

## 1 Before you begin

If you have not already done so, gather the required information and confirm your site requirements, as described in the *Site Requirements Guide* at <http://now.netapp.com/>.

## 2 Unpack and verify contents

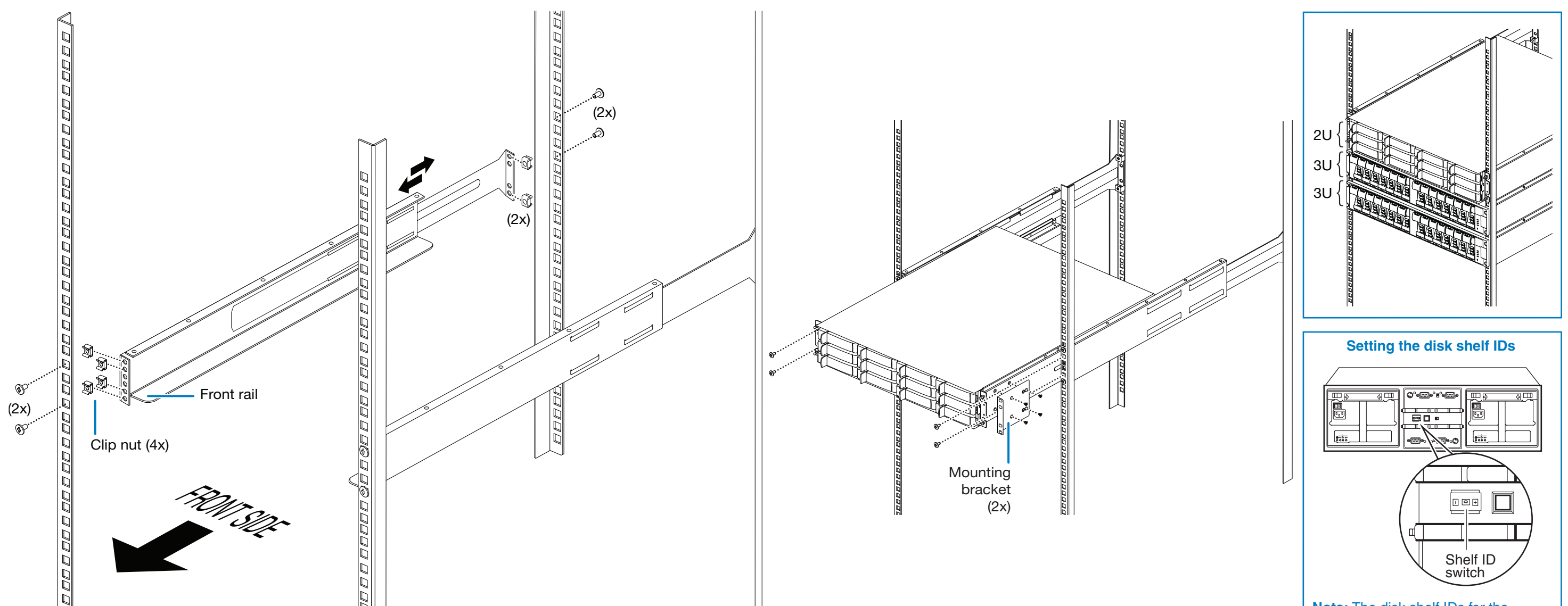
Your system comes with an accessory kit that includes the following components:

- This installation poster
- Software license flyer
- Grounding kit
- Power cables
- DB-9 to RJ-45 console adapters
- Rail kit (for two-post and four-post racks)

## 3 Install in rack

**Caution:** Use only the NetApp® rail kit to install your system. Using a different rail kit can cause injury to you or damage to your system.

### Four-post rack



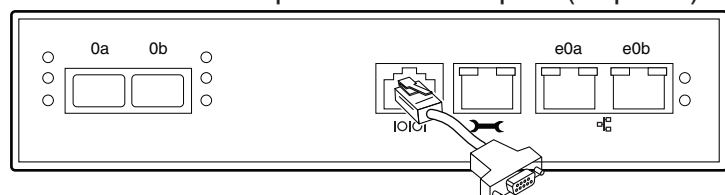
**Note:** See the rail kit installation flyer included with the rail kit for the two-post procedure.

