Connections in a stretch MetroCluster configurations with array LUNs

ONTAP MetroCluster

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Connections in a stretch MetroCluster configurations with array LUNs

Connections in a stretch MetroCluster configurations with array LUNs

In a stretch MetroCluster configuration, with array LUNs, you must connect the FC-VI ports across controllers. Direct connectivity is supported between the controllers and E-Series storage arrays. For all other LUN configurations arrays, you must use FC switches in the configuration.

You can also set up a stretch MetroCluster configuration with both disks and array LUNs. In such a configuration, you must use either FC-to-SAS bridges or SAS optical cables to connect the controllers to disks.

Example of a stretch MetroCluster configuration with array LUNs

In a stretch MetroCluster configuration with array LUNs, you must cable the FC-VI ports for direct connectivity between the controllers. In addition, you must cable each controller HBA port to switch ports on the corresponding FC switches. Cabling to the array LUNs is the same as that in a fabric-attached MetroCluster, except for E-Series array LUNs, which can be directly connected.

The following illustration shows the FC-VI ports cabled across controllers A and B in a stretch MetroCluster configuration:

FAS9000 storage systems controller modules use four FC-VI ports each.

For configurations with E-Series array LUNs, you can directly attach the E-Series LUNs.

Direct Attach support for Stretch MetroCluster Configuration with NetApp E-Series array

Except for connecting the FC-VI ports, the rest of this procedure is for setting up a MetroCluster configuration with array LUNs, that are not using E-Series array LUNs. This requires FC switches that are the same as using array LUNs in fabric-attached configurations.

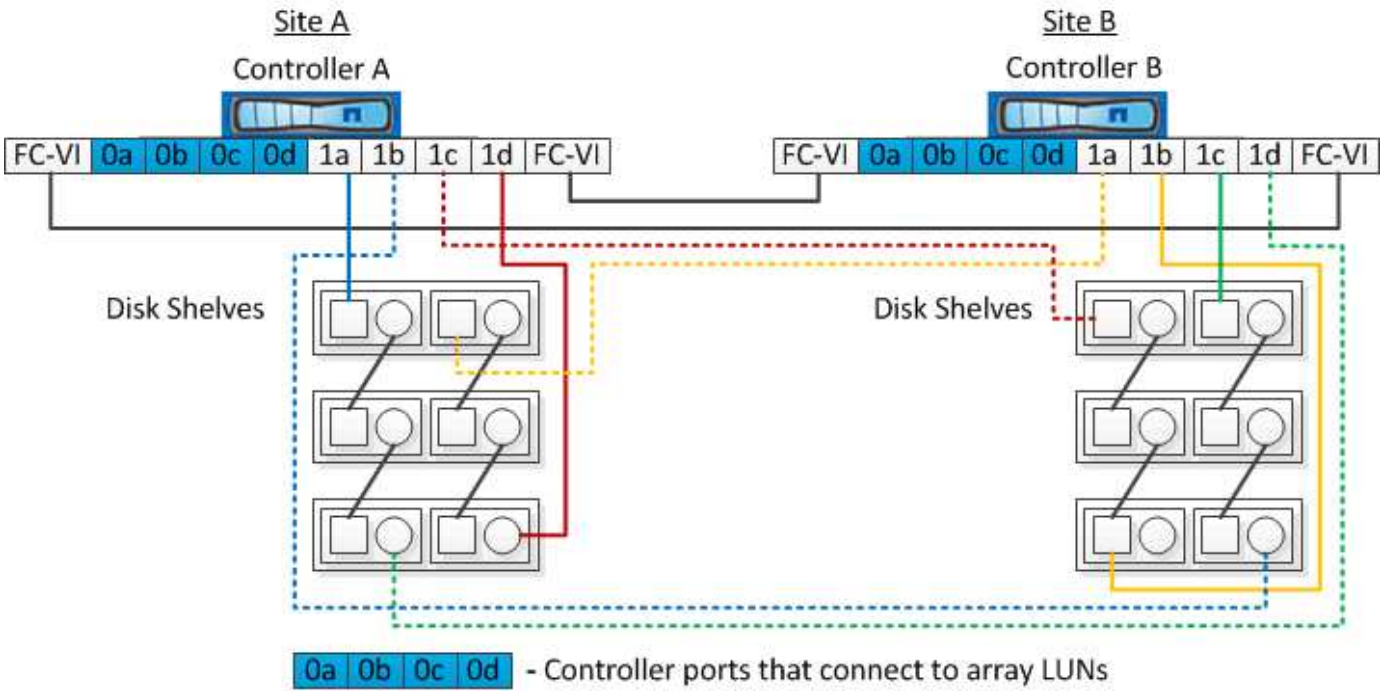
Examples of two-node stretch MetroCluster configurations with disks and array LUNs

For setting up a stretch MetroCluster configuration with native disks and array LUNs, you must use either FC-to-SAS bridges or SAS optical cables to connect the ONTAP systems to the disk shelves. In addition FC switches must be used for connecting array LUNs to the ONTAP systems.

