The bridge to possible

Cisco Catalyst 9000 Switching Platform



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Overview

Q: What are Cisco Catalyst 9000 switches?

A: The Cisco Catalyst 9000 family of switches, including the new Catalyst 9000X models, offer versatile design for more flexible operations, assure a more secure experience, and bring exceptional speed and scale to the table. As the foundation for intent-based networking, these enterprise LAN access and core switches are built to transform your network to handle a hybrid world where the workplace is anywhere, endpoints could be anything, and applications are hosted all over the place.

Catalyst 9000 switches lead the industry with the first 400G in Enterprise, first Silicon One™ ASICs for campus, full mGig and PoE ports, converged switching and routing, and continuous Zero-Trust security.

With Catalyst 9000 switches you can:

Transform the workspace for hybrid work with a powerful platform that provides the broadest range of bandwidth, speed, scale, and power required for today's more immersive experiences, big and small.

Secure the network from inside to outside by leveraging enhanced computational power and advanced AI/ML to apply continuous Zero-Trust security anywhere it's needed.

Future proof design so IT can work smarter not harder, with converged switching/routing capabilities, enhanced app-hosting, and more config automations for a smarter, more agile campus and branch.

Cisco Catalyst 9000 switches support full programmability and serviceability as well as convergence between wired and wireless in a single platform. These switches provide superior high availability and unmatched security features for the next-generation enterprise network designs, with wired and wireless security and application visibility built natively into the switch. These switches are highly resilient, keeping the downtime to minimum. They support all the foundational high-availability capabilities such as patching, Graceful Insertion and Removal (GIR), Non-Stop Forwarding/ Stateful Switchover (NSF/SSO), redundant platinum-rated power supplies, and fans.

Additionally, all Cisco Catalyst 9000 switches:

- Deliver IoT convergence with industry-leading scale and capabilities such as service discovery and "Thing" classification
- Are based on the latest Silicon One or UADP Application-Specific Integrated Circuit (ASIC) technology with programmable pipeline and tables that help ensure platform longevity
- Run a modern operating system, open Cisco IOS XE Software, that supports model-driven programmability, streaming telemetry, and patching
- Use X86-based multicore CPUs and local Solid-State Disk (SSD) storage for third-party container-based application hosting
- Provide unprecedented application visibility and control with Network-Based Application Recognition (NBAR) Version2
- The Catalyst 9000 switching portfolio continues to expand to meet the evolving needs of your network and offers upgrade options for every legacy Cisco Catalyst switch series—Catalyst 2K, 3K, 4K, and 6K

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Q: What are Cisco Catalyst 9200 Series Switches?

A: Catalyst 9200 Series switches focus on offering right-sized switching for simple branch deployments. With its family pedigree, Catalyst 9200 Series offers simplicity without compromise – it is secure, always on and provides a new level of IT simplicity.

These switches also support full IEEE 802.3at PoE+, fixed (C9200L models), compact (C9200CX), and modular (C9200 models) uplink options with field-replaceable network modules, redundant fans, and power supplies and a variety of uplink modules. Catalyst 9200 models also support Cisco Catalyst Center management or cloud monitoring for Catalyst. 60W UPOE, multigigabit and HVDC power supply options are available with C9200CX models.

Q: What are Cisco Catalyst 9300 Series Switches?

A: Cisco Catalyst 9300 Series switches are the next generation of enterprise-class stackable fixed access-layer switches. They provide the highest density of 10G multigigabit and 90W UPOE+ per port and 100G uplinks. Also, the first switch in the industry with up to 1Tbps of mixed stacking and 100G native IPsec. With double the local compute for app hosting, Catalyst 9300X models can serve many different needs for hybrid work, smart buildings, and can even be a "branch in a box" solution for lean branch sites not using SD-WAN. Catalyst 9300 models also support Cisco Catalyst Center, Meraki cloud management or Meraki cloud monitoring.

These switches support larger table scale, application hosting with ASAc firewall, Cisco Spaces gateway, ThousandEyes, Docker containers, Cisco Umbrella cloud security, full PoE+, Cisco UPOE+ and UPOE fixed and modular uplink options and field-replaceable network modules, redundant fans, and power supplies. In addition, Cisco Catalyst 9300 Series models support a variety of fixed (C9300L/LM models) and modular uplink (C9300 and C9300X models) options with up to 4x 100G fiber uplink support as well as 10G and 5G multigigabit with 90W UPOE+ and multi-rate 25G/10G/1G and 1G fiber connectivity for FTTX and higher bandwidth access, aggregation and core.

Q: What are Cisco Catalyst 9400 Series Switches?

A: Cisco Catalyst 9400 Series Switches are the next generation of enterprise-class modular access and aggregation switches that are part of the Cisco Catalyst 9000 family. These switches provide unparalleled investment protection with a centralized switching architecture that is capable of supporting up to 9 Tbps system bandwidth. The family of switches delivers state-of-the-art high availability with capabilities such as NSF/SSO, In-Service Software Upgrade (ISSU), uplink resiliency, and N+1/N+N redundancy with modular power supplies.

The new Catalyst C9400X-SUP-2/2XL supervisors and line cards are optimized for features and scale, taking the Catalyst 9400 chassis to the limit for line-rate port density and overall capacity in modular access switching. The C9400X-SUP-2/2XL supervisors provide customers with the option to fully load a 10- slot chassis up to 480Gbps per slot with dual-rate 100G/40G and multi-rate 25G/10G/1G and 1G fiber, mGig ports, 90W UPOE+, and 4x100G uplinks while maintaining backward compatibility.

With several unique innovations such as modular power supply, dual serviceable fan tray, Cisco Catalyst 9400 Series switches sets a new bar for enterprise modular access network deployments.

Q: What are Cisco Catalyst 9500 Series Switches?

A: Cisco Catalyst 9500 Series switches are the next generation of enterprise-class fixed-core and aggregation layer switches. These switches, with the new Catalyst 9500X models, are optimized to meet the requirements of flexible hybrid work. In fixed campus switches to use new Silicon One ASICs with

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dual-rate 400G/200G uplinks, the Catalyst 9500 Series gives higher scale, streamlined buffering systems, to reduce latency and boost throughput while improving security with line-rate MACsec-256 and WAN-MACsec without a tradeoff in performance.

The Catalyst 9500 Series offers a broad array of high-density models with 400, 100, and 40 Gigabit Ethernet Quad Small Form-Factor Pluggable (QSFP-DD, QSFP28, QSFP+) and 50, 25, 10, and 1 Gigabit Ethernet Small Form-Factor Pluggable Plus (SFP56, SFP28, SFP+, SFP) port types and densities. The Cisco Catalyst 9500 Series supports advanced routing and infrastructure services (MPLS Layer 2 and 3 VPNs, IP Multicast VPN [MVPN], and Network Address Translation [NAT]), SD-Access border capabilities (host tracking database, cross-domain connectivity, and Virtual Route Forwarding [VRF]-aware LISP), and network system virtualization with Cisco StackWise Virtual technology (select models) that are critical for placement in the campus core. These switches support Cisco Catalyst Center management or cloud monitoring for Catalyst. The Cisco Catalyst 9500 Series also supports foundational high-availability capabilities such as patching, Graceful Insertion and Removal (GIR), Cisco Nonstop Forwarding with Stateful Switchover (NSF/SSO), redundant platinum-rated power supplies, and fans.

Q: What are Cisco Catalyst 9600 Series Switches?

A: The Cisco Catalyst 9600 Series is the industry's first purpose-built 400 Gigabit Ethernet line of modular switches targeted for the enterprise campus. The Catalyst 9600 Series, including the new C9600X-SUP-2 and line cards, raises the standard for enterprise campus core switching and are optimized to meet the requirements of flexible hybrid work. First in modular campus switching to use new Silicon One ASICs and supply dual-rate 400G/200G uplinks, the Catalyst 9600 Series gives higher scale, streamlined buffering systems, and line-rate MACsec-256 and WAN-MACsec reduce latency and boost throughput while improving security without a tradeoff in performance. C9600X-SUP-2 supervisor and combo line card work with existing Catalyst 9600 chassis so customers upgrade while protecting their investments.

The Cisco Catalyst 9600 Series includes non-blocking 400, 200, 100, and 40 Gigabit Ethernet Quad Small Form-Factor Pluggable (QSFP-DD, QSFP28, QSFP+) and 50, 25, 10 and 1 Gigabit Ethernet Small Form-Factor Pluggable Plus (SFP56, SFP28,SFP+, SFP) and 10Gbps multigigabit technology copper interfaces to offer granular port densities that fit diverse campus needs. The switches support advanced routing and infrastructure services (such as Multiprotocol Label Switching [MPLS] Layer 2 and Layer 3 VPNs, Multicast VPN [MVPN], and Network Address Translation [NAT]); Cisco Software-Defined Access capabilities (such as a host tracking database, cross-domain connectivity, and VPN Routing and Forwarding [VRF]-aware Locator/ID Separation Protocol [LISP]); and network system virtualization with Cisco StackWise virtual technology that are critical for their placement in the campus core. The Cisco Catalyst 9600 Series also supports foundational high-availability capabilities such as patching, Graceful Insertion and Removal (GIR), Cisco Nonstop Forwarding with Stateful Switchover (NSF/SSO), redundant platinum-rated power supplies, and fans.

Q: Will StackWise Virtual be supported on all ports on the Cisco Catalyst 9400, 9500 and 9600 Series?

A: StackWise Virtual is supported on all the front panel ports and uplink ports. Please refer to the Cisco IOS XE Release Notes for more information.

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Product portfolio and positioning

Q: What is the relative positioning among Cisco Catalyst 9200, 9300, 9400, 9500 and 9600 Series switches?

A: Refer to Table 1.

Table 1. Platform positioning

Platform	Positioning
Cisco Catalyst 9200 Series	Simple branch fixed access series with 10G and 1G with 1G/10G/25G uplink options
Cisco Catalyst 9300 Series	Lead fixed access series with 10G (mGig), 5G, 2.5G, and 1G copper and 25G/10G SFP28/SFP+, 1G SFP, IEEE 802.3bt Type 4 UPOE+ (90W) and 100G uplink options
Cisco Catalyst 9400 Series	Lead modular access series with dense 5G and 10G (mGig) copper, IEEE 802.3bt Type 4 UPOE+ (90W) and 100G uplink options, and 100G/40G QSFP28/QSFP+, 25G/10G SFP28/SFP+, 1G SFP for access and aggregation
Cisco Catalyst 9500 Series	Lead fixed core and aggregation series with 400G, 100G, 50G, 40G, 25G and 10G
Cisco Catalyst 9600 Series	Lead modular core and aggregation series with 400G, 200G, 100G, 50G, 40G, 25G, 10 and 1G fiber and 10G (mGig) copper

Q: What is the portfolio transition from the Cisco Catalyst 3000 and 4000 Series to the Cisco Catalyst 9000 platform?

A: Refer to Table 2.

Table 2. Cisco Catalyst platform transitions

Portfolio	Older platform	Transition to Cisco Catalyst 9000 platform
Compact Switching	Cisco Catalyst 2960-CX/3560-CX	Cisco Catalyst 9200CX models
Access switching	Cisco Catalyst 2960-X/XR	Cisco Catalyst 9200 Series (C9200L/C9200 models)

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Portfolio	Older platform	Transition to Cisco Catalyst 9000 platform
	Cisco Catalyst 3650/3850 copper Cisco Meraki MS250, MS3xx, MS4xx	Cisco Catalyst 9300 Series (C9300L/C9300LM/C9300 models)
	Cisco Catalyst 3850 fiber	Cisco Catalyst 9300 Series (C9300X models)
	Cisco Catalyst 4500E Series	Cisco Catalyst 9400 Series
Core switching	Cisco Catalyst 4500-X Series	Cisco Catalyst 9500 Series
	Cisco Catalyst 6500 Series	Cisco Catalyst 9600 Series
	Cisco Catalyst 6800 Series	Cisco Catalyst 9600 Series

Cisco Catalyst 9000 network features and services (common to all Cisco Catalyst 9000 family switches)

Q: What feature sets does Cisco Catalyst 9000 switches support?

A: Cisco Catalyst 9000 switches support the packaging of features into Cisco Catalyst Advantage and Essentials software subscription options. The details of the features in each software subscription are listed in the feature matrix. Catalyst 9600 Series switches only support Cisco Catalyst Advantage licenses.

Q: What programmability capabilities are available on the Catalyst 9000 switches?

A: Cisco Catalyst 9000 switches opens a completely new paradigm in network configuration, operation, and monitoring through network automation. The Cisco automation solution is open, standards based, and extensible across the entire network lifecycle of a network device.

- Simplified Campus Automation: Optimizes the discovery and configuration of network devices
- Device provisioning: Through Plug-and-Play (PnP), Zero-Touch Provisioning (ZTP), and Preboot Execution (PXE)
- Configuration: Model-driven operation through open Application Programming Interfaces (APIs) over NETCONF/RESTconf, Python Scripting
- Customization and monitoring: Streaming telemetry
- Upgrade and manageability: In-Service Software Upgrade (ISSU), patch ability, and config/replace
- Docker and third-party application hosting

Q: What management capabilities are available for the Cisco Catalyst 9000 switches?

A: You can manage these switches using the Cisco IOS XE software Command-Line Interface

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(CLI), using Cisco Prime Infrastructure 3.1.7 DP13, Cisco Catalyst Center, Cisco Meraki Dashboard, onboard Cisco IOS XE Software Web User Interface (WebUI), Simple Network Management Protocol (SNMP), or NETCONF/RESTconf/YANG. Catalyst 9000 switches have been designed to work with Cisco Catalyst Center and SD-Access, using the Cisco Catalyst Center Appliance or virtual machine.

Q: Is there an onboard web GUI on Cisco Catalyst 9000 family switches?

A: Yes. An onboard web GUI – WebUI – is available.

Q: What is Simplified Campus Automation?

A: Simplified Campus Automation is designed to optimize the discovery and configuration of devices in your network with a more streamlined simple and easy-to-use automation tool. With features such as simplified discovery, IT can discover devices within the network within just a few steps. Also available is a more streamlined GUI that provides a better simplified view of switch configurations and software details on a port-by-port basis.

