

Cisco NX-OS Software Release 4.1

PB509940

Cisco® NX-OS Software Release 4.1 continues the design objectives of providing a rich and comprehensive feature set to address the high demands of mission-critical data centers. In addition to support for the new hardware in the Cisco Nexus™ 7000 Series Switches, new software features are also introduced to further enhance Cisco's product offering in the next-generation data center.

Starting with Cisco NX-OS Software Release 4.1, the Cisco Nexus 7000 Series Switches and Cisco MDS 9000 Series Multilayer Switches will be sharing this common operating system that focuses on data center features and protocols, availability, and operational considerations. The first release of Cisco NX-OS Software Release 4.1 for the Cisco Nexus 7000 Series Switch will be named Release 4.1(2).

Table 1 lists the hardware supported in Cisco NX-OS Software Release 4.1, and Table 2 lists the new software features introduced in this release.

Table 1. Cisco NX-OS Software Release 4.1 Supported Hardware

Description	Part Number
Cisco Nexus 7000 Series 10-Slot Chassis	N7K-C7010
Cisco Nexus 7000 Series 10-Slot Fabric Module	N7K-C7010-FAB-1
Cisco Nexus 7000 Series 10-Slot System Fan Tray	N7K-C7010-FAN-S
Cisco Nexus 7000 Series 10-Slot Fabric Fan Tray	N7K-C7010-FAN-F
Cisco Nexus 7000 Series 18-Slot Chassis	N7K-C7018
Cisco Nexus 7000 Series 18-Slot Fabric Module	N7K-C7018-FAB-1
Cisco Nexus 7000 Series 18-Slot Fan Tray	N7K-C7018-FAN
Cisco Nexus 7000 Series 6KW AC Power Supply Module	N7K-AC-6.0KW
Cisco Nexus 7000 Series 7.5KW AC Power Supply Module US	N7K-AC-7.5KW-US
Cisco Nexus 7000 Series 7.5KW AC Power Supply Module International	N7K-AC-7.5KW-INT
Cisco Nexus 7000 Series Supervisor Module	N7K-SUP1
Cisco Nexus 7000 Series 32-Port 10Gb Ethernet Module	N7K-M132XP-12
Cisco Nexus 7000 Series 48-Port 10/100/1000 Ethernet Module	N7K-M148GT-11
Cisco Nexus 7000 Series 48-Port 1GE SFP Ethernet Module	N7K-M148GS-11

Table 2. New Software Features in Cisco NX-OS Software Release 4.1

Software Feature	Description
Port-Channel Enhancement	Supports configuration of up to 768 Port-Channels
IPv6 Enhancement	<p>Adds support for the following IPv6 protocols:</p> <ul style="list-style-type: none"> • Multicast Listener Discovery (MLD) Protocol Version 2 • Bidirectional Protocol Independent Multicast (Bidir PIM) • Source-Specific Multicast (SSM) PIM • Enhanced Interior Gateway Routing Protocol (EIGRP) • Access control lists (ACLs) ((port-based ACLs [PACLs], VLAN-based ACLs [VACLs], router-based ACLs [RACLs], and security group ACLs [SGACLs]) • Unicast Reverse Path Forwarding (uRPF) • Quality of Service (QoS)
VLAN Trunking Protocol (VTP) Transparent Mode	Allows VTP protocol data units (PDUs) to pass through Cisco Nexus 7000 Series switches
'show capacity' command	Provides the user with a single command that summarizes the current utilization of the platform hardware resources of the switch
ACL Hardware Resource Pooling	Allows any features that use ACLs to scale beyond 16K entries
Switched Port Analyzer (SPAN) Enhancement	<p>Supports the following options on SPAN destination interfaces:</p> <ul style="list-style-type: none"> • Inpkt: Allows the SPAN destination ports to receive the normal incoming traffic • Learning: Enables MAC addresses learning
Smart CallHome HTTPS Transport	Provides a secure communication channel through the HTTPS tunnel between Cisco Nexus 7000 Series Switches and the Cisco AutoNotify backend server
Role-backed access control (RBAC) Role Distribution	Supports distribution of RBAC role configuration for easier deployment
MIB Enhancement	<p>Adds support for additional MIB:</p> <ul style="list-style-type: none"> • IPMCAST-MIB (RFC-5132)
Virtual Port Channel (vPC)	<p>Supported as of r4.1(3)</p> <p>Increases usable bandwidth by eliminating STP blocked ports in common dual homed designs.</p> <ul style="list-style-type: none"> • Transparent to neighbor hosts or switches • Neighbors need only support LACP • Retains independent control and data plane • Support for dual sups per switch
CFSolP	Cisco Fabric service (CFS) is a distribution protocol that provides a rich set of features, using which applications can distribute and synchronize configuration and/or runtime data in a network.

