⊓ NetApp®

AFF A900 Systems
Installation and Setup Instructions

Prepare for installation | Stage 1
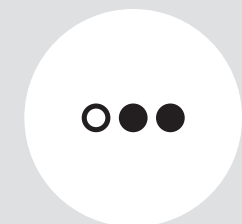
Pre-setup

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

Contents
In the box

Cables in your shipment are order-dependent. Not all cables shown may be in your shipment.
Note: For more cable information and part numbers, see the Hardware Universe.

25 GbE data cable
Network cable

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

Optical network cable
Ethernet, FC optical connections

Part number
X6553-R6 (112-00188), 2m
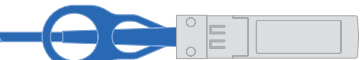X6536-R6 (112-00090), 5m
X6554-R6 (112-00189), 15m

Additional cables

Ethernet cables   Power cables

40 GbE network cable
Ethernet, FC and cluster network, HA interconnect

Part numbers:
X66100-1 (112-00543), 2m
X66100-3 (112-00543), 3m

100 GbE network cable
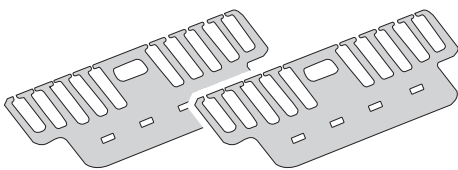**NVMe Storage, Ethernet data cable (order dependent)**

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

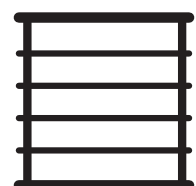**MiniSAS HD cable**
SAS storage cables

Part number
X-26004-00 (112-00436), 1m
X-26005-00 (112-00437), 2m
X-26007-00 (112-00438), 3m

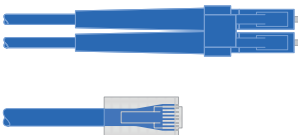**Slide rail kit**

Cable management arms

You provide

Rack space
8U per chassis

Screwdriver
Phillips #2

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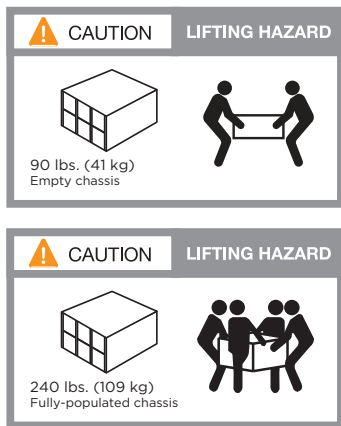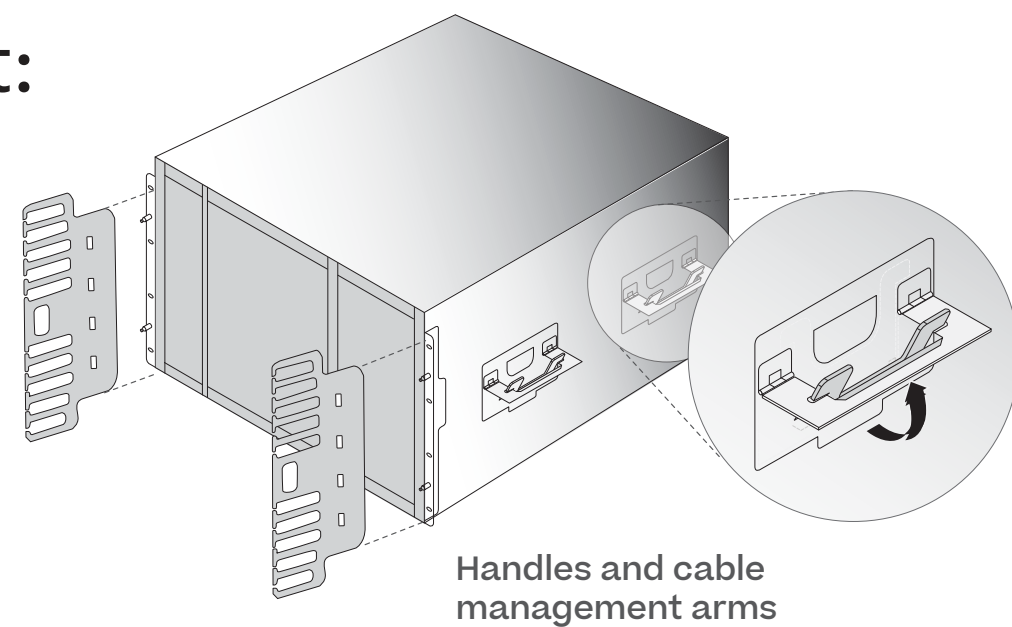For connecting your storage system to your network switch and laptop or console.

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

1 Install system in a rack or cabinet:

- Install rail kits, as needed, using the rail kit installation instructions.
- Install the empty chassis into the system cabinet or rack.
- Reinstall the system components into the chassis, matching the chassis slot ID with the slot ID sticker on the component.
- Attach cable management arms.
- Place the bezel on the front of the system.

