HPE Apollo 4510 Gen10 System - Parts Support Guide

Part Number: External
Published: 2020
Edition: 1

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Abstract
This document will help you identify parts of the product and also gives a step-by-step instruction on how to remove and replace the components.

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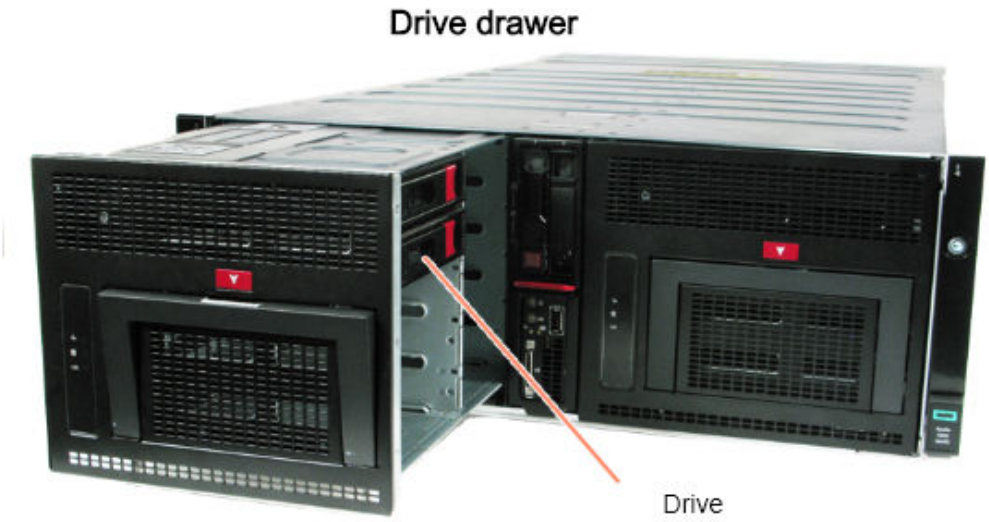
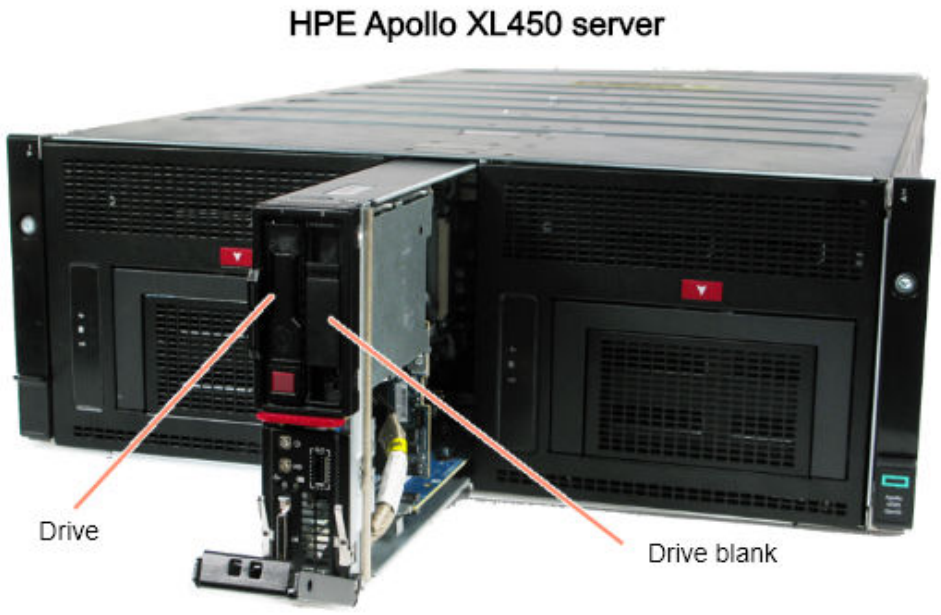
Front View



