detected a Lower Non-critical sensor going low has deasserted.

Severity: Info

Alert Category: Warning - Voltage

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0477

SNMP Trap ID: 13

Automatically notify Support: No

User response: No action; information only.

81010202-0701ffff   Numeric sensor [NumericSensorElementName] going low (lower critical) has deasserted. (CMOS Battery)

Explanation: This message is for the use case when an implementation has detected a Lower Critical sensor going low has deasserted.

Severity: Info

Alert Category: Critical - Voltage

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0481

SNMP Trap ID: 1

Automatically notify Support: No

User response: No action; information only. SysBrd 12V : SysBrd 3.3V : SysBrd 5V :

81010701-0701ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-0702ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (DIMM AB Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-0703ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (CPU1 VR Temp VCO)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-0704ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (HDD Inlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-1001ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (PCI Riser 1 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-1002ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (PCI Riser 2 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-1501ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (PIB Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-1502ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (GPU Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-1a01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (HDD Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-2c01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (Mezz Card Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010701-2d01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-critical) has deasserted. (PCH Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-critical sensor going high has deasserted.

Severity: Info

Alert Category: Warning - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0491

SNMP Trap ID: 12

Automatically notify Support: No

User response: No action; information only.

81010901-0701ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-0702ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (DIMM AB Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-0703ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (CPU1 VR Temp VCO)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-0704ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (HDD Inlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-1001ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (PCI Riser 1 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-1002ffff Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (PCI Riser 2 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-1501ffff Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (PIB Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-1502ffff Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (GPU Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-1a01ffff Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (HDD Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-2c01ffff Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (Mezz Card Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010901-2d01ffff Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (PCH Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0495

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010902-0701ffff   Numeric sensor [NumericSensorElementName] going high (upper critical) has deasserted. (SysBrd 12V)

Explanation: This message is for the use case when an implementation has detected an Upper Critical sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Voltage

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0495

SNMP Trap ID: 1

Automatically notify Support: No

User response: No action; information only. SysBrd 3.3V : SysBrd 5V :

81010b01-0701ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-0702ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (DIMM AB Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-0703ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (CPU1 VR Temp VCO)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-0704ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (HDD Inlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-1001ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (PCI Riser 1 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-1002ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (PCI Riser 2 Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-1501ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (PIB Ambient Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-1502ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (GPU Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-1a01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (HDD Outlet Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-2c01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (Mezz Card Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81010b01-2d01ffff   Numeric sensor [NumericSensorElementName] going high (upper non-recoverable) has deasserted. (PCH Temp)

Explanation: This message is for the use case when an implementation has detected an Upper Non-recoverable sensor going high has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0499

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81030006-2101ffff   Sensor [SensorElementName] has asserted. (Sig Verify Fail)

Explanation: This message is for the use case when an implementation has detected a Sensor has asserted.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0508

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

81030012-0601ffff   Sensor [SensorElementName] has asserted. (SMM Mode/SMM Monitor)

Explanation: This message is for the use case when an implementation has detected a Sensor has asserted.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0508

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

81030012-2301ffff   Sensor [SensorElementName] has asserted. (OS RealTime Mod)

Explanation: This message is for the use case when an implementation has detected a Sensor has asserted.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0508

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

8107010f-2201ffff   Sensor [SensorElementName] has deasserted the transition from normal to non-critical state. (GPT Status)

Explanation: This message is for the use case when an implementation has detected that a Sensor has deasserted a transition to non-critical from normal.

Severity: Info

Alert Category: Warning - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0521

SNMP Trap ID: 60

Automatically notify Support: No

User response: No action; information only.

8107010f-2582ffff   Sensor [SensorElementName] has deasserted the transition from normal to non-critical state. (I/O Resources)

Explanation: This message is for the use case when an implementation has detected that a Sensor has deasserted a transition to non-critical from normal.

Severity: Info

Alert Category: Warning - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0521

SNMP Trap ID: 60

Automatically notify Support: No

User response: No action; information only.

81070128-2e01ffff   Sensor [SensorElementName] has deasserted the transition from normal to non-critical state. (ME Recovery)

Explanation: This message is for the use case when an implementation has detected that a Sensor has deasserted a transition to non-critical from normal.

Severity: Info

Alert Category: Warning - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0521

SNMP Trap ID: 60

Automatically notify Support: No

User response: No action; information only.

81070201-0301ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (CPU 1 OverTemp)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0523

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070201-0302ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (CPU 2 OverTemp)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070201-1101ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (PCI 1 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070201-1102ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (PCI 2 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070201-1103ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (PCI 3 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070201-1104ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (PCI 4 Temp)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070202-0701ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (SysBrd Vol Fault)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Voltage

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 1

Automatically notify Support: No

User response: No action; information only.

81070202-1501ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (PIB Fault)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Voltage

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 1

Automatically notify Support: No

User response: No action; information only.

81070202-1502ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (PDB Fault)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Voltage

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 1

Automatically notify Support: No

User response: No action; information only.

8107020f-2201ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (TXT ACM Module)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

8107020f-2582ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (I/O Resources)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

81070214-2201ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (TPM Lock)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

81070219-0701ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (SysBrd Fault)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

8107021b-0301ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (CPU 1 QPILinkErr)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

8107021b-0302ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (CPU 2 QPILinkErr)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

81070228-2e01ffff   Sensor [SensorElementName] has transitioned to a less severe state from critical. (IPMB IO Error)

Explanation: This message is for the use case when an implementation has detected a Sensor transition to less severe from critical.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0523

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only. ME Error : ME Flash Error :

81070301-0301ffff   Sensor [SensorElementName] has deasserted the transition to non-recoverable from a less severe state. (CPU 1 OverTemp)

Explanation: This message is for the use case when an implementation has detected that the Sensor transition to non-recoverable from less severe has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0525

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070301-0302ffff   Sensor [SensorElementName] has deasserted the transition to non-recoverable from a less severe state. (CPU 2 OverTemp)

Explanation: This message is for the use case when an implementation has detected that the Sensor transition to non-recoverable from less severe has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0525

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070301-1101ffff   Sensor [SensorElementName] has deasserted the transition to non-recoverable from a less severe state. (PCI 1 Temp)

Explanation: This message is for the use case when an implementation has detected that the Sensor transition to non-recoverable from less severe has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0525

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070301-1102ffff Sensor [SensorElementName] has deasserted the transition to non-recoverable from a less severe state. (PCI 2 Temp)

Explanation: This message is for the use case when an implementation has detected that the Sensor transition to non-recoverable from less severe has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0525

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070301-1103ffff Sensor [SensorElementName] has deasserted the transition to non-recoverable from a less severe state. (PCI 3 Temp)

Explanation: This message is for the use case when an implementation has detected that the Sensor transition to non-recoverable from less severe has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0525

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

81070301-1104ffff Sensor [SensorElementName] has deasserted the transition to non-recoverable from a less severe state. (PCI 4 Temp)

Explanation: This message is for the use case when an implementation has detected that the Sensor transition to non-recoverable from less severe has deasserted.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0525

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

810b010c-2581ffff Redundancy Lost for [RedundancySetElementName] has deasserted. (Backup Memory)

Explanation: This message is for the use case when Redundacy Lost has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0803

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

810b030c-2581ffff Non-redundant:Sufficient Resources from Redundancy Degraded or Fully Redundant for [RedundancySetElementName] has deasserted. (Backup Memory)

Explanation: This message is for the use case when a Redundancy Set has transitioned from Non-redundant:Sufficient Resources.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0807

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

810b050c-2581ffff Non-redundant:Insufficient Resources for [RedundancySetElementName] has deasserted. (Backup Memory)

Explanation: This message is for the use case when a Redundancy Set has transitioned from Non-redundant:Insufficient Resources.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0811

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f0007-0301ffff   [ProcessorElementName] has Recovered from IERR. (CPU 1)

Explanation: This message is for the use case when an implementation has detected a Processor Recovered - IERR Condition.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0043

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only.

816f0007-0302ffff   [ProcessorElementName] has Recovered from IERR. (CPU 2)

Explanation: This message is for the use case when an implementation has detected a Processor Recovered - IERR Condition.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0043

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only.

816f0009-1301ffff   [PowerSupplyElementName] has been turned on. (Host Power)

Explanation: This message is for the use case when an implementation has detected a Power Unit that has been Enabled.

Severity: Info

Alert Category: System - Power On

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0107

SNMP Trap ID: 24

Automatically notify Support: No

User response: No action; information only.

816f000f-2201ffff   The System [ComputerSystemElementName] has detected a POST Error deassertion. (ABR Status)

Explanation: This message is for the use case when an

implementation has detected that Post Error has deasserted.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0185

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only. Firmware Error : Sys Boot Status :

816f0013-1701ffff   System [ComputerSystemElementName] has recovered from a diagnostic interrupt. (NMI State)

Explanation: This message is for the use case when an implementation has detected a recovery from a Front Panel NMI / Diagnostic Interrupt

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0223

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0021-2201ffff   Fault condition removed on slot [PhysicalConnectorElementName] on system [ComputerSystemElementName]. (No Op ROM Space)

Explanation: This message is for the use case when an implementation has detected a Fault condition in a slot has been removed.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0331

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0021-2582ffff   Fault condition removed on slot [PhysicalConnectorElementName] on system [ComputerSystemElementName]. (All PCI Error)

Explanation: This message is for the use case when an

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implementation has detected a Fault condition in a slot has been removed.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0331

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only. One of PCI Error :

816f0021-2c01ffff   **Fault condition removed on slot [PhysicalConnectorElementName] on system [ComputerSystemElementName]. (Mezz Error)**

Explanation: This message is for the use case when an implementation has detected a Fault condition in a slot has been removed.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0331

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0021-3001ffff   **Fault condition removed on slot [PhysicalConnectorElementName] on system [ComputerSystemElementName]. (PCI 1)**

Explanation: This message is for the use case when an implementation has detected a Fault condition in a slot has been removed.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0331

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0021-3002ffff   **Fault condition removed on slot [PhysicalConnectorElementName] on system [ComputerSystemElementName]. (PCI 2)**

Explanation: This message is for the use case when an

implementation has detected a Fault condition in a slot has been removed.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0331

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0021-3003ffff   **Fault condition removed on slot [PhysicalConnectorElementName] on system [ComputerSystemElementName]. (PCI 3)**

Explanation: This message is for the use case when an implementation has detected a Fault condition in a slot has been removed.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0331

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0021-3004ffff   **Fault condition removed on slot [PhysicalConnectorElementName] on system [ComputerSystemElementName]. (PCI 4)**

Explanation: This message is for the use case when an implementation has detected a Fault condition in a slot has been removed.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0331

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0028-2101ffff   **Sensor [SensorElementName] has returned to normal on management system [ComputerSystemElementName]. (TPM Cmd Failures)**

Explanation: This message is for the use case when an implementation has detected a Sensor returned from

degraded/unavailable/failure.

Severity: Info

Alert Category: Warning - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0399

SNMP Trap ID: 60

Automatically notify Support: No

User response: No action; information only.

816f0107-0301ffff An Over-Temperature Condition has been removed on [ProcessorElementName]. (CPU 1)

Explanation: This message is for the use case when an implementation has detected a Over-Temperature Condition has been Removed for Processor.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0037

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0107-0302ffff An Over-Temperature Condition has been removed on [ProcessorElementName]. (CPU 2)

Explanation: This message is for the use case when an implementation has detected a Over-Temperature Condition has been Removed for Processor.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0037

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f010c-2001ffff Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f010c-2002ffff Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f010c-2003ffff Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f010c-2004ffff Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f010c-2005ffff **Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 5)**

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f010c-2006ffff **Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 6)**

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f010c-2007ffff **Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 7)**

Explanation: This message is for the use case when an

implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f010c-2008ffff **Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 8)**

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f010c-2581ffff **Uncorrectable error recovery detected for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (All DIMMS)**

Explanation: This message is for the use case when an implementation has detected a Memory uncorrectable error recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0139

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only. One of the DIMMs :

816f010d-0401ffff   The Drive [StorageVolumeElementName] has been enabled. (Computer HDD0)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-0402ffff   The Drive [StorageVolumeElementName] has been enabled. (Computer HDD1)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-0403ffff   The Drive [StorageVolumeElementName] has been enabled. (Computer HDD2)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-0404ffff   The Drive [StorageVolumeElementName] has been enabled. (Computer HDD3)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-0405ffff   The Drive [StorageVolumeElementName] has been enabled. (1U Storage HDD0)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-0406ffff   The Drive [StorageVolumeElementName] has been enabled. (1U Storage HDD1)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-0407ffff   The Drive [StorageVolumeElementName] has been enabled. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-0408ffff   The Drive [StorageVolumeElementName] has been enabled. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-0409ffff   The Drive [StorageVolumeElementName] has been enabled. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-040affff   The Drive [StorageVolumeElementName] has been enabled. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-040bffff   The Drive [StorageVolumeElementName] has been enabled. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010d-040cffff   The Drive [StorageVolumeElementName] has been enabled. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected a Drive was Enabled.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0167

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f010f-2201ffff   The System [ComputerSystemElementName] has recovered from a firmware hang. (Firmware Error)

Explanation: This message is for the use case when an implementation has recovered from a System Firmware Hang.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0187

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0113-0301ffff   System [ComputerSystemElementName] has recovered from a bus timeout. (CPU 1 PECI)

Explanation: This message is for the use case when an implemenation has detected that a system has recovered from a Bus Timeout.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0225

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1.   (Trained technician only) Replace microprocessor n (see Removing a microprocessor and heat sink and Replacing a microprocessor and heat sink).
2.   If the problem persists and there is no other CPU with the same error indication, replace the system board.
3.   (Trained technician only) Replace the system board (see Removing the system board and Installing the system board). (n = microprocessor number)

816f0113-0302ffff   System [ComputerSystemElementName] has recovered from a bus timeout. (CPU 2 PECI)

Explanation: This message is for the use case when an implemenation has detected that a system has recovered from a Bus Timeout.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0225

SNMP Trap ID: 50

Automatically notify Support: No

User response:
1.   (Trained technician only) Replace microprocessor n (see Removing a microprocessor and heat sink and Replacing a microprocessor and heat sink).
2.   If the problem persists and there is no other CPU with the same error indication, replace the system board.
3.   (Trained technician only) Replace the system board (see Removing the system board and Installing the system board). (n = microprocessor number)

816f0125-1001ffff   [ManagedElementName] detected as present. (PCI Riser 1)

Explanation: This message is for the use case when an implementation has detected a Managed Element is now Present.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0390

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f0125-1002ffff   [ManagedElementName] detected as present. (PCI Riser 2)

Explanation: This message is for the use case when an implementation has detected a Managed Element is now Present.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0390

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f0125-1f01ffff   [ManagedElementName] detected as present. (PDB Cable)

Explanation: This message is for the use case when an implementation has detected a Managed Element is now Present.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0390

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f0125-2c01ffff   [ManagedElementName] detected as present. (Mezz Card)

Explanation: This message is for the use case when an implementation has detected a Managed Element is now Present.

Severity: Info

816f0207-0301ffff • 816f020d-0403ffff

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0390

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f0207-0301ffff **[ProcessorElementName] has Recovered from FRB1/BIST condition. (CPU 1)**

Explanation: This message is for the use case when an implementation has detected a Processor Recovered - FRB1/BIST condition.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0045

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only.