CAUTION LIFTING HAZARD
90 lbs. (41 kg)
Empty chassis

CAUTION LIFTING HAZARD
240 lbs. (109 kg)
Fully-populated chassis

Handles and cable management arms

2 Cable controller for a switchless or switched cluster:

See your network administrator for help connecting to your switches.

Cluster interconnect cable (PN X66100)
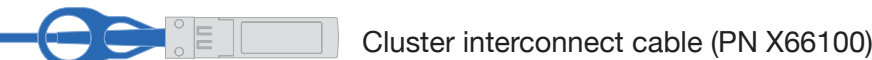
1 **Switchless cluster:** Cable cluster interconnect a ports together in slot A4 and B4 (e4a) and again in slot A8 and B8 (e8a).

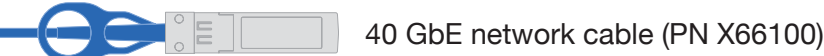**Switched cluster:** Cable cluster interconnect a ports in slot A4 and B4 (e4a) and again in slot A8 and B8 (e8a) to the cluster network switch.

Ethernet cable

2 Connect the wrench ports to the management switches.

25 GbE network cable (PN X66240)

3 Cable ports in slot A3 and B3 (e3a and e3c) and slot A9 and B9 (e9a and e9c) to the 25 GbE network switches.

40 GbE network cable (PN X66100)

Cable host-side b ports in slot A4 and B4 (e4b) and slot A8 and B8 (e8b) to the host switch.
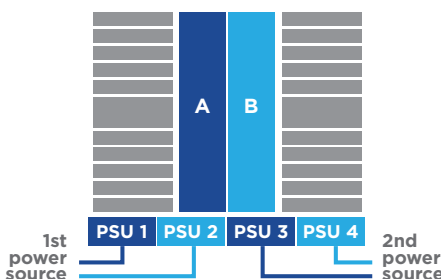
32 Gb FC (SFP+ Op) (PN X66250)

4 Cable ports in slot A5 and B5 (e5a, e5b, e5c, and e5d) and slot A7 and B7 (e7a, e7b, e7c, and e7d) to the 32 Gb FC network switches.

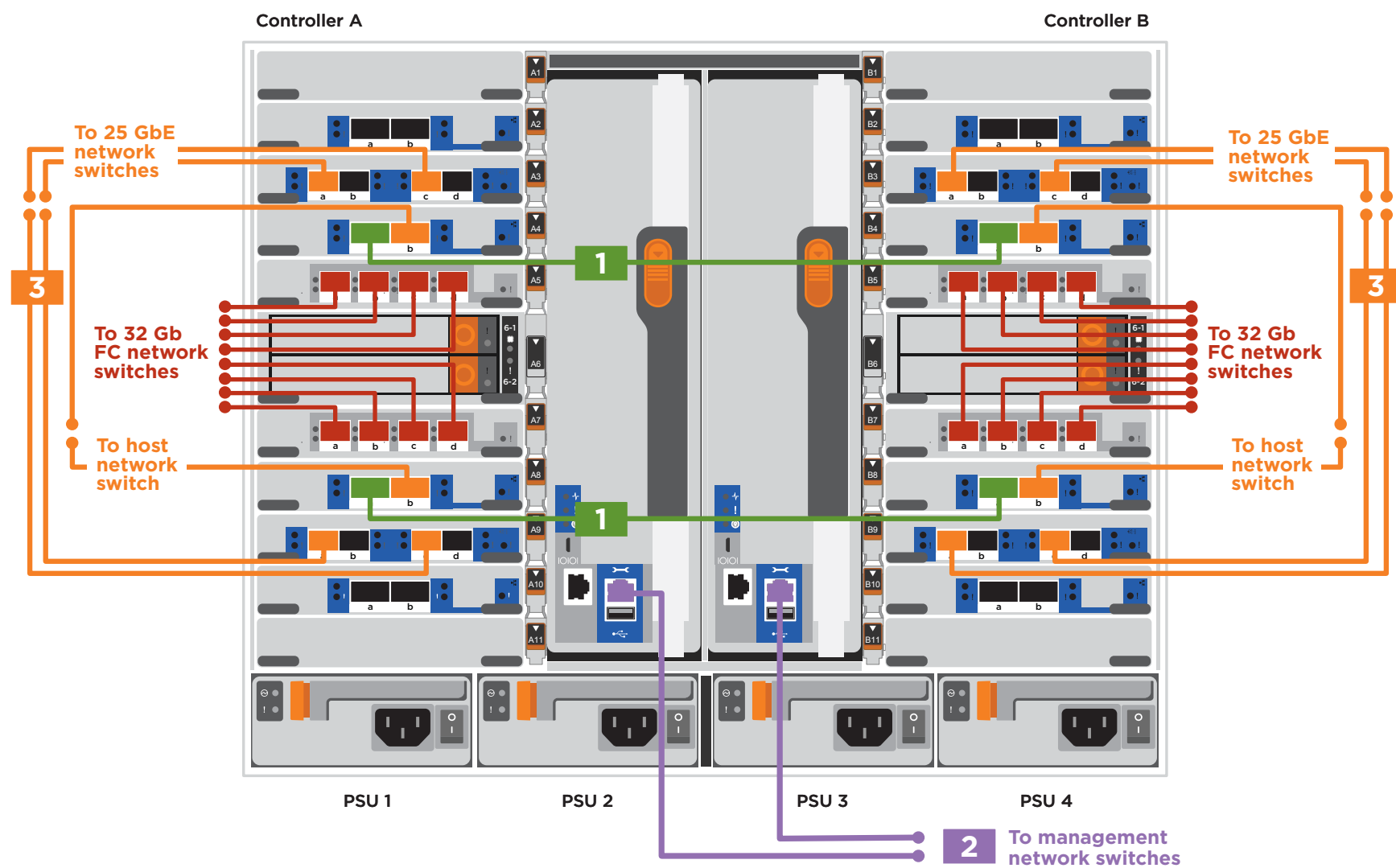**5** Strap the cables to the cable management arms (not shown).

