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Cisco N9300 Series Smart Switch Onboarding: Operating the Switch in Networking Mode

Introduction

The Cisco N9300 Series Smart Switches are integrated network devices designed for scalable, secure, and efficient data center operations. This article provides essential information for onboarding the Cisco N9300 Series Smart Switches, specifically highlighting the new models and features introduced with Cisco NX-OS Release 10.6(1s).

Cisco N9300 Series Smart switches

Cisco N9300 Series Smart Switches deliver advanced performance, scalability, and security for modern data center environments. These switches feature Cisco Silicon One E100 ASICs and integrated Data Processing Units (DPUs) to optimize network efficiency and enable software-defined services.

Here are two models from the Cisco N9300 Series:

Cisco N9324C-SE1U switch

The Cisco N9324C-SE1U switch is a 1-RU solution that provides

- Twenty-four 100G ports for high-speed networking
- Cisco Silicon One E100 ASIC for high-speed connectivity and scalability
- 4 DPUs offering software-defined stateful services

Cisco N9348Y2C6D-SE1U switch

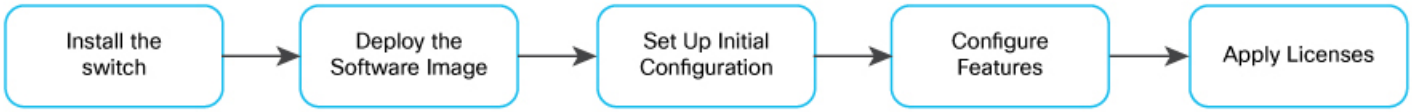
The Cisco N9348Y2C6D-SE1U switch is a 1-rack-unit (1RU), top-of-rack (ToR) fixed-port switch designed for data center environments. It provides

- Forty-eight 10G and 25G ports, two 40G and 100G ports, and six 400G ports
- Cisco Silicon One E100 ASIC for high-speed connectivity and scalability
- 2 DPUs offering software-defined stateful services

Onboard Cisco N9300 Smart switch in network-only mode

Enable operation of a Cisco N9300 Series Smart switch by deploying the switch in network-only mode.

To provide network-only functionality in your data center, perform this task to bring a new Cisco N9300 Smart switch online.



1 Install switch

2 Deploy software
3 Set up configuration
4 Configure features
5 Apply licenses

Before you begin

- Ensure you have the appropriate rack space and power provisioned.
- Obtain the compatible running 64-bit NX-OS image. See Downloads.
- Verify applicable licenses for required features are available.

Use these steps to onboard the Cisco N9300 Smart Switch in network-only mode.

Step 1 Install the switch in the rack.

Physically install the Cisco N9324C-SE1U or N9348Y2C6D-SE1U switch as described in the hardware installation guide.

- Cisco N9324C-SE1U: Cisco N9324C-SE1U NX-OS-Mode Switch Hardware Installation Guide
- Cisco N9348Y26D-SE1U: Cisco Nexus N9348Y2C6D-SE1U NX-OS-Mode Switch Hardware Installation Guide

Step 2 Deploy the software image on the switch.

Use the required 64-bit Cisco NX-OS image for N9300 Series Smart Switches. (e.g., `nxos64-s1-dpu.10.6.1s.F.bin`).

Note The 32-bit image is not supported.

- For initial deployment, use Power On Auto Provisioning (POAP).
- For software upgrades or downgrades, see the Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 10.6(x).

Note Only Disruptive Upgrade is supported.

Step 3 Set up the initial configuration.

- Access the switch using console or a network connection.
- Configure hostname, management IP address, user credentials, and interfaces.
- Set up network interfaces, port speeds, and breakout modes to match your your data center topology.

Step 4 Configure the required features.

- Enable Layer 2 or Layer 3, VXLAN, Multicast, MPLS, Segment Routing, and security features, as needed for your deployment.
- Use programmability features such as YANG models, NETCONF, RESTCONF, Python API, NX-API for automation.

Step 5 Apply necessary licensing.

Attach valid licenses (Premier, Advantage, or Essentials) to enable the required features

For more information, see the Cisco NX-OS Licensing Guide and Cisco Nexus Smart Licensing Using Policy User Guide.

The Cisco N9300 Smart Switch is installed, running 64-bit NX-OS, and licensed for network-only operation.