



## Upgrade N9300 Series Smart Switches

This chapter provides information regarding the software image for the N9300 series smart switches and the different ways in which the components such as Data Processing Unit (DPU) firmware can be upgraded.

- [N9300 series smart switches, on page 1](#)

### N9300 series smart switches

#### Software image

Each Nexus switch is shipped with the Cisco NX-OS software preinstalled. The Cisco NX-OS software consists of an NX-OS software image, and this image is required to load the Cisco NX-OS operating system.

The Cisco N9300 Series Smart switches integrate Data Processing Units (DPUs) with networking ASICs to enhance data center networking and security. Hypershield manages the DPU to provide the security functions, while the NPU provides the N9000 routing and switching functions. At the core of the switch is the CPU, which runs the NXOS operating system. The CPU also hosts the Hypershield Agent, which connects to the external Hypershield system. For more information, refer to the [Getting Started with Cisco N9300 Series Smart Switches](#) document.

The Cisco NX-OS Release 10.5(3s) introduces Cisco N9324C-SE1U switch, a N9300 series smart switch, and a new NX-OS software image for the N9300 series smart switches. This 64-bit image has a file name with **nxos64-s1-dpu** as the prefix (for example, **nxos64-s1-dpu.10.5.3s.F.bin**) and is mandatory on the Cisco N9324C-SE1U switch. This image includes NX-OS component, DPU image, and Hypershield Agent.

The integration of Cisco NX-OS and Hypershield software into a single software image simplifies deployment and enhances operational flexibility.



**Note** The DPU image is available on the switch even when the DPU is powered off. To power on the DPU, enable feature service-acceleration. For more information about feature service-acceleration, refer to the [Getting Started with Cisco N9300 Series Smart Switches](#) document.

For more information about NX-OS upgrade and downgrade, refer to [Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 10.5\(x\)](#).

### Upgrade DPU firmware and Hypershield Agent on N9324C-SE1U switch

DPU firmware and Hypershield Agent can be upgraded in different ways on Cisco N9324C-SE1U switch.

DPU firmware can be upgraded on a Cisco N9324C-SE1U switch in four ways that include:

- Through Hypershield Management Plane—On the Management Plane, ensure that the Hypershield Agent is connected. When a new DPU image is available on the Management Plane, the Agent downloads the DPU image and then performs the upgrade.
- Upgrade DPU firmware on NX-OS using RPM commands—Download the image to the switch bootflash and then use the **install add dpu\_fw-<fw version>-10.5.3s.x86\_64.rpm activate** command.




---

**Note** To downgrade, use the **install add dpu\_fw-<fw version>-10.5.3s.x86\_64.rpm activate downgrade** command.

---

- Upgrade the entire NX-OS image and bundled DPU firmware—To upgrade the whole image, use the **install all nxos nxos64-s1-dpu.10.6.1.F.bin** command. After upgrade, the DPU that is bundled in the image must be used.
- Install RPMs during NX-OS upgrade—Use the **install all nxos nxos64-s1-dpu.10.6.1.F.bin package dpu\_fw-<fw version>-10.6.1.x86\_64.rpm** command.

Hypershield Agent can be upgraded on a Cisco N9324C-SE1U switch in two ways that include:

- Upgrade DPU firmware on NX-OS using RPM commands—Download the image to the switch bootflash and then use the **install add agent-<agent version>-10.5.3s.x86\_64.rpm activate** command.




---

**Note** To downgrade, use the **install add agent-<agent version>-10.5.3s.x86\_64.rpm activate downgrade** command.

---

- Install RPMs during NX-OS upgrade—Use the **install all nxos nxos64-s1-dpu.10.6.1.F.bin package agent-<agent version>-10.6.1.x86\_64.rpm** command.