HPE Superdome Flex 280 Server - Parts Support Guide

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Revision history

Part number	Publication date	Edition	Summary of changes

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Accessing Components

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003933en_us&noframe
To remove the rear top cover:

- Remove the two T10 screws that secure the cover.
- Slide and lift the cover off the chassis.

To remove the front top cover:

- Remove the five T10 screws that secure the cover.
- Slide and lift the cover off the chassis.

To remove the bottom cover:

- Flip the chassis over (or access it from underneath).
- Remove the two T10 screws through the front bulkhead.
- Slide and lift the cover off the chassis.

To remove an air baffle, simply lift the air baffle out of the chassis.

To remove the air seal:

- Remove the screws that secure it to cable management bracket.
- Lift the air seal out of the chassis.

To remove the PCIe riser cover:

- Remove the two T10 screws that secure the PCIe riser cover.
- Slide and lift the cover out of the chassis.

To remove the cable management bracket:

- Remove the cable wraps
- Disconnect the PCIe riser cables from each other.
- Move the cables out of the cable management bracket.
- Remove the T10 screws.
- Lift the cable management bracket out of the chassis.

To remove the GPU support bracket:

- Remove the U-bracket under the GPU support bracket or release one side of the U-bracket.
- Remove the four T10 screws that secure the GPU support bracket.
- Lift the bracket out of the chassis.

To remove the middle brace:

- Remove the two T10 screws (one on each side) that secure the brace.
- Lift the brace out of the chassis.

Storage Controller Backup Battery Replacement

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003921en_us&noframe
Required tools:

- T10 Torx screwdriver
- Phillips screwdriver

Procedure:

1. Prepare the system for part replacement.
    a. Collect log of hardware status.
    b. Shut down the operating system.
    c. Power down the system.
    d. Disconnect the chassis from site power.
    e. Remove bezel and cables from the chassis
2. Slide the chassis in the rack or remove the chassis from the rack.
3. Remove the rear top cover. Remove the rear air baffles.
4. Remove the PCIe riser cover.
5. Remove the backup battery.
    a. Disconnect the power cable on the battery.
    b. Remove the backup battery card.
    c. Remove the battery from the backup battery card.

6. Install the replacement backup battery.
    a. Insert the replacement backup battery into the tray on the backup battery card.
    b. Install the backup battery card.
    c. Connect the power cable from the backup battery to the cable attached to the storage controller card.
7. Return the system to operation.
    a. Install the PCIe riser cover.
    b. Install the rear air baffles.
    c. Install the rear top cover.
    d. Slide the chassis into the rack and reconnect the cables.
    e. Connect power and test UPI connections.
    f. Install the bezel.
    g. Power on the system and boot to UEFI Shell.
    h. Check status of system hardware.
    i. Boot the operating system.
    j. Check the status of the battery.
    k. Collect log of hardware status.

Power Supply Replacement

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003923en_us&noframe
Required tools:

- None

Procedure:

You can replace the power supply while the system is running and stowed in the rack. If the system is running with two failed power supplies, replace one and then replace the other. Do not try to replace both simultaneously.Be sure to note the orientation of the power supplies. It is possible to install a power supply upside down. If a power supply is installed upside down, the power supply will not plug into the power board.

1. Locate the power supply. The power supplies are numbered PS0 through PS3 from left to right.

2. Remove the power supply.
    a. Disconnect the power cord.
    b. Press and hold the power supply latch and pull the power supply out of the chassis
3. Install the replacement power supply.
    a. Orient the new power supply with the latch on the left.
    b. Push the power supply into the chassis until it locks in place.
    c. Attach the power cord.
4. Return the system to operation.
    a. Check the status LEDs on the power supply.
    b. Check the health/status of the system hardware.
    c. Check the power sensor readings.

PCIe Card Replacement

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003926en_us&noframe
Required tools:

- T10 Torx screwdriver
- Phillips screwdriver

Procedure:

1. Prepare the system for part replacement.
    a. Shut down the operating system.
    b. Power down the system.
    c. Disconnect the chassis from site power.
    d. Remove bezel and cables from the chassis.
2. Slide the chassis in the rack or remove the chassis from the rack.
3. Remove the rear top cover.
4. Remove the rear air baffles.

5. Remove the PCIe riser cover.
6. Disconnect any cables connected to the card.
7. Remove the card.
    a. Remove the screw that secures the retention bracket.
    b. Remove the bracket.
    c. Slide the card out of the slot.
8. Install the replacement card.
    a. Insert the replacement card.
    b. Connect any cables to the card.
    c. Install the retention bracket and secure it with its screw.
9. Return the system to operation.
    a. Install the PCIe riser cover.
    b. Install the rear air baffles.
    c. Install the rear top cover.
    d. Slide the chassis into the rack and reconnect the cables.
    e. Connect power and test UPI connections.
    f. Install the bezel.
    g. Power on the system and boot to UEFI Shell.
    h. Check status of system hardware.
    i. Boot the operating system.
    j. Verify that the PCIe card is available.

