



TrueNAS M-Series Basic Setup Guide User Guide

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TrueNAS M-Series Basic Setup Guide



Product Information

The 3rd Generation M-Series Unified Storage Array is a 4U, 24-bay, hybrid data storage array. It has redundant power supplies and up to two TrueNAS controllers. The system comes with the TrueNAS operating system preloaded.

Note: The 3rd Generation TrueNAS M-Series systems have a unified chassis design that allows customers to upgrade them with more powerful controllers. Customers can upgrade an M30 to an M40, an M40 to an M50, or an M50 to an M60. For more information on upgrades, speak with an iXsystems Sales or Support Representative.

Product Usage Instructions

Safety Considerations

- **Static Discharge:** Before opening the system case or handling non-hot-swappable system components, keep in mind the risk of electrostatic discharge (ESD) caused by static electricity. It is harmful to sensitive electronic devices and components.
- **Handling the System:** The M-Series weighs 75 lbs unloaded and requires a minimum of two people to lift. Never attempt to lift the system loaded with drives. Install the system in a rack before adding drives and remove drives before uninstalling the system. When handling rails, system components, or drives, never force movement if a component seems stuck. Gently remove the component and check for pinched cables or obstructing material before installing it again. Hold the system from the sides or bottom whenever possible and be mindful of loose cabling or connectors to avoid damage or personal injury.

Requirements

We recommend the following tools when installing an M-Series system in a rack:

- **Support:** 855-473-7449 or 1-408-943-4100

Components

The TrueNAS M-Series Unified Storage Array package includes the following components:

- M-Series Unified Storage Array
- Bezel (Optional)
- Set of rack-mount rails
- Up to 24 drive trays or air baffles, depending on the number of drives purchased with the system

If there is any shipping damage or missing parts, please take photos and contact iXsystems support immediately at support@ixsystems.com, 1-855-GREP4-iX (1-855-473-7449), or 1-408-943-4100. For quick reference, locate and record the hardware serial numbers on the back of each chassis. Carefully unpack the shipping boxes and locate these components.

Introduction

The 3rd Generation M-Series Unified Storage Array is a 4U, 24-bay, hybrid data storage array. It has redundant power supplies and up to two TrueNAS controllers.

Note: The 3rd Generation TrueNAS M-Series systems have a unified chassis design that allows customers to upgrade them with more powerful controllers. Customers can upgrade an M30 to an M40, an M40 to an M50, or an M50 to an M60. Speak with an iXsystems Sales or Support Representative for more information.

Your system comes with the TrueNAS operating system preloaded.

Review the safety considerations and hardware requirements before installing an M-Series system into a rack.

Safety

Static Discharge

Warning: Static electricity can build up in your body and discharge when touching conductive materials. Electrostatic Discharge (ESD) is harmful to sensitive electronic devices and components. Keep these safety recommendations in mind before opening the system case or handling non-hot-swappable system components.

- Turn off the system and remove power cables before opening the case or touching internal components.
- Place the system on a clean, hard work surface like a wooden tabletop. Use an ESD dissipative mat if possible to protect the internal components.
- Touch the metal chassis with your bare hand to dissipate static electricity in your body before handling any internal components, including components not yet installed in the system. We always recommend wearing an anti-static wristband and using a grounding cable.
- Store all system components in anti-static bags.

Handling the System

Warning

- The M-Series weighs 75 lbs unloaded and requires a minimum of two people to lift.
- Never attempt to lift an M-Series system loaded with drives! Install the system in a rack before adding drives,

and remove drives before uninstalling the system.

- When handling rails, system components, or drives, never force movement if a component seems stuck. Gently remove the component and check for pinched cables or obstructing material before installing it again. Installing a component with excessive force can damage the system or cause personal injury.

Hold the system from the sides or bottom whenever possible. Always be mindful of loose cabling or connectors, and avoid pinching or bumping these elements. These instructions use “left” and “right” according to your perspective when facing the front of a system or rack.

Requirements

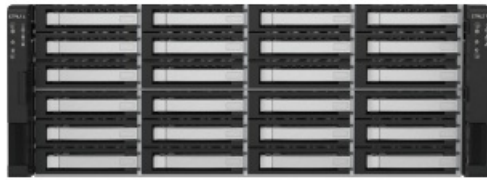
We recommend these tools when installing an M-Series system in a rack:

- #2 Philips head screwdriver
- Flat head screwdriver
- Tape measure
- Level

M-Series Components

TrueNAS units are carefully packed and shipped with trusted carriers to arrive in perfect condition. If there is any shipping damage or missing parts, please take photos and contact iXsystems support immediately at support@ixsystems.com, 1-855-GREP4-iX (1-855-473-7449), or 1-408-943-4100. Please locate and record the hardware serial numbers on the back of each chassis for quick reference.

