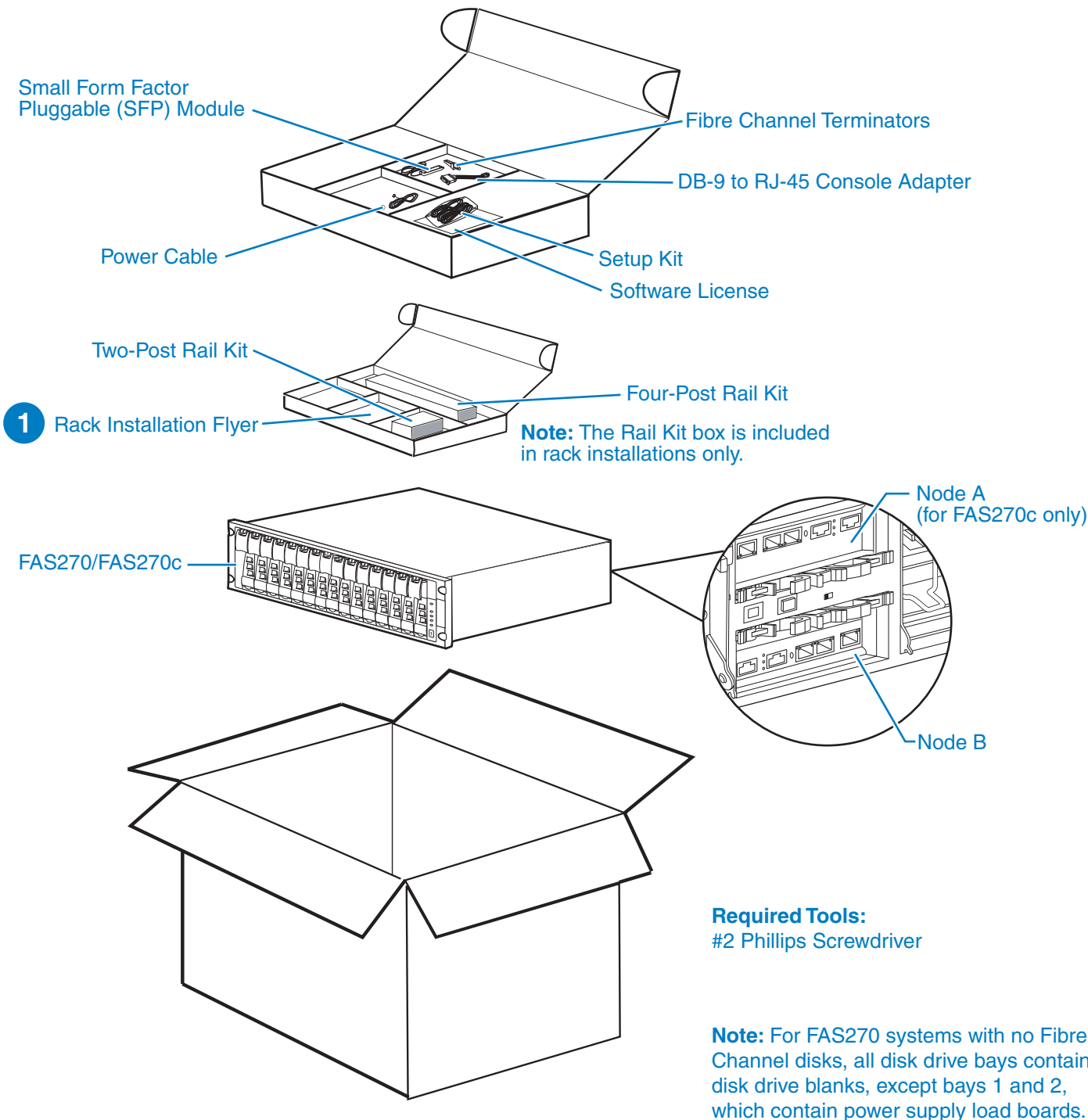
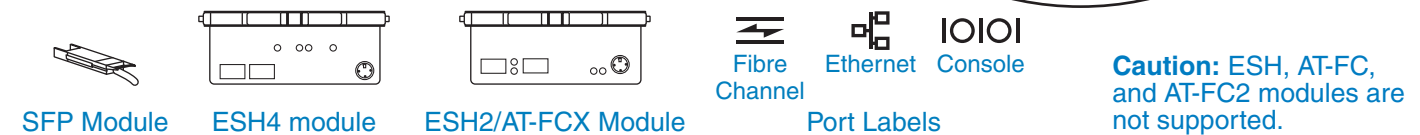