816f0207-0302ffff **[ProcessorElementName] has Recovered from FRB1/BIST condition. (CPU 2)**

Explanation: This message is for the use case when an implementation has detected a Processor Recovered - FRB1/BIST condition.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0045

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only.

816f0207-2584ffff **[ProcessorElementName] has Recovered from FRB1/BIST condition. (All CPUs)**

Explanation: This message is for the use case when an implementation has detected a Processor Recovered - FRB1/BIST condition.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0045

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only. One of the CPUs :

816f020d-0401ffff **Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (Computer HDD0)**

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-0402ffff **Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (Computer HDD1)**

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-0403ffff **Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (Computer HDD2)**

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-0404ffff   Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (Computer HDD3)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-0405ffff   Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD0)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-0406ffff   Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD1)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-0407ffff   Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-0408ffff   Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-0409ffff   Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-040affff Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-040bffff Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f020d-040cffff Failure no longer Predicted on drive [StorageVolumeElementName] for array [ComputerSystemElementName]. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected an Array Failure is no longer Predicted.

Severity: Info

Alert Category: System - Predicted Failure

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0169

SNMP Trap ID: 27

Automatically notify Support: No

User response: No action; information only.

816f030c-2001ffff Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has recovered. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0137

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f030c-2002ffff Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has recovered. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0137

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f030c-2003ffff Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has recovered. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0137

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f030c-2004ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has recovered. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0137

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f030c-2005ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has recovered. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0137

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f030c-2006ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has recovered. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0137

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f030c-2007ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has recovered. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0137

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f030c-2008ffff   Scrub Failure for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has recovered. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected a Memory Scrub failure recovery.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0137

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f0313-1701ffff   System [ComputerSystemElementName] has recovered from an NMI. (NMI State)

Explanation: This message is for the use case when an implementation has detected a Software NMI has been Recovered from.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0230

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

Appendix A. Integrated Management Module II (IMM2) error messages   **289**

816f040c-2001ffff   [PhysicalMemoryElementName] Enabled on Subsystem [MemoryElementName]. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f040c-2002ffff   [PhysicalMemoryElementName] Enabled on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f040c-2003ffff   [PhysicalMemoryElementName] Enabled on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f040c-2004ffff   [PhysicalMemoryElementName] Enabled on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f040c-2005ffff   [PhysicalMemoryElementName] Enabled on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f040c-2006ffff   [PhysicalMemoryElementName] Enabled on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

**816f040c-2007ffff   [PhysicalMemoryElementName]
Enabled on Subsystem
[MemoryElementName]. (DIMM 7)**

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

**816f040c-2008ffff   [PhysicalMemoryElementName]
Enabled on Subsystem
[MemoryElementName]. (DIMM 8)**

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

**816f040c-2581ffff   [PhysicalMemoryElementName]
Enabled on Subsystem
[MemoryElementName]. (All DIMMS)**

Explanation: This message is for the use case when an implementation has detected that Memory has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0130

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only. One of the DIMMs :

**816f0413-2582ffff   A PCI PERR recovery has occurred
on system
[ComputerSystemElementName]. (PCIs)**

Explanation: This message is for the use case when an implementation has detected a PCI PERR recovered.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0233

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

**816f0507-0301ffff   [ProcessorElementName] has
Recovered from a Configuration
Mismatch. (CPU 1)**

Explanation: This message is for the use case when an implementation has Recovered from a Processor Configuration Mismatch.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0063

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only.

**816f0507-0302ffff   [ProcessorElementName] has
Recovered from a Configuration
Mismatch. (CPU 2)**

Explanation: This message is for the use case when an implementation has Recovered from a Processor Configuration Mismatch.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0063

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only.

816f0507-2584ffff   [ProcessorElementName] has Recovered from a Configuration Mismatch. (All CPUs)

Explanation: This message is for the use case when an implementation has Recovered from a Processor Configuration Mismatch.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0063

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only. One of the CPUs :

816f050c-2001ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

816f050c-2002ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

816f050c-2003ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

816f050c-2004ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

816f050c-2005ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

816f050c-2006ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

816f050c-2007ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

816f050c-2008ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only.

816f050c-2581ffff   Memory Logging Limit Removed for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (All DIMMS)

Explanation: This message is for the use case when an implementation has detected that the Memory Logging Limit has been Removed.

Severity: Info

Alert Category: Warning - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0145

SNMP Trap ID: 43

Automatically notify Support: No

User response: No action; information only. One of the DIMMs :

816f050d-0401ffff   Critical Array [ComputerSystemElementName] has deasserted. (Computer HDD0)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-0402ffff   Critical Array [ComputerSystemElementName] has deasserted. (Computer HDD1)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-0403ffff   Critical Array [ComputerSystemElementName] has deasserted. (Computer HDD2)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-0404ffff   Critical Array [ComputerSystemElementName] has deasserted. (Computer HDD3)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-0405ffff   Critical Array [ComputerSystemElementName] has deasserted. (1U Storage HDD0)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-0406ffff   Critical Array [ComputerSystemElementName] has deasserted. (1U Storage HDD1)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-0407ffff   Critical Array [ComputerSystemElementName] has deasserted. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-0408ffff   Critical Array [ComputerSystemElementName] has deasserted. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: Prefix: PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-0409ffff   Critical Array [ComputerSystemElementName] has deasserted. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-040affff   Critical Array [ComputerSystemElementName] has deasserted. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-040bffff   Critical Array [ComputerSystemElementName] has deasserted. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f050d-040cffff   Critical Array [ComputerSystemElementName] has deasserted. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected that an Critiacal Array has deasserted.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0175

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f0607-0301ffff   An SM BIOS Uncorrectable CPU complex error for [ProcessorElementName] has deasserted. (CPU 1)

Explanation: This message is for the use case when an SM BIOS Uncorrectable CPU complex error has deasserted.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0817

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only.

816f0607-0302ffff   An SM BIOS Uncorrectable CPU complex error for [ProcessorElementName] has deasserted. (CPU 2)

Explanation: This message is for the use case when an SM BIOS Uncorrectable CPU complex error has deasserted.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0817

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only.

816f0607-2584ffff   An SM BIOS Uncorrectable CPU complex error for [ProcessorElementName] has deasserted. (All CPUs)

Explanation: This message is for the use case when an SM BIOS Uncorrectable CPU complex error has deasserted.

Severity: Info

Alert Category: Critical - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0817

SNMP Trap ID: 40

Automatically notify Support: No

User response: No action; information only. One of the CPUs :

816f060d-0401ffff   Array in system [ComputerSystemElementName] has been restored. (Computer HDD0)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-0402ffff   Array in system [ComputerSystemElementName] has been restored. (Computer HDD1)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-0403ffff   Array in system [ComputerSystemElementName] has been restored. (Computer HDD2)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-0404ffff   Array in system [ComputerSystemElementName] has been restored. (Computer HDD3)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-0405ffff   Array in system [ComputerSystemElementName] has been restored. (1U Storage HDD0)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-0406ffff   Array in system [ComputerSystemElementName] has been restored. (1U Storage HDD1)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-0407ffff   Array in system [ComputerSystemElementName] has been restored. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-0408ffff   Array in system [ComputerSystemElementName] has been restored. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-0409ffff   Array in system [ComputerSystemElementName] has been restored. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-040affff   Array in system [ComputerSystemElementName] has been restored. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-040bffff   Array in system [ComputerSystemElementName] has been restored. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f060d-040cffff Array in system [ComputerSystemElementName] has been restored. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected that a Failed Array has been Restored.

Severity: Info

Alert Category: Critical - Hard Disk drive

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0177

SNMP Trap ID: 5

Automatically notify Support: No

User response: No action; information only.

816f070c-2001ffff Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f070c-2002ffff Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f070c-2003ffff Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f070c-2004ffff Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f070c-2005ffff Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f070c-2006ffff   Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f070c-2007ffff   Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f070c-2008ffff   Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only.

816f070c-2581ffff   Configuration error for [PhysicalMemoryElementName] on Subsystem [MemoryElementName]has deasserted. (All DIMMS)

Explanation: This message is for the use case when an implementation has detected a Memory DIMM configuration error has deasserted.

Severity: Info

Alert Category: Critical - Memory

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0127

SNMP Trap ID: 41

Automatically notify Support: No

User response: No action; information only. One of the DIMMs :

816f070d-0401ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (Computer HDD0)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-0402ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (Computer HDD1)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-0403ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (Computer HDD2)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-0404ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (Computer HDD3)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-0405ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (1U Storage HDD0)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-0406ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (1U Storage HDD1)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-0407ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (1U Storage HDD2)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-0408ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (1U Storage HDD3)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-0409ffff   Rebuild completed for Array in system [ComputerSystemElementName]. (1U Storage HDD4)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-040affff   Rebuild completed for Array in system [ComputerSystemElementName]. (1U Storage HDD5)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-040bffff   Rebuild completed for Array in system [ComputerSystemElementName]. (1U Storage HDD6)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f070d-040cffff   Rebuild completed for Array in system [ComputerSystemElementName]. (1U Storage HDD7)

Explanation: This message is for the use case when an implementation has detected that an Array Rebuild has Completed.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0179

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f0807-0301ffff   [ProcessorElementName] has been Enabled. (CPU 1)

Explanation: This message is for the use case when an implementation has detected a Processor has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0060

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f0807-0302ffff   [ProcessorElementName] has been Enabled. (CPU 2)

Explanation: This message is for the use case when an implementation has detected a Processor has been Enabled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0060

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f0807-2584ffff   [ProcessorElementName] has been Enabled. (All CPUs)

Explanation: This message is for the use case when an implementation has detected a Processor has been Enabled.

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Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0060

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only. One of the CPUs :

816f0813-2581ffff System [ComputerSystemElementName]has recovered from an Uncorrectable Bus Error. (DIMMs)

Explanation: This message is for the use case when an implementation has detected a that a system has recovered from a Bus Uncorrectable Error.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0241

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0813-2582ffff System [ComputerSystemElementName]has recovered from an Uncorrectable Bus Error. (PCIs)

Explanation: This message is for the use case when an implementation has detected a that a system has recovered from a Bus Uncorrectable Error.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0241

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f0813-2584ffff System [ComputerSystemElementName]has recovered from an Uncorrectable Bus Error. (CPUs)

Explanation: This message is for the use case when an implementation has detected a that a system has recovered from a Bus Uncorrectable Error.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0241

SNMP Trap ID: 50

Automatically notify Support: No

User response: No action; information only.

816f090c-2001ffff [PhysicalMemoryElementName] on Subsystem [MemoryElementName] is no longer Throttled. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected Memory is no longer Throttled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0143

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f090c-2002ffff [PhysicalMemoryElementName] on Subsystem [MemoryElementName] is no longer Throttled. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected Memory is no longer Throttled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0143

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f090c-2003ffff [PhysicalMemoryElementName] on Subsystem [MemoryElementName] is no longer Throttled. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected Memory is no longer Throttled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0143

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f090c-2004ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] is no longer Throttled. (DIMM 4)**

Explanation: This message is for the use case when an implementation has detected Memory is no longer Throttled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0143

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f090c-2005ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] is no longer Throttled. (DIMM 5)**

Explanation: This message is for the use case when an implementation has detected Memory is no longer Throttled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0143

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f090c-2006ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] is no longer Throttled. (DIMM 6)**

Explanation: This message is for the use case when an implementation has detected Memory is no longer Throttled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0143

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f090c-2007ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] is no longer Throttled. (DIMM 7)**

Explanation: This message is for the use case when an implementation has detected Memory is no longer Throttled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0143

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f090c-2008ffff **[PhysicalMemoryElementName] on Subsystem [MemoryElementName] is no longer Throttled. (DIMM 8)**

Explanation: This message is for the use case when an implementation has detected Memory is no longer Throttled.

Severity: Info

Alert Category: System - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0143

SNMP Trap ID:

Automatically notify Support: No

User response: No action; information only.

816f0a07-0301ffff **The Processor [ProcessorElementName] is no longer operating in a Degraded State. (CPU 1)**

Explanation: This message is for the use case when an implementation has detected a Processor is no longer running in the Degraded state.

Severity: Info

Alert Category: Warning - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0039

SNMP Trap ID: 42

Automatically notify Support: No

User response: No action; information only.

816f0a07-0302ffff   The Processor [ProcessorElementName] is no longer operating in a Degraded State. (CPU 2)

Explanation: This message is for the use case when an implementation has detected a Processor is no longer running in the Degraded state.

Severity: Info

Alert Category: Warning - CPU

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0039

SNMP Trap ID: 42

Automatically notify Support: No

User response: No action; information only.

816f0a0c-2001ffff   An Over-Temperature Condition has been removed on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 1)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Removed.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0147

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0a0c-2002ffff   An Over-Temperature Condition has been removed on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 2)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Removed.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0147

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0a0c-2003ffff   An Over-Temperature Condition has been removed on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 3)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Removed.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0147

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0a0c-2004ffff   An Over-Temperature Condition has been removed on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 4)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Removed.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0147

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0a0c-2005ffff   An Over-Temperature Condition has been removed on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 5)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Removed.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0147

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0a0c-2006ffff An Over-Temperature Condition has been removed on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 6)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Removed.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0147

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0a0c-2007ffff An Over-Temperature Condition has been removed on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 7)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Removed.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0147

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0a0c-2008ffff An Over-Temperature Condition has been removed on the [PhysicalMemoryElementName] on Subsystem [MemoryElementName]. (DIMM 8)

Explanation: This message is for the use case when an implementation has detected an Over Temperature Condition for Memory that has been Removed.

Severity: Info

Alert Category: Critical - Temperature

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0147

SNMP Trap ID: 0

Automatically notify Support: No

User response: No action; information only.

816f0a13-0301ffff System [ComputerSystemElementName] has recovered from a Fatal Bus Error. (CPU 1 PECI)

Explanation: This message is for the use case when an implementation has detected that a system has recovered from a Bus Fatal Error.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0245

SNMP Trap ID: 50

Automatically notify Support: No

User response:

1. (Trained technician only) Replace microprocessor n (see Removing a microprocessor and heat sink and Replacing a microprocessor and heat sink).

2. If the problem persists and there is no other CPU with the same error indication, replace the system board.

3. (Trained technician only) Replace the system board (see Removing the system board and Installing the system board). (n = microprocessor number)

816f0a13-0302ffff System [ComputerSystemElementName] has recovered from a Fatal Bus Error. (CPU 2 PECI)

Explanation: This message is for the use case when an implementation has detected that a system has recovered from a Bus Fatal Error.

Severity: Info

Alert Category: Critical - Other

Serviceable: No

CIM Information: **Prefix:** PLAT and **ID:** 0245

SNMP Trap ID: 50

Automatically notify Support: No

User response:

1. (Trained technician only) Replace microprocessor n (see Removing a microprocessor and heat sink and Replacing a microprocessor and heat sink).

2. If the problem persists and there is no other CPU with the same error indication, replace the system board.

816f0a13-0302ffff

3. (Trained technician only) Replace the system board
   (see Removing the system board and Installing the
   system board). (n = microprocessor number)

Appendix B. UEFI (POST) error codes

This section details the UEFI (POST) error codes.

