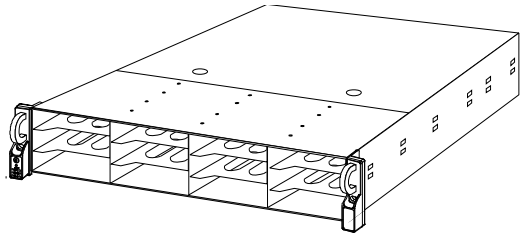
2U Disk Chassis Spare

For SnapServer® 2000 Series / REO® 4600

This document describes how to remove and replace the chassis in an 2U disk appliance from Overland Storage. This chassis is used for both the REO 4600 and different SnapServer 2000 Series products.



It is **required** that the work be done by an Authorized Service Provider. Improper installation may result in damage which voids existing warranties.

WARNING: To reduce the risk of electric shock or damage to equipment, always remove the power cords.

CAUTION: While working with the unit, observe standard Electrostatic Discharge (ESD) precautions to prevent damage to micro-circuitry or static-sensitive devices.

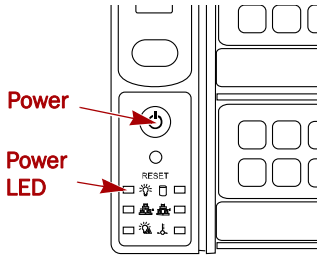
NOTE: Depending on the model, different parts may need to be transferred from the old appliance to the new appliance.

Prepare the Appliance

Disconnect and Power Off

1. On a SAN S2000, use the GUI to make sure **none** of the **initiators** (servers) have active connections.
2. Power off the unit by pressing the **Power button** on the front of the server for **no more** than one second.

   While there is no obvious change, the appliance starts its shutdown process.

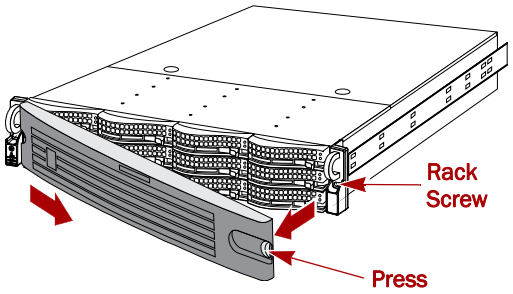


3. Wait **1-2 minutes**, and then verify that the power LED is off before continuing.
4. Disconnect the **power cords**.
5. Disconnect all **data cables**.

Remove the Disk Carriers

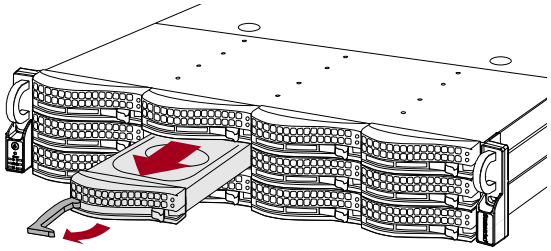
IMPORTANT: Overland recommends that you remove the drive assemblies to lessen the unit's weight prior to removal. The assemblies must be reinstalled in the same slots.

1. Remove the **bezel** by pressing the latch on the right side, pulling the right side away from the unit, and pulling the bezel off to the right. Set the bezel aside.



NOTE: Do not remove the disk drives from their carriers. Doing so voids the drive warranty.

2. On the drive carrier, press the **button** to release the assembly handle.
3. Use the **handle** to pull the assembly out.



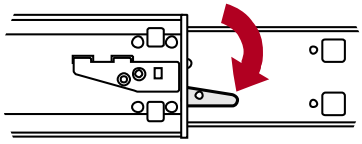
4. Number the drive assembly and set it on an ESD surface.
5. Repeat Steps 2–4 for the remaining drive carrier assemblies.

Remove Appliance from Rack

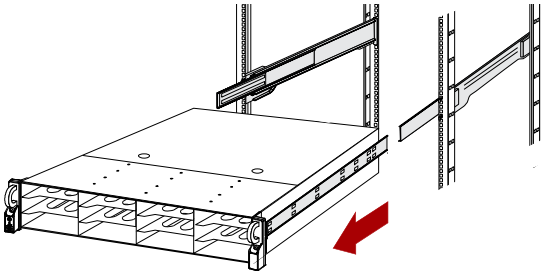
WARNING: To prevent injury, it is recommended that a mechanical lifter (or at least two people) be used during installation or removal.