Q: What is the purpose of the blue beacon LED on Cisco Catalyst 9000 switches?

A: The blue beacon LED is common across the Cisco Catalyst 9000 switching portfolio to simplify the operations. It makes chassis identification easier when several such switches are mounted on racks. A remote administrator can enable the LED to blink to help the local operator quickly locate the chassis. The local operator presses the mode button to acknowledge.

Q: What is the maximum number of VRF instances that I can configure on the Cisco Catalyst 9000 platform?

A: The maximum number of VRFs that you can configure on the Cisco Catalyst 9300, 9400 and 9500 (C9500-16X/40X, C9500-12Q/24Q) Series switches is 256. For Catalyst 9200 Series switches the maximum is 4 VRFs on the modular models and 1 VRF on fixed models. For Cisco Catalyst 9400 (with C9400X-SUP-2/2X), 9500 (C9500-24Y4C/48Y4C, C9500-32QC/32C) and 9600 Series switches the maximum is 1K VRF's at FCS.

Q: What is Cisco's direction for wireless?

A: Cisco believes that the best solution for a wired or wireless network is achieved when integrated into SD-Access, Cisco's lead architecture for the next-generation enterprise network. This solution delivers consistency with wired infrastructure around policy, segmentation, orchestration and automation, and assurance. This architecture delivers the best experience for mobility, guest, IoT, multicast services, and overall network performance with its distributed data plane and centralized control-plane architecture.

Q: What wireless support is provided with Cisco Catalyst 9000 switches?

A: The Cisco Catalyst 9000 family of switches is instrumental in supporting the following wireless capabilities in the SD-Access architecture:

- Connect access points and integrate them into the SD-Access fabric. The switch integrates with the fabric control plane (LISP), thereby providing reachability for the access points and clients in the fabric.
- Deliver macro (VRF) and micro (Security Group Tag (SGT) [SGT] group-based) segmentation to the access points to deliver end-to-end policies.
- Can terminate guest VXLAN traffic, so there is no need for a dedicated guest anchor controller.

The support for wireless capability uses the Cisco Catalyst 9800 Wireless Controllers for cloud-based or appliance- based control. You can also use the AireOS 8.5 Controller running on a Cisco 8540 Wireless Controller, Cisco 5520 Wireless Controller, or Cisco 3504 Wireless Controller appliance with the Cisco Catalyst platforms functioning as Fabric Edge and Fabric Border nodes.

Q: What are the SD-Access wireless capabilities?

A: Cisco Catalyst 9000 switches provides a complete solution for the campus with Cisco AireOS controllers Wi-Fi 6 and Wave 2 access points.

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Q: What are the advantages of integrating wireless in the SD-Access fabric architecture?

A: Highest performance and scale: Distributed data-plane forwarding in hardware distributed in the network paired with the large control-plane scale offered by the dedicated controller appliances.

- Best guest: You don't need a dedicated guest anchor controller in the Demilitarized Zone (DMZ): Traffic is sent directly to the fabric border to exit the fabric. Also, there is no sub-optimal traffic forwarding such as from an access point to a foreign controller and on to a guest anchor controller
- Best mobility: IP addressing is simpler; there is one subnet for the entire wireless SSID across the network, and no hairpin of traffic when roams occur
- Simple operation: Operation is simple because wired and wireless are treated the same and operated together; they have common policies and controller-based automation
- Wired innovations applied to wireless: First-hop security innovations available for wired can also be applied to wireless; for example, Dynamic ARP Inspection (DAI), IP Source Guard (IPSG), and DHCP Snooping
- Segmentation across wired and wireless:
  - The virtual network now passes all the way to wired as well as wireless devices
  - This segmentation is important for separation of certain devices from others, such as IoT and building automation devices connected over wireless
  - It is also important for security reasons to reduce attack the surface; if someone gets into a segment, the person can move only within that segment
  - Because segmentation is handled by the fabric, the number of SSIDs can be limited
- Best multicast:
  - The solution offers the best performance of distributed replication in hardware across the network

These switches truly deliver the best of wired and wireless together.

Q: What is the rationale for future downlink speeds converging on 5 to 10 Gbps?

A: The maximum speed supported in the most widely deployed cabling, Cat5e, goes up to 5 to 10 Gbps with NBASE-T technology. Additionally, the next-generation wireless standard, Wi-Fi 6E/6 (802.11ax) will require 5 Gbps links to the Ethernet network from the access points. Compute, storage, and high-performance endpoints will support 5 Gbps with next-generation NICs. 2.5 Gbps is seen as a transitional technology.

Q: What are Cisco's solutions for 5 Gbps connections to endpoints?

A: Cisco offers stackable Cisco Catalyst 9300 Series switch models and modular Cisco Catalyst 9400 and 9600 Series switch line cards support Cisco multigigabit (10G/5G/2.5G/1G) interfaces.

Q: How will uplink speeds evolve beyond 10G in the campus?

A: With downlink speeds increasing, uplink speeds will evolve beyond today's most common speeds of 10G. There is a new speed required in the campus that 1) uses the same common duplex fiber in the cable plant, 2) is able to support the 300- to 350-meter distances common in the campus, and 3) uses optics that are consistent with SFP+ for easy migration. As a result of these requirements, 50G and 25G Ethernet is bound to emerge as the preferred uplink speed in the campus for links from the access layer to the aggregation layer. Also, links from the core layer to the aggregation/distribution layer of the network will evolve from 10G and 40G to 100G and now 400G.

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Q: What are Cisco's solutions for the uplinks and core?

A: Cisco provides the industry's first full campus solution, from the access layer to the network core. Cisco Catalyst 9200 Series stackable switches support fixed and modular uplinks. The Catalyst 9200L models support 4x 1G, 4x 10G and 2x 25G fixed uplinks, Catalyst 9200 models 4x1, and 4x 10G modular uplink options. Cisco Catalyst 9300 Series stackable switches support fixed and modular uplinks. The Catalyst 9300L models support 4x 10G and 4x 1G fixed uplinks. Catalyst 9300 models support 40G, 25G, 10G, 1G or mGig, and Catalyst 9300X models support 100G, 40G, 25G, 10G, 1G or mGig modular uplink options. Cisco Catalyst 9400 Series modular switches support 100G, 40G, 25G and 10G uplink ports. Cisco Catalyst 9500 Series and 9600 Series switches support dense multi-rate 1G/10G/25G/50G and dual-rate 400G/200G, and dual-rate 40G/100G uplinks in the core.

Q: How do I participate in the "Try and Buy" cloud promotion?

A: For current Catalyst 9300 customers wanting to participate in the "Try and Buy" cloud promotion, no additional purchase is required as the functionality can be turned on via the command line. To add the Catalyst 9300 devices to your network, a serial number is required which can be obtained by completing the "Try and Buy" registration process.

Reference 'Getting Started: Cisco Catalyst 9300 with Meraki Dashboard' or contact Meraki support for further assistance.

Q: What happens when the "Try and Buy" promotion ends?

A: At the end of the promotion period, customers are given the option to continue to use Meraki Dashboard by purchasing a Meraki license or can revert to traditional IOS XE by contacting Meraki support.

Q: What are the licensing requirements for using cloud monitoring with Cisco Catalyst 9000 switches?

A: For all current Catalyst 9200, 9300, and 9500 customers, the minimum requirement is Cisco Catalyst Essentials and Advantage license.

Q: What are Ecolabels?

A: According to the United States Environmental Protection Agency , Ecolabels are marks placed on product packaging or in e-catalogs that can help consumers and institutional purchasers quickly and easily identify those products that meet specific environmental performance criteria and are therefore deemed "environmentally preferable". Ecolabels can be owned or managed by government agencies, nonprofit environmental advocacy organizations, or private sector entities. Currently Cisco has 12 EPEAT and 37 Energy Star certified products.

Q: What are the different types of Ecolabels?

A: Ecolabels can be of various types that showcase energy efficiency, such as 80 plus or Energy Star, or for supply chain like EPEAT or TCO certification (Global, voluntary certification for IT products with environmental responsibility in supply chain).

They can be global and/or local, voluntary versus mandatory, or industry standards.

Type 1 employs a third party certification process to verify compliance, whereas Types 2 and 3 are self-declared based on standards or pre-determined categories.

Q: Why ENERGY STAR® certification of Cisco Catalyst 9000 switches important?

A: Cisco is driving long term value and market advantage by continuing to embed energy efficiency through hardware, software and by providing customers visibility into their energy consumption to help them baseline, identify trends and anomalies and take corrective actions.

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With the ENERGY STAR certification of Catalyst 9200 and 9300 Series models, Cisco is one of the first networking company to have third party-approved Campus Switches. Ecolabel certifications like ENERGY STAR help customers identify “environmentally preferable” products to help maximize energy efficiency, reduce GHG emissions and lower energy costs.

ENERGY STAR certification reinforces Cisco’s ongoing commitment to deliver energy efficient products including top-rated power supplies, active power management and monitoring capabilities, alignment to ISO 14000 Environmental Management systems standards, and all designed with circularity principles in mind.

Learn more: ENERGY STAR Certified Product Finder.

Cisco Catalyst 9200 Series switches

Q: What are the key SKUs in the Cisco Catalyst 9200 Series?

A: The Cisco Catalyst 9200 Series has a number of compact, fixed uplink, modular uplink platform SKUs as well as a number of license, power and network module options:

- 24 and 48 ports 1G with modular uplinks
  C9200-24T: 24 ports data, modular uplinks
  C9200-24P-4G: 24 ports PoE+, modular uplinks
  C9200-48T: 48 ports data, modular uplinks
  C9200-48P: 48 ports PoE+, modular uplinks
- 24 and 48 ports 1G with 10G fixed uplinks
  C9200L-24T-4X: 24 ports data, 4x 10G uplinks
  C9200L-24P-4X: 24 ports PoE+, 4x 10G uplinks
  C9200L-48T-4X: 48 ports data, 4x 10G uplinks
  C9200L-48P-4X: 48 ports PoE+, 4x 10G uplinks
- 24 and 48 ports 1G with 1G fixed uplinks
  C9200L-24T-4G: 24 ports data, 4x 1G uplinks
  C9200L-24P-4G: 24 ports PoE+, 4x 1G uplinks
  C9200L-48T-4G: 48 ports data, 4x 1G uplinks
  C9200L-48P-4G: 48 ports PoE+, 4x 1G uplinks
- 24 and 48 port mGig/1G with fixed 10G uplinks
  C9200L-24PXG-4X: 24 ports PoE+, 8x mGig, 16x 1G, 4x 10G uplinks
  C9200L-48PXG-4X: 48 ports PoE+, 12x mGig, 36x 1G, 4x 10G uplinks
- 24 and 48 port mGig/1G with fixed 25G uplinks
  C9200L-24PXG-2Y: 24 ports PoE+, 8x mGig, 16x 1G, 2x25G uplinks
  C9200L-48PXG-2Y: 48 ports PoE+, 8x mGig, 40x 1G, 2x25G uplinks
- 8 and 12 port 1G compact with 10G uplinks
  C9200CX-8P-2X2G: 8 port 1G PoE+, 2x1G copper and 2x10G SFP+ uplinks
  C9200CX-8P-2XGH Catalyst 9200CX 8-port 1G, 2x10G and 2x1G, PoE+, HVDC
  C9200CX-12P-2XGH Catalyst 9200CX 12-port 1G, 2x10G and 2x1G, PoE+, HVDC
  C9200CX-12P-2X2G: 12 port 1G PoE+, 2x1G copper and 2x10G SFP+ uplinks
  C9200CX-12T-2X2G: 12 port 1G data, 2x1G copper and 2x10G SFP+ uplinks
  C9200CX-8UXG-2X Catalyst 9200CX 4-port 1G, 4-port 1/2/5/10G multigigabit, 2x1/10G SFP+, UPOE C9200CX-8UXG-2XH Catalyst 9200CX 4-port 1G, 4-port 1/2/5/10G multigigabit, 2x1/10G SFP+, UPOE, HVDC

License options:

- C9200-DNX-A-24-3, -5, -7, C9200-DNA-A-24-3, -5, -7:
- C9200 24 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term
- C9200-DNX-E-24-3, -5, -7, C9200-DNA-E-24-3, -5, -7:
- C9200 24 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9200-DNX-A-48-3, -5, -7, C9200-DNA-A-48-3, -5, -7:
- C9200 48 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term

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- C9200-DNX-E-48-3, -5, -7, C9200-DNA-E-48-3, -5, -7:
- C9200 48 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9200L-DNX-A-24-3, -5, -7, C9200L-DNA-A-24-3, -5, -7:
- C9200L 24 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term
- C9200L-DNX-E-24-3, -5, -7, C9200L-DNA-E-24-3, -5, -7:
- C9200L 24 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9200L-DNX-A-48-3, -5, -7, C9200L-DNA-A-48-3, -5, -7:
- C9200L 48 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term
- C9200L-DNX-E-48-3, -5, -7, C9200L-DNA-E-48-3, -5, -7:
- C9200L 48 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9200CX-DNX-E-3, -5, -7, C9200CX-DNA-E-3, -5, -7:
- C9200CX 8 or 12 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9200CX-DNX-A-3, -5, -7, C9200CX-DNA-A-3, -5, -7:
- C9200CX 8 or 12 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term
- C9200-DNA-E-A-3, -5, -7:
- C9200 Cisco Catalyst Essentials to Advantage upgrade; 3, 5 and 7 year term

Network module options:

- C9200-NM-4G: 4x 1G network module
- C9200-NM-4X: 4x 1G/10G network module

Power options:

- PWR-C6-600WAC
- PWR-C6-1KWAC
- PWR-C5-600WAC
- PWR-C5-1KWAC

Fan Module (C9200 SKUs only):

- C9200-FAN=

Q: Can I stack Cisco Catalyst 9200 Series Switches with the Cisco Catalyst 2960-X/XR Series Switches?

A: These switches do not stack together. Features are packaged differently between these platforms, they use different CPU architectures, and the platforms do not have the same scaling, making stacking with them impossible.

Q: Are the network modules shared between the Cisco Catalyst 9200 and 9300 Series switches?

A: Cisco Catalyst 9300 Series switch network modules cannot be used on Cisco Catalyst 9200 Series switches.

Q: What are the supported uplinks for Cisco Catalyst 9200 Series switches?