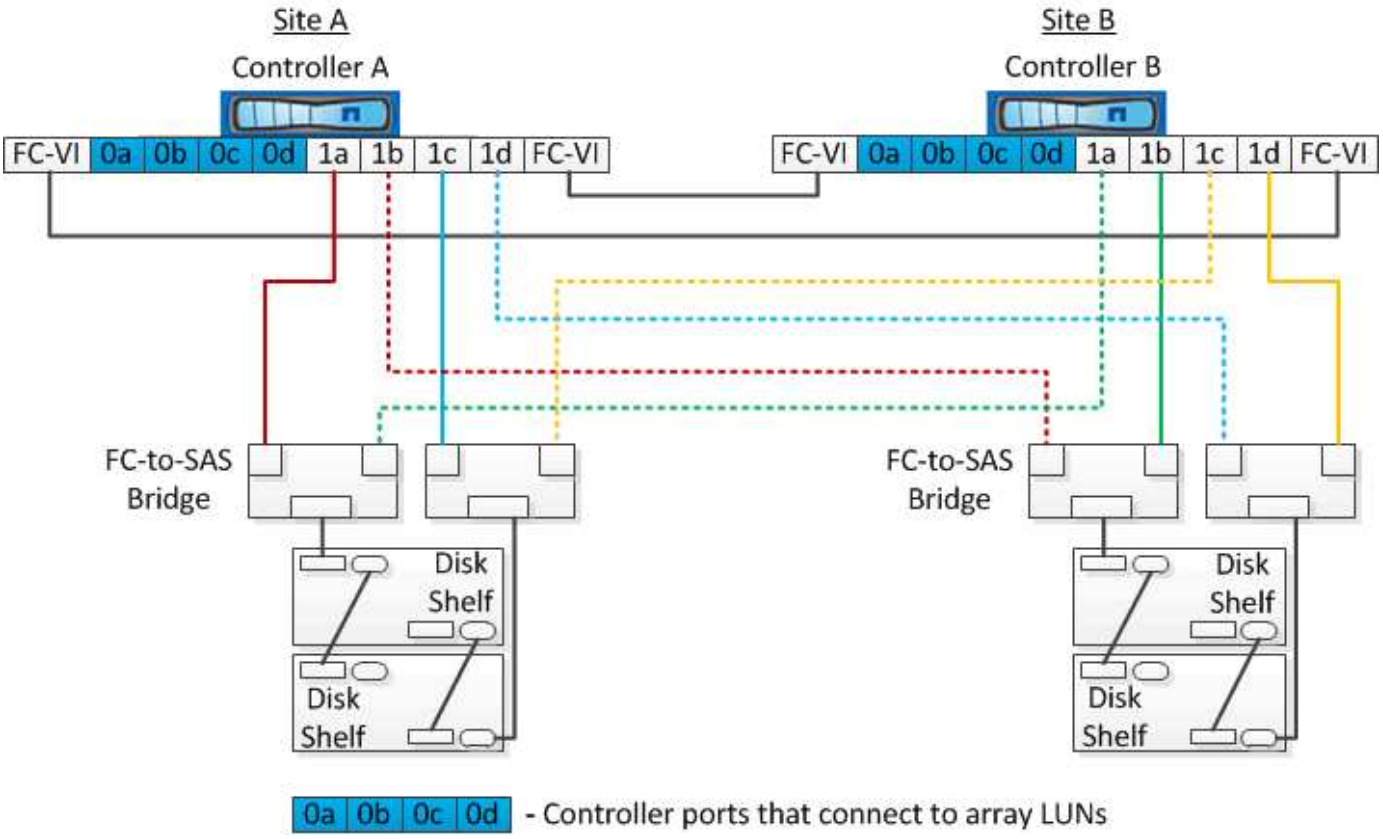
A minimum of eight HBA ports are required for an ONTAP system to connect to both native disks and array LUNs.

In the following examples representing two-node stretch MetroCluster configurations with disks and array LUNs, HBA ports 0a through 0d are used for connection with array LUNs. HBA ports 1a through 1d are used for connections with native disks.