1. Remove and retain the **screws** holding the appliance to the rack rails.
2. Using the two **handles**, pull the unit out until the rails lock.

3. Press down **both latches** where the inner rail on the appliance goes into the middle rail.



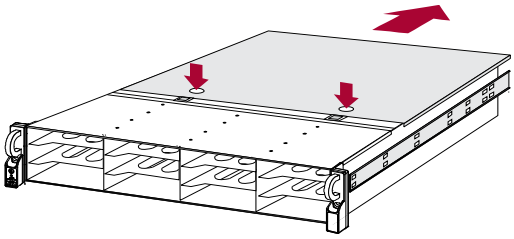
4. Keeping it parallel to the floor, pull the **appliance** out of the rack and place it on an ESD surface.



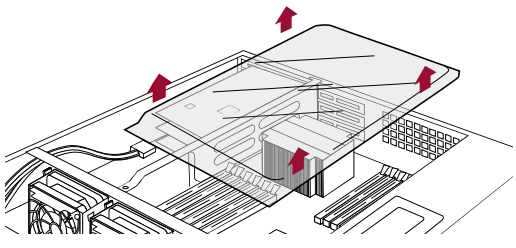
5. Slide the **rails** back into the rack.
6. Unpack the **new chassis** and place it on the ESD surface next to the old unit.

Remove Covers

1. On the **old** appliance, push down the **cover latches** and slide the cover back **until it stops** at 1/2 inch (1.25cm).



2. Lift the **cover** up and off.
3. Remove the plastic **air duct:**
   a. Grab the **duct** on the right front side and the left rear side.
   b. Lift it **straight up** and set it aside.



4. Repeat Steps 1–3 for the **new chassis**.

Move Parts to New Chassis

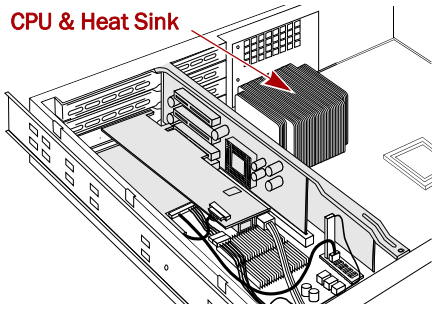
Following standard ESD practices, move these items from the old appliance over to the new chassis:

- CPU and heat sink
- Memory DIMMs
- PCIe/UIO cards and Riser
- Flash DOM
- Fans
- Power supplies
- Inner rail

WARNING: Allow the unit time to cool, especially the heat sink, before swapping parts.

Move the CPU and Heat Sink

NOTE: Perform this procedure twice for dual-CPU units.

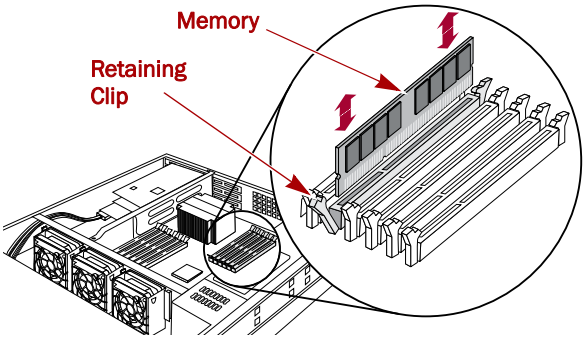


1. At the **old** chassis, release the **four screws** holding the heat sink to the primary CPU.
2. Remove the **heat sink** and set it aside.
3. Clean any **remaining bond** off the top of the CPU.
   Use commercial wipes with IPA to gently remove the thermal compound taking care to protect the contacts on the bottom of the processor.
4. At the **new** chassis, release the zero-force primary socket **lever**, raise the CPU **cover**, and remove the **dummy** CPU.
5. At the **old** chassis, release the zero-force primary socket **lever** and remove the **CPU**.
6. Move the CPU to the **new** chassis, carefully place it in the **socket** using the same orientation, and lock it into place.
7. Insert the **dummy CPU** in the **old** chassis and lock it into place.
8. Remove the **heat sink** from its packaging, center it over the **CPU**, and secure it with the four screws.

