



# **Expanding a two-node MetroCluster FC configuration to a four-node configuration**

## **ONTAP MetroCluster**

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# Expanding a two-node MetroCluster FC configuration to a four-node configuration

Expanding a two-node MetroCluster FC configuration to a four-node MetroCluster FC configuration involves adding a controller to each cluster to form an HA pair at each MetroCluster site, and then refreshing the MetroCluster FC configuration.

- The nodes must be running ONTAP 9 or later in a MetroCluster FC configuration.

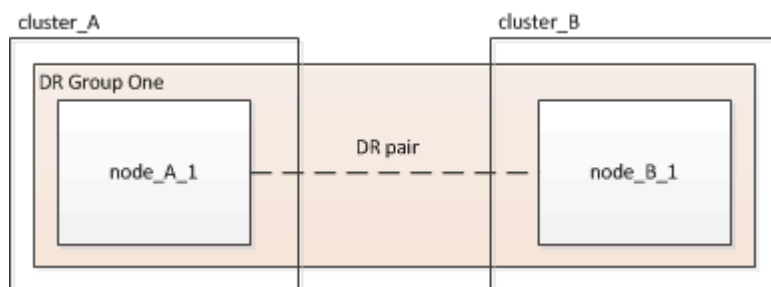
This procedure is not supported on earlier versions of ONTAP or in MetroCluster IP configurations.

- If the platforms in your two-node configuration are not supported in ONTAP 9.2 and you plan to upgrade to platforms supported in ONTAP 9.2 *and* expand to a four-node cluster, you must upgrade the platforms in the two-node configuration *before* expanding the MetroCluster FC configuration.
- The existing MetroCluster FC configuration must be healthy.
- The equipment you are adding must be supported and meet all of the requirements described in the *Fabric-attached MetroCluster Installation and Configuration Guide* or the *Stretch Installation and Configuration Guide*.

[Fabric-attached MetroCluster installation and configuration](#)

[Stretch MetroCluster installation and configuration](#)

- You must have available FC switch ports to accommodate the new controllers and any new bridges.
- You need the admin password and access to an FTP or SCP server.
- This procedure applies only to MetroCluster FC configurations.
- This procedure is disruptive and takes approximately four hours to complete.
- Before performing this procedure, the MetroCluster FC configuration consists of two single-node clusters:



After completing this procedure, the MetroCluster FC configuration consists of two HA pairs, one at each site:



- Both sites must be expanded equally.

A MetroCluster configuration cannot consist of an uneven number of nodes.

- This procedure can take over an hour per site, with additional time for tasks such as initializing the disks and netbooting the new nodes.

The time to initialize the disks depends on the size of the disks.

- This procedure uses the following workflow:



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