SnapServer® Expansion E2000

Quick Start Guide

Overview

This document describes how to unpack a SnapServer Expansion E2000 array from Overland Storage and install it into a four-post, 32-inch depth, EIA-310 rack.

WARNING: To reduce the risk of electric shock or damage to equipment, always remove any power cords while working with the unit.

AVERTISSEMENT: pour réduire le risque de choc électrique ou endommagement de l'équipement, retirez toujours les cordons électriques en travaillant avec l'appareil.

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

Register First

Before starting, it is **essential** that you activate your Overland warranty. Technical and warranty support are **not available** until this is done:

1. Go to the **Overland Storage** web site (http://www.overlandstorage.com/).
2. Click the **Service & Support** tab.
3. Select **My Products** tab **> Register New Product**.
4. At the Site Login, enter your **e-mail address** and **password** (Figure 1).

   NOTE: If you are not yet a member, click "New member?" and follow the instructions given. It's free and easy!

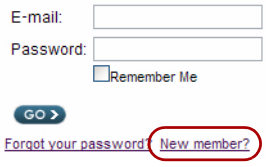

Figure 1. Support Site Login

5. Fill in the information and click **Submit**.

Within three business days, you will receive an e-mail from Overland with your warranty certificate. Follow the instructions included to complete the process.

Rack Installation

Before installing the disk drives, it is recommended that the unit first be secured in the rack.

WARNING: Use care during rack installation or removal to prevent accidental tipping of the rack causing damage or personal injury.

AVERTISSEMENT: soyez prudent lors de l'installation ou de l'enlèvement du support afin d'empêcher le renversement accidentel de la crémaillère, pour éviter dommages et blessures.

The rail kit included with the E2000 is adaptable for installation in the two major types of hardware racks: squared-holed and round-holed EIA-310 racks.

NOTE: A two-post telco-style rack or any rack that is less than 29-inches in depth will not support this appliance. Also, for threaded-hole racks, Overland Storage recommends using a shelf.

The rails are not universal. They are stamped LH (left) and RH (right) and must be mounted on the appropriate side (when facing the rack front).

Attach Inner Rails to Chassis

This procedure is required for **all rack types**:

1. Mark the **screw holes** on the rack where the rails will be installed.

   NOTE: Be sure rear holes are horizontally in line with the front holes to ensure the unit remains level.

2. Remove the **inner rail** (Figure 2) from the rail set:

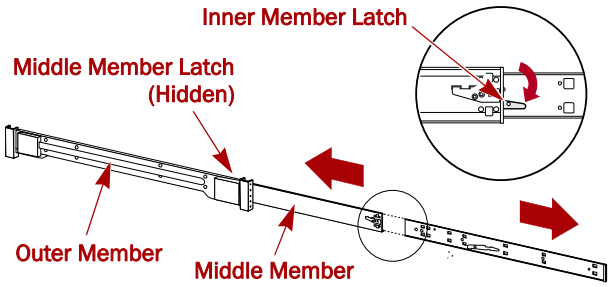

Figure 2. Inner Rail Release Latch

   a. Fully extend the **rail set**.
   b. Push the inner member **latch** down, and remove the **inner rail**.

c. Release and slide the **middle member** back into the outer member.

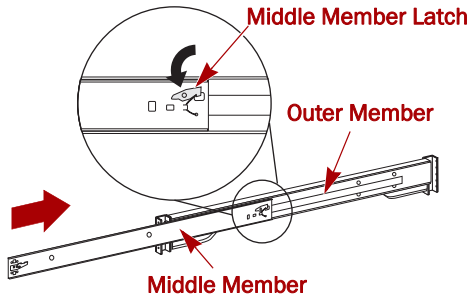

Figure 3. Inner Rail Release Latch

3. Attach the **right inner member** (Figure 4):

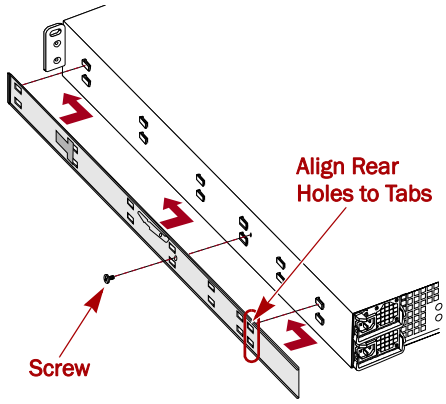

Figure 4. Attach Inner Rail Member to E2000

a. Facing the chassis, position the **rail** against the right side of the appliance with the locking tabs going through the holes on the rail.

b. Slide the rail **toward the front** to lock it.