**Note:** The disk shelf IDs for the disk shelves should be set in the range 1 to 6.

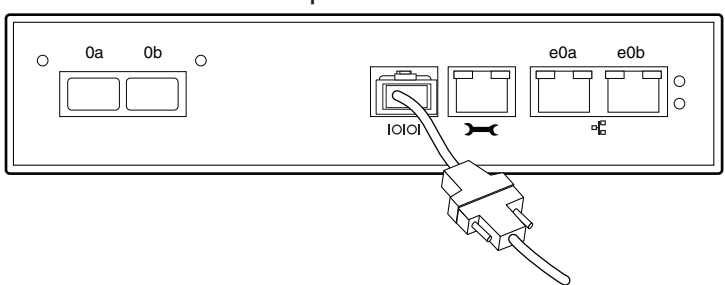
## 4 Cable the system

### Cable controllers

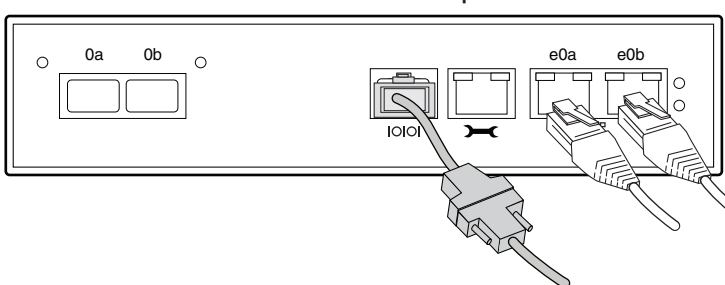
- 1 RJ-45 to DB-9 adapter to console port (required)



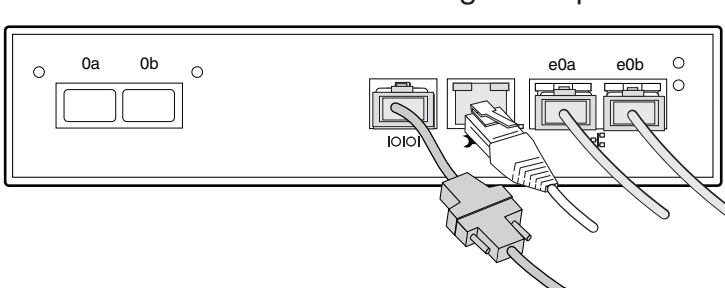
- 2 Console cable to adapter



- 3 Network cables to e0a and e0b ports



- 4 Network cable to Remote Management port



### Port labels

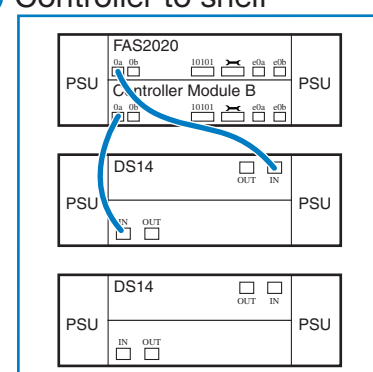
- Remote Management Port
- Fibre Channel
- Ethernet
- IOIOI Console

### Cable disk shelves

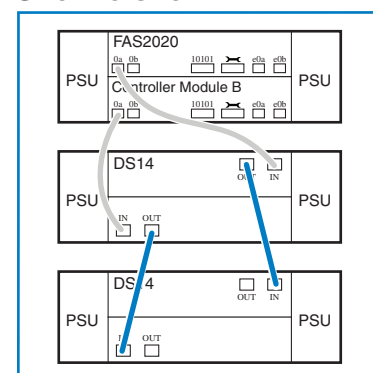
These are a few common configurations. For additional options, see *Supported Configurations for FAS2000-series Systems* at <http://now.netapp.com>.

