TrueNAS® ES24 Expansion Shelf Basic Setup Guide

Version 1.3

1 ES24 Expansion Shelf

The TrueNAS® ES24 is a 4U, 24-bay, SAS3 (12 Gb/s) expansion shelf with dual expansion controllers and redundant power supplies.

Note: TrueNAS® units are carefully packed and shipped with trusted carriers to arrive in perfect condition. If there is any shipping damage or any parts are missing, please take photos and contact iXsystems support immediately at `support@iXsystems.com` or **1-855-GREP4-iX** (1-855-473-7449) or 1-408-943-4100.

Please locate and record the hardware serial numbers on the back or side of each chassis for easy reference.

Carefully unpack the shipping boxes and locate these components:

ES24 Expansion Shelf	
Set of rackmount rails	Up to 24 drive trays populated with drives
Two 3-meter Mini SAS HD to Mini SAS HD cables and one serial cable	Two 2 IEC C13 to NEMA 5-15P power cords

1.1 Become Familiar With the ES24

The ES24 has front panel buttons for power and alarm mute, and indicators for power, locate ID, and fault. The fault indicator is on during the initial power-on self-test (POST) or when the TrueNAS® software has issued an alert (https://www.ixsystems.com/documentation/truenas/tn_options.html#alert).
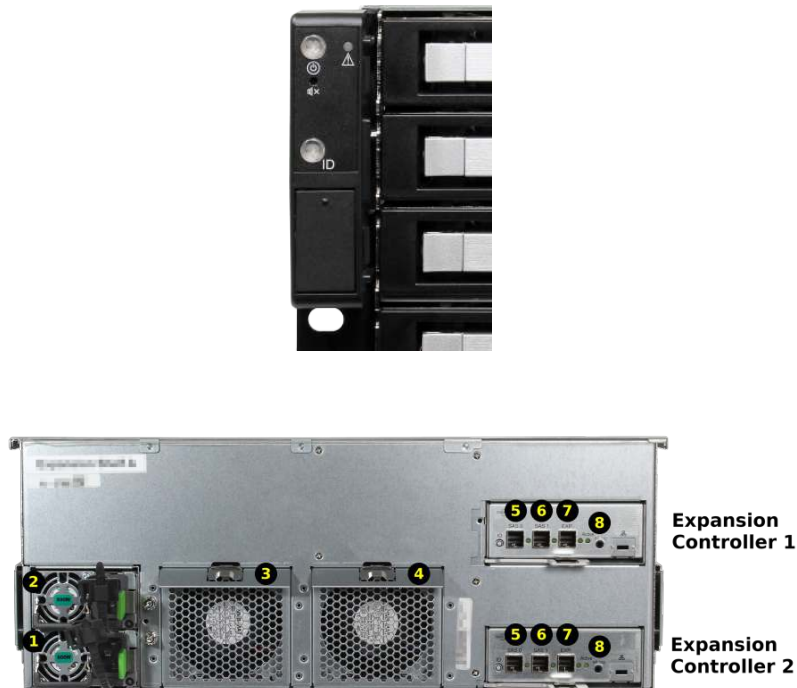

Fig. 1: Back Panel

The ES24 has two expansion controllers in an over/under configuration. The connectors and features on each controller are:

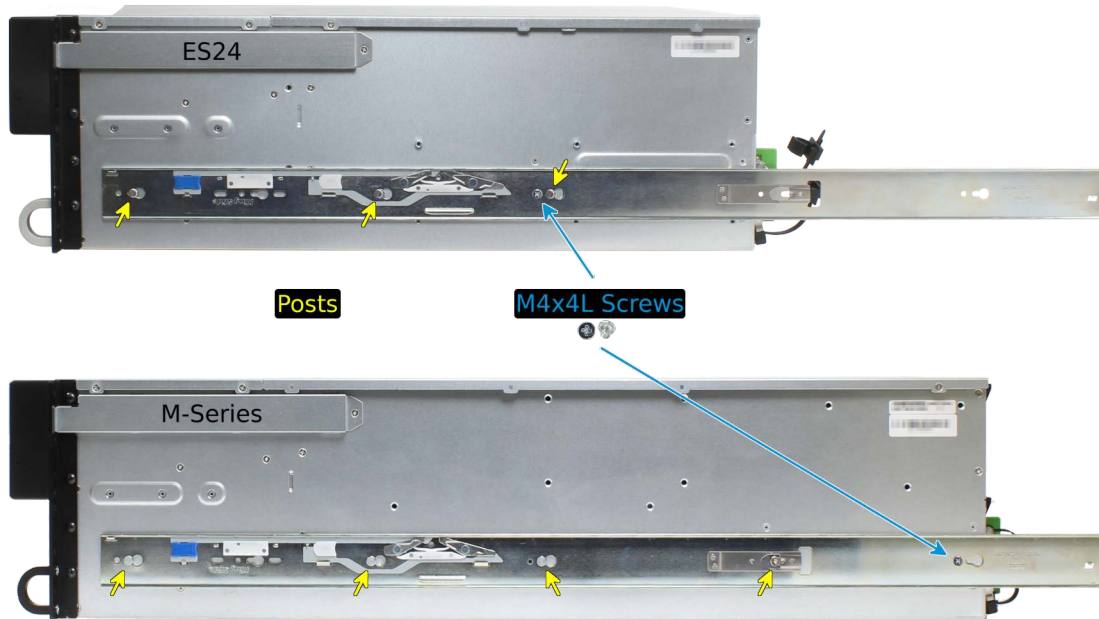| |
| --- |
| 1-2: Redundant power supplies |
| 3-4: Fans |
| 5-7: HD Mini SAS3 connectors |
| 8: Serial port |

