Maintaining and Troubleshooting the HP ProLiant DL360p G8 Server

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Chapter 1: Introduction

Change history

The following changes are made to this document since the last issue:

Issue	Date	Summary of changes
2	May 2021	Updated the following section: • Internal server components on page 20
1	September 2013	First issue of the document.

Chapter 2: Maintaining and Troubleshooting the HP DL360p G8 Server

HP ProLiant DL360p G8 Server overview

The Avaya Common Servers category includes the HP ProLiant DL360p G8 1U server that supports several Avaya software solutions, some requiring more hardware, and memory requirements beyond the standard configuration. This book covers the standard configuration only—consult specific Avaya product documentation for application-specific or solution-specific server configurations.

- Avaya Common Servers are supplied under an OEM relationship and Avaya servers are treated differently than other commercially available servers from the vendors.
- Neither customers, business partners, distributors, nor Avaya Associates interacting with customers and business partners, should get BIOS or other firmware updates for any third party OEM servers forming part of Avaya's turnkey appliance offers. Only consult Avaya-provided downloads, information and support. Send questions to the Server Product Management mailbox at srvrprodmgt@avaya.com.
- Avaya Common Servers are turnkey appliances. No servers designed for a particular application can be repurposed for use with another application. The only exception to this is when an application has provided an upgrade or migrate path from an existing server state to a different server state with the appropriate kits, tools, documentation, and training materials. For example, Avaya Aura Messaging is providing a kit plus documentation for migrating a server running Modular Messaging to Avaya Aura Messaging.
- Remote access and use of HP's hardware management tools for the HP DL360p G8 server are not supported by any Avaya application (HP ILO).
- Do not contact HP for Service; all support, warranty, repair, and maintenance are through the Avaya processes.
- Avaya strongly recommends that all servers are protected with an Uninterruptable Power Supply for power surge and interruption protection. Avaya is not responsible for servers damaged by power surges, brown outs, black outs etc. when the server is connected to standard power mains and has no protection.
- Substitution of a DC power supply in a server must be approved by the Application Product Manager before any substitution is made. If there is a significant demand for a turnkey solution with a DC power supply, an Avaya GRIP (Global Requirements Integration Process)

request must be submitted. Partners registered to use this process can submit a GRIP request at https://portal.avaya.com/apps/grip/partner.asp. Avaya Associates may assist and can find information about this process at http://spark4.avaya.com/grip. Note, a GRIP request must be made for the Avaya application product, not the server model. The decision on whether to include a turnkey offer with a DC power supply is the responsibility of each Avaya application Product Manager. The name of the Product Managers for each application can be found at the bottom of the application page on the Avaya Global Sales portal.

- Product labels on the servers themselves have the 9-digit base server codes for Avaya Services in service and support. These 9-digit codes differ from the 6-digit orderable codes under which servers are ordered. On every server package, there is a Packing Label and a Hierarchy Label. The Hierarchy Label itemizes the stock list in the box of the 6-digit orderable code and Avaya recommends retaining them for reference.
- Quality assurance – product integrity testing/environmental international restrictions/ has been completed by HP and verified with Avaya through the use of Design for Environmental Checklists. These lists include: batteries, printed wiring boards, plastic parts, product packaging, RoHS, green requirements, and energy efficiency.

How to use this document

This guide contains information for installing the HP ProLiant DL360p G8 Server as part of an Avaya deployment and provides:

- Instructions for how to find the appropriate online server documentation from HP.
- References to specific topics in standard HP documentation
- Suggested changes, details, and notes to assist the user in interpreting the manufacturer’s documentation and to clarify Avaya's recommended implementation of the equipment
- Additional topics not covered in standard HP documentation but which are necessary for successful installation and maintenance of Avaya products

Downloading HP documentation

Use this procedure to find and download the HP ProLiant DL360p G8 documentation.

Procedure

1. Open a browser and go to http://support.avaya.com.
2. Click **Downloads & Documents** from the menu at the top.
3. Enter `Common Servers` in the **Enter Your Product Here** field, and select 2.0.x from the **release** dropdown.

4. Select the **Documents** option, and click **Enter**.
5. Download the documents that you need.

HP DL360p G8 document set

See the following documents for HP DL360p server information and procedures.

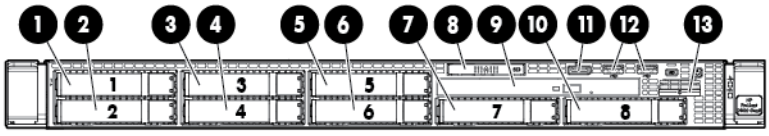
Documents

- HP ProLiant DL360p Gen8 Server User Guide
- HP ProLiant DL360p Gen8 Server Maintenance and Service Guide
- HP ProLiant Gen8 Troubleshooting Guide, Volume I: Troubleshooting
- HP ProLiant Gen8 Troubleshooting Guide, Volume II: Error Messages
- HP Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products

Documents included in the shipping container

Title	Part number
1U Rack Hardware Installation Instructions	365 494–004
Power Cord Strain Relief Kit	407 454–021
Assembly document set: • HP ProLiant Server Setup Poster • Important Safety Information • Limited Warranty and Material Limitations	660849–001 • 667798–002 • 377834–021 • 307797–029

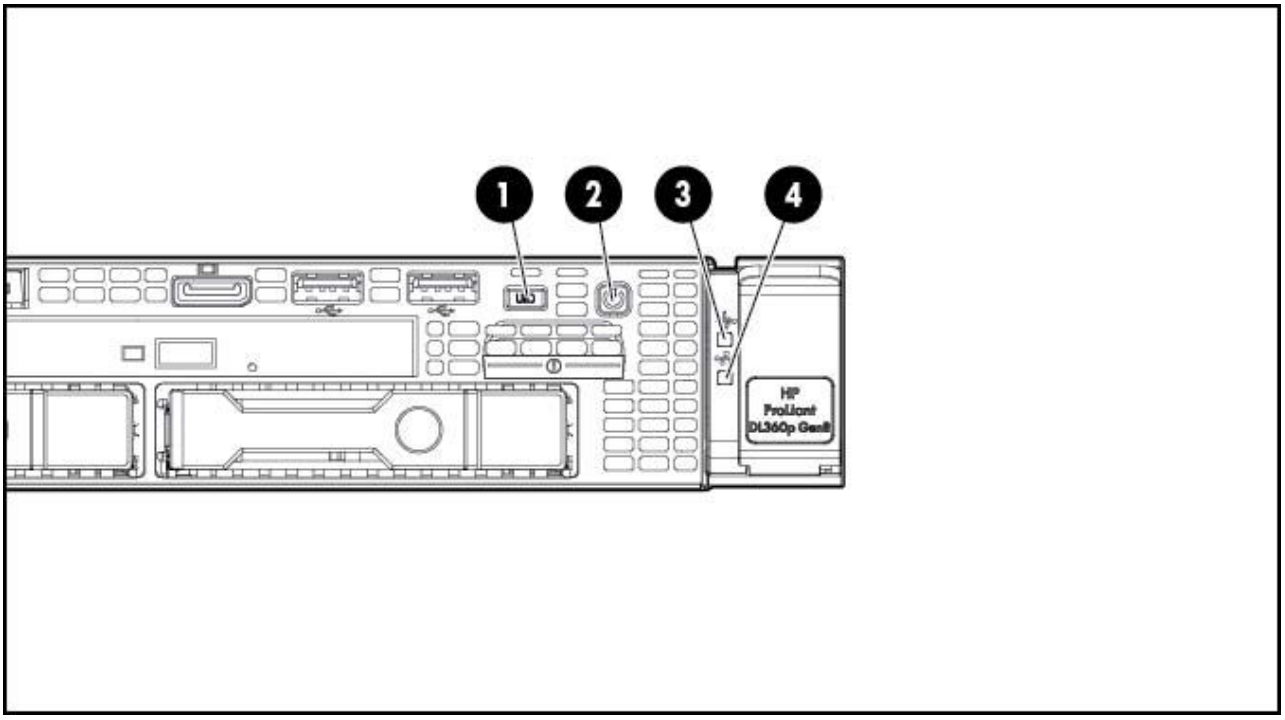
Front-panel view



No.	Description
1	Hard Drive Bay
2	Hard Drive Bay
3	Hard Drive Bay
4	Hard Drive Bay
5	Hard Drive Bay
6	Hard Drive Bay
7	Hard Drive Bay
8	Slide-out System Insight Display (SID)
9	Optical Disk Drive Bay
10	Hard Drive Bay
11	Video connector (requires Front Video Adapter Kit)
12	Two (2) USB Connectors
13	Active Health and Network Status LEDs