Active/Active NAS or iSCSI:  
1 Fibre Channel Disk Shelf Stack (Multipath)

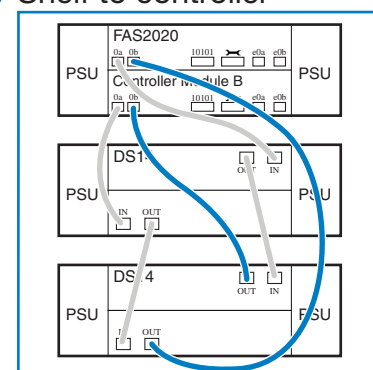
- 1 Controller to shelf



- 2 Shelf to shelf

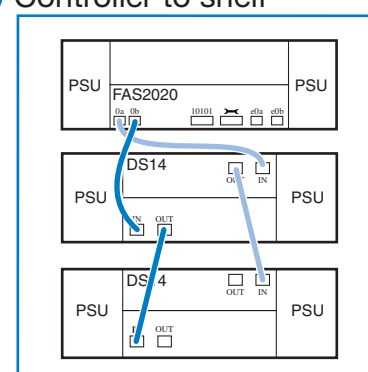


- 3 Shelf to controller



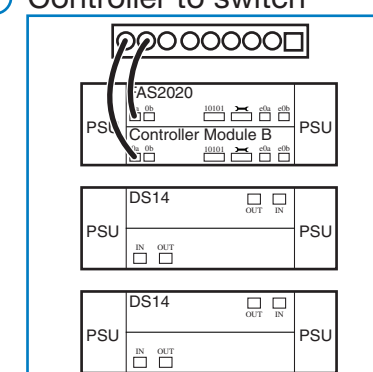
Single Controller Dual Path

- 1 Controller to shelf

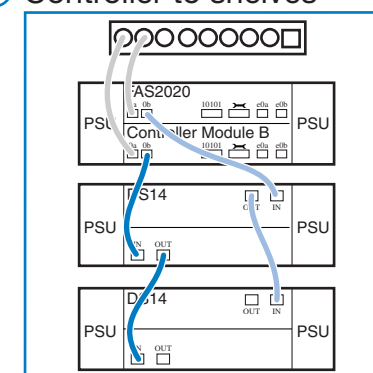


Active/Active FC SAN Dual Path

- 1 Controller to switch

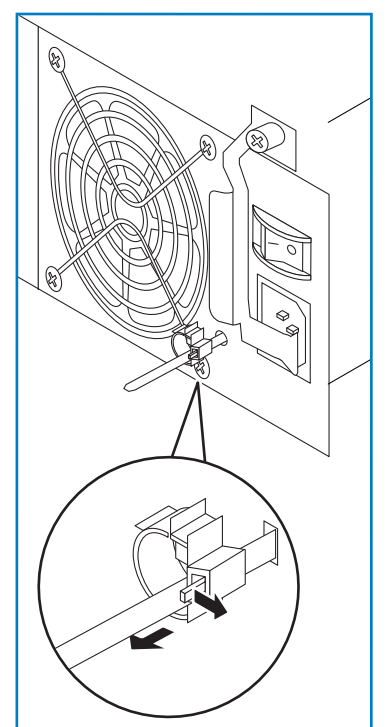