Power cable

6 Connect the power cables to the PSUs and connect them to different power sources (not shown).

PSU 1 and PSU 3 provide power to all side A FRUs, PSU 2 and PSU 4 provide power to all side B FRUs.
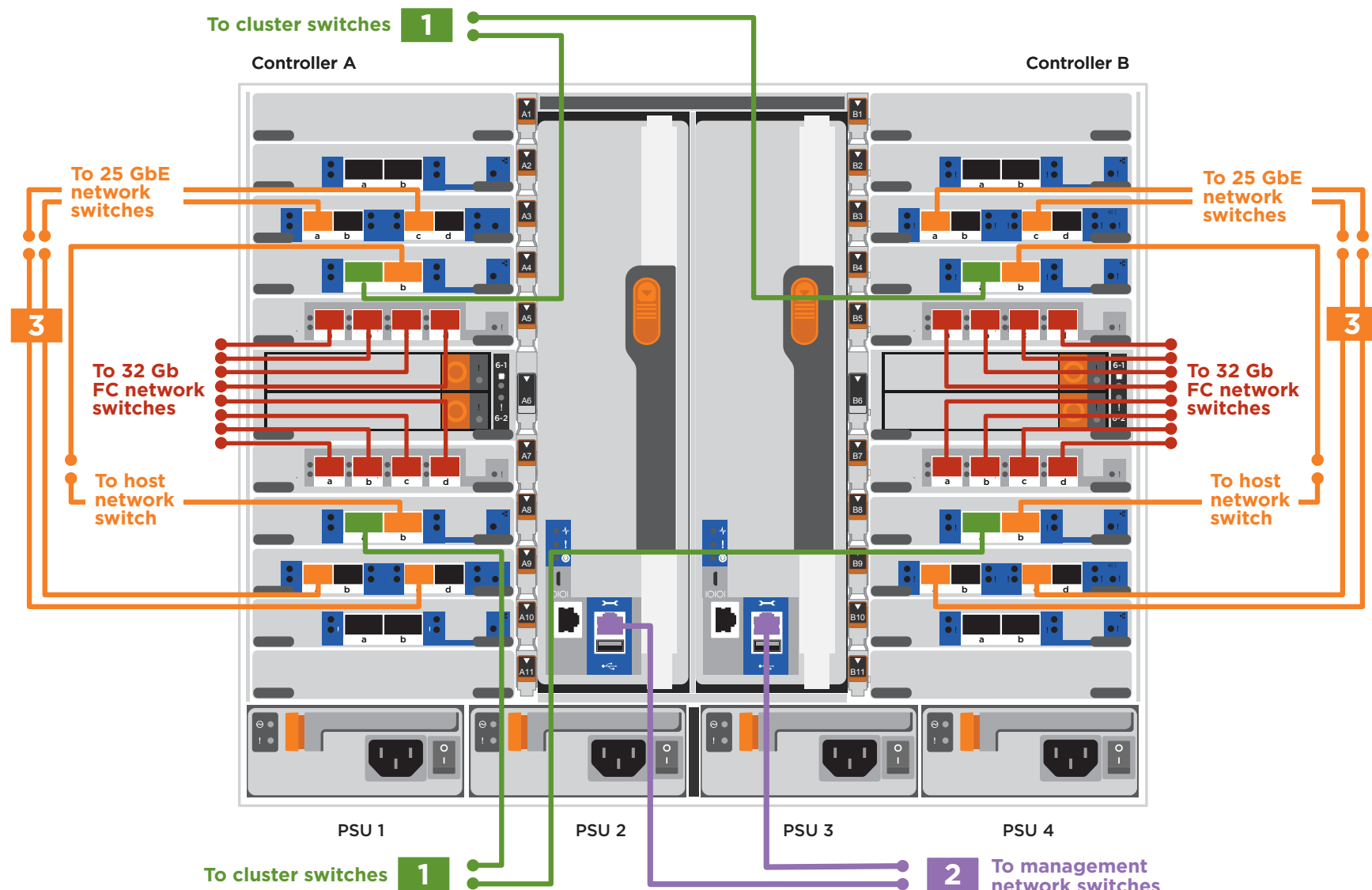
A B
1st power source PSU 1 PSU 2 PSU 3 PSU 4 2nd power source

! DO NOT power on controllers at this point.