UEFI (POST) diagnostic error codes can be generated when the server starts up or while the server is running. UEFI (POST) codes are logged in the Integrated Management Module II (IMM2) event log in the server.

For each event code, the following fields are displayed:

Event identifier
    An identifier that uniquely identifies an event.

Event description
    The logged message string that appears for an event.

Explanation
    Additional information to explain why the event occurred.

Severity
    An indication of the level of concern for the condition. The severity is abbreviated in the event log to the first character. The following severities can be displayed:

Table 20. Event severity levels

Severity	Description
Informational	An informational message is something that was recorded for audit purposes, usually a user action or a change of states that is normal behavior.
Warning	A warning is not as severe as an error, but if possible, the condition should be corrected before it becomes an error. It might also be a condition that requires additional monitoring or maintenance.
Error	An error typically indicates a failure or critical condition that impairs service or an expected function.

User response
    Indicate the actions that you should take to resolve the event.

    Perform the steps listed in this section in the order shown until the problem is solved. After you perform all of the actions that are described in this field, if you cannot solve the problem, contact IBM support.

The following is the list of the UEFI (POST) error codes and suggested actions to correct the detected problems.

I.11002   **[I.11002] A processor mismatch has been detected between one or more processors in the system.**

Explanation: One or More Mismatched Processors Detected

Severity: Error

User response: Complete the following steps:

1. This message could occur with messages about other Processor configuration problems. Resolve those messages first.

2. If the problem persists, ensure that matching processors are installed (i.e., matching option part numbers, etc)

3. Verify that the Processor's are installed in the correct sockets according to the service information for this product. If not, correct that problem.

4. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

5. (Trained Service technician only) Replace mismatching processor. Inspect Processor socket and replace the system board first if socket is damaged.

I.18005 **[I.18005] A discrepancy has been detected in the number of cores reported by one or more processor packages within the system.**

Explanation: Processors have mismatched number of cores

Severity: Error

User response: Complete the following steps:

1. If this is a newly installed option, ensure that matching Processors are installed in the correct Processor sockets according to the service information for this product.

2. Check IBM support site for an applicable service bulletin that applies to this Processor error.

3. (Trained Service technician only) Replace Processor. Inspect Processor socket and replace the system board first if socket is damaged.

I.18006 **[I.18006] A mismatch between the maximum allowed QPI link speed has been detected for one or more processor packages.**

Explanation: Processors have mismatched QPI Speed

Severity: Error

User response: Complete the following steps:

1. If this is a newly installed option, ensure that matching Processor CPUs are installed in the correct ProcessorCPU sockets according to the service information for this product

2. Check IBM support site for an applicable retain tipservice bulletin or firmware update that applies to this Processor error.

3. (Trained Service technician only) Replace Processor. Inspect Processor socket and replace the system board first if socket is damaged.

I.18007 **[I.18007] A power segment mismatch has been detected for one or more processor packages.**

Explanation: Processors have mismatched Power Segments

Severity: Error

User response: Complete the following steps:

1. Processors installed do not have the same power requirements

2. Ensure that all Processors have matching power requirements (such as 65, 95, or 130 Watts)

3. If power requirements match, check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

4. (Trained Service technician only) Replace Processor. Inspect Processor socket and replace the system board first if socket is damaged

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I.18008 **[I.18008] A mismatch has been detected between Processors frequency and DDR3 DIMMs frequency.**

Explanation: Processors have mismatched Internal DDR3 Frequency

Severity: Error

User response: Complete the following steps:

1. Verify that matching DIMMs are installed in the correct population sequence, according to the service information for this product. {Add link to Memory chart.} Correct any configuration issues found.

2. (Trained Service technician only) Replace associated Processor. Inspect Processor socket and replace the system board first if socket is damaged

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I.18009 **[I.18009] A core speed mismatch has been detected for one or more processor packages.**

Explanation: Processors have mismatched Core Speed

Severity: Error

User response: Complete the following steps:

1. Verify that matching processors are installed in the correct processor sockets according to the service information for this product. Correct any mismatch issues found.

2. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

3. (Trained Service technician only) Replace Processor. Inspect Processor socket and replace the system board first if socket is damaged.

I.1800A **[I.1800A] A mismatch has been detected between the speed at which a QPI link has trained between two or more processor packages.**

Explanation: Processors have mismatched Bus Speed

Severity: Error

User response: Complete the following steps:

1. Verify that the Processor is a valid option that is listed as a Server Proven device for this system. If not, remove the Processor and install a Server Proven one.

2. Verify that matching Processors are installed in the correct Processor sockets according to the service information for this product. Correct any mismatch found.

3. Check IBM support site for an applicable service bulletin or firmware update that applies to this processor error.

4. (Trained Service technician only) Replace the Processor. Inspect Processor socket and replace the system board first if socket is damaged

I.1800B   **[I.1800B] A cache size mismatch has been detected for one or more processor packages.**

Explanation: Processors have one or more cache levels with mismatched size

Severity: Error

User response: Complete the following steps:

1. Verify that matching processors are installed in the correct processor sockets according to the service information for this product. Correct any mismatch found.

2. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

3. (Trained Service technician only) Replace the system board.

I.1800C   **[I.1800C] A cache type mismatch has been detected for one or more processor packages.**

Explanation: Processors have one or more cache levels with mismatched type

Severity: Error

User response: Complete the following steps:

1. Verify that matching Processors are installed in the correct Processor sockets according to the service information for this product.

2. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

3. (Trained Service technician only) Replace the system board.

I.1800D   **[I.1800D] A cache associativity mismatch has been detected for one or more processor packages.**

Explanation: Processors have one or more cache levels with mismatched associativity

Severity: Error

User response: Complete the following steps:

1. Verify that matching Processors are installed in the correct Processor sockets according to the service information for this product.

2. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

3. (Trained Service technician only) Replace the system board.

I.1800E   **[I.1800E] A processor model mismatch has been detected for one or more processor packages.**

Explanation: Processors have mismatched Model Number

Severity: Error

User response: Complete the following steps:

1. Verify that matching Processors are installed in the correct Processor sockets according to the service information for this product.

2. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

3. (Trained Service technician only) Replace the system board.

I.1800F   **[I.1800F] A processor family mismatch has been detected for one or more processor packages.**

Explanation: Processors have mismatched Family

Severity: Error

User response: Complete the following steps:

1. Verify that matching Processors are installed in the correct Processor sockets according to the service information for this product

2. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

3. (Trained Service technician only) Replace the system board.

I.18010   **[I.18010] A processor stepping mismatch has been detected for one or more processor packages.**

Explanation: Processors of the same model have mismatched Stepping ID

Severity: Error

User response: Complete the following steps:

1. Verify that matching Processors are installed in the correct Processor sockets according to the service information for this product.

2. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.

3. (Trained Service technician only) Replace the system board.

I.2018002 **[I.2018002] The device found at Bus % Device % Function % could not be configured due to resource constraints. The Vendor ID for the device is % and the Device ID is %.**

Explanation: OUT_OF_RESOURCES (PCI Option ROM)

Severity: Info

User response: Complete the following steps:

1. If this PCIe device and/or any attached cables were recently installed, moved, serviced or upgraded, reseat adapter and any attached cables.

2. Check IBM support site for any applicable service bulletin or UEFI or adapter firmware update that applies to this error. NOTE: It may be necessary to disable unused option ROMs from UEFI F1 setup or ASU or using adapter manufacturer utilities so that adapter firmware can be updated.

3. Move card to a different slot. If slot not available or error re-occurs, replace adapter.

4. (Trained Service technician only) If adapter was moved to a different slot and error did not re-occur, verify that this is not a system limitation and then replace the system board. Also, if this is not the initial installation and the error persists after adapter replacement, replace system board.

I.2018003 **[I.2018003] A bad option ROM checksum was detected for the device found at Bus % Device % Function %. The Vendor ID for the device is % and the Device ID is %.**

Explanation: ROM CHECKSUM ERROR

Severity: Error

User response: Complete the following steps:

1. If this PCIe device and/or any attached cables were recently installed, moved, serviced or upgraded, reseat adapter and any attached cables.

2. Move adapter to a different system slot, if available.

3. Check IBM support site for any applicable service bulletin or UEFI or adapter firmware update that applies to this error. NOTE: It may be necessary to configure slot to Gen1 or to use special utility software so that adapter firmware can be upgraded.

Gen1/Gen2 settings can be configured via F1 Setup -> System Settings -> Devices and I/O Ports -> PCIe Gen1/Gen2/Gen3 Speed Selection, or the ASU Utility.

4. Replace adapter.

I.3048005 **[I.3048005] UEFI has booted from the backup flash bank.**

Explanation: Booting Backup UEFI Image

Severity: Info

User response: Complete the following steps:

1. Refer to service information for this product section on UEFI Recovery to return system to primary bank.

I.3808004 **[I.3808004] The IMM System Event log (SEL) is full.**

Explanation: IPMI System Event Log is Full

Severity: Info

User response: Complete the following steps:

1. Use IMM Web Interface to clear event log.

2. If IMM communication is unavailable, use F1 Setup to access System Event Logs Menu and Choose Clear IMM System Event Log and Restart Server.

I.3818001 **[I.3818001] The firmware image capsule signature for the currently booted flash bank is invalid.**

Explanation: Current Bank CRTM Capsule Update Signature Invalid

Severity: Info

User response: Complete the following steps:

1. Reboot system. Will come up on backup UEFI image. Reflash the primary UEFI image.

2. If error does not persist no additional recovery action is required.

3. If error persists, or boot is unsuccessful, (Trained service technician only) Replace the system board.

I.3818002 **[I.3818002] The firmware image capsule signature for the non-booted flash bank is invalid.**

Explanation: Opposite Bank CRTM Capsule Update Signature Invalid

Severity: Info

User response: Complete the following steps:

1. Reflash backup UEFI image.

2. If error does not persist no additional recovery action is required.

3. If error persists, or boot is unsuccessful, (Trained service technician only) Replace the system board.

I.3818003   **[I.3818003] The CRTM flash driver could not lock the secure flash region.**

Explanation: CRTM Could not lock secure flash region

Severity: Info

User response: Complete the following steps:

1. If system failed to boot successfully, DC cycle system.
2. If system boots to F1 setup, flash UEFI image and reset bank to primary (if required). If system boots without error, recovery is complete and no additional action is required.
3. If system fails to boot, or if flash attempt fails, (Trained service technician only) Replace the system board.

I.58015   **[I.58015] Memory spare copy initiated.**

Explanation: Spare Copy Started

Severity: Info

User response: Complete the following steps:

1. No user required for this event. This is for informational purposes only.

I.580A4   **[I.580A4] Memory population change detected.**

Explanation: DIMM Population Change Detected

Severity: Info

User response: Complete the following steps:

1. Check system event log for uncorrected DIMM failures and replace those DIMMs.

I.580A5   **[I.580A5] Mirror Fail-over complete. DIMM number % has failed over to to the mirrored copy.**

Explanation: DIMM Mirror Fail-over Detected

Severity: Info

User response: Complete the following steps:

1. Check the system-event log for uncorrected DIMM failures and replace those DIMMs.

I.580A6   **[I.580A6] Memory spare copy has completed successfully.**

Explanation: Spare Copy Complete

Severity: Info

User response: Complete the following steps:

1. Check system log for related DIMM failures and replace those DIMMs.

S.1100B   **[S.1100B] CATERR(IERR) has asserted on processor %.**

Explanation: Processor CATERR(IERR) has asserted

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.
2. (Trained Service technician only) Replace the Processor.

S.1100C   **[S.1100C] An uncorrectable error has been detected on processor %.**

Explanation: Uncorrectable processor error detected

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
2. Reboot system. If problem persists escalate to the next level of supprt.

S.2011001   **[S.2011001] An Uncorrected PCIe Error has Occurred at Bus % Device % Function %. The Vendor ID for the device is % and the Device ID is %.**

Explanation: PCI SERR Detected

Severity: Error

User response: Complete the following steps:

1. If this node and/or any attached cables were recently installed, moved, serviced or upgraded, a. Reseat Adapter and any attached cables. b. Reload Device Driver c. If device is not recognized, reconfiguring slot to Gen1 or Gen2 may be required. Gen1/Gen2 settings can be configured via F1 Setup -> System Settings -> Devices and I/O Ports -> PCIe Gen1/Gen2/Gen3 Speed Selection, or the ASU Utility.
2. Check IBM support site for an applicable device driver, firmware update, revision of service information for this product or other information that applies to this error. Load new device driver and any required firmware updates.
3. If problem persists, then remove Adapter Card. If system reboots successfully without the adapter, replace that card.
4. (Trained Service technician only) Replace the processor.

S.2018001 [S.2018001] An Uncorrected PCIe Error has Occurred at Bus % Device % Function %. The Vendor ID for the device is % and the Device ID is %.

Explanation: PCIe Uncorrected Error Detected

Severity: Error

User response: Complete the following steps:

1. If this node and/or any attached cables were recently installed, moved, serviced or upgraded, a. Reseat Adapter and any attached cables. b. Reload Device Driver c. If device is not recognized, reconfiguring slot to Gen1 or Gen2 may be required. Gen1/Gen2 settings can be configured via F1 Setup -> System Settings -> Devices and I/O Ports -> PCIe Gen1/Gen2/Gen3 Speed Selection, or the ASU Utility.
2. Check IBM support site for an applicable device driver, firmware update, version of service information for this product or other information that applies to this error. Load new device driver and any required firmware updates.
3. If problem persists, then remove Adapter Card. If system reboots successfully without the adapter, replace that card.
4. Replace PCIe riser card.
5. (Trained Service technician only) Replace the processor.

S.3020007 [S.3020007] A firmware fault has been detected in the UEFI image.

Explanation: Internal UEFI Firmware Fault Detected, System halted

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
2. Reflash UEFI image.
3. (Trained service technician only) Replace the system board.

S.3028002 [S.3028002] Boot permission timeout detected.

Explanation: Boot Permission Negotiation Timeout

Severity: Error

User response: Complete the following steps:

1. Check FPC/IMM logs for communication errors and resolve.
2. Reseat system
3. If problem persists escalate to the next level of support

S.3030007 [S.3030007] A firmware fault has been detected in the UEFI image.

Explanation: Internal UEFI Firmware Fault Detected, System halted

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
2. Reflash UEFI image.
3. (Trained service technician only) Replace the system board.

S.3040007 [S.3040007] A firmware fault has been detected in the UEFI image.

Explanation: Internal UEFI Firmware Fault Detected, System halted

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
2. Reflash UEFI image.
3. (Trained service technician only) Replace the system board.

S.3050007 [S.3050007] A firmware fault has been detected in the UEFI image.

Explanation: Internal UEFI Firmware Fault Detected, System halted

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
2. Reflash UEFI image.
3. (Trained service technician only) Replace the system board.

S.3058004 [S.3058004] A Three Strike boot failure has occurred. The system has booted with default UEFI settings.

Explanation: POST failure has occurred! System booted with default settings.

Severity: Error

User response: Complete the following steps:

1. This event resets UEFI to the default settings for the next boot. If successful, user is forced into F1 setup. Original UEFI settings are still present.