- 2 Controller to shelves



### Connect power

**Note:** You do not need to ground your system.



## 5 Boot the system and proceed with setup

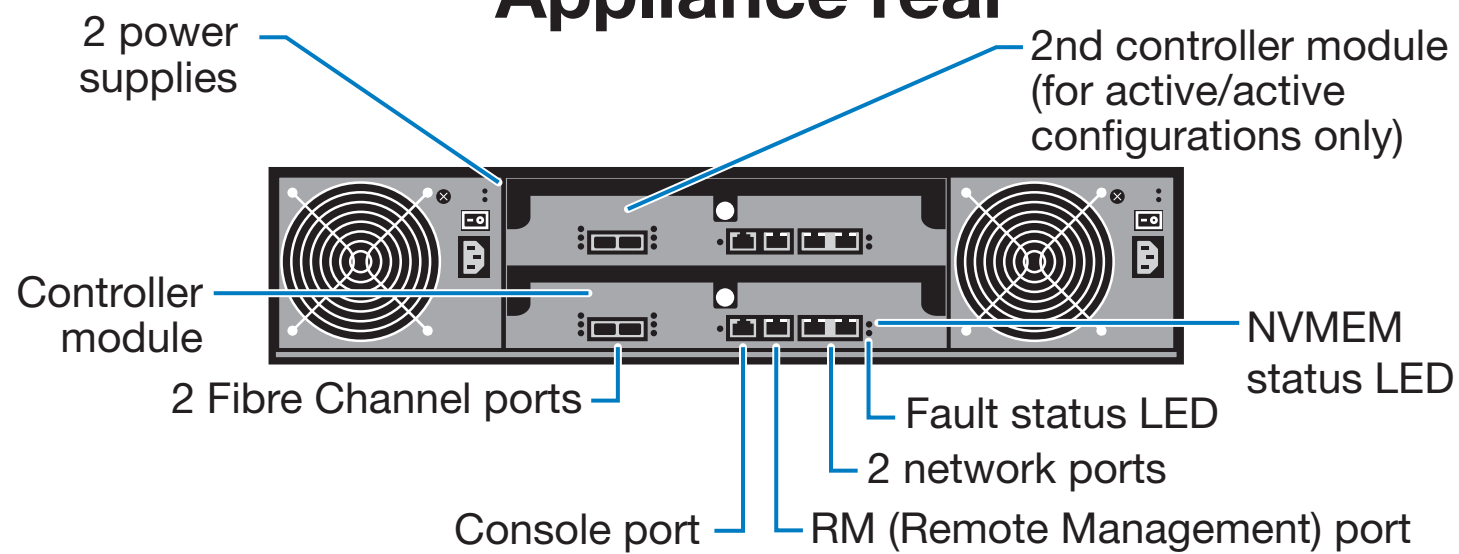
- Turn on the power to your system. It takes the LEDs on your system power supplies a few seconds to illuminate.
- Use the console interface and proceed through the setup questions. See the *Data ONTAP Software Setup Guide* at <http://now.netapp.com/>.