This may require some force as it is a tight fit.

c. Secure the rail with its Phillips **screw**.

4. Repeat Step 3 to install the **left inner member**.

IMPORTANT: Depending on your rack type, continue with either the *"Square-Holed Rack Installation" or "Round-Holed Rack Installation."*

Square-Holed Rack Installation

1. Attach the **left outer rail** to the rack (Figure 5):

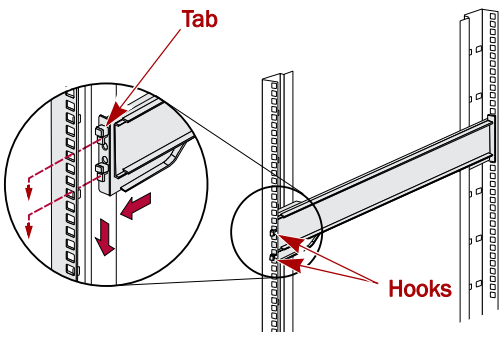

Figure 5. Attaching Front of Rail

a. Position the **rail** against the inside of the rack front rail with the hooks in line with the holes.

b. **Insert** the bracket front into the rack rail and **press down** so that the hooks catch.

The spring-loaded tabs will extend into the hole to prevent the rail from unhooking.

c. Slide the **rear segment** of the bracket rearward until the hooks are in line with the correct holes.

d. **Insert** the bracket rear into the rack rail and **press down** so that the hooks catch and the tabs lock.

2. Repeat Step 1 for the **right** slide rail assembly.

3. Verify that the **rails** are level and straight.

Continue with "Install the Unit in the Rack" on page 3.

Round-Holed Rack Installation

Before installing the rails onto an unthreaded round-holed rack, the round-hole rail kit adaptors (Figure 6) must be installed on the ends of the outer rails.

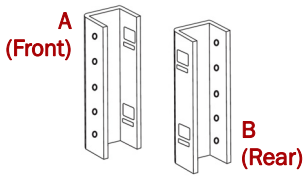

Figure 6. Round-Holed Rack Adaptors

1. Attach the **adaptors** (Figure 7) to both ends of the rail:

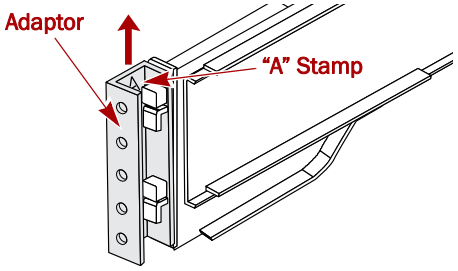

Figure 7. Attach the Adaptor to the Front

a. Position the adaptor stamped "A" at the front of the **left outer rail** (end with the graphic label).

NOTE: Make sure the stamp is at the top and the square adaptor holes are aligned with the hooks on the outer rail.

b. Press the **adaptor** onto the hooks and slide it **upwards** until it locks (clicks).

NOTE: The rail buttons will snap into the square holes.

c. Repeat Steps a–b for the **left rear** adaptor (stamped "B").

2. Facing the rack, position the **left rail** in the rack, aligning the adaptor holes with the **front** left rack holes being used (Figure 8 on page 3).

