AFF C400 Systems
Installation and Setup Instructions

Prepare for installation | Stage 1

Pre-setup

1. Unpack all boxes and inventory contents.
   Attention: Customers with specific power requirements must check Hardware Universe for their configuration options.
2. Review the NetApp ONTAP Configuration Guide.

Note: For MetroCluster configurations, use the MetroCluster installation content.

Contents In the box

Cables in your shipment are order-dependent. Not all cables shown may be in your shipment.

100 GbE cable (QSFP28)
Storage, cluster network, GbE network, and Ethernet data (order-dependent)

Part numbers:
X66211A-05 (112-00595), 0.5m
X66211A-1 (112-00573), 1m
X66211A-2 (112-00574), 2m
X66211A-5 (112-00576), 5m

RJ-45 cables
Wrench port (e0M/BMC) (order-dependent)

Part numbers:
X5585-R6 (112-00291), 3m
X6562-R6 (112-00196), 5m

32 Gb FC (SFP+ Op)
FC optical network cable

Part numbers:
X66250-2 (112-00342), 2m
X66250-5 (112-00344), 5m
X66250-15 (112-00346), 15m

Additional cables

Ethernet cables   Power cables

micro USB console cable

16 Gb FC or 25GbE cables
Mezzanine cards (SFPs pre-installed):

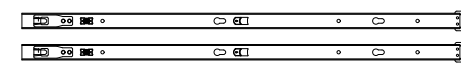Part number:
X66250-2-N-C (112-00342)
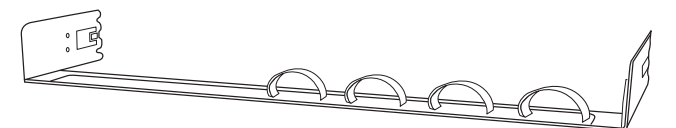
25 GbE cable (SFP28)
HA interconnect

Part numbers:
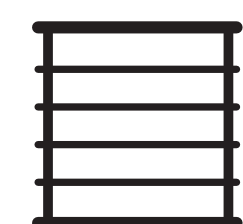X66240-2 (112-00598), 2m
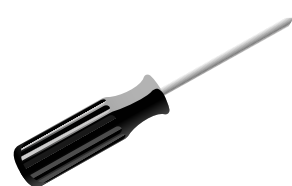X66240-5 (112-00639), 5m

Slide rail kit

Cable management tray
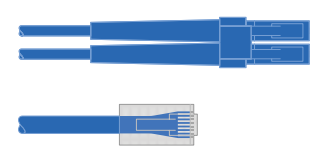
You provide

Rack space
4U for AFF C400
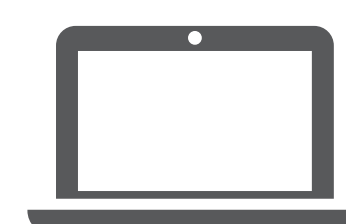+2U for each NS224 shelf

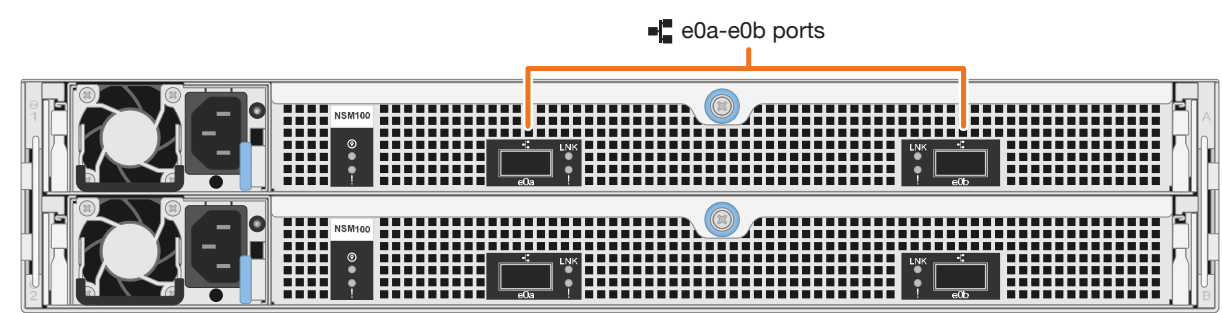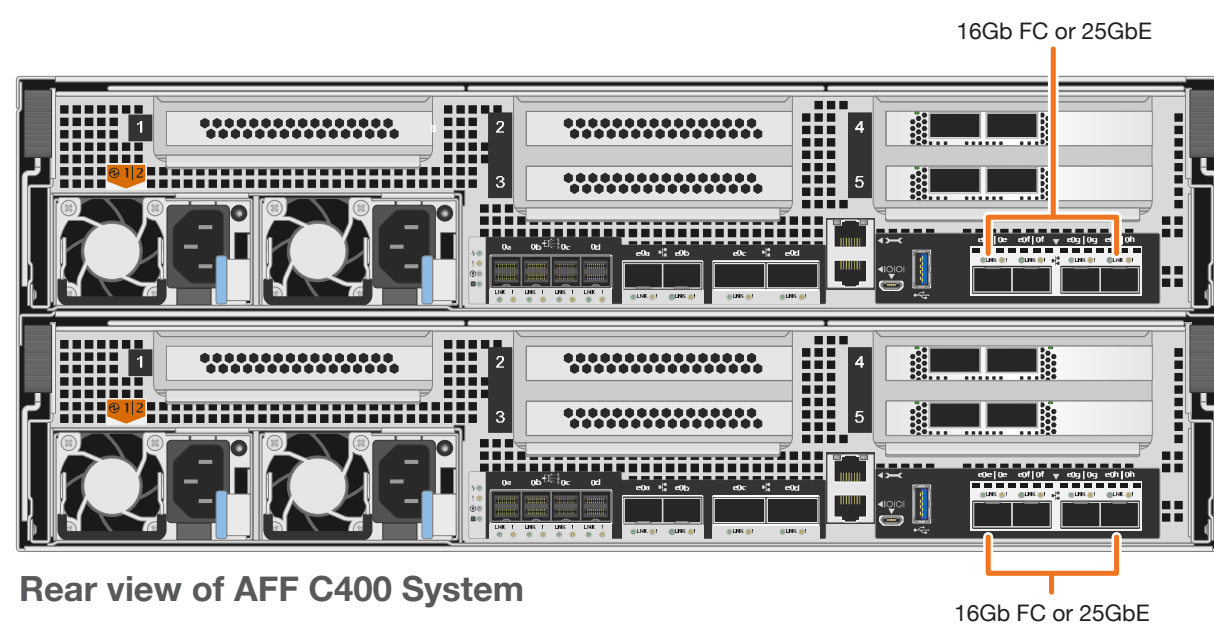**Screwdriver**
Phillips #2