A: Catalyst 9200 Series switches support the following fixed and modular uplink options:

- 4x 1G SFP fixed uplinks
- 4x 10G SFP+ fixed uplinks
- 2x 25G SFP28 fixed uplinks
- 4x 1 SFP modular uplinks
- 4x 1/10 SFP+ modular uplinks
- 2x 10G SFP+, 2x 1G copper fixed uplinks

Q: What management ports are available on the Cisco Catalyst 9200 Series switches?

A: Catalyst 9200 Series switches come with a 10/100/1000 Ethernet dedicated management port on the backside of the switch right above the console port. This port is in a separate VRF instance called “Mgmt-vrf” in order to segment the management traffic from the global routing table of the switch. Catalyst 9200CX compact switches come with a micro-USB console port with an optional USB to RJ45 adapter, for management.

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Q: Can I use both console ports on Cisco Catalyst 9200 Series switches simultaneously?

A: No. When you use the USB console, the RJ-45 console receives the output of the USB console as well. This design allows the administrator to see when the USB console port is in use. This capability is useful for remote administrators.

Q: Do Cisco Catalyst 9200 Series switches support auto-baud on the console port?

A: No.

Q: What type of airflow do Cisco Catalyst 9200 Series switches support?

A: The airflow on Cisco Catalyst 9200 Series switches is from “front and side” to back airflow.

Q: What are the key considerations in migrating from Catalyst 3560CX/2960CX to the Catalyst 9200CX?

A: Catalyst 9200CX compact switches have the same dimensions, uplink options and downlink options as the previous generation compact switches and all existing installations can be migrated. There are also HVDC options not available on legacy Catalyst compact models. In some cases, new installation best practices may be required for better efficiency and cooling and may require different accessory kits.

Q: Does the Cisco Catalyst 9200 Series support cloud-monitoring for Catalyst?

A: Yes, starting from IOS XE 17.3. release, Catalyst 9200 Series switches support cloud monitoring for Catalyst.

Q: What are the different powering options for Catalyst 9200 Series switches?

A: Catalyst 9200L 24/48 port models come with redundant fixed (non-field replaceable) power supply configurations with options of 125W, 600W and 1000W.

Catalyst 9200 24/48 modular uplink models come with dual, redundant, field replaceable and upgradeable power supply with options of 125W, 600W and 1000W.

Catalyst 9200CX 8/12 port PoE+ and mGig models come with fixed internal 315W power supplies (not field replaceable or upgradeable).

Catalyst 9200CX 12 port Data model is powered with 802.3bt class 6 using upstream Cisco UPOE+ switches. Alternatively, this switch can also be powered by external power adapter options of 80W AC or DC.

Catalyst 9200CX HVDC models come with fixed internal 315W power supplies that are compatible with 120V-418 VDC (380V nominal) as well as 100-277 VAC.

HVDC is the future in sustainability by providing high efficiency working with DC micro grid powered by renewable sources. Compatibility with AC provides investment protection for moving to DC power in the future.

Q: What is the value HVDC power options?

A: HVDC technology is a more viable energy transmission solution in our increasingly connected smart building energy ecosystem. HVDC seamlessly integrates clean energy into new and existing building power infrastructures and ensuring that renewable energy and localized power storage is an accessible and affordable option. Combined with low voltage PoE, HVDC micro-grids enables both secure monitoring and power control and quick power restoration.

Q: What is the power consumption for Cisco Catalyst 9200 Series switches?

A: Power consumption by SKU is listed on the data sheet and can be seen in Table 3.

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Table 3. Cisco Catalyst 9200 Series power consumption by SKU

Model	Total 10/100/1000 copper ports	Default AC power supply	Available PoE power	Default AC power supply	Fans
Fixed SKUs (C9200L)					
C9200L-24T-4G/4X	24	125W AC	-	Yes	Dual Fixed
C9200L-48T-4G/4X	48	125W AC	-	Yes	Dual Fixed
C9200L-24P-4G/4X	24 PoE+	600W AC	370W	Yes	Dual Fixed
C9200L-48P-4G/4X*	48 PoE+	1000W AC	740W	Yes	Dual Fixed
Modular SKUs (C9200)					
C9200-24T	24	125W AC	-	Yes	Dual FRU
C9200-48T	48	125W AC	-	Yes	Dual FRU
C9200-24P	24 PoE+	600W AC	370W	Yes	Dual FRU
C9200-48P	48 PoE+	1000W AC	740W	Yes	Dual FRU

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Model	Total 10/100/1000 copper ports	Default AC power supply	Available PoE power	Default AC power supply	Fans
Compact SKUs (C9200CX)					
C9200CX-12T-2X2G	12	Powered by 802.3bt class 6 PoE	-	-	Fanless
C9200CX-12P-2X2G	12 PoE+	315W AC	240W	Yes	Fanless
C9200CX-8P-2X2G	8 PoE+	315W AC	240W	Yes	Fanless
C9200CX-8UXG-2X	8 UPOE	315W AC	240W	Yes	Fanless
C9200CX-12P-2XGH	12 PoE+	315W HVDC/AC	240W	Yes	Fanless
C9200CX-8P-2XGH	8 PoE+	315W HVDC/AC	240W	Yes	Fanless
C9200-8UXG-2XH	8 UPOE	315W HVDC/AC	240W	Yes	Fanless

*** ENERGY STAR certified model**

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Cisco Catalyst 9300 Series switches

Q: What are the key SKUs in the Cisco Catalyst 9300 Series?

A: The Cisco Catalyst 9300 Series has 34 primary platform SKUs and a number of license, power, network and SSD storage module options:

- **C9300X-48HX:** 48 ports 10G mGig with 90W UPOE+*
- **C9300X-48TX:** 48 ports 10G mGig data*
- **C9300X-48HXN:** 40 ports 5G mGig, 8 ports 10G mGig, full 90W UPOE+*
- **C9300X-24HX:** 24 ports 10G mGig with 90W UPOE+*
- **C9300X-24Y:** 24 ports multi-rate 25G/10G/1G SFP28*
- **C9300X-12Y:** 12 ports multi-rate 25G/10G/1G SFP28*
- **C9300-48UN:** 48 ports 5G mGig, UPOE*
- **C9300-48UXM:** 36 ports 1G/2.5G with 12 ports full 10G mGig*
- **C9300-24UX:** 24 ports 10G mGig UPOE*
- **C9300-48U:** 48 ports 1G UPOE*
- **C9300-24U:** 24 ports 1G UPOE*
- **C9300-24UB:** 24 ports 1G UPOE high density
- **C9300-48UB:** 48 ports 1G UPOE high density
- **C9300-24UXB:** 24 ports 10G mGig UPOE high density
- **C9300-24H:** 24 ports 1G UPOE+ 90W
- **C9300-48H:** 48 ports 1G UPOE+ 90W
- **C9300-48P:** 48 ports PoE+*
- **C9300-24P:** 24 ports PoE+*
- **C9300-48T:** 48 ports data*
- **C9300-24T:** 24 ports data*
- **C9300-24S:** 24 ports 1G SFP*
- **C9300-48S:** 48 ports 1G SFP*
- **C9300L-24T-4G:** 24 ports 1G data with 4x 1G uplink
- **C9300L-24P-4G:** 24 ports 1G PoE+ with 4x 1G uplink
- **C9300L-48T-4G:** 48 ports 1G data with 4x 1G uplink
- **C9300L-48P-4G:** 48 ports 1G PoE+ with 4x 1G uplink
- **C9300L-24T-4X:** 24 ports 1G data with 4x 10G uplink*
- **C9300L-24P-4X:** 24 ports 1G PoE+ with 4x 10G uplink*
- **C9300L-48T-4X:** 48 ports 1G data with 4x 10G uplink*
- **C9300L-48P-4X:** 48 ports 1G PoE+ with 4x 10G uplink*
- **C9300L-24UXG-4X:** 16 ports 1G data, 8 mGig ports with 4x 10G uplinks*
- **C9300L-24UXG-2Q:** 16 ports 1G data, 8 mGig ports with 2x 40G uplinks
- **C9300L-48UXG-4X:** 36 ports 1G data, 8 mGig ports with 4x 10G uplinks*
- **C9300L-48UXG-2Q:** 36 ports 1G data, 8 mGig ports with 2x 40G uplink
- **C9300LM-24U-4Y:** 24 ports 1G UPOE with 4x 25G uplinks
- **C9300LM-48U-4Y:** 48 ports 1G UPOE with 4x 25G uplinks
- **C9300LM-48UX-4Y:** 8 ports mGig, 40 ports 1G UPOE with 4x 25G uplinks
- **C9300LM-48T-4Y:** 48 ports 1G data with 4x 25G uplinks

*** Supports Meraki cloud management**

License options:

- C9300X-DNX-A-24-3, -5, -7; C9300X-DNA-A-24-3, -5, -7: C9300X 24 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term

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- C9300X-DNX-E-24-3, -5, -7; C9300X-DNA-E-24-3, -5, -7: C9300X 24 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9300X-DNX-A-12-3, -5, -7; C9300X-DNA-A-12-3, -5, -7: C9300X 12 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term
- C9300X-DNX-E-12-3, -5, -7; C9300X-DNA-E-12-3, -5, -7: C9300X 12 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9300-DNX-A-24-3, -5, -7; C9300-DNA-A-24-3, -5, -7: C9300 24 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term
- C9300-DNX-E-24-3, -5, -7; C9300-DNA-E-24-3, -5, -7: C9300 24 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9300-DNX-A-48-3, -5, -7, C9300-DNA-A-48-3, -5, -7: C9300 48 port Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term
- C9300-DNX-E-48-3, -5, -7; C9300-DNA-E-48-3, -5, -7: C9300 48 port Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9300-DNA-E-A-3, -5, -7: C9300 Cisco Catalyst Essentials to Advantage upgrade; 3, 5 and 7 year term
- C9300L-DNX-A-24-3, -5, -7; C9300L-DNA-A-24-3, -5, -7: C9300L/LM 24 port Cisco Catalyst Advantage; 3, 5 and 7 year term
- C9300L-DNX-E-24-3, -5, -7; C9300L-DNA-E-24-3, -5, -7: C9300L/LM 24 port Cisco Catalyst Essentials; 3, 5 and 7 year term
- C9300L-DNX-A-48-3, -5, -7; C9300L-DNA-A-48-3, -5, -7: C9300L/LM 48 port Cisco Catalyst Advantage; 3, 5 and 7 year term
- C9300L-DNX-E-48-3, -5, -7; C9300L-DNA-E-48-3, -5, -7: C9300L/LM 48 port Cisco Catalyst Essentials; 3, 5 and 7 year term
- C9300L-DNX-E-A-3, -5, -7; C9300L-DNA-E-A-3, -5, -7: C9300L/LM Cisco Catalyst Essentials to Advantage upgrade; 3, 5 and 7 year term
- LIC-C9300-24A-1Y C9300 Cisco Meraki Advanced Software license, 24-port, 1 Year Term license
- LIC-C9300-24A-1Y, -3Y, -5Y, -7Y, -10Y C9300 Cisco Meraki Advanced Software license, 24-port, 1, 3, 5, ,7, 10 Year Term license
- LIC-C9300-24E-1Y, -3Y, -5Y, -7Y, -10Y C9300 Cisco Meraki Enterprise Software license, 24-port, 1 Year Term license
- LIC-C9300-48A-1Y, -3Y, -5Y, -7Y, -10Y C9300 Cisco Meraki Advanced Software license, 48-port, 1 Year Term license
- LIC-C9300-48E-1Y, -3Y, -5Y, -7Y, -10Y C9300 Cisco Meraki Enterprise Software license, 48-port, 1 Year Term license

Network module options:

- C9300X-NM-4C: 4x dual-rate 100G/40G network module*
- C9300X-NM-2C: 2x dual-rate 100G/40G network module
- C9300X-NM-8Y: 8x multi-rate 25G/10G/1G network module
- C9300X-NM-8M: 8x 10G mGig network module
- C9300-NM-2Q: 2x 40G network module
- C9300-NM-2Y: 2x 25G network module
- C9300-NM-8X: 8x 10G network module
- C9300-NM-4M: 4x 10G mGig network module
- C9300-NM-4G: 4x 1G network module

***C9300X-NM-4C is compatible only with C9300X-48HX, C9300X-48TX and C9300X-24Y models.**

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Power options:

- PWR-C1-350WAC
- PWR-C1-715WAC
- PWR-C1-1100WAC
- PWR-C1-1100WAC-P (UPOE)
- PWR-C1-1900WAC-P (UPOE+)

Fan Module:

- C9300-FAN=

Storage modules:

- SSD-120G: Cisco pluggable USB3.0 SSD storage
- SSD-240G: Cisco pluggable USB3.0 SSD storage

Q: How many Cisco Catalyst 9300 Series switches can be stacked?

A: You can stack up to 8 switches using Cisco Stackwise-1T (C9300X), Stackwise-480 (C9300X and C9300) or Cisco Stackwise-320 (C9300L). While C9300X and C9300 models may be in the same stack, C9300L models can only stack with other C9300L models).

Q: Can I stack Cisco Catalyst 9300 Series Switches with the Cisco Catalyst 3850 Series Switches?

A: These switches do not stack together. Features are packaged differently between these platforms, they use different CPU architectures, and the platforms do not have the same scaling, making stacking with them impossible.

Q: Can I stack the Cisco Catalyst 9300 Series fixed and modular uplink models together?

A: No, the fixed uplink (C9300L) switches support StackWise-320 whereas the modular uplink (C9300X and C9300) models support StackWise-480. Catalyst 9300X only stacks support a Stackwise-1T.

Q: Are the network modules shared between the Cisco Catalyst 9300 and 3850 Series switches?

A: Cisco Catalyst 3850 Series switch network modules may be used on Cisco Catalyst 9300 Series modular uplink models. However, the Cisco Catalyst 9300 Series switch network modules are not usable on the Cisco Catalyst 3850 Series switches. The Cisco Catalyst 9300 Series fixed uplink models uses fixed network modules only.

Q: What are the supported uplink modules for Cisco Catalyst 9300 Series switches?

A: Cisco Catalyst 9300 Series switches support the following uplink fixed and modular uplink options.