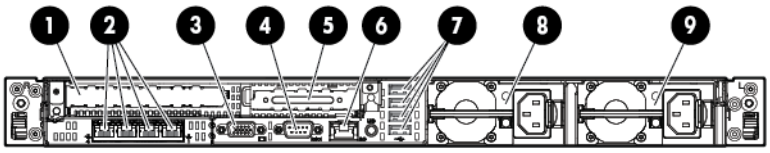
Front panel LEDs

Use these LEDs to identify hardware status and problems.



Item	Description	Status
1	UID LED/Button	Solid Blue = Identification is activated Flashing Blue = System is being managed remotely Off = Identification is deactivated
2	Power On/Standby Button/LED	Solid Green = System is on Flashing Green = Waiting for server power sequence Solid Amber = System is in standby, but power is still applied Off = Power cord is not attached, power supply failure has occurred, no power supplies are installed, facility power is not available or the power button cable is disconnected
3	Health LED	Solid Green = System health is normal Flashing Amber = System health is degraded. To identify the component in a degraded state, see “Systems Insight Display LEDs (pg 75 in the Server Maintenance and Service Guide)” Flashing Red = System health is critical. To identify the component in a critical state, see “Systems Insight Display LEDs (pg 75).” If possible check iLO/BIOS logs. Also check application’s system log and SEL log from IPMI interface if possible. Fast Flashing Red = Power fault (check system and devices)
4	NIC Status LED	Solid Green = Link to network Flashing Green = Network activity Off = No network connection

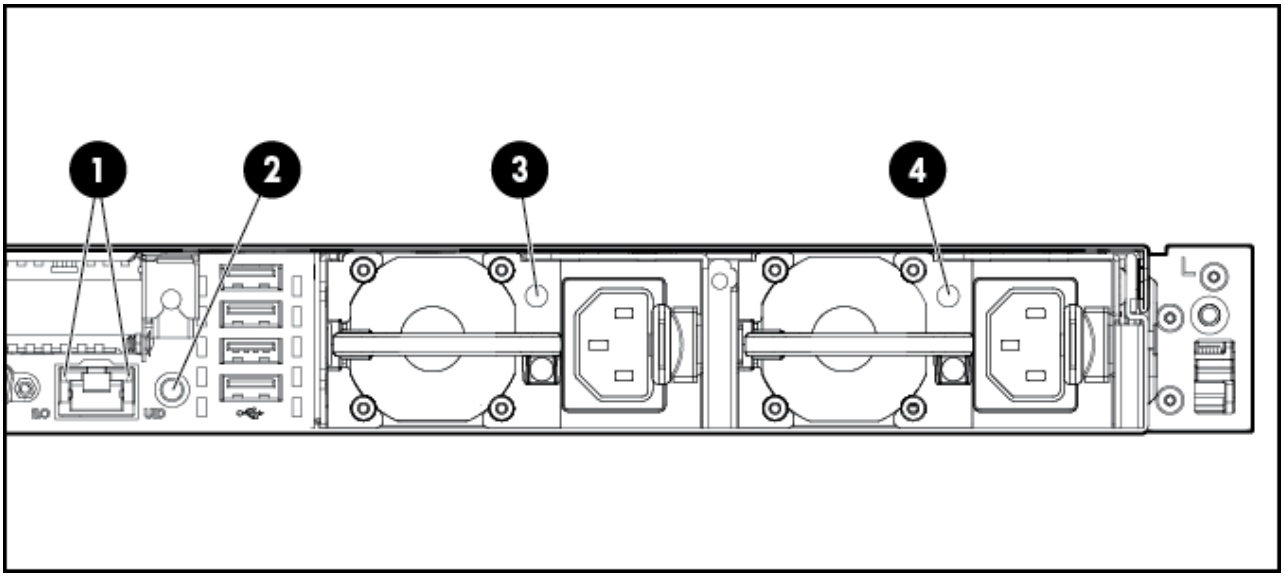
Rear-panel view



No.	Description
1	PCIe 3.0 Full height/half length x16 expansion slot
2	Flexible LOM ports (Shown: 4 ports 1 Gb each) The HP DL360p G8 server ports are labeled 1 to 4 from right to left.
3	Video connector
4	Serial connector
5	PCIe 3.0 Low Profile x8 expansion slot
6	iLO Management Engine NIC connector
7	Four (4) USB connectors
8	Power supply bay 2 (Shown populated: Optional Power Supply for Redundant Power)
9	Power supply bay 1 (Primary Power Supply)

Rear panel LEDs

Use these LEDs to identify hardware status and problems.



Item	Description	Status
1 (left)	HP iLO/Standard NIC activity LED	Solid Green = Activity exists Flashing Green = Activity exists Off = No activity exists
1 (right)	HP iLO/Standard NIC link LED	Solid Green = Link exists Off = No link exists

Table continues…

Item	Description	Status
2	UID button/LED	Solid Blue = Identification is activated Flashing Blue = System is being managed remotely Off = Identification is deactivated
3	Power supply 2 LED	Solid Green = Normal Off = One or more of the following conditions exists: • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit
4	Power supply 1 LED	Solid Green = Normal Off = One or more of the following conditions exists: • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit

External server components

Part number	Description	Hot-swappable?
700506773	DL360p G8 SRVR 300GB 10K SAS 2.5” HDD	Y
700506781	DL360p G8 SRVR 300GB 15K SAS 2.5” HDD	Y
700506782	DL360p G8 SRVR 900GB 10K SAS 2.5” HDD	Y
700506770	DL360p G8 SRVR PWR Supply 460W AC, CS Gold Ht Power Supply	Y, if redundant
700506775	DL360p G8 SRVR PWR Supply 750W AC, CS Gold Ht Power Supply	Y, if redundant
700506776	DL360p G8 SRVR PWR Supply 750W DC, CS-48VDC Ht Power Supply	Y, if redundant

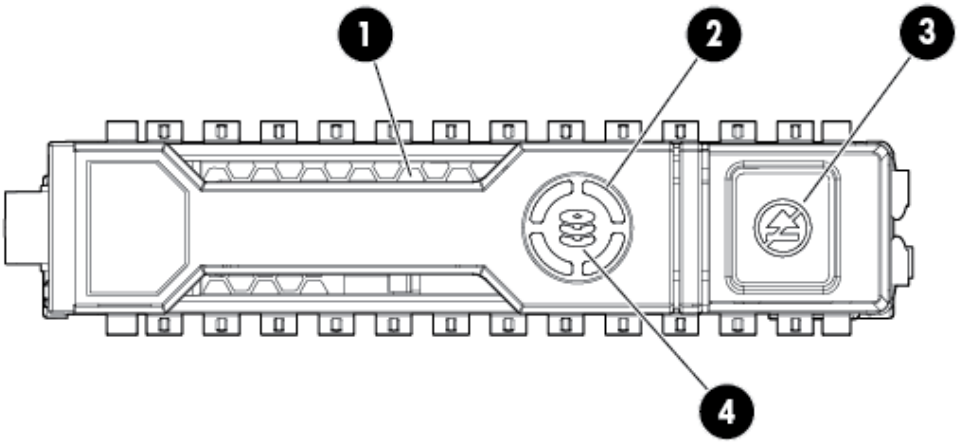
Related links

Power supply problems on page 17

Hard disk drive problems

Hard drive LEDs

Use these indicators to identify status and problems with a hard drive.



