



# **SAN configurations in a MetroCluster environment**

**ONTAP 9**

NetApp  
April 21, 2023

# Table of Contents

- SAN configurations in a MetroCluster environment ..... 1
  - SAN configurations in a MetroCluster environment ..... 1
  - Prevent port overlap between switchover and switchback. .... 1

# SAN configurations in a MetroCluster environment

## SAN configurations in a MetroCluster environment

You must be aware of certain considerations when using SAN configurations in a MetroCluster environment.

- MetroCluster configurations do not support front-end FC fabric “routed” vSAN configurations.
- Beginning with ONTAP 9.12.1, four-node MetroCluster IP configurations are supported on NVMe/FC. MetroCluster configurations are not supported for NVMe prior to ONTAP 9.12.1.
- Other SAN protocols such as iSCSI, FC, and FCoE are supported on MetroCluster configurations.
- When using SAN client configurations, you must check whether any special considerations for MetroCluster configurations are included in the notes that are provided in the [NetApp Interoperability Matrix Tool](#) (IMT).
- Operating systems and applications must provide an I/O resiliency of 120 seconds to support MetroCluster automatic unplanned switchover and Tiebreaker or Mediator-initiated switchover.
- The MetroCluster is using the same WWPNs on both sides of the front-end SAN.

### Related information

[Understanding MetroCluster data protection and disaster recovery](#)

For further MetroCluster-specific host information, refer to the following NetApp Knowledge Base articles:

[What are AIX Host support considerations in a MetroCluster configuration?](#)

[Solaris host support considerations in a MetroCluster configuration](#)

## Prevent port overlap between switchover and switchback

In a SAN environment, you can configure the front-end switches to avoid overlap when the old port goes offline and the new port comes online.

During switchover, the FC port on the surviving site might log in to the fabric before the fabric has detected that the FC port on the disaster site is offline and has removed this port from the name and directory services.

If the FC port on the disaster is not yet removed, the fabric login attempt of the FC port at the surviving site might be rejected due to a duplicate WWPN. This behavior of the FC switches can be changed to honor the login of the previous device and not the existing one. You should verify the effects of this behavior on other fabric devices. Contact the switch vendor for more information.

Choose the correct procedure according to your switch type.

## Example 1. Steps

### Cisco switch

1. Connect to the switch and log in.
2. Enter configuration mode:

```
switch# config t
switch(config)#
```

3. Overwrite the first device entry in the name server database with the new device:

```
switch(config)# no fcns reject-duplicate-pwvn vsan 1
```

4. In switches that are running NX-OS 8.x, confirm that the flogi quiesce timeout is set to zero:
  - a. Display the quiesce timerval:

```
switch(config)# show flogi interval info \ i quiesce
```

```
Stats:  fs flogi quiesce timerval:  0
```

- b. If the output in the previous step does not indicate that the timerval is zero, then set it to zero:

```
switch(config)# flogi scale enable
```

```
switch(config)$ flogi quiesce timeout 0
```

### Brocade switch

1. Connect to the switch and log in.
2. Enter the switchDisable command.
3. Enter the configure command, and press y at the prompt.

```
F-Port login parameters (yes, y, no, n): [no] y
```

4. Choose setting 1:

```
- 0: First login take precedence over the second login (default)
- 1: Second login overrides first login.
- 2: the port type determines the behavior
Enforce FLOGI/FDISC login: (0..2) [0] 1
```

5. Respond to the remaining prompts, or press **Ctrl + D**.

6. Enter the `switchEnable` command.

#### **Related information**

[Performing switchover for tests or maintenance](#)

## Copyright information

Copyright © 2023 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.