- 4x 1 Gigabit Ethernet network – fixed and modular
- 4x Multigigabit (1, 2.5, 5, or 10 Gigabit Ethernet) network – fix and modular
- 8x 10 Gigabit Ethernet SFP+ network modular
- 8x 10 Multigigabit Ethernet network modular
- 2x 25 Gigabit Ethernet SFP28 network modular
- 8x 25/10/1 Gigabit Ethernet network modular
- 2x 40 Gigabit Ethernet QSFP network – fixed and modular
- 2x 100/40 Gigabit Ethernet QSFP28 network modular
- 4x 100/40 Gigabit Ethernet QSFP28 network modular

Q: Where can I purchase an SSD module for the Cisco Catalyst 9300 Series switches?

A: SSD modules approved by Cisco are available (SSD-240G=, SSD-120G=).

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Q: What management ports are available on the Cisco Catalyst 9300 Series switches?

A: Catalyst 9300 Series switches come with a 10/100/1000 Ethernet dedicated management port on the backside of the switch right above the console port. This port is in a separate VRF instance called “Mgmt-vrf” in order to segment the management traffic from the global routing table of the switch.

Q: Can I use both console ports on Cisco Catalyst 9300 Series switches simultaneously?

A: No. When you use the USB console, the RJ-45 console receives the output of the USB console as well. This design allows the administrator to see when the USB console port is in use. This capability is useful for remote administrators.

Q: Do Cisco Catalyst 9300 Series switches support auto-baud on the console port?

A: No.

Q: What type of airflow do Cisco Catalyst 9300 Series switches support?

A: The airflow on Cisco Catalyst 9300 Series switches is “front and sides” to back airflow.

Q: What fiber solutions are available on the Cisco Catalyst 9300 Series switches?

A: The Cisco Catalyst 9300 Series includes 12-ports, 24-port and 48-port SKUs with multi-rate 25G/10G/1G and 1G SFP downlink options. These seamlessly integrate with the Catalyst 9300 copper devices, using the same optics, uplink modules, power supplies, fans and cables, and can be stacked together with other Catalyst 9300 switches that also run Stackwise-480 (C9300 and C9300X SKUs) or Stackwise-1T (C9300X SKUs only).

Q: Does the Cisco Catalyst 9300 Series support application hosting?

A: Yes, Cisco Catalyst 9300 Series switches support native docker application hosting capabilities reserving dedicated memory and CPU resources for application hosting. This provides a separate execution space for user applications without compromising the integrity and performance of the switch. Applications, including ASAC firewall, and Dockers containers, reside in the external Solid State Drive (SSD) storage and have no access to the internal device flash storage, which is reserved for Cisco IOS XE to protect its integrity. Catalyst 9300X models support enhanced app hosting with additional CPU, memory and local storage capabilities.

Q: Does the Cisco Catalyst 9300 Series support Cisco Spaces IoT Gateway?

A: Yes, Cisco Catalyst 9300 Series switches support hosting Cisco Spaces natively on the CPU complex. Cisco Spaces IoT Services on both Catalyst 9000 switches and access points bridges wired and wireless smart building technology using the power of data to help speed return to a trusted workplace and the inevitable return-to-office.

Q: Does the Cisco Catalyst 9300 Series support ThousandEyes Enterprise Agent?

A: Yes, Cisco Catalyst 9300 Series switches support hosting ThousandEyes Enterprise Agent natively on the flash of the switch starting from IOS XE 17.3.3 release. Cisco signed ThousandEyes Enterprise Agent app is required to run natively on the flash of the switch.

Q: Does Catalyst 9300 Series switches support ASAc firewalls?

A: Yes.

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Q: What are the minimum hardware and licensing prerequisites to host ASAc on the Catalyst 9300 Series switches?

A: To host ASAc on Catalyst 9300 Series switches, any model (C9300/L/LM/X) with a Cisco Catalyst or Cisco DNA Advantage Software license is required. Additionally, the switch should include a pluggable USB SSD-240G hardware. Choose the appropriate ASAc term license: 'L-ASA-C-5S-K9=' for firewall throughputs up to 100 Mbps or 'L-ASA-C-10S-K9=' for higher throughputs up to 1G.

Q: What are the compatible software versions to host the virtual ASAc application on Catalyst 9300 Series switches?

A: Support for hosting ASAc on the Catalyst 9300 Series starts with IOS XE 17.12.2 for switches and ASAc version 9.20.2.

Q: What are the common use cases for hosting ASAc firewall on the Catalyst 9300 Series switch at access?

A: Common use cases for hosting ASAc on Catalyst 9300 switches include:

- Stateful Inspection for security compliance.
- Avoiding network bottlenecks by virtualizing physical firewall appliances.
- Reducing the attack surface through logical network segmentation.
- Enforcing granular access controls using SGACL.
- Connecting isolated OT/IoT clusters with secure IPsec tunnels.
- Secure remote management using SSL/TLS VPN.
- Minimizing latency for time-sensitive applications.

Q: What models of Catalyst 9300 Series switches can host the ASAc application?

A: All models of Catalyst 9300 Series (C9300, C9300L, C9300LM, C9300X) can host ASAc. For optimal performance, hosting on C9300X models is recommended.

Q: What are the minimum compute and storage requirements to host ASAc on C9300 models?

A: The minimum resources required are 2vCPUs (1 core), 2GB RAM, and 8GB disk space.

Q: What are the recommended resource Profiles to host ASAc on Catalyst 9300 Series switches?

A: Refer to Table 4.

Table 4. Resource Profiles for hosting

Profile	CPU	RAM	Disk Space	Supported Platforms
Profile 1	2 vCPUs (1 Core)	2 GB	120 GB/240 GB	C9300/L/LM/X
Profile 2	4 vCPUs (2 Core)	8 GB	120 GB/240 GB	C9300X

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Q: Can we host another application along with ASAc on Catalyst 9300 Series switches?

A: Catalyst 9300/L/LM models will have no app-hosing resources left when ASAc is hosted. Catalyst 9300X models may have the resources to host another application; however, the combination needs validation.

Q: Can ASAc application be hosted on Catalyst 9300 Series switching with legacy USB SSD-120G?

A: Yes, SSD-120G can be used to host the ASAc application on Catalyst 9300 series switches.

Q: What is the maximum ASAc virtual firewall throughput (1D) when hosted on Catalyst 9300 Series switches?

A: Refer to Table 5.

Table 5. Maximum ASAc throughput

Model	Max Throughput	CPU	RAM
C9300	500 Mbps	2 vCPUs (1 Core)	2GB
C9300X	700 Mbps	2 vCPUs (1 Core)	2GB
C9300X	900 Mbps	4 vCPUs (2 Core)	8GB

Q: What features are supported on ASAc when hosted on Catalyst 9300 Series switches?

A: ASAc supports most of the features that are supported on parity with ASAv, supporting advanced features like IPsec, VPN, and SGTACLs. Most of the features that are supported on ASAv by Cisco software are supported on the virtual appliance as well, except for clustering.

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Q: What are the management options for ASAc hosted on Catalyst 9300 Series switches?

A: For large deployments, Cisco Catalyst Center and Cisco Defense Orchestrator (CDO) are recommended. For smaller deployments, CLI, RESTCONF/NETCONF, and Cisco Adaptive Security Device Manager (ASDM) can be used.

Table 6. ASAc management options

ASAc Management	Owner	Large-scale Deployments	Small Deployments
ASAc Life Cycle Management	NetOps	Cisco Catalyst Center	CLI/RESTCONF/NETCONF
ASAc Policy Management	SecOps	Cisco Defense Orchestrator (CDO)	ASDM

Q: What mode does ASAc firewall support when hosted on Catalyst 9300?

A: ASAc supports only Routed firewall mode, it does not support transparent mode.

Q: Can ASAc leverage existing ASAv license to host on Catalyst 9300 Series switches?

A: Yes, ASAc can use ASAv licenses 'L-ASA-V-10S-K9=' or ''L-ASA-V-5S-K9=' when hosted on Catalyst 9300 Series switches.

Q: Can ASAc application be hosted on the Catalyst 9300 switch stack? What are the prerequisites to host it on the stack?

A: Yes, ASAc can be hosted on the Catalyst 9300 switch stack. To ensure optimal performance and High Availability (HA), it is recommended to have two USB SSD-240G devices in the stack—one connected to the active switch and the other to the standby switch.

Additionally, it's important to note that a single ASAc license is shared between the active and standby instances within the stack. This licensing approach facilitates seamless transitions and efficient utilization of resources in the event of a switch-over.

Q: What is the High Availability (HA) support for ASAc hosted on Catalyst 9300 Series switches?

A: The App-hosting framework offers High Availability (HA) for hosted applications, including ASAc, within the Catalyst 9300 stack. The support is limited to stateless switchover. The active ASAc instance periodically synchronizes its configuration to the standby instance. A single ASAc license is shared between the active and standby instances in the stack.

During a switchover, the standby ASAc instance takes approximately 90 to 120 seconds to start processing the traffic. It is important to note that traffic subjected to stateful inspection is temporarily dropped during this transition period. This brief interruption ensures a seamless transfer of control between active and standby instances, maintaining the integrity of the high-availability architecture.

Q: Does the Cisco Catalyst 9300 Series support cloud monitoring for Catalyst?

A: Yes, starting from IOS XE 17.3. release, Catalyst 9300 Series switches support cloud-monitoring for Catalyst.

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Q: Does the Cisco Catalyst 9300 Series support cloud management for Catalyst?

A: Yes, a number of Catalyst 9300 Series switch models support cloud-monitoring for Catalyst and can be ordered with the Meraki Software option. The Meraki Software option combines the simplicity of the Meraki dashboard with power of Catalyst 9000 switching hardware. To satisfy high-bandwidth applications and the deployment of high-speed 802.11ax/Wi-Fi 6/6E access points, the Meraki Software option provides multigigabit ports, 480G stacking, and modular 10/40G uplinks. Catalyst 9300 models with the Meraki Software option deliver resiliency with fast stack convergence and StackPower. They provide Adaptive Policy using an over-the-wire tag which segments traffic into security groups to deliver scalable security. The Catalyst 9300 models integrated under the Meraki dashboard provide a simple, powerful solution to the most demanding wired access applications.

Q: What is the power consumption for Cisco Catalyst 9300 Series modular uplink models?

A: Power consumption by SKU is listed on the data sheet and can be seen in Table 7.

Table 7. Cisco Catalyst 9300 Series power consumption by SKU

Model	Total ports	Default AC power supply	Available PoE power	Cisco StackWise-1T	Cisco StackWise-480	Cisco StackPower
C9300X-48HX	48 10G Multigigabit UPOE+	1100W AC	1000W	Yes	Yes	Yes
C9300X-48TX	48 10G Multigigabit	715W AC	1000W	Yes	Yes	Yes
C9300X-48HXN	40 5G/2 10G Multigigabit UPOE+	1100W AC	1000W	Yes	Yes	Yes
C9300X-24HX	24 UPOE+	1100W AC	1000W	Yes	Yes	Yes
C9300X-12Y	12 25/10/1G SFP28	715W AC	1000W	Yes	Yes	Yes
C9300X-24Y	12 25/10/1G SFP28	715W AC	1000W	Yes	Yes	Yes

The following are Catalyst 9300 models that fully support cloud management and can be ordered with a Meraki software option:

- Data-only: C9300X-48TX, C9300-48T, C9300-24T, C9300L-48T-4X, C9300L-24T-4X
- 30W PoE+: C9300-48P, C9300-24P, C9300L-48P-4X, C9300L-48PF-4X, C9300L-24P-4X
- 60W UPOE: C9300-48U, C9300-48UXM, C9300-48UN, C9300-24U, C9300-24UX, C9300L-48UXG-4X, C9300L-24UXG-4X
- 90W UPOE+: C9300X-48HX, C9300X-24HX, C9300X-48HXN
- Fiber: C9300X-24Y, C9300X-12Y, C9300-48S, C9300-24S

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Model	Total ports	Default AC power supply	Available PoE power	Cisco StackWise-1T	Cisco StackWise-480	Cisco StackPower
C9300-24T	24	350W AC	-	No	Yes	Yes
C9300-48T	48	350W AC	-	No	Yes	Yes
C9300-24P	24 PoE+	715W AC	445W	No	Yes	Yes
C9300-48P*	48 PoE+	715W AC	437W	No	Yes	Yes
C9300-24U	24 Cisco UPOE	1100W AC	830W	No	Yes	Yes
C9300-48U	48 Cisco UPOE	1100W AC	822W	No	Yes	Yes
C9300-24UB	24 Cisco UPOE high density	1100W AC	830W	No	Yes	Yes
C9300-48UB	48 Cisco UPOE high density	1100W AC	822W	No	Yes	Yes
C9300-24UXB*	24 Multigigabit Cisco UPOE high density (100 Mbps or 1, 2.5, 5, or 10 Gbps)	1100W AC	560W	No	Yes	Yes
C9300-24H	24 Cisco UPOE+	1300W AC	1000W	No	Yes	Yes
C9300-48H	24 Cisco UPOE+	1300W AC	560W	No	Yes	Yes
C9300-24UX	24 Multigigabit Cisco UPOE (100 Mbps or 1, 2.5, 5, or 10 Gbps)	1100W AC	560W	No	Yes	Yes
C9300-48UXM	48x 2.5 Gbps ports (12 Multigigabit – 1, 2.5, 5, or 10 Gbps)	1100W AC	490W	No	Yes	Yes

*** ENERGY STAR certified model**

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Q: What is the power consumption for Cisco Catalyst 9300 Series fixed uplink switches?

A: Power consumption by SKU is listed on the data sheet and can be seen in Table 8.