Item	LED	Status	Definition	Avaya recommendations and information
1	Locate	Solid blue	The drive is being identified by a host application	This is normal operation if application supports this feature or if disk array is being created/ selected.
		Flashing blue	The drive carrier firmware is being updated or requires an update	Check support.avaya.com for HP DL360p G8 firmware updates. View release notes for Avaya firmware update inclusions for HDD update.
2	Activity ring	Rotating green	Drive activity	This is normal operation and indicates that the drive is currently operating as part of the RAID array.
		Off	No drive activity	This indicates that the drive may currently have no activity or is not part of the RAID array.

Table continues…

Item	LED	Status	Definition	Avaya recommendations and information
3	Do not remove	Solid white	Do not remove the drive. Removing the drive causes one or more of the logical drives to fail.	This indicates that the RAID array is operating in degraded mode because one of the drives in the array has failed or is currently rebuilding. Removing a drive in this state will destroy the logical drive array. If the array is currently rebuilding this status will clear when the new replacement drive has rebuilt. Rebuild can take from 20 minutes up to 2 hours depending on the size of drive and activity of the system.
		Off	Removing the drive does not cause a logical drive to fail.	If an active drive is removed, the other drives that are part of the array will indicate a status of “do not remove”.
4	Drive status	Solid green	The drive is a member of one or more logical drives	This indicates normal operation.
		Flashing green	The drive is rebuilding or performing a RAID migration, stripe size migrations, capacity expansion, or logical drive extension, or is erasing.	A newly inserted replacement drive should start this LED pattern within 10-15 seconds of insertion to indicate a rebuild of the logical drive. If action does not start, unplugging and reinserting new drive can be performed.
		Flashing amber/ green	The drive is a member of one or more logical drives and predicts the drive will fail.	This signature indicates future failure and drive should be replaced asap.
		Flashing amber	The drive is not configured and predicts the drive will fail	The drive must be replaced ASAP if it is needed for current array.
		Solid amber	The drive has failed	The drive must be replaced ASAP.
		Off	The drive is not configured by a RAID controller	Reinsert drive if expected to rebuild as part of array. If no LED activity continues, try another unused drive if possible. Tools to recreate the RAID array can be accessed at support.avaya.com. If a new array is created all data from the previous array will be destroyed.

Related links

External server components on page 12

Hard disk drive problems

Symptoms

Some possible symptoms indicating hard drive problems are:

- Drives have failed as indicated by HDD LEDs (Hard drive LEDs on page 13) or alarmed by Avaya application.
- There is an active disk drive failure alarm from an Avaya application
- Drives are not recognized by Avaya application
- Data is inaccessible
- Server response time is slower than usual

HP documentation reference(s)

Troubleshooting Guide Volume 1: SAS, SATA, and SSD drive guidelines

Troubleshooting Guide Volume 1: Drive problems (hard drives and solid state drives)

Helpful guidelines

When adding drives to the server, observe the following general guidelines:

- Drives must be the same capacity to provide the greatest storage space efficiency when drives are grouped together into the same drive array.
- Drives in the same logical volume must be of the same type. ACU does not support mixing SAS, SATA, and SSD drives in the same logical volume.

Troubleshooting a hard disk drive

About this task

Follow the steps below to troubleshoot hard drive problems on one of these drives:

- DL360p G8 SRVR 300GB 10K SAS 2.5” HDD
- DL360p G8 SRVR 300GB 15K SAS 2.5” HDD
- DL360p G8 SRVR 900GB 10K SAS 2.5” HDD

Procedure

1. Be sure there are no loose connections, and all drives are fully seated.
2. Check HDD LEDs for indication of possible problems. See hard drive LED section.
3. Be sure drive blanks are installed properly when the server is operating. Drives may overheat and cause sluggish response or drive failure.
4. Be sure the replacement drives within an array are the same size or larger.
5. Be sure the replacement drives within an array are the same drive type, such as SAS, SATA, or SSD
6. Power cycle the server. Shutdown server according to Avaya application procedures.
7. Check support.avaya.com to see if a firmware update is available from Avaya for this model of server. View notes to see if firmware update is applicable to the observed problem before applying the update.

Next steps

If the part is defective, continue with the following removal and replacement procedures.

Replacing a hard disk drive

Before you begin

Best practice is to ensure the customer has a good separate backup of their system data before performing any maintenance on the server.

About this task

Follow the steps below to replace one of these drives:

- DL360p G8 SRVR 300GB 10K SAS 2.5” HDD
- DL360p G8 SRVR 300GB 15K SAS 2.5” HDD
- DL360p G8 SRVR 900GB 10K SAS 2.5” HDD

Procedure

1. Remove the drive.
   a. Push button to release locking latch. (#1 in the following image)
   b. Pull on unlocked latch to remove HDD. (#2 in the following image)

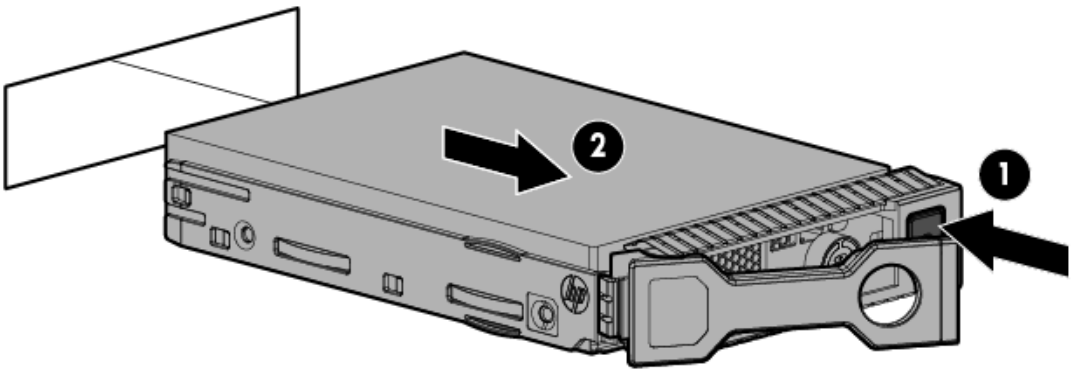


Figure 1: Removing hard disk drive

Drives are hot-swappable so power down of server is not recommended, however only one drive should be replaced at a time until RAID array rebuild is complete.

2. Replace the drive.
   a. Insert HDD into empty drive slot.
   b. Secure HDD by closing the latch.
   c. Refer to the Hard Drive LED table for the drive rebuild status.
   d. Check using Avaya application tools for RAID status if available.

Power supply problems

Symptoms

Some possible symptoms indicating power supply problems are:

- The server does not power on.
- The system power LED is off or solid amber. Front panel LEDs on page 9
- The health LED Front panel LEDs on page 9 is solid red, flashing red, solid amber, or flashing amber.