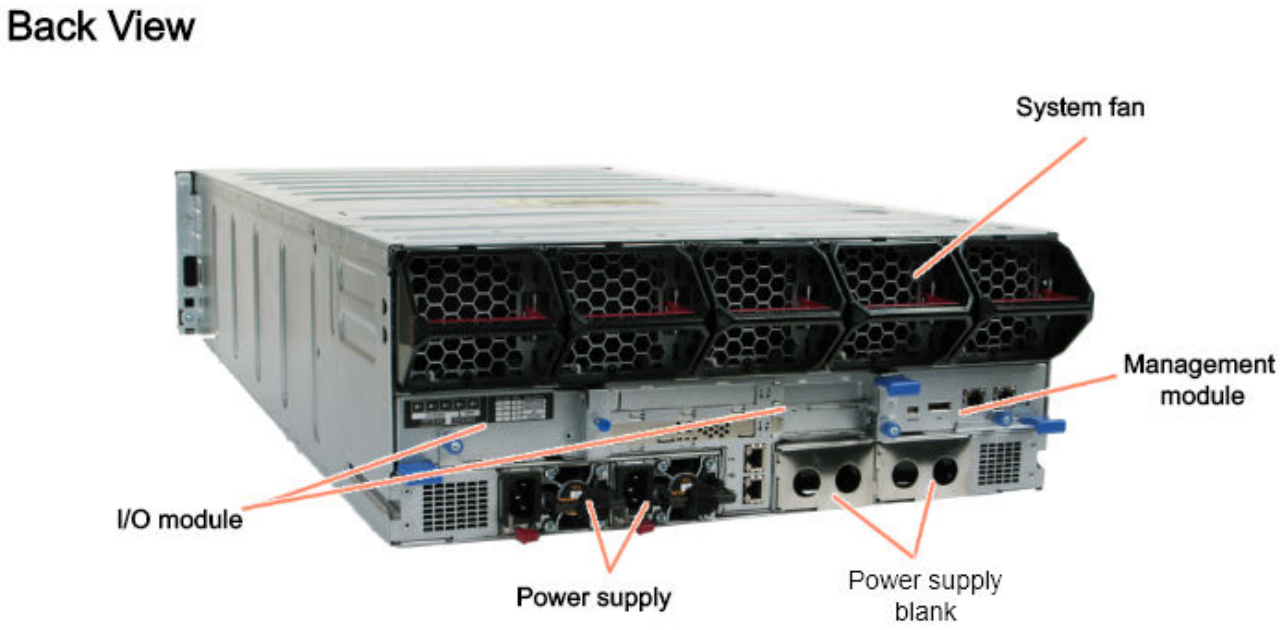
Drive drawer



HPE Apollo XL450 server



Back View



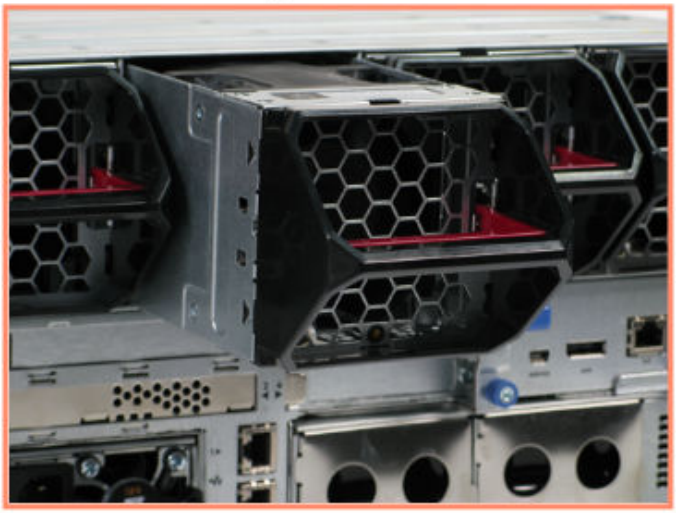
I/O module

I/O module



System fan

System fan



Management module

Management module



Power supply

Power supply



Precautions

To prevent damage to the unit, protect data, and avoid personal injury, review and follow these precautions.

Before you begin

1. If the unit contains heated components, wait until the components have cooled off before proceeding. Refer to the service manual for details on how long each component requires to adequately cool off.
2. Put on your electrostatic discharge (ESD) wrist or shoe strap to avoid damaging any circuitry.
3. Place an ESD mat on a suitably grounded surface, and then place the unit on the mat.
4. Remove any devices from the unit being serviced, such as diskettes, tape cartridges, or CD-ROMs.
5. Power off the unit and any peripheral devices that are connected to it.**Note: Replacing a hot-plug device does not require powering down the unit.**
6. Disconnect the power cord from the electrical outlet and then from the unit. When a unit is plugged into an AC power source, voltage is always applied to the unit. You must therefore disconnect the power cord from the power source before opening the unit.
7. Disconnect all peripheral device cables from the unit.

Static electricity

Static electricity can damage electrical components. Before removing or replacing a component, observe the following precautions to prevent damage to electric components and accessories:

- Remove all ESD-generating materials from your work area.
- To avoid hand contact, transport and store all electrostatic parts and assemblies in conductive or approved ESD packaging such as ESD tubes, bags, or boxes.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free stations. Before removing items from their containers, place the containers on a grounded surface.
- Do not take the new component out of its ESD package or handle any component before connecting your ESD wrist or shoe strap to a suitably grounded surface.
- Always use an ESD-protected work station when servicing the unit. If an ESD work station is not available, ground yourself to discharge body static by touching the metal chassis of the unit you are servicing.
- Avoid contact with pins, leads, or circuitry.
- Use the ESD package provided with the new part to return the old part.