Additional network cables
For connecting your storage system to your network switch and laptop or console

Laptop or console
With a USB/serial connection and access to a Web browser to configure your storage system

16Gb FC or 25GbE

e0a-e0b ports

Rear view of NS224 drive shelf

Rear view of AFF C400 System

16Gb FC or 25GbE

Note: If the port labels on the card are not visible, check the card installation orientation (the PCIe connector socket is on the left side of the card slot in the C400, and then look for the card, by part number, in the Hardware Universe for a graphic of the bezel which will show the port labels. The card part number can be found using the sysconfig -a command or on the system packing list.

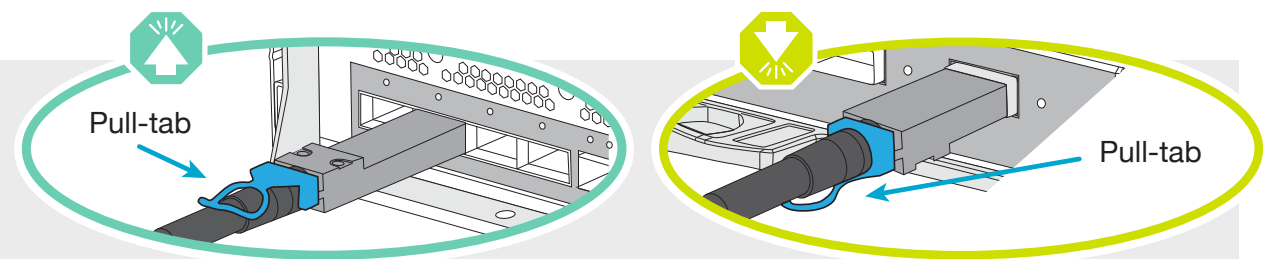## 1 Install system in a rack or cabinet

- Install the slide rail or telco tray kits, as needed, and then install and secure your system using the instructions included with the kit.
- Attach cable management devices to the back of each controller (as shown).
- Place the bezel on the front of the system.
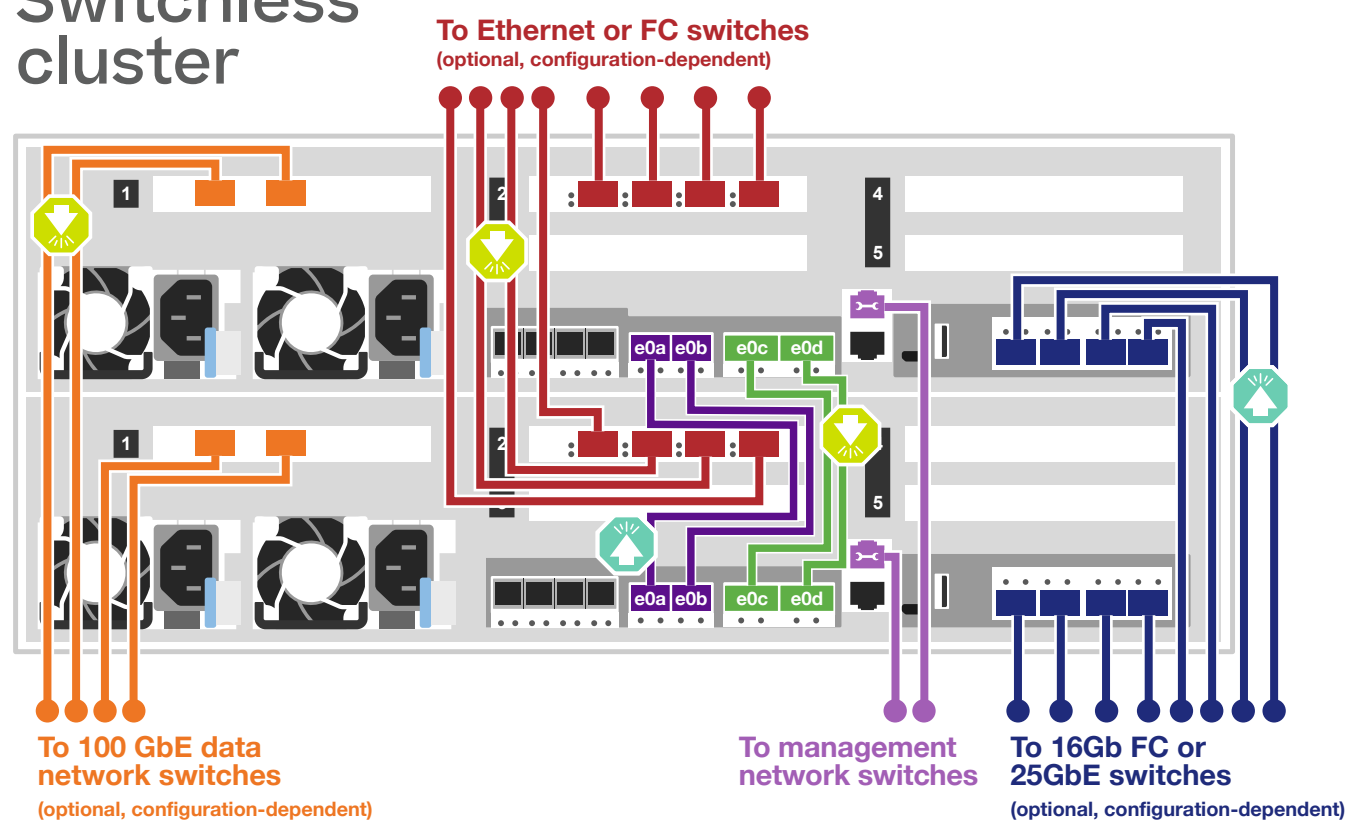- Install any drive shelves for your system.

⚠ CAUTION   LIFTING HAZARD

≥ 50.1 kg (≥ 110.2 lbs.)