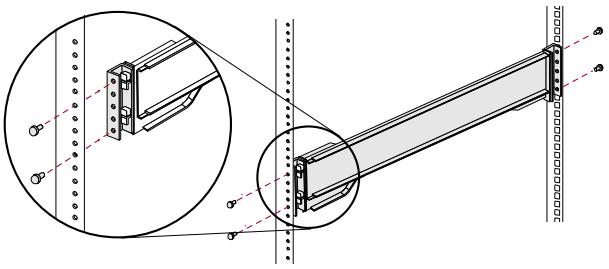

Figure 8. Using the Early Round-Hole Adaptors

3. Using the **screws** from the kit, secure the **front** of the rail to the rack.
4. Slide the **rear rail segment** rearward until the **rear** adaptor holes are in line with holes being used.
5. Using the **screws** from the kit, secure the **rear** of the rail to the rack.
6. Repeat Steps 1–5 for the **right rail**.
7. Verify that the **rails** are level and straight.

Continue the installation with "Install the Unit in the Rack."

Install the Unit in the Rack

WARNING: It is recommended that a mechanical lifter (or at least two people) be used during rack installation or removal to prevent injury.

AVERTISSEMENT: pour éviter toute blessure il est recommande qu'un monte-charge (ou deux personnes au moins) soit utilisé lors de l'installation ou de l'enlèvement du support.

1. At the front, extend the **middle** rail members until they lock (click).
2. Confirm that the ball-bearing **shuttles** are at the **front** (Figure 9).

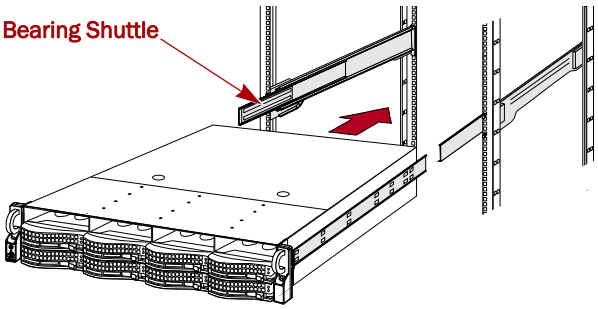

Figure 9. Inserting Expansion Array Into Rack

3. Using a mechanical lifter or two people, insert the **appliance** into the rack **rails**.

   Lift the appliance to its install height and engage the **inner members** on the appliance with the middle members protruding from the rack, and slide the appliance into the rack until it stops.
4. Slide the **unit** in and out a few times to ensure that the expansion array does not bind.

   If binding occurs, verify that the front and rear flanges are mounted in the correct holes, readjusting the slide positioning as necessary.
5. Using the **two screws** provided, secure the expansion array flanges to the rack (Figure 10).

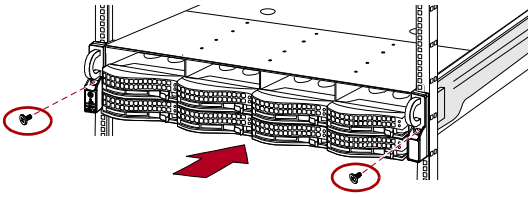

Figure 10. Secure the Expansion Array to Rack

Disk Drives

The E2000 comes without disk drives (they are sold separately in singles and 4-packs) and can be configured as noted here:

Server	Drives Supported
SnapServer NAS N2000	A combination of 4 to 12 SAS and/or SATA drives with blank drive carriers filling in the empty slots.
SnapServer SAN S2000	
REO® 4600 (VTL)	12 SATA drives*

* The REO 4600 does not support blank drive carriers.

Recommended Drive Configurations (SnapServer S2000 and N2000 only)

Before installing or adding drives to an E2000 array that is used with either an N2000 or an S2000, the following must be observed:

- Different capacity drives can be installed in the same expansion array. However, they should not be included in the same RAID array, because capacity usage for all drives in the RAID is limited to the capacity of the smallest drive member.
- Drives of different rotational speed (such as, SAS and SATA drives) can be installed in the same expansion array (Figure 11), but they should not be installed in the same column or be separated from each other by a column of different rotational speed drives (Figure 12 on page 4). If you are combining drives with different rotational speeds, use the figures below to plan where to place the disk drives.
- Overland recommends grouping columns of drives of the same speed next to each other when possible.

