



Installing the Brocade FC switch RCF file

ONTAP MetroCluster

netapp-ivanad, ntap-bmegan
April 12, 2021

This PDF was generated from https://docs.netapp.com/us-en/ontap-metrocluster/install-fc/task_install_the_brocade_fc_switch_rcf_file.html on May 31, 2021. Always check docs.netapp.com for the latest.

Table of Contents

Installing the Brocade FC switch RCF file 1

Installing the Brocade FC switch RCF file

When you configure a Brocade FC switch, you can install the switch configuration files that provide the complete switch settings for certain configurations.

These steps must be repeated on each of the Brocade FC switches in the MetroCluster fabric configuration.

Steps

1. Initiate the download and configuration process:

configDownload

Respond to the prompts as shown in the following example.

```
FC_switch_A_1:admin> configDownload
Protocol (scp, ftp, sftp, local) [ftp]:
Server Name or IP Address [host]: <user input>
User Name [user]:<user input>
Path/Filename [<home dir>/config.txt]:path to configuration file
Section (all|chassis|switch [all]): all
.
.
.
Do you want to continue [y/n]: y
Password: <user input>
```

After entering your password, the switch downloads and executes the configuration file.

2. Persistently enable the switch: **switchcfgpersistenable**

The example shows how to persistently enable FC switch_A_1.

```
FC_switch_A_1:admin> switchcfgpersistenable
```

3. Run the following command to confirm that the configuration file has set the switch domain:

switchShow

Each switch is assigned a different domain number depending on which configuration file the switch used.

```
FC_switch_A_1:admin> switchShow
switchName: FC_switch_A_1
switchType: 109.1
switchState: Online
switchMode: Native
switchRole: Subordinate
switchDomain: 5
```

4. Verify that your switch is assigned the correct domain value as indicated in the following table.

Fabric	Switch	Switch domain
1	A_1	5
	B_1	7
2	A_2	6
	B_2	8

5. Change the port speed: **portcfgspeed**

```
FC_switch_A_1:admin> portcfgspeed port number port speed
```

By default, all the ports are configured to operate at 16 Gbps. You might change the port speed for the following reasons:

- The interconnect switch ports speed should be changed when an 8-Gbps FC-VI adapter is used and the switch port speed should set to 8 Gbps.
- The switch ports speed should be changed when an 8-Gbps HBA adapter is used for ATTO FibreBridge 6500N.
- The ISL ports' speed must be changed when the ISL is not capable of running at 16 Gbps. ====



1. Calculate the ISL distance.

Due to the behavior of the FC-VI, you must set the distance to 1.5 times the real distance with a minimum of 10 (LE). The distance for the ISL is calculated as follows, rounded up to the next full kilometer: $1.5 \times \text{real distance} = \text{distance}$.

If the distance is 3 km, then $1.5 \times 3 \text{ km} = 4.5$. This is lower than 10; therefore, you must set the ISL to the LE distance level.

The distance is 20 km, then $1.5 \times 20 \text{ km} = 30$. You must set the ISL to the LS distance level.

2. Set the distance for each ISL port using the following command:

portcfglongdistance *port levelvc_link_initdistance*

A `vc_link_init` value of 1 uses the fillword 'ARB' by default. A value of 0 uses the fillword 'IDLE'. The required value might vary depending on the link you use. In this example, the default is set and the distance is assumed to be 20 km. Hence, the setting is '30' with a `vc_link_init` value of 1, and the ISL port is 21.

Example: LS

```
FC_switch_A_1:admin> portcfglongdistance 21 LS 1
-distance 30
```

Example: LE

```
FC_switch_A_1:admin> portcfglongdistance 21 LE 1
```

3. Verify if the IP address is set correctly: **ipAddrshow**

```
FC_switch_A_1:admin> ipAddrshow
```

You can set the IP address with the following command if required: **ipAddrSet**

4. Set the timezone from the switch prompt: **tstimezone --interactive**

You should respond to the prompts as required.

```
FC_switch_A_1:admin> tstimezone --interactive
```

5. Reboot the switch: **reboot**

The example shows how to reboot FC switch _A_1.

```
FC_switch_A_1:admin> reboot
```

6. Verify the distance setting: **portbuffershow**

A distance setting of LE appears as 10 km.

```

FC_Switch_A_1:admin> portbuffershow
User Port Lx    Max/Resv Buffer Needed  Link
Remaining
Port Type Mode Buffers  Usage  Buffers Distance
Buffers
-----
.....
...
21    E    -      8      67      67      30 km
22    E    -      8      67      67      30 km
...
23    -    8      0      -      -      466

```

7. Reconnect the ISL cables to the ports on the switches where they were removed.

The ISL cables were disconnected when the factory settings were reset to the default settings.

[Resetting the Brocade FC switch to factory defaults](#)

8. Validate the configuration.

- a. Verify that the switches form one fabric: **switchshow**

The following example shows the output for a configuration that uses ISLs on ports 20 and 21.

```

FC_switch_A_1:admin> switchshow
switchName: FC_switch_A_1
switchType: 109.1
switchState:Online
switchMode: Native
switchRole: Subordinate
switchDomain:      5
switchId:   fffc01
switchWwn:  10:00:00:05:33:86:89:cb
zoning:      OFF
switchBeacon: OFF

Index Port Address Media Speed State  Proto
=====
...
20   20  010C00   id   16G  Online FC   LE E-Port
10:00:00:05:33:8c:2e:9a "FC_switch_B_1"
(downstream) (trunk master)
21   21  010D00   id   16G  Online FC   LE E-Port
(Trunk port, master is Port 20)
...

```

- b. Confirm the configuration of the fabrics: **fabricshow**

```

FC_switch_A_1:admin> fabricshow
Switch ID      Worldwide Name      Enet IP Addr FC
IP Addr Name
-----
1: fffc01 10:00:00:05:33:86:89:cb 10.10.10.55
0.0.0.0      "FC_switch_A_1"
3: fffc03 10:00:00:05:33:8c:2e:9a 10.10.10.65
0.0.0.0      >"FC_switch_B_1"

```

- c. Verify that the ISLs are working: **islshow**

```

FC_switch_A_1:admin> islshow

```

- d. Confirm that zoning is properly replicated by running the following commands:

cfgshow
zoneshow

Both outputs should show the same configuration information and zoning

information for both switches.

- e. If trunking is used, you can confirm the trunking with the following command:
trunkShow

```
FC_switch_A_1:admin> trunkshow
```


Copyright Information

Copyright © 2021 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.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

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.