



# **Cabling the FC-to-SAS bridges to the controller module in a two-node bridge-attached MetroCluster configuration**

## **ONTAP MetroCluster**

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# Table of Contents

Cabling the FC-to-SAS bridges to the controller module in a two-node bridge-attached MetroCluster configuration ..... 1

# Cabling the FC-to-SAS bridges to the controller module in a two-node bridge-attached MetroCluster configuration

You must cable the bridges to the controller module in a two-node bridge-attached MetroCluster configuration.

## Steps

1. Verify that each bridge can detect all of the disk drives and disk shelves to which the bridge is connected.

| If you are using the... | Then...   |
|-------------------------|---|
| ATTO ExpressNAV GUI     | <p>a. In a supported web browser, enter the IP address of a bridge in the browser box.</p> <p>You are brought to the ATTO FibreBridge homepage of the bridge for which you entered the IP address, which has a link.</p> <p>b. Click the link, and then enter your user name and the password that you designated when you configured the bridge.</p> <p>The ATTO FibreBridge status page of the bridge appears with a menu to the left.</p> <p>c. Click <b>Advanced</b> in the menu.</p> <p>d. Run the following command, and then click <b>Submit</b>:</p> <p><b>sastargets</b></p> |
| Serial port connection  | <p>Run the following command:</p> <p><b>sastargets</b></p>  |

The **sastargets** command output shows the devices (disks and disk shelves) that the bridge is connected to. Output lines are sequentially numbered so that you can quickly count the devices.



If the **text response** truncated appears at the beginning of the output, you can use Telnet to connect to the bridge and run the same command to view all of the output.

The following output shows that 10 disks are connected:

| Tgt | VendorID | ProductID        | Type | SerialNumber         |
|-----|----------|------------------|------|----------------------|
| 0   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1CLE300009940UHJV |
| 1   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1ELF600009940V1BV |
| 2   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1G3EW00009940U2M0 |
| 3   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1EWMP00009940U1X5 |
| 4   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1FZLE00009940G8YU |
| 5   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1FZLF00009940TZKZ |
| 6   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1CEB400009939MGXL |
| 7   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1G7A900009939FNNT |
| 8   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1FY0T00009940G8PA |
| 9   | NETAPP   | X410_S15K6288A15 | DISK | 3QP1FXW600009940VERQ |

- Verify that the command output shows that the bridge is connected to all of the disks and disk shelves in the stack that it is supposed to be connected to.

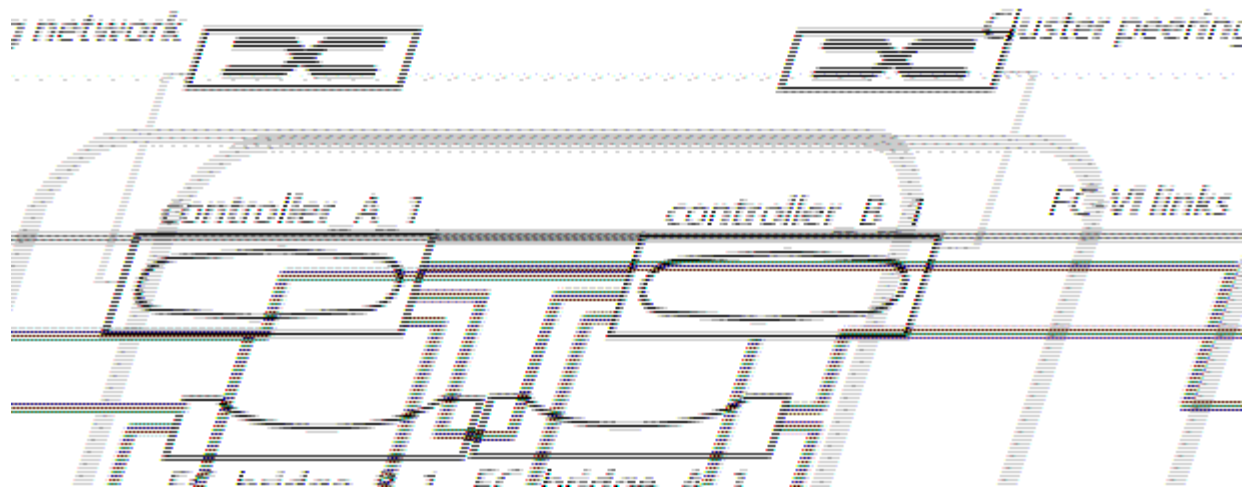
| If the output is... | Then...  |
|---------------------|--|
| Correct             | Repeat <a href="#">Step 1</a> for each remaining bridge.   |
| Not correct         | <ol style="list-style-type: none"> <li>Check for loose SAS cables or correct the SAS cabling by recabling the disk shelves to the bridges.<br/><br/><a href="#">Cabling disk shelves to the bridges</a></li> <li>Repeat <a href="#">Step 1</a> for each remaining bridge.</li> </ol> |

- Cable each bridge to the controller modules:

- Cable FC port 1 of the bridge to an FC port on the controller module in cluster\_A.
- Cable FC port 2 of the bridge to an FC port on the controller module in cluster\_B.

If the controller module is configured with a quad-port FC adapter, you should ensure that the storage stacks are connected to two FC ports that are not on the same ASIC. Port a and port b share the same ASIC, and port c and port d share the same ASIC. You should not connect a stack of shelves to port a and port b. Instead, you should use port a and port c, or you should use port b and port d to avoid a single point of failure if an ASIC fails.

If the controller module is configured with more than one FC adapter, you should not cable both bridge ports to the same adapter. You should distribute FC port 1 to adapter A and FC port 2 to adapter B to avoid a single point of failure.



4. Repeat [Step 3](#) on the other bridges until all of the bridges have been cabled.

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