Table 8. Cisco Catalyst 9300 Series power consumption by SKU

Model	Total 10/100/1000 or Multigigabit copper ports	Total uplink fiber ports	Default AC power supply	Cisco StackWise-320	Available PoE power
C9300L-48P-4X	48 PoE+	4x SFP+ (10G)	1100W	Yes	890W
C9300L-48P-4G	48 PoE+	4x SFP (1G)	1100W	Yes	890W
C9300L-24P-4X	24 PoE+	4x SFP+ (10G)	715W	Yes	505W
C9300L-24P-4G	24 PoE+	4x SFP (1G)	715W	Yes	505W
C9300L-48T-4X	48	4x SFP+ (10G)	350W	Yes	N/A
C9300L-48T-4G	48	4x SFP (1G)	350W	Yes	N/A
C9300L-24T-4X	24	4x SFP+ (10G)	350W	Yes	N/A
C9300L-24T-4G	24	4x SFP (1G)	350W	Yes	N/A
C9300LM-24U-4Y	24 UPOE	4x SFP28 (25G)	1100W	Yes	890W
C9300LM-48U-4Y	48 UPOE	4x SFP28 (25G)	1100W	Yes	890W
C9300LM-48UX-4Y	48 UPOE	4x SFP28 (25G)	1100W	Yes	890W
C9300LM-48T-4Y	48	4x SFP28 (25G)	350W	Yes	N/A

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Q: How do I position the Cisco Catalyst 9300 Series models verses the Catalyst 9200 Series models?

A: The scale and performance of the Cisco Catalyst 9300 Series fixed uplink (C9300L SKUs) and modular uplink (C9300 SKUs) switches are higher than that of the Cisco Catalyst 9200 Series, making them more suited to larger networks. Also, the Catalyst 9200 switches support only limited SD-Access functionality, while the Catalyst 9300 Series models can serve as complete fabric-in-a-box deployments, Audio Visual Bridging (AVB), Docker container and application hosting including ASAc firwall. Finally, the security features are more advanced with the Catalyst 9300 Series models, such as Encrypted Traffic Analytics (ETA), MACsec-256 link encryption, so these switches are more appropriate in a business-critical branch network, while the Catalyst 9200 Series switches are more appropriate for simple branch networks.

Q: What is the data sheet and SKUs on Cisco Catalyst 9300 Series switches?

A: Refer to the Cisco Catalyst 9300 Series switch data sheet that provide the technical and product details of the series:

Cisco Catalyst 9300 Series Data Sheet.

Cisco Catalyst 9400 Series switches

Q: What are the key SKUs in the Cisco Catalyst 9400 Series?

A: The Cisco Catalyst 9400 Series has the following primary hardware SKUs with a number of license, power and SSD storage module options:

- **C9410R:** 10 slot Catalyst 9400 Chassis
- **C9407R:** 7 slot Catalyst 9400 Chassis
- **C9404R:** 4 slot Catalyst 9400 Chassis
- **C9400-SUP-2XL:** Up to 480G per slot supervisor, with 100G/40G uplinks
- **C9400-SUP-2:** Up to 240G per slot supervisor, with 100G/40G uplinks
- **C9400-SUP-1XL-Y:** Up to 240G per slot supervisor, with 0G/25G/10G uplinks
- **C9400-SUP-1XL:** Up to 240G per slot supervisor, with 40G/10G uplinks
- **C9400-SUP-1:** 80G per slot supervisor
- **C9400-LC-24XY:** 20-Port 25G (SFP28), 4-Port 10G (SFP+)
- **C9400-LC-12QC:** 12-Port 40G (QSFP+) or 4-Port 100G (QSFP28), 4-Port 40G (QSFP+)
- **C9400-LC-48HX:** 48 ports UPOE+ 10G/5G/2.5G/1G/100M mGig (RJ45) line card
- **C9400-LC-48UX:** 48 ports UPOE with 24 ports 10G/5G/2.5G mGig, 24 ports 1G/100M/10M (RJ45) line card
- **C9400-LC-48HN:** 48 ports UPOE+ 100M/1G/2.5G/5G mGig (RJ45) line card
- **C9400-LC-48H:** 48 ports UPOE+ 10/100/1000 (RJ45) line card
- **C9400-LC-48U:** 48 ports UPOE 10/100/1000 (RJ45) line card
- **C9400-LC-48P:** 48 ports PoE+ 10/100/1000 (RJ45) line card
- **C9400-LC-48T:** 48 ports 10/100/1000 (RJ45) line card
- **C9400-LC-48XS:** 48 ports 10G (SFP+)/1G (SFP) line card
- **C9400-LC-24XS:** 24 ports 10G (SFP+)/1G (SFP) line card
- **C9400-LC-48S:** 48 ports 1G (SFP) line card
- **C9400-LC-24S:** 24 ports 1G (SFP) line card

License options:

- C9400-DNX-A-3, -5, -7; C9400-DNA-A-3, -5, -7:

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- C9400 Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term
- C9400-DNX-E-3, -5, -7; C9400-DNA-E-3, -5, -7:
- C9400 Cisco Catalyst and Cisco DNA Essentials; 3, 5 and 7 year term
- C9400-DNA-E-A-3, -5, -7:
- C9400 Cisco Catalyst Essentials to Advantage upgrade; 3, 5 and 7 year term

Power options:

- C9400-PWR-2100WAC
- C9400-PWR-3200AC
- C9400-PWR-3200DC

Fan Module:

- C9410-FAN=
- C9407-FAN=
- C9404-FAN=

Storage modules:

- C9400-SSD-240G: Cisco pluggable 240GB M2 SATA memory
- C9400-SSD-480G: Cisco pluggable 480GB M2 SATA memory
- C9400-SSD-960G: Cisco pluggable 960GB M2 SATA memory

Q: What is the system architecture on Cisco Catalyst 9400 Series switches?

A: Catalyst 9400 Series switches are based on centralized architecture using the Cisco UADP ASIC running open Cisco IOS XE software. This architecture has several key benefits, including simplicity of upgrades, investment protection, and superior high availability.

Q: What are the different chassis models available on Cisco Catalyst 9400 Series switches?

A: Cisco Catalyst 9400 Series switches offer three chassis types: 4 slot, 7 slot, and 10 slot, each with redundant supervisor slots. The 4 slot chassis has 2 line cards slots that can serve up to 96 ports with up to 480 G per slot with SUP-2XL. The 7 slot chassis has 5 line card slots that can serve up to 240 line card ports with up to 480 G per slot with SUP-2XL. The 10 slot chassis has 8 line card slots that can serve up to 384 line card ports with up to 480 G per slot with SUP-2XL.

Q: Where are the different data sheets and SKUs on Cisco Catalyst 9400 Series switches?

A: Refer to the Cisco Catalyst 9400 Series switch data sheets that provide the technical and product details of the series:

- Cisco Catalyst 9400 Series Line Cards Data Sheet
- Cisco Catalyst 9400 Series Switch Chassis Data Sheet
- Cisco Catalyst 9400 Supervisor Engine Data Sheet

Q: What uplink combination is available on Cisco Catalyst 9400 Series supervisors?

A: Cisco Catalyst 9400 Series switches offers a flexible uplink architecture for 100, 40, 25, and 10 Gigabit Ethernet deployments, helping ensure that your investment is protected for the future.

Cisco Catalyst 9400 Supervisor Engine-2 and 2XL support one of the following combinations of uplink ports in a standalone configuration:

Native 100 Gigabit Ethernet uplinks: 4x QSFP28

Mixed uplink deployment: 3x QSFP28 + 4x SFP28

Mixed uplink deployment: 1x QSFP+ and 4x SFP+

Cisco Catalyst 9400 Supervisor Engine-1, 1XL and 1XL-Y support one of the following combinations of uplink ports in a standalone configuration:

- Native 40 Gigabit Ethernet uplinks: 2x QSFP
- Native 25 Gigabit Ethernet uplinks: 2x SFP28 (1XL-Y)
- Native 10 Gigabit Ethernet uplinks: 8x SFP+
- Mixed uplink deployment: 1x QSFP+ and 4x SFP+

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Q: What uplink combinations are available with Catalyst 9400 Series switch redundant supervisors?

A: In redundant supervisor configuration, one of the following combination of uplinks ports is supported:

Cisco Catalyst 9400 Supervisor Engine-2 and 2XL support one of the following combinations of the uplink ports in a redundant supervisor configuration:

- 21x QSFP28 on each supervisor (2/2XL)
- 1x QSFP28 + 4x SFP28 on each supervisor

Cisco Catalyst 9400 Supervisor Engine-1, 1XL and 1XL-Y support one of the following combinations of uplink ports in a redundant supervisor configuration:

- 1x QSFP on each supervisor
- 1x SFP28 on each supervisor
- 4x SFP+ on each supervisor

Q: What are the SSD onboard storage options on Cisco Catalyst 9400 Series switches?

A: On the supervisor module, you can order an optional SSD for onboard storage. The supervisor module supports 240, 480, or 960 GB configurations. It is recommended to configure this module on both supervisors (active and redundant) at the time of order. For dual-supervisor configuration, it is recommended that you order the same size of SSD module on both supervisors.

Q: What line cards are available on Cisco Catalyst 9400 Series switches?

A: Cisco Catalyst 9400 Series switches support the following line card modules to serve the diverse needs of modular campus deployments:

- C9400-LC-24XY: 20-Port 25G (SFP28), 4-Port 10G (SFP+) (SUP-2X/2XL only)
- C9400-LC-12QC: 12-Port 40G (QSFP+) or 4-Port 100G (QSFP28), 4-Port 40G (QSFP+) (SUP-2X/2XL only)
- C9400-LC-48HX: 48 ports UPOE+ 10G/5G/2.5G/1G mGig 1G/100M (RJ45)
- C9400-LC-48HN: 48 ports UPOE+ 5G/2.5G/1G mGig, 1G/100M (RJ45)
- C9400-LC-48UX: 48 ports UPOE with 24 ports 10G/5G/2.5G mGig, 24 ports 1G/100M mGig (RJ45)
- C9400-LC-48TX: 48 ports 10G/5G/2.5G/1G mGig (RJ45), data
- C9400-LC-48H: 48 ports UPOE+ 10/100/1000 (RJ45)
- C9400-LC-48U: 48 ports UPOE 10/100/1000 (RJ45)
- C9400-LC-48P: 48 ports PoE+ 10/100/1000 (RJ45)
- C9400-LC-48T: 48 ports 10/100/1000 (RJ45)
- C9400-LC-48XS: 48 ports 10G (SFP+)/1G (SFP)
- C9400-LC-24XS: 24 ports 10G (SFP+)/1G (SFP)
- C9400-LC-48S: 48 ports 1G (SFP)
- C9400-LC-24S: 24 ports 1G (SFP)

Q: Can a Catalyst 9400 Series switch spare supervisor be used in any standby supervisor slot?

A: Yes, standby SUP will assume the license level of Active SUP regardless which slot its inserted in.

Q: Does SSO work with a Cisco Catalyst Essentials License and spare SUP in a Catalyst 9400 Series switch?

A: SSO functionality is supported in with Cisco Catalyst Essentials license, however for NSF and ISSU capabilities, a Network Advantage license is needed on both Supervisors.

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Q: If I buy a Catalyst 9400 Series switch with the Cisco Catalyst Essentials license and a spare supervisor (ships with Network Advantage only), does it effectively upgrade the switch to Cisco Catalyst Advantage?

A: If the Cisco Catalyst Advantage feature set is required, the chassis must be upgraded to Cisco Catalyst Advantage license: C9400-DNA-E-A.

Following table summarizes a few scenarios.

Table 9. Catalyst 9400 Supervisor License Operation

Deployment Scenario	Operation	Result
Use spare SUP as secondary SUP	Config of primary SUP gets copied and used for secondary SUP	After reboot, system operates with 1x DNA-E and 2x NW-E
Use spare SUP as primary SUP (Dual SUP mode)	Reboot is mandatory	Upon SL validation, system operates with 1xDNA-E and 2x NW-E

Q: What is the airflow design on Cisco Catalyst 9400 Series switches?

A: Cisco Catalyst 9400 Series switches utilize a side-to-side airflow design that is most common in campus modular access deployments.

Q: What is unique about Cisco Catalyst 9400 Series switch fan-tray design?

A: Cisco Catalyst 9400 Series switches have an innovative fan-tray design that allows you to service the fan tray from the front or the back using the same fan tray. In certain rack deployments, this design allows you to retain your cable connectivity to the modules while servicing the fan tray from the rear.

Q: What is unique about the Cisco Catalyst 9400 Series switch power design?

A: The Cisco Catalyst 9400 Series switch power-design architecture is unique and superior in many ways. The novel design supports:

- Modular power supply
- Superior high-availability capabilities to support N + 1 or N + N modes of operation
- Combined mode of operation
- Ability to mix-and-match inputs from AC or DC power supplies
- Platinum rated efficient power supplies
- Power shared across data, PoE and system components

Q: How many power supplies can the 4, 7 and 10 slot chassis hold?

A: The 4 slot chassis option supports up to 4 modular power supplies. The 7 and 10 slot chassis options support up to 8 modular power supplies.

Q: How do I decide the number of power supplies I need on a Cisco Catalyst 9400 Series switch?

A: Use the Cisco Power Calculator to estimate the power requirements on Cisco Catalyst 9400 Series switches. This tool allows you to configure

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current and future power needs based on the devices, line cards, and access endpoints and recommends the number of power supplies you need for your deployment: https://www.cisco.com/c/en/us/support/web/tools-catalog.html.

Q: Do the power supplies separate the power into data and inline (PoE) categories?

A: No. The power from the power supplies is shared between data, PoE and other system components.

Q: What power redundant mode does Cisco Catalyst 9400 Series switches support?

A: Cisco Catalyst 9400 Series switches support N+N redundant mode and N+1 redundant mode. The platforms allow changing of the power supply modes with a simple CLI. For N+N mode, N power supplies are active and N are in standby. For N+1 mode, N power supplies are active and 1 is in standby.

Q: On Cisco Catalyst 9400 Series switches, what is the default power supply mode?

A: The default mode is a combined mode; User can change the mode of operation either N+N or N+1 mode.

Q: Do Cisco Catalyst 9400 Series switches come with built-in RFID?

A: Yes, Cisco Catalyst 9400 Series switches come with built-in passive RFID tags on all the components so that you have an inventory of the different components, including separated RFID tags for the supervisor, all line-card modules, the power supplies, the fan tray, and the chassis.

Q: What management ports are available on Cisco Catalyst 9400 Series switches?

A: Cisco Catalyst 9400 Series switches come with a mini-B type USB console port and a 10/100/1000 Ethernet (RJ-45) dedicated management port on the front panel of the switch. The Ethernet port is in a separate VRF instance called “Mgmt-vrf”. This setup segments the management traffic from the global routing table of the switch.