Switchless cluster

Controller A   Controller B

To 25 GbE network switches
To 32 Gb FC network switches
To host network switch

3   **1**   **3**

To 25 GbE network switches
To 32 Gb FC network switches
To host network switch

PSU 1   PSU 2   PSU 3   PSU 4

2 To management network switches

Switched cluster

To cluster switches **1**

Controller A   Controller B

To 25 GbE network switches
To 32 Gb FC network switches
To host network switch

3   **3**

To 25 GbE network switches
To 32 Gb FC network switches
To host network switch

PSU 1   PSU 2   PSU 3   PSU 4

To cluster switches **1**   **2** To management network switches

Cabling an AFF A900 with DS224C disk shelves

Mini-SAS HD cable
(PN X-26004-00)
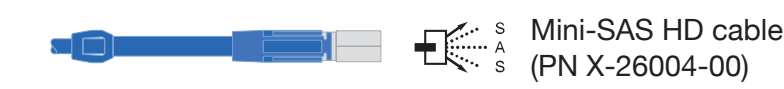
Insert SAS cable tab **UP** or tab **DOWN** and gently push into place until it clicks.

1 Connect the shelf-to-shelf ports   **2** Connect controller A to the shelves.   **3** Connect controller B to the shelves.

—————— Multipath HA cabling
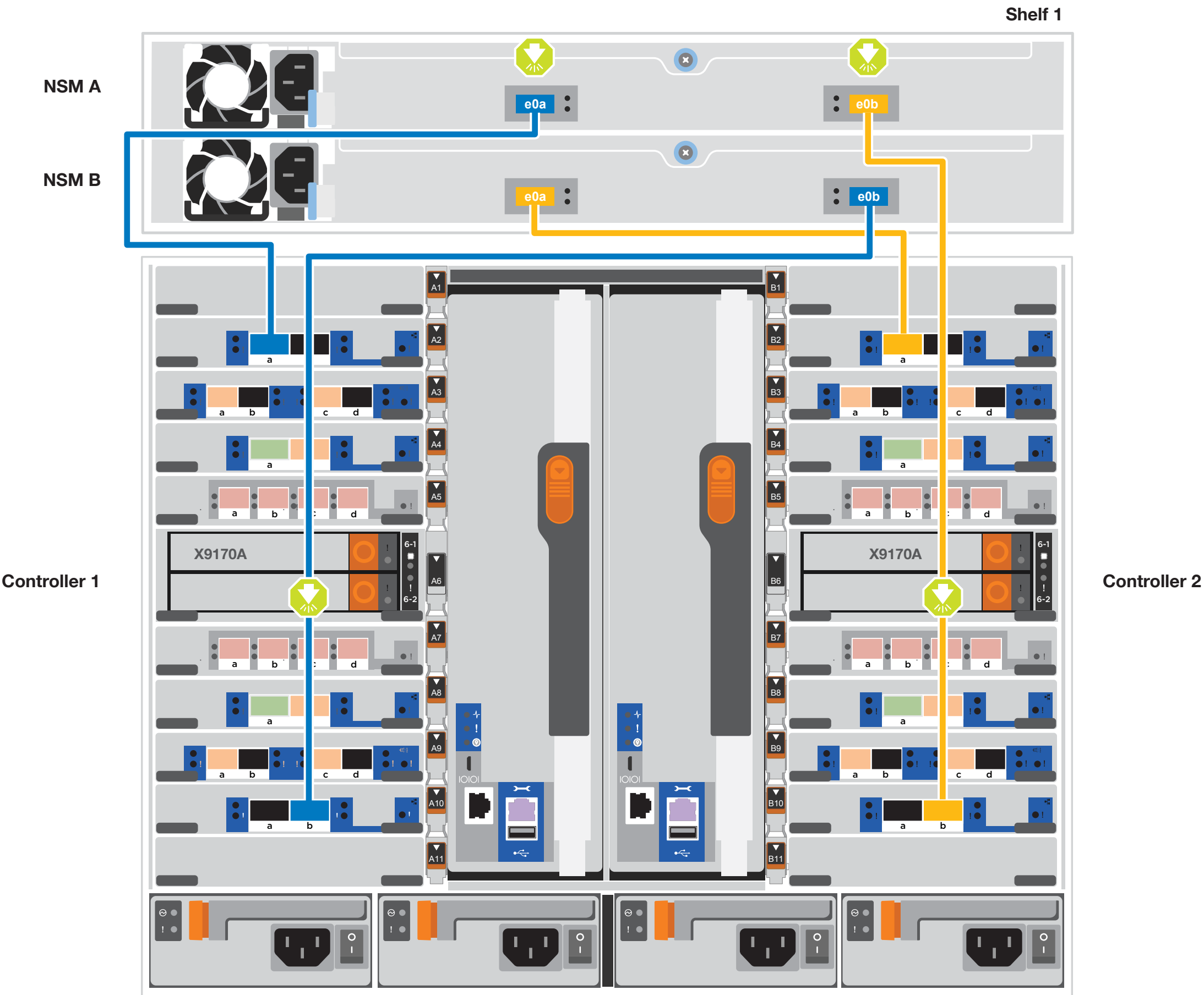- - - - - - Quad-path HA cabling
(optional)
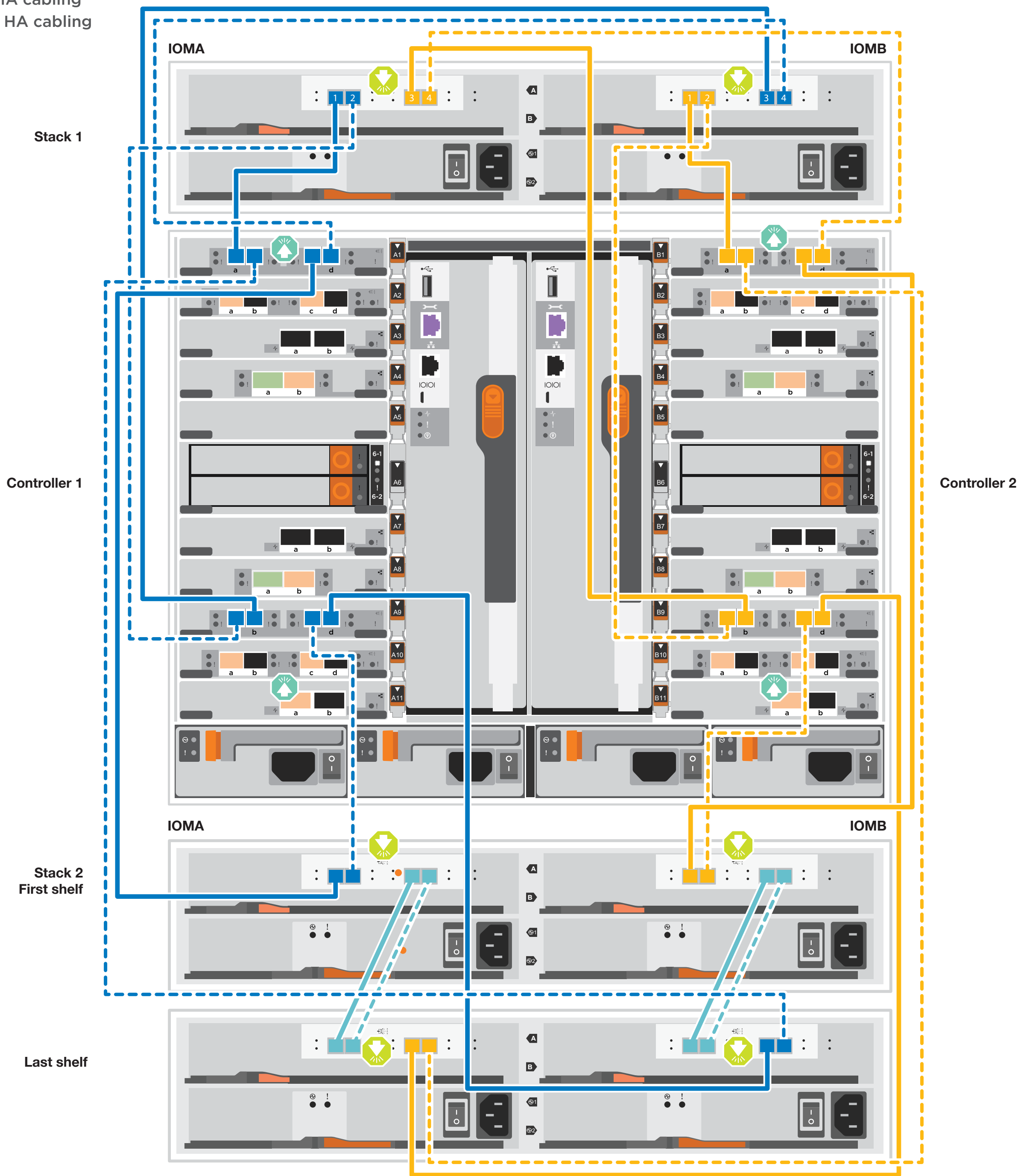
Cabling an AFF A900 with one NS224 disk shelf

━━━━▆▆▆▆▆━ 100 GbE QSFP28 copper cable (PN X66211A)

⬇ Insert 100 GbE or QSFP28 cable tab **DOWN** and gently push into place until it clicks.