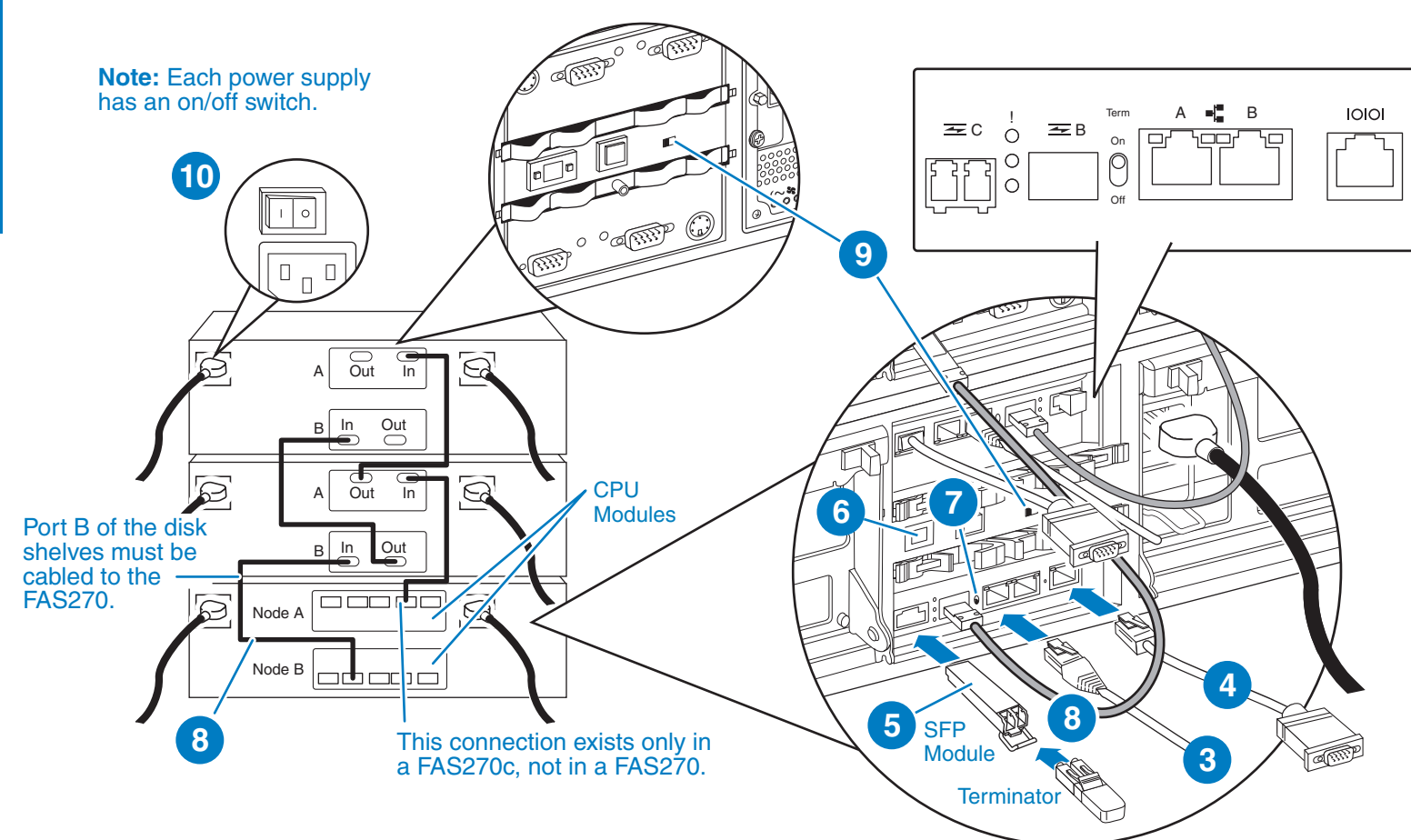