1.2 ES24 and M-Series Rail Kit Assembly

1.2.1 Remove Cabinet Rails from Rack Rails

Extend the cabinet rail until it stops. To remove the cabinet rail, press the white release tab to the right while pulling the cabinet rail.

1.2.2 Mount Cabinet Rails

The cabinet rails are mounted on both sides of the system cabinet. Align the cabinet rail keyholes with the three posts (ES24) or four posts (M-Series) on the side of the chassis and slide the rail until the post is secured in the keyhole slot of the rail.
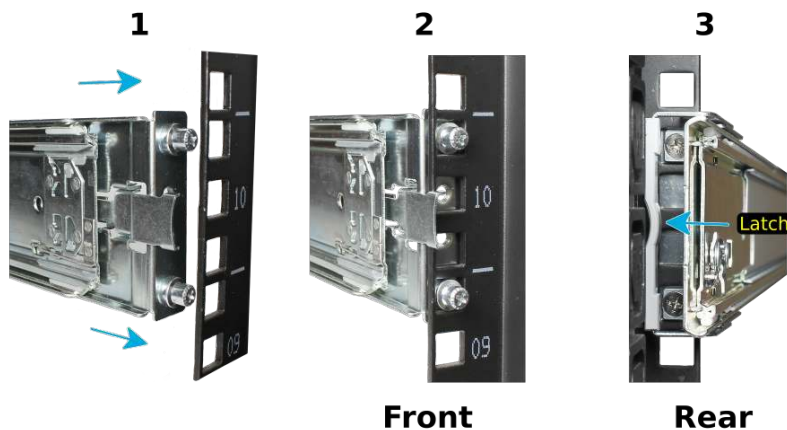

Align the rail hole with the screw hole and secure the rail with one M4x4L screw from the rail kit. Repeat this process to mount and secure the second cabinet rail on the other side.

1.2.3 Mount the Rack Rails

Place the rail in the rack with the front end toward the front of the rack, aligning the pins with the mounting holes in the front of the rack. Push the pins into the holes until the latch clicks.

For the rear end of the rail, align the pins with the mounting holes on the rear rack. Pull the white latch toward the rear until the pins click in place. Repeat this process for the second rear rail.

1.2.4 Mount the Unit in the Rack

Caution: Two people are required to safely lift the chassis for rack installation or removal. Do not install drives until after the chassis has been installed in the rack, and remove all drives before removing the chassis from the rack.

Pull the front rack rail forward until it stops. Align the cabinet rail with the inside of the front rack rail and slide the cabinet rail forward until it is fully seated inside the rack rail. Repeat the process for the second rail.

When both cabinet rails are secured in the rack rails, gently push the chassis until it stops halfway in. Slide the blue release tabs on both cabinet rails toward the front of the system while pushing the unit in. Push the chassis into the rack until it is flush with the front of the rack.

Anchor the unit in the rack on both sides with the M5x18L screws included in the rail kit.
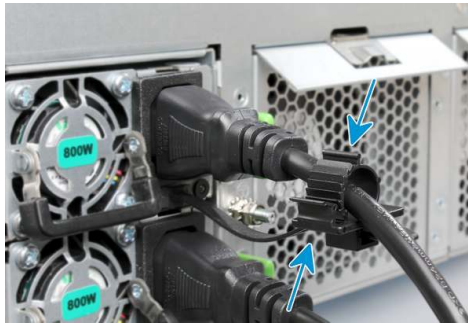
1.3 Install Drive Trays

Drive trays are used to mount drives in the array. Drive trays are installed in drive bays in the chassis. Each drive bay in the chassis has two indicator LEDs to the right of the tray. The status LED is blue when the drive is active, and the fault LED is red if a fault has occurred.

