



## **Get started**

### **Cluster and storage switches**

NetApp  
May 08, 2024

# Table of Contents

- Get started ..... 1
  - What's new for switches ..... 1
  - Learn about Cluster, Storage, and Shared switches ..... 1
  - Get up and running with Cluster, Storage, and Shared switches ..... 2

# Get started

## What's new for switches

Learn about the new switches for FAS and AFF systems.

### New switch support

Unresolved directive in whats-new.adoc - include::.../\_include/new-switch-support.adoc[]

## Learn about Cluster, Storage, and Shared switches

NetApp offers cluster, storage, and shared switches that deliver internal communications with the ability to non-disruptively move data and network interfaces across the cluster.

The “front-end” switches provide connectivity to host storage, while the “back-end” cluster switches provide connections between two or more NetApp controllers.



Only NetApp-validated back-end switches (ordered from NetApp) are supported.

### Cluster switches

Cluster switches allow you to build ONTAP clusters with more than two nodes. NetApp-supported cluster switches include:

- Broadcom BES-53248
- Cisco Nexus 9336C-FX2
- NVIDIA SN2100

### Storage switches

Storage switches allow you to route data between servers and storage arrays in a Storage Area Network (SAN). NetApp-supported cluster switches include:

- Cisco Nexus 9336C-FX2
- NVIDIA SN2100

### Shared switches

Shared switches allow you to combine cluster and storage functionality into a shared switch configuration, by supporting the use of shared cluster and storage RCFs. The NetApp-supported shared switch is:

- Cisco Nexus 9336C-FX2

### End-of-availability

The following storage switches are no longer available for purchase, but are still supported:

- Cisco Nexus 3232C

- Cisco Nexus 3132Q-V
- Cisco Nexus 92300YC
- NetApp CN1610

## Get up and running with Cluster, Storage, and Shared switches

To get up and running with cluster, storage, and shared switches, you install hardware components and configure your switch.

Deploying the switch involves the following workflow.

1

### Install AFF/FAS controllers

Install your AFF/FAS controllers in the rack or cabinet. Access the install and setup instructions for your AFF/FAS platform model.

#### AFF systems

- [AFF C190](#)
- [AFF A220](#)
- [AFF A250](#)
- [AFF A400](#)
- [AFF A700](#)
- [AFF A800](#)
- [AFF A900](#)

#### FAS systems

- [FAS500f](#)
- [FAS8300](#)
- [FAS8700](#)
- [FAS9000](#)
- [FAS9500](#)

2

### Install the switch hardware

Install your switches in the rack or cabinet. Access the following instructions for your switch model.

#### Cluster switches

- [Install BES-53248 switch](#)
- [Install Cisco Nexus 9336C-FX2 switch](#)
- [Install NVIDIA SN2100 switch](#)

#### Storage switches

- [Install Cisco Nexus 9336C-FX2 switch](#)
- [Install NVIDIA SN2100 switch](#)

#### Shared switches

- [Install Cisco Nexus 9336C-FX2 switch](#)

3

### Cable the switches to the controllers

The AFF/FAS install and setup instructions include instructions for cabling the controller ports to the switch. However, if you need lists of supported cables and transceivers, and detailed information about the host ports for your switch, access the following instructions for your switch model.

**Cluster switches**

- [Cable BES-53248 switch](#)
- [Cable Cisco Nexus 9336C-FX2 switch](#)
- [Cable NVIDIA SN2100 switch](#)

**Storage switches**

- [Cable Cisco Nexus 9336C-FX2 switch](#)
- [Cable NVIDIA SN2100 switch](#)

**Shared switches**

- [Cable Cisco Nexus 9336C-FX2 switch](#)

**4****Configure switch**

Perform an initial setup of your switches. Access the following instructions for your switch model.

**Cluster switches**

- [Configure BES-53248 switch](#)
- [Configure Cisco Nexus 9336C-FX2 switch](#)
- [Configure NVIDIA SN2100 switch](#)

**Storage switches**

- [Configure Cisco Nexus 9336C-FX2 switch](#)
- [Configure NVIDIA SN2100 switch](#)

**Shared switches**

- [Configure Cisco Nexus 9336C-FX2 switch](#)

**5****Install switch software**

To install and configure the software on your switch, follow the software install workflow for your switch model.

**Cluster switches**

- [Install software for BES-53248 switches](#)
- [Install software for Cisco Nexus 9336C-FX2 switch](#)
- [Install software for NVIDIA SN2100 switch](#)

**Storage switches**

- [Install software for Cisco Nexus 9336C-FX2 switch](#)
- [Install software for NVIDIA SN2100 switch](#)

**Shared switches**

- [Install software for Cisco Nexus 9336C-FX2 switch](#)

**6****Complete system setup**

After you have configured your switches and installed the required software, access the install and setup instructions for your AFF/FAS platform model to complete your system setup.

**AFF systems**

- [AFF C190](#)
- [AFF A220](#)
- [AFF A250](#)
- [AFF A400](#)
- [AFF A700](#)
- [AFF A800](#)
- [AFF A900](#)

**FAS systems**

- [FAS500f](#)
- [FAS8300](#)
- [FAS8700](#)
- [FAS9000](#)
- [FAS9500](#)

**7****Complete ONTAP configuration**

After you have installed and set up your AFF/FAS controllers and switches, you must complete configuring your storage in ONTAP. Access the following instructions according to your deployment configuration.

- For ONTAP deployments, see [Configure ONTAP](#).
- For ONTAP with MetroCluster deployments, see [Configure Metrocluster with ONTAP](#).

## Copyright information

Copyright © 2024 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.