CAUTION: It is a requirement that the heat sink screws be **cross-tighten** to provide a good connection. In order, halfway tighten the front-left, rear-right, front-right, and rear-left screws. Repeat the process to fully tighten them.

Move the Memory DIMMs

IMPORTANT: Different models have different DIMMs in different slots. Move the existing DIMMs to the exact same slots in the new chassis.

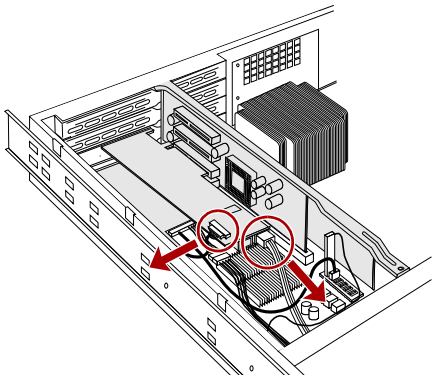


1. Press the **retaining clips** to release the DIMM in the old chassis.
2. Move the **DIMM** to the **same slot** in the new chassis and press down until the clips lock.
3. Depending on your configuration, repeat Steps 1–2 for the **remaining** DIMMs.

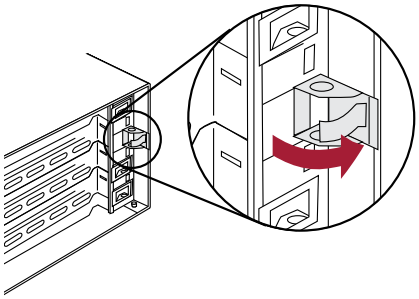
Move the PCIe/UIO Cards and Riser

NOTE: For a SAN S2000, the Journal Drive/Battery Backup (JD/BBU) card in the bottom slot requires a special procedure covered in Step 2.

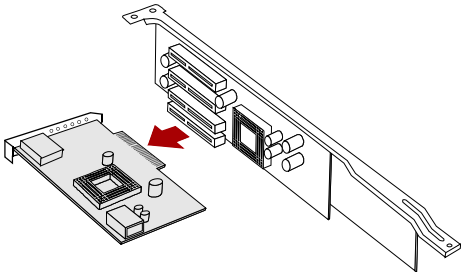
1. Remove all the **PCIe/UIO cards**, placing them in order on the ESD surface:
   a. Starting with the top card, remove any **cables** from the card.



   b. Open the card **latch** at the rear of the unit.

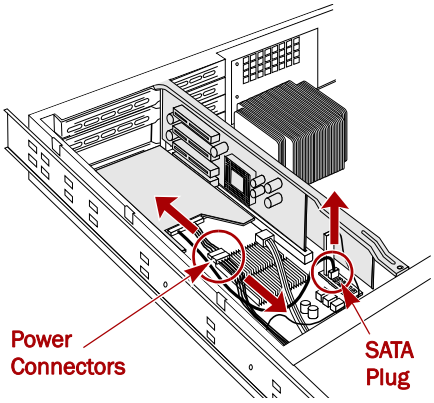


   c. Remove the card from its **riser slot**.

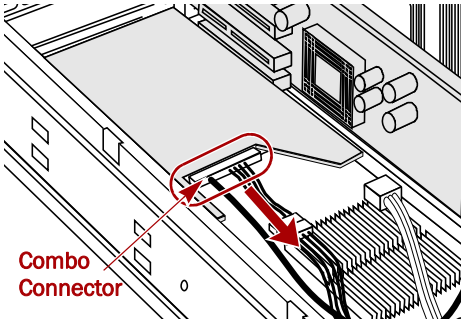


NOTE: You need to simultaneously pull out and angle away from the rear to release both the bracket (from the rear slot) and the card connectors (from the riser card).

   d. Set the card aside on an **ESD surface**.
   e. Repeat Steps a–d for any **other cards**.
2. For a **SAN S2000 Journal Drive/BBU card**, follow this procedure:
   a. Unplug the **power** connectors closest to the card.