Memory DIMM Replacement

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003927en_us&noframe
Required tools:

- T10 Torx screwdriver

Procedure:

1. Prepare the system for part replacement.
    a. Collect log of hardware status.
    b. Shut down the operating system.
    c. Power down the system.
    d. Disconnect the chassis from site power.
    e. Remove bezel and cables from the chassis.
2. Slide the chassis in the rack or remove the chassis from the rack.
3. Remove the front or rear top cover and the front or rear air baffles, depending on the location of the memory DIMM.
4. Remove the memory DIMM.
    a. Locate the DIMM, and press down on the DIMM latches.
    b. Remove the DIMM from the slot.
5. Install the replacement memory DIMM.
    a. Insert the replacement DIMM in the slot.
    b. Push the DIMM down until it snaps in place.
6. Return the system to operation.
    a. Install the air baffles.
    b. Install the top cover.
    c. Slide the chassis into the rack and reconnect the cables.
    d. Connect power and test UPI connections.
    e. Install the bezel.
    f. Power on the system and boot to UEFI Shell.
    g. Check status of system hardware.
    h. Boot the operating system.
    i. Verify that the memory is available.
    j. Run memory diagnostics (optional).

k. Collect log of hardware status.

GPU Card Replacement

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003930en_us&noframe
Required tools:

- T10 Torx screwdriver
- Phillips screwdriver

Procedure:

1. Prepare the system for part replacement.
    a. Shut down the operating system.
    b. Power down the system.
    c. Disconnect the chassis from site power.
    d. Remove bezel and cables from the chassis.
2. Slide the chassis in the rack or remove the chassis from the rack.
3. Remove the rear top cover. Remove the rear air baffles.
4. Remove the PCIe riser cover.
5. Remove the GPU card.
    a. Disconnect any power cables connected to the card.
    b. Remove any screws that secure the card to the GPU support bracket.
    c. Remove the screw that secures the retention bracket.
    d. Remove the retention bracket.
    e. Slide the card out of the slot.
6. Install the replacement card.
    a. Insert the replacement card.
    b. Install the retention bracket and secure it with its screw.
    c. Secure the card with screws to the GPU support bracket.

d. Connect any power cables that were disconnected from the card.

7. Return the system to operation.

   a. Install the PCIe riser cover.

   b. Install the rear air baffles.

   c. Install the rear top cover.

   d. Slide the chassis into the rack and reconnect the cables.

   e. Connect power and test UPI connections.

   f. Install the bezel.

   g. Power on the system and boot to UEFI Shell.

   h. Check status of system hardware.

   i. Boot the operating system.

   j. Verify that the GPU card is available.

Fan Replacement

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003931en_us&noframe
Required tools:

- T10 Torx screwdriver (if a fan brace is installed)

Procedure:

1. If a fan brace is installed, remove both halves of the fan brace and discard them.

2. Prepare the system for part replacement.

   For a single-chassis system, no actions need to be performed before fan replacement.

   For a two-chassis system:

   a. Collect log of hardware status.

   b. Shut down the operating system.

   c. Power down the system.

   d. Remove bezel and UPI cables in front of the fan.

3. Grasp the handle and slowly pull the fan straight out of the system. Be careful not to scrape your knuckles on the fan grating.
4. Hold the replacement fan so the key is facing up.
5. Push the fan into the chassis until it locks in place.
6. Return the system to operation.

   For a single-chassis system:

   a. Ensure there is airflow coming out of the new fan.

   b. Check status of system hardware.

   c. Check fan sensor readings.

   For a two-chassis system:

   a. Reconnect the UPI cables.

   b. Test UPI connections.

   c. Install the bezel.

   d. Power on the system.

   e. Ensure there is airflow coming out of the new fan.

   f. Check status of system hardware.

   g. Check fan sensor readings.

DVD Drive Replacement

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003932en_us&noframe
Required tools:

- T10 Torx screwdriver

Procedure:

1. Prepare the system for part replacement.

   a. Eject any media in the DVD drive.

   b. Collect log of hardware status.

   c. Shut down the operating system.

d. Power down the system.

e. Disconnect the chassis from site power.

f. Remove bezel and cables from the chassis.

2. Slide the chassis in the rack or remove the chassis from the rack.
3. Remove the rear top cover. Remove the rear air baffles.
4. Remove the PCIe riser cover.
5. Remove the DVD drive.

   a. Remove the screw.

   b. Disconnect the DVD cable.

   c. Slide the DVD drive out the rear of the chassis.

6. Install the replacement DVD.

   a. Slide the replacement DVD drive into the chassis.

   b. Secure the screw.

   c. Attach the cable to the DVD drive.

7. Return the system to operation.

   a. Install the rear air baffles.

   b. Install the rear top cover.

   c. Slide the chassis into the rack and reconnect the cables.

   d. Connect power and test UPI connections.

   e. Install the bezel.

   f. Power on the system and boot to UEFI Shell.

   g. Check status of system hardware.

   h. Boot the operating system.

   i. Mount a DVD and verify it is accessible.

   j. Collect log of hardware status.

Disk Drive Replacement

https://support.hpe.com/hpesc/public/videoDisplay?videoId=vpsg00003920en_us&noframe
Required tools:

- None

Procedure:

1. Prepare the system for part replacement.

   If the drives are mirrored, you can do the following while replacing the faulty disk drive:

   - Leave the operating system running.
   - Leave the system powered up.
   - Leave the system stowed in the rack.

   In other configurations, you might need to shut down the operating system before replacing a drive.

2. Locate the drive to replace.
3. Release the drive handle.
4. Remove the drive.
   a. Pull the drive out of the chassis.
   b. Lay the drive on an ESD-safe surface.
   c. Pry the drive carrier off the drive.
5. Install the replacement drive.
   a. Install the drive carrier.
   b. Slide the drive into the chassis.
   c. Push the drive handle until the drive locks in place.
6. Return the system to operation.
   a. Verify the disk is listed in the UEFI Shell device-mapping table.
   b. Check status of system hardware.