Complete NetApp documentation is available from the NOW™ site at <http://now.netapp.com>. You can view the manuals online, print them locally, or order them.

Contents Shipped



Note: Each power supply has an on/off switch.



- Use the Rack Installation Flyer in the rail kit box to install the appropriate rail kit on the rack.
- Install your appliance and, if applicable, any additional disk shelves into the rack (not shown in figure).
- Connect your appliance to the network by plugging the supplied network cable into the left network port.
- Connect your appliance to a console by using the supplied DB-9 to RJ-45 console adapter.
- Plug the SFP module into Fibre Channel port C. If you are not attaching a third-party device, terminate the port.
- Set your appliance ID to 1.
- If you are adding disk shelves:
 - Set the terminate switch on the CPU module to Off.
 - Repeat Step 3 through Step 5 for the second node of a FAS270c, if applicable.
 - Go to Step 8.
 If you are not adding disk shelves:
 - Set the terminate switch on the CPU module to On.
- Repeat Step 3 through Step 5 for the second node of a FAS270c, if applicable.
- Go to Step 9.
- Cable the Fibre Channel port on Node B to the disk shelf ESH2/ESH4/AT-FCX module B Input.

Note: For FAS270c, also cable the Fibre Channel port on Node A to the disk shelf ESH2/ESH4/AT-FCX module A Input.
- Verify that the appliance speed (and disk shelf loop speed, if applicable) is set to 1 Gb.

Note: The loop speed switch is on the disk shelf for DS14mk2 FC and DS14mk4 FC disk shelves, and on a jumper in the AT-FCX module. See the appropriate disk shelf guide for more information.
- Plug in the power cords, making sure that the power supplies on the left side of your system are connected to a separate AC source from the power supplies on the right side of your system. This ensures redundant power sources.

Caution: Do not turn on the power to your system.
- Go to "FAS270/FAS270c System Setup Overview" in this document.

FAS270/FAS270c System Setup Overview

Setting Up Your System

To set up your system, you must complete the following tasks:

- Gather information about your system and record it in the "System setup information worksheet," which is in the *Site Requirements Guide*.

Note: For information about cabling and configuring your system as an FCP target in a Fibre Channel fabric, see the *Block Access Management Guide*. Make sure that your SAN switch is powered on and configured before you turn on power to your system.
- If you have a FAS270c, read "Understanding Disk Ownership" on this panel, and then record or assign disks to each node, using the "Disk Ownership Worksheet" on this panel.
- Complete the startup script on each node, as described in "Booting Your Appliance for the First Time" on the next panel.

Understanding Disk Ownership

A FAS270 CPU module owns all the disks associated with the system. However, in a FAS270c cluster configuration, each CPU module can own disks in either system, including the SES disks in each disk shelf in the system.

If you add disk shelves to your system, the disks in the disk shelves arrive with owned disks. You can assign ownership of the new disks to either CPU module. You can also leave the disks unassigned, as spares for the entire system. Later, if you do not like your initial setup, you can change disk ownership as needed. See the *Storage Management Guide* at http://now.netapp.com/NOW/knowledge/doc/s/ontap/ontap_index.shtml for more information.

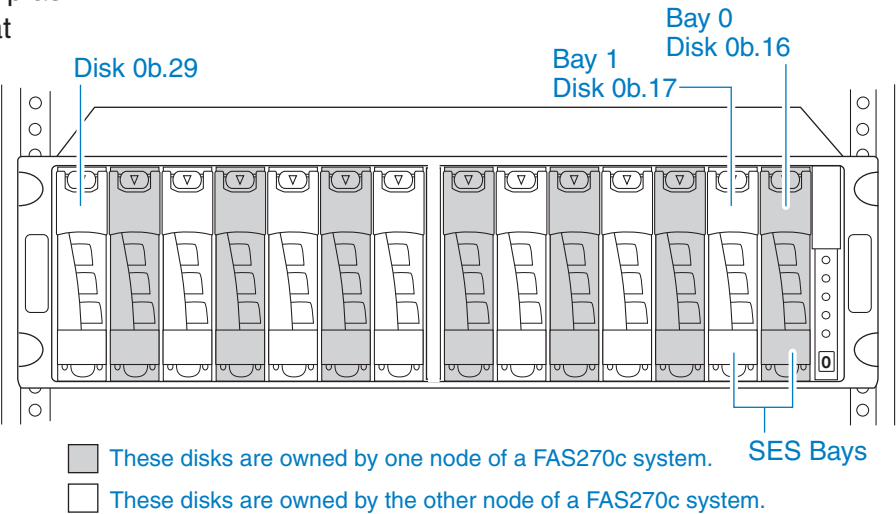
The Illustration to the right shows one possible configuration for a FAS270c or a DS14 family disk shelf in an active/active configuration.