Carefully unpack the shipping boxes and locate these components:



M-Series Unified Storage Array



Bezel



Set of rack-mount rails



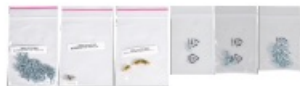
Up to 24 drive trays or air baffles, depending on the number of drives purchased with the system



2 IEC C13 to NEMA 5-15P power cords, 2 IEC C13 to C14 cords, and a set of cable ties



DB9 to 3.5mm serial cable







Hardware for mounting the system in a rack

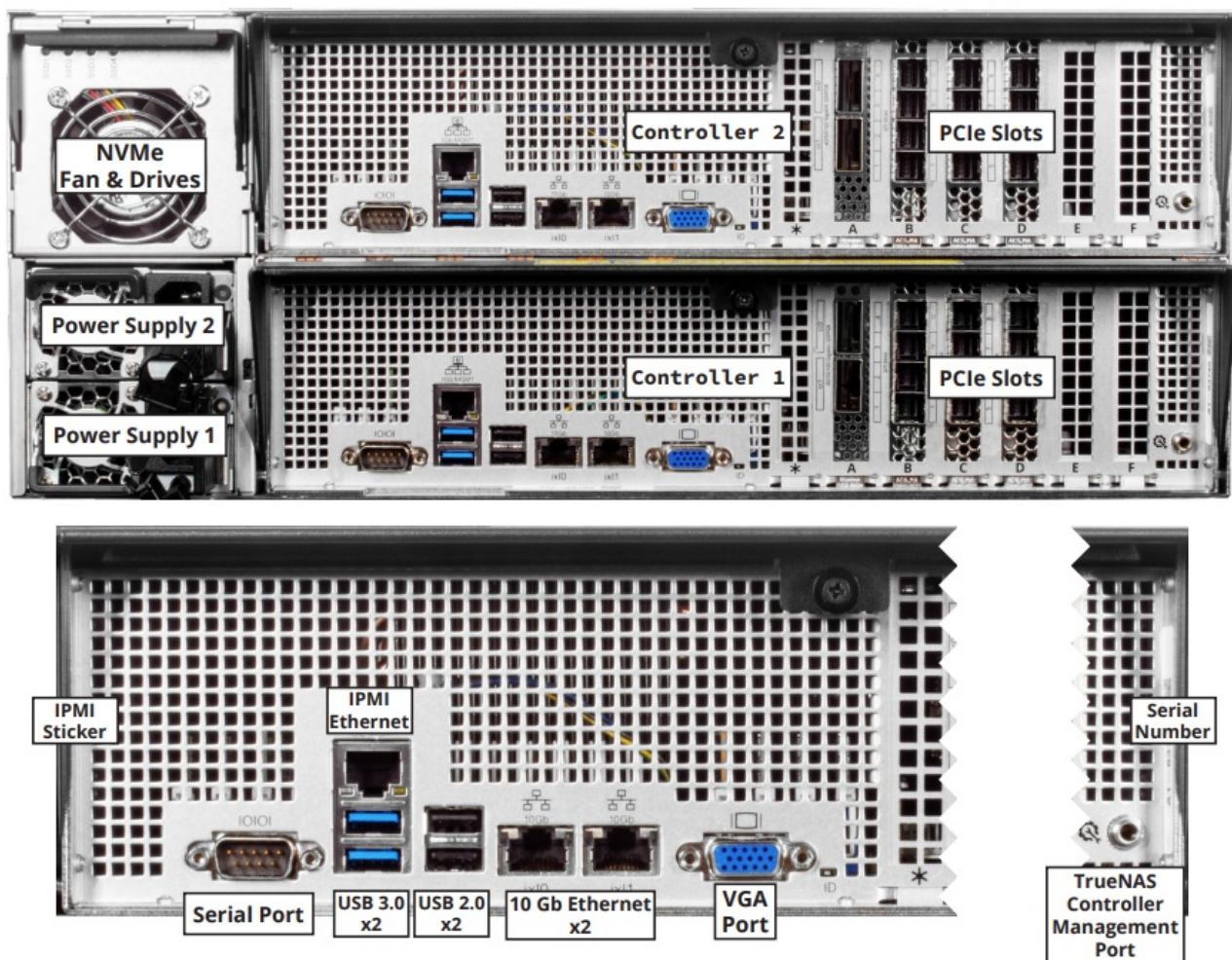
Front Indicators

The front ears have power, locate ID, fault, and network activity indicators. The fault indicator is on during the initial power-on self-test (POST) and turns off during normal operation. It turns on if the TrueNAS software issues an alert.



Light / Button	Color and Indication
	Blue: System On
	N/A: Reset Button
ID	Blue: Locate ID Active
	Red: Fault / Alert
	Amber: Link Active

Rear Components and Ports



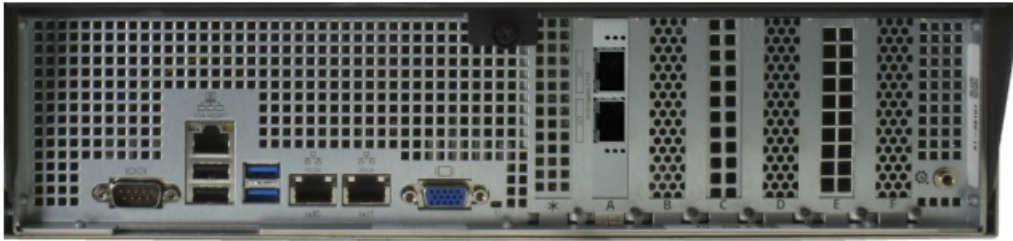
- The M-Series includes one or two TrueNAS controllers in an over-and-under configuration.