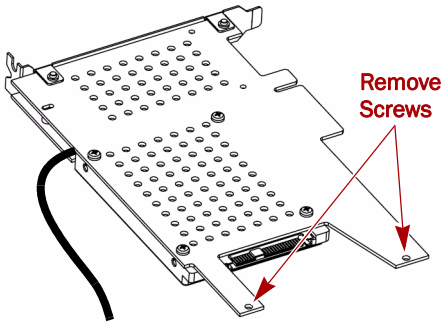


   b. Unplug the **SATA plug** behind the Flash DOM.
   c. Unplug the **combo connector** from the rear of the drive.



   d. Move the combo connector assembly to the **new** chassis and connect it to the **power cable stub**.
   e. Plug the SATA plug into the **second port** on the SATA connector.

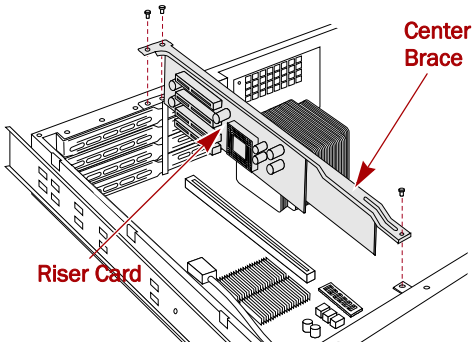
f. Remove the two **screws** holding the card end to the motherboard.



g. Opening the rear card latch, remove the **JD/BBU** card leaving the BBU cable attached.

3. Move the center **riser card** to the new chassis:

a. On the **new** chassis, remove and retain the **three screws** securing the center brace and remove the brace.



b. On the **old** chassis, remove and retain the **three screws** securing the riser/brace assembly and pull the assembly out.

c. Position the **assembly** in the **new** chassis and secure it with the three retained screws.

d. Position the **new brace** in the **old** chassis and secure it with the three retained screws.

4. Remove the appropriate **slot covers** from the rear of the **new** chassis and install them in the open slots on the **old** chassis.

5. In reverse order, reinstall the **cards** into the same riser card slots in the **new chassis**, reconnecting any cables previously removed.

NOTE: The RAID card has stickers over the unused ports.

a. Holding the card near the riser slot, insert the **narrow end** of the card bracket into its slot.

b. Continue pushing the **card** simultaneously into both the bracket slot and the riser slot.

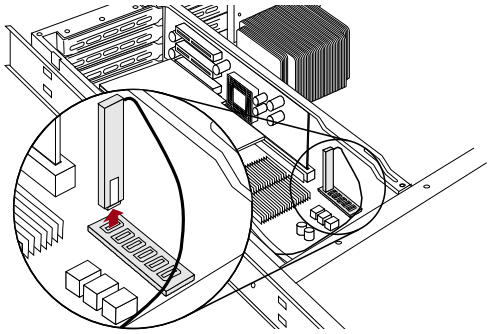
c. Push the wide, **angled end** of the bracket until it is flush with the rear and the card is secure in the riser slot (no contacts showing).

d. Holding the angled end of the bracket, close the **rear latch**.

Verify the card doesn't move as the latch closes.

Move Flash DOM

1. Locate the **flash DOM** in front of the riser card slot.



2. Remove the **flash power cable** from the backplane.

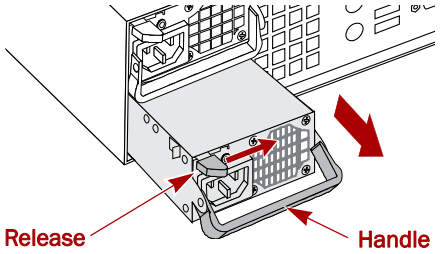
3. Press the latch to remove the **flash and the cable** from the old chassis and install it in the same slot in the new chassis.

