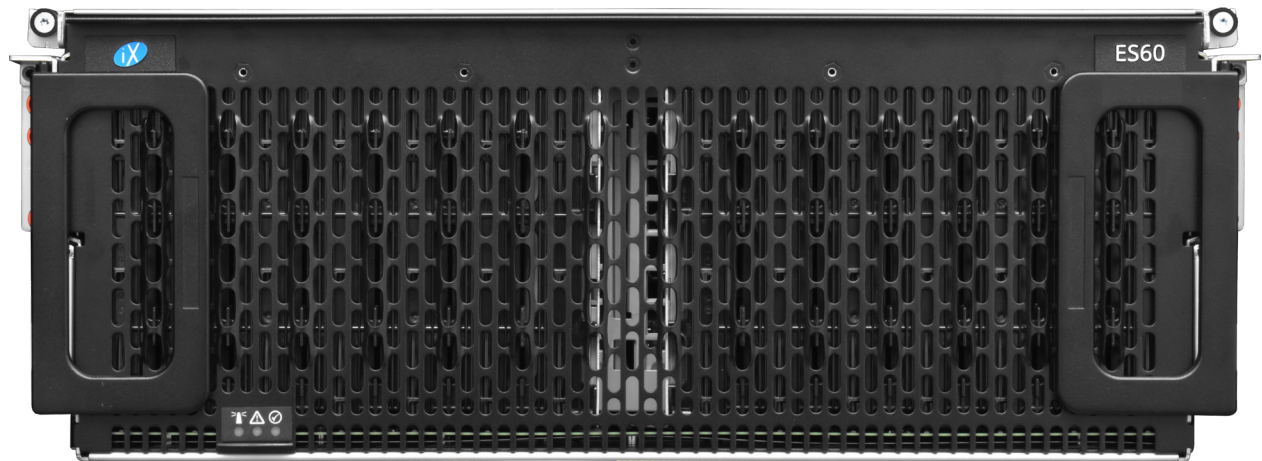


TrueNAS® ES60 Gen 2 Racking Guide

v.24031



Introduction

This document guides you through racking your shelf and connecting it to a TrueNAS storage array. See the back page of this document for guidance on where to access in-depth product information and setup recommendations.

The ES60 requires a Phillips screwdriver and a T15 Torx screwdriver to install in a rack. We also recommend using a level to install the rails.

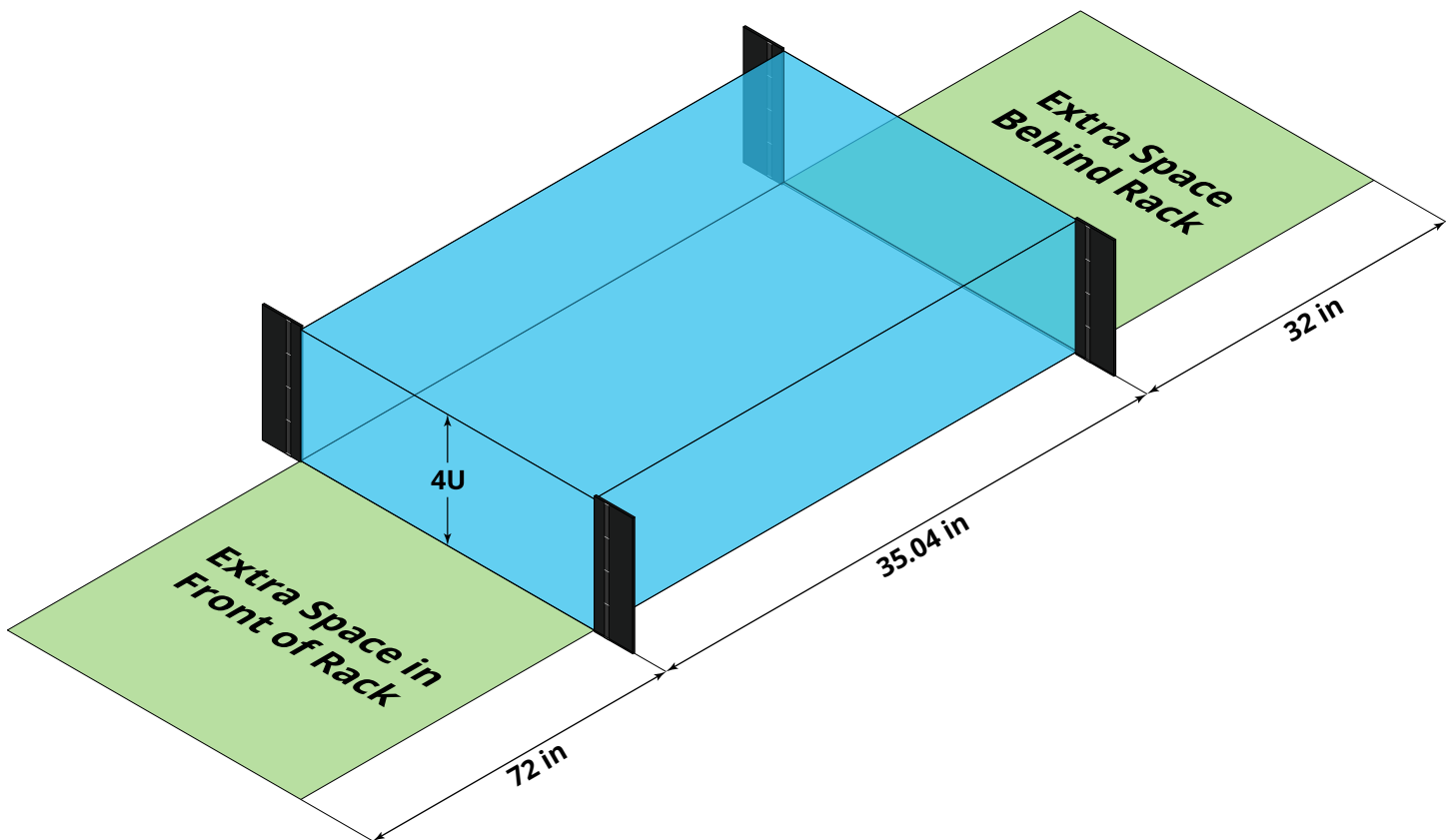
ⓘ Note - Rack Space

The ES60 Gen 2 requires at least 4U of rack space in an EIA-310 compliant rack.

The ES60 is up to 35.04" (890 mm) long with the rail kit and CMA. The rack posts must be 24" to 32" (61cm to 81cm) apart to install the rail kit.

We recommend having at least 72" (1.8 meters) of space in front of the rack.

We also recommend having at least 32" (813 mm) of space behind the rack.



