HPE ProLiant DL380 G6 Server - Parts Support Guide

Part Number: External
Published: 2020
Edition: 1

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Abstract
This document gives a step-by-step instruction on how to remove and replace the components of the product.

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Table of contents

Remove/Replace
References
Required Tools 4
Preparation Procedures 4
Safety Considerations 5
Procedures
Access Panel 6
SAS Hard Drive Blank 7
Hot-Plug SAS Hard Drive 8
Hot-Plug Power Supply 8
Optical Drive 9
Optical Drive Cage 9
Power Supply Backplane 10
Hot-Plug Fan 11
SFF Hard Drive Backplane 11
SFF Hard Drive Cage 12
LFF Hard Drive Backplane 12
LFF Hard Drive Cage 13
PCI Riser Cage 14
Air Baffle 14
Systems Insight Display 15
Front Left And Right Bezel 15
Fan Cage 16
Expansion Slot Covers 17
Battery-Backed Write Cache 17
Expansion Boards 18
Heat Sink 18
Heat Sink Cage 19
Power Supply Cage Assembly 20
Processor 21
DIMMs 22
System Battery 23
System Board 24

Required Tools

You need the following items for certain procedures:

- T10/T15 Torx screwdriver (included with the server)
- HP Insight Diagnostics software ("HP Insight Diagnostics")

Preparation Procedures

To access some components and perform certain service procedures, you must perform one or more of the following procedures:

- : If you are performing service procedures in an HP, Compaq branded, telco, or third-party rack cabinet, you can use the locking feature of the rack rails to support the server and gain access to internal components.
- : If you must remove a server from a rack or a non-hot-plug component from a server, power down the server.
- : If the rack environment, cabling configuration, or the server location in the rack creates awkward conditions, remove the server from the rack.
- : If you are performing certain service procedures, access the product rear panel.

Extend the server from the rack

1. Pull down the quick release levers on each side of the server.
2. Extend the server from the rack.
3. After performing the installation or maintenance procedure, slide the server back into the rack, and then press the server firmly into the rack to secure it in place.

WARNING! To reduce the risk of personal injury, be careful when pressing the server rail-release latches and sliding the server into the rack. The sliding rails could pinch your fingers.

Power down the server

WARNING! To reduce the risk of personal injury, electric shock, or damage to the equipment, remove the power cord to remove power from the server. The front panel Power on/Standby button does not

completely shut off system power. Portions of the power supply and some internal circuitry remain active until AC power is removed.

Important! If installing a hot-plug device, it is not necessary to power down the server.

1. Back up the server data.
2. Shut down the operating system as directed by the operating system documentation.
3. Press the Power on/Standby button to place the server in Standby mode. When the server activates Standby power mode, the system power LED changes to amber.
4. Disconnect the power cords. The system is now without power.

Remove the server from the rack

To remove the server from an HP, Compaq branded, telco, or third-party rack:

1. Power down the server.
2. Extend the server from the rack.
3. Disconnect the cabling and remove the server from the rack.
4. Place the server on a sturdy, level surface.

Access the product rear panel

To access the server rear panel components, you must open the cable management arm.

1. Power down the server.
2. Swing open the cable management arm.
3. Remove the cables from the cable trough.
4. Remove the cable management arm.

Safety Considerations

Before performing service procedures, review all the safety information.

Preventing electrostatic discharge

To prevent damaging the system, be aware of the precautions you need to follow when setting up the system or handling parts. A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the device. To prevent electrostatic damage:

- Avoid hand contact by transporting and storing products in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free workstations.
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching pins, leads, or circuitry.
- Always be properly grounded when touching a static-sensitive component or assembly.

Server warnings and cautions

Before installing a server, be sure that you understand the following warnings and cautions.

WARNING! To reduce the risk of electric shock or damage to the equipment:

- **Do not disable the power cord grounding plug. The grounding plug is an important safety feature.**
- **Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.**
- **Unplug the power cord from the power supply to disconnect power to the equipment.**
- **Do not route the power cord where it can be walked on or pinched by items placed against it. Pay particular attention to the plug, electrical outlet, and the point where the cord extends from 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.