HP documentation reference(s)

Troubleshooting Guide Volume 1: Power Source Problems

Troubleshooting Guide Volume 1: Power Supply Problems

Troubleshooting Guide Volume 1: Power on Problems Flowchart

Possible Causes

List of possible causes for the above symptoms:

- Improperly seated or faulty power supply
- Loose or faulty power cord
- Power source problem
- Improperly seated component or interlock problem

If the power supply LED is off, it could mean any of the following:

- AC power unavailable
- Power supply failed
- Power supply in standby mode
- Power supply exceeded current limit

Troubleshooting a power supply

About this task

Follow the steps below to troubleshoot and replace one of these power supplies:

- DL360p G8 SRVR PWR Supply 460W AC, CS Gold Ht Power Supply
- DL360p G8 SRVR PWR Supply 750W AC, CS Gold Ht Power Supply
- DL360p G8 SRVR PWR Supply 750W DC, CS-48VDC Ht Power Supply

Table 1: Power supply LEDs

System Power LED	Definition

Table continues…

Off (Server)	System has no power
Solid Amber	System is in standby, Power On/Standby Button service is initialized
Flashing Green	System is waiting to power on; Power On/Standby button is pressed
Solid Green	System is powered on

Procedure

1. To troubleshoot possible power source problems:
    a. Plug another device into the grounded power outlet to be sure the outlet works. Also, be sure the power source meets applicable standards.
    b. Replace the power cord with a known functional power cord to be sure it is not faulty.
    c. Replace the power strip with a known functional power strip to be sure it is not faulty.
    d. Have a qualified electrician check the line voltage to be sure it meets the required specifications.
    e. Be sure the proper circuit breaker is in the On position.

    If power source is not the problem, continue with steps below to troubleshoot power supplies.
2. Be sure no loose connections exist.
3. Press the Power On/Standby button to be sure it is on. If the server has a Power On/Standby button that returns to its original position after being pressed, be sure you press the switch firmly. For more information about system power LED status, see Rear panel LEDs on page 11.
4. Check the Systems insight display LEDs on page 20.
5. Check the power supply LEDs, be sure they indicate that each power supply is working properly. If the LEDs indicate a problem with a power supply (red, amber, or off), then check the power source. If the power source is working properly, then replace the power supply.
6. If running a redundant configuration, be sure that all of the power supplies in the system have the same spare part number and are supported by the server.

Next steps

If the part is defective, continue with the following removal and replacement procedures.

Replacing a power supply

About this task

Follow the steps below to replace one of these power supplies:

- DL360p G8 SRVR PWR Supply 460W AC, CS Gold Ht Power Supply
- DL360p G8 SRVR PWR Supply 750W AC, CS Gold Ht Power Supply
- DL360p G8 SRVR PWR Supply 750W DC, CS-48VDC Ht Power Supply

Procedure

1. If system does not have redundant power, shut down server according to Avaya application procedures. (Server may already be down because of failed power supply)
   - If server does not power down according to normal shutdown procedures, press and release the Power On/Standby button. This method initiates a controlled shutdown of applications and the OS before the server enters standby mode.
   - Press and hold the Power On/Standby button for more than 4 seconds to force the server to enter standby mode. This method forces the server to enter standby mode without properly exiting applications and the OS. If an application stops responding, you can use this method to force a shutdown, but be aware that file corruption could occur using this method.
2. Replace failed power supply.
   a. Press tab (1 in the following figure)
   b. Pull supply out (2 in the following figure)
   c. Install new supply

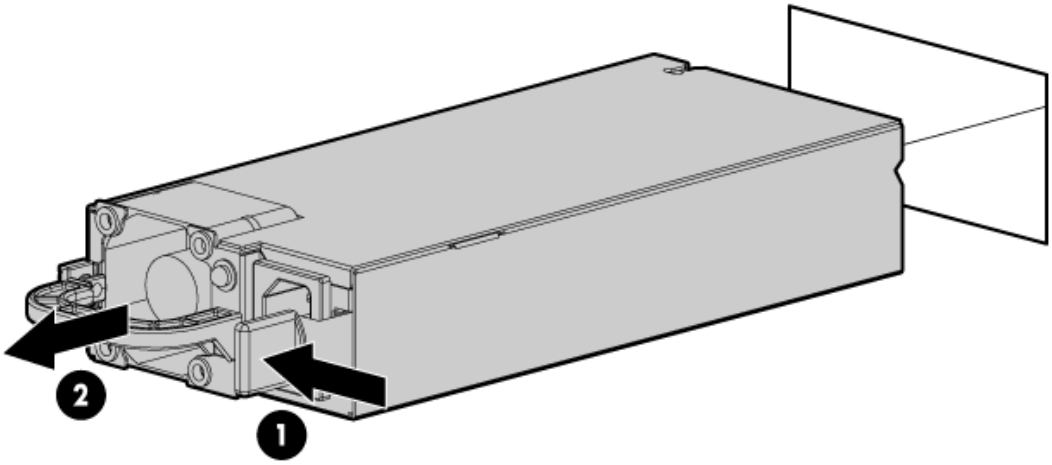


Figure 2: Replacing power supply

3. Connect the power cable(s) to the power supply (if disconnected)
4. Power up the server (if powered down)

Internal server components

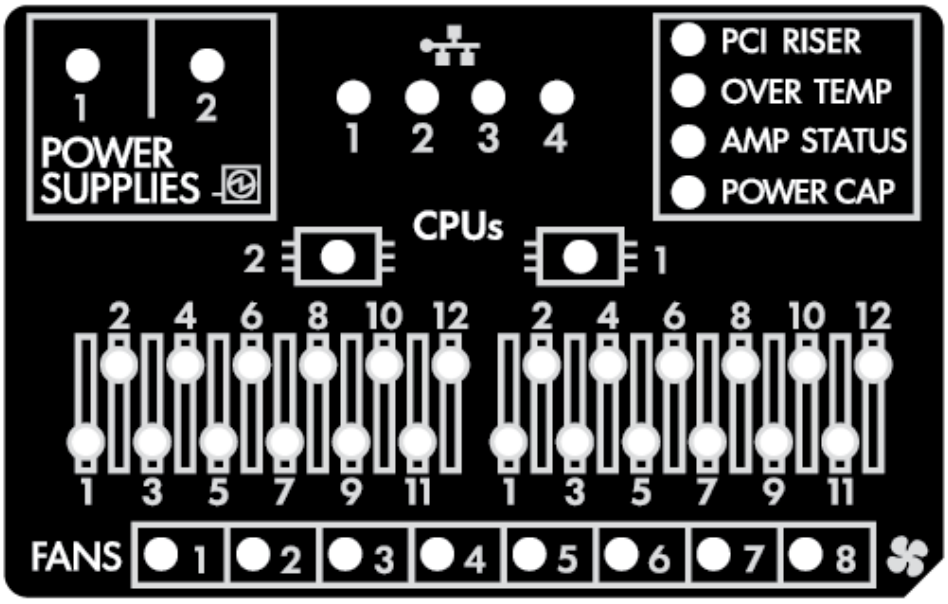
Part number	Description
700506778	DL360p G8 SRVR DVD-R/W Drive HP 9.5mm SATA
700506777	DL360p G8 SRVR Dual Port PCIe 1GB NIC
700507020	DL360p G8 SRVR FAN FRU
700506774	DL360p G8 SRVR 4 GB Memory RDIMM
700506771	DL360p G8 SRVR Super Cap RAID Battery

Related links

[HP DL360p G8 systems insight display LEDs](#) on page 20
[DVD-RW problems](#) on page 21
[NIC problems](#) on page 25
[Thermal (fan) problems](#) on page 29
[DIMM problems](#) on page 32

HP DL360p G8 systems insight display LEDs

Use this display to identify hardware status and problems with the server.