M-Series Expansion Slots

Expansion slots on the M-Series are reserved for specific cards or internal use:

	Slot A	Slot B	Slot C	Slot D	Slot E	Slot F
M30	NIC or F C	N/A	NTB	N/A	Internal SAS	Secondary NIC
M40	NIC	N/A	NTB	External SAS	Internal SAS	4x NVME Riser, NIC2, or FC
M50	NIC1	External SAS1	NIC2 or FC	External SAS2	NTB	Internal SAS
M60	NIC1	External SAS1	External SAS3, NIC2, or FC	External SAS2	NTB	Internal SAS

M30 Controller Expansion Slots



M40 Controller Expansion Slots



M50 Controller Expansion Slots



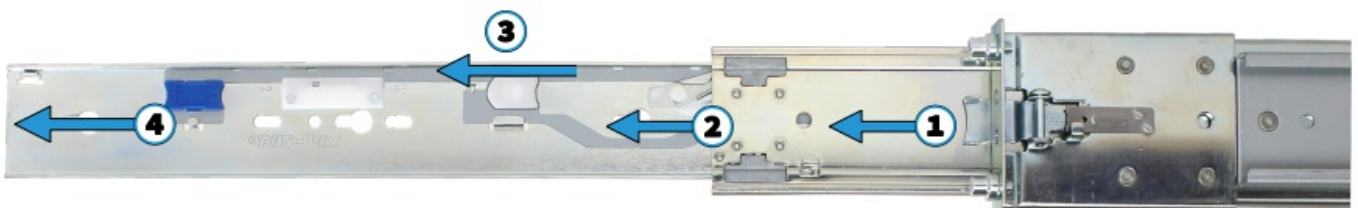
M60 Controller Expansion Slots



Rack the M-Series

- The M-Series requires 4U of space in an EIA-310 compliant rack that is 27" (686mm) deep, frame to frame.
- The vertical rack posts must be between 26" (660.4mm) and 36" (914.4mm) apart to install the rails properly.

Install Chassis Rails



- Extend the inner rack rail until it locks in place (1). Slide out the chassis rail until it stops (2).
- Remove the chassis rail by sliding the white release tab away from the inner rack rail (3), then pull the chassis rail free (4).

- The chassis rails mount on each side of the system.

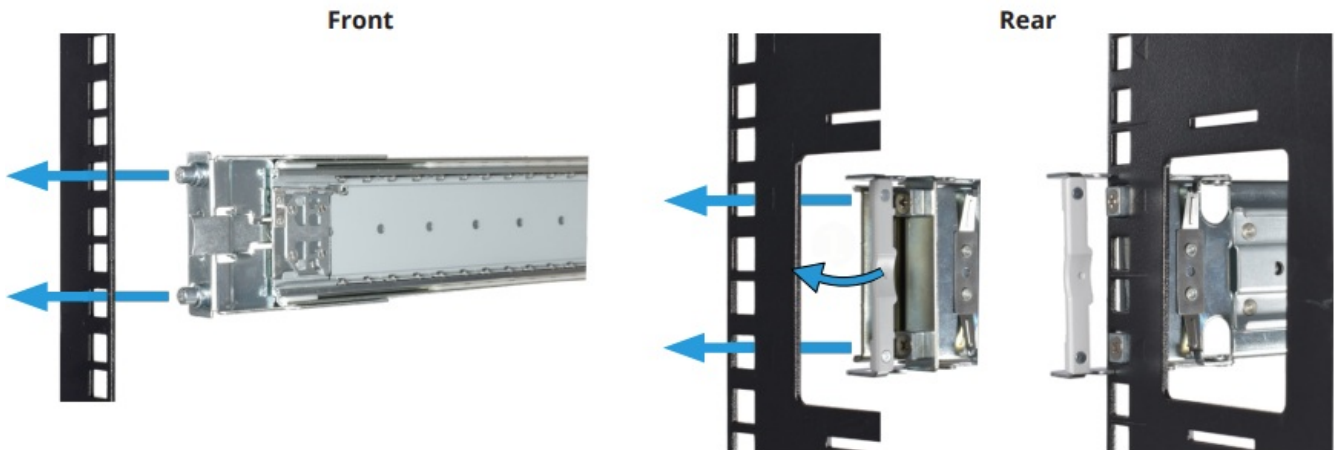


- Place the chassis rail keyholes over the posts on the side of the chassis so the posts go through the keyholes, then slide the rail towards the rear of the system until the metal tab clicks and secures the rail in place.
- Secure the rail to the chassis using three low-profile M4 screws. Repeat this process on the other side.