1 Connect controller A port e3a to port e0a on NSM A on the shelf.
Connect controller A port e7b to port e0b on NSM B on the shelf.

2 Connect controller B port e3a to port e0a on NSM B on the shelf.
Connect controller B port e7b to port e0b on NSM A on the shelf.

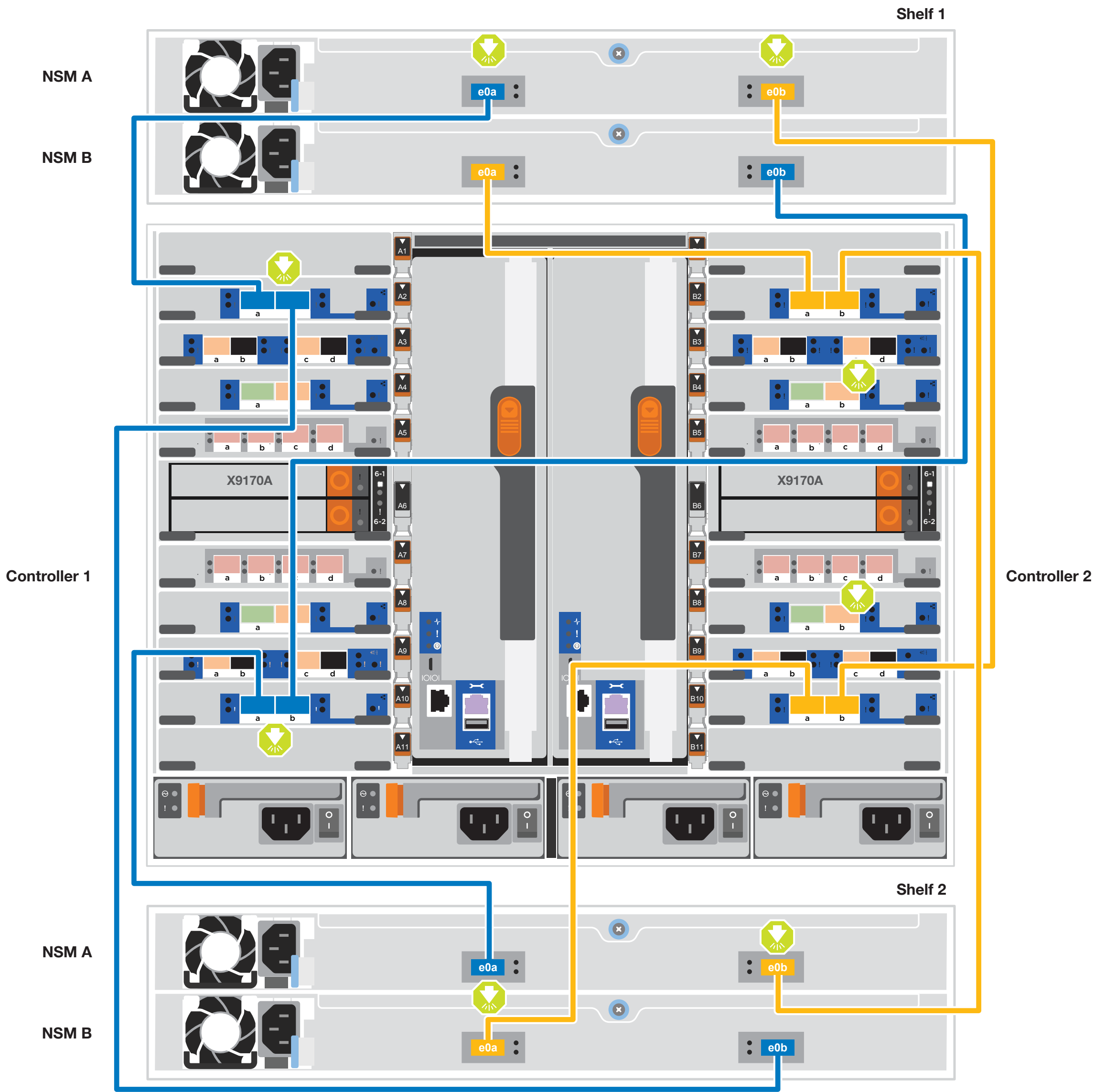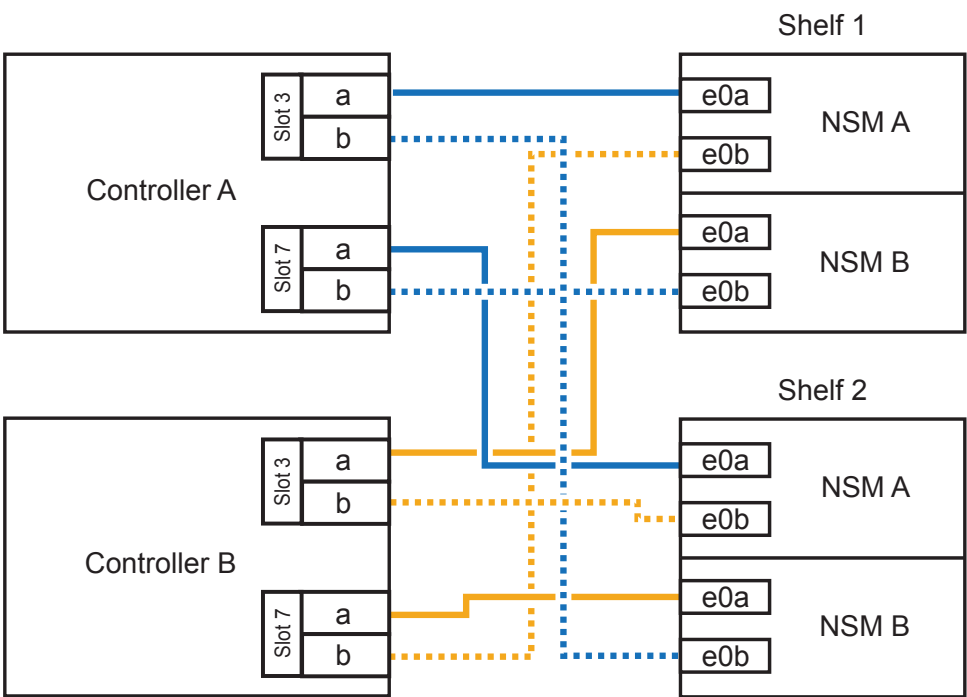## Cabling an AFF A900 with two NS224 disk shelves