2. If User did not intentionally trigger the reboots, check logs for probable cause.

3. Undo recent system changes (settings or devices added). If not recent system changes, remove all options then remove CMOS battery for 30 seconds to clear CMOS contents. Verify that the system boots. Then, re-install options one at a time to locate the problem.

4. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.

5. Reflash UEFI firmware.

6. Remove and re-install CMOS battery for 30 seconds to clear CMOS contents

7. (Trained service technician only) Replace the system board.

S.3060007 **[S.3060007] A firmware fault has been detected in the UEFI image.**

Explanation: Internal UEFI Firmware Fault Detected, System halted

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.

2. Reflash UEFI image.

3. (Trained service technician only) Replace the system board.

S.3070007 **[S.3070007] A firmware fault has been detected in the UEFI image.**

Explanation: Internal UEFI Firmware Fault Detected, System halted

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.

2. Reflash UEFI image.

3. (Trained service technician only) Replace the system board.

S.3108007 **[S.3108007] The default system settings have been restored.**

Explanation: System Configuration Restored to Defaults

Severity: Error

User response: Complete the following steps:

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1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.

S.3818004 **[S.3818004] The CRTM flash driver could not successfully flash the staging area. A failure occurred.**

Explanation: CRTM Update Failed

Severity: Error

User response: Complete the following steps:

1. Continue booting sytem. If system does not reset, manually reset the system.

2. If the error is not reported on the subsequent boot, no additional recovery action is required.

3. If the error persists, continue booting system and reflash UEFI image.

4. (Trained service technician only) Replace the system board.

S.3818007 **[S.3818007] The firmware image capsules for both flash banks could not be verified.**

Explanation: CRTM image capsule could not be verified

Severity: Error

User response: Complete the following steps:

1. If system failed to boot successfully, DC cycle system.

2. If system boots to F1 steup, flash UEFI image and reset bank to primary (if required). If system boots without error, recovery is complete and no additional action is required.

3. If system fails to boot, or if flash attempt fails, (Trained service technician only) Replace the system board.

S.51003 **[S.51003] An uncorrectable memory error was detected in DIMM slot % on rank %. [S.51003] An uncorrectable memory error was detected on processor % channel %. The failing DIMM within the channel could not be determined. [S.51003] An uncorrectable memory error has been detected during POST.**

Explanation: Fatal Memory Error Occurred

Severity: Error

User response: Complete the following steps:

1. If the node has recently been installed, moved, serviced, or upgraded, verify that the DIMM is properly seated and visually verify that there is no foreign material in any DIMM connector on that memory channel. If either of these conditions is

found, correct and retry with the same DIMM. (Note: Event Log may contain a recent 00580A4 event denoting detected change in DIMM population that could be related to this problem.)

2. If no problem is observed on the DIMM connectors or the problem persists, replace the DIMM identified by LightPath and/or event log entry.

3. If problem re-occurs on the same DIMM connector, replace the other DIMMs on the same memory channel.

4. Check IBM support site for an applicable service bulletin or firmware update that applies to this memory error.

5. (Trained Service technician only) If problem re-occurs on the same DIMM connector, inspect connector for damage. If found, replace system board.

6. (Trained Service technician only) Replace affected Processor.

S.51006   [S.51006] A memory mismatch has been detected. Please verify that the memory configuration is valid.

Explanation: One or More Mismatched DIMMs Detected

Severity: Error

User response: Complete the following steps:

1. Could follow an uncorrectable memory error or failed memory test. Check log and service that event first. DIMMs disabled by other errors or actions could cause this event.

2. Verify that the DIMMs are installed in the correct population sequence, according to the service information for this product.

3. Disable memory mirroring and sparing. If this action eliminates the mismatch, check IBM Support site for information related to this problem.

4. Reflash UEFI firmware.

5. Replace DIMM

6. (Trained Service technician only) Replace Processor.

S.51009   [S.51009] No system memory has been detected.

Explanation: No Memory Detected

Severity: Error

User response: Complete the following steps:

1. Make sure that one or more DIMMs are installed in the server.

2. If no memory fault is recorded in the logs and no DIMM connector error LEDs are lit, verify that all DIMM connectors are enabled using the Setup utility or the Advanced Settings Utility (ASU).

3. Re-Install all DIMMs verifying the correct population sequence, according to the service information for this product.

4. (Trained service technician only) Replace the processor.

5. (Trained service technician only) Replace the system board.

S.58008   [S.58008] A DIMM has failed the POST memory test.

Explanation: DIMM Failed Memory Test

Severity: Error

User response: Complete the following steps:

1. You must AC-cycle the system to re-enable affected DIMM connector or re-enable manually using F1 setup

2. If the node has been recently installed, serviced, moved, or upgraded, check to ensure that DIMMs are firmly seated and that no foreign material can be seen in the DIMM connector. If either condition is observed, correct and retry with the same DIMM. (Note: Event Log may contain a recent 00580A4 event denoting detected change in DIMM population that could be related to this problem.)

3. If problem persists, replace the DIMM identified by LightPath and/or event log entry.

4. If problem re-occurs on the same DIMM connector, swap the other DIMMs on the same memory channel across channels one at a time to a different memory channel or Processor. (check service information for this product/Install guide for population requirements for sparing/paring modes). If problem follows a moved DIMM to a different memory channel, replace that DIMM.

5. Check IBM support site for an applicable service bulletin or firmware update that applies to this memory error.

6. (Trained service technician only) If problem stays with the original DIMM connector, re-inspect DIMM connector for foreign material and remove, if found. If connector is damaged, replace system board.

7. (Trained service technician only) Remove affected Processor and inspect Processor socket pins for damaged or mis-aligned pins. If damage is found, or this is an upgrade Processor, replace system board. If there are multiple Processor's, swap Processor's to move affected Procesor to another Processor socket and retry. If problem follows the affected Processor (or there is only one Processor), replace the affected Processor.

S.68005 [S.68005] An error has been detected by the the IIO core logic on Bus %. The Global Fatal Error Status register contains %. The Global Non-Fatal Error Status register contains %. Please check error logs for the presence of additional downstream device error data.

Explanation: Critical IOH-PCI Error

Severity: Error

User response: Complete the following steps:

1. Check log for a separate error for an associated PCIe device and service that error.
2. Check IBM support site for an applicable service bulletin or firmware update for the system or adapter that applies to this error.
3. (Trained Service technician only) Replace the system board.

S.680B8 [S.680B8] Internal QPI Link Failure Detected.

Explanation: Internal QPI Link Failure Detected

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
2. Inspect processor socket for foreign debris or damage. If debris is found remove debris.
3. If error recurs, or socket damage is found, replace the system board (Trained Service technician only) .
4. (Trained Service Technician Only) Replace the processor.

S.680B9 [S.680B9] External QPI Link Failure Detected.

Explanation: External QPI Link Failure Detected

Severity: Error

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
2. Inspect processor socket for foreign debris or damage. If debris is found remove debris.
3. If error recurs, or socket damage is found, replace the system board (Trained Service technician only) .

W.11004 [W.11004] A processor within the system has failed the BIST.

Explanation: Processor Self Test Failure Detected

Severity: Error

User response: Complete the following steps:

1. If the Processor or firmware was just updated, check IBM support site for an applicable service bulletin or firmware update that applies to this Processor error.
2. (Trained service technician only) If there are multiple Processor's, swap Processor's to move affected Processor to another Processor socket and retry. If problem follows the affected Processor, or this is a single Processor system, replace the Processor. Inspect Processor socket on each Processor removal and replace system board first if damaged or mis-aligned pins are found.
3. (Trained Service technician only) Replace the system board.

W.3048006 [W.3048006] UEFI has booted from the backup flash bank due to an Automatic Boot Recovery (ABR) event.

Explanation: Automated Boot Recovery, Booting Backup UEFI Image

Severity: Warning

User response: Complete the following steps:

1. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
2. Reflash Primary UEFI image. Refer to UEFI Recovery section of service information for this product.
3. (Trained service technician only) Replace the system board.

W.305000A [W.305000A] An invalid date and time have been detected.

Explanation: RTC Date and Time Incorrect

Severity: Warning

User response: Complete the following steps:

1. Check IMM/chassis event log. This event should immediately precede 0068002 error. Service that event or any other battery related errors.
2. Use F1 Setup to reset date and time. If problem returns after a system reset, replace CMOS battery.
3. If problem persists then check IBM support site for an applicable service bulletin or firmware update that applies to this error.
4. Trained Service technician only) Replace the system board.

W.3058009 [W.3058009] DRIVER HEALTH PROTOCOL: Missing Configuraiton. Requires Change Settings From F1.

Explanation: DRIVER HEALTH PROTOCOL: Missing Configuration. Requires Change Settings From F1

Severity: Warning

User response: Complete the following steps:

1. Go to System Settings > Settings > Driver Health Status List and find a driver/controller reporting Configuration Required status.
2. Search for the driver menu from System Settings and change settings appropriately.
3. Save settings and restart system.

W.305800A **[W.305800A] DRIVER HEALTH PROTOCOL: Reports 'Failed' Status Controller.**

Explanation: DRIVER HEALTH PROTOCOL: Reports 'Failed' Status Controller

Severity: Warning

User response: Complete the following steps:

1. Reboot the system.
2. If problem persists, switch to backup UEFI or reflash current UEFI image.
3. (Trained Service Technician Only) Replace system board.

W.305800B **[W.305800B] DRIVER HEALTH PROTOCOL: Reports 'Reboot' Required Controller.**

Explanation: DRIVER HEALTH PROTOCOL: Reports 'Reboot' Required Controller

Severity: Warning

User response: Complete the following steps:

1. No action required – system will reboot at the end of POST.
2. If problem persists, switch to backup UEFI or reflash current UEFI image.
3. (Trained Service Technician Only) Replace system board.

W.305800C **[W.305800C] DRIVER HEALTH PROTOCOL: Reports 'System Shutdown' Required Controller.**

Explanation: DRIVER HEALTH PROTOCOL: Reports 'System Shutdown' Required Controller

Severity: Warning

User response: Complete the following steps:

1. Reboot the system.
2. If problem persists, switch to backup UEFI or reflash current UEFI image.
3. (Trained Service Technician Only) Replace system board.

W.305800D **[W.305800D] DRIVER HEALTH PROTOCOL: Disconnect Controller Failed. Requires 'Reboot'.**

Explanation: DRIVER HEALTH PROTOCOL: Disconnect Controller Failed. Requires 'Reboot'

Severity: Warning

User response: Complete the following steps:

1. Reboot the system to reconnect the controller.
2. If problem persists, switch to backup UEFI or reflash current UEFI image.
3. (Trained Service Technician Only) Replace system board.

W.305800E **[W.305800E] DRIVER HEALTH PROTOCOL: Reports Invalid Health Status Driver.**

Explanation: DRIVER HEALTH PROTOCOL: Reports Invalid Health Status Driver

Severity: Warning

User response: Complete the following steps:

1. Reboot the system.
2. If problem persists, switch to backup UEFI or reflash current UEFI image.
3. (Trained Service Technician Only) Replace system board.

W.3808000 **[W.3808000] An IMM communication failure has occurred.**

Explanation: IMM Communication Failure

Severity: Warning

User response: Complete the following steps:

1. Reset the IMM from the FPC.
2. Use FPC to remove AUX power from the node. This will reboot the entire node.
3. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.
4. Reflash UEFI Firmware.
5. (Trained service technician only) Replace the system board.

W.3808002 **[W.3808002] An error occurred while saving UEFI settings to the IMM.**

Explanation: Error Updating System Configuration to IMM

Severity: Warning

User response: Complete the following steps:

1. Use F1 Setup, Verify Settings and Save Settings to recover settings.

2. Reset the IMM from the FPC.

3. Use FPC to remove AUX power from the node. This will reboot the entire node.

4. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.

5. Reflash IMM Firmware.

6. Remove and re-install CMOS battery for 30 seconds to clear CMOS contents.

7. Trained Service technician only) Replace the system board.

W.3808003   **.[W.3808003] Unable to retrieve the system configuration from the IMM.**

Explanation: Error Retrieving System Configuration from IMM

Severity: Warning

User response: Complete the following steps:

1. Use F1 Setup, Verify Settings and Save Settings to recover settings.

2. Reset the IMM from the FPC.

3. Use FPC to remove AUX power from the node. This will reboot the entire node.

4. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.

5. Reflash IMM Firmware.

6. Remove and re-install CMOS battery for 30 seconds to clear CMOS contents.

7. Trained Service technician only) Replace the system board.

W.3818005   **[W.3818005] The CRTM flash driver could not successfully flash the staging area. The update was aborted**

Explanation: CRTM Update Aborted

Severity: Warning

User response: Complete the following steps:

1. Continue booting system. If system does not reset, manually reset the system.

2. If the error is not reported on the subsequent boot, no additional recovery action is required.

3. If the event persists, continue booting system and reflash UEFI image.

4. (Trained service technician only) Replace the system board.

W.381800D   **[W.381800D] TPM physical presence is in asserted state**

Explanation: TPM physical presence is in asserted state

Severity: Warning

User response: Complete the following steps:

1. Complete any administrative tasks requiring the TPM physical presence switch to be in the "ON" position..

2. Restore the physical presence switch to the "OFF" position and reboot the system.

3. (Trained service technician only) Replace the system board.

W.3938002   **[W.3938002] A boot configuration error has been detected.**

Explanation: Boot Configuration Error

Severity: Warning

User response: Complete the following steps:

1. F1 Setup -> Save Settings

2. Retry OOB config update

W.50001   **[W.50001] A DIMM has been disabled due to an error detected during POST.**

Explanation: DIMM Disabled

Severity: Info

User response: Complete the following steps:

1. If the DIMM was disabled because of a memory fault, follow the procedure for that event.

2. If no memory fault is recorded in the logs and no DIMM connector error LEDs are lit, re-enable the DIMM through the Setup utility or the Advanced Settings Utility (ASU).

3. If problem persists, Power cycle the node from management console.

4. Reset IMM to default settings.

5. Reset UEFI to default settings.

6. Reflash IMM and UEFI firmware.

7. (Trained Service technician only) Replace system board.

W.58001   **[W.58001] The PFA Threshold limit (correctable error logging limit) has been exceeded on DIMM number % at address %. MC5 Status contains % and MC5 Misc contains %.**

Explanation: DIMM PFA Threshold Exceeded

Severity: Error

User response: Complete the following steps:

W.58007 • W.68002

1. If the node has recently been installed, moved, serviced, or upgraded, verify that the DIMM is properly seated and visually verify that there is no foreign material in any DIMM connector on that memory channel. If either of these conditions is found, correct and retry with the same DIMM. (Note: Event Log may contain a recent 00580A4 event denoting detected change in DIMM population that could be related to this problem.)

2. Check IBM support site for an applicable firmware update that applies to this memory error. The release notes will list the known problems the update addresses.

3. If PFA re-occurs on the same DIMM connector, swap the other DIMMs on the same memory channel one at a time to a different memory channel or Processor. (check service information for this product/Install guide for population requirements for sparing/paring modes). If PFA follows a moved DIMM to any DIMM connector on the different memory channel, replace the moved DIMM.

4. (Trained service technician only) If problem continues to re-occur on the same DIMM connector, inspect DIMM connector for foreign material and remove, if found. If connector is damaged, replace system board.