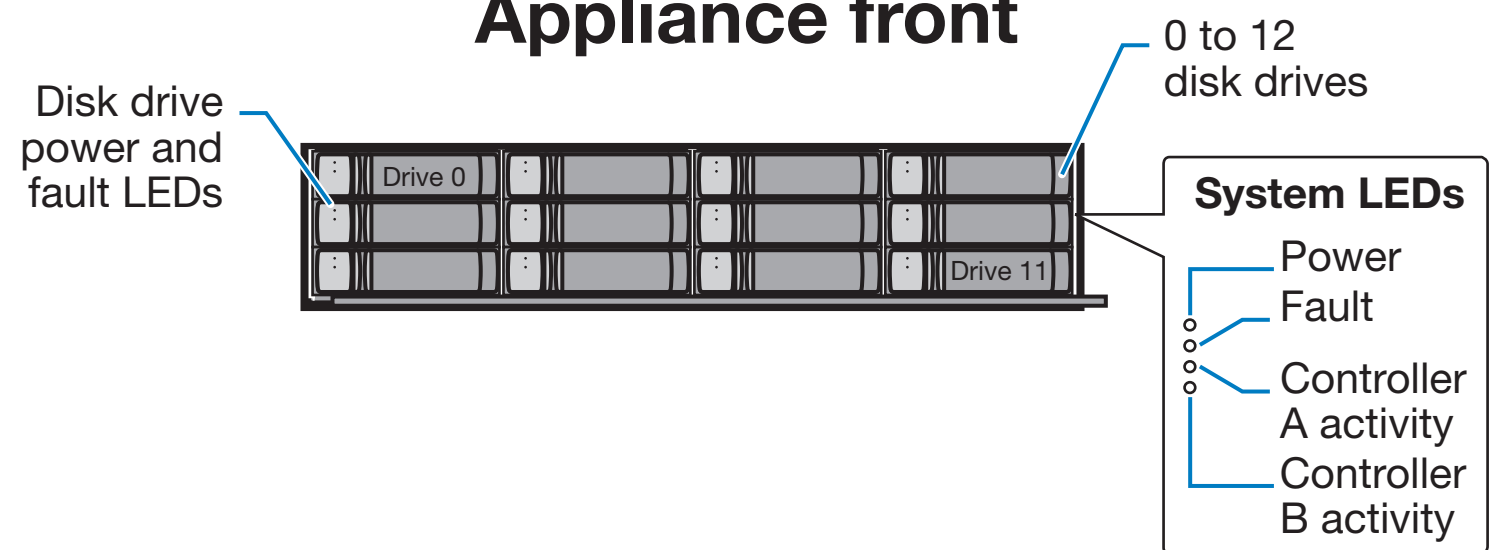
NetApp™

# Hardware Overview of the FAS2020 System

## Appliance rear



## Appliance front



## Shutting down a controller module

Shut down the target controller module (called a “node” in an active/active configuration) by completing the applicable procedure:

### If you have an active/active configuration

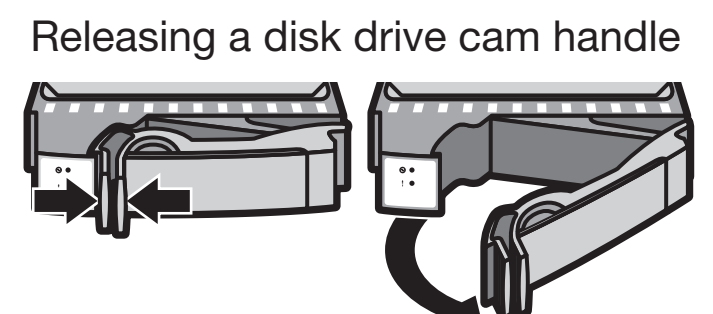
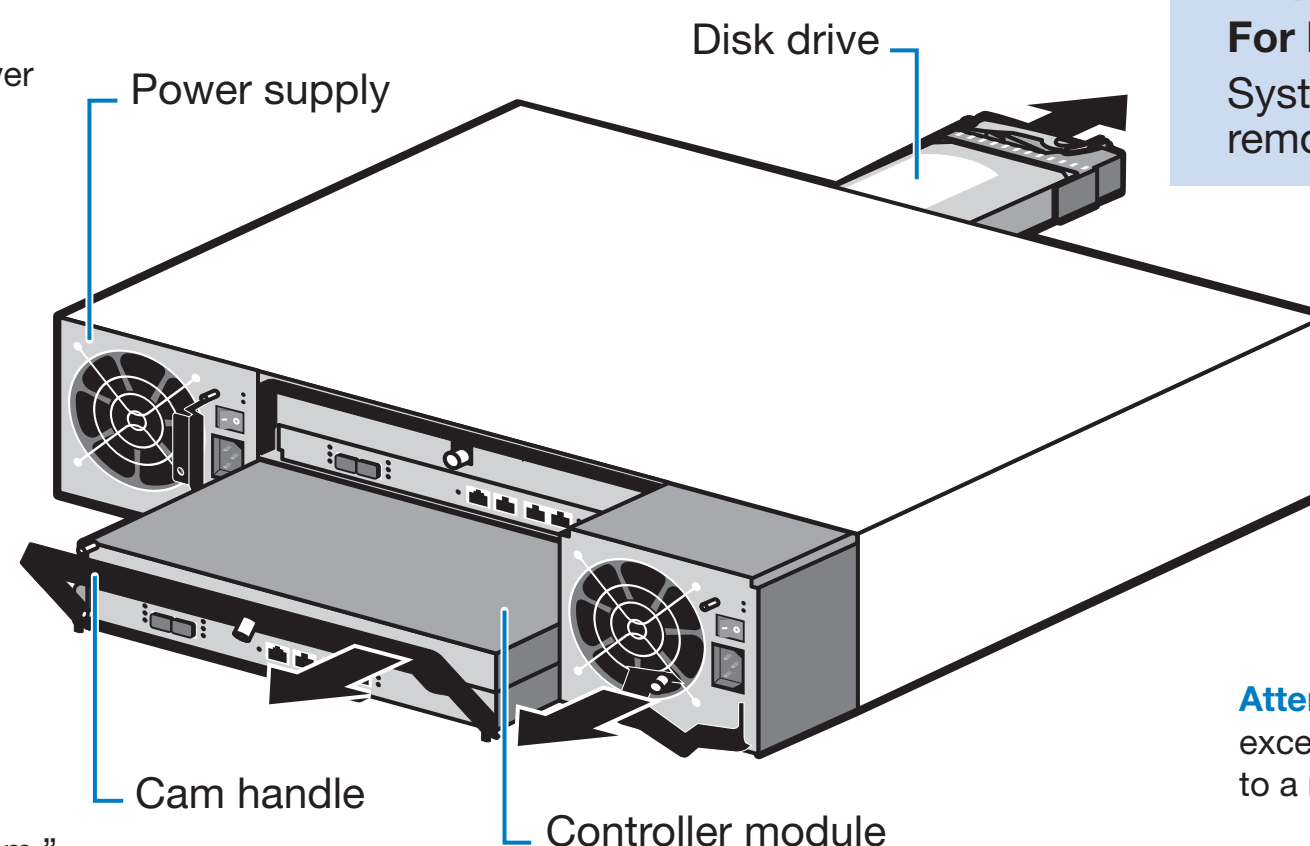
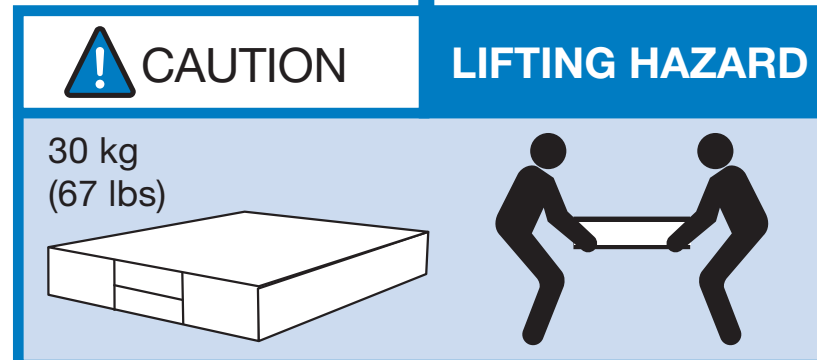
1. Check the status of the target node by entering the following command at the system console of either node:  
`cf status`
2. Take one of the following actions, depending on the result of the `cf status` command:
  - IF** clustering is enabled and neither node is in takeover mode, go to step 3.
  - IF** clustering is enabled and the partner node took over the target node, go to “Opening the System.”
  - IF** clustering is enabled and the target node took over the partner node, correct the problem, run the `cf giveback` command from the target node console, and go to step 1.
3. Take over the target node by entering the following command from the partner node’s console:  
`partner> cf takeover`
4. Go to “Opening the system” when the takeover is complete.