ⓘ Important - Damage or Injury

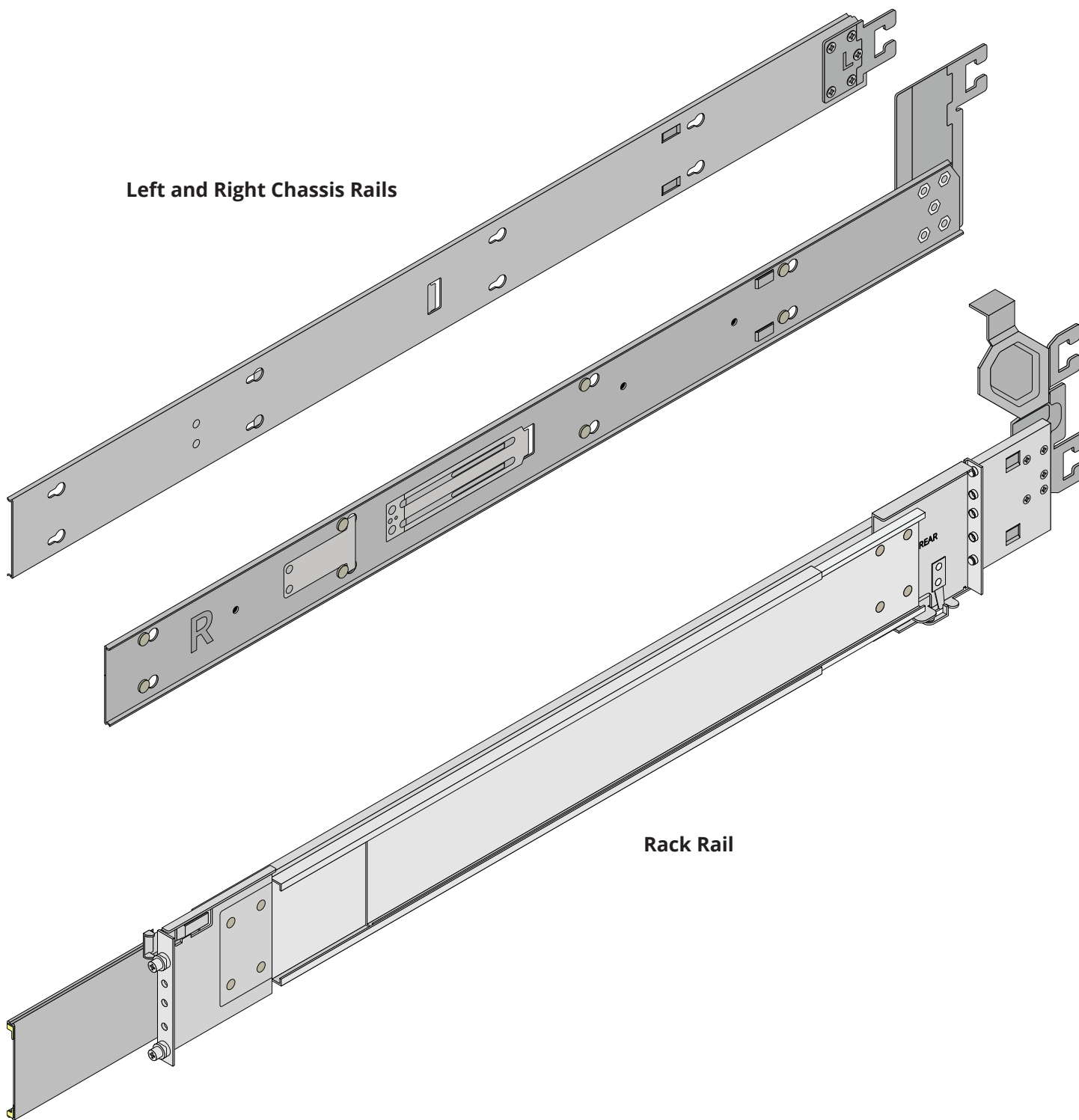
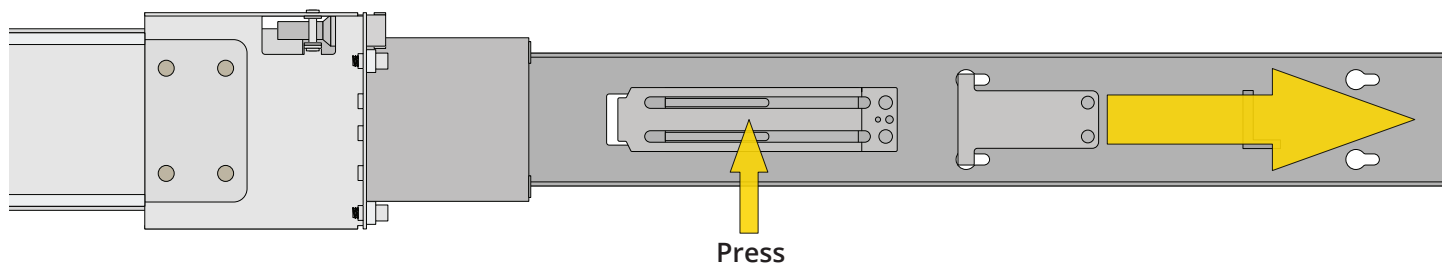
When handling rails, system components, or drives, never force movement if a part seems stuck or does not insert properly. Gently remove the part and check for pinched cables or obstructing material before installing it again. Installing a part with excessive force can damage the system or cause personal injury.

⚠ Warning - Team Lift

The ES60 requires two people to lift safely. Failure to follow safety recommendations can lead to severe system damage or personal injury.

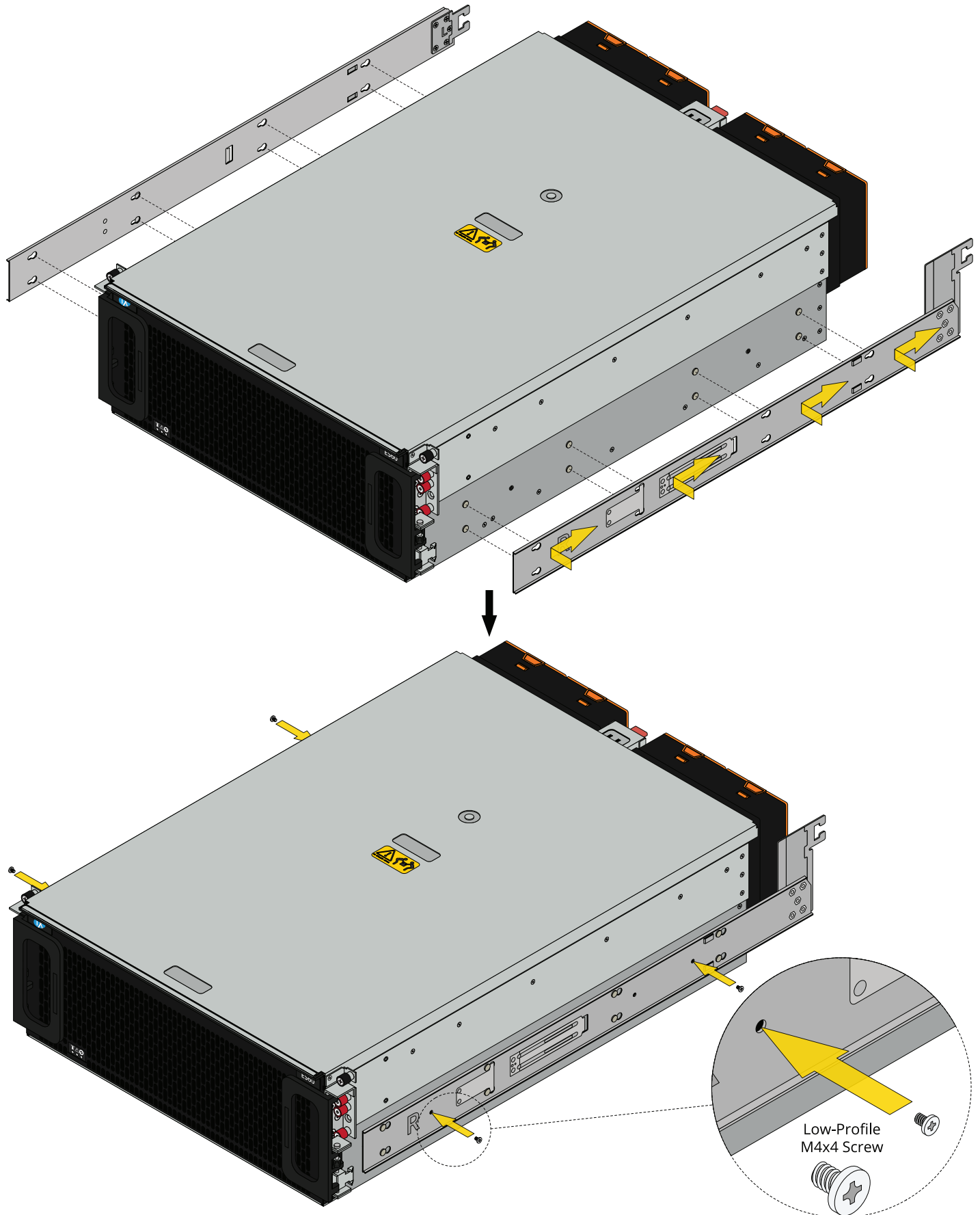
1 Remove Chassis Rail from Rack Rail

Extend the innermost chassis rail until you expose the metal safety catch. Push the safety catch in and pull the chassis rail out until it is free from the rack rail. Repeat the process for the other rail.



2 Install the Chassis Rail on the System

Fit the rail keyholes over the mounting pegs on the chassis and slide the rail toward the back of the chassis until it locks. Use two low-profile M4x4 screws to secure the rail to the chassis. Repeat for the second chassis rail.