Caution! Do not operate the server for long periods with the access panel open or removed. Operating the server in this manner results in improper airflow and improper cooling that can lead to thermal damage.

Access Panel

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001879en_us&noframe

Access panel removal

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

Caution! For proper cooling do not operate the server without the access panel, baffles, expansion slot covers, or blanks installed. If the server supports hot-plug components, minimize the amount of time the access panel is open.

To remove the access panel:

1. Power down the server if performing a non-hot-plug installation or maintenance procedure.
2. Extend the server from the rack.
3. Use the T15 Torx screwdriver attached to the rear of the server to loosen the security screw on the hood latch.
4. Lift up on the hood latch handle, and then remove the access panel.

Access panel replacement

To replace the access panel, reverse the removal procedures.

SAS Hard Drive Blank

https://players.brightcove.net/5774263525001/bSzerI5PS0_default/index.html?videoId=99999999999

SAS hard drive blank removal

Caution! For proper cooling do not operate the server without the access panel, baffles, expansion slot covers, or blanks installed. If the server supports hot-plug components, minimize the amount of time the access panel is open.

To remove the hot-plug SAS hard drive blank:

1. Squeeze the release levers on each side of the blank.
2. Pull out the hard drive blank out of the bay.

SAS hard drive blank replacement

To replace the blank, slide the blank into the bay until it locks into place.

Hot-Plug SAS Hard Drive

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001880en_us&noframe

Hot-plug SAS hard drive removal

Caution! For proper cooling do not operate the server without the access panel, baffles, expansion slot covers, or blanks installed. If the server supports hot-plug components, minimize the amount of time the access panel is open.

To remove the hot-plug SAS hard drive:

1. Push the release button.
2. Pull the release lever.
3. Remove the hard drive.

Hot-plug SAS hard drive replacement

To replace the hot-plug SAS hard drive, reverse the removal procedures.

Hot-Plug Power Supply

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001881en_us&noframe

Hot-plug power supply removal

WARNING! To reduce the risk of personal injury from hot surfaces, allow the power supply or power supply blank to cool before touching it.

Caution! To prevent improper cooling and thermal damage, do not operate the server unless all bays are populated with either a component or a blank.

To remove the hot-plug power supply:

Note: Determine how many hot-plug power supplies are installed. If only one hot-plug power supply is installed, power down and remove the power cord from the server. If more than one hot-plug power supply is installed, continue with the next step.

1. Access the product rear panel.
2. Disconnect the power cord from the power supply.

3. Remove the hot-plug power supply.

Hot-plug power supply replacement

WARNING! To reduce the risk of electrical shock or damage to the equipment, do not connect the power cord to the power supply until the power supply is installed.

To replace the hot-plug power supply:

1. Slide the hot-plug power supply into the power supply bay.
2. Connect the power cord to the power supply.

Optical Drive

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Optical drive removal

Caution! To prevent improper cooling and thermal damage, do not operate the server unless all bays are populated with either a component or a blank.

To remove the optical drive:

1. Power down the server.
2. Remove the access panel.
3. Disconnect the cable from the optical drive.
4. Push down on the release lever and push the drive out the front of the chassis.

Optical drive replacement

To replace the optical drive, reverse the removal procedures.

Optical Drive Cage

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001883en_us&noframe

Optical drive cage removal

Caution! To prevent improper cooling and thermal damage, do not operate the server unless all bays are populated with either a component or a blank.

To remove the optical drive cage:

1. Power down the server.
2. Remove the access panel.
3. Disconnect the cable from the optical drive.
4. Push down on the release lever and push the drive out the front of the chassis.
5. Remove the two screws securing the cage to the system board.
6. Remove the optical drive cage.

Optical drive cage replacement

To replace the optical drive cage, reverse the removal procedures.

Power Supply Backplane

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001884en_us&noframe

Power supply backplane removal

To remove the power supply backplane:

1. Power down the server.
2. Extend or remove the server from the rack.
3. Remove all power supplies.
4. Remove the access panel.
5. Remove the power supply backplane by loosening one thumbscrew and lifting up the backplane.