Description	Status
Processor LEDs	Off = Normal Amber = Failed Processor
DIMM LEDs	Off = Normal Amber = Failed DIMM or configuration issue
Fan LEDs	Off = Normal Amber = Failed fan or missing fan
NIC LEDs	Off = No link to network Solid Green = Network Link Flashing Green = Network link with activity If power is off, the front panel LED is not active. For status, see “Rear panel LEDs and buttons (pg 71 Server Maintenance and Service Guide)
Power Supply LEDs	Off = Normal Amber = Failed power supply
PCI Riser LED	Off = Normal Amber = Incorrectly installed PCI riser board
Over Temp LED	Off = Normal Amber = High system temperature detected
Amp Status LED	Off = Disabled Solid Green = Advanced Memory Protection active Solid Amber = Memory failure has occurred Flashing Amber = Invalid AMP memory configuration
Power Cap LED	Off = System is in standby, or no cap is set Solid Green = Power cap applied

Related links

Internal server components on page 20

DVD-RW problems

Symptoms

- System does not boot from the drive
- Data read from the drive is inconsistent, or drive cannot read data
- Drive is not detected

HP documentation reference(s)

Troubleshooting Guide Volume 1: Internal system problems

Troubleshooting Guide Volume 1: CD - ROM and DVD drive problems

Troubleshooting a DVD-R/W drive

About this task

Follow the steps below to troubleshoot a DL360p G8 SRVR DVD-R/W Drive HP 9.5mm SATA.

Warning:

Eliminate the risk of electric shock by removing all AC power from the system before installing or replacing any non hot-plug hardware option. Disconnect all power cords to completely remove power from the server. Always follow Avaya's application procedures when shutting down the server.

Warning:

To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.

Procedure

1. If system is not booting from drive:
    a. Be sure there are no loose connections
    b. Be sure the media from which you are attempting to boot is not damaged and is a bootable CD or DVD.
    c. If possible, be sure the drive boot order in BIOS is set so that the server boots from the CD -ROM drive first.
2. If data read from drive is inconsistent:
    a. Clean the drive and media.
    b. If a paper or plastic label has been applied to the surface of the CD or DVD in use, remove the label and any adhesive residue.
3. If drive is not detected:
    a. Be sure there are no loose connections.
    b. Be sure the cables are working properly. If possible, replace with known functional cables to test whether the original cables were faulty.

Next steps

If the part is defective, continue with the following removal and replacement procedures.

Replacing a DVD-R/W drive

About this task

Follow the steps below to replace a DL360p G8 SRVR DVD-R/W Drive HP 9.5mm SATA.

Warning:

Eliminate the risk of electric shock by removing all AC power from the system before installing or replacing any non hot-plug hardware option. Disconnect all power cords to completely remove power from the server. Always follow Avaya's application procedures when shutting down the server.

Warning:

To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.

Procedure

1. Power down the server
2. Remove all power:
   - Disconnect each power cord from the power source.
   - Disconnect each power cord from the server.
3. Extend the server from the rack
4. Remove the access panel
5. If installed, remove the FBWC capacitor pack.
6. For an SFF DVD drive, do the following:
   a. Disconnect the SATA DVD cable from the system board to fully remove the DVD drive from the bay by removing Torx screws (1) and then pulling out DVD drive (2). The Torx service tool is located inside server next to the power supply housing.
   b. Remove the DVD drive from the server.

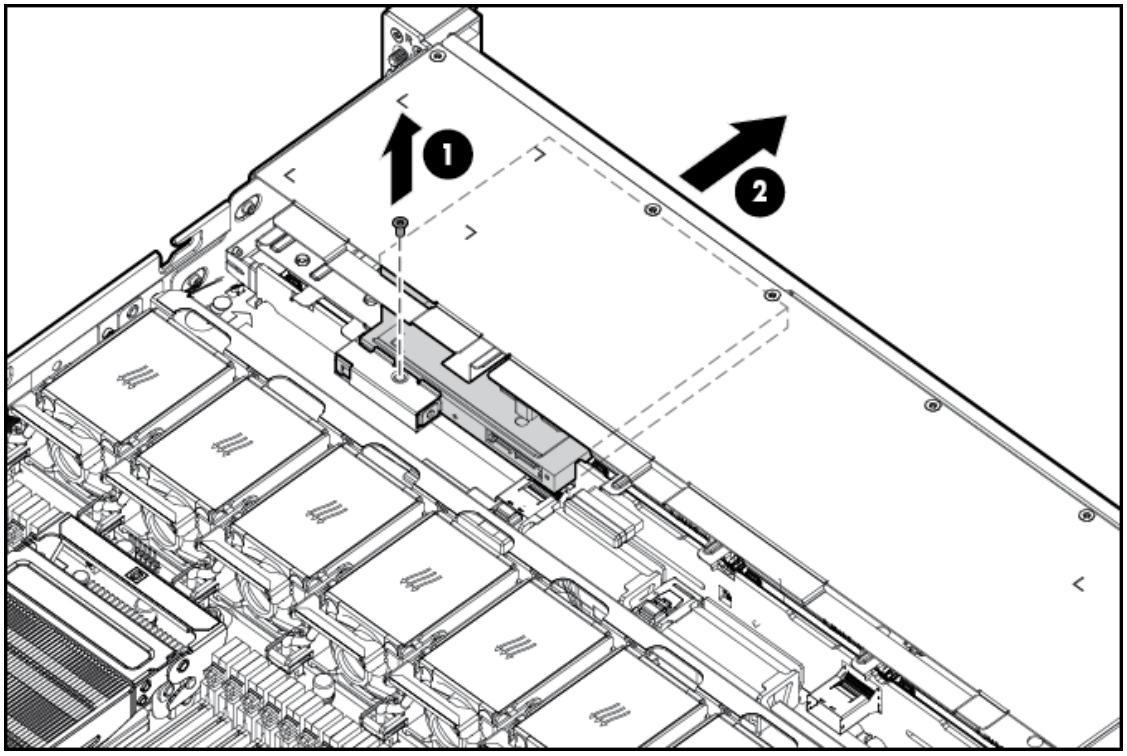


Figure 3: Removing a DVD R/W drive

c. Disconnect the SATA DVD cable from the rear of the DVD drive.

7. Remove the bezel blank from the DVD - ROM bay (refer to appropriate users guide section).

To insert DVD drive:

8. For an SFF DVD drive, do the following:
   a. Install the DVD drive using the screws from this kit and a T - 10/T - 15 Torx screwdriver.
   b. Connect the cable to the rear of the drive and to the SATA DVD - ROM drive connector on the system board.
   c. Clip the cable to the power supply air baffle when routing it along the edge of the system board.
9. Install the access panel
10. Slide the server into the rack.
11. Connect each power cord to the server.
12. Connect each power cord to the power source.
13. Power up the server

NIC problems

Symptoms

- Network controller or FlexibleLOM is installed but not working.
- Network controller or FlexibleLOM has stopped working.
- Network controller or FlexibleLOM stopped working when an expansion board was added

HP documentation reference(s)

Troubleshooting Guide Volume 1: Network controller or FlexibleLOM problems

Server Maintenance and Service Guide: FlexibleLOM

Troubleshooting a NIC

About this task

Follow the steps below to troubleshoot the DL360p G8 SRVR Dual Port PCIe 1GB NIC or DL360p G8 SRVR 1GbE 4-port 331FLR Adapter FIO kit.

Note:

Always follow safe electrostatic discharge practices.

Procedure

1. Check the network controller or FlexibleLOM LEDs to see if any statuses indicate the source of the problem. For NIC LED status information see theSystems insight display LEDs on page 20 or NIC jack LED status.
2. Be sure there are no loose connections.
3. Be sure the correct cable type is used for the network speed or that the correct SFP or DAC cable is used. For dual - port 10GB networking devices, both SFP ports should have the same media (for example, DAC cable or equal SFP+ module). Mixing different types of SFP (SR/LR) on a single device is not supported.
4. Be sure the network cable is working by replacing it with a known functional cable.
5. Be sure a valid IP address is assigned to the controller and that the configuration settings are correct according to Avaya's application documentation.