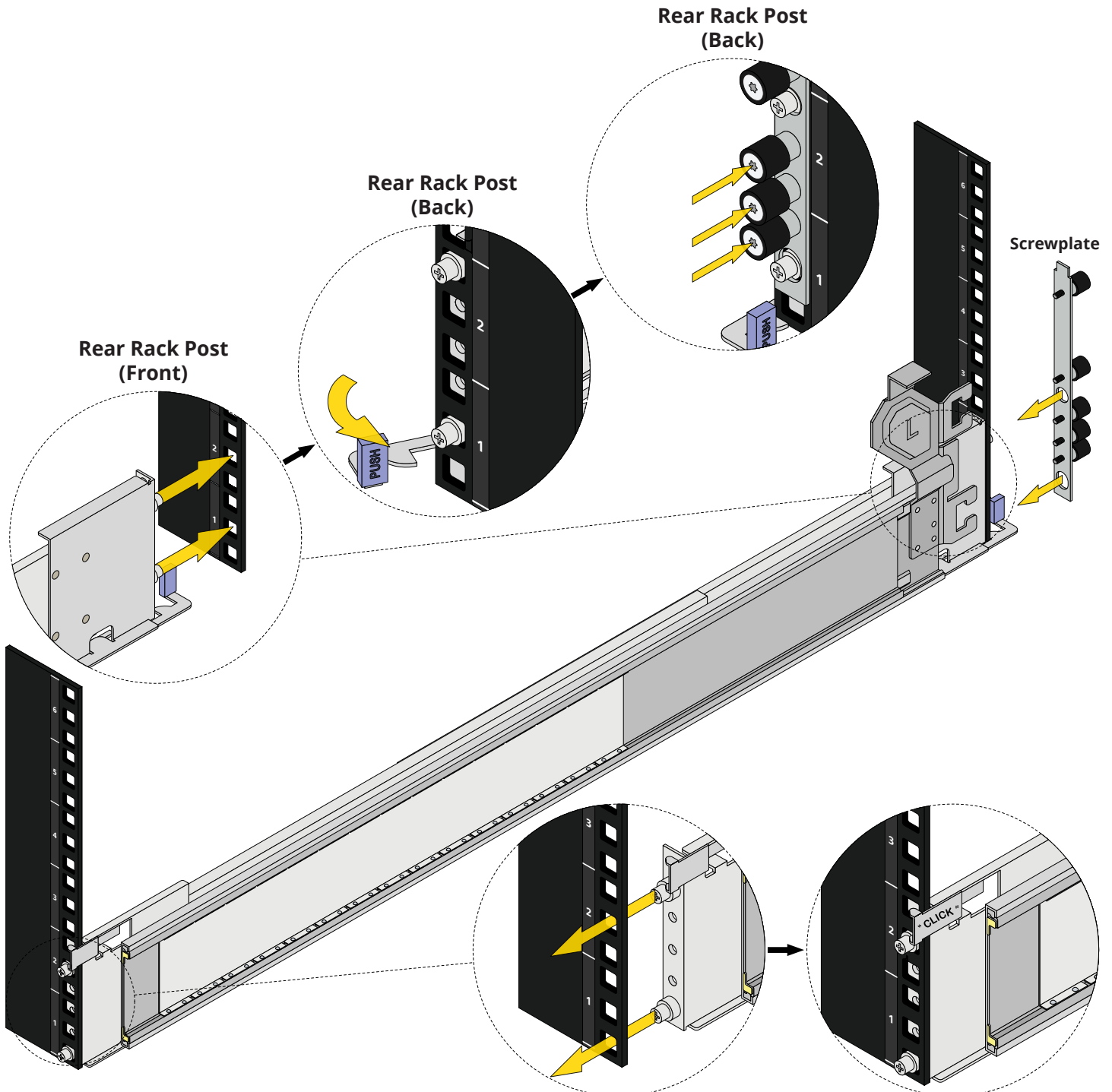
3 Install the Rack Rail in the Rack

The front rail pins mount to the 4U bottom-most attach points, and the back rail pins mount one hole above the 4U bottom-most attach points. The rails have left-side “L” and right-side “R” stamps.

Install the front of the rail first. Align the rail pins with the mounting holes in the rack and push them through until the front latch clicks into place. Make sure an additional 2U of rack space is available above the rail.

Align the rear rail pins with the rack mounting holes and push them through until the blue release catch clicks into place over the rack. Fit a screwplate over the rear rail pegs and secure the rail to the rear rack post with the lower three thumbscrews on the screwplate. Note that the rear rail pins install one mounting hole higher than the front rail pins. You can use a level to ensure the front and back of the rail are even.

Repeat this process for the other rack rail.



4 Install Cover Retention Hardware

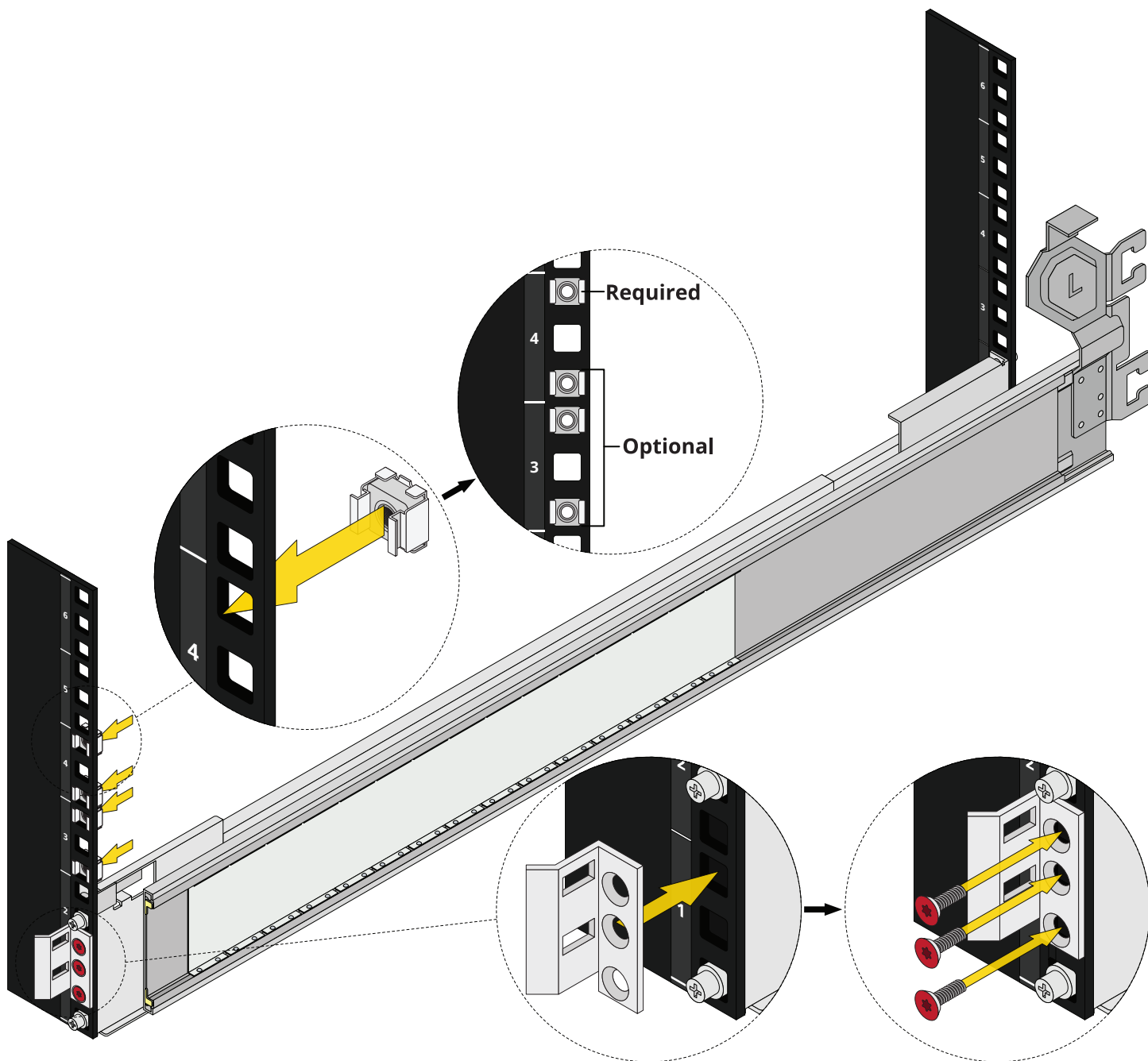
At the front rack post, place a cage nut in the topmost rack mounting hole of the reserved 4U

You can optionally place more cage nuts two, three, and five rack mounting holes down from the first one to lock the entire system to the rack later.