### If you have a single-controller configuration

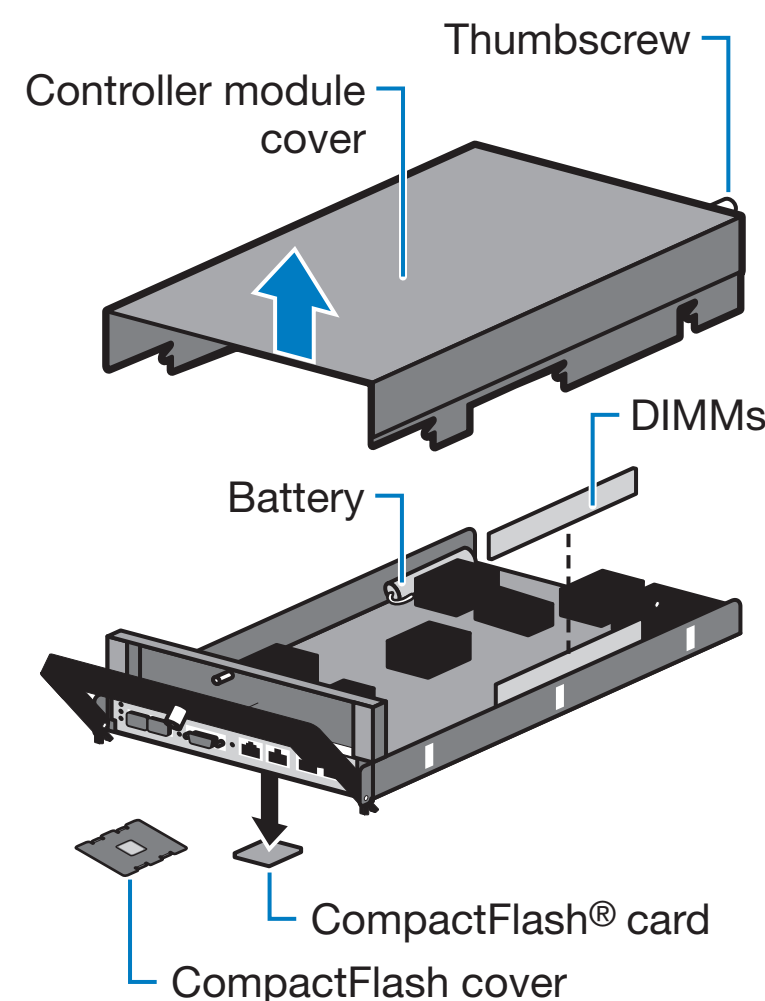
1. Enter the following command from the system console: `halt`
2. Turn off the power supplies and unplug both power cords from the power source.
3. Check the nonvolatile memory (NVMEM) LED.
  - IF** the LED is not flashing, go to “Opening the System.”
  - IF** the LED is flashing, there is content in the NVMEM that has not been saved to disk. Reconnect the power supplies to the power source, reboot the controller module, and repeat Steps 1 through 3. If repeated attempts to cleanly shut down the controller module fail, be aware that you might lose any data that was not saved to disk. Go to “Opening the System.”

## Opening the system

1. Properly ground yourself.
2. Loosen the thumbscrew on the controller module cam handle.
3. Unplug system cables from the controller module, as needed.
4. Pull the controller module cam handle downward and slide the controller module out of the system. Make sure that you support the bottom of the controller module with your free hand.
5. Remove the controller module cover by completing the following substeps, using the illustration for reference:
  - a. Loosen the thumbscrew on the back of the controller module.
  - b. Gently press the heel of your hand on the indentation in the controller module cover closest to the cam handle, then slide the cover toward the back of the controller module.
  - c. Lift the cover straight up off the controller module.



**Attention:** Disk drives are fragile. Do not handle them except when replacing failed disk drives or moving them to a new chassis.



## Important:

### For hot-swappable FRUs:

Always consult <http://now.netapp.com> for current field-replaceable unit (FRU) replacement procedures.

### Adding external storage or using FCP:

You must order and use SFP modules on your system, if you are connecting external Fibre Channel storage devices or using FCP with the system.

## Important:

### For hot-swappable power supplies:

System shuts down two minutes after you remove a power supply.

## Closing the system

1. Align the controller module cover with the notches on the sides of the controller module, then slide the cover down and forward to seat it.
2. Align the end of the controller module with the opening in the chassis.
3. Gently push the controller module halfway into the chassis and recable the controller module, then push the controller module all the way into the chassis.
 

**Result:** For systems in an active/active configuration, the node reboots as soon as you seat the controller completely into the chassis.
4. Firmly push up the cam handle to finish seating the controller module in the system, and then push the cam handle to the closed position and tighten the thumbscrew beneath the cam handle.
5. Complete the boot process.
  - IF** your system has a single controller module, plug in the power supply and turn on the power.
  - IF** your system is in an active/active configuration, give back the node by completing the following substeps:
    - a. Enter the following command from the partner console: `cf giveback`
    - b. On the console of the newly installed controller module, select Normal Boot (option 1) from the displayed menu to boot Data ONTAP®.