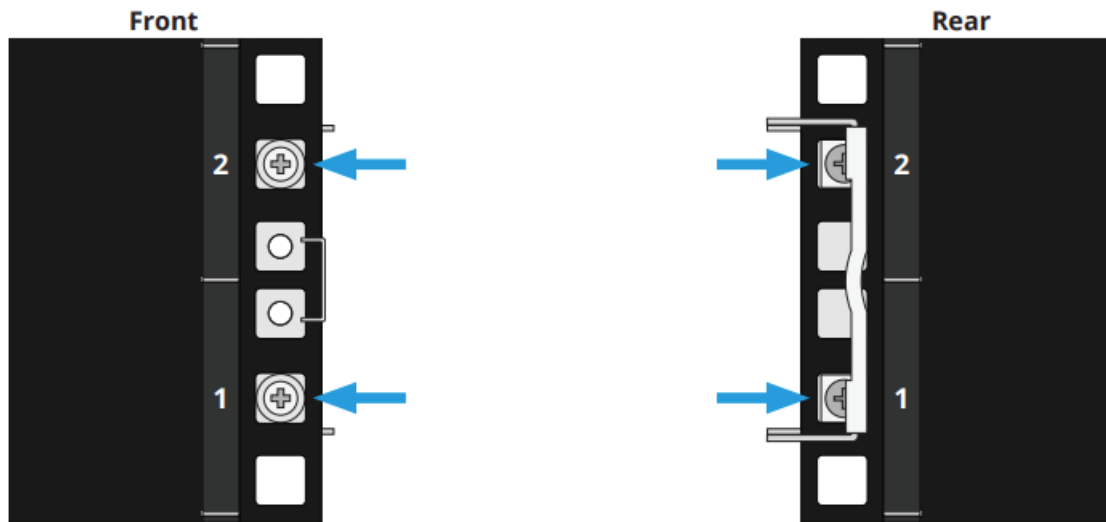
Install Rack Rails



- The rack rails install in the center of the bottom 2U of the total 4U of reserved rack space.
- Unlock and retract the inner rack rail before installing it in the rack. Rotate the release lever on the back of the inner rail as shown on the arrow label, then push the inner rail towards the back of the assembly until it stops.



- Place the rail in the rack with the front end towards the front of the rack. Align the pins with the front rack mounting holes. Push the pins into the holes until the latch clicks.
- At the rear of the rail, align the pins with the rack holes. Swing the gray latch handle outwards and pull it to extend the rail until the rail pins are fully seated in the rack holes. Release the latch to lock the rail in place. Repeat the process for the second rack rail.



- Ensure the rails are positioned in the middle of the bottom 2U of rack space. The pins that go through the rack should be in the middle holes of each U.

Mount the System in the Rack

Warning: The M-Series requires two people to safely lift in and out of a rack. Do not install drives until after you mount the M-Series in the rack. Remove all drives before taking the M-Series out of the rack.



- Extend both inner rack rails out from the rack until they lock. Align the chassis rails with the rack rails, then slide the chassis rails in until they are fully seated.
- When both chassis rails are secured in the rack rails, gently push the chassis until it stops half way in.



- Slide the blue release tabs on both chassis rails towards the front of the system and push the unit into the rack.
- To anchor the unit in the rack, insert a long M5 screw through the retention port on each ear. The screw hole is behind a small door on each ear.

Install Drives

- TrueNAS systems only support qualified HDDs and SSDs. Contact the Sales Team for more drives or replacements.

- Adding unqualified drives to the system voids the warranty. Call Support if drives are improperly installed in trays.



- Place a tray on a flat surface. Mount a hard drive by aligning the drive connectors to the rear of the tray and pushing the drive screw holes into the drive tray pegs.
- Baffles maintain proper air flow in systems with fewer than 24 drive trays. When installing a new drive, insert a flathead screwdriver in the baffle groove and gently pull to remove the baffle.



- Each drive bay in the chassis has two indicator lights to the right of the tray. The upper light is blue when the drive is active or a hot spare. The lower light is solid 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.

We strongly recommend a standard drive tray installation order to simplify support:

- SSD drives for write cache (W), if present
- SSD drives for read cache (R), if present
- Hard drives or SSD drives for data storage
- Air baffle filler trays to fill any remaining empty bays

Install the first drive in the top left bay. Install the next drive to the right of the first. Install remaining drives to the right across the row. After a row is filled, move down to the next row and start again with the left bay.