Q: Can I use both console ports simultaneously on a Cisco Catalyst 9400 Series switch?

A: No. The RJ-45 port is the default and console switches to USB when the USB cable is connected.

Q: Are there any recommended cable specifications for 90W UPOE+ applications?

A: Recommended cable specifications are documented in the Catalyst 9400 hardware installation guide: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst9400/hardware/install/b_c9400_hig/b_c9400_hig_appendix_01011.html.

Q: Do Cisco Catalyst 9400 Series switches support Online Insertion and Removal (OIR)?

A: Yes, OIR is supported on all the modules and power supplies.

Q: What fiber solutions are available on the Cisco Catalyst 9400 Series switches?

A: The Cisco Catalyst 9400 Series includes 12-port 40G, 4-port 100G/4-port 40G, 20-port multi-rate 25G/10G/1G and 48-port 10G/1G downlink options. These seamlessly integrate with the Catalyst 9400 copper line cards.

Q: What pluggable transceiver modules do Cisco Catalyst 9400 Series switches support?

A: Refer to the Cisco Transceiver Module Compatibility Matrices for the supported list https://www.cisco.com/c/en/us/products/interfaces-modules/transceiver-modules/index.html.

Q: Does the Cisco Catalyst 9400 Series support application hosting?

A: Yes, Cisco Catalyst 9400 Series switches support application hosting capabilities reserving dedicated memory and CPU resources for

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application hosting. This provides a separate execution space for user applications without compromising the integrity and performance of the switch. Applications, including Dockers containers, reside in the external Solid State Drive (SSD) storage and have no access to the internal device flash storage, which is reserved for Cisco IOS XE to protect its integrity.

Q: Does the Cisco Catalyst 9400 Series support Cisco Spaces IoT Gateway?

A: Yes, Cisco Catalyst 9400 Series switches support hosting Cisco Spaces natively on the CPU complex. Cisco Spaces IoT Services on both Catalyst 9000 switches and access points bridges wired and wireless smart building technology using the power of data to help speed return to a trusted workplace and the inevitable return-to-office.

Q: Does the Cisco Catalyst 9400 Series support ThousandEyes Enterprise Agent?

A: Yes, Cisco Catalyst 9400 Series switches support hosting ThousandEyes Enterprise Agent natively on the flash of the switch starting from IOS XE 17.5.1 release. Cisco signed ThousandEyes Enterprise Agent app is required to run natively on the flash of the switch.

Cisco Catalyst 9500 Series switches

Q: What are the key SKUs in the Cisco Catalyst 9500 Series?

A: Cisco Catalyst 9500 Series has eight primary switch SKUs:

- **C9500X-60L4D:** 60 ports 50G/25G/10G/1G SFP56, 4 ports 400G/200G/100G/40G QSFP-DD
- **C9500X-28C8D:** 28 ports 100G/40G QSFP28, 8 ports 400G/200G/100G/40G QSFP-DD
- **C9500-32QC:** 24 ports 40G QSFP with 4 ports 100G QSFP28 uplinks OR 32 ports 40G QSFP OR 16 ports 100G QSFP28
- **C9500-24Q:** 24 ports 40G QSFP
- **C9500-12Q:** 12 ports 40G QSFP
- **C9500-48Y4C:** 48 ports 25G/10G SFP28 option with 4 ports 100G/40G QSFP28 uplinks
- **C9500-24Y4C:** 24 ports 25G/10G SFP28 option with 4 ports 100G/40G QSFP28 uplinks
- **C9500-40X:** 40 ports 10G SFP+ option with 8 ports 10G SFP+ or 2 ports 40G QSFP uplinks
- **C9500-16X:** 16 ports 10G SFP+ option with 8 ports 10G SFP+ or 2 ports 40G QSFP uplinks

Q: What are the key software license SKUs in the Cisco Catalyst 9500 Series?

A: Cisco Catalyst and Cisco DNA Software Licenses

- **C9500X-DNA-E-3Y, -5, -7:** Catalyst 9500X Cisco DNA Essential license; 3, 5 and 7 year term for 28C8D, 60L4D SKU
- **C9500X-DNA-A-3Y, -5, -7:** Catalyst 9500X Cisco DNA Advantage license; 3, 5 and 7 year term for 28C8D, 60L4D SKU
- **C9500X-DNA-E-3Y, -5, -7:** Catalyst 9500X Cisco DNA Essentials license; 3, 5 and 7 year term for 24Q, 40X, 32C, 32QC, 48Y4C SKU
- **C9500X-DNA-A-3Y, -5, -7:** Catalyst 9500X Cisco DNA Advantage license; 3, 5 and 7 year term for 24Q, 40X, 32C, 32QC, 48Y4C SKU
- **C9500-DNA-L-E-3Y, -5, -7:** Catalyst 9500X Cisco DNA Essentials license, low port density; 3, 5 and 7 year term for 12Q, 16X, 24Y4C SKU
- **C9500-LIC=:** Cisco DNA software license upgrade from Essentials to Advantage
- **C9500-DNX-E-12Q-3Y, -5, -7:** Cisco Catalyst Essentials, 12-Port 40G QSFP+; 3, 5 and 7 year term for 12Q SKU
- **C9500-DNX-A-12Q-3Y, -5, -7:** Cisco Catalyst Advantage, 12-Port 40G QSFP+; 3, 5 and 7 year term for 12Q SKU

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- **C9500-DNX-E-16X-3Y, -5, -7:** Cisco Catalyst Essentials, 16-Port 10G SFP+; 3, 5 and 7 year term for 16X SKU
- **C9500-DNX-A-16X-3Y, -5, -7:** Cisco Catalyst Advantage, 16-Port 10G SFP+; 3, 5 and 7 year term for 16X SKU
- **C9500-DNX-E-24Y4C-3Y, -5, -7:** Cisco Catalyst Essentials, 24-Port 40G QSFP+; 3, 5 and 7 year term for 24Y4C SKU
- **C9500-DNX-A-24Y4C-3Y, -5, -7:** Cisco Catalyst Advantage, 24-Port 40G QSFP+; 3, 5 and 7 year term for 24Y4C SKU
- **C9500-DNX-E-28C-3Y, -5, -7:** Cisco Catalyst Essentials, 28-Port 100G QSFP28, 8-port 400G QSFP-DD; 3, 5 and 7 year term for 24Y4C SKU
- **C9500-DNX-A-28C-3Y, -5, -7:** Cisco Catalyst Advantage, 28-Port 100G QSFP28, 8-port 400G QSFP-DD; 3, 5 and 7 year term for 24Y4C SKU
- **C9500-DNX-E-32Q-3Y, -5, -7:** Cisco Catalyst Essentials, 32-Port 40G QSFP+; 3, 5 and 7 year term for 24Y4C SKU
- **C9500-DNX-A-32Q-3Y, -5, -7:** Cisco Catalyst Advantage, 32-Port 40G QSFP+; 3, 5 and 7 year term for 24Y4C SKU
- **C9500-DNX-E-40X-3Y, -5, -7:** Cisco Catalyst Essentials, 40-Port 10G SFP+; 3, 5 and 7 year term for 16X SKU
- **C9500-DNX-A-40X-3Y, -5, -7:** Cisco Catalyst Advantage, 40-Port 10G SFP+; 3, 5 and 7 year term for 16X SKU
- **C9500-DNX-E-48Y-3Y, -5, -7:** Cisco Catalyst Essentials, 48-Port 25G SFP28; 3, 5 and 7 year term for 16X SKU
- **C9500-DNX-A-48Y-3Y, -5, -7:** Cisco Catalyst Advantage, 48-Port 25G SFP28; 3, 5 and 7 year term for 16X SKU
- **C9500-DNX-E-60L-3Y, -5, -7:** Cisco Catalyst Essentials, 60-Port 50G SFP56; 3, 5 and 7 year term for 16X SKU
- **C9500-DNX-A-60L-3Y, -5, -7:** Cisco Catalyst Advantage, 60-Port 50G SFP56; 3, 5 and 7 year term for 16X SKU

Network module options:

- **C9500-NM-8X:** 8 ports 1/10G SFP/SFP+
- **C9500-NM-2Q:** 2 ports 40G QSFP+

Power supply options:

Catalyst 9500X models:

- **C9K-PWR-1500WAC:** 1500W AC
- **C9K-PWR-1500WDC:** 1500W DC

Catalyst 9500 models:

- **PWR-C4-950WAC-R:** 950W AC
- **PWR-C4-950WDC-R:** 950W DC
- **C9K-PWR-650WAC-R:** 650W AC
- **C9K-PWR-650WACL-R:** 650W DC
- **C9K-PWR-930WDC-R:** 930W DC
- **C9K-PWR-1600WAC-R:** 1600W AC
- **C9K-PWR-1600WDC-R:** 1600W DC

Fan options:

- **C9500X-FAN-1U-R** Catalyst 9500X front to back cooling fan
- **C9500X-FAN-1U-F** Catalyst 9500X back to front cooling fan
- **FAN-T4-R** Type 4 front to back cooling fan

Pluggable SSD options:

- **C9K-F3-SSD-240GB:** 240 GB (Catalyst 9500X only)
- **C9K-F3-SSD-480GB:** 480 GB (Catalyst 9500X only)
- **C9K-F3-SSD-960GB:** 960 GB (Catalyst 9500X only)
- **C9K-F1-SSD-240G:** 240 GB
- **C9K-F1-SSD-480G:** 480 GB
- **C9K-F1-SSD-960G:** 960 GB

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Q: Are the uplink modules of Cisco Catalyst 9500 Series switches the same as those for the Cisco Catalyst 3850 Series uplink modules?

A: No, uplink modules of the Cisco Catalyst 9500 Series switches have different SKUs from those of the 3850 Series.

Q: How many Rack Units (RUs) do Cisco Catalyst 9500 Series Switches have?

A: Cisco Catalyst 9500 Series Switches are 1RU switches.

Q: Do Cisco Catalyst 9500 Series switches come with built-in RFID?

A: Yes, they come with a built-in passive RFID tag.

Q: Do Catalyst 9500X model switches have front-to-back and back-to-front fan options?

A: Yes, Catalyst 9500X models offer front-to-back or back-to-front fan options.

Q: What management ports are available on Cisco Catalyst 9500 Series switches?

A: Cisco Catalyst 9500 Series switches come with a mini-B/USB-C type console port and a 10, 100, or 1000 Ethernet (RJ-45) dedicated management port on the front panel of the switch. The Ethernet port is in a separate VRF instance called “Mgmt-vrf” in order to segment the management traffic from the global routing table of the switch.

Q: Can I use both console ports simultaneously on a Cisco Catalyst 9500 Series switch?

A: No. The RJ-45 port is default and the console switches to USB when USB cable is connected.

Q: Do Cisco Catalyst 9500 Series switches support Trivial File Transport Protocol (TFTP) to boot the software image?

A: Yes, you can use TFTP to boot the application image over the network with the following parameters set up:

- MAC_ADDR: The switch default MAC address
- IP_ADDR: The IP address or netmask of the switch
- DEFAULT_ROUTER: The IP address of the default router in the local network

Example:

- Switch: set DEFAULT_ROUTER 10.4.2.1
- Switch: set IP_ADDR 10.4.2.140/255.255.255.0
- Switch: boot tftp://<tftp server ip addr>/<filename>

Q: Do Cisco Catalyst 9500 Series switches support OIR?

A: Yes, the 5 fans and the 2 power supply units support OIR. Also, uplink modules on the 10 and 25 Gigabit Ethernet SKU support OIR.

Q: How many fans can fail on a Cisco Catalyst 9500 Series Switch without interrupting the system?

A: One. Cisco Catalyst 9500 Series switches are designed to support a single fan failure. We recommended that you replace fans as soon as possible when they fail.

Q: Do Cisco Catalyst 9500 Series switches support 802.1ae (MACsec)?

A: Cisco Catalyst 9500 Series switches are hardware-capable for MACsec 802.1ae on all ports on the switch.

Q: What type of airflow do Cisco Catalyst 9500 Series switches support?

A: The airflow on Cisco Catalyst 9500 Series switches can be both “front-to-back” or “back-to-front” airflow.

Q: What pluggable transceiver modules do Cisco Catalyst 9500 Series switches support?

A: Refer to the Cisco Transceiver Module Compatibility Matrixes for a complete list: https://tmgmatrix.cisco.com/.

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Q: Can Cisco Catalyst 9500 Series switches support redundant power supplies?

A: Yes, Cisco Catalyst 9500 Series switches come with two AC power supplies. For further details on power supplies, please refer to Cisco Catalyst 9500 Series switch data sheet: Latest data sheet version.

Q: Does the Cisco Catalyst 9500 Series support cloud-monitoring for Catalyst?

A: Yes, starting from IOS XE 17.3. release, Catalyst 9500 Series switches support cloud-monitoring for Catalyst.

Cisco Catalyst 9600 Series switches

Q: What are the key SKUs in the Cisco Catalyst 9600 Series?

A: The Cisco Catalyst 9600 Series has 4 primary hardware SKUs with a number of license, power and SSD storage module options:

- **C9606R:** 6 slot Catalyst 9600 Chassis, up to 25.6 Tbps capacity
- **C9600X-SUP-2:** Up to 6.4 T per slot supervisor
- **C9600-SUP-1:** Up to 2.4 T per slot supervisor
- **C9600X-LC-32CD:** 30 ports 100G/40G, 2 ports 400G/200G/100G line card
- **C9600X-LC-56YL4C:** 56 ports 50G/25G/10G, 4 port 100G
- **C9600-LC-40YL4CD:** 40 ports 50G/25G/10G, 2 port 400G/200G/100G/40G, 2 port 200G/100G/40G
- **C9600-LC-24C:** 24 ports 100G/40G, line card
- **C9600-LC-48YL:** 48 ports 50G/25G/10G/1G line card
- **C9600-LC-48TX:** 48 ports 10G mGig line card
- **C9600-LC-48S:** 48 ports 1Gbps SFP line card

License options:

- C9600-DNX-A-3, -5, -7; C9600-DNA-A-3, -5, -7: C9600 Cisco Catalyst and Cisco DNA Advantage; 3, 5 and 7 year term

Power options:

- C9600-PWR-2KWAC
- C9600-PWR-2KWDC
- C9600-PWR-3KWAC

Fan Module:

- C9606-FAN=

Storage modules:

- C9K-F2-SSD-240GB: Cisco pluggable 240GB M2 SATA memory
- C9K-F2-SSD-480GB: Cisco pluggable 480GB M2 SATA memory
- C9K-F2-SSD-960GB: Cisco pluggable 960GB M2 SATA memory

Q: What is the system architecture on Cisco Catalyst 9600 Series switches?