Press the silver button on the drive tray to open the latch. Carefully slide the tray into a drive bay until the right side of the latch touches the metal front edge of the chassis, then gently swing the latch closed until it clicks into place.

1.4 Connect Power Cords

Do not plug the power cords into a power outlet yet. Connect a power cord to the back of one power supply. Place the cord into the plastic clamp and press the tab into the latch to lock it in place. Repeat the process for the second power supply and cord.
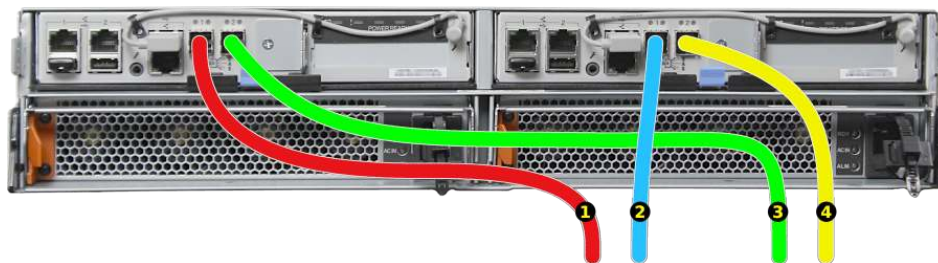

1.5 Connect The Expansion Shelf

Plug the ES24 power cords into power outlets. **Wait two minutes for the drives to start.**
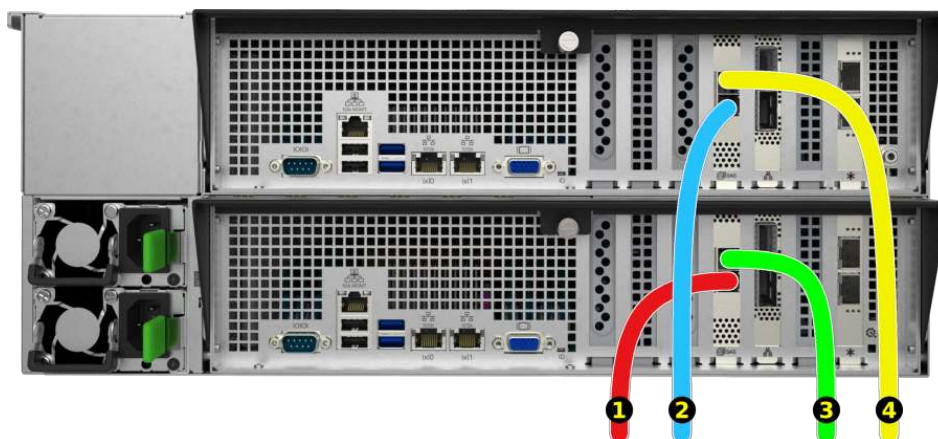
If the TrueNAS® system is on, it can remain on while the expansion shelf is connected.

