



Installation and Setup Instructions for NetApp SharedStorage™

SharedStorage Cabling Instructions

A SharedStorage system can be cabled by one of two methods: harness cabling or open cabling. The cabling method is predetermined at the factory, and the hardware should arrive at your site with the appropriate cabling materials for your particular installation.

Harness Cabling

A harness-cabled system uses a cabled wiring harness containing all required cable connections between the appliances (nodes) and switches. The harness facilitates the connecting procedure by pre-positioning the cable connections at the correct drop point for each appliance, and by labeling each connector for proper connection location and reference. The harness is typically used with systems containing two to four cabinets side by side to one another, with each cabinet containing an appliance, six disk shelves, and two switches.

A labeling scheme is used to indicate the connection location for each cable, and is represented by the following nomenclature:

nN - nM sA X

- nN represents the from node, or origin node.
- nM represents the to node, or destination node.
- s represents the side of the switch to connect to: side A or B.
- X is the port number on the switch that you're connecting to.

For example, a cable connector labeled as **n1 - n2 sA 2** means that the cable connects node 1 to node 2, through side A of switch port 2.

Each appliance has a total of eight HBA connections at the rear of the appliance. For a single appliance in a four-node system, two of these connections are made to the switches within the same appliance system, and the six remaining connections go to the other nodes. Each node has six cabinet-to-cabinet connections after cabling is complete.

Node-to-Switch Connections

Prepare the location for the hardware you are installing. Attach the cabinets together if you are installing a cabinet-based system, and install seismic bracing (if required).

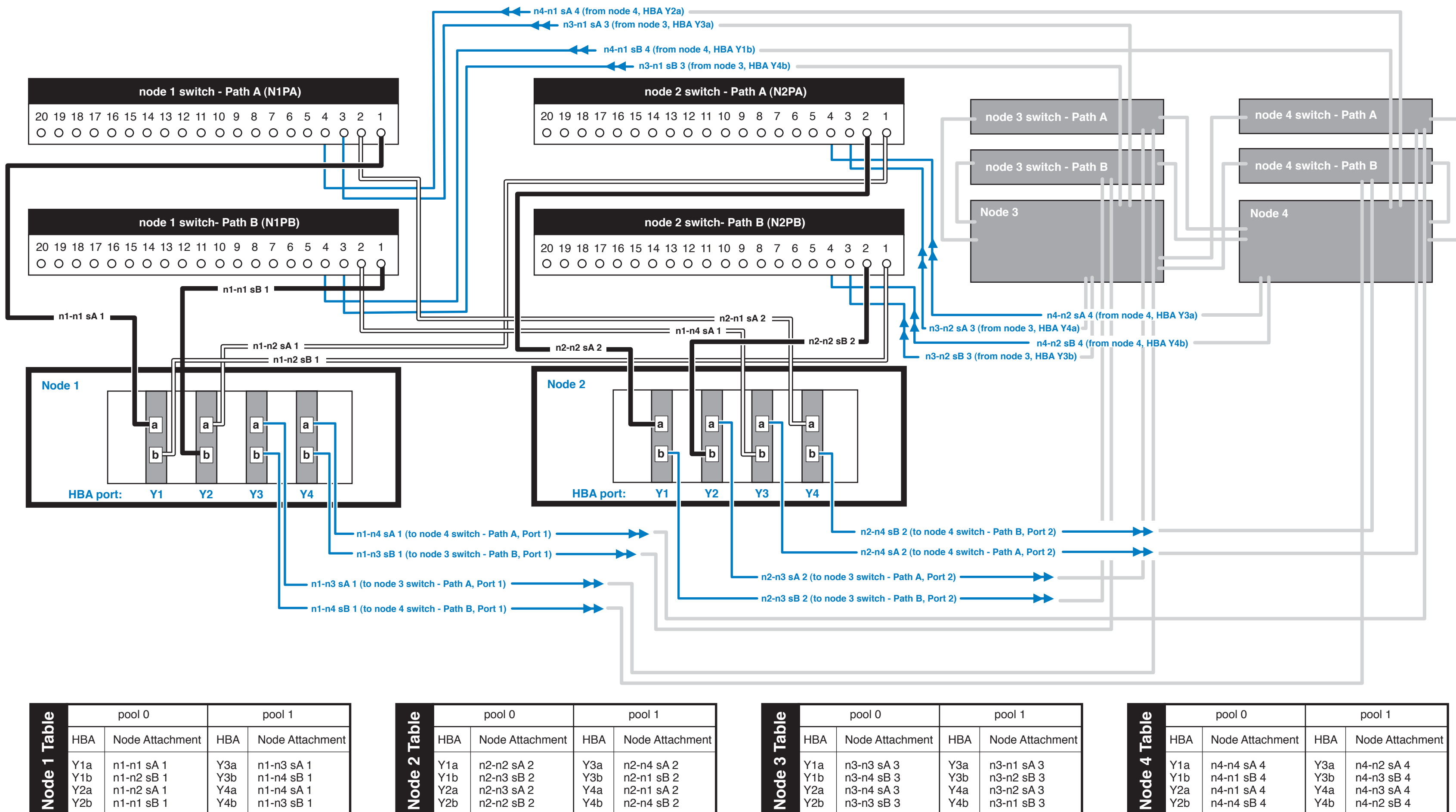
- The diagram at right shows the node-to-switch connections for the first two nodes in the SharedStorage system. Connect the two nodes to the switches according to the diagram.