Install Bezel (Optional)

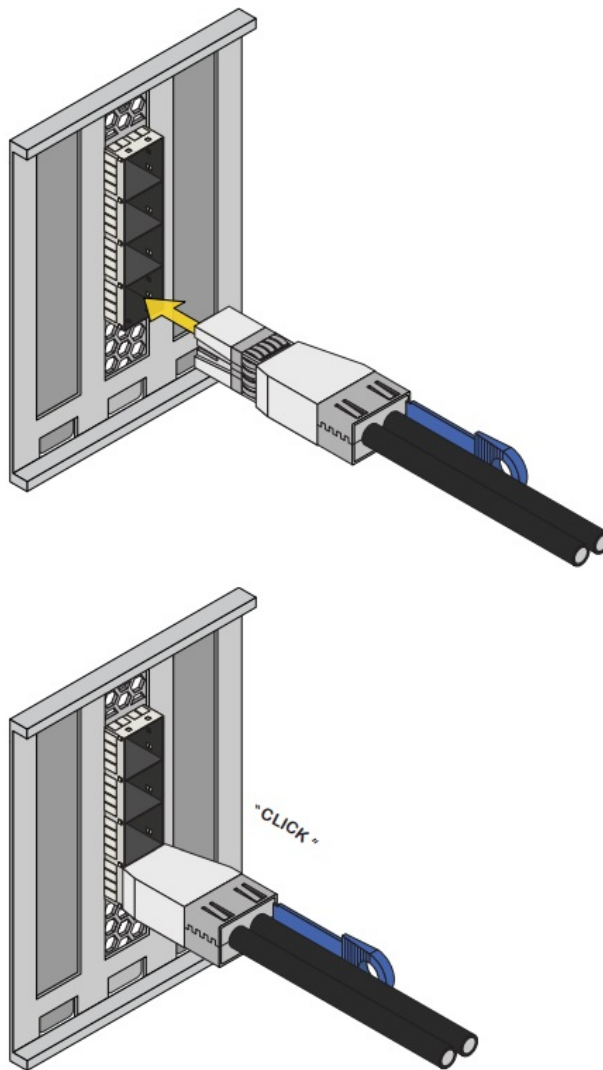


- Slide the right side of the bezel into the attachment points on the right ear, then push the left side of the bezel into the left ear latch until it locks.
- To remove the bezel, push the left ear release tab away from the bezel, then swing the bezel out.

Storage Expansion

Note: The M30 does not support storage expansion.

Connect SAS Cables



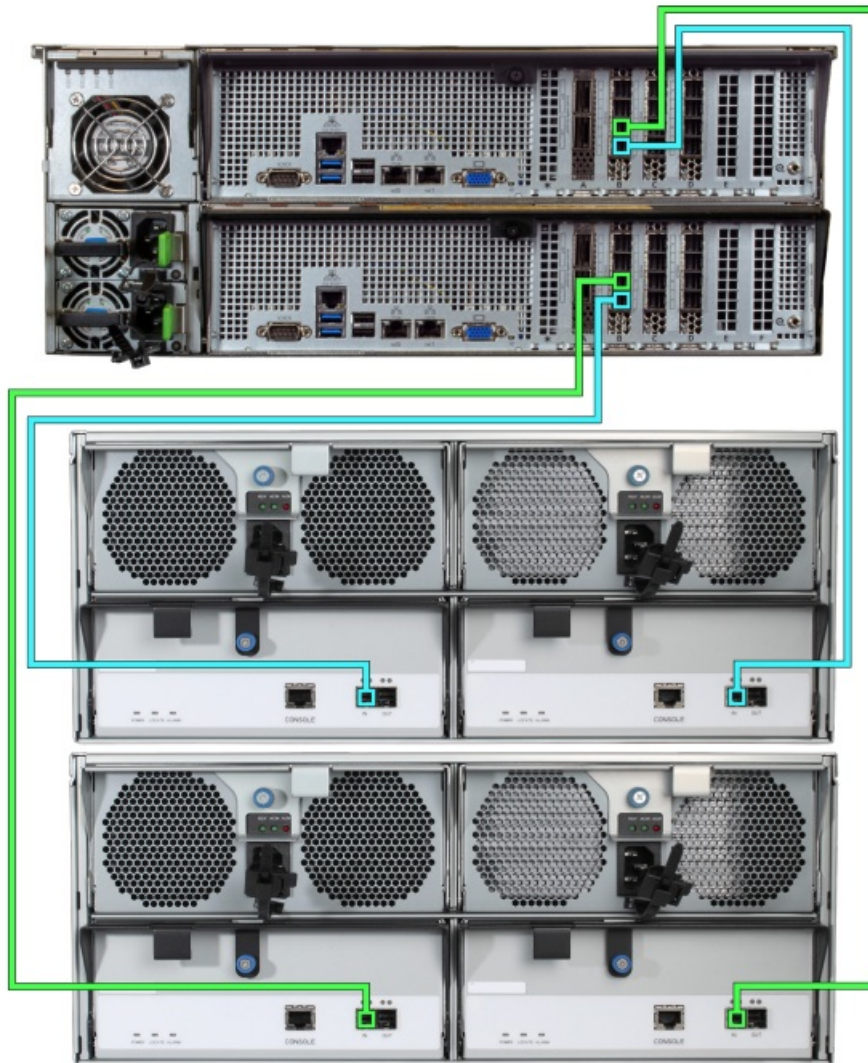
- Line the SAS3 cable connector up with the SAS port on the back of the system. Ensure the blue tab on the SAS cable is facing toward the right. Gently push the connector into the port until it clicks.