5. (Trained service technician only) Inspect processor socket for foreign debris or damage. If debris is found, remove debris.

6. (Trained service technician only) Remove affected processor and inspect processor socket pins for damaged or mis-aligned pins. If damage is found on processor, replace system board.

7. (Trained Service technician only) Replace affected processor.

W.58007   **[W.58007] Invalid memory configuration (Unsupported DIMM Population) detected. Please verify memory configuration is valid.**

Explanation: Unsupported DIMM Population

Severity: Error

User response: Complete the following steps:

1. Could follow an uncorrectable memory error or failed memory test. Check log and service that event first. DIMMs disabled by other errors or actions could cause this event.

2. Ensure that the DIMM connectors are populated according to the guidelines in the service information for this product.

W.580A1   **[W.580A1] Invalid memory configuration for Mirror Mode. Please correct memory configuration.**

Explanation: Unsupported DIMM Population for Mirror Mode

Severity: Error

User response: Complete the following steps:

1. If a DIMM connector error LED is lit, resolve the failure.

2. Make sure that the DIMM connectors are correctly populated for mirroring mode, according to the service information for this product.

W.580A2   **[W.580A2] Invalid memory configuration for Sparing Mode. Please correct memory configuration.**

Explanation: Unsupported DIMM Population for Spare Mode

Severity: Error

User response: Complete the following steps:

1. Make sure that the DIMM connectors are correctly populated for sparing mode, according to the service information for this product.

W.68002   **[W.68002] A CMOS battery error has been detected**

Explanation: CMOS Battery Fault

Severity: Error

User response: Complete the following steps:

1. If the system was recently Installed, Moved, or Serviced, make sure the battery is properly seated.

2. Check IBM support site for an applicable service bulletin or firmware update that applies to this error.

3. Replace CMOS Battery

4. (Trained Service technician only) Replace the system board.

Appendix C. DSA diagnostic test results

After running the DSA diagnostic tests, use this information to resolve any issues that were found.

DSA Broadcom network test results

The following messages can result when you run the Broadcom network test.

405-000-000   BRCM:TestControlRegisters Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-001-000   BRCM:TestMIIRegisters Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-002-000   BRCM:TestEEPROM Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-003-000   BRCM:TestInternalMemory Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-004-000   BRCM:TestInterrupt Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-005-000   BRCM:TestLoopbackMAC Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-006-000   BRCM:TestLoopbackPhysical Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-007-000   BRCM:TestLEDs Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-800-000   BRCM:TestControlRegisters Test Aborted

Explanation: The control registers test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-801-000   BRCM:TestMIIRegisters Test Aborted

Explanation: The MII register test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-802-000   BRCM:TestEEPROM Test Aborted

Explanation: The EEPROM test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-803-000   BRCM:TestInternalMemory Test Aborted

Explanation: The internal memory test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-804-000   BRCM:TestInterrupt Test Aborted

Explanation: The interrupt test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-805-000   BRCM:TestLoopbackMAC Test Aborted

Explanation: Loopback testing at the MAC layer was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-806-000   BRCM:TestLoopbackPhysical Test Aborted

Explanation: Loopback testing at the physical layer was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-807-000   BRCM:TestLEDs Test Aborted

Explanation: Verification of status LEDs was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

405-900-000   BRCM:TestControlRegisters Test Failed

Explanation: A failure was detected while testing internal MAC registers

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

405-901-000   BRCM:TestMIIRegisters Test Failed

Explanation: A failure was detected while testing internal PHY registers.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

405-902-000   BRCM:TestEEPROM Test Failed

Explanation: A failure was detected while testing non-volatile RAM.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

405-903-000   BRCM:TestInternalMemory Test Failed

Explanation: A failure was detected while testing internal memory.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

405-904-000   BRCM:TestInterrupt Test Failed

Explanation: A failure was detected while testing interrupts.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.

3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

405-905-000   BRCM:TestLoopbackMAC Test Failed

Explanation: BRCM:TestLoopbackMAC Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

405-906-000   BRCM:TestLoopbackPhysical Test Failed

Explanation: A failure was detected during the loopback test at the physical layer.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

405-907-000   BRCM:TestLEDs Test Failed

Explanation: A failure was detected while verifying operation of the status LEDs.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found

in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.

2. Rerun the test.

3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

DSA Brocade test results

The following messages can result when you run the Brocade test.

218-000-000   Brocade:MemoryTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-001-000   Brocade:ExternalLoopbackTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-002-000   Brocade:SerdesLoopbackTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-003-000   Brocade:PCILoopbackTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-004-000   Brocade:ExternalEthLoopbackTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-005-000   Brocade:SerdesEthLoopbackTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-006-000   Brocade:InternalLoopbackTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-800-000   Brocade:MemoryTest Aborted

Explanation: The test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-801-000   Brocade:ExternalLoopbackTest Aborted

Explanation: The test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-802-000   Brocade:SerdesLoopbackTest Aborted

Explanation: The test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-803-000   Brocade:PCILoopbackTest Aborted

Explanation: The test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-804-000   Brocade:ExternalEthLoopbackTest Aborted

Explanation: The test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-805-000   Brocade:SerdesEthLoopbackTest Aborted

Explanation: The test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-806-000   Brocade:InternalLoopbackTest Aborted

Explanation: The test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

218-900-000   Brocade:MemoryTest Failed

Explanation: A failure was detected while testing the adapter memory.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Rerun the test.
2. Verify whether the firmware is at proper level.
3. Rerun the test.
4. If the problem remains, contact your IBM technical-support representative.

218-901-000   Brocade:ExternalLoopbackTest Failed

Explanation: A failure was detected during the Loopback test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Check cable connections.
2. Rerun the test.
3. Verify whether the firmware is at proper level.
4. Rerun the test.
5. If the problem remains, contact your IBM technical-support representative.

218-902-000   Brocade:SerdesLoopbackTest Failed

Explanation: A failure was detected during the Loopback test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Rerun the test.
2. Verify whether the firmware is at proper level.
3. Rerun the test.
4. If the problem remains, contact your IBM technical-support representative.

218-903-000   Brocade:PCILoopbackTest Failed

Explanation: A failure was detected during the Loopback test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Rerun the test.
2. Verify whether the firmware is at proper level.
3. Rerun the test.
4. If the problem remains, contact your IBM technical-support representative.

218-904-000   Brocade:ExternalEthLoopbackTest Failed

Explanation: A failure was detected during the Loopback test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Check or replace SFP/cable.
2. Rerun the test.
3. Verify whether the firmware is at proper level.
4. Rerun the test.
5. If the problem remains, contact your IBM technical-support representative.

218-905-000   Brocade:SerdesEthLoopbackTest Failed

Explanation: A failure was detected during the Loopback test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Rerun the test.
2. Verify whether the firmware is at proper level.
3. Rerun the test.
4. If the problem remains, contact your IBM technical-support representative.

218-906-000   Brocade:InternalLoopbackTest Failed

Explanation: A failure was detected during the Loopback test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Rerun the test.
2. Verify whether the firmware is at proper level.
3. Rerun the test.
4. If the problem remains, contact your IBM technical-support representative.

DSA checkpoint panel test results

The following messages can result when you run the checkpoint panel test.

180-000-000   Check-point Panel Test Passed

Explanation: Check-point Panel Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

180-801-000   Check-point Panel Test Aborted

Explanation: Check-point Panel Test Aborted. BMC is unable to verify that the operator information panel cable is connected.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Inspect and reseat operator information panel cable at both ends.
2. Verify that the Baseboard Management Controller (BMC) is working.
3. Run the test again.
4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

180-901-000   Check-point Panel Test Failed

Explanation: Check-point Panel Test Failed. Operator reported incorrect display.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Check the operator information panel cabling for loose or broken connections at both ends or damage to the cable.
2. Replace the information panel cable if damage is present.
3. Run the test again.
4. Replace the operator information panel assembly.
5. Run the test again.

6. If failure remains, refer to "Troubleshooting by
   symptom" in the system "Installation and Service
   Guide" for the next corrective action.

DSA CPU stress test results

The following messages can result when you run the CPU stress test.

089-000-000   CPU Stress Test Passed

Explanation: CPU Stress Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

089-801-000   CPU Stress Test Aborted

Explanation: CPU Stress Test Aborted. Internal
Program Error.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Turn off and restart the system.
2. Make sure that the DSA Diagnostic code is at the
   latest level.
3. Run the test again.
4. Check system firmware level and upgrade if
   necessary. The installed firmware level can be found
   in the DSA Diagnostic Event Log within the
   Firmware/VPD section for this component. The
   latest level firmware for this component can be
   found in reference to this system type at the IBM
   Support website.
5. Run the test again.
6. If the system has stopped responding, turn off and
   restart the system and then run the test again.
7. If failure remains, refer to "Troubleshooting by
   symptom" in the system "Installation and Service
   Guide" for the next corrective action.

089-802-000   CPU Stress Test Aborted

Explanation: CPU Stress Test Aborted. System
resource unavailability error.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Turn off and restart the system.
2. Make sure that the DSA Diagnostic code is at the
   latest level.
3. Run the test again.
4. Check system firmware level and upgrade if
   necessary. The installed firmware level can be found
   in the DSA Diagnostic Event Log within the
   Firmware/VPD section for this component.
5. Run the test again.
6. If the system has stopped responding, turn off and
   restart the system and then run the test again.
7. If failure remains, refer to "Troubleshooting by
   symptom" in the system "Installation and Service
   Guide" for the next corrective action.

089-803-000   CPU Stress Test Aborted

Explanation: CPU Stress Test Aborted. Memory size is
insufficient to run the test. At least 1GB is required.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

089-804-000   CPU Stress Test Aborted

Explanation: CPU Stress Test Aborted. User pressed
Ctrl-C.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

089-901-000   CPU Stress Test Failed

Explanation: CPU Stress Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. If the system has stopped responding, turn off and
   restart the system and then run the test again.

2. Make sure that the DSA Diagnostic code is at the latest level.
3. Run the test again.
4. Check system firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.

5. Run the test again.
6. If the system has stopped responding, turn off and restart the system and then run the test again.
7. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

DSA Emulex adapter test results

The following messages can result when you run the Emulex adapter test.

516-000-000   ELXUCNA: NIC MAC LoopBackTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

516-001-000   ELXUCNA: NIC PHY LoopBackTest Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

516-002-000   ELXUCNA: ELXUCNA: NIC LED(Beacon)Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

516-800-000   ELXUCNA: NIC MAC LoopBackTest Aborted

Explanation: Loopback testing at the MAC layer was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

516-801-000   ELXUCNA: NIC PHY LoopBackTest Aborted

Explanation: Loopback testing at the physical layer was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

516-802-000   ELXUCNA: ELXUCNA: NIC LED(Beacon)Test Aborted

Explanation: Verification of status LEDs was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

516-900-000   ELXUCNA: NIC MAC LoopBackTest Failed

Explanation: A failure was detected during the loopback test at the MAC layer.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

516-901-000   ELXUCNA: NIC PHY LoopBackTest Failed

Explanation: A failure was detected during the loopback test at the physical layer.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

516-902-000   ELXUCNA: ELXUCNA: NIC LED(Beacon)Test Failed

DSA EXA port ping test results

The following messages can result when you run the EXA port ping test.

401-000-000   EXA Port Ping Test Passed

Explanation: EXA Port Ping Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

401-801-000   EXA Port Ping Test Aborted

Explanation: EXA Port Ping Test Aborted. Unable to get device base address.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Remove power cables, wait for 45 seconds, reconnect and rerun the test.
2. Make sure that the scalability cable connections are as per specification.
3. Make sure that DSA and BIOS/uEFI are at the latest level.
4. If the problem remains, contact your technical-service representative.

401-802-000   EXA Port Ping Test Aborted

Explanation: EXA Port Ping Test Aborted. Port connections may not be correct.

Explanation: A failure was detected while verifying operation of the status LEDs.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Remove power cables, wait for 45 seconds, reconnect and rerun the test.
2. Make sure that the scalability cable connections are as per specification.
3. Make sure that DSA and BIOS/uEFI are at the latest level.
4. If the problem remains, contact your technical-service representative.

401-901-001   EXA Port Ping Test Failed

Explanation: EXA Port Ping Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Remove power cables, wait for 45 seconds, reconnect and rerun the test.
2. Make sure that the scalability cable connections are as per specification.
3. Check scalability cables for loose connections.
4. Replace the scalability cable(s) for specified port(s).

5. If the problem remains, contact your technical-service representative.

DSA hard drive test results

The following messages can result when you run the hard drive test.

217-000-000   HDD Test Passed

Explanation: HDD Stress Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

217-800-000   HDD Test Aborted

Explanation: HDD Test Aborted. The test was canceled.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Check cable connections.
2. Rerun the test.

3. Verify that Hard drive supports self test and self test logging.
4. If the problem remains, contact your technical-support representative.

217-900-000   HDD Test Failed

Explanation: HDD Test Failed. The hard drive self-test detected a failure.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Check cable connections.
2. Rerun the test.
3. Verify the firmware is at the latest level.
4. Rerun the test.
5. If the problem remains, contact your technical-support representative.

DSA Intel network test results

The following messages can result when you run the Intel network test.

406-000-000   IANet:Registers Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-001-000   IANet:EEPROM Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-002-000   IANet:FIFO Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-003-000   IANet:Interrupts Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-004-000   IANet:Loopback Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-800-000   IANet:Registers Test Aborted

Explanation: Registers test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-801-000   IANet:EEPROM Test Aborted

Explanation: EEPROM test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-802-000   IANet:FIFO Test Aborted

Explanation: FIFO test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-803-000   IANet:Interrupts Test Aborted

Explanation: Interrupt test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-804-000   IANet:Loopback Test Aborted

Explanation: Loopback test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

406-900-000   IANet:Registers Test Failed

Explanation: A failure was detected during the Registers test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

406-901-000   IANet:EEPROM Test Failed

Explanation: A failure was detected during the EEPROM test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

406-902-000   IANet:FIFO Test Failed

Explanation: A failure was detected during the FIFO test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
2. Rerun the test.
3. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

406-903-000   IANet:Interrupts Test Failed

Explanation: A failure was detected during the Interrupt test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.

2. Rerun the test.

3. Check interrupt assignments in the PCI Hardware section of the DSA Diagnostic Log. If the ethernet device is sharing interrupts, if possible modify the interrupt assignments using F1 Setup to assign a unique interrupt to the device.

4. Rerun the test.

5. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

406-904-000   IANet:Loopback Test Failed

Explanation: A failure was detected during the Loopback test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check the Ethernet cable for damage and ensure correct cable type and attachment.

2. Check component firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.

3. Rerun the test.

4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

DSA LSI hard drive test results

The following messages can result when you run the LSI hard drive test.

407-000-000   LSIESG:DiskDefaultDiagnostic Test Passed

Explanation: The test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

407-800-000   LSIESG:DiskDefaultDiagnostic Test Aborted

Explanation: The test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

407-900-000   LSIESG:DiskDefaultDiagnostic Test Failed

Explanation: The hard drive self-test detected a failure.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check cable connections.