The nut should be **inside** the rack, with the “wings” touching **the left and right sides of the hole (horizontal)**.

Repeat this process for the other rack post and make sure to install all cage nuts in parallel rack mounting holes.

Align a latch plate over the three holes between the rack rail mounting pins with the flange pointing to the outside of the rack. Secure the latch plate the rack with three T15 M5 screws. Repeat for the other latch plate.

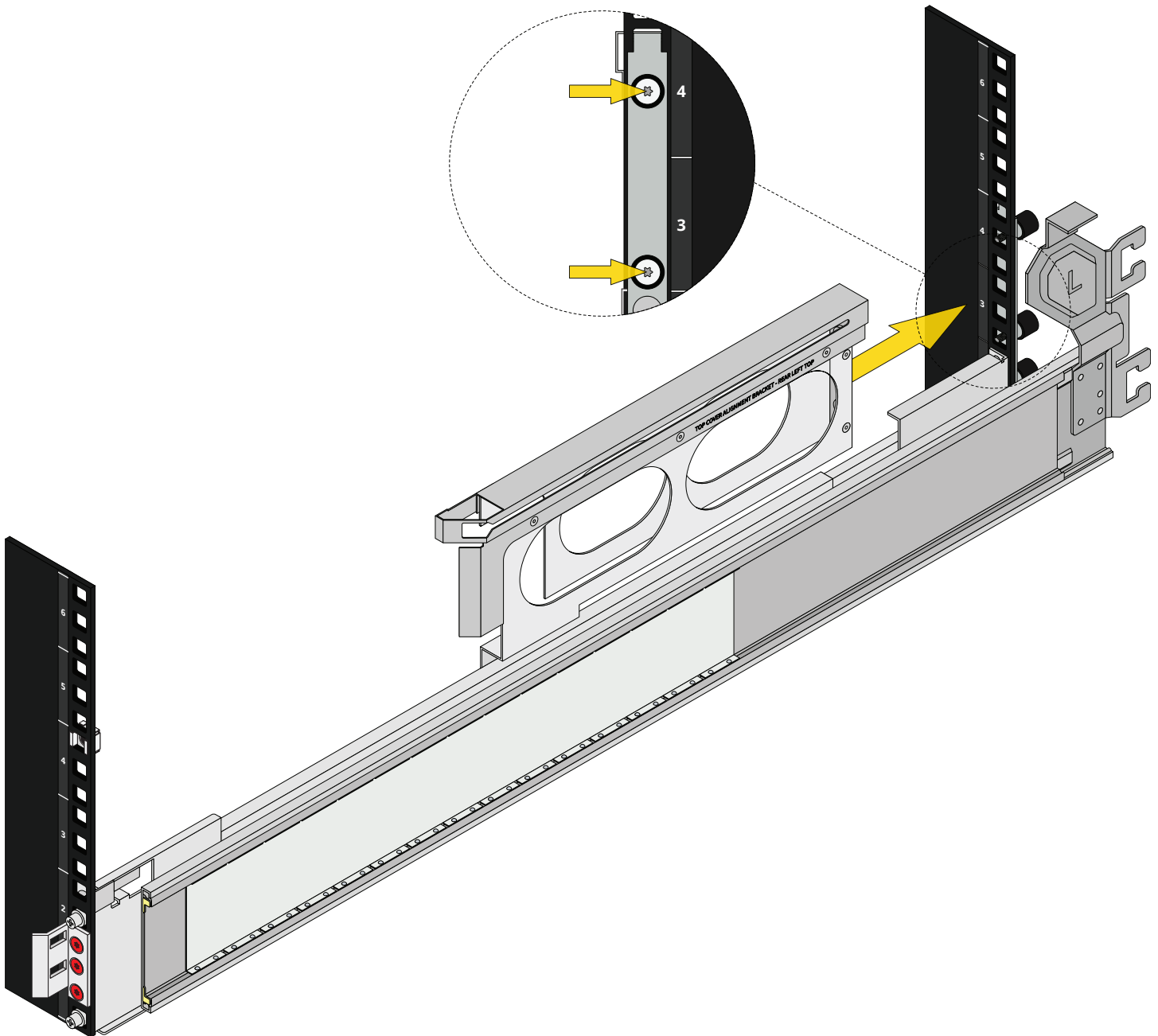


Place the left Cover Retention Bracket over the rail and align it with the mounting holes on the *rear* of the rack rail. The groove in the bracket must face toward the inside of the rack.

Tighten the top two thumbscrews on the screwplate to secure the bracket to the rear of the rack rail.

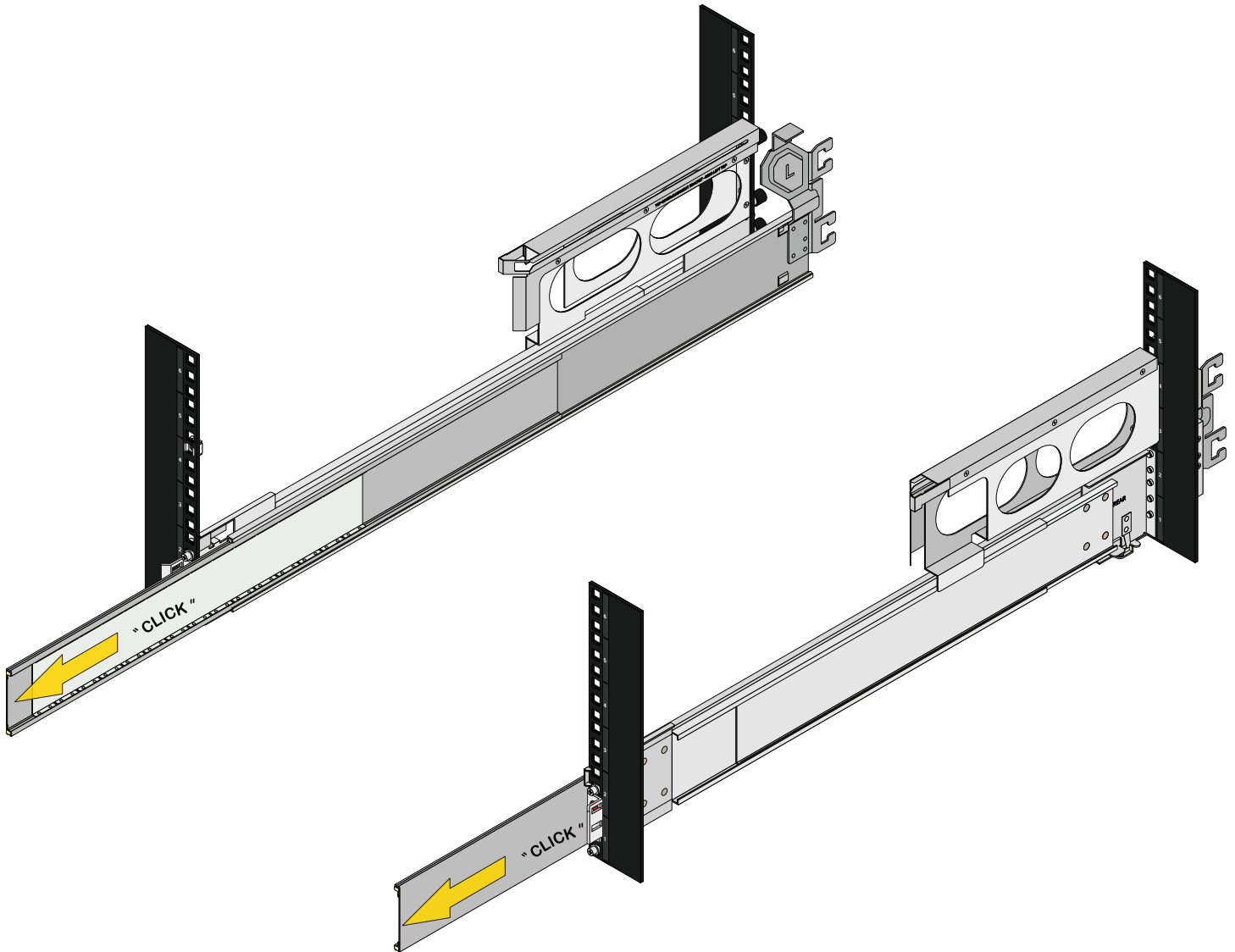
Use the same method to install the second alignment bracket to the other rail. Make sure the grooves on top of both brackets face inside the rack.