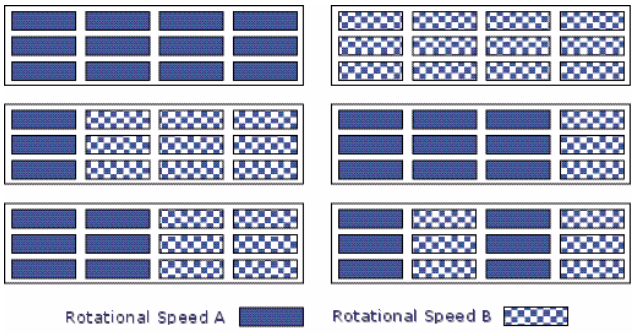

Figure 11. Supported Drive Configurations

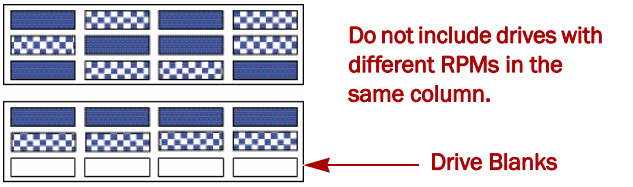

Figure 12. Unsupported Drive Configurations

Installing Drives

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

Once the unit is in the rack, install the drives. Initially, the top row is empty and the other two rows are filled with drive blanks. Remove as many blanks as needed:

1. If a **drive blank** is in the slot where you are about to install a disk drive, remove the blank by pressing the lever release button and pulling it out.
2. Remove a **drive assembly** from the packaging.
3. Press the **button** to release the lever.
4. With the button on the right, position the **drive assembly** in front of the appropriate **bay** and slide it in (Figure 13) until resistance is felt.

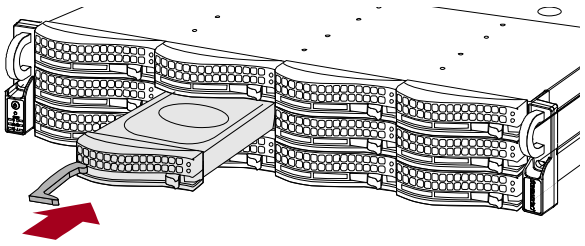

Figure 13. Inserting Drive Carriers

5. Push the **lever** in to lock the assembly in the bay.
6. Repeat Steps 1–5 for **each** remaining drive carriers.

IMPORTANT: To maintain proper airflow and cooling, a drive assembly or a blank drive carrier must be installed in *every* slot. No empty slots are allowed.

Attach the Bezel

Once the drives and blanks are installed, attach the front bezel (Figure 14):

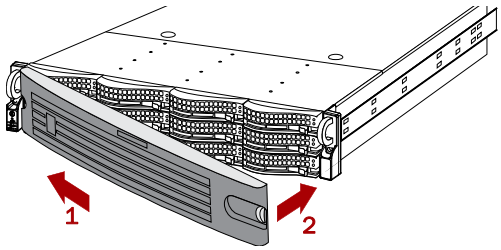

Figure 14. Attaching the Bezel

1. Insert the **bezel tabs** into the flange holes.
2. Push the **other side** in until it latches (clicks).
3. If desired, **lock** the bezel.

Cable Attachment

All cabling and power connections are located on the rear panel of the E2000 expansion array (Figure 15). All cooling exhaust is handled through the rear panel.

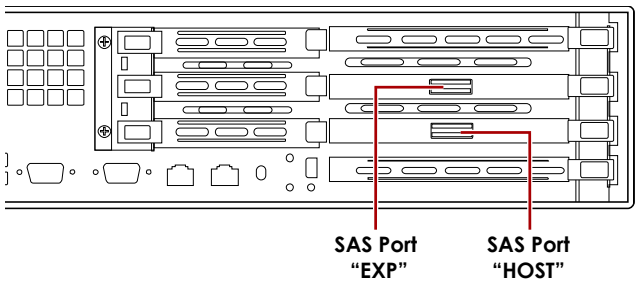

Figure 15. E2000 Rear Panel Connections

1. Plug the supplied **SAS cable** into the **bottom** SAS Port (HOST) of the expansion array.
2. Plug the other end of the SAS cable into the **SAS port** on the server or the **top** SAS Port (EXP) of another existing E2000.