100 GbE QSFP28 copper cable (PN X66211A)

Insert 100 GbE or QSFP28 cable tab DOWN and gently push into place until it clicks.

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

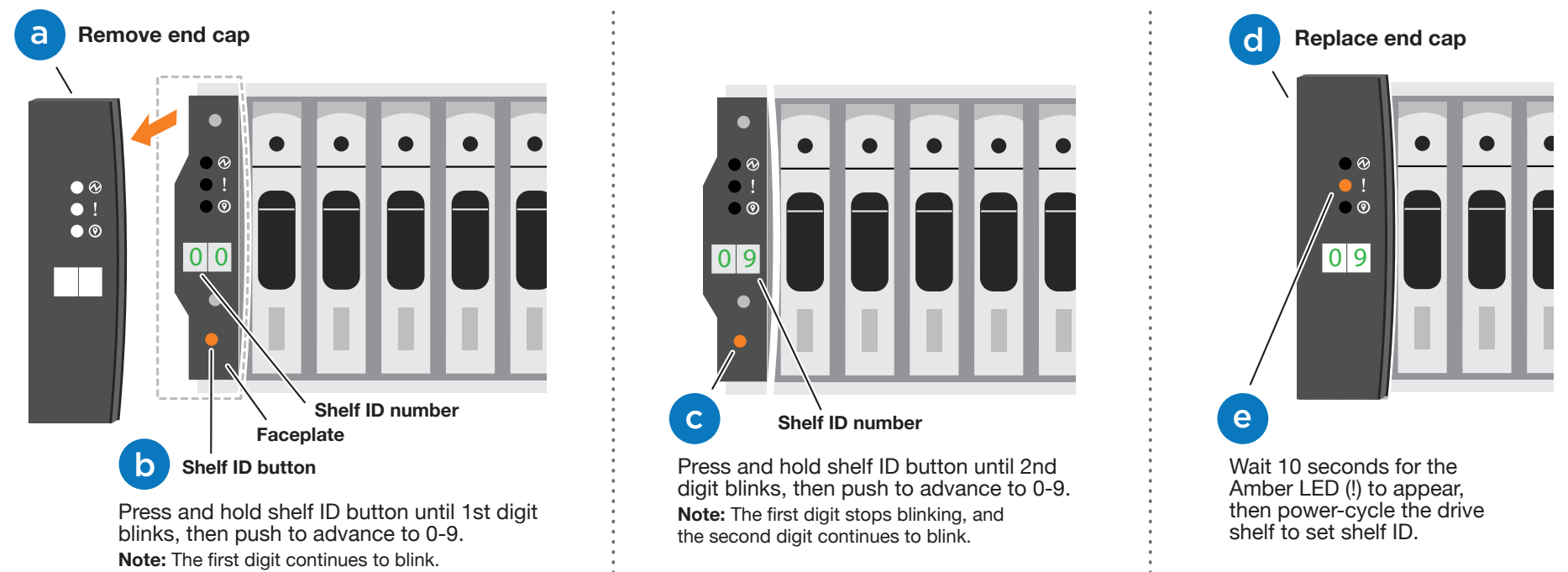**1** ## Power on the shelves and set shelf IDs:

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. For all other shelf models, turn on the power switch to boot the shelves.

2. If you need to change the shelf IDs, continue with substeps a through e; otherwise, skip to "Power on the controllers" below.