The ES60 cover slides into the grooves when it is pushed into the rack.



5 Extend the Middle Rails

Slide the middle rack rails out until they click and lock. Ensure the bearing sleeve is also as far forward as possible.

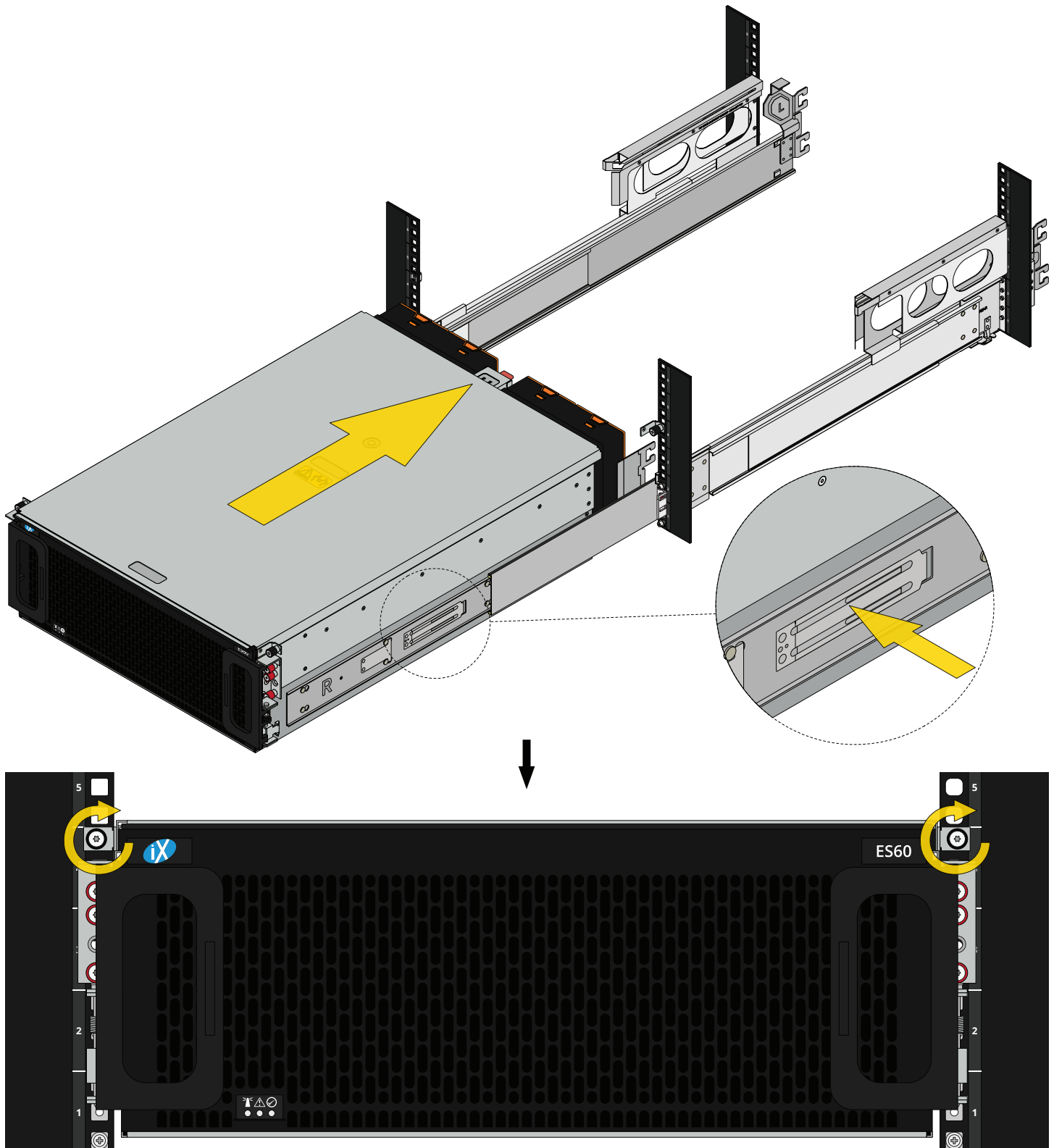


6 Install the System in the Rack

Team-lift the system and align the chassis rails with the rack rails, then slide them in and push the system into the rack until the metal safeties click and lock.

Press the metal safety catches on each chassis rail against the chassis and gently push the chassis into the rack until the chassis latches lock into the latch plates.

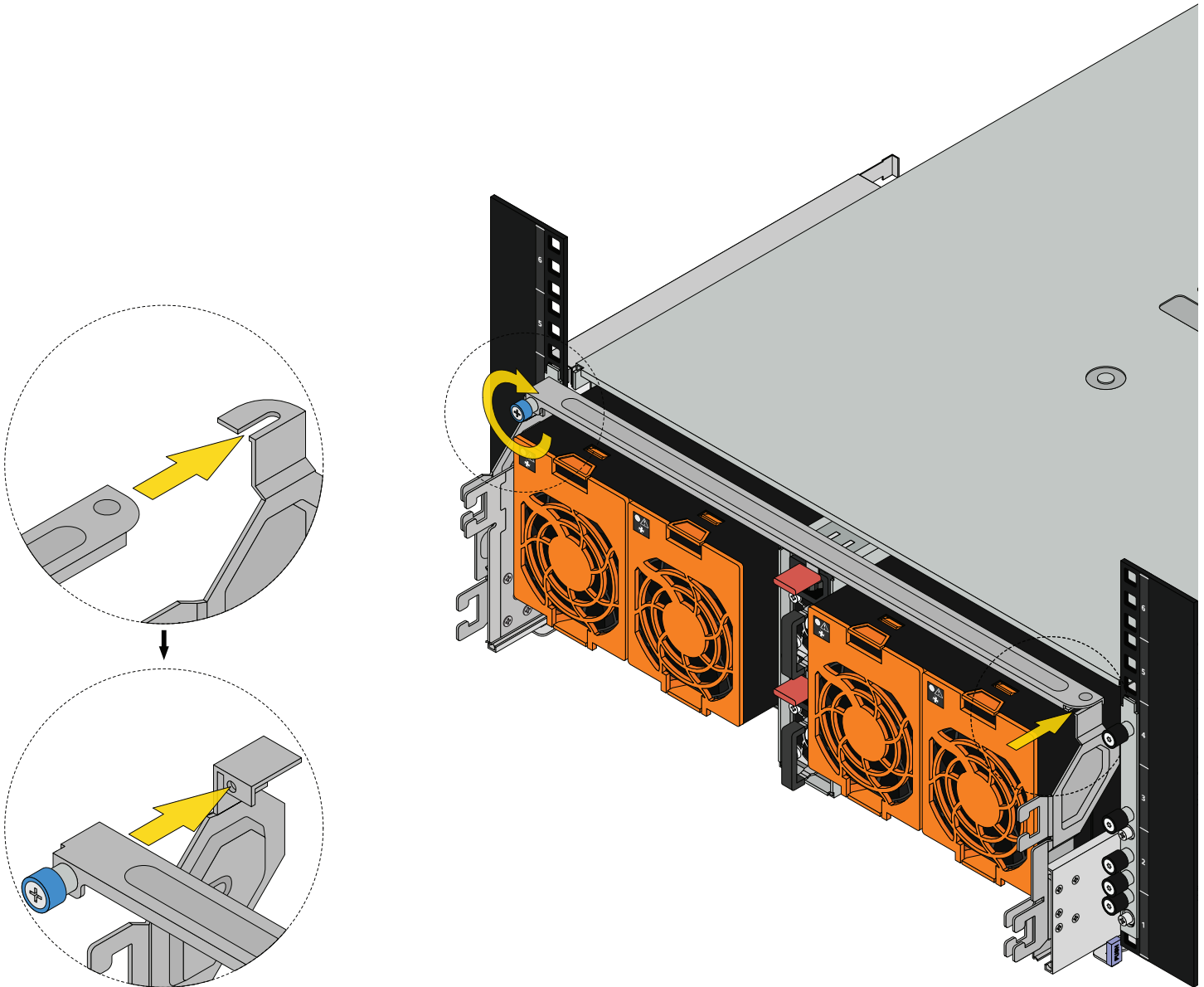
Tighten the black thumbscrews to secure the cover to the rack.