The ES24 is compatible with several TrueNAS® systems. Typical SAS cable connections for connecting one or two ES24 units to TrueNAS® High Availability (HA) systems are shown here. When a TrueNAS® unit with only a single storage controller is used, only cables #1 and #3 are connected.
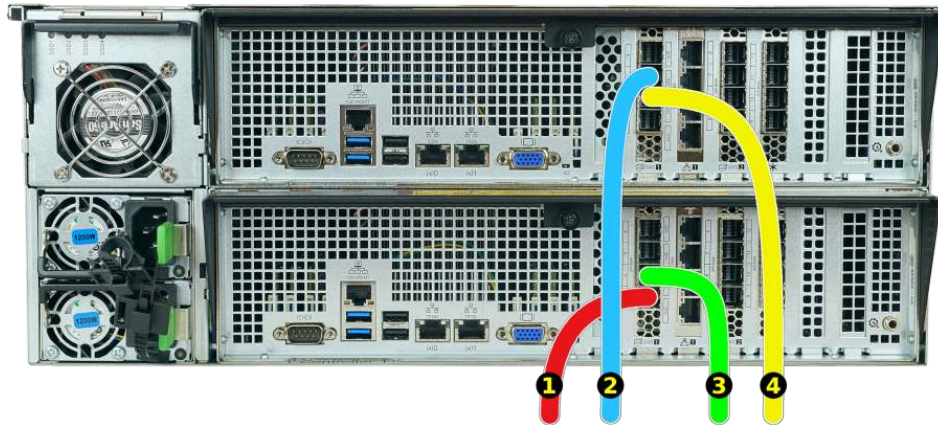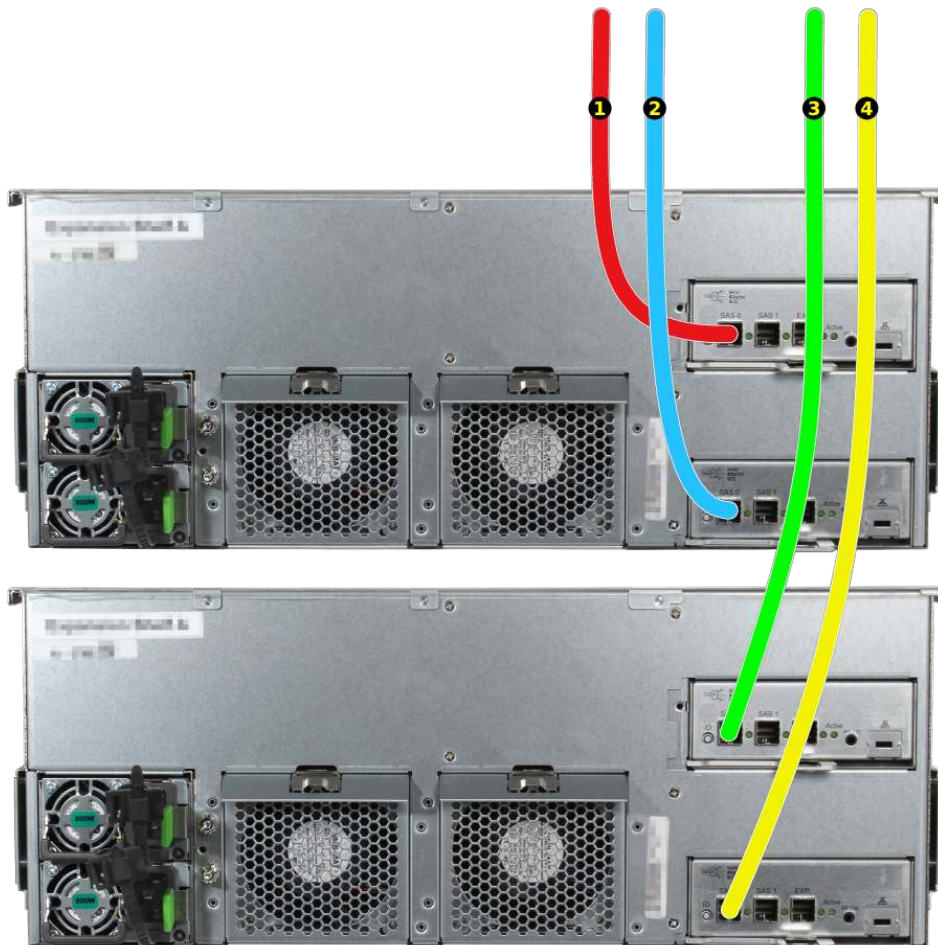
X-Series

M40

M50

The SAS cables from the TrueNAS® system connect to these ports on the ES24:

- Connect cable #1 to the first ES24, expansion controller 1 SAS 0 port.
- Connect cable #2 to the first ES24, expansion controller 2 SAS 0 port.

If a second ES24 is present:

- Connect cable #3 to the second ES24, expansion controller 1 SAS 0 port.
- Connect cable #4 to the second ES24, expansion controller 2 SAS 0 port.

1.6 User Guide

The TrueNAS® User Guide with complete configuration instructions is available by clicking *Guide* in the TrueNAS® web interface or going directly to https://www.ixsystems.com/documentation/truenas/.

2 Contacting iXsystems

For assistance, please contact iX Support:

Contact Method	Contact Options
Web	https://support.ixsystems.com
Email	support@iXsystems.com
Telephone	Monday - Friday, 6:00AM to 6:00PM Pacific Standard Time: • US-only toll-free: 855-473-7449 option 2 • Local and international: 408-943-4100 option 2
Telephone	After Hours (24x7 Gold Level Support only): • US-only toll-free: 855-499-5131 • International: 408-878-3140 (international calling rates will apply)