Ordering Information

Cisco NX-OS is available in three license levels. A rich feature set is provided with the Base license, which is bundled with the hardware at no extra cost. The Enterprise license enables incremental functions that are applicable to many enterprise deployments. The Advanced Services license enables next-generation data-center functions such as virtual device contexts (VDCs) and Cisco TrustSec. Table 3 summarizes the three packages.

Table 3. License Packages

Package	Content
Base package	Provides a rich feature set appropriate for most data center requirements
Enterprise package	Provides incremental functions available only with the Enterprise license: <ul style="list-style-type: none"> • IP routing <ul style="list-style-type: none"> ◦ Open Shortest Path First (OSPF) Versions 2 and 3 (IPv4 and IPv6) ◦ Intermediate System-to-Intermediate System (IS-IS) Protocol (IPv4) ◦ Border Gateway Protocol (BGP) (IPv4) ◦ Enhanced Interior Gateway Routing Protocol (EIGRP) (IPv4 and IPv6) • IP Multicast <ul style="list-style-type: none"> ◦ PIM: Sparse, Bidir, Any-Source Multicast (ASM), and Source-Specific Multicast (SSM) modes (IPv4 and IPv6) ◦ Multicast Source Discovery Protocol (MSDP) (IPv4) • Policy-Based Routing (PBR) (IPv4) • Generic Routing Encapsulation (GRE) tunnels
Advanced package	Enables use of the following functions in Cisco NX-OS Software: <ul style="list-style-type: none"> • VDCs • Cisco TrustSec

For the most up-to-date license-to-feature mapping, please visit the Cisco NX-OS Licensing Guide at: http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_1/nx-os/licensing/guide/nx-os_licensing.html.

To place an order, visit the [Cisco Ordering Homepage](#). To download software, visit the [Cisco Software Center](#). Table 4 provides ordering information.

Table 4. Ordering Information

Product Name	Part Number
Cisco NX-OS Enterprise LAN License	N7K-LAN1K9
Cisco NX-OS Advanced LAN License	N7K-ADV1K9
Cisco NX-OS 4.1 Software for the Cisco Nexus 7000 Supervisor 1	N7KS1K9-41

Cisco Services and Support

Cisco offers a wide range of services to help accelerate your success in deploying and optimizing Cisco Nexus 7000 Series Switches in your data center. Cisco's innovative services are delivered through a unique combination of people, processes, tools, and partners, and are focused on helping you increase operational efficiency and improve your data center network. Cisco Advanced Services use an architecture-led approach to help you align your data center infrastructure to your business goals and achieve long-term value. Cisco SMARTnet[®] Service helps you resolve mission-critical problems with direct access any time to Cisco network experts and award-winning resources. With this service, you can take advantage of the Smart Call Home service capability, which offers proactive diagnostics and real-time alerts on your Cisco Nexus 7000 Series Switches. Spanning the entire network lifecycle, Cisco Services help protect your investment, optimize network operations, support migration, and strengthen your IT expertise. For more information about Cisco Data Center Services, visit: <http://www.cisco.com/go/dcservices>.

For More Information

For more information about Cisco NX-OS, visit the product homepage at: <http://www.cisco.com/go/nxos> or contact your local account representative.



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