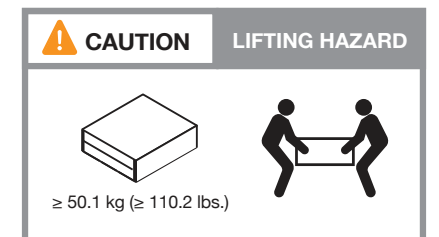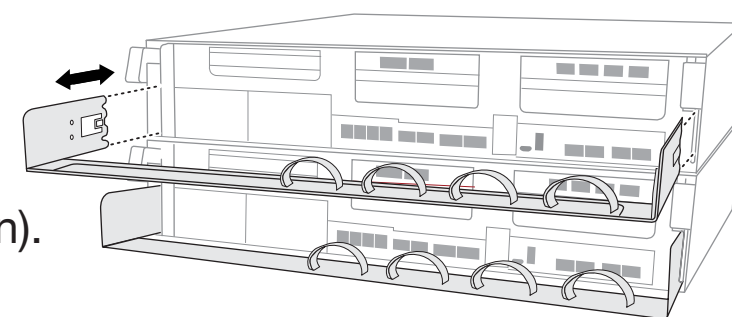
2 Cable the controller for a switchless or switched cluster

See your network administrator for help connecting to your switches.

Attention: Be sure to check the illustration arrow for the proper cable connector pull-tab orientation.

Note: To unplug a cable, gently pull the tab to release the locking mechanism.

Pull-tab

Pull-tab

Switchless cluster

To Ethernet or FC switches
(optional, configuration-dependent)

To 100 GbE data network switches
(optional, configuration-dependent)

To management network switches

To 16Gb FC or 25GbE switches
(optional, configuration-dependent)

Switched cluster

To Ethernet or FC switches
(optional, configuration-dependent)

To cluster switches

To 100 GbE data network switches
(optional, configuration-dependent)

To cluster switches

To management network switches

To 16Gb FC or 25GbE switches
(optional, configuration-dependent)

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100 GbE cables (cluster network)

🟢 **Switchless cluster:** Connect ports e0c to e0c and ports e0d to e0d.

Switched cluster: Controller 1: Connect port e0c to switch 1 and port e0d to switch 2. Controller 2: Connect port e0c to switch 1 and port e0d to switch 2.

