



# **Install and cable MetroCluster components**

## **ONTAP MetroCluster**

NetApp  
December 01, 2022

This PDF was generated from [https://docs.netapp.com/us-en/ontap-metrocluster/install-stretch/task\\_rack\\_the\\_hardware\\_components\\_mcc\\_2\\_node\\_stretch\\_atto.html](https://docs.netapp.com/us-en/ontap-metrocluster/install-stretch/task_rack_the_hardware_components_mcc_2_node_stretch_atto.html) on December 01, 2022. Always check docs.netapp.com for the latest.

# Table of Contents

- Install and cable MetroCluster components . . . . . 1
  - Racking the hardware components . . . . . 1
  - Cabling the controllers to each other . . . . . 1
  - Cabling the cluster peering connections . . . . . 2
  - Cabling the management and data connections . . . . . 2

# Install and cable MetroCluster components

## 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.



## Copyright information

Copyright © 2022 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

## Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.