Power supply backplane replacement

To replace the power supply backplane, reverse the removal procedures.

Hot-Plug Fan

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001885en_us&noframe

Hot-plug fan removal

To remove the hot plug fan:

1. Extend or remove the server from the rack.
2. Remove the access panel.
3. Squeeze the release lever and pull upward to remove the fan.

Caution! Do not operate the server for long periods with the access panel open or removed. Operating the server in this manner results in improper airflow and improper cooling that can lead to thermal damage.

Hot-plug fan replacement

To replace the hot plug fan, reverse the removal procedures.

SFF Hard Drive Backplane

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001886en_us&noframe

SFF hard drive backplane removal

To remove the SFF hard drive backplane:

1. Power down the server.
2. Remove the access panel.
3. Remove all hot-plug hard drives.
4. Disconnect all cables from the hard drive backplane.

5. Remove the SFF hard drive cage.
6. Remove the hard drive backplane by pulling out the spring-loaded screw and lifting the backplane up and over the guide tabs.

SFF hard drive backplane replacement

To replace the SFF hard drive, reverse the removal procedures.

SFF Hard Drive Cage

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001887en_us&noframe

SFF hard drive cage removal

Caution! To prevent improper cooling and thermal damage, do not operate the server unless all bays are populated with either a component or a blank.

To remove the SFF hard drive cage:

1. Power down the server.
2. Remove the access panel.
3. Disconnect all cables from the hard drive backplane.
4. Remove the two screws securing the cage to the system board.
5. Remove the hard drive cage.

SFF hard drive cage replacement

To replace the SFF hard drive cage, reverse the removal procedures.

LFF Hard Drive Backplane

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LFF hard drive backplane removal

To remove the component:

1. Power down the server.
2. Remove the access panel.
3. Remove all hot-plug hard drives.
4. Disconnect all cables from the hard drive backplane.
5. Remove the hard drive backplane by loosening the screws and lifting up.

LFF hard drive backplane replacement

To replace the LFF hard drive backplane, reverse the removal procedures.

LFF Hard Drive Cage

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001889en_us&noframe

LFF hard drive cage removal

Caution! To prevent improper cooling and thermal damage, do not operate the server unless all bays are populated with either a component or a blank.

To remove the LFF hard drive cage:

1. Power down the server.
2. Remove the access panel.
3. Disconnect all cables from the hard drive backplane.
4. Remove the hard drive cage by removing the four screws on each side of the cage and sliding the cage forward.

LFF hard drive cage replacement

To replace the LFF hard drive cage, reverse the removal procedures.

PCI Riser Cage

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PCI riser cage removal

Caution! To prevent damage to the server or expansion boards, power down the server and remove all AC power cords before removing or installing the PCI riser cage.

To remove the PCI riser cage:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage by unscrewing the five thumb screws, flipping the two latches on each side of the cage, and lifting the cage.

PCI riser cage replacement

To replace the PCI riser cage, reverse the removal procedures.

Air Baffle

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001891en_us&noframe

Air baffle removal

Caution! For proper cooling do not operate the server without the access panel, baffles, expansion slot covers, or blanks installed. If the server supports hot-plug components, minimize the amount of time the access panel is open.

To remove the air baffle:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage.
4. Remove the battery pack from the air baffle.
5. Remove the air baffle by lifting it out.

Air baffle replacement

To replace the air baffle, reverse the removal procedures.

Systems Insight Display

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Systems Insight Display removal

To remove the Systems Insight display:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage .
4. Remove the air baffle.
5. Disconnect the Systems Insight Display cable.
6. Remove the Systems Insight Display by removing one screw located behind the SID and pulling the display forward.

Systems Insight Display replacement

To replace the Systems Insight Display, reverse the removal procedures.

Front Left And Right Bezel

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001893en_us&noframe

Front left and right bezel removal

To remove the front bezel:

1. Power down the server.

2. Remove the access panel.
3. Remove the PCI riser cage.
4. Remove the air baffle.
5. Extend or remove the Systems Insight Display.
6. Remove the T10 Torx screws, and then detach the front bezel.