25 GbE cables

🟣 Connect ports e0a to e0a and ports e0b to e0b. (HA interconnect only)

100 GbE cables

🟠 Connect ports to the 100 GbE data network switches. (optional, configuration dependent)

FC cables

🔴 Connect ports to the FC data network switches. (optional, configuration dependent)

Ethernet cables 🔧

🟣 Connect the Wrench port (e0M/BMC) to the management switches

Optical cables

🔵 Connect the mezzanine ports (e0e | 0e through e0h | 0h) to either 25 GbE or 16 Gb FC switches; configuration dependent.

⚫ Strap the cables to the cable management arms. (not shown)

DO NOT plug the power cables into a power source yet.
The system will boot as soon as the power cables are plugged into the power source and power supplies.
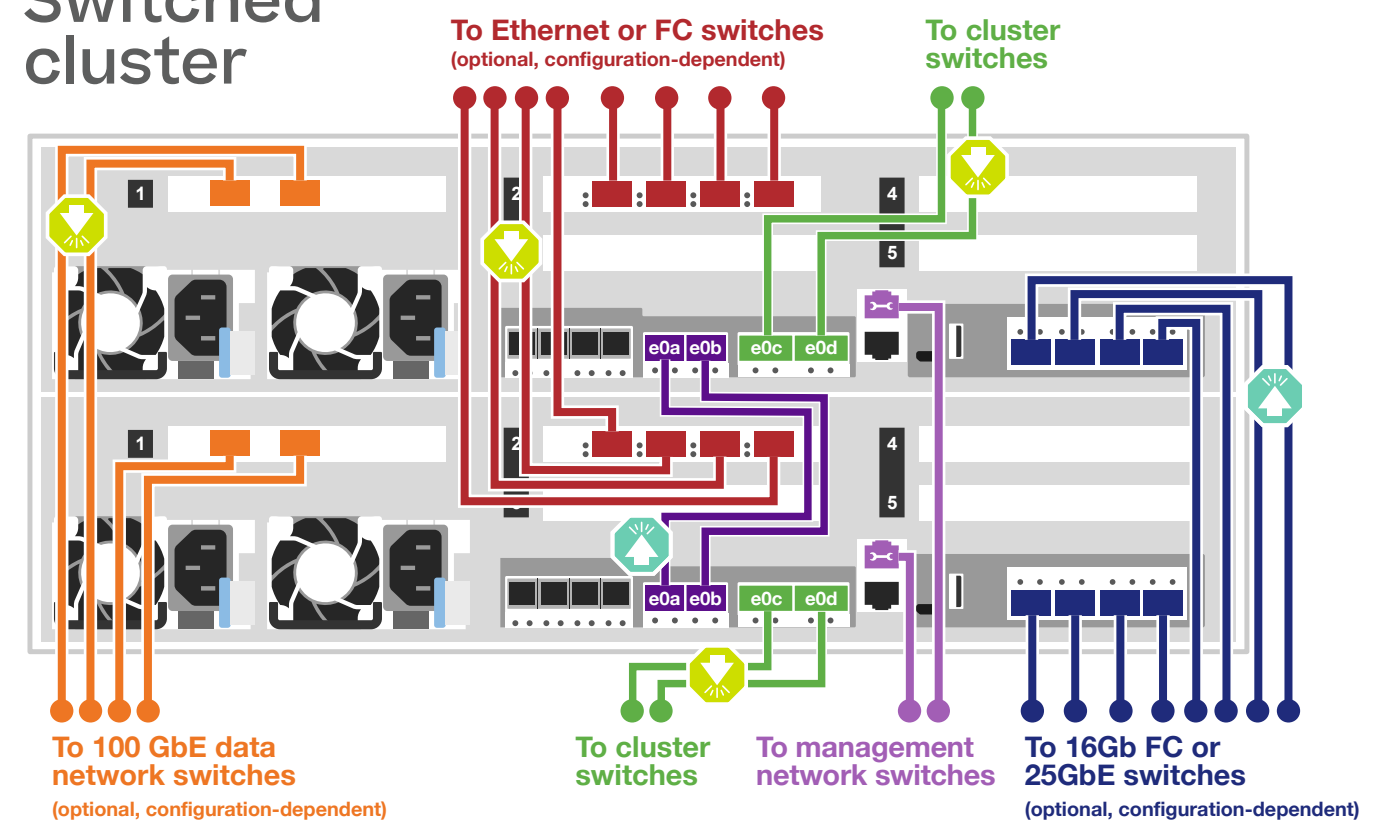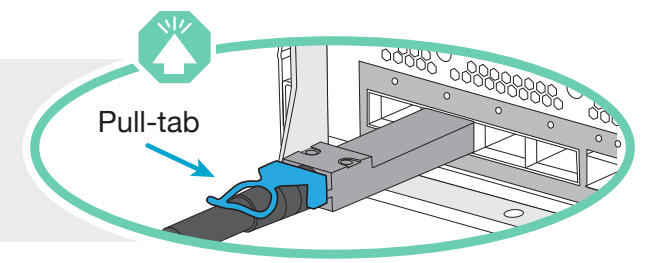
Attention: Be sure to check the illustration arrow for the proper cable connector pull-tab orientation.