Next steps

If the part is defective, continue with the following removal and replacement procedures.

Replacing a NIC

About this task

Follow the steps below to replace the DL360p G8 SRVR Dual Port PCIe 1GB NIC or DL360p G8 SRVR 1GbE 4-port 331FLR Adapter FIO kit.

Note:

Always follow safe electrostatic discharge practices.

Procedure

1. Power down the server according to Avaya's application instructions.
2. Remove all power:
   a. Disconnect each power cord from the power source.
   b. Disconnect each power cord from the server.
3. Remove any attached network cables.
4. Extend the server from the rack
5. Remove the access panel
6. Loosen the thumbscrew.
7. Remove the existing FlexibleLOM
   a. Loosen the thumbscrew (1 on the following image).
   b. Remove the Flexible LOM (2 on the following image).

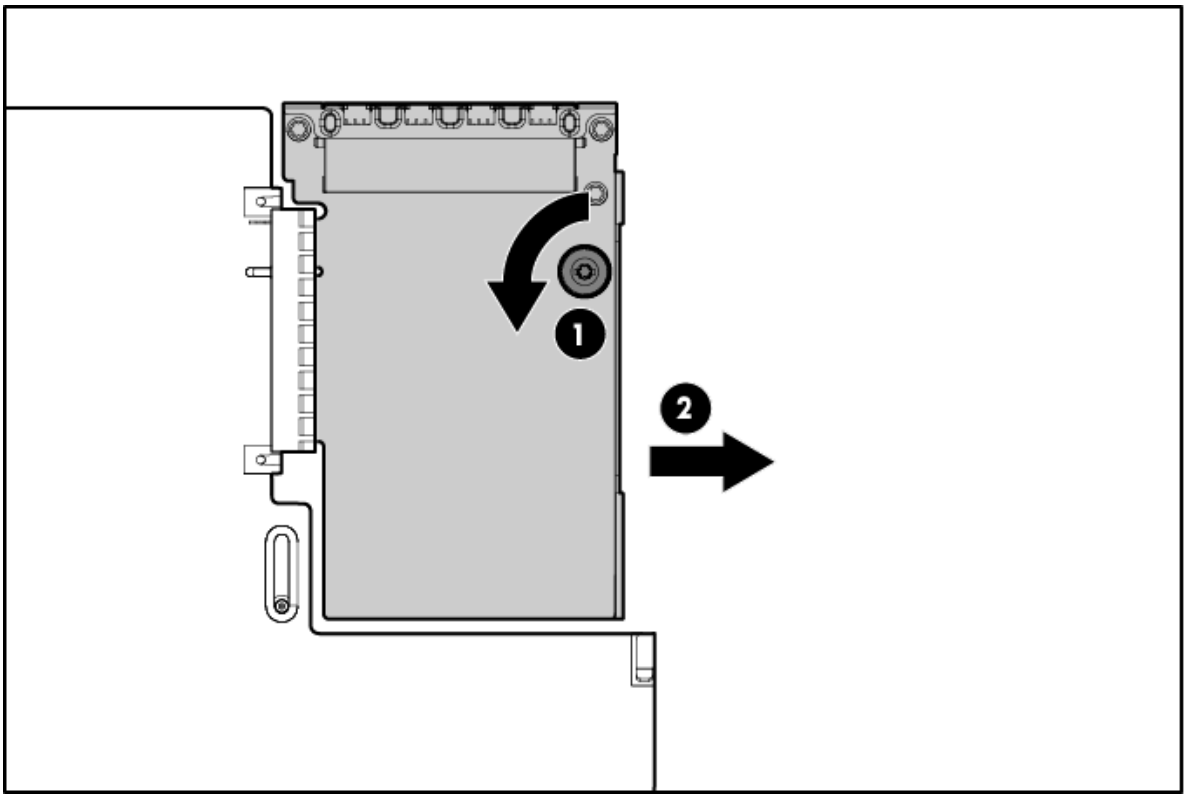


Figure 4: Removing flexible LOM

8. To replace the component, firmly seat the FlexibleLOM in the slot, and then tighten the thumbscrew.

9. To replace the dual port PCIe 1GB NIC follow the expansion board removal instructions. PCIe riser card assembly on page 27
10. Install the access panel
11. Slide the server into the rack.
12. Connect the LAN segment cables.
13. Connect each power cord to the server.
14. Connect each power cord to the power source.
15. Power up the server

Working with a PCIe riser card assembly

About this task

Use this procedure when adding or removing NIC cards.

Note:

Always follow safe electrostatic discharge practices.

Procedure

1. Power down the server according to Avaya's application instructions.
2. Remove all power:
   a. Disconnect each power cord from the power source.
   b. Disconnect each power cord from the server.
3. Extend the server from the rack
4. Remove the access panel
5. Remove the PCIe riser cage.
   a. Flip fasteners up (#1 in following image)
   b. Turn fasteners 180 degrees (#2 in following image)
   c. Lift cage straight up (#3 in following image)

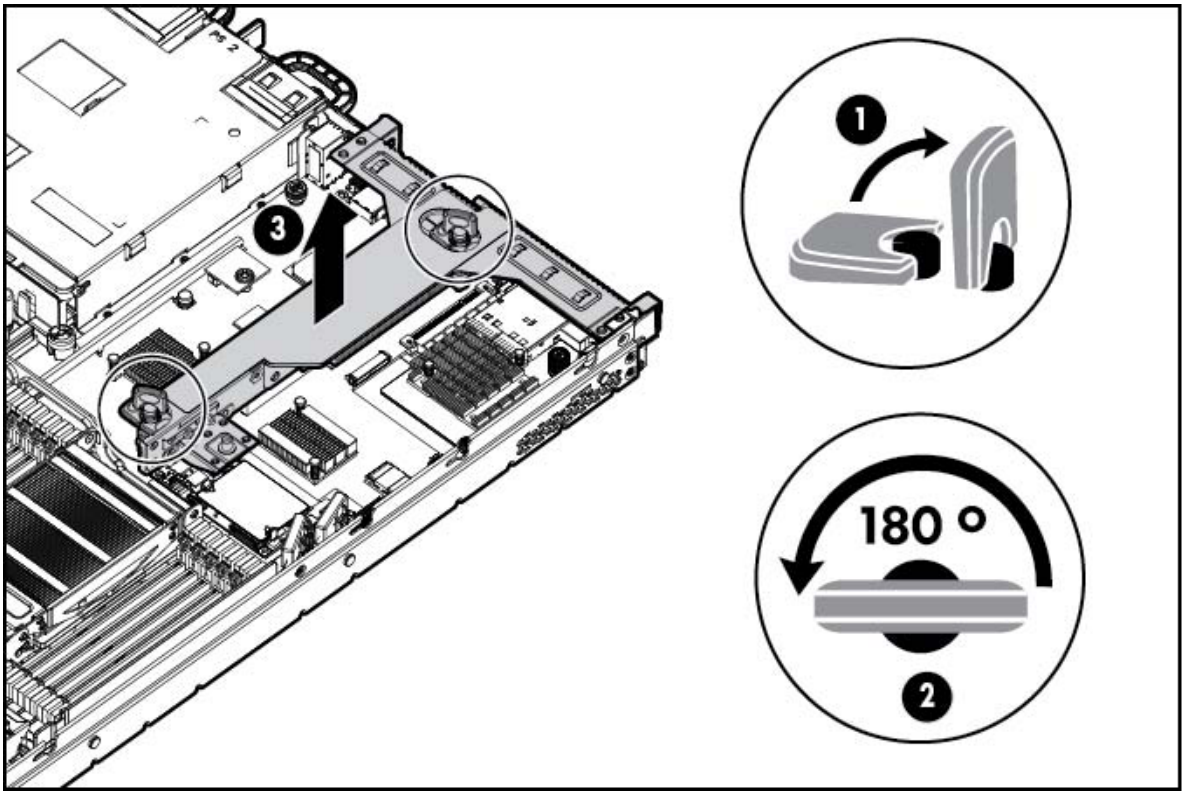


Figure 5: Removing PCIe riser cage

6. Remove any installed expansion boards.

   Note:

   If you are not replacing the expansion board, replace the screw into the PCIe riser cage before installing the PCIe riser cage back into the server.