Disk Ownership Worksheet

Complete the following worksheet to determine disk assignments for your cluster and any expansion shelves. Identify any disks for which you want an ownership change, and mark it in the worksheet which node will own the disk.

Typically, your FAS270c arrives with even numbered drive bays (0b.16, 0b.18, 0b.20) assigned to the bottom CPU module (Node B), and odd drive bays (0b.17, 0b.19, 0b.21) assigned to the top CPU module (Node A).

Bay	Disk Shelf 1			Disk Shelf 2			Disk Shelf 3		
	Disk ID	Node		Disk ID	Node		Disk ID	Node	
		A	B		A	B		A	B
0	0b.16	<input type="checkbox"/>	X	0b.32	<input type="checkbox"/>	<input type="checkbox"/>	0b.48	<input type="checkbox"/>	<input type="checkbox"/>
1	0b.17	X	<input type="checkbox"/>	0b.33	<input type="checkbox"/>	<input type="checkbox"/>	0b.49	<input type="checkbox"/>	<input type="checkbox"/>
2	0b.18	<input type="checkbox"/>	X	0b.34	<input type="checkbox"/>	<input type="checkbox"/>	0b.50	<input type="checkbox"/>	<input type="checkbox"/>
3	0b.19	X	<input type="checkbox"/>	0b.35	<input type="checkbox"/>	<input type="checkbox"/>	0b.51	<input type="checkbox"/>	<input type="checkbox"/>
4	0b.20	<input type="checkbox"/>	X	0b.36	<input type="checkbox"/>	<input type="checkbox"/>	0b.52	<input type="checkbox"/>	<input type="checkbox"/>
5	0b.21	X	<input type="checkbox"/>	0b.37	<input type="checkbox"/>	<input type="checkbox"/>	0b.53	<input type="checkbox"/>	<input type="checkbox"/>
6	0b.22	<input type="checkbox"/>	<input type="checkbox"/>	0b.38	<input type="checkbox"/>	<input type="checkbox"/>	0b.54	<input type="checkbox"/>	<input type="checkbox"/>
7	0b.23	<input type="checkbox"/>	<input type="checkbox"/>	0b.39	<input type="checkbox"/>	<input type="checkbox"/>	0b.55	<input type="checkbox"/>	<input type="checkbox"/>
8	0b.24	<input type="checkbox"/>	<input type="checkbox"/>	0b.40	<input type="checkbox"/>	<input type="checkbox"/>	0b.56	<input type="checkbox"/>	<input type="checkbox"/>
9	0b.25	<input type="checkbox"/>	<input type="checkbox"/>	0b.41	<input type="checkbox"/>	<input type="checkbox"/>	0b.57	<input type="checkbox"/>	<input type="checkbox"/>
10	0b.26	<input type="checkbox"/>	<input type="checkbox"/>	0b.42	<input type="checkbox"/>	<input type="checkbox"/>	0b.58	<input type="checkbox"/>	<input type="checkbox"/>
11	0b.27	<input type="checkbox"/>	<input type="checkbox"/>	0b.43	<input type="checkbox"/>	<input type="checkbox"/>	0b.59	<input type="checkbox"/>	<input type="checkbox"/>
12	0b.28	<input type="checkbox"/>	<input type="checkbox"/>	0b.44	<input type="checkbox"/>	<input type="checkbox"/>	0b.60	<input type="checkbox"/>	<input type="checkbox"/>
13	0b.29	<input type="checkbox"/>	<input type="checkbox"/>	0b.45	<input type="checkbox"/>	<input type="checkbox"/>	0b.61	<input type="checkbox"/>	<input type="checkbox"/>



Booting Your Appliance for the First Time

Complete the following steps for your appliance. For the FAS270, only Steps 1 through 6 apply:

- Check that the disk shelf IDs and terminate switches are set properly, and that your system is grounded properly.

NOTE: For information about cabling and configuring your system as an FCP target in a Fibre Channel fabric, see the *Block Access Management Guide*. Make sure that your SAN switch is powered on and configured before you turn on power to your system.
- Start a console session for each node, then turn on the power first to the disk shelves, if applicable, and then to your appliance.