4. Attach the **flash power cable** to the new chassis backplane.

Move the Power Supplies

For **each** power supply:

1. Press the **release button** toward the center of the unit and use the handle to slide the power supply out.

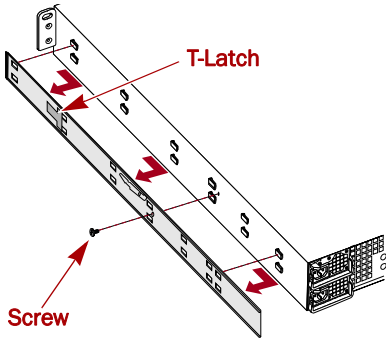


2. Insert the power supply into the same bay in the **new chassis** and push it in until it latches (clicks).

Move the Inner Rails

For **each** inner rail:

1. Remove and retain the **screw** holding the rail to the side of the old unit.



2. Lifting the **T-latch**, slide the rail to the rear and off the tabs.

3. Slide the rail onto the same side on the **new chassis**.

4. Using the retained **screw**, secure the rail.

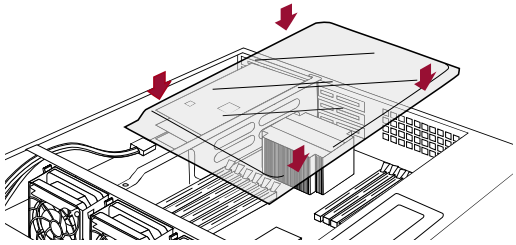
Reactivate the Unit

At this point, all the necessary parts have been moved to the new chassis and you are ready to reactivate the unit.

Replace Covers

1. Reinstall the **clear air duct** in the new chassis.

   The name on the cover's narrow end faces the front.

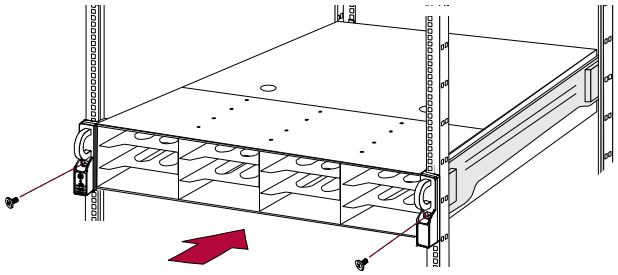


2. Place the **new top cover** back on the new chassis.
3. Slide the cover towards the front until it latches (clicks).
4. Repeat Steps 1–3 for the old chassis covers.

WARNING: Never operate the SnapServer appliance without the top cover in place.

Replace Appliance in Rack

1. Extend the rails out of the rack with the **bearing slides** all the way to the front.
2. Using two people to lift the appliance, carefully slide the **appliance rail** into the **rack rail**, and push the appliance to the rear of the rack.



3. Using the **retained screws**, secure the appliance into the rack.
4. One at a time, insert the **disk assemblies** into the new chassis:
   a. Use the lever to push the disk assembly all the way into the slot **same slot** in the new chassis.
   b. Push the **lever** close until it locks (clicks).
5. Replace the **bezel** on the front of the unit by inserting the left tabs and pushing the right side in until it latches (clicks).
6. Reconnect the **data cables**.
7. Reconnect the **power cords** to the appliance.

Return Removed Parts to Overland

1. Pack the **old chassis** in the replacement part's box using the provided packing materials.
2. Insert the **parts box** (with the old riser card) into the appropriate slot in the packing.
3. Return the old parts to **Overland Storage**.

Power On and Configure

The new spare chassis needs to be configured to match the unit it is replacing:

1. Turn the unit on by pressing the **power button** once for less than a second.
2. After the unit boots, access it through the **GUI** to verify that it is working properly.
3. If an **License** was purchased for optional features, contact Overland Technical Support to activate those features on your new chassis:

   http://support.overlandstorage.com/support/contact.htm#ts
4. If replication is activated on this appliance, activate the **Storage Journal** drive.
   a. In the SAN Web Manager, click the **Pools** tab.
   b. In the Actions list on the left, click **Set Storage Journal**.
   c. At the **Storage Journal Configuration** page, select the SCSI drive (~80 GB) from the list and click Add.