7. Remove the PCIe riser board.
   a. Remove screws (#1 in following images)
   b. Remove board (#2 in following images)

   Note:

   The x16 PCIe riser board has two screws to remove from the assembly and the x8 PCIe riser board has three screws to remove from the assembly.

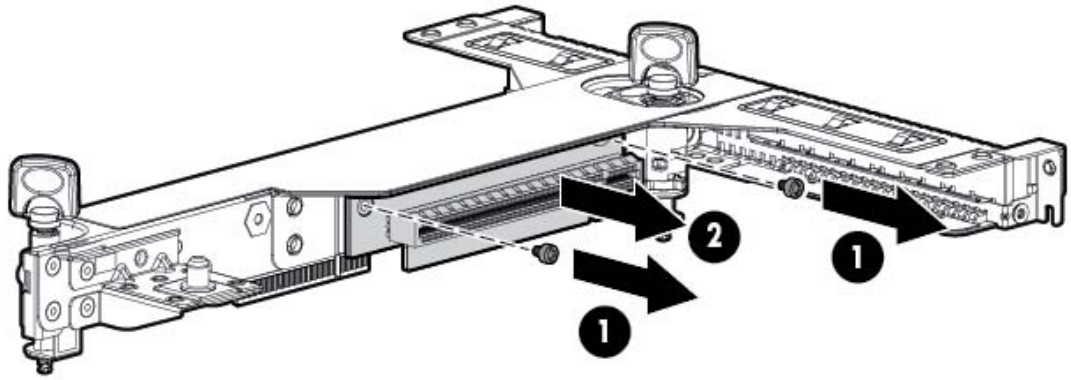


Figure 6: Right side, expansion slot 2 PCIe x16, half-height half-length

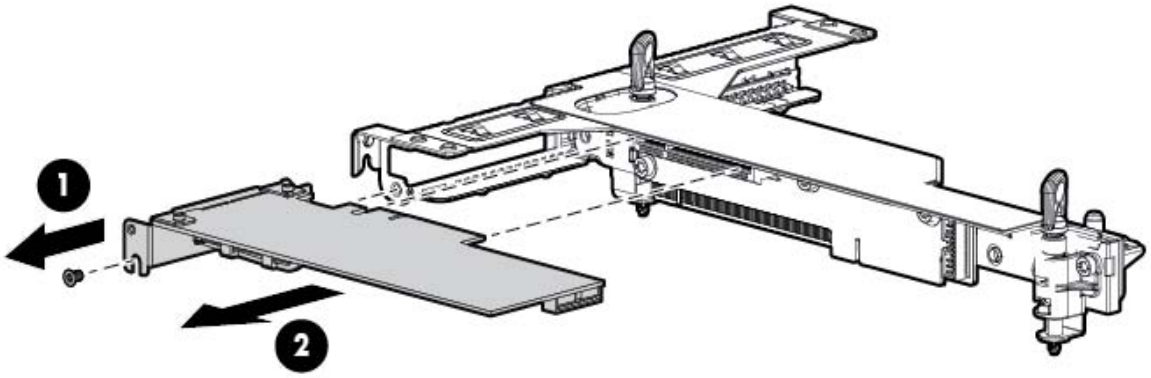


Figure 7: Left side, expansion slot 1 PCIe x8, low profile

8. To replace the component, reverse the removal procedure.

Important:

The server does not power up if the PCI riser cage is not seated properly.

Thermal (fan) problems

Symptoms

- Server powers up but quickly shuts down

- Insight display LEDs indicate a fan failure
- Avaya application alarms fan failure

Note:

For servers with redundant fans, backup fans may spin up periodically to test functionality. This is part of normal redundant fan operation.

HP documentation reference(s)

Troubleshooting Guide Volume 1: Hot - plug fan problems are occurring

Server Maintenance and Service Guide: Fan Module

Troubleshooting thermal fans

About this task

Follow the steps below to troubleshoot the DL360p G8 SRVR FAN FRU.

Note:

Always follow safe electrostatic discharge practices.

Procedure

1. Be sure the fans are properly seated and working.
   a. Follow the procedures and warnings in the server documentation for removing the access panels and accessing and replacing fans.
   b. Unseat, and then reseat, each fan according to the proper procedures.
   c. Replace the access panels, and then attempt to restart the server.
2. Be sure all fan slots have fans or blanks installed.

   Note:

   The server has eight fans. Install fans 1 and 2 only when processor 2 is installed. When only one processor is installed, install the fan blanks in bays 1 and 2.
3. Be sure no ventilation problems exist. If you have been operating the server for an extended period of time with the access panel removed, airflow may have been impeded, causing thermal damage to components.
4. Verify the fan airflow path is not blocked by cables or other material.
5. Be sure no POST error messages are displayed while booting the server that indicate temperature violation or fan failure information.
6. Check the LEDs to be sure the hot - plug fans are working.
7. Be sure hot - plug fan requirements are being met

Next steps

If the part is defective, continue with the following removal and replacement procedures.

Replacing thermal fans

About this task

Follow the steps below to replace the DL360p G8 SRVR FAN FRU.

Note:

Always follow safe electrostatic discharge practices.

Procedure

1. Replace any required non - functioning fans and restart the server if necessary. Fans are hot-swappable.
2. To remove the component:
   a. Extend the server from the rack. If the server is to remain on with application up, ensure power cord does not disconnect when extending server from rack.
   b. Remove the access panel
   c. Remove the fan module.

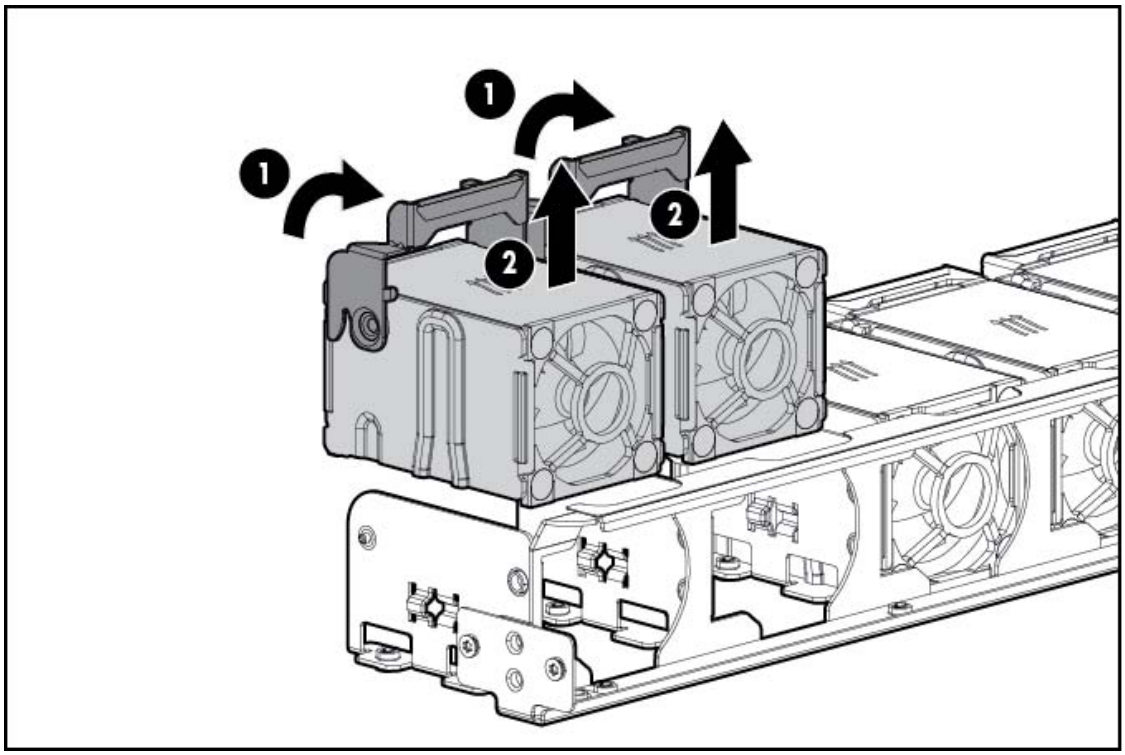


Figure 8: Removing fans

Caution:

To avoid server shutdown, a fan must be replaced within 60 seconds of being removed.