Note: To unplug a cable, gently pull the tab to release the locking mechanism.

Pull-tab

Cabling an AFF C400 system to one NS224 shelf

100 GbE QSFP28 copper cable

- ● Connect controller A slot 4 port 1 (e4a) to port e0a on NSM A on the shelf.

  Connect controller A slot 4 port 2 (e4b) to port e0b on NSM B on the shelf.

- ● Connect controller B slot 4 port 1 (e4a) to port e0a on NSM B on the shelf.

  Connect controller B slot 4 port 2 (e4b) to port e0b on NSM A on the shelf.

Shelf 1

NSM A
e0a   e0b

NSM B
e0a   e0b

Controller A
1   2   3   4   5   2   1

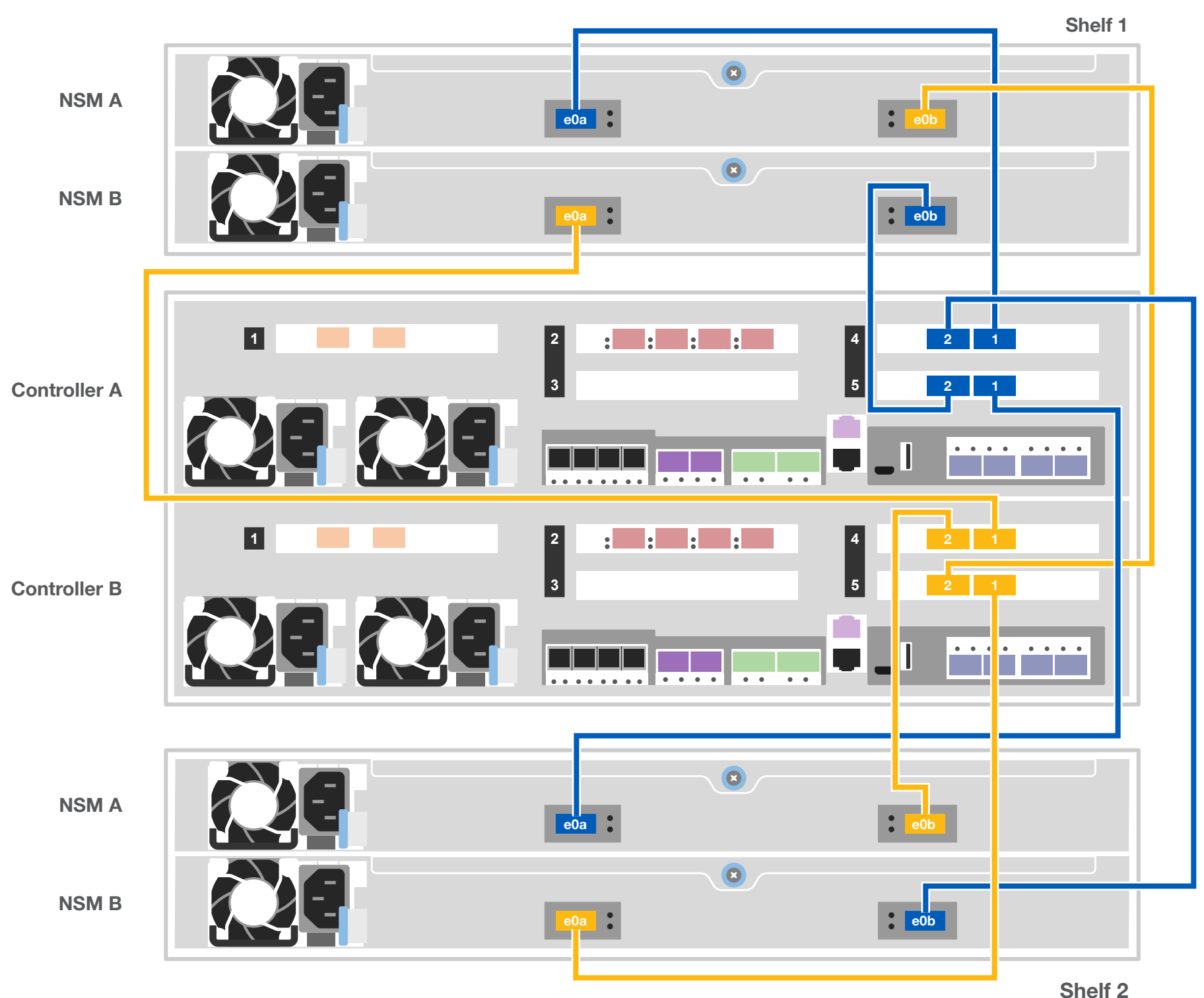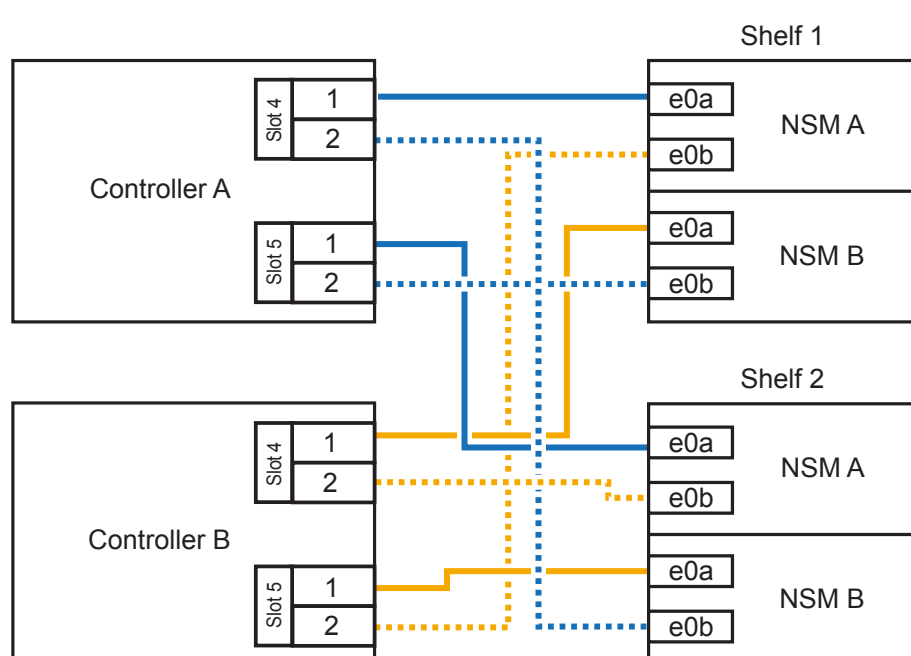Controller B
1   2   3   4   5   2   1
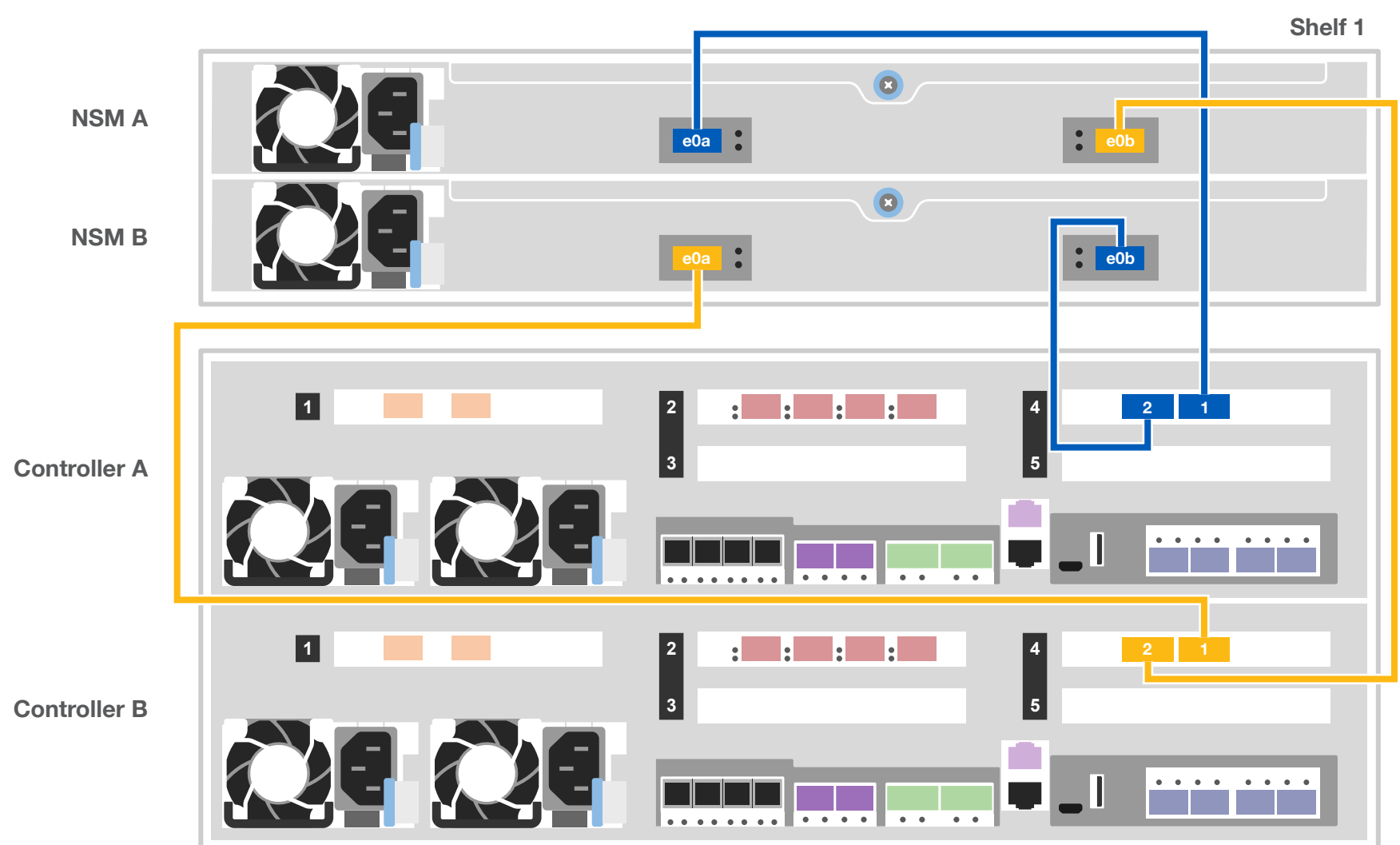
Cabling an AFF C400 system to two NS224 shelves

