Overview

Cluster and storage switches

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Overview

Overview of installation and configuration for NVIDIA SN2100 switches

The NVIDIA SN2100 is a cluster switch that allows you to build ONTAP clusters with more than two nodes.

Initial configuration overview

To configure a NVIDIA SN2100 switch on systems running ONTAP, follow these steps:

1. Install the hardware for the NVIDIA SN2100 switch.

   Instructions are available in the *NVIDIA Switch Installation Guide*.

2. Configure the switch.

   Instructions are available in NVIDIA's documentation.

3. Review cabling and configuration considerations.

   Review requirements for optical connections, the QSA adapter, and the switchport speed.

4. Cable the NS224 shelves as switch-attached storage.

   Follow the cabling procedures if you have a system in which the NS224 drive shelves need to be cabled as switch-attached storage (not direct-attached storage).

5. Install Cumulus Linux in Cumulus mode or install Cumulus Linux in ONIE mode.

   You can install Cumulus Linux (CL) OS when the switch is running either Cumulus Linux or ONIE.

6. Install the Reference Configuration File (RCF) script.

   There are two RCF scripts available for Clustering and Storage applications. The procedure for each is the same.

7. Configure SNMPv3 for switch log collection.

   This release includes support for SNMPv3 for switch log collection and for Switch Health Monitoring (SHM).

The procedures use Network Command Line Utility (NCLU), which is a command line interface that ensures Cumulus Linux is fully accessible to all. The net command is the wrapper utility you use to execute actions from a terminal.

Additional information

Before you begin installation or maintenance, be sure to review the following:

- Configuration requirements

- Components and part numbers
- Required documentation
- Hardware Universe for all supported ONTAP versions.

Configuration requirements for NVIDIA SN2100 switches

For NVIDIA SN2100 switch installation and maintenance, be sure to review all configuration requirements.

Installation requirements

If you want to build ONTAP clusters with more than two nodes, you need two supported cluster network switches. You can use additional management switches, which are optional.

You install the NVIDIA SN2100 switch (X190006) in the NVIDIA dual/single switch cabinet with the standard brackets that are included with the switch.

For cabling guidelines, see Review cabling and configuration considerations.

ONTAP and Linux support

The NVIDIA SN2100 switch is a 10/25/40/100GbE switch running Cumulus Linux. The switch supports the following:

- ONTAP 9.10.1P3.

  The SN2100 switch serves Cluster and Storage applications in ONTAP 9.10.1P3 over different switch-pairs.

- Cumulus Linux (CL) OS version.

  In order to download the SN2100 Cumulus software from NVIDIA, you must have login credentials to access NVIDIA's Enterprise Support Portal. See the Knowledge Base article How to register with NVIDIA for Enterprise Support Portal Access. For current compatibility information, see the NVIDIA Ethernet Switches information page.

- You can install Cumulus Linux when the switch is running Cumulus Linux or ONIE.

Components and part numbers for NVIDIA SN2100 switches

For NVIDIA SN2100 switch installation and maintenance, be sure to review the list of components and part numbers for the cabinet and rail kit.

Cabinet details

You install the NVIDIA SN2100 switch (X190006) in the NVIDIA dual/single switch cabinet with the standard brackets that are included with the switch.

Rail kit details

The following table lists the part number and description for the SN2100 switches and rail kits:

Part number	Description
X190006-PE	Cluster Switch, NVIDIA SN2100, 16PT 100GbE, PTSX
X190006-PI	Cluster Switch, NVIDIA SN2100, 16PT 100GbE, PSIN
X-MTEF-KIT-D	Rail Kit, NVIDIA Dual switch side by side
X-MTEF-KIT-E	Rail Kit, NVIDIA Single switch short depth

See NVIDIA documentation for details on installing your SN2100 switch and rail kit.

Documentation requirements for NVIDIA SN2100 switches

For NVIDIA SN2100 switch installation and maintenance, be sure to review all the recommended documentation.

Title	Description
NVIDIA Switch Installation Guide	Describes how to install your NVIDIA SN2100 switches.
NS224 NVMe Drive Shelf Cabling Guide	Overview and illustrations showing how to configure cabling for drive shelves.
NetApp Hardware Universe	Allows you to confirm supported hardware, such as storage switches and cables, for your platform model.

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