7 Install the Cable Management Brace

At the back of the system, insert the brace pivot pin into the top bracket on the **right** rail.

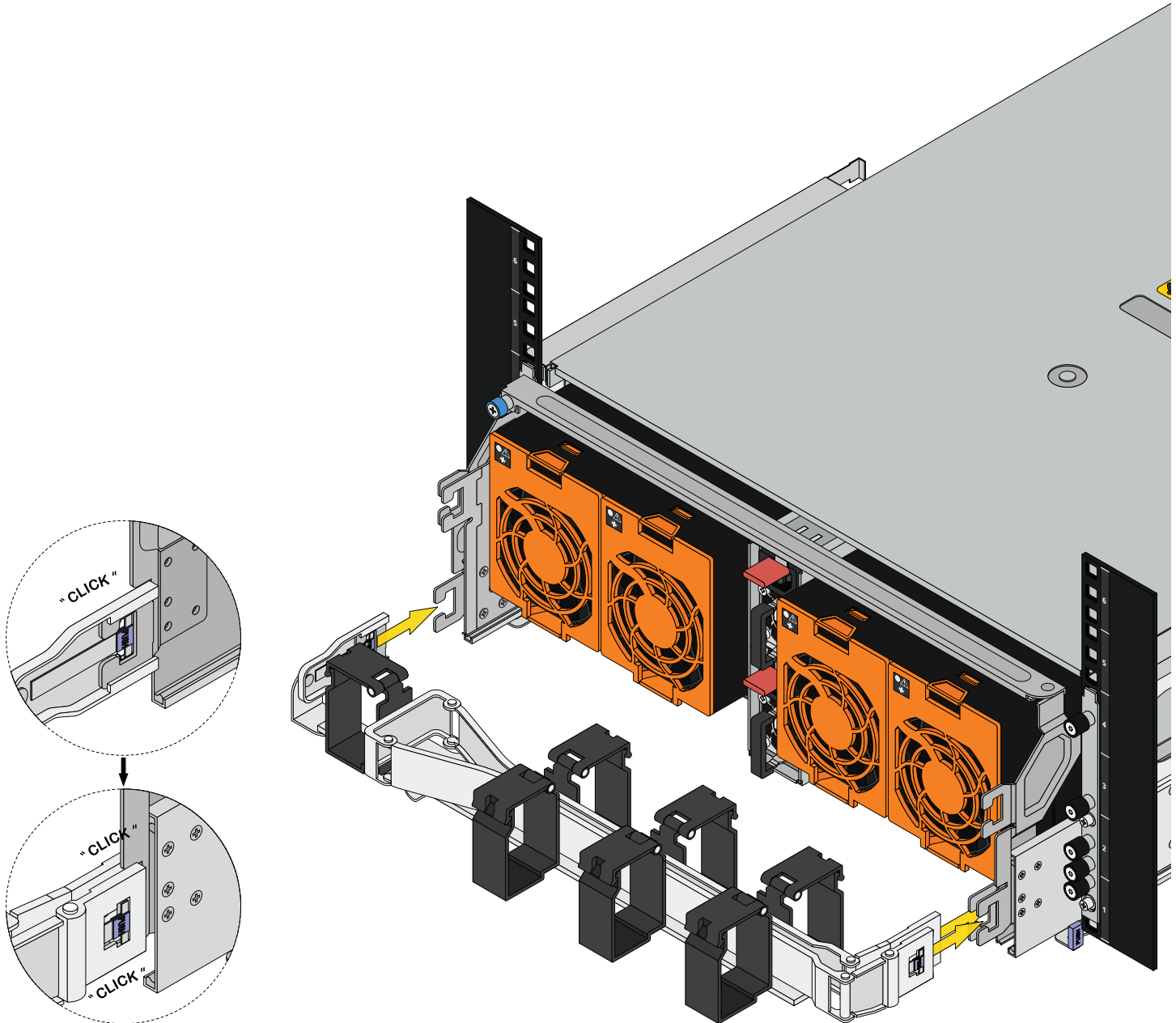
Swing the left side of the brace to the top bracket on the **left** rail and tighten the thumbscrew to secure the brace to the brace brackets.



8 Install the Lower Cable Management Arm (CMA)

Starting with the left side, push the post onto the left bracket. On the right side, push the inner post onto the inner bracket, then push the outer post onto the outer bracket.

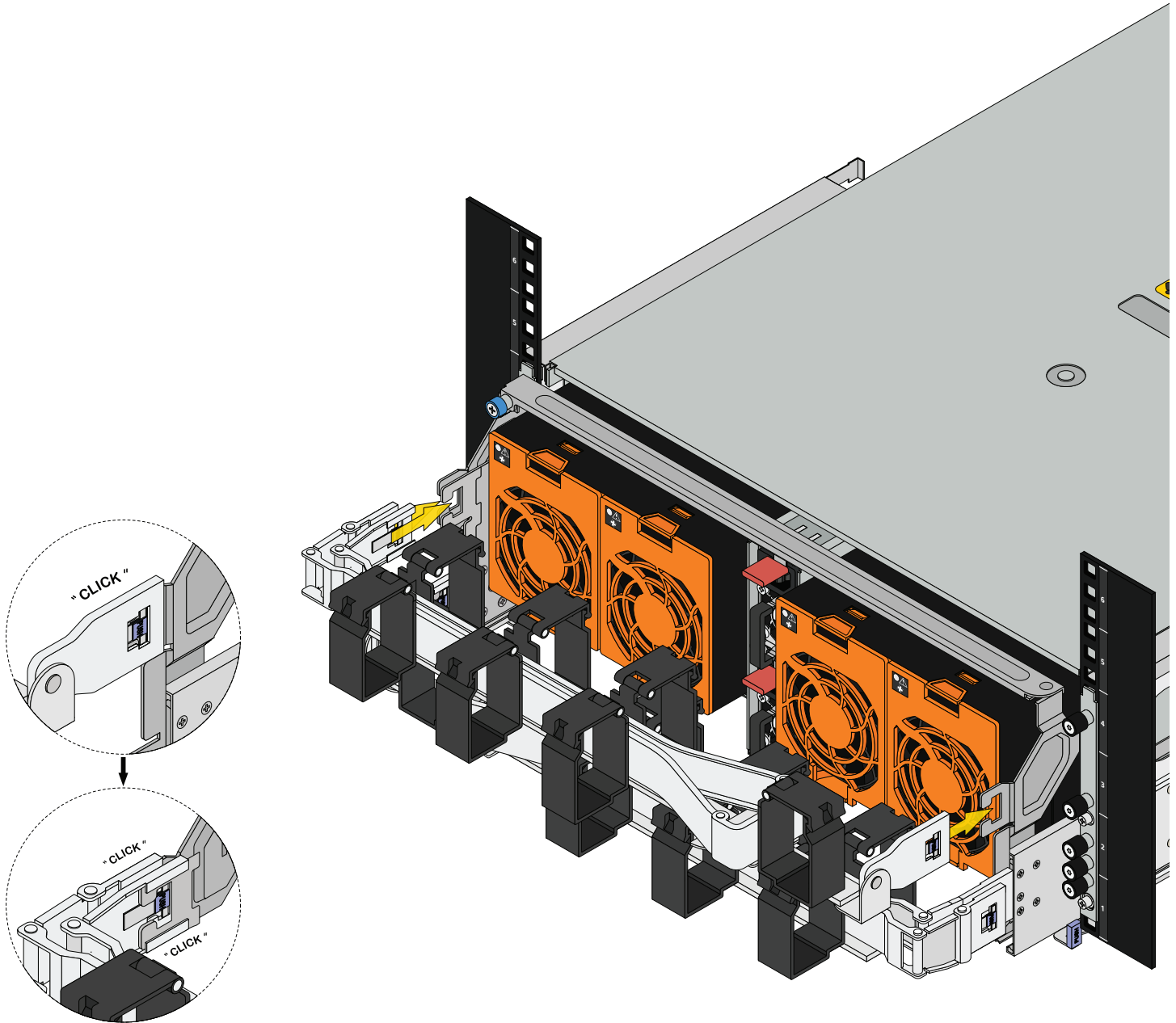
The CMA posts click and lock when installed correctly.



9 Install the Upper Cable Management Arm (CMA)

Starting with the right side, push the post onto the right bracket. On the left side, push the inner post onto the inner bracket, then push the outer post onto the outer bracket.