2. Rerun the test.

3. Verify whether the firmware is at the latest level.

4. Rerun the test.

5. If the problem remains, contact your IBM technical-support representative.

DSA Mellanox adapter test results

The following messages can result when you run the Mellanox adapter test.

408-000-000   MLNX:MLNX_DiagnosticTestEthernetPort Test Passed

Explanation: Port Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

408-001-000   MLNX:MLNX_DiagnosticTestIBPort Test Passed

Explanation: Port Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

408-800-000   MLNX:MLNX_DiagnosticTestEthernetPort Test Aborted

Explanation: Port Test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

408-801-000   MLNX:MLNX_DiagnosticTestIBPort Test Aborted

Explanation: Port Test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

408-900-000   MLNX:MLNX_DiagnosticTestEthernetPort Test Failed

Explanation: Port Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Make sure that the physical link of the port under test in the active state.
2. If these condition was met but the test keeps failing the port's adapter might be faulty.
3. Try replacing the adapter and repeating the test.

408-901-000   MLNX:MLNX_DiagnosticTestIBPort Test Failed

Explanation: Port Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Make sure that the physical link of the port under test in the active state and a subnet manager running on the fabric to which the port is attached.
2. If these condition was met but the test keeps failing the port's adapter might be faulty.
3. Try replacing the adapter and repeating the test.

DSA memory isolation test results

The following messages can result when you run the memory isolation test.

201-000-000   Standalone Memory Test Passed

Explanation: Quick/Full Memory Test All CPUs Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-000-001   Standalone Memory Test Passed

Explanation: Quick/Full Memory Test CPU 1 Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-000-002   Standalone Memory Test Passed

Explanation: Quick/Full Memory Test CPU 2 Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-000-003   Standalone Memory Test Passed

Explanation: Quick/Full Memory Test CPU 3 Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-000-004   Standalone Memory Test Passed

Explanation: Quick/Full Memory Test CPU 4 Passed.

Severity: Event

201-811-000 • 201-812-000

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-811-000   Standalone Memory Test Aborted

Explanation: Unable to Locate SMBIOS key "_SM_".

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-811-001   Standalone Memory Test Aborted

Explanation: Unable to Locate SMBIOS key "_SM_".

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-811-002   Standalone Memory Test Aborted

Explanation: Unable to Locate SMBIOS key "_SM_".

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-811-003   Standalone Memory Test Aborted

Explanation: Unable to Locate SMBIOS key "_SM_".

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-812-000   Standalone Memory Test Aborted

Explanation: Memory test is not supported for this system.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-812-001   Standalone Memory Test Aborted

Explanation: Memory test is not supported for this system.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-812-002   Standalone Memory Test Aborted

Explanation: Memory test is not supported for this system.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-812-003   Standalone Memory Test Aborted

Explanation: Memory test is not supported for this system.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-813-000   Standalone Memory Test Aborted

Explanation: Chipset Error: Can not turn OFF ECC error reporting in CPU.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-813-001   Standalone Memory Test Aborted

Explanation: Chipset Error: Can not turn OFF ECC error reporting in CPU.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-813-002   Standalone Memory Test Aborted

Explanation: Chipset Error: Can not turn OFF ECC error reporting in CPU.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-813-003   Standalone Memory Test Aborted

Explanation: Chipset Error: Can not turn OFF ECC error reporting in CPU.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-814-000   Standalone Memory Test Aborted

Explanation: Chipset Error: Can not disable Scubbing feature for CPU.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-814-001   Standalone Memory Test Aborted

Explanation: Chipset Error: Can not disable Scubbing feature for CPU.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-814-002   Standalone Memory Test Aborted

Explanation: Chipset Error: Can not disable Scubbing feature for CPU.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-814-003   Standalone Memory Test Aborted

Explanation: Chipset Error: Can not disable Scubbing feature for CPU.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-815-000   Standalone Memory Test Aborted

Explanation: Program Error with Quick Memory Menu Option Selection.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-815-001   Standalone Memory Test Aborted

Explanation: Program Error with Quick Memory Menu Option Selection.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-815-002   Standalone Memory Test Aborted

Explanation: Program Error with Quick Memory Menu Option Selection.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-815-003   Standalone Memory Test Aborted

Explanation: Program Error with Quick Memory Menu Option Selection.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-816-000   Standalone Memory Test Aborted

Explanation: Program Error with Full Memory Menu Option Selection.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-816-001   Standalone Memory Test Aborted

Explanation: Program Error with Full Memory Menu Option Selection.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-816-002   Standalone Memory Test Aborted

Explanation: Program Error with Full Memory Menu Option Selection.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-816-003   Standalone Memory Test Aborted

Explanation: Program Error with Full Memory Menu Option Selection.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-818-000   Standalone Memory Test Aborted

Explanation: Unable to Locate SMBIOS key "_SM_".

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-818-001   Standalone Memory Test Aborted

Explanation: Unable to Locate SMBIOS key "_SM_".

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-818-002   Standalone Memory Test Aborted

Explanation: Unable to Locate SMBIOS key "_SM_".

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-818-003   Standalone Memory Test Aborted

Explanation: Unable to Locate SMBIOS key "_SM_".

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-819-000   Standalone Memory Test Aborted

Explanation: The start-end address ranges in the restricted area of the memory.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-819-001   Standalone Memory Test Aborted

Explanation: The start-end address ranges in the restricted area of the memory.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-819-002   Standalone Memory Test Aborted

Explanation: The start-end address ranges in the restricted area of the memory.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-819-003   Standalone Memory Test Aborted

Explanation: The start-end address ranges in the restricted area of the memory.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-820-000 Standalone Memory Test Aborted

Explanation: Memory Upper limit is less than 16 Mbytes.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-820-001 Standalone Memory Test Aborted

Explanation: Memory Upper limit is less than 16 Mbytes.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-820-002 Standalone Memory Test Aborted

Explanation: Memory Upper limit is less than 16 Mbytes.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-820-003 Standalone Memory Test Aborted

Explanation: Memory Upper limit is less than 16 Mbytes.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-821-000 Standalone Memory Test Aborted

Explanation: Variable range MTRR registers are larger than fixed range MTRR registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-821-001   Standalone Memory Test Aborted

Explanation: Variable range MTRR registers are larger than fixed range MTRR registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-821-002   Standalone Memory Test Aborted

Explanation: Variable range MTRR registers are larger than fixed range MTRR registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-821-003   Standalone Memory Test Aborted

Explanation: Variable range MTRR registers are larger than fixed range MTRR registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-822-000   Standalone Memory Test Aborted

Explanation: Invalid MTRR service request.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-822-001   Standalone Memory Test Aborted

Explanation: Invalid MTRR service request.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-822-002   Standalone Memory Test Aborted

Explanation: Invalid MTRR service request.

Severity: Warning

Serviceable: No

Recoverable: No

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Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-822-003   Standalone Memory Test Aborted

Explanation: Invalid MTRR service request.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-824-000   Standalone Memory Test Aborted

Explanation: Node Interleave feature must be OFF. Go to Setup and disable Node Interleave option and then re-run the test.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-824-001   Standalone Memory Test Aborted

Explanation: Node Interleave feature must be OFF. Go to Setup and disable Node Interleave option and then re-run the test.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-824-002   Standalone Memory Test Aborted

Explanation: Node Interleave feature must be OFF. Go to Setup and disable Node Interleave option and then re-run the test.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-824-003   Standalone Memory Test Aborted

Explanation: Node Interleave feature must be OFF. Go to Setup and disable Node Interleave option and then re-run the test.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-826-000   Standalone Memory Test Aborted

Explanation: BIOS: Memory Controller has been disabled. Go to Setup and Enable Memory Controller.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-826-001   Standalone Memory Test Aborted

Explanation: BIOS: Memory Controller has been disabled. Go to Setup and Enable Memory Controller.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-826-002   Standalone Memory Test Aborted

Explanation: BIOS: Memory Controller has been disabled. Go to Setup and Enable Memory Controller.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-826-003   Standalone Memory Test Aborted

Explanation: BIOS: Memory Controller has been disabled. Go to Setup and Enable Memory Controller.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-827-000   Standalone Memory Test Aborted

Explanation: BIOS: ECC function has been disabled by BIOS. Go to Setup and enable ECC generation.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-827-001   Standalone Memory Test Aborted

Explanation: BIOS: ECC function has been disabled by BIOS. Go to Setup and enable ECC generation.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-827-002   Standalone Memory Test Aborted

Explanation: BIOS: ECC function has been disabled by BIOS. Go to Setup and enable ECC generation.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-827-003   Standalone Memory Test Aborted

Explanation: BIOS: ECC function has been disabled by BIOS. Go to Setup and enable ECC generation.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-844-000   Standalone Memory Test Aborted

Explanation: Chipset Error: Problem in masking MSR machine check control MASK registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-844-001   Standalone Memory Test Aborted

Explanation: Chipset Error: Problem in masking MSR machine check control MASK registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-844-002 Standalone Memory Test Aborted

Explanation: Chipset Error: Problem in masking MSR machine check control MASK registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-844-003 Standalone Memory Test Aborted

Explanation: Chipset Error: Problem in masking MSR machine check control MASK registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-845-000 Standalone Memory Test Aborted

Explanation: Chipset Error: Problem clearing MSR machine check control registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-845-001 Standalone Memory Test Aborted

Explanation: Chipset Error: Problem clearing MSR machine check control registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-845-002 Standalone Memory Test Aborted

Explanation: Chipset Error: Problem clearing MSR machine check control registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-845-003 Standalone Memory Test Aborted

Explanation: Chipset Error: Problem clearing MSR machine check control registers.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-859-000 Standalone Memory Test Aborted

Explanation: INVALID XSECSRAT type.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-859-001 Standalone Memory Test Aborted

Explanation: INVALID XSECSRAT type.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-859-002 Standalone Memory Test Aborted

Explanation: INVALID XSECSRAT type.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-859-003 Standalone Memory Test Aborted

Explanation: INVALID XSECSRAT type.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-860-000 Standalone Memory Test Aborted

Explanation: No OEM0 type 1 found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-860-001 Standalone Memory Test Aborted

Explanation: No OEM0 type 1 found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-860-002 Standalone Memory Test Aborted

Explanation: No OEM0 type 1 found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-860-003 Standalone Memory Test Aborted

Explanation: No OEM0 type 1 found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-861-000 Standalone Memory Test Aborted

Explanation: No SRAT type 1 found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-861-001 Standalone Memory Test Aborted

Explanation: No SRAT type 1 found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-861-002 Standalone Memory Test Aborted

Explanation: No SRAT type 1 found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-861-003   Standalone Memory Test Aborted

Explanation: No SRAT type 1 found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-862-000   Standalone Memory Test Aborted

Explanation: No OEM1 structure found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-862-001   Standalone Memory Test Aborted

Explanation: No OEM1 structure found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-862-002   Standalone Memory Test Aborted

Explanation: No OEM1 structure found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-862-003   Standalone Memory Test Aborted

Explanation: No OEM1 structure found.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-863-000   Standalone Memory Test Aborted

Explanation: No IBMERROR key in OEM1 structure.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-863-001   Standalone Memory Test Aborted

Explanation: No IBMERROR key in OEM1 structure.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-863-002   Standalone Memory Test Aborted

Explanation: No IBMERROR key in OEM1 structure.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-863-003   Standalone Memory Test Aborted

Explanation: No IBMERROR key in OEM1 structure.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-864-000   Standalone Memory Test Aborted

Explanation: No GAS located in OEM1.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-864-001   Standalone Memory Test Aborted

Explanation: No GAS located in OEM1.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-864-002   Standalone Memory Test Aborted

Explanation: No GAS located in OEM1.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-864-003   Standalone Memory Test Aborted

Explanation: No GAS located in OEM1.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-865-000   Standalone Memory Test Aborted

Explanation: No XSECSRAT key in OEM0 structure.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-865-001   Standalone Memory Test Aborted

Explanation: No XSECSRAT key in OEM0 structure.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-865-002   Standalone Memory Test Aborted

Explanation: No XSECSRAT key in OEM0 structure.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-865-003   Standalone Memory Test Aborted

Explanation: No XSECSRAT key in OEM0 structure.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-866-000   Standalone Memory Test Aborted

Explanation: EFI-SAL Invalid parameter from GetMemoryMap function.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-866-001   Standalone Memory Test Aborted

Explanation: EFI-SAL Invalid parameter from GetMemoryMap function.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-866-002   Standalone Memory Test Aborted

Explanation: EFI-SAL Invalid parameter from GetMemoryMap function.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-866-003   Standalone Memory Test Aborted

Explanation: EFI-SAL Invalid parameter from GetMemoryMap function.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

Appendix C. DSA diagnostic test results   **349**

201-867-000   Standalone Memory Test Aborted

Explanation: EFI/SAL: Buffer not allocated.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-867-001   Standalone Memory Test Aborted

Explanation: EFI/SAL: Buffer not allocated.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-867-002   Standalone Memory Test Aborted

Explanation: EFI/SAL: Buffer not allocated.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-867-003   Standalone Memory Test Aborted

Explanation: EFI/SAL: Buffer not allocated.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-868-000   Standalone Memory Test Aborted

Explanation: EFI/SAL: Buffer allocated in GetMemoryMap too small.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-868-001   Standalone Memory Test Aborted

Explanation: EFI/SAL: Buffer allocated in GetMemoryMap too small.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-868-002　Standalone Memory Test Aborted

Explanation: EFI/SAL: Buffer allocated in GetMemoryMap too small.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-868-003　Standalone Memory Test Aborted

Explanation: EFI/SAL: Buffer allocated in GetMemoryMap too small.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-869-000　Standalone Memory Test Aborted

Explanation: EFI/SAL Invalid parameter from GetMemoryMap function.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-869-001　Standalone Memory Test Aborted

Explanation: EFI/SAL Invalid parameter from GetMemoryMap function.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-869-002　Standalone Memory Test Aborted

Explanation: EFI/SAL Invalid parameter from GetMemoryMap function.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-869-003 Standalone Memory Test Aborted

Explanation: EFI/SAL Invalid parameter from GetMemoryMap function.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-870-000 Standalone Memory Test Aborted

Explanation: CPU Doamin in ACPI not valid.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-870-001 Standalone Memory Test Aborted

Explanation: CPU Doamin in ACPI not valid.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-870-002 Standalone Memory Test Aborted

Explanation: CPU Doamin in ACPI not valid.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-870-003 Standalone Memory Test Aborted

Explanation: CPU Doamin in ACPI not valid.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-871-000 Standalone Memory Test Aborted

Explanation: Data Mis-compare encountered.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-871-001 Standalone Memory Test Aborted

Explanation: Data Mis-compare encountered.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-871-002 Standalone Memory Test Aborted

Explanation: Data Mis-compare encountered.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-871-003 Standalone Memory Test Aborted

Explanation: Data Mis-compare encountered.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-877-000 Standalone Memory Test Aborted

Explanation: BIOS: Sparing in Extended PCI reg. must be OFF. Go to setup and disable sparing.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-877-001 Standalone Memory Test Aborted

Explanation: BIOS: Sparing in Extended PCI reg. must be OFF. Go to setup and disable sparing.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-877-002 Standalone Memory Test Aborted

Explanation: BIOS: Sparing in Extended PCI reg. must be OFF. Go to setup and disable sparing.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-877-003 Standalone Memory Test Aborted

Explanation: BIOS: Sparing in Extended PCI reg. must be OFF. Go to setup and disable sparing.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-878-000 Standalone Memory Test Aborted

Explanation: Sparing feature must be turned OFF. Go to setup and turn the sparing feature OFF.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-878-001 Standalone Memory Test Aborted

Explanation: Sparing feature must be turned OFF. Go to setup and turn the sparing feature OFF.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-878-002 Standalone Memory Test Aborted

Explanation: Sparing feature must be turned OFF. Go to setup and turn the sparing feature OFF.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-878-003   Standalone Memory Test Aborted

Explanation: Sparing feature must be turned OFF. Go to setup and turn the sparing feature OFF.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-885-000   Standalone Memory Test Aborted

Explanation: Processor does not support MTRR register manipulation. Can not write to memory without cache.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-885-001   Standalone Memory Test Aborted

Explanation: Processor does not support MTRR register manipulation. Can not write to memory without cache.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-885-002   Standalone Memory Test Aborted

Explanation: Processor does not support MTRR register manipulation. Can not write to memory without cache.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-885-003   Standalone Memory Test Aborted

Explanation: Processor does not support MTRR register manipulation. Can not write to memory without cache.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-886-000   Standalone Memory Test Aborted

Explanation: Memory Upper limit is less than 16 Mbytes.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-886-001   Standalone Memory Test Aborted

Explanation: Memory Upper limit is less than 16 Mbytes.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-886-002   Standalone Memory Test Aborted

Explanation: Memory Upper limit is less than 16 Mbytes.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-886-003   Standalone Memory Test Aborted

Explanation: Memory Upper limit is less than 16 Mbytes.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:
1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.