3. To replace the component:
    a. Install the Fan Module
    b. Install the access panel
    c. Slide the server into the rack.

DIMM problems

Symptoms

- General memory problems are occurring
- Server is out of memory
- Memory count error exists
- Server fails to recognize existing memory
- Server fails to recognize new memory

HP documentation reference(s)

Troubleshooting Guide Volume 1: DIMM Handling Guidelines

Server Maintenance and Service Guide: DIMMS

Helpful Guidelines

- Always follow safe ESD practices
- Avoid electrostatic discharge
- Always hold DIMMs by the side edges only.
- Avoid touching the connectors on the bottom of the DIMM.
- Never wrap your fingers around a DIMM.
- Avoid touching the components on the sides of the DIMM.
- Never bend or flex the DIMM.

Troubleshooting memory DIMMs

About this task

Follow the steps below to troubleshoot a DL360p G8 SRVR 4 GB Memory RDIMM.

Procedure

1. If general memory problems are occurring:
    a. Check system insight display for any memory error LEDs.
    b. Isolate and minimize the memory configuration.
    c. Check any server LEDs that correspond to memory slots.
    d. View power-up screen for any memory errors displayed if monitor is installed.

e. If you are unsure which DIMM has failed, test each bank of DIMMs by removing all other DIMMs. Then, isolate the failed DIMM by switching each DIMM in a bank with a known working DIMM. Start installing CH1A first and then proceed to install CH2B, second and continue to populate in that order.

f. Remove any third – party memory.

g. To test the memory, run HP Insight Diagnostics (Troubleshooting Guide Volume 1, pg 68). A keyboard and mouse are required.

2. If the server is out of memory:

   a. Be sure no operating system errors are indicated.

   b. Be sure a memory count error did not occur. Refer to the message displaying memory count during POST. This can only be viewed with monitor and keyboard.

3. If a memory count error exists, a possible cause is that the memory modules are not installed correctly.

   a. Be sure the memory modules are supported by the server.

   b. Be sure the memory modules have been installed correctly in a supported configuration.

   c. Be sure the memory modules are seated properly

   d. Be sure no operating system errors are indicated.

   e. Restart the server and check to see if the error message is still displayed.

   f. Run HP Insight Diagnostics (Troubleshooting Guide Volume 1, pg 68). Then, replace failed components as indicated

4. If the server fails to recognize existing memory:

   a. Reseat the memory.

   b. Be sure the memory is configured properly.

   c. Be sure a memory count error does not occur. See the message displaying memory count during POST. This can only be viewed with monitor and keyboard.

5. If the server fails to recognize new memory:

   a. Be sure the memory is the correct type for the server and is installed according to the server requirements.

   b. Be sure you have not exceeded the memory limits of the server or operating system.

   c. Be sure the memory is seated properly

   d. If possible test the memory by installing the memory into a known working server. Be sure the memory meets the requirements of the new server on which you are testing the memory.

Next steps

If the part is defective, continue with the following removal and replacement procedures.

Replacing memory DIMMs

About this task

Follow the steps below to replace a defective DL360p G8 SRVR 4 GB Memory RDIMM.

Procedure

1. Power down the server
2. Remove all power:
   a. Disconnect each power cord from the power source.
   b. Disconnect each power cord from the server.
3. Extend the server from the rack
4. Remove the access panel
5. Remove the DIMM

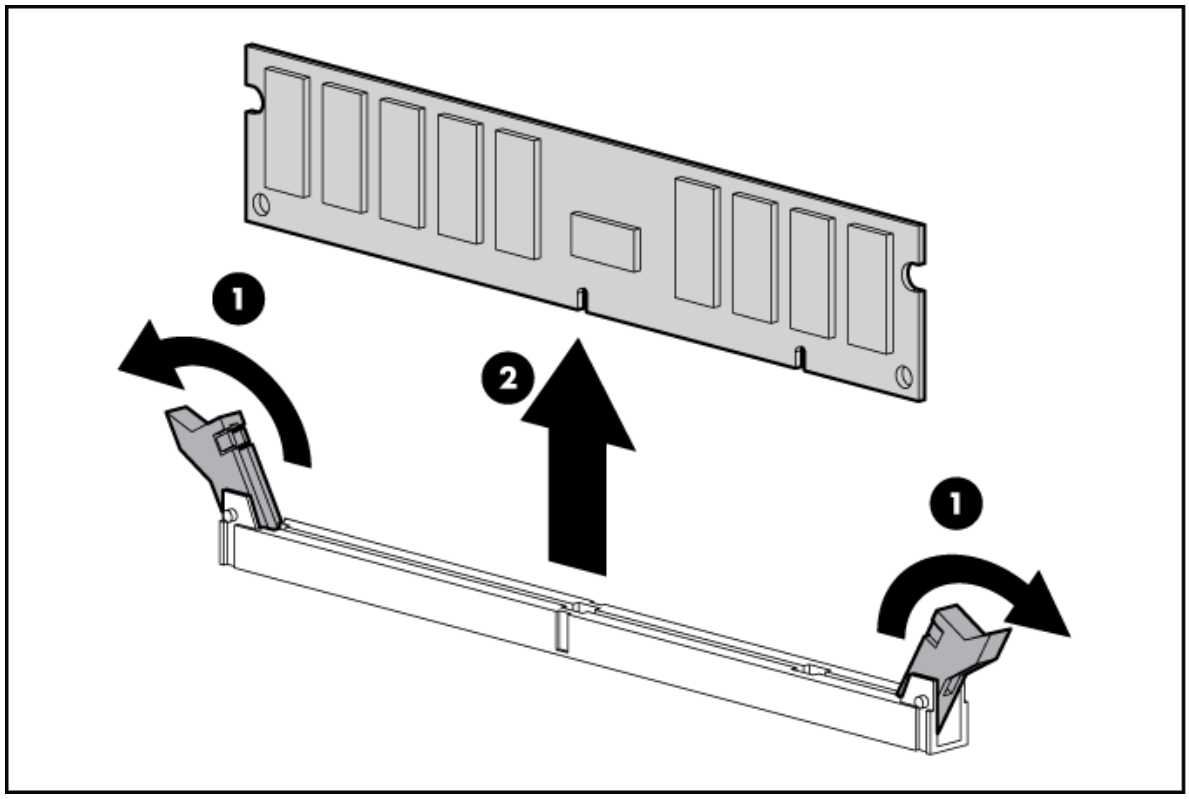


Figure 9: Removing DIMM

6. To replace the component, reverse the removal procedure.

Contacting Avaya Services

Avaya provides a telephone number to report problems or to ask questions about your product:

- The support telephone number is 1–800–242–2121 in the United States.
- For additional support telephone numbers, see the Avaya Website: http://www.avaya.com/support.

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