The CMA posts click and lock when installed correctly.



10 Install Cables

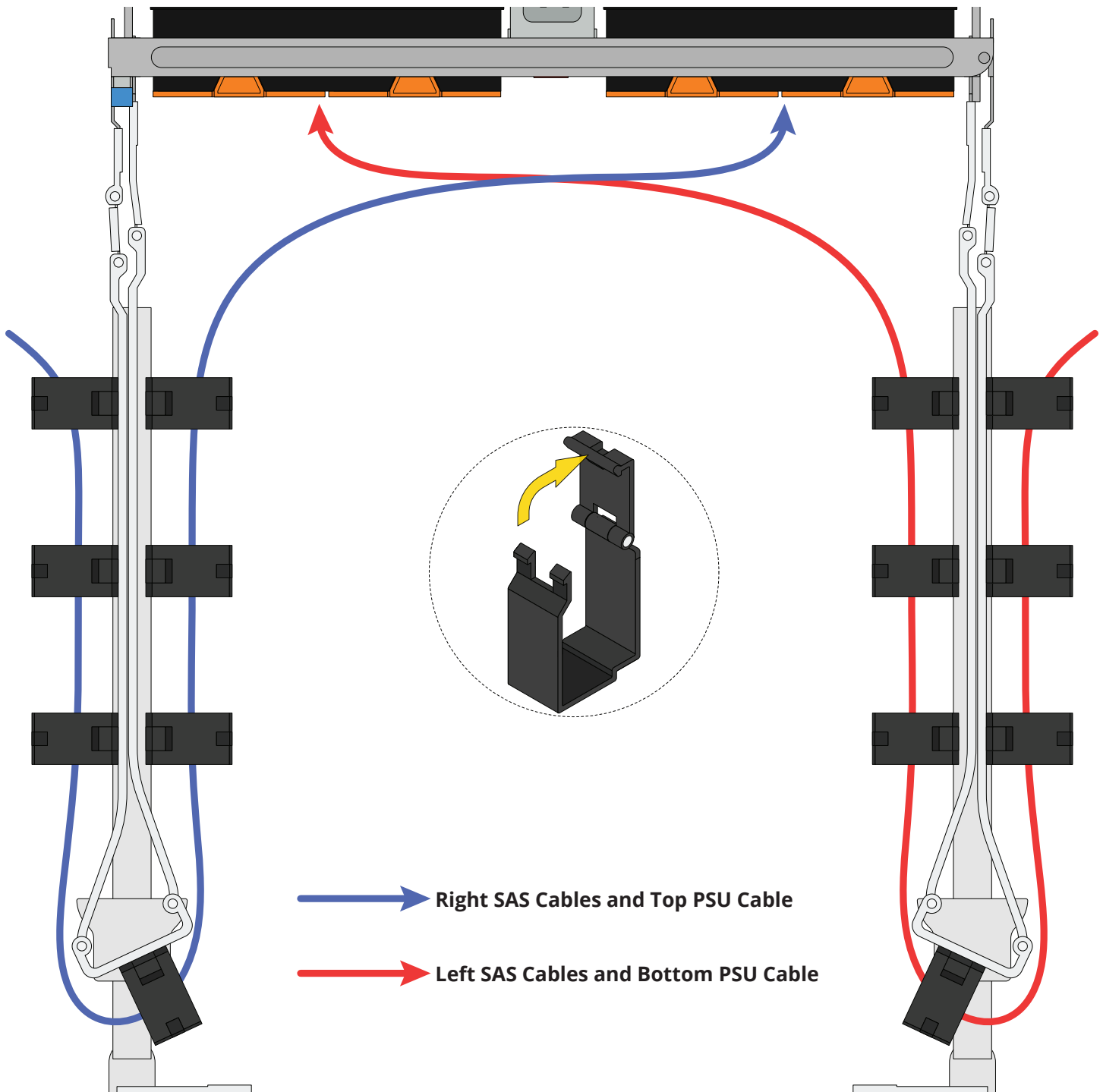
Open the top CMA by pushing the blue release on the right CMA post and pulling it away from the bracket. Then, swing the top CMA out to the left.

Open the bottom CMA by pushing the blue release on the left CMA post and pulling it away from the bracket. Then, swing the top CMA out to the right.

Open the black baskets on the CMAs by pulling the tops up and route all the cables for power and SAS. Ensure all cables have at least 20 inches of slack between the system and the CMA. After installing cables, reconnect the CMAs.

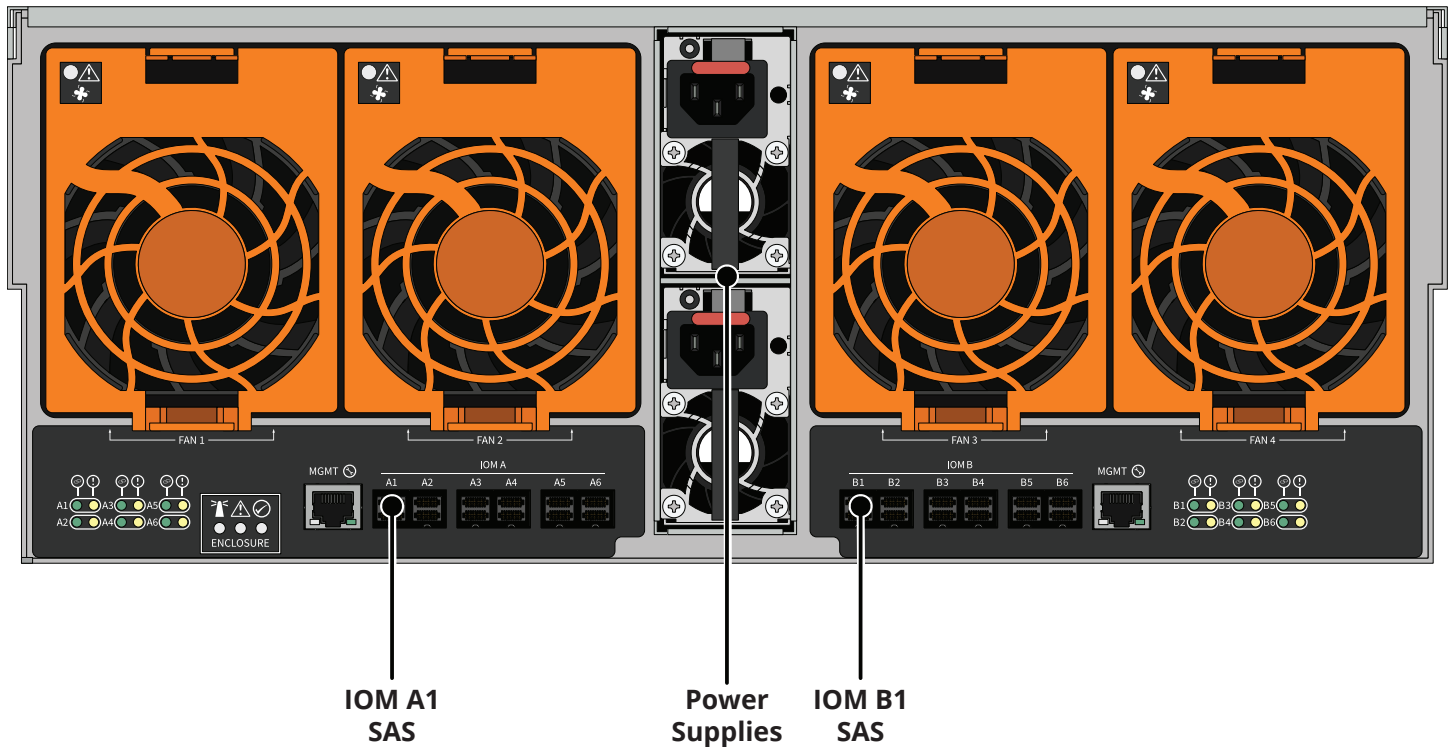
✓ Tip - Cabling

We recommend bundling the cables for each side using the included velcro straps to make servicing easier.



Connect SAS cables to SAS ports on both sides of the system.