   Repeat these steps for any remaining drive shelves.

a Remove end cap

Shelf ID number
Faceplate
b Shelf ID button
Press and hold shelf ID button until 1st digit blinks, then push to advance to 0-9.
Note: The first digit continues to blink.

c Shelf ID number
Press and hold shelf ID button until 2nd digit blinks, then push to advance to 0-9.
Note: The first digit stops blinking, and the second digit continues to blink.

d Replace end cap
e Wait 10 seconds for the Amber LED (!) to appear, then power-cycle the drive shelf to set shelf ID.

2 ## Turn on the power switches to all nodes:

PSU 1 and PSU 3 provide power to all side A FRUs, PSU 2 and PSU 4 provide power to all side B FRUs.

1st power source — PSU 1 | PSU 2 | PSU 3 | PSU 4 — 2nd power source

PSU 1   PSU 2   PSU 3   PSU 4
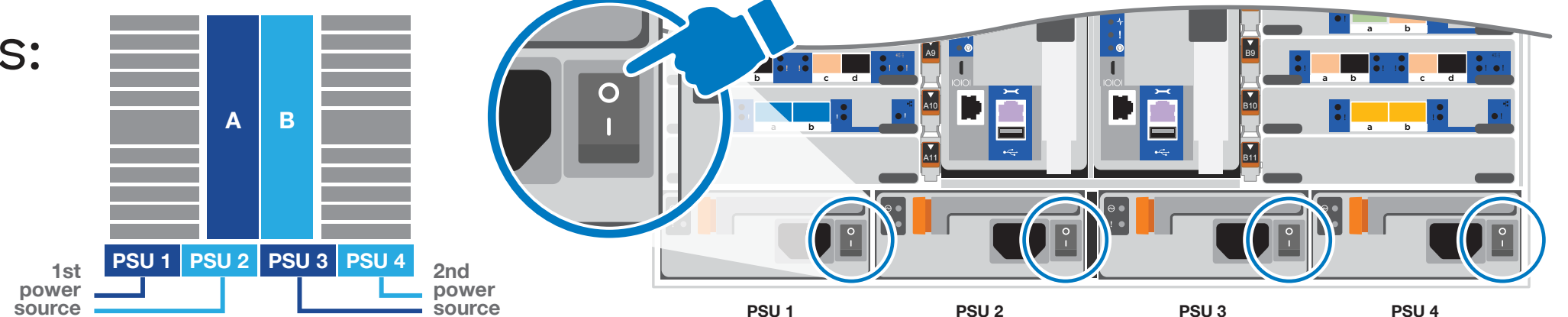
3 ## Complete initial cluster setup with network discovery:

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.
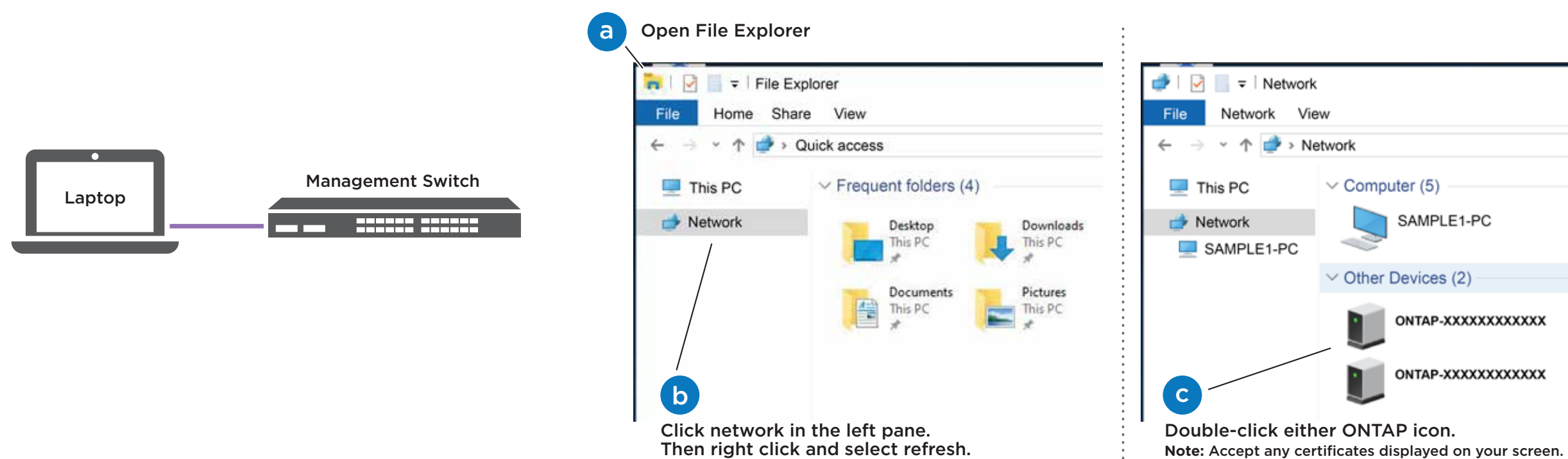
4 ## Use System Manager Guided Setup to configure your cluster.

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.