100 GbE QSFP28 copper cable

Use the table below to connect your controllers to the two NS224 shelves.

Shelf 1
Controller A — Slot 4: 1, 2 — NSM A: e0a, e0b — NSM B: e0a, e0b

Shelf 2
Controller B — Slot 5: 1, 2 — NSM A: e0a, e0b — NSM B: e0a, e0b

Shelf 1

NSM A
e0a   e0b

NSM B
e0a   e0b

Controller A
1   2   3   4   5   2   1   /   2   1

Controller B
1   2   3   4   5   2   1   /   2   1

NSM A
e0a   e0b

NSM B
e0a   e0b

Shelf 2

1 Power on the shelves and set shelf IDs:

Note: For NS224 drive shelves, shelf IDs are pre-set to 00 and 01. If you want to change the shelf IDs, use the straightened end of a paperclip, or narrow tipped ball point pen to access the shelf ID button behind the faceplate.

1. Plug the power cords into the shelf power supplies, and then connect them to power sources on different circuits.

   Note: NS224 shelves have no power switch and will begin to boot.

2. If you need to change the shelf ID's, see
   [Change a shelf ID - NS224 shelves](#) for detailed instructions.

End cap

Shelf ID button access
Shelf ID number
Faceplate
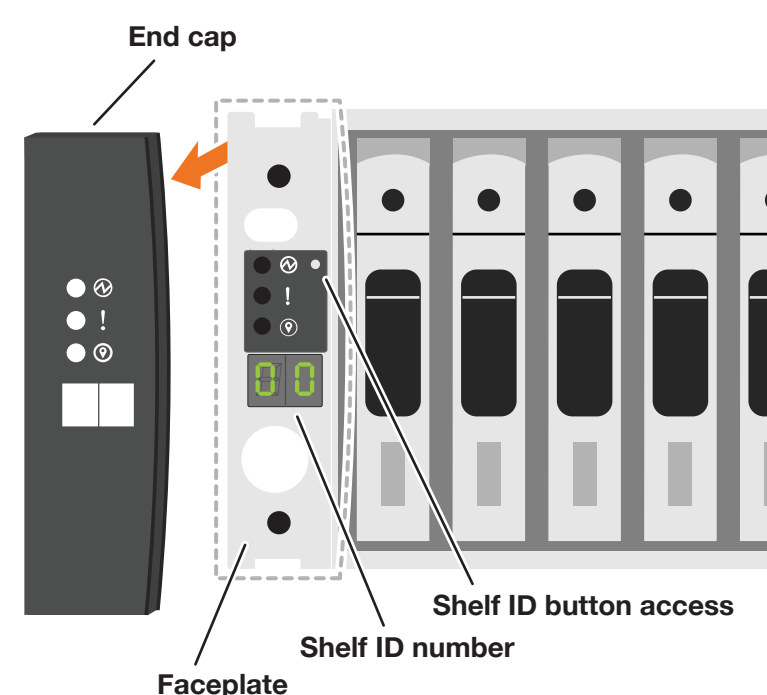
2 Connect the power cables to the controllers and to the power source.
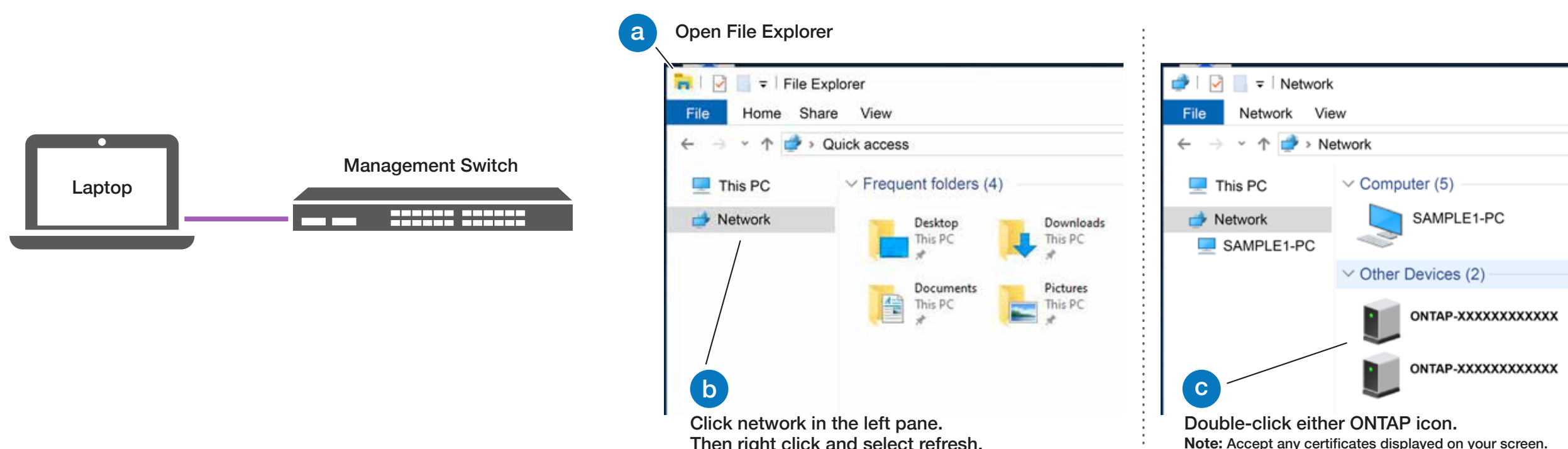
The system powers on when plugged into the power source.