Connect Expansion Shelves

- To set up SAS between your TrueNAS system and expansion shelves, cable the first port on the first TrueNAS controller to the first port on the first expansion shelf controller. High Availability (HA) systems require another cable from the first port on the second TrueNAS controller to the first port on the second expansion shelf controller.
- We do not recommend other cabling configurations. Contact iX Support if you need other cabling methods.
- If your TrueNAS system has HA, reboot or failover after connecting SAS cables to sync drives between controllers.

Important: When setting up SAS connections, please adhere to the wiring example below. Connecting expansion shelves incorrectly causes errors. Never cable a single TrueNAS controller to different controllers on one expansion shelf.

- The guide included with your Expansion Shelf has instructions for SAS connections. For more diagrams, see the TrueNAS SAS Connections Guide (www.truenas.com/docs/hardware/expansionshelves/sasconnections)¹.
- The example below shows an M60 connected to two ES60s.

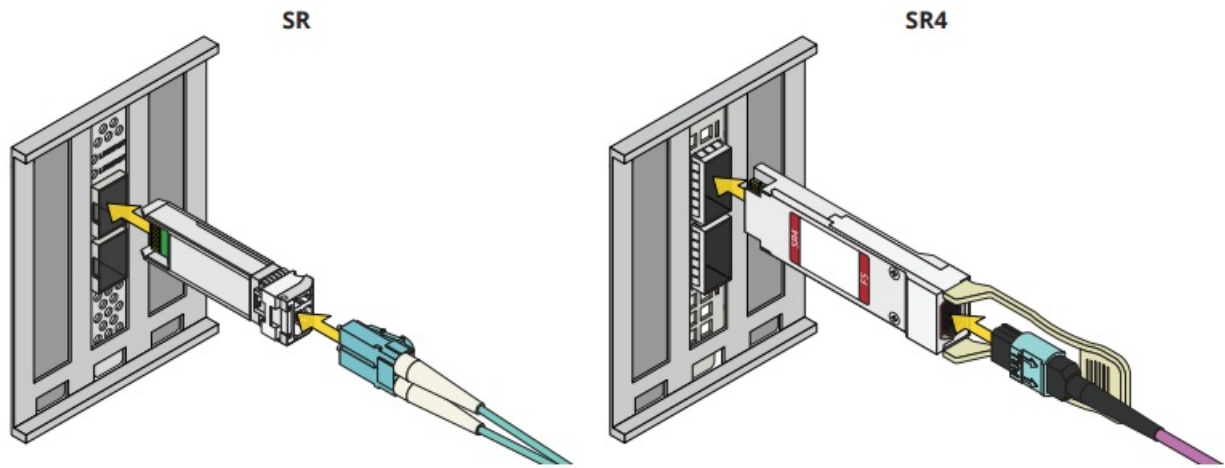


Connections

Connect Network Cables

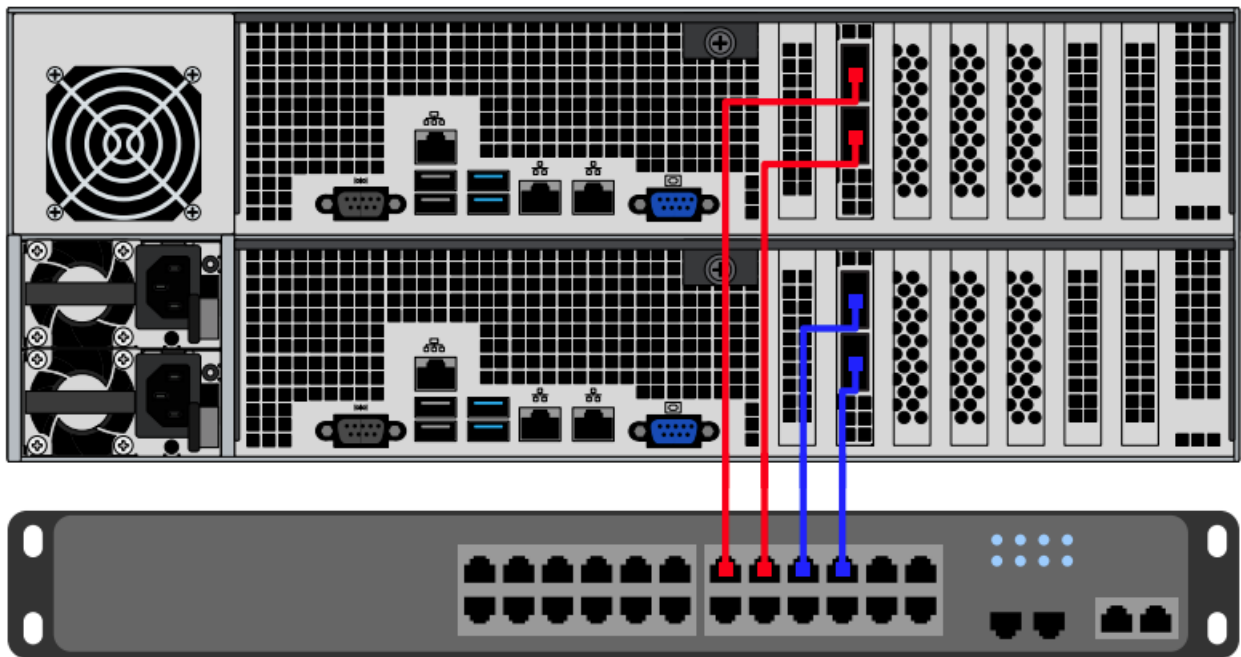
- Connect network cables from the local switch or management network to the IPMI ethernet, ixl0, and ixl1 ports on each TrueNAS Controller. See section “2.3 Rear Components and Ports” on page 3 for port locations.
- iXsystems preconfigures network ports to customer specifications before shipping.