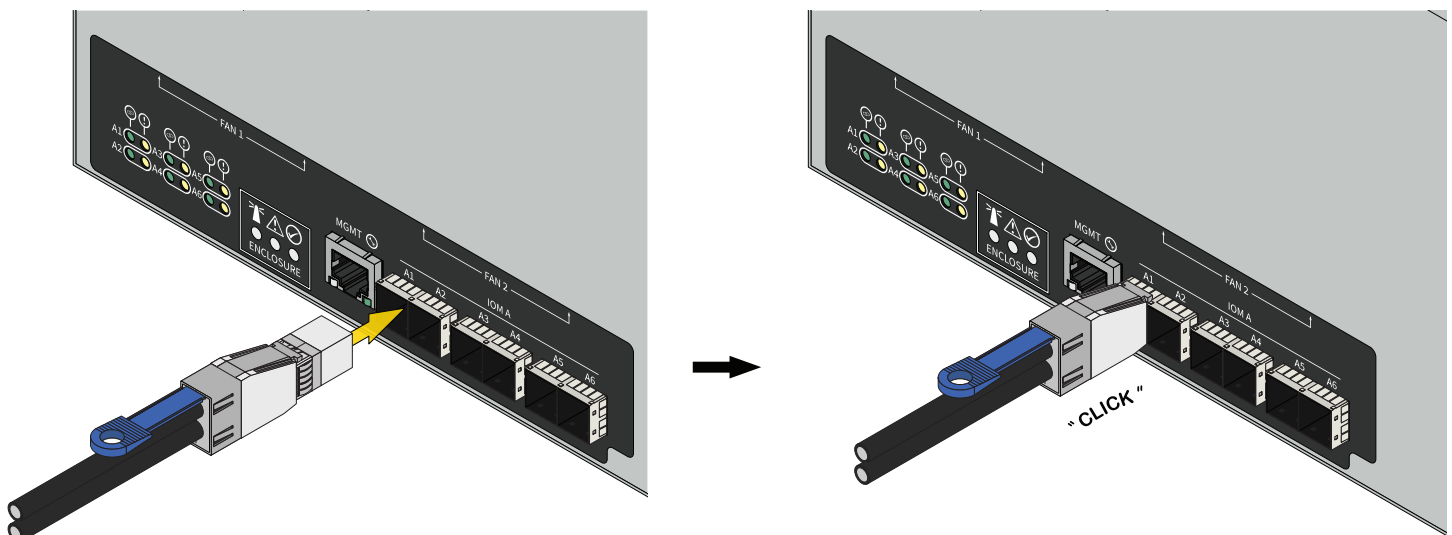
Then, connect the power cables to both power supplies, but **do not plug them into a power source yet**.



10.1 SAS Cabling

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 on top. Gently push the connector into the port until it clicks.

For more information on SAS configuration, see the ES60 Gen 2 User Manual (<https://www.truenas.com/docs/files/ES60Gen2PUM.pdf>).



Tip - Cable Management

Before continuing, test your cable setup by sliding the system out of the rack. The cables should move freely with the CMA without pinching or coming loose.

11 Install Drives

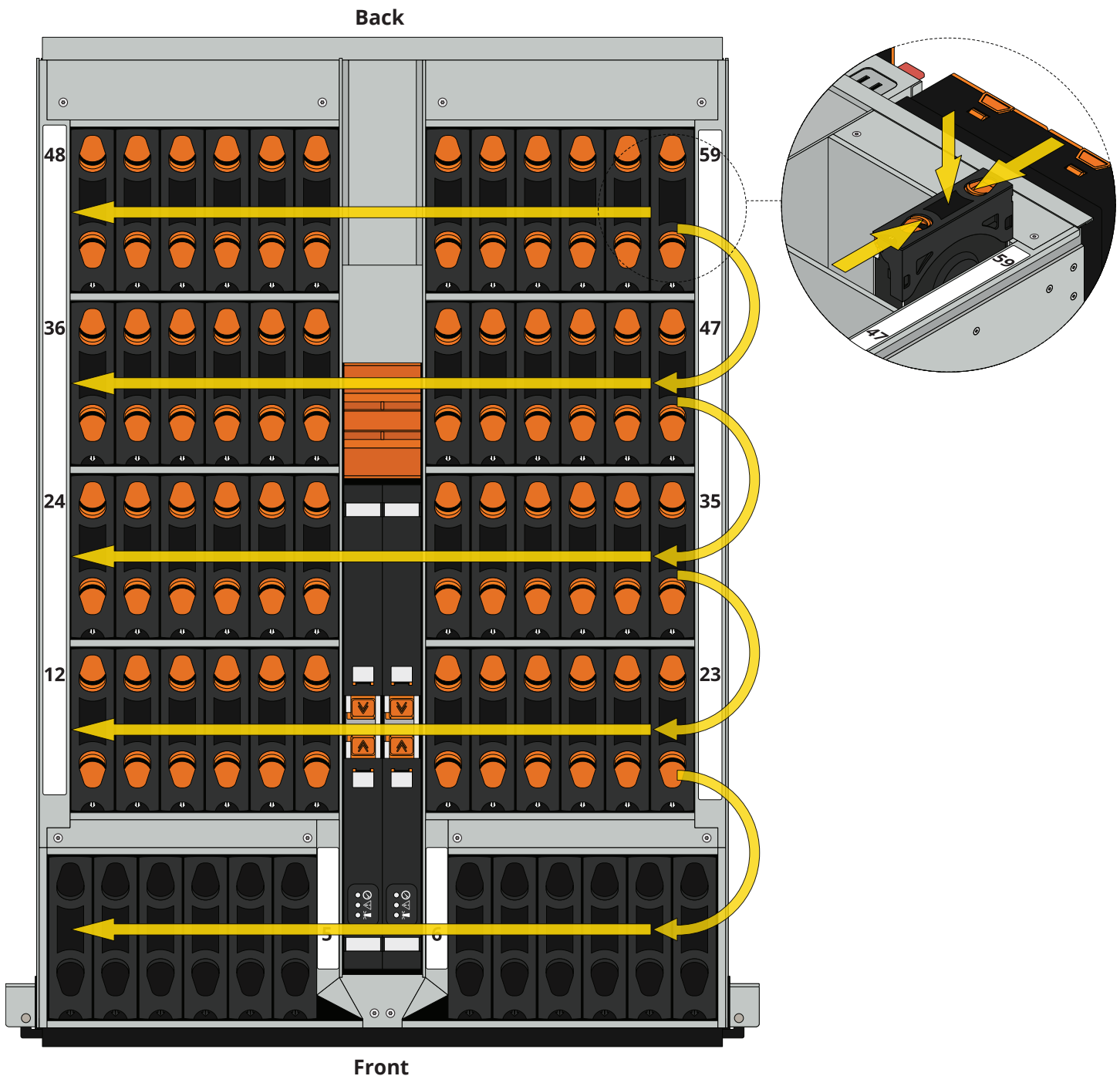
Pull the latch handles to free the ES60 from the rack, then pull the ES60 out until it locks into the service position.

Retrieve a drive assembly (drives and clips come pre-installed) and point the arrow on the clip towards the front of the ES60. Pinch the orange tabs and gently push the drive into a slot, then release the tabs. Ensure the drive is fully inserted into the bay and does not extend above the system.

For proper airflow, start with the row labeled **59** at the back of the drive drawer. Install the drives from right-to-left. When that row is full, move to the next row forward labeled **47** and proceed to fill the enclosure from right-to-left, back-to-front. Drive blanks come pre-installed, but you can move them as needed.

Note - Drive Cooling

You must install at least 24 drives into the ES60 to ensure proper airflow for cooling.



12 Boot the System

Push the system back into the rack by pressing the metal safety catches on each chassis rail against the chassis and pushing the chassis into the rack until the chassis latches lock into the latch plates.

If you installed the optional extra cage nuts in step 4, you can now tighten the red thumbscrews on each side of the system to lock the system to the rack.

Plug the power cables into PDU outlets and wait for the ES60 to boot up. After booting, the ES60 automatically pairs with the TrueNAS system it is connected to. You can access ES60 hardware details through the TrueNAS UI.

ⓘ Note - Voltage Requirements

The ES60 requires power from a 200V to 240V power distribution unit (PDU).

13 Additional Resources

ES60 User Manual



ES60 Resources



iX Support



ES60 User Manual: <https://www.truenas.com/docs/files/ES60Gen2PUM.pdf>

ES60 Resources: <https://www.truenas.com/docs/hardware/expansionshelves/#es60-gen-2-resources>

14 Contact iXsystems

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

Contact Method	Contact Options
Web	https://support.ixsystems.com
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 (24x7 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)