Front left and right bezel replacement

To replace the front left bezel, reverse the removal procedures.

Fan Cage

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001894en_us&noframe

Fan cage removal

To remove the fan cage:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage.
4. Remove the air baffle.
5. Remove the fans.
6. Remove the fan cage by removing the six system board screws and lifting out the fan cage.

Fan cage replacement

To replace the fan cage, reverse the removal steps. When re-installing the fans, press down on the top of each fan to be sure it is seated properly.

Expansion Slot Covers

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001895en_us&noframe

Expansion slot covers removal

Caution! To prevent damage to the server or expansion boards, power down the server and remove all AC power cords before removing or installing the PCI riser cage.

Caution! For proper cooling do not operate the server without the access panel, baffles, expansion slot covers, or blanks installed. If the server supports hot-plug components, minimize the amount of time the access panel is open.

To remove the expansion slot covers:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage.
4. To remove slot cover 1 or 4, push in on the retainer to release it. Remove the expansion slot cover.
5. To remove slot covers 2 and 3, lift up on the latch, remove the latch, and then remove the cover.
6. To remove slot covers 5 and 6, push down on the latch, rotate the latch down, and then remove the cover.

Expansion slot covers replacement

To replace the expansion slot covers, reverse the removal procedures.

Battery-Backed Write Cache

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Battery-backed write cache removal

To remove the cache module:

1. Power down the server.
2. Remove the access panel.

3. Remove the PCI riser cage.
4. Remove the one cable from the cache on the system board.
5. Remove the cache module by releasing the two levers on each side and lifting out the module.

Battery-backed write cache replacement

To replace the cache module, reverse the removal procedures.

Caution! To prevent damage to the cache module during installation, be sure the cache module is fully inserted before pressing down.

Expansion Boards

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001897en_us&noframe

Expansion boards removal

To remove the expansion board:

1. Power down the server.
2. Remove the access panel.
3. Disconnect any external cables that are connected to the expansion board.
4. Remove the PCI riser cage.
5. Disconnect any internal cables that are connected to the expansion board.
6. Remove the expansion board by pressing the release lever and lifting out the expansion board.

Expansion boards replacement

To replace the expansion board, reverse the removal procedures.

Heat Sink

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001898en_us&noframe

Heat sink removal

To remove the heat sink:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage.
4. Remove the air baffle.
5. Open the heat sink retaining bracket, and then remove the heat sink.

Heat sink replacement

To replace the heat sink:

1. Clean the old thermal grease from the processor with the alcohol swab. Allow the alcohol to evaporate before continuing.
2. Apply all the grease to the top of the processor in an -S- pattern to ensure even distribution.
3. Install the heat sink.
4. Close and lock the heat sink retaining latches.
5. Install the air baffle.
6. Install the PCI riser cage.
7. Install the access panel.
8. Power up the server.

Heat Sink Cage

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001899en_us&noframe

Heat sink cage removal

To remove the heat sink cage:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage.
4. Remove the air baffle.
5. Remove the heat sink.
6. Remove the six T15 Torx screws securing the cage.
7. Lift out the heat sink cage.

Heat sink cage replacement

To replace the heat sink cage, reverse the removal procedures.

Power Supply Cage Assembly

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Power supply cage assembly removal

To remove the power supply cage assembly:

1. Power down the server.
2. Access the product rear panel.
3. Remove all power supplies.
4. Remove the access panel.
5. Remove the PCI riser cage.
6. Remove the air baffle.
7. Remove the power supply backplane.
8. Loosen the two system board thumbscrews and the 10 T15 Torx screws in the back of the cage assembly, and then slide the system board assembly forward.
9. Remove the power supply cage assembly by lifting it.

Power supply cage assembly replacement

To replace the power supply cage assembly, reverse the removal procedures.

Processor

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Processor removal

Caution ! To avoid damage to the processor: Handle the processor only by the edges. Do not touch the bottom of the processor, especially the contact area.

Caution ! THE PINS ON THE SYSTEM BOARD ARE VERY FRAGILE AND EASILY DAMAGED. To avoid damage to the system board: - Never install or remove a processor without using the processor installation tool.- Do not touch the processor socket contacts.- Do not tilt or slide the processor when lowering the processor into the socket.