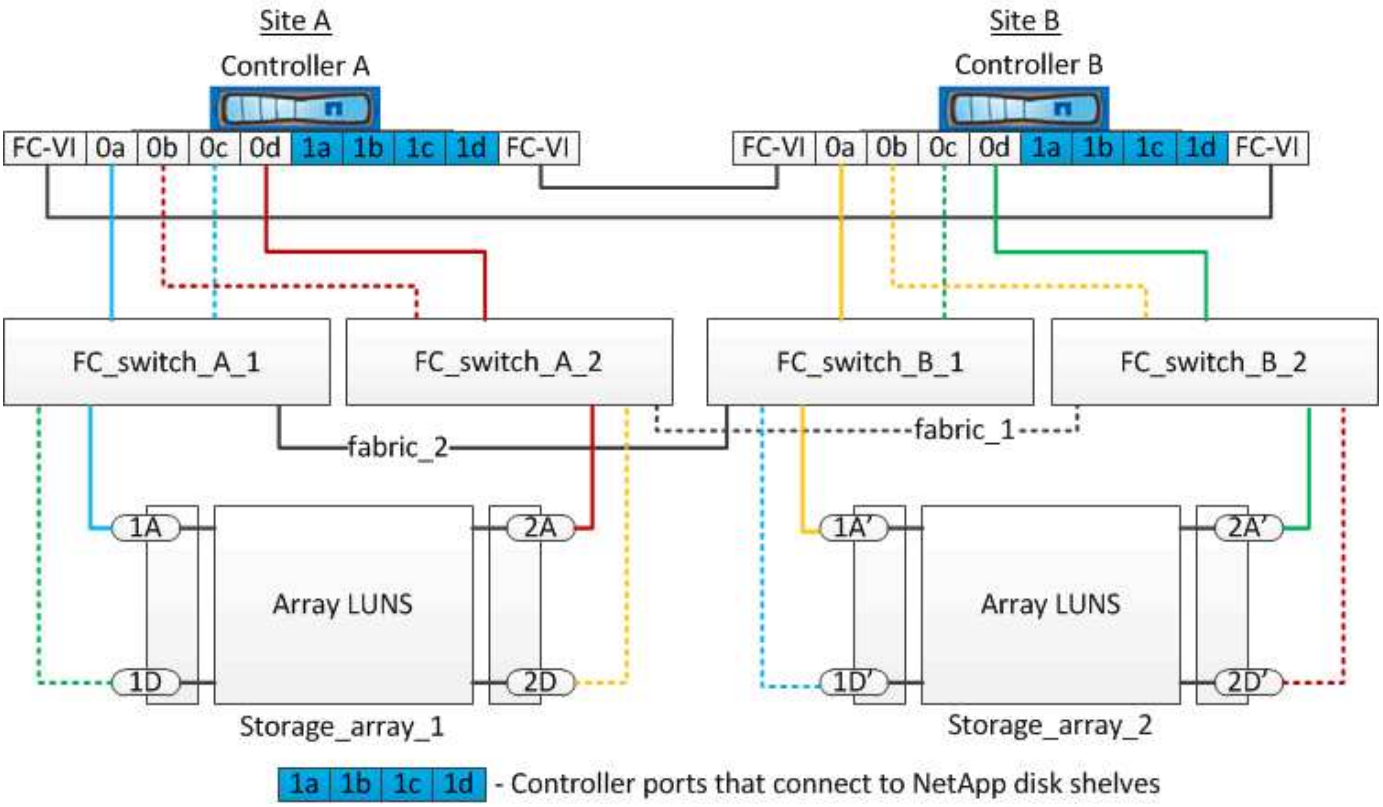
The following illustration shows a two-node stretch MetroCluster configuration in which the native disks are connected to the ONTAP systems using SAS optical cables:



The following illustration shows a two-node stretch MetroCluster configuration in which the native disks are connected to the ONTAP systems using FC-to-SAS bridges:



The following illustration shows a two-node stretch MetroCluster configuration with the array LUN connections:



If required, you can also use the same FC switches to connect both native disks and array LUNs to the controllers in the MetroCluster configuration.

Example of a stretch MetroCluster configuration with E-Series storage arrays

In a stretch MetroCluster configuration with an E-Series storage array LUNs, you can directly connect the storage controllers and the storage arrays. Unlike other array LUNs, FC switches are not required.

The Direct Attach support for Stretch MetroCluster Configuration with NetApp E-Series array Knowledgebase article provides examples of configurations with E-Series array LUNs.

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