Short-Reach (SR) NIC Network Setup

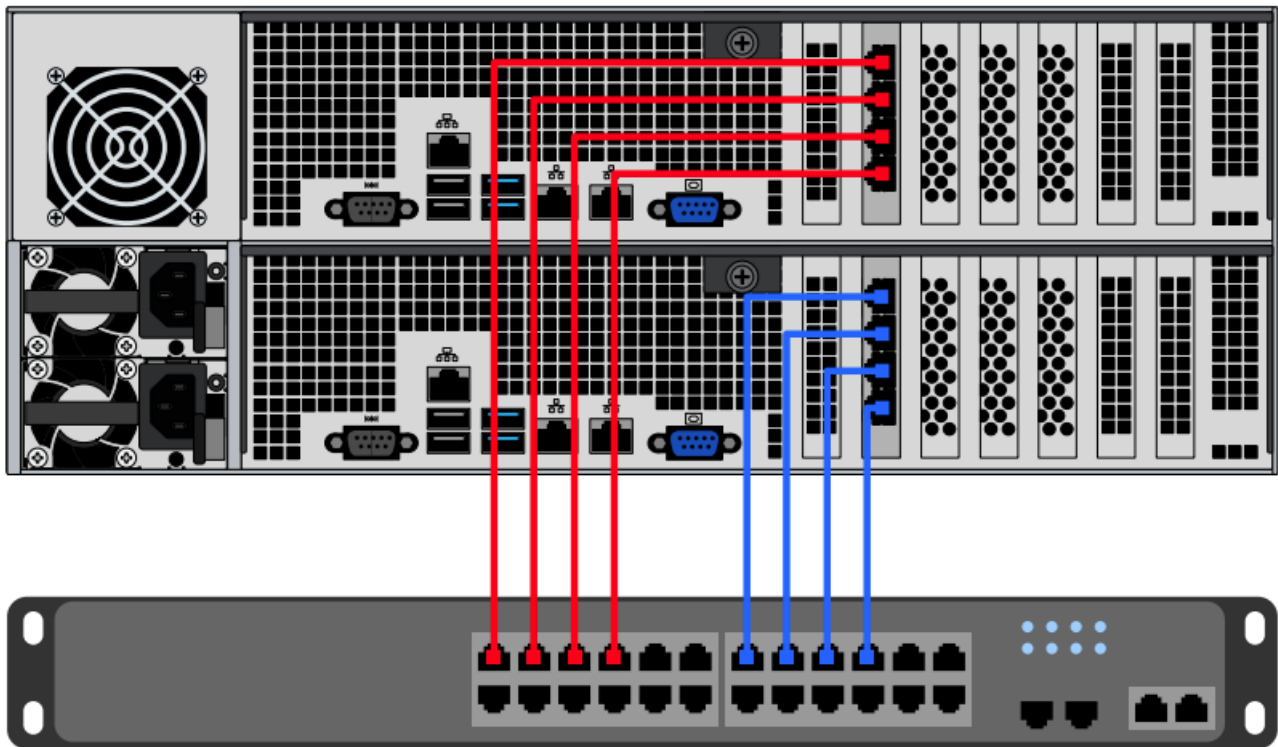


- If you ordered short reach NICs with your M-Series, you can set them up now for networking.
- Insert the SR optics into the first port on the NIC, then plug the SR cable into the back of the SR optics. Both the optics and the cable will click and lock into place when installed correctly. Repeat for remaining ports.
- After installing the optics and cables in the NIC connect both cables to your network switch.

Tip: Optics orientation can vary for different switches. Look at the connectors inside the ports to orient the SR optics.