201-899-000   Standalone Memory Test Aborted

Explanation: Memory Diagnostics Test Aborted by user.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-899-001   Standalone Memory Test Aborted

Explanation: Memory Diagnostics Test Aborted by user.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-899-002   Standalone Memory Test Aborted

Explanation: Memory Diagnostics Test Aborted by user.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-899-003   Standalone Memory Test Aborted

Explanation: Memory Diagnostics Test Aborted by user.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

201-901-000   Standalone Memory Test Failed

Explanation: Memory Diagnostics Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.
5. Replace any DIMMS(s) mentioned in error, one by one.
6. Make sure that all DIMMs are enabled in the Configuration/Setup Utility program.
7. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

201-901-001   Standalone Memory Test Failed

Explanation: Memory Diagnostics Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.
5. Replace any DIMMS(s) mentioned in error, one by one.
6. Make sure that all DIMMs are enabled in the Configuration/Setup Utility program.
7. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

201-901-002   Standalone Memory Test Failed

Explanation: Memory Diagnostics Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.
2. If the problem remains, contact your technical-service representative.
3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.
4. Make sure that DSA and BIOS/uEFI are at the latest level.
5. Replace any DIMM(s) mentioned in error, one by one.
6. Make sure that all DIMMs are enabled in the Configuration/Setup Utility program.
7. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

201-901-003   Standalone Memory Test Failed

Explanation: Memory Diagnostics Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Perform the actions mentioned one at a time and try the test after each action.

2. If the problem remains, contact your technical-service representative.

3. Turn off the system and disconnect it from power. Wait for 45 seconds. Reseat DIMM(s). Reconnect it to power.

4. Make sure that DSA and BIOS/uEFI are at the latest level.

5. Replace any DIMMS(s) mentioned in error, one by one.

6. Make sure that all DIMMs are enabled in the Configuration/Setup Utility program.

7. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

DSA memory stress test results

The following messages can result when you run the memory stress test.

202-000-000   MemStr Test Passed

Explanation: Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

202-801-000   MemStr Test Aborted

Explanation: Internal program error.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Turn off and restart the system.

2. Make sure that the DSA Diagnostic code is at the latest level.

3. Run the test again.

4. If the system has stopped responding, turn off and restart the system.

5. Check the system firmware level and upgrade if necessary.

6. Run the memory diagnostic to identify the specific failing DIMM.

7. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

202-802-000   MemStr Test Aborted

Explanation: Memory size is insufficient to run the test. At least 1 GB is required.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

202-803-000   MemStr Test Aborted

Explanation: User pressed Ctrl-C.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

202-901-000   MemStr Test Failed

Explanation: Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Execute the standard DSA memory diagnostics to validate all memory.

2. Make sure that the DSA Diagnostic code is at the latest level.

3. Turn off the system and disconnect it from power.

4. Reseat the memory cards and DIMMs.

5. Reconnect the system to power and turn the system on.

6. Run the test again.

7. Execute the standard DSA memory diagnostics to validate all memory.

8. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

202-902-000   MemStr Test Failed

Explanation: Memory size is insufficient to run the test.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Ensure that all memory is enabled by checking the "Available System Memory" in the "Resource Utilization" section of the DSA Diagnostic Event log.

2. If necessary, access the Configuration/Setup Utility program by pressing F1 during system boot and enable all memory.

3. Make sure that the DSA Diagnostic code is at the latest level.

4. Run the test again.

5. Execute the standard DSA memory diagnostics to validate all memory.

6. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

DSA Nvidia GPU test results

The following messages can result when you run the Nvidia GPU test.

409-000-000 NVIDIA User Diagnostic Test Passed

Explanation: NVIDIA User Diagnostic test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-003-000 Nvidia::DiagnosticServiceProvider::Bandwidth Test Passed

Explanation: Nvidia GPU Bandwidth test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-004-000 Nvidia::DiagnosticServiceProvider::Query Test Passed

Explanation: Nvidia GPU Query test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-005-000 Nvidia::DiagnosticServiceProvider::Matrix Test Passed

Explanation: Nvidia GPU Matrix test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-006-000 Nvidia::DiagnosticServiceProvider::Binomial Test Passed

Explanation: Nvidia GPU Binomial test passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-800-000 NVIDIA User Diagnostic Test Aborted

Explanation: NVIDIA User Diagnostic test was canceled.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-803-000 Nvidia::DiagnosticServiceProvider::Bandwidth Test Aborted

Explanation: Nvidia GPU Bandwidth test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-804-000 Nvidia::DiagnosticServiceProvider::Query Test Aborted

Explanation: Nvidia GPU Query test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-805-000   Nvidia::DiagnosticServiceProvider::Matrix Test Aborted

Explanation: Nvidia GPU Matrix test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-806-000   Nvidia::DiagnosticServiceProvider::Binomial Test Aborted

Explanation: Nvidia GPU Binomial test was canceled.

Severity: Warning

Serviceable: No

Recoverable: No

Automatically notify Support: No

409-900-000   NVIDIA User Diagnostic Test Failed

Explanation: NVIDIA User Diagnostic Test Failed.

Severity: Event

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Verify that the GPU is seated in the PCIe slot correctly by reseating the GPU. Then power cycle the system.
2. Verify that the power connectors to the GPU are connected firmly. Then power cycle the system.
3. Run nvidia-smi -q In some cases this will report a poorly connected power cable.
4. Rerun the diagnostics, using the same GPU, on system that is known to be working. A variety of system issues can cause diagnostic failure.
5. If the problem remains, contact your IBM technical-support representative.

409-903-000   Nvidia::DiagnosticServiceProvider::Bandwidth Test Failed

Explanation: Nvidia GPU Bandwidth Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Verify that the GPU is seated in the PCIe slot correctly by reseating the GPU. Then power cycle the system.
2. Verify that the power connectors to the GPU are connected firmly. Then power cycle the system.
3. Run nvidia-smi -q In some cases this will report a poorly connected power cable.
4. Rerun the diagnostics, using the same GPU, on system that is known to be working. A variety of system issues can cause diagnostic failure.
5. If the problem remains, contact your IBM technical-support representative.

409-904-000   Nvidia::DiagnosticServiceProvider::Query Test Failed

Explanation: Nvidia GPU Query Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Verify that the GPU is seated in the PCIe slot correctly by reseating the GPU. Then power cycle the system.
2. Verify that the power connectors to the GPU are connected firmly. Then power cycle the system.
3. Run nvidia-smi -q In some cases this will report a poorly connected power cable.
4. Rerun the diagnostics, using the same GPU, on system that is known to be working. A variety of system issues can cause diagnostic failure.
5. If the problem remains, contact your IBM technical-support representative.

409-905-000   Nvidia::DiagnosticServiceProvider::Matrix Test Failed

Explanation: Nvidia GPU Matrix Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Verify that the GPU is seated in the PCIe slot correctly by reseating the GPU. Then power cycle the system.
2. Verify that the power connectors to the GPU are connected firmly. Then power cycle the system.
3. Run nvidia-smi -q In some cases this will report a poorly connected power cable.

4. Rerun the diagnostics, using the same GPU, on system that is known to be working. A variety of system issues can cause diagnostic failure.

5. If the problem remains, contact your IBM technical-support representative.

409-906-000   Nvidia::DiagnosticServiceProvider::Binomial Test Failed

Explanation: Nvidia GPU Binomial Test Failed.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Verify that the GPU is seated in the PCIe slot correctly by reseating the GPU. Then power cycle the system.

2. Verify that the power connectors to the GPU are connected firmly. Then power cycle the system.

3. Run nvidia-smi -q In some cases this will report a poorly connected power cable.

4. Rerun the diagnostics, using the same GPU, on system that is known to be working. A variety of system issues can cause diagnostic failure.

5. If the problem remains, contact your IBM technical-support representative.

DSA optical drive test results

The following messages can result when you run the optical drive test.

215-000-000   Optical Drive Test Passed

Explanation: Optical Drive Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

215-801-000   Optical Drive Test Aborted

Explanation: Optical Drive Test Aborted. Unable to communicate with driver.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Make sure that the DSA Diagnostic code is at the latest level.

2. Run the test again.

3. Check the drive cabling for loose or broken connections at both ends or damage to the cable. Replace the cable if damage is present.

4. Run the test again.

5. Check system firmware level and upgrade if necessary.The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.

6. Run the test again.

215-802-000   Optical Drive Test Aborted

Explanation: Optical Drive Test Aborted. A read error was encountered.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Insert a new CD or DVD into the drive and wait for 15 seconds for the media to be recognized. Rerun the test.

2. Check the drive cabling for loose or broken connections at both ends or damage to the cable. Replace the cable if damage is present.

3. Run the test again.

4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

215-803-000   Optical Drive Test Failed

Explanation: Optical Drive Test Failed. Disk may be in use by the operating system.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Wait for the system activity to cease

2. Run the test again

3. Turn off and restart the system.

4. Run the test again.

215-804-000   Optical Drive Test Aborted

Explanation: Optical Drive Test Aborted. The media tray is open.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Close the media tray and wait for 15 seconds for the media to be recognized. Run the test again.
2. Insert a new CD or DVD into the drive and wait for 15 seconds for the media to be recognized. Rerun the test.
3. Check the drive cabling for loose or broken connections at both ends or damage to the cable. Replace the cable if damage is present.
4. Run the test again.
5. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

215-901-000   Optical Drive Test Aborted

Explanation: Optical Drive Test Aborted. Drive media is not detected.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Insert a new CD or DVD into the drive and wait for 15 seconds for the media to be recognized. Rerun the test.
2. Check the drive cabling for loose or broken connections at both ends or damage to the cable. Replace the cable if damage is present.
3. Run the test again.
4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

215-902-000   Optical Drive Test Failed

Explanation: Optical Drive Test Failed. Read miscompare.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Insert a new CD or DVD into the drive and wait for 15 seconds for the media to be recognized. Rerun the test.
2. Check the drive cabling for loose or broken connections at both ends or damage to the cable. Replace the cable if damage is present.
3. Run the test again.
4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

215-903-000   Optical Drive Test Aborted

Explanation: Optical Drive Test Aborted. Could not access the device.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Insert a new CD or DVD into the drive and wait for 15 seconds for the media to be recognized. Rerun the test.
2. Check the drive cabling for loose or broken connections at both ends or damage to the cable. Replace the cable if damage is present.
3. Run the test again.
4. Check system firmware level and upgrade if necessary.The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
5. Run the test again.
6. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

DSA system management test results

The following messages can result when you run the system management test.

166-000-001   IMM I2C Test Passed

Explanation: IMM I2C Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

166-801-001   IMM I2C Test Aborted

Explanation: IMM returned incorrect response length.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-802-001   IMM I2C Test Aborted

Explanation: Test cannot be completed for unknown reason.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-803-001   IMM I2C Test Aborted

Explanation: Node Busy. Try later.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-804-001   IMM I2C Test Aborted

Explanation: Invalid Command.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-805-001   IMM I2C Test Aborted

Explanation: Invalid Command for given LUN.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-806-001   IMM I2C Test Aborted

Explanation: Timeout while processing command.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-807-001   IMM I2C Test Aborted

Explanation: Out of space.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

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166-808-001 IMM I2C Test Aborted

Explanation: Reservation Canceled or Invalid Reservation ID.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-809-001 IMM I2C Test Aborted

Explanation: Request data truncated.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-810-001 IMM I2C Test Aborted

Explanation: Request data length invalid.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-811-001 IMM I2C Test Aborted

Explanation: Request data field length limit exceeded.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-812-001 IMM I2C Test Aborted

Explanation: Parameter out of range.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-813-001 IMM I2C Test Aborted

Explanation: Cannot return number of requested data bytes.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-814-001 IMM I2C Test Aborted

Explanation: Requested Sensor, data, or record not present.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.

2. Make sure that DSA and BMC/IMM are at the latest level.

166-815-001   IMM I2C Test Aborted

Explanation: Invalid data field in Request.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-816-001   IMM I2C Test Aborted

Explanation: Command illegal for specified sensor or record type.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-817-001   IMM I2C Test Aborted

Explanation: Command response could not be provided.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-818-001   IMM I2C Test Aborted

Explanation: Cannot execute duplicated request.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-819-001   IMM I2C Test Aborted

Explanation: Command response could not be provided. SDR Repository in?update mode.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-820-001   IMM I2C Test Aborted

Explanation: Command response could not be provided. Device in firmware update mode.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-821-001   IMM I2C Test Aborted

Explanation: Command response could not be provided. BMC initialization in progress.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-822-001   IMM I2C Test Aborted

Explanation: Destination unavailable.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-823-001   IMM I2C Test Aborted

Explanation: Cannot execute command. Insufficient privilege level.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.

166-824-001   IMM I2C Test Aborted

Explanation: Cannot execute command.

Severity: Warning

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.

2. Make sure that DSA and BMC/IMM are at the latest level.

166-901-001   IMM I2C Test Failed

Explanation: IMM Indicates failure in RTMM bus (BUS 0).

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.
3. Run the test again.
4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

166-903-001   IMM I2C Test Failed

Explanation: IMM Indicates failure in TMP75 bus (BUS 2).

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.
2. Make sure that DSA and BMC/IMM are at the latest level.
3. Run the test again.
4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

166-904-001   IMM I2C Test Failed

Explanation: IMM Indicates failure in TMP75 bus (BUS 3).

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at

a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.