   NOTE: If you are connecting additional E2000 arrays, the SAS cable from a HOST port of the first array always connects to the upper SAS Port (EXP) of the next array.
3. Attach the **power cords** to the AC Power **sockets**.
4. Plug the **power cords** into a UPS appliance or AC power source.

Power Up the E2000

IMPORTANT: Always power up your E2000 expansion arrays before powering up your head unit (if the head unit is running, shut it down first). This enables the head unit to discover all the attached expansion arrays.

To turn the expansion array **ON**, press and hold the Power button (Figure 16) for no more than one (1) second.

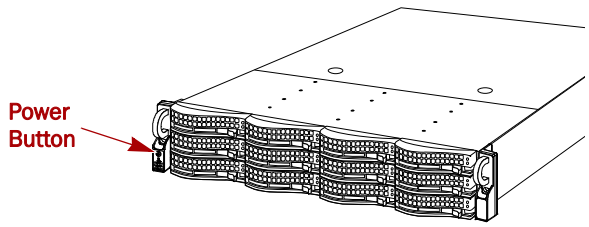

Figure 16. Power Button on Left Flange

After you turn the power ON, the system performs a self-test process, which takes about a minute. When all expansion arrays are ON and running, power up the SnapServer or REO appliance.

You must leave all the expansion arrays ON while you complete any additional configuration processes for your application and backup media servers.

Verifying that the E2000 is Online

1. Launch a Web browser and enter the **Server name** (or IP address) of the SnapServer or REO 4600 to which the E2000 is connected.
2. Depending on your server, use the instructions in the following table to verify that your server recognizes the E2000 expansion array.

Server	Perform These Steps
SnapServer NAS N2000	1. Click the **Administration** link and log in as **admin** with your administrator password. 2. Navigate to the **Storage > Disks/Units** screen.
SnapServer SAN S2000	1. Log into the GUI as **admin**. 2. Navigate to the **Devices** screen.
REO® 4600 (VTL)	1. Log into the GUI as **Administrator**. 2. Navigate to the **System > Disk Management** screen.

Your E2000 appears in the GUI as a 12-disk drive chassis. Disk drives installed in the E2000 appear as online disk drives in the correct physical position. Unpopulated drive slots appear as offline disk drives (N2000 and S2000 only).

Additional Configuration

Because the SnapServer Expansion E2000 array works with different Overland disk products, you need to refer to the appropriate user guide that comes with your SnapServer or REO system for any special configuration steps, the total number of expansion arrays that can be attached, and for instructions on creating RAID arrays and drive pools.

The SAN S2000 user guide is **available online** at:

http://support.overlandstorage.com/support/snapserver-san.htm

The REO 4600 user guide is **available online** at:

http://support.overlandstorage.com/support/reo-series.htm

The NAS N2000 user guide is **available online** at:

http://support.overlandstorage.com/support/snapserver-nas.htm

Warranty & Service

Detailed Warranty Information

To view detailed warranty information for Overland products, click **Service > Warranty** or follow this link:

http://support.overlandstorage.com/support/service-coverage.html

Access Product Information

For detailed information about your products including entitlement, under Support Home, select **My Products > View Products**. Log in if you haven't already done so.

For the answers to the most commonly asked questions, select the appropriate product family page under **Downloads and FAQ's** tab.

General Help

For warranty and technical support information, see our Contact Us web page:

http://www.overlandstorage.com/company/contact-us/index.aspx

To search for more service information, visit our Expert Knowledge Base System:

http://support.overlandstorage.com/kb

TIP: If you want to be notified whenever a change is made, click **Watch Category** in the Tools box on the upper right on the Knowledge Base sub-category pages.

You can get additional technical support on the Internet at http://support.overlandstorage.com, or by contacting Overland Storage using the information found on the Contact Us page on our web site.