A: Catalyst 9600 Series switches are based on centralized architecture using the Cisco Silicon One and UADP ASIC 3.0 running open Cisco IOS XE software. This architecture has several key benefits, including simplicity of upgrades, investment protection, and superior high availability.

Q: Are there different chassis models available on Cisco Catalyst 9600 Series switches?

A: Cisco Catalyst 9600 Series switches currently offers one chassis type: 6 slot with redundant supervisor slots. The 6 slot chassis has 4 line cards slots that can serve up to 120 ports of 50 with 8 ports 400G and 200G, 48 ports of 100G, 192 ports of 40G and 10G mGig with Supervisor-2, and 192 ports of 50G/25G/10G/1G, 96 ports of 40G and 48 ports of 100G with Supervisor-1. The 6 slot chassis also include 4 power bays and a “9-fan” fan tray.

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Q: What line cards are available on Cisco Catalyst 9600 Series switches?

A: Cisco Catalyst 9600 Series switches support the following line card modules to serve the diverse needs of modular campus core and aggregation deployments:

- **C9600X-LC-32CD:** 30 ports 100G/40G, 2 ports 400G/200G/100G line card ((SUP-2 only)
- **C9600X-LC-56YL4C:** 56 ports 50G/25G/10G, 4 port 200G (SUP-2 only)
- **C9600-LC-40YL4CD:** 40 ports 50G/25G/10G, 2 port 400G/200G/100G/40G, 2 port 200G
- **C9600-LC-24C:** 24 ports 100G/40G line card
- **C9600-LC-48YL:** 48 ports 50G/25G/10G/1G line card
- **C9600-LC-48TX:** 48 ports 10G mGig line card
- **C9600-LC-48S:** 48 ports 1Gbps SFP line card

Q: What are the different data sheets and SKUs on Cisco Catalyst 9600 Series switches?

A: Refer to the Cisco Catalyst 9600 Series switch data sheets that provide the technical and product details of the series:

- Cisco Catalyst 9600 Series Switch Chassis Data Sheet
- Cisco Catalyst 9600 Supervisor Engine Modules Data Sheet
- Cisco Catalyst 9600 Series Switch Line Cards Data Sheet

Q: What are the SSD onboard storage options on Cisco Catalyst 9600 Series switches?

A: On the supervisor module, you can order an optional SSD for onboard storage. The supervisor module supports 240, 480 or up to 960 GB configurations. It is recommended to configure this module on both supervisors (active and redundant) at the time of order. For dual-supervisor configuration, it is recommended that you order the same size of SSD module on both supervisors.

Q: Can a Catalyst 9600 Series switch line cards be used in any slot?

A: No. Slots 1, 2 and 5, 6 are reserved for line cards. Slots 3 and 4 on the Catalyst 9600 have been reserved for Supervisors.

Q: Can a Catalyst 9600 Series switch spare supervisor be used in any slot?

A: No. Slots 3 and 4 on the Catalyst 9600 have been reserved for Supervisors.

Q: Can any port act as uplink or core port?

A: Yes, any of the front panel data ports can be used for uplinks or core from 1/10G, 25G, 40G, 50G, 100G, 200G, and 400G.

Q: Does SSO work with a Catalyst 9600 Series switch?

A: SSO functionality is supported in with Cisco Catalyst Advantage license, including NSF and ISSU capabilities.

Q: What is the airflow design on Cisco Catalyst 9600 Series switches?

A: Cisco Catalyst 9600 Series switches utilize a side-to-side airflow design that is most common in campus modular core deployments. A NEBS (C9606-FB-23-KIT=) compliant kit is available for airflow alteration.

Q: What is unique about Cisco Catalyst 9600 Series switch fan-tray design?

A: Cisco Catalyst 9600 Series switches have an innovative fan-tray design that allows you to service the fan tray from the front or the back using the same fan tray. In certain rack deployments, this design allows you to retain your cable connectivity to the modules while servicing the fan tray from the rear.

Q: What is unique about the Cisco Catalyst 9600 Series switch power design?

A: The Cisco Catalyst 9600 Series switch power-design architecture is unique and superior in many ways. The novel design supports:

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- Titanium rated with 3K AC power
- Platinum rated (>90% efficiency) efficient power supplies
- Modular power supply
- Superior high-availability capabilities to support N+1 redundancy
- Combined mode of operation
- Ability to mix 220VAC and DC inputs
- AC and DC power options

Q: How many power supplies can the 6 slot chassis hold?

A: The 6 slot chassis option supports up to 4 modular power supplies. A minimum of two power supplies are needed to power a fully loaded chassis.

Q: How do I decide the number of power supplies I need on a Cisco Catalyst 9600 Series switch?

A: Use the Cisco Power Calculator to estimate the power requirements on Cisco Catalyst 9600 Series switches. This tool allows you to configure current and future power needs based on the devices, line cards, and recommends the number of power supplies you will need for your deployment https://www.cisco.com/c/en/us/support/web/tools-catalog.html.

Q: On Cisco Catalyst 9600 Series switches, what is the default power supply mode?

A: The default mode is a combined mode; User can change the mode of operation to N+1 mode.

Q: What power redundancy modes does Cisco Catalyst 9600 Series switches support?

A: Cisco Catalyst 9600 Series switches support N+1 or combined redundant mode. The platforms allow changing of the power supply modes with a simple CLI. For N+1 mode, N power supplies are active and 1 is in standby.

Q: Do Cisco Catalyst 9600 Series switches come with built-in RFID?

A: Yes, Cisco Catalyst 9600 Series switches come with built-in passive RFID tags on all the components so that you have an inventory of the different components, including separated RFID tags for the supervisor, all line-card modules, the power supplies, the fan tray, and the chassis.

Q: What management ports are available on Cisco Catalyst 9600 Series switches?

A: Cisco Catalyst 9600 Series switches come with a mini-B type USB and an RJ-45 console port, with a dedicated 10/100/1000 Ethernet (RJ-45) and 10G SPF+ management port on the front panel of the switch. The Ethernet port is in a separate VRF instance called “Mgmt-vrf”. This setup segments the management traffic from the global routing table of the switch.

Q: What are the high availability features of Catalyst 9600 series?

A: Catalyst 9600 Series switches have been designed for high availability and non-stop operations and maintenance. The hardware supports high availability with redundant supervisors, N+1 power supply redundancy and hot swappable of all components. The Cisco IOS XE operating system enables “In Service Software Upgrades” (ISSU) ensuring continuous operations; hot patching providing the ability to update the OS without requiring a reload of the system; Graceful Insertion and Removal (GIR) enabling removal and insertion of switch in the network for maintenance minimizing downtime.

Q: Can I use both console ports simultaneously on a Cisco Catalyst 9600 Series switch?

A: Cisco Catalysts 9600 Series provides two options to connect to the console, an RJ45 port and a USB port. Only one can be used at any time to connect with RJ-45 port as the default Console switches to USB when the USB cable is connected.

Q: Do Cisco Catalyst 9600 Series switches support Online Insertion and Removal (OIR)?

A: Yes, OIR is supported on all the modules and power supplies.

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Q: What pluggable transceiver modules do Cisco Catalyst 9600 Series switches support?

A: Refer to the Cisco Transceiver Module Compatibility Matrixes for the supported list https://tmgmatrix.cisco.com/.

Q: Is StackWise Virtual be supported on Cisco Catalyst 9600 Series switches?

A: StackWise Virtual is supported on the Cisco Catalyst 9600 Series with Supervisor 1 (C9600-SUP-1) and allows for dual supervisors in each chassis. Catalyst 9600X Supervisor 2 (C9600X-SUP-2) will support StackWise Virtual in a future software release.

Q: Is StackWise Virtual be supported on all ports Cisco Catalyst 9600 Series switches?

A: StackWise Virtual supports all available ports.

Q: What is the maximum VRF instances Cisco Catalyst 9600 Series switches?

A: Catalyst 9600 Series switches supports 1K VRF's.

Q: What uplink combinations are available on Cisco Catalyst 9600 Series Supervisors?

A: Catalyst 9600 Series Supervisors will not have any dedicated uplinks ports. Any line card front panel ports can be leveraged for uplink connectivity.

Q: Is there an onboard web UI on Cisco Catalyst Series switches?

A: All Catalyst 9000 switches, including the Catalyst 9600 Series, support on-board webUI to simplify device management.

Q: What is the minimum version of Cisco Catalyst Center is required to support 9600?

A: Please refer to the Software defined access hardware and software compatibility matrix provides for minimum release required for supporting the Catalyst 9600 Series.

Q: How can I use Cisco Catalyst 9600 Series switches in a SD-Access?

A: Catalyst 9600 Series switches extend support for SD-Access as both a border node and a control node.

Q: When do I position Cisco Catalyst 9600 versusCisco Catalyst 9500 series?

A: The Cisco Catalyst 9600 Series is a 6-slot modular switching system that is capable of supporting 4 line card slots and 2 supervisors. Catalyst 9600 Series switches should be positioned when there is a need for a scalable platform with additional resiliency features such as SSO with redundant supervisors and power.

Typically, Catalyst 9600 Series switches should be positioned when customer is planning to migrate from modular Catalyst 6800/6500 series. Catalyst 9500 Series switches are a fixed core platform that are designed for customers migrating from fixed Catalyst 6800 and Catalyst 3850 10G fiber models.

Q: Would I be able to use Cisco Catalyst 9400 Series line cards on Cisco Catalyst 9600 Series switches?

A: No, you cannot use Catalyst 9400 Series line cards in a Catalyst 9600 Series switch as the line cards are based on different architectures.

Benefits of upgrading

Q: Where can I find comparisons between Cisco Catalyst 9000 switches and other Cisco Catalyst switches?

A: Below are a list of documents that highlight the key differences of Catalyst 9200 Series, 9300 Series, 9400 Series, 9500 Series and 9600 Series switches with other comparable Catalyst switching platforms.

- Benefits of upgrading to Cisco Catalyst 9200 Series switches
- Benefits of upgrading to Cisco Catalyst 9300 Series switches
- Benefits of upgrading to Cisco Catalyst 9400 Series switches
- Benefits of upgrading to Cisco Catalyst 9500 Series switches
- Benefits of upgrading to Cisco Catalyst 9600 Series switches

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Pricing and ordering

Q: Where can I find the complete SKU list or data sheets for the Cisco Catalyst 9000 switches?

A: A complete list of PIDs is available in the platform-specific data sheets:

- Cisco Catalyst 9200 Series: Latest data sheet version
- Cisco Catalyst 9300 Series: Latest data sheet version
- Cisco Catalyst 9400 Chassis: Latest Datasheet Version for Chassis
- Cisco Catalyst 9400 Supervisor: Latest Datasheet Version for Supervisor
- Cisco Catalyst 9400 Line cards: Latest Datasheet Version for Line cards
- Cisco Catalyst 9500: Latest Data sheet Version
- Cisco Catalyst 9600 Chassis: Latest Datasheet Version for Chassis
- Cisco Catalyst 9600 Supervisor: Latest Datasheet Version for Supervisor
- Cisco Catalyst 9600 Line cards: Latest Datasheet Version for Line cards

Q: What is the SKU mapping between the Cisco Catalyst 3560-CX and 2960-CX and 9200CX switch models?

A: Refer to Table 10.

Table 10. Mapping between Cisco Catalyst 2960 and 9200CX models

Catalyst 3560-CX/2960-CX Series switch PIDs	Catalyst 9200CX switch PIDs	Short description
WS-C3560CX-8TC-S, WS-C3560CX-8PC-S, WS-C3560CX-8PT-S, WS C3560CX-8XPD-S, WS-C2960-CX-8TC-L, WS-C2960-CX-8TC-L	C9200CX-8P-2X2G	Cisco Catalyst 9200CX 8 port PoE+ switch
WS-C3560CX-12TC-S	C9200CX-12T-2X2G	Cisco Catalyst 9200CX 12 port data switch
WS-C3560CX-12PC-S, WS-C3560CX-12PD-S	C9200CX-12T-2X2G	Cisco Catalyst 9200CX 12 port PoE+ switch

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Q: What is the SKU mapping between the Cisco Catalyst 2960-X/XR and 9200 Series switches?

A: Refer to Table 11.

Table 11. Mapping between Cisco Catalyst 2960 and 9200 Series

Catalyst 2960-X/XR Series switch PIDs	Catalyst 9200CX switch PIDs	Short description
WS-C2960X-24 -TD-L -TS-L, TS-LL	C9200L-24T -4X -4G	Cisco Catalyst 9200 24 port data only switch
WS-C2960X-24P - PD-L -PS-L, PSQ-LL	C9200L-24P -4X -4G	Cisco Catalyst 9200 24 port PoE+ switch
WS-C2960X-48 -TD-L -TS-L, TS-LL	C9200L-48T -4X -4G	Cisco Catalyst 9200 48 port data only switch
WS-C2960X-48 -FPD-L, LPD-L -FPS-L, LPS-L	C9200L-48P -4X -4G	Cisco Catalyst 9200 48 port PoE+ switch
WS-C2960XR-24 -TD-I, -TS-I	C9200-24T	Cisco Catalyst 9200 24 port data only switch
WS-C2960XR-24P - PD-I, -PS-I	C9200-24P	Cisco Catalyst 9200 24 port PoE+ switch
WS-C2960XR-48 -TD-I, -TS-I	C9200L-48T	Cisco Catalyst 9200 48 port data only switch
WS-C2960XR-48 -FPD-I, LPD-I -FPS-I, LPS-I	C9200L-48P	Cisco Catalyst 9200 48 port PoE+ switch

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Q: What is the SKU mapping between the Cisco Catalyst 3850 and 9300 Series switches?

A: Refer to Table 12.