Disassembly

Ensure that you take the following precautions when disassembling a unit:

- Label each cable as you remove it, noting its position and routing. This will make replacing the cables much easier and will ensure that the cables are rerouted properly.
- Keep all screws with the component removed, if applicable. The screws used in each component can be of different thread sizes and lengths. Using the wrong screw in a component could damage the unit.
- If the unit contains light-sensitive components such as toner cartridges, store the component in its original packaging or in a dark location to avoid damage.

Tools And Materials

Tools used in removal and replacement

Ensure that you have the tools you need before you begin. These should include:

- T-10 Torx screwdriver
- T-15 Torx screwdriver
- HPE Insight Diagnostics

Bezel Ear

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Bezel ear

Before you begin:

1. Review and follow precautions.
2. Backup all data.
3. Power down the chassis.

Bezel ear removal

1. Remove the three Torx-10 screws securing the bezel ear to the chassis.
2. Grasp the bezel ear and pull it away from the chassis.

Bezel ear replacement

1. Making sure to align the screw holes, replace the bezel ear at the front of the chassis.
2. Replace the three Torx-10 screws securing the bezel ear to the chassis.

Server Tray

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Server tray

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Power down the server tray.

Server tray removal

1. **CAUTION: To prevent improper cooling and thermal damage, do not operate the chassis unless all bays are populated with a component or a blank.**
2. Press the release tab to release the server tray handle.
3. Grasp the server tray handle and pull the server tray away from the Apollo 4510 Gen10 chassis.

Server tray replacement

1. Press the server tray into place.
2. Push the server tray handle in to lock the server tray into the Apollo Apollo4510 Gen10 chassis.

System Fans

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System fans

Before you begin:

1. Review and follow precautions.
2. Back up all data.

System fans removal

1. **IMPORTANT: The removal and replacement procedure must be complete within 60 seconds. Exceeding this period causes the system to shut down.**

2. Noting the orientation for removal, squeeze the latch on the system fan and pull away from the chassis.

System fans replacement

1. Noting the orientation from removal, slide the system fan into the fan bay until it clicks.

Power Supply

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Power supply

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. If the proper redundancy is not in place, power down the server before beginning this procedure.

Power supply removal

1. **CAUTION: When replacing a power supply, the procedure must be completed within 60 seconds. Failure to do so can disrupt airflow in the chassis.**
2. Remove the power cable from the power supply.
3. Noting the orientation for removal, squeeze the tab on the power supply and pull away from the chassis.

Power supply replacement

1. Noting the orientation from removal, slide the power supply into the chassis until it clicks.
2. Replace the power cable.

Power Supply Blank

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Power supply blank

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. If the proper redundancy is not in place, power down the server before beginning this procedure.

Power supply blank removal

1. **CAUTION: When replacing a power supply blank, the procedure must be completed within 60 seconds. Failure to do so can disrupt airflow in the chassis.**
2. Noting the orientation for removal, grasp the power supply blank and pull away from the chassis.

Power supply blank replacement

1. Noting the orientation from removal, slide the power supply blank into the chassis until it clicks.

I/O Module

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I/O module

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Power down the chassis.
4. Disconnect all cables from the I/O module.

I/O module removal

1. Loosen the Torx-15 captive screws to release both I/O module handles.
2. Rotate each I/O module handle away from the chassis.
3. Grasp the module handles and slide the I/O module out of the bay.

I/O module replacement

1. **CAUTION: To prevent improper cooling and thermal damage, do not operate the chassis unless all device bays are populated with either a component or a blank.**
2. With the module handles extended, slide I/O module into the bay until the handle starts to engage.
3. Rotate the I/O module handles in and tighten the Torx-15 captive screw to lock both I/O module handles in place.

Management Module

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Management module

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Power down the chassis.

Management module removal

1. Loosen the Torx-15 captive screw to release the management module handle.
2. Rotate the management module handle away from the chassis.
3. Grasp the management module handle and slide the management module out of the bay.

Management module replacement

1. With the management module extended, slide the management module into the chassis until handle starts to engage.
2. Rotate the management module handle in and tighten the Torx-15 captive screw to lock the management module in place.

Expansion Board

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Expansion board removal

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Power down the chassis.
4. Remove the I/O module from the chassis.