The HBAs are represented at the rear of each node in the diagram by Y1, Y2, Y3, and Y4; however, the actual slot locations might vary depending on how the system was configured from the factory. In general, let Y1 be the HBA furthest left and let Y4 be the one furthest right.

- Use the same connection methodology to attach any additional nodes, such as nodes 3 and 4.
- After completing the connections, secure any loose cabling to avoid entanglement.

Proceed to connect the disk shelves to the switches, as described on the back side of this instruction sheet.

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Disk Shelf-to-Switch Connections

The disk shelf-to-switch connections are identical for all nodes in the SharedStorage system. Connect the six disk shelves of the first node according to the following steps:

1. Connect all disk shelf ESH modules in the top module A position to the first switch (top switch, path A) according to the diagram at right.
2. Connect all disk shelf ESH modules in the bottom module B position to the second switch (bottom switch, path B) according to the diagram.
3. Repeat the disk shelf connections for the remaining nodes in the system.
4. If your system uses disk shelves with ESH modules, set the terminate switch to On for all modules in the system. Disk shelves with ESH2 modules have a termination auto-sensing feature; and therefore, no switch setting is required.
5. After completing the connections, secure any loose cabling to avoid entanglement. The rear view of the SharedStorage system should be left as neat as possible.
6. Continue with software setup procedures.

Open Cabling

Use this cabling method for installations where the cable harness cannot be used. Open cabling requires you to connect each individual cable separately. Use the cabling nomenclature as described in the harness cabling procedure to assist with open cabling connections.

Software Setup Procedures

1. On the first node, press Ctrl-C while the appliance is booting and go to the 'Boot Menu'.
2. Select 'Maintenance Mode' (option 5).
3. Assign disks for the root volume.
4. Reboot the first node and press Ctrl-C while the appliance is booting, then go to the 'Boot Menu'.
5. Select 'Initialize disks' (option 4). This will create the root volume and will guide you through the setup procedure.
6. Repeat steps 4 and 5 for each subsequent node.
7. Set up MultiStore™ licenses, SnapMover® licenses, and (optionally) Cluster Failover licenses.
8. Set up disk assignments.
9. Set up vFiler™ virtual filers.

Troubleshooting

Troubleshooting can be done through physical inspection.

The switch has the same amber and green LEDs as the HBA, and they mean the same thing. The amber LED lights up when there is a physical connection. The green LED lights up when there is protocol traffic.

Because the switch connects to each disk shelf directly, a quick look at the switch LED lights can help identify any problems.