Table 12. Mapping between Cisco Catalyst 3850 and 9300 Series

Catalyst 3850 Series switch PIDs	Catalyst 9300 Series switch PIDs	Short description
WS-C3850-24T	C9300-24T	24-port data only switch
WS-C3850-24P	C9300-24P	24-port PoE+ switch
WS-C3850-24U	C9300-24U	24-port UPOE switch
WS-C3850-24XU	C9300-24UX	24-port Multigigabit and UPOE switch
WS-C3850-48T	C9300-48T	48-port data only switch
WS-C3850-48P	C9300-48P	48-port PoE+ switch
WS-C3850-48U	C9300-48U	48-port UPOE switch
WS-C3850-12X48U	C9300X-48UXM	48-port 10G/mGig, UPOE+
WS-C3850-12S	C9300-24S	24-port 1G SFP
WS-C3850-24S	C9300-48S	48-port 1G SFP

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Q: What is the SKU mapping between the Cisco Catalyst 3650 and 9300L Series switches?

A: Refer to Table 13.

Table 13. Mapping between Cisco Catalyst 3650 and 9300L Series

Catalyst 3650 Series switch PIDs	Catalyst 9300L Series switch PIDs	Short description
WS-C3650-24TS	C9300L-24T-4G	24 1G data ports with 4x 1G uplink
WS-C3650-24PS	C9300L-24P-4G	24 1G PoE+ ports with 4x 1G uplink
WS-C3650-48TS	C9300L-48T-4G	48 1G data ports with 4x 1G uplink
WS-C3650-48PS	C9300L-48P-4G	48 1G PoE+ ports with 4x 1G uplink
WS-C3650-24TD	C9300L-24T-4X	24 1G data ports with 4x 10G uplink
WS-C3650-24PD	C9300L-24P-4X	24 1G PoE+ ports with 4x 10G uplink
WS-C3650-48TQ	C9300L-48T-4X	48 1G data ports with 4x 10G uplink
WS-C3650-48PQ	C9300L-48P-4X	48 1G PoE+ ports with 4x 10G uplink
WS-C3650-8X24UQ	C9300L-24UXG-4X	8 Mgig ports, 16 UPoE ports with 4x 10G uplink
WS-C3650-12X48UQ	C9300L-24UXG-2Q	8 Mgig ports, 16 UPoE ports with 2x 40G uplink
WS-C3650-12X48UR	C9300L-48UXG-4X	12 Mgig ports, 36 UPoE ports with 4x 10G uplink
WS-C3650-12X48UZ	C9300L-48UXG-2Q	12 Mgig ports, 36 UPoE ports with 2x 40G uplink
WS-C3650-24PDM	C9300LM-24U-4Y	24 ports 1G UPOE with 4x 25G uplinks
WS-C3650-48FQM	C9300LM-48U-4Y	48 ports 1G UPOE with 4x 25G uplinks

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Q: What is the SKU mapping between the Cisco Catalyst 4500E and 9400 Series switches?

A: Refer to Table 14.

Table 14. Mapping between Cisco Catalyst 4500E and 9400 Series

Catalyst 3650 Series switch PIDs	Catalyst 9300L Series switch PIDs	Short description
WS-C4503-E	C9404R	Cisco Catalyst 9400 Series 4 slot chassis
WS-C4506-E	C9407R	Cisco Catalyst 9400 Series 7 slot chassis
WS-C4507R+E	C9407R	Cisco Catalyst 9400 Series 7 slot chassis
WS-C4510R+E	C9410R	Cisco Catalyst 9400 Series 10 slot chassis
WS-X45-SUP6-E	C9400-SUP-1/C9400X-SUP-2	Cisco Catalyst 9400 Series Supervisor 1/2
WS-X45-SUP6L-E	C9400-SUP-1/C9400X-SUP-2	Cisco Catalyst 9400 Series Supervisor 1/2
WS-X45-SUP7-E	C9400-SUP-1/C9400X-SUP-2	Cisco Catalyst 9400 Series Supervisor 1/2
WS-X45-SUP7L-E	C9400-SUP-1/C9400X-SUP-2	Cisco Catalyst 9400 Series Supervisor 1/2
WS-X45-SUP8-E	C9400-SUP-1/C9400X-SUP-2	Cisco Catalyst 9400 Series Supervisor 1/2
WS-X45-SUP8L-E	C9400-SUP-1/C9400X-SUP-2	Cisco Catalyst 9400 Series Supervisor 1/2
WS-X4748- RJ45V+E	C9400-LC-48U C9400-LC-48H C9400-LC-48HN C9400-LC-48HX	Cisco Catalyst 9400 Series 48-Port UPOE 10/100/1000 (RJ-45) Cisco Catalyst 9400 Series 48-Port UPOE+ 10/100/1000 (RJ-45) Cisco Catalyst 9400 Series 48-Port UPOE+ 5G/2.5G mGig, 10/100/1000 (RJ-45) OE+ 10G, 5G/2.5G mGIG, 1000M/100M (RJ-45)
WS-X4648- RJ45V+E	C9400-LC-48U C9400-LC-48H	Cisco Catalyst 9400 Series 48-Port UPOE 10/100/1000 (RJ-45) Cisco Catalyst 9400 Series 48-Port UPOE+ and UPOE 10/100/1000 (RJ-45)
WS-X4748- UPOE+E	C9400-LC-48HN C9400-LC-48HX	Cisco Catalyst 9400 Series 48-Port UPOE+ 5G 2.5G mGig (RJ-45) 10/100/1000 (RJ-45) Cisco Catalyst 9400 Series 48-Port UPOE+ 10G, 5G/2.5G mGig, 1000M/100M (RJ-45)

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Catalyst 3650 Series switch PIDs	Catalyst 9300L Series switch PIDs	Short description
no comparable SKU	C9400-48P	Cisco Catalyst 9400 Series 48-Port PoE+ 10/100/1000 (RJ-45)
WS-X4748-RJ45+E	C9400-LC-48T	Cisco Catalyst 9400 Series 48-Port 10/100/1000 (RJ-45)
WS-X4648-RJ45+E	C9400-LC-48T	Cisco Catalyst 9400 Series 48-Port 10/100/1000 (RJ-45)
PWR-C45- 1300ACV	C9400-PWR- 3200AC	Cisco Catalyst 9400 Series 3200W AC Power Supply
PWR-C45- 2800ACV	C9400-PWR- 3200AC	Cisco Catalyst 9400 Series 3200W AC Power Supply
PWR-C45- 4200ACV	C9400-PWR- 3200AC	Cisco Catalyst 9400 Series 3200W AC Power Supply
PWR-C45- 6000ACV	C9400-PWR- 3200AC	Cisco Catalyst 9400 Series 3200W AC Power Supply
PWR-C45- 9000ACV	C9400-PWR- 3200AC	Cisco Catalyst 9400 Series 3200W AC Power Supply

Q: What is the SKU mapping between the Cisco Catalyst 4500X and 9500 Series switches?

A: Refer to Table 15.

Table 15. Mapping between Cisco Catalyst 4500X and Catalyst 9300X and 9500 Series

4500X PIDs	9500 PID	Short description
WS-C4500X- 16SFP+	C9500-12Q	Cisco Catalyst 9500 12-port 40GE QSFP switch
	C9500-16X	Cisco Catalyst 9500 16-port 10GE SFP+ Switch
	C9300X-24Y	Cisco Catalyst 9300X 24-port 25GE SFP28 Switch
	C9300X-12Y	Cisco Catalyst 9300X 12-port 25GE SFP28 Switch

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4500X PIDs	9500 PID	Short description
WS-C4500X-24X-ES	C9500-24Y4C C9500-24X C9500-24Q C9300X-24Y C9300X-12Y	Cisco Catalyst 9500 24-port 25GE SFP28 with 4-port 100GE QSFP28 switch Cisco Catalyst 9500 16-port 10GE SFP+ with 8-port 10GE SFP+ Switch Cisco Catalyst 9500 24-port 40GE QSFP switch Cisco Catalyst 9300X 24-port 25GE SFP28 Switch Cisco Catalyst 9300X 12-port 25GE SFP28 Switch
WS-C4500X-32SFP+	C9500-24Q C9500-32QC C9500-32C C9500X-28C8D	Cisco Catalyst 9500 24-port 40GE QSFP switch Cisco Catalyst 9500 32-port 40GE QSFP or 16-port 100GE QSFP28 switch Cisco Catalyst 9500 32-port 100GE QSFP28 switch Cisco Catalyst 9500 28-port 100GE QSFP28, 8-port 400GE QSFP-DD switch
WS-C4500X- 40X-ES	C9500-40X C9500-48X C9500-40X-2Q C9500-48Y4C	Cisco Catalyst 9500 40+ port 10GE SFP+ Switch Cisco Catalyst 9500 convenience bundle - 40P x 10G + 8P x 10G Cisco Catalyst 9500 convenience bundle - 40P x 10G + 2P x 40G Cisco Catalyst 9500 48-port 25GE SFP28 with 4-port 100GE QSFP28 switch

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Q: What is the SKU mapping between the Cisco Catalyst 6800 and 9500 Series switches?

A: Refer to Table 16.

Table 16. Mapping between Cisco Catalyst 6840 Series and 9500 Series

6840X PIDs	9500 PID	Short description
C6816-X-LE	C9500-16X C9500-24Y4C	Cisco Catalyst 9500 16-ports 10G SFP+ switch Cisco Catalyst 9500 24-port 25G SFP28 with ports 100G switch
C6832-X-LE	C9500-40X C9500-48Y4C	Cisco Catalyst 9500 40-ports 10G SFP+ switch Cisco Catalyst 9500 48-ports 25G/10G SFP28 switch
C6824-X-LE-40G	C9500-24Y4C	Cisco Catalyst 9500 24-ports 25G/10G SFP28 switch
C6840-X-LE-40G	C9500-40X C9500-48X C9500-40X-2Q C9500-48Y4C	Cisco Catalyst 9500 40-port 10GE SFP+ switch Cisco Catalyst 9500convenience bundle – 40P x 10G + 8P x 10G switch Cisco Catalyst 9500 convenience bundle – 40P x 10G + 2P x 40G switch Cisco Catalyst 9500 48-port 25GE SFP28 with 4-port 100GE QSFP28 switch
C6880-X-LE	C9500X-28C8D	Cisco Catalyst 9500X 28-ports 100GG/40G QSFP28, 8 ports 400G/200G/100G/40G QSFP-DD
C6880-X	C9500X-28C8D	Cisco Catalyst 9500X 28-ports 100GG/40G QSFP28, 8 ports 400G/200G/100G/40G QSFP-DD

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Q: What is the SKU mapping between the Cisco Catalyst 6500/6800 and Cisco Catalysts 9600 switches?

A: Refer to Table 17.

Table 17. Mapping between Cisco Catalyst 6500/6800 Series and 9600 Series

Catalyst 6500/6800 series PIDs	Catalyst 9600 Series Switch PIDs	Short description
C6800-16P10G	C9600-LC-48YL	48 port 10GE/25GE line card
C6800-32P10G	C9600-LC-48YL	48 port 10GE/25GE line card
C6800-8P40G	C9600-LC-24C	24 port 40GE/12 port 100GE line card
no comparable SKU	C9600-LC-48X	48 port mGig line card
C6807-XL	C9606R	6 slot Cisco Catalyst 9600 Chassis
VS-S2T-10G/-XL	C9600-SUP-1/C9600X-SUP-2	Catalyst 9600 Series Supervisor 1/2
C6800-SUP6T/-XL	C9600-SUP-1/C9600X-SUP-2	Catalyst 9600 Series Supervisor 1/2
C6800-SUP720/-XL	C9600X-SUP-1/C9600X-SUP-2	Catalyst 9600 Series Supervisor 1/2

Q: What is the SKU mapping between the Cisco Catalyst 6800ia and 9300 Series?

A: Refer to Table 18.

Table 18. Mapping between Cisco Catalyst 6800ia and 9300 Series

6800IA PIDs	9500 PID	Short description
C6800IA-48TD	C9300-48T	Cisco Catalyst 9300 48-port data only switch
C6800IA-48FPD	C9300-48P	Cisco Catalyst 9300 48-port PoE+ switch
C6800IA-48FPDR	C9300-48P	Cisco Catalyst 9300 48-port PoE+ switch

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Warranty and support

Q: How does Cisco Smart Net Total Care Service pricing compare between the Cisco Catalyst 9000 family and Cisco Catalyst 3850, 4500, and 4500X Series?

A: Smart Net Total Care pricing for the Cisco Catalyst 9000 family is at parity with the existing Cisco Catalyst 3850, 4500, and 4500X Series.

Q: Does Smart Net Total Care support include support for all the different licenses?

A: Smart Net Total Care supports hardware and network essentials and network advantage perpetual licenses. All term-based subscription licenses, such as Cisco Catalyst Essentials and Cisco Catalyst Advantage, are covered by SWSS, which is included by default in the price of the license.

Q: Do Cisco Catalyst 9000 family switches support the Enhanced Limited Lifetime Warranty (E-LLW)?

A: Yes, all Cisco Catalyst 9000 family switches support E-LLW. E-LLW provides 90-day 8x5 Cisco Technical Assistance Center (TAC) hardware support, next-business-day hardware replacement, and guest access to the knowledge base. The business unit software policy provides free software updates for Cisco IOS XE software in the network stack.

Q: What is the software support model with E-LLW on the Cisco Catalyst 9000 family?

A: Catalyst 9000 family, Cisco Catalyst Software term-based subscription license-related issues are covered by SWSS, which is included as part of the Cisco Catalyst software subscription license. Also, for the first 90 days, you are entitled to configuration help for Cisco IOS XE software-related questions. Software updates to the Cisco IOS XE software will be supported by the business unit software policy.

Services

Q: Are there any services available to support the Cisco Catalyst 9000 family of switches?

A: Yes. With Cisco Services, you can achieve infrastructure excellence faster with less risk. Our services for Cisco Catalyst 9000 switches provide expert guidance to help you successfully plan, deploy, manage and support your new switches. With unmatched networking expertise, best practices and innovative tools, Cisco Services can help you reduce overall upgrade, refresh, and migration costs as you introduce new hardware, software and protocols into the network. With a comprehensive lifecycle of services, Cisco experts will help you minimize disruption and improve operational efficiency to extract maximum value from your Cisco Catalyst infrastructure.

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