To power source
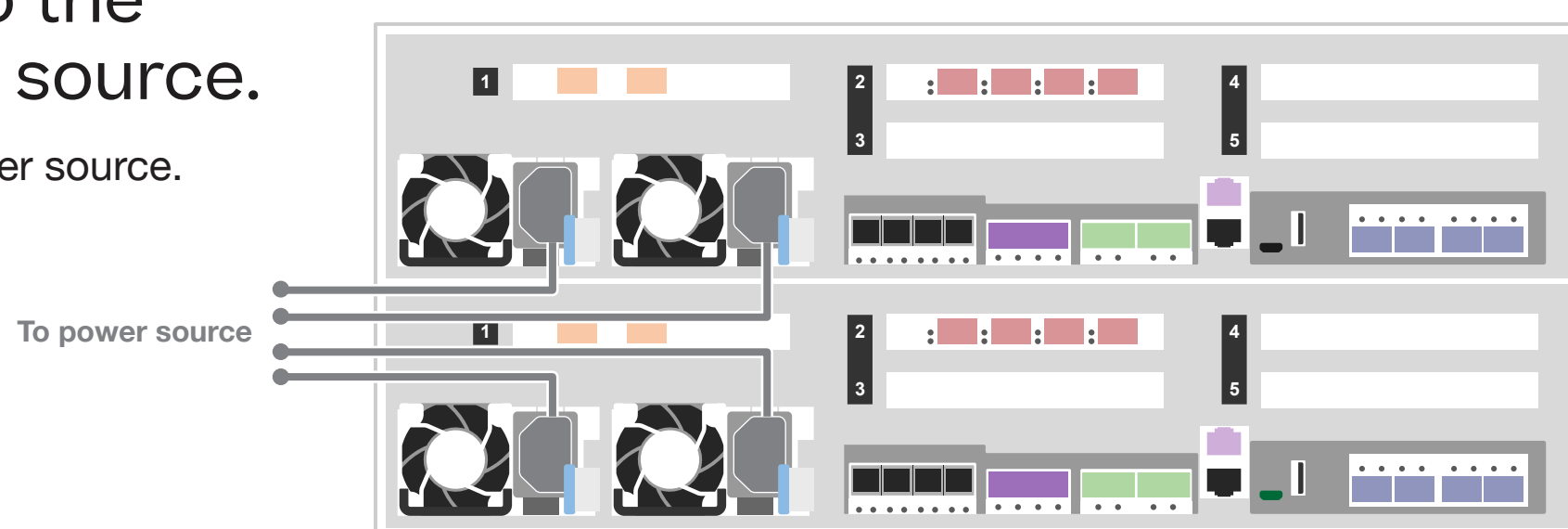
3 Complete initial cluster setup with network discovery:

Note: If your laptop does not support network discovery, see the [Detailed guide.](#)

Connect your laptop to the management switch and access the network computers and devices.

Laptop   Management Switch

a Open File Explorer

b Click network in the left pane.
Then right click and select refresh.

c Double-click either ONTAP icon.
Note: Accept any certificates displayed on your screen.

4 Use System Manager Guided Setup to configure your cluster.

5 Completing setup:

1. Click...
   a) [mysupport.netapp.com](#)
   b) [Create/log in to your account](#)
   c) [Download and install Active IQ Config Advisor](#)
   d) [Register your system](#)

2. Verify the health of your system by running Config Advisor.

3. After you have completed the initial configuration, go to the [NetApp ONTAP Resources](#) page for information about configuring additional features in ONTAP.