Expansion board removal

1. Loosen the Torx-15 captive screw securing the bracket to the I/O module.
2. Slide the bracket back and then remove it from the I/O module.
3. Remove any cables connected to the expansion board.
4. Loosen the 2 Torx-15 captive screws securing the riser assembly to the I/O module.
5. Pull away to remove the riser assembly.
6. Remove the Torx-10 screw securing the expansion board to the I/O module.
7. Gently pull to remove the expansion board from the I/O module.

Expansion board replacement

1. Align the notch in the expansion board with the expansion board slot key.

2. Push the expansion board into the slot.
3. Replace the Torx-10 screw securing the expansion board to the I/O module.
4. Replace the riser assembly and tighten the two Torx-15 captive screws securing the riser assembly to the I/O module.
5. Replace any cables previously removed.
6. Lower the bracket onto the I/O module and slide it forward.
7. Tighten the captive screw securing the bracket to the I/O module.

Smart Storage Battery

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Smart storage battery

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Power down the chassis.
4. Remove the management module.

Smart storage battery removal

1. Disconnect the smart storage battery cable from the management module.
2. Remove the Torx-15 screw securing the bracket to the management module.
3. Remove the bracket.
4. Noting the orientation for replacement, rotate the smart storage battery away from the management module and remove it.

Smart storage battery replacement

1. Noting the orientation from removal, toe the Smart Storage battery into the notch and lower it onto the management module.
2. Place the bracket on the management module and replace the Torx-15 screw.
3. Reconnect the smart storage battery on the management module.

Midplane Assembly

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Midplane assembly removal

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Power down the chassis.
4. Remove the server.
5. Remove all power supplies
6. Remove all system fans.
7. Remove the I/O module
8. Remove the management module

Midplane assembly removal

1. Remove the 5 Torx-10 screws located on the top of the chassis.
2. Remove the Torx-10 screw located on each side of the chassis.
3. Lift up to remove the midplane assembly cover.
   CAUTION: For proper cooling, do not operate the chassis with the midplane assembly cover removed as it might cause improper cooling and system shutdown.
4. Disconnect the cables from the midplane assembly.

5. Remove the 2 Torx-15 screws located on each side of the chassis.
6. Noting orientation for replacement, lift up to remove the midplane assembly.

Midplane assembly replacement

1. Noting orientation from removal, lower the midplane assembly into the chassis.
2. Replace the 2 Torx-15 screws located on each side of the chassis.
3. Replace the cables on the midplane assembly.
4. Making sure to align the screws holes, replace the midplane assembly cover.
5. Replace the Torx-10 screw located on each side of the chassis.
6. Replace the 5 Torx-10 screws located on the top of the chassis.

Fan Louver

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Fan louver

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Power down the chassis.
4. Remove the midplane assembly cover.

Fan louver removal

1. Noting orientation for replacement, grasp the fan louver and lift up to remove it from the chassis.

Fan louver replacement

1. Noting orientation from removal, lower the fan louver into the chassis.

Drive

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Drive

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Determine the status of the drive from the LED definitions.

Drive removal

1. Press the button on the drive drawer to release the drive drawer handle.
2. Grasp the handle and pull the drive drawer out until it stops.
   IMPORTANT: If removing several drives make sure to label the drives before removing them. Drives must be returned to their original locations.
3. Press the ejection latch in to release the drive handle.
4. Grasp the handle and pull the drive out of the drive drawer.

Drive replacement

1. With the handle extended, slide the drive into the drive drawer until the handle starts to engage.
2. Push the drive handle in to lock the drive in place.
3. Close the drive drawer.

Drive Drawer Assembly

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Drive drawer assembly

Before you begin:

1. Review and follow precautions.
2. Back up all data.
3. Extend the drive drawer from the chassis.
4. Remove all drives.

Drive drawer assembly removal

1. Simultaneously release the 3 drive drawer assembly latches and extend the drawer out further.
2. Remove the Torx-10 captive screw securing the cable retention bracket to the drive drawer.
3. Lift up to remove the cable retention bracket.
4. Disconnect all cables from the drive drawer.
5. Pull the cable retention clip to release it from the drive drawer.
6. Remove the cable assembly from the drive drawer.
7. Fully extend the drive drawer until it is free of the drive drawer rails.

Drive drawer assembly replacement

1. Making sure to align the 3 drive rails, slide the drive drawer onto the slide rails.
2. Reconnect the cable assembly to the drive drawer.
3. Replace the cable retention bracket.
4. Tighten the T-10 captive screw securing the cable retention bracket to the drive drawer.
5. Slide the drive drawer back into the chassis until it locks into place.