



# **Installing and cabling MetroCluster components**

## **ONTAP MetroCluster**

NetApp  
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# Installing and cabling MetroCluster components

The storage controllers must be cabled to the storage media and to each other. The storage controllers must also be cabled to the data and management networks.

## Racking the hardware components

If you have not received the equipment already installed in cabinets, you must rack the components.

This task must be performed on both MetroCluster sites.

### Steps

1. Plan out the positioning of the MetroCluster components.

The rack space depends on the platform model of the storage controllers, switch types, and the number of disk shelf stacks in your configuration.

2. Properly ground yourself.
3. Install the storage controllers in the rack or cabinet.

[AFF and FAS Documentation Center](#)

4. Install the disk shelves, power them on, and set the shelf IDs.
  - You must power-cycle each disk shelf.
  - Shelf IDs must be unique for each SAS disk shelf within each MetroCluster DR group (including both sites).
5. Install each FC-to-SAS bridge:

- a. Secure the “L” brackets on the front of the bridge to the front of the rack (flush-mount) with the four screws.

The openings in the bridge “L” brackets are compliant with rack standard ETA-310-X for 19-inch (482.6 mm) racks.

For more information and an illustration of the installation, see the *ATTO FibreBridge Installation and Operation Manual for your bridge model*.

- b. Connect each bridge to a power source that provides a proper ground.
- c. Power on each bridge.



For maximum resiliency, bridges that are attached to the same stack of disk shelves must be connected to different power sources.

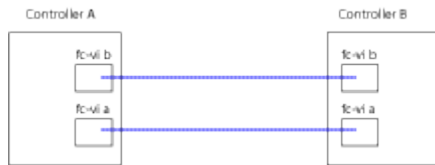
The bridge Ready LED might take up to 30 seconds to illuminate, indicating that the bridge has completed its power-on self test sequence.

## Cabling the controllers to each other

Each controller's FC-VI adapters must be cabled directly to its partner.

### Steps

1. Cable the FC-VI ports.



The above illustration is a typical representation of the required cabling. The specific FC-VI ports vary by controller module.

- AFF A300 and FAS8200 controller modules can be ordered with one of two options for FC-VI connectivity:
  - Onboard ports 0e and 0f configured in FC-VI mode.
  - Ports 1a and 1b on an FC-VI card in slot 1.
- AFF A700 and FAS9000 storage systems controller modules use four FC-VI ports each.

## Cabling the cluster peering connections

You must cable the controller module ports used for cluster peering so that they have connectivity with the cluster on their partner site.

This task must be performed on each controller module in the MetroCluster configuration.

At least two ports on each controller module should be used for cluster peering.

The recommended minimum bandwidth for the ports and network connectivity is 1 GbE.

### Steps

1. Identify and cable at least two ports for cluster peering and verify they have network connectivity with the partner cluster.

Cluster peering can be done on dedicated ports or on data ports. Using dedicated ports provides a higher throughput for the cluster peering traffic.

[Cluster and SVM peering express configuration](#)

## Cabling the management and data connections

You must cable the management and data ports on each storage controller to the site networks.

This task must be repeated for each new controller at both MetroCluster sites.

You can connect the controller and cluster switch management ports to existing switches in your network. In

addition you can connect controller to new dedicated network switches such as NetApp CN1601 cluster management switches.

**Steps**

1. Cable the controller's management and data ports to the management and data networks at the local site.

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