Result: The system begins to boot, and then it stops at the first installation question, which is displayed on the console:

```
Please enter the new hostname[]:
```

- Go to the system console for each node (Node A is the top node in a FAS270c) and answer the installation questions for that node, using the information you collected in the "System setup information worksheet" from the *Site Requirements Guide*.

Note: When you encounter the time zone question, you can press Enter to accept the default setting if you do not know how to set the time zone. You can then set the time zone after you complete initial setup. See the Timezone Man page at the system prompt or through the FilerView® interface.
- For the FAS270, assign all the disks to the system by entering the following command at the prompt:
disk assign all

For the FAS270c, assign disks to the proper node by completing the following steps, using the disk ownership worksheet:

- Determine disk ownership by entering the following command from the console:
disk show -v
- Assign disks to this node by entering the following command: **disk assign 0b.NN**

- Check the licenses on the CPU module or the node by entering the following command: **license**

Note: Clustering must be licensed on **both** nodes in a FAS270c.

Add any missing licenses by entering the following command for each missing license:
license add xxxx

xxxx is the license code for the product.

- Reboot the appliance or both nodes by entering the following command: **reboot**
- Enable clustering by entering the following command on one node's console: **cf enable**
- Check each node's status by entering the following command: **cf status**
- Test takeover and giveback on each node by completing the following substeps:

- Initiate takeover by entering the following command: **cf takeover**

Result: Takeover succeeds. If not, run the Cluster Configuration Checker (<http://now.netapp.com/NOW/tools>), fix any errors, reboot the node, and repeat the test.
- Check the status of the takeover by entering the following command:
cf status
- Give back the node by entering the following command: **cf giveback**
- Check the status of the cluster by entering the following command:
cf status
- Repeat substeps **a** through **d** for the other node.

- Continue with post-setup configuration as needed, using the manuals listed in the table on the next panel.

Where To Go for More Information

For information about...	Go to http://now.netapp.com for...
New features, enhancements, known issues, and late-breaking news for your version of Data ONTAP® software	The Release Notes for your version of Data ONTAP
Configuring and managing the iSCSI protocol, and creating and managing LUNs and initiator groups with the iSCSI service	The <i>Block Access Management Guide for iSCSI</i>
Configuring and managing the FCP protocol, and creating and managing LUNs and initiator groups with the FCP service	The <i>Block Access Management Guide for FCP</i>
Setting up your system in a Fibre Channel SAN environment	
Configuring a cluster	The <i>FAS200 Series Hardware and Service Guide</i>
Managing all aspects of your system	The documentation for your version of Data ONTAP
The most current information about your system hardware	The <i>Hardware Information Library page</i>
Hardware configuration options available for your system	The <i>System Configuration Guide</i>
Troubleshooting the platform	The <i>FAS200 Series Hardware and Service Guide</i>
Testing field-replaceable units and diagnosing and correcting system hardware problems	The <i>Diagnostics Guide</i>
Managing Fibre Channel or ATA disk shelves	The <i>DiskShelf14mk2 FC Hardware Guide</i> The <i>DiskShelf14mk2 AT Hardware Guide</i>

Troubleshooting Tips

If your appliance does not boot when you power it on, follow these troubleshooting tips in the given order:

- Check the system console for any error messages, and cross-reference them to the *FAS200 Series Hardware and Service Guide* for corrective action. Make sure that any attached disk shelves use ESH2/ESH4/AT-FCX modules.

Caution: ESH, AT-FC, and AT-FC2 modules are not supported for use in disk shelves connected to FAS270/FAS270c configurations.
- Check all cables and connections, making sure that they are secure. Make sure that you used the supplied DB-9 to RJ-45 console adapter, or see the *FAS200 Series Hardware and Service Guide* for the RJ-45 pinout description.
- Ensure that power is supplied and is reaching your appliance.
- Check the LED status for system components to identify what failed. Replace components as needed.
- Use the diagnostics to check the bootable image:
 - Power on your appliance.
 - Press any key during the CFE (Common Firmware Environment) firmware power-on self-test to stop at the CFE prompt.
 - Enter **boot_diags** from the CFE prompt.
 - Enter **run all** at the prompt to run all available diagnostics on your system.
 - Correct any errors you find.
 - Exit the diagnostics.
- If your appliance does not boot successfully, there might be a problem with the boot image. Call NetApp technical support at +1(888)4-NETAPP.