Caution! To avoid damage to the processor and system board, only authorized personnel should attempt to replace or install the processor in this server.

Caution! To prevent possible server malfunction and damage to the equipment, multiprocessor configurations must contain processors with the same part number.

Important! Processor socket 1 must always be populated. If processor socket 1 is empty, the server does not power up.

To remove a processor:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage.
4. Remove the air baffle.
5. Remove the heat sink.
6. Open the processor locking lever and the processor socket retaining bracket.
7. Align the processor installation tool over the processor with the locking lever graphic correctly oriented.
8. Press in on the release tabs on the side of the tool and lower it onto the processor.
9. With the processor in place, release the tabs to firmly grasp the processor into the mouth of the tool.

.0. Lift the processor straight up and out of the socket.

.1. To help ensure that the processor remains in the tool, carefully rotate the tool, and then push in and release the tabs to secure the processor in the tool.

Caution! To avoid damage to the system board:

- Do not touch the processor socket contacts.
- Always install the processor socket cover after removing the processor from the socket.
- Do not tilt or slide the processor when lowering the processor into the socket.

Processor replacement

To replace a processor:

Caution! Failure to completely open the processor locking lever prevents the processor from seating during installation, leading to hardware damage.

1. Insert the processor into the processor installation tool. Handle the processor by the edges only, and do not touch the bottom of the processor, especially the contact area.**Caution! Ensure that the alignment pins on the tool are aligned with the cutouts on the processor. If the processor is not inserted correctly, it may be destroyed.Important! Be sure the processor remains inside the processor installation tool.**
2. Align the processor installation tool with the socket, and then install the processor.
3. Press the tabs on the processor installation tool to separate it from the processor, and then remove the tool.
4. Close the processor socket retaining bracket and the processor locking lever.**Caution! Be sure to close the processor socket retaining bracket before closing the processor locking lever. The lever should close without resistance. Forcing the lever closed can damage the processor and socket, requiring system board replacement.Caution! To avoid severely damaging the processor, be sure to apply thermal grease before replacing the heat sink.**

DIMMs

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DIMMs removal

To remove the DIMMs:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage.
4. Remove the air baffle.
5. Remove the DIMM by releasing the latches on each end and lifting out the DIMM.

DIMMs replacement

To replace the DIMMs, reverse the removal procedures.

For DIMM configuration information, see the server user guide.

System Battery

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001903en_us&noframe

System battery removal

WARNING! The computer contains an internal battery pack. A risk of fire and burns exists if the battery pack is not properly handled. To reduce the risk of personal injury:

- **Do not attempt to recharge the battery.**
- **Do not expose the battery to temperatures higher than 60-C (140-F).**
- **Do not disassemble, crush, puncture, short external contacts, or dispose of in fire or water.**
- **Replace only with the spare designated for this product.**

To remove the battery:

1. Power down the server.
2. Remove the access panel.
3. Remove the PCI riser cage.
4. Remove the air baffle.

5. Remove the battery by pulling the lever forward and lifting out the battery.

System battery replacement

To replace the battery, reverse the removal procedures.

System Board

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00001904en_us&noframe

System board removal

To remove the system board:

1. Power down the server.
2. Remove all power supplies.
3. Remove the access panel.
4. Remove the PCI riser cage.
5. Remove the battery pack.
6. Remove the air baffle.
7. Remove all DIMMs.
8. Remove the hot-plug fans.
9. Remove the fan cage.
10. Remove the power supply backplane.
11. Disconnect all cables connected to the system board.
12. Remove the heat sink.
13. Remove the processor.
14. Loosen the system board thumbscrews.
15. Remove the power supply cage.
16. Remove the system board by lifting off the chassis.

Important! If replacing the system board or clearing NVRAM, you must re-enter the server serial number through RBSU.

System board replacement

To replace the system board, reverse the removal procedures.

Note: After you replace the system board, you must re-enter the server serial number and the product ID. Refer to your server maintenance and server guide for more information on how to do this.