2. Make sure that DSA and BMC/IMM are at the latest level.

3. Run the test again.

4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

166-905-001   IMM I2C Test Failed

Explanation: IMM Indicates failure in the ADS1015 bus (BUS 4).

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.

2. Make sure that DSA and BMC/IMM are at the latest level.

3. Run the test again.

4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

166-908-001   IMM I2C Test Failed

Explanation: IMM Indicates failure in the PCA9557 bus (BUS 7).

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Perform the actions mentioned one at a time and try the test after each action:

1. Turn off the system and disconnect it from power. Wait for 45 seconds. Reconnect it to power.

2. Make sure that DSA and BMC/IMM are at the latest level.

3. Run the test again.

4. If failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

DSA tape drive test results

The following messages can result when you run the tape drive test.

264-000-000   Tape Test Passed

Explanation: Tape Test Passed.

Severity: Event

Serviceable: No

Recoverable: No

Automatically notify Support: No

264-901-000   Tape Test Failed

Explanation: An error was found in the tape alert log.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Clean the tape drive using the appropriate cleaning media and install new media.

2. Run the test again.

3. Clear the error log.

4. Run the test again.

5. Make sure that the drive firmware is at the latest level.

6. Rerun the test after upgrading to the latest firmware level.

7. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

264-902-000   Tape Test Failed

Explanation: Tape Test Failed. Media is not detected.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Clean the tape drive using the appropriate cleaning media and install new media.

2. Run the test again.

3. Make sure that the drive firmware is at the latest level.

4. Rerun the test after upgrading to the latest firmware level.

5. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

264-903-000   Tape Test Failed

Explanation: Tape Test Failed. Media is not detected.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Clean the tape drive using the appropriate cleaning media and install new media.
2. Run the test again.
3. Make sure that the drive firmware is at the latest level.
4. Rerun the test after upgrading to the latest firmware level.
5. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

264-904-000   Tape Test Failed

Explanation: Tape Test Failed. Drive hardware error.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Check the tape drive cabling for loose or broken connections or damage to the cable. Replace the cable if damage is present.
2. Clean the tape drive using the appropriate cleaning media and install new media.
3. Run the test again.
4. Make sure that the drive firmware is at the latest level.
5. Rerun the test after upgrading to the latest firmware level.
6. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

264-905-000   Tape Test Failed

Explanation: Tape Test Failed. Software error: invalid request.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. If the system has stopped responding, turn off and restart the system.
2. Check the system firmware level and upgrade if necessary. The installed firmware level can be found in the DSA Diagnostic Event Log within the Firmware/VPD section for this component.
3. Run the test again.
4. If the system has stopped responding, turn off and restart the system.
5. Make sure that the drive firmware is at the latest level.
6. Run the test again.
7. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

264-906-000   Tape Test Failed

Explanation: Tape Test Failed. Unrecognized error.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Clean the tape drive using the appropriate cleaning media and install new media.
2. Run the test again.
3. Make sure that the drive firmware is at the latest level.
4. Rerun the test after upgrading to the latest firmware level.
5. Make sure that the DSA Diagnostic code is at the latest level.
6. Run the test again.
7. Check the system firmware level and upgrade if necessary.
8. Run the test again.
9. If the failure remains, refer to "Troubleshooting by symptom" in the system "Installation and Service Guide" for the next corrective action.

264-907-000   Tape Test Failed

Explanation: An error was found in the block address somewhere.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Clean the tape drive using the appropriate cleaning media and install new media.

264-908-000 Tape Test Failed

Explanation: An error was found in getting tape capacity.

Severity: Error

Serviceable: Yes

Recoverable: No

Automatically notify Support: No

User response: Complete the following steps:

1. Make sure that medium is present.
2. Clean the tape drive using the appropriate cleaning media and install new media.

Appendix D. Getting help and technical assistance

If you need help, service, or technical assistance or just want more information about IBM products, you will find a wide variety of sources available from IBM to assist you.

Use this information to obtain additional information about IBM and IBM products, determine what to do if you experience a problem with your IBM system or optional device, and determine whom to call for service, if it is necessary.

Before you call

Before you call, make sure that you have taken these steps to try to solve the problem yourself.

If you believe that you require IBM to perform warranty service on your IBM product, the IBM service technicians will be able to assist you more efficiently if you prepare before you call.

- Check all cables to make sure that they are connected.
- Check the power switches to make sure that the system and any optional devices are turned on.
- Check for updated software, firmware, and operating-system device drivers for your IBM product. The IBM Warranty terms and conditions state that you, the owner of the IBM product, are responsible for maintaining and updating all software and firmware for the product (unless it is covered by an additional maintenance contract). Your IBM service technician will request that you upgrade your software and firmware if the problem has a documented solution within a software upgrade.
- If you have installed new hardware or software in your environment, check http://www.ibm.com/systems/info/x86servers/serverproven/compat/us to make sure that the hardware and software is supported by your IBM product.
- Go to http://www.ibm.com/supportportal to check for information to help you solve the problem.
- Gather the following information to provide to IBM Support. This data will help IBM Support quickly provide a solution to your problem and ensure that you receive the level of service for which you might have contracted.
  - Hardware and Software Maintenance agreement contract numbers, if applicable
  - Machine type number (IBM 4-digit machine identifier)
  - Model number
  - Serial number
  - Current system UEFI and firmware levels
  - Other pertinent information such as error messages and logs
- Go to http://www.ibm.com/support/entry/portal/Open_service_request to submit an Electronic Service Request. Submitting an Electronic Service Request will start the process of determining a solution to your problem by making the pertinent information available to IBM Support quickly and efficiently. IBM service technicians can start working on your solution as soon as you have completed and submitted an Electronic Service Request.

You can solve many problems without outside assistance by following the troubleshooting procedures that IBM provides in the online help or in the documentation that is provided with your IBM product. The documentation that comes with IBM systems also describes the diagnostic tests that you can perform. Most systems, operating systems, and programs come with documentation that contains troubleshooting procedures and explanations of error messages and error codes. If you suspect a software problem, see the documentation for the operating system or program.

Using the documentation

Information about your IBM system and preinstalled software, if any, or optional device is available in the documentation that comes with the product. That documentation can include printed documents, online documents, readme files, and help files.

See the troubleshooting information in your system documentation for instructions for using the diagnostic programs. The troubleshooting information or the diagnostic programs might tell you that you need additional or updated device drivers or other software. IBM maintains pages on the World Wide Web where you can get the latest technical information and download device drivers and updates. To access these pages, go to http://www.ibm.com/supportportal.

Getting help and information from the World Wide Web

Up-to-date information about IBM products and support is available on the World Wide Web.

On the World Wide Web, up-to-date information about IBM systems, optional devices, services, and support is available at http://www.ibm.com/supportportal. IBM System x information is at http://www.ibm.com/systems/x. IBM BladeCenter information is at http://www.ibm.com/systems/bladecenter. IBM IntelliStation information is at http://www.ibm.com/systems/intellistation.

How to send DSA data to IBM

Use the IBM Enhanced Customer Data Repository to send diagnostic data to IBM.

Before you send diagnostic data to IBM, read the terms of use at http://www.ibm.com/de/support/ecurep/terms.html.

You can use any of the following methods to send diagnostic data to IBM:
- **Standard upload:** http://www.ibm.com/de/support/ecurep/send_http.html
- **Standard upload with the system serial number:** http://www.ecurep.ibm.com/app/upload_hw
- **Secure upload:** http://www.ibm.com/de/support/ecurep/send_http.html#secure
- **Secure upload with the system serial number:** https://www.ecurep.ibm.com/app/upload_hw

Creating a personalized support web page

You can create a personalized support web page by identifying IBM products that are of interest to you.

To create a personalized support web page, go to http://www.ibm.com/support/ mynotifications. From this personalized page, you can subscribe to weekly email notifications about new technical documents, search for information and downloads, and access various administrative services.

Software service and support

Through IBM Support Line, you can get telephone assistance, for a fee, with usage, configuration, and software problems with your IBM products.

For more information about Support Line and other IBM services, see http://www.ibm.com/services or see http://www.ibm.com/planetwide for support telephone numbers. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

Hardware service and support

You can receive hardware service through your IBM reseller or IBM Services.

To locate a reseller authorized by IBM to provide warranty service, go to http://www.ibm.com/partnerworld and click **Business Partner Locator**. For IBM support telephone numbers, see http://www.ibm.com/planetwide. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

In the U.S. and Canada, hardware service and support is available 24 hours a day, 7 days a week. In the U.K., these services are available Monday through Friday, from 9 a.m. to 6 p.m.

IBM Taiwan product service

Use this information to contact IBM Taiwan product service.

台灣 IBM 產品服務聯絡方式：
台灣國際商業機器股份有限公司
台北市松仁路 7 號 3 樓
電話：0800-016-888

IBM Taiwan product service contact information:

IBM Taiwan Corporation
3F, No 7, Song Ren Rd.
Taipei, Taiwan
Telephone: 0800-016-888

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Important notes

Processor speed indicates the internal clock speed of the microprocessor; other factors also affect application performance.

CD or DVD drive speed is the variable read rate. Actual speeds vary and are often less than the possible maximum.

When referring to processor storage, real and virtual storage, or channel volume, KB stands for 1024 bytes, MB stands for 1,048,576 bytes, and GB stands for 1,073,741,824 bytes.

When referring to hard disk drive capacity or communications volume, MB stands for 1,000,000 bytes, and GB stands for 1,000,000,000 bytes. Total user-accessible capacity can vary depending on operating environments.

Maximum internal hard disk drive capacities assume the replacement of any standard hard disk drives and population of all hard disk drive bays with the largest currently supported drives that are available from IBM.

Maximum memory might require replacement of the standard memory with an optional memory module.

Each solid-state memory cell has an intrinsic, finite number of write cycles that the cell can incur. Therefore, a solid-state device has a maximum number of write cycles that it can be subjected to, expressed as `total bytes written` (TBW). A device that has exceeded this limit might fail to respond to system-generated commands or might be incapable of being written to. IBM is not responsible for replacement of a device that has exceeded its maximum guaranteed number of program/erase cycles, as documented in the Official Published Specifications for the device.

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Some software might differ from its retail version (if available) and might not include user manuals or all program functionality.

Particulate contamination

Attention: Airborne particulates (including metal flakes or particles) and reactive gases acting alone or in combination with other environmental factors such as humidity or temperature might pose a risk to the device that is described in this document.

Risks that are posed by the presence of excessive particulate levels or concentrations of harmful gases include damage that might cause the device to malfunction or cease functioning altogether. This specification sets forth limits for particulates and gases that are intended to avoid such damage. The limits must not be viewed or used as definitive limits, because numerous other factors, such as temperature or moisture content of the air, can influence the impact of particulates or environmental corrosives and gaseous contaminant transfer. In the absence of specific limits that are set forth in this document, you must implement practices that maintain particulate and gas levels that are consistent with the protection of human health and safety. If IBM determines that the levels of particulates or gases in your environment have caused damage to the device, IBM may condition provision of repair or replacement of devices or parts on implementation of appropriate remedial measures to mitigate such environmental contamination. Implementation of such remedial measures is a customer responsibility.

Table 21. Limits for particulates and gases

Contaminant	Limits
Particulate	• The room air must be continuously filtered with 40% atmospheric dust spot efficiency (MERV 9) according to ASHRAE Standard 52.2[1]. • Air that enters a data center must be filtered to 99.97% efficiency or greater, using high-efficiency particulate air (HEPA) filters that meet MIL-STD-282. • The deliquescent relative humidity of the particulate contamination must be more than 60%[2]. • The room must be free of conductive contamination such as zinc whiskers.
Gaseous	• Copper: Class G1 as per ANSI/ISA 71.04-1985[3] • Silver: Corrosion rate of less than 300 Å in 30 days

Table 21. Limits for particulates and gases (continued)

Contaminant	Limits
[1] ASHRAE 52.2-2008 - *Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size*. Atlanta: American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. [2] The deliquescent relative humidity of particulate contamination is the relative humidity at which the dust absorbs enough water to become wet and promote ionic conduction. [3] ANSI/ISA-71.04-1985. *Environmental conditions for process measurement and control systems: Airborne contaminants*. Instrument Society of America, Research Triangle Park, North Carolina, U.S.A.	

Documentation format

The publications for this product are in Adobe Portable Document Format (PDF) and should be compliant with accessibility standards. If you experience difficulties when you use the PDF files and want to request a web-based format or accessible PDF document for a publication, direct your mail to the following address:

Information Development
IBM Corporation
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P.O. Box 12195
Research Triangle Park, North Carolina 27709-2195
U.S.A.

In the request, be sure to include the publication part number and title.

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This product may not be certified in your country for connection by any means whatsoever to interfaces of public telecommunications networks. Further certification may be required by law prior to making any such connection. Contact an IBM representative or reseller for any questions.

Electronic emission notices

When you attach a monitor to the equipment, you must use the designated monitor cable and any interference suppression devices that are supplied with the monitor.

Federal Communications Commission (FCC) statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio

communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that might cause undesired operation.

Industry Canada Class A emission compliance statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Australia and New Zealand Class A statement

Attention: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

European Union EMC Directive conformance statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a nonrecommended modification of the product, including the fitting of non-IBM option cards.

Attention: This is an EN 55022 Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Responsible manufacturer:

International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
914-499-1900

European Community contact:

IBM Deutschland GmbH
Technical Regulations, Department M372
IBM-Allee 1, 71139 Ehningen, Germany
Telephone: +49 7032 15 2941
Email: lugi@de.ibm.com

Germany Class A statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse A ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung der IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung der IBM gesteckt/eingebaut werden.

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Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG). Dies ist die Umsetzung der EU-Richtlinie 2004/108/EG in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC EG Richtlinie 2004/108/EG) für Geräte der Klasse A

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:

International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:

IBM Deutschland GmbH
Technical Regulations, Abteilung M372
IBM-Allee 1, 71139 Ehningen, Germany
Telephone: +49 7032 15 2941
Email: lugi@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse A.

Japan VCCI Class A statement

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This is a Class A product based on the standard of the Voluntary Control Council for Interference (VCCI). If this equipment is used in a domestic environment, radio interference may occur, in which case the user may be required to take corrective actions.

Japan Electronics and Information Technology Industries Association (JEITA) statement

高調波ガイドライン準用品

Japan Electronics and Information Technology Industries Association (JEITA) Confirmed Harmonics Guidelines with Modifications (products greater than 20 A per phase)

Korea Communications Commission (KCC) statement

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적으로 합니다.

This is electromagnetic wave compatibility equipment for business (Type A). Sellers and users need to pay attention to it. This is for any areas other than home.

Russia Electromagnetic Interference (EMI) Class A statement

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В жилых помещениях оно может создавать радиопомехи, для
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Taiwan Class A compliance statement

警告使用者:
這是甲類的資訊產品,在
居住的環境中使用時,可
能會造成射頻干擾,在這
種情況下,使用者會被要
求採取某些適當的對策。

German Ordinance for Work gloss statement

The product is not suitable for use with visual display work place devices according to clause 2 of the German Ordinance for Work with Visual Display Units.

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne § 2 der Bildschirmarbeitsverordnung geeignet.

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