Ethernet NIC Network Setup

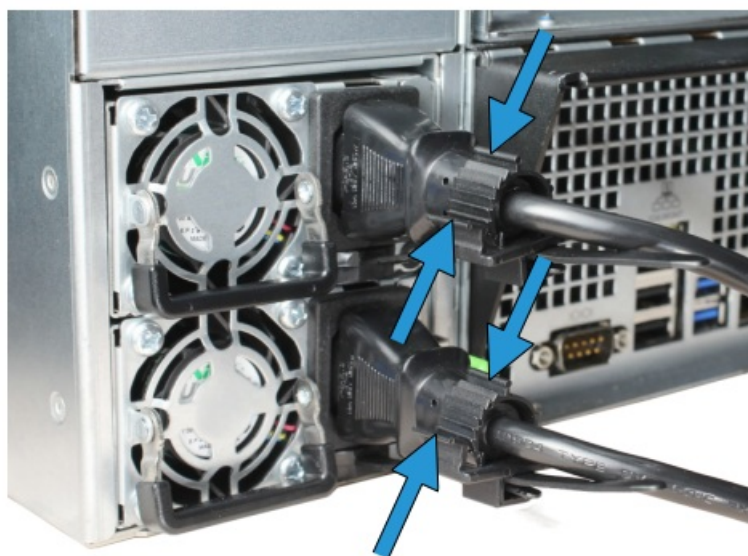


- If you ordered four-port ethernet NICs with your M-Series, you can set them up now for networking.
- Insert ethernet cables into each port on the NIC, then connect each cable to your network switch.

Connect Monitor and Keyboard

- We recommend connecting a monitor and keyboard for the first boot so you can configure the system and view the initial TrueNAS web interface IP address.
- Connect a keyboard and monitor to the bottom controller (Controller 1). See section “2.3 Rear Components and Ports” to identify the USB and VGA ports.

Connect Power Cables



- Do not plug the power cables into a power outlet yet. Connect a power cord to the back of one power supply.
- Place the cord in 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.

- The M-Series turns on automatically when connected to power. It also turns back automatically on when power is restored after a power failure.

Boot the System

Warning

- Your system is equipped with the optimal BIOS and IPMI firmware out of the box.
- DO NOT UPGRADE your system's BIOS and IPMI firmware.
- We recommend that IPMI be on a separate and secure network without Internet access.
- Please contact support if you need to upgrade your system's BIOS or IPMI firmware.

After plugging the power cables into outlets, the M-Series powers on and boots into TrueNAS.

When booted, the system console displays the TrueNAS web UI IP address. The IP address is either preconfigured according to customer guidelines or automatically generated with DHCP. Example:

The web user interface is at:

- <http://192.168.100.231>
- <https://192.168.100.231>

Enter the IP address into a browser on a computer on the same network to access the web user interface. To identify the active controller on an HA system, go to the Shell (CORE) or Linux Shell (SCALE) and enter `hactl`.

Connect to the TrueNAS CORE Enterprise WebUI

The TrueNAS CORE web interface uses default credentials for first-time logins:

- **Username:** root
- **Password:** abcd1234

After logging in, change the root account password in Account > Users to increase system security. If you have more than one TrueNAS device connected to the network, mDNS can experience name conflicts. To change the hostname in the web UI, go to Network > Global Configuration > Hostname.

Connect to the TrueNAS SCALE Enterprise WebUI

The TrueNAS SCALE web interface uses default credentials for first-time logins:

- **Username:** admin
- **Password:** abcd1234

After logging in, change the admin account password in Credentials > Local Users to increase system security. If you have more than one TrueNAS device connected to the network, mDNS can experience name conflicts. To change the hostname in the web UI, go to Network and click Settings in the Global Configuration widget.

Out-of-Band-Management



- Out-of-band logins have separate credentials from the TrueNAS web interface. The credentials are randomized and attached to the back of the TrueNAS chassis. For more details, see <https://www.truenas.com/docs/sb-327> 2.
- For additional details about out of band management, see the M-Series Out-of-Band-Management guide: <https://www.truenas.com/docs/hardware/mseries/mseriesoobm> 3.

Additional Resources



- The TrueNAS Documentation Hub has complete software configuration and usage instructions. Click Guide in the TrueNAS web interface or go directly to: <https://www.truenas.com/docs> 5
- Additional hardware guides and articles are in the Documentation Hub's Hardware section: <https://www.truenas.com/docs/hardware> 6
- The TrueNAS Community forums provide opportunities to interact with other TrueNAS users and discuss their configurations: <https://www.truenas.com/community> 7

Contacting iXsystems

Having issues? Please contact iX Support to ensure a smooth resolution.

Contact Method	Contact Options
Web	https://support.ixsystems.com 8
Email	support@ixsystems.com
Telephone	Monday-Friday, 6:00AM to 6:00PM Pacific Standard Time: <ul style="list-style-type: none"> • US-only toll-free: 1-855-473-7449 option 2 • Local and international: 1-408-943-4100 option 2
Telephone	Telephone After Hours (24×7 Gold Level Support only): <ul style="list-style-type: none"> • US-only toll-free: 1-855-499-5131 • International: 1-408-878-3140 (International calling rates will apply)

Contact

- **Support:** 855-473-7449 or 1-408-943-4100
- **Email:** support@ixsystems.com

Documents / Resources

	<p>TrueNAS M-Series Basic Setup Guide [pdf] User Guide M-Series Basic Setup Guide, M-Series, Basic Setup Guide, Setup Guide</p>
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