



# Switching for Intent-Based Networking—Campus, Branch, and Data Center

By automating the network from edge to core, enterprise to data center, and embedding machine learning, analytics, and assurance at a foundational level, Cisco is making the previously unmanageable manageable and the previously undetectable detectable. This means you can focus on running your business not on running your network. This is the power of Cisco's intent-based networking solutions.

Explore our Cisco® Catalyst®, Meraki®, and Cisco Nexus® switch portfolio for your campus, branch and data center to help build your digital-ready network foundation.





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# Digital network readiness

The promise of digital for your business is all about innovating faster while reducing risk, cost, and complexity. Your network forms the foundation of your transformation to a digital organization. We are transforming your network with new switching products and systems that enable time-saving automation, greater scale with virtualization, and valuable analytics that directly address your evolving business needs and lower your costs. Whether you need converged wired and wireless, core switches, or solutions that meet the stringent requirements of the next-generation data center, Cisco has a switch to fit your business needs.



# Cisco Catalyst campus and branch switching

## Cisco Catalyst 9000 switching family:

The [Cisco Catalyst 9000](#) family of switches are next-generation enterprise switches purpose-built for a new era in intent-based networking with full fabric control with Cisco DNA™ and Software-Defined Access (SD-Access).

These switches deliver industry-leading performance and functionality, with up to a 10x performance upgrade at similar prices. Built around the completely programmable Cisco Unified Access™ Data Plane (UADP) application-specific integrated circuit (ASIC), and running the newest converged operating system, open Cisco IOS® XE, these switches showcase significant Cisco innovations in advanced security, mobility, Internet of Things (IoT), and the cloud.

The Cisco Catalyst 9000 switching family also offers the new Cisco ONE™ subscription-based software licenses, allowing customers to purchase the features and capabilities they need.

## All Cisco Catalyst 9000 switches:



Reduce cost and complexity with Cisco SD-Access by automating policy, enabling fast service creation, and providing complete visibility into the wired and wireless access networks.



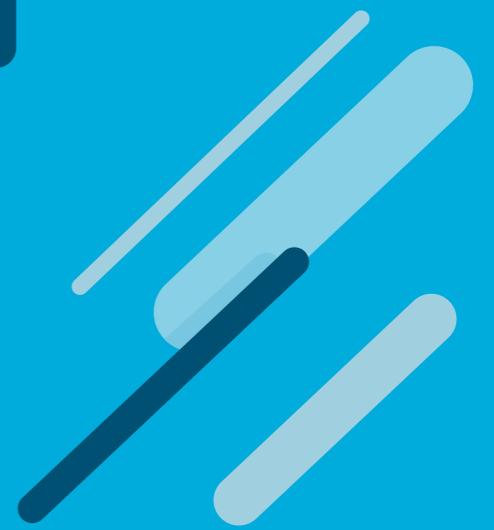
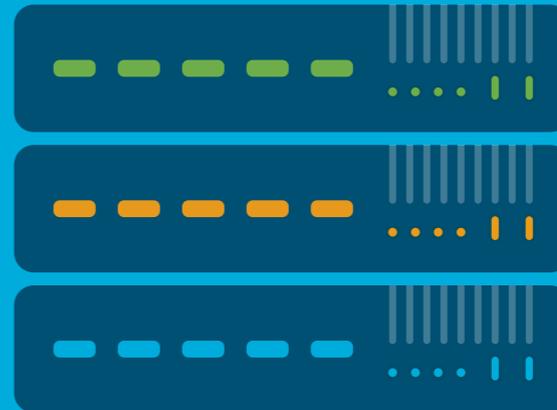
Create better customer and employee experiences through higher performance and improved support for mobility and new applications.



Deliver advanced end-to-end security to handle threats before, during, and after attacks.

These switches form the foundational building blocks for Cisco DNA and an entirely new era of networking. But whether you operate in a traditional environment or in full fabric-control mode, Cisco Catalyst 9000 switches offer more capabilities and higher densities at prices comparable to your existing Cisco Catalyst switches.

# Cisco Catalyst 9000 Switches



# Cisco Catalyst campus and branch switching (cont'd)

## Cisco Catalyst 9500 Switches



Cisco Catalyst 9500 Series switches are our lead fixed-core and aggregation enterprise switching platforms built for security, mobility, IoT, and cloud. They are the industry's leading purpose-built 25, 40 and 100 Gbps switches targeted for the enterprise campus, delivering unmatched table scales (MAC, route, and ACL) and buffering for enterprise applications.

- Offers up to 6.4 Tbps nonblocking with a wide range of port densities, including 100 Gbps (QSFP28) and 40 Gbps (QSFP+) and 25 (SFP28) and 10 Gbps (SFP+)
- Supports advanced routing and infrastructure services (Multiprotocol Label Switching [MPLS] Layer 2 and 3 VPNs, Multicast VPN [MVPN], Network Address Translation [NAT]), SD-Access border capabilities, and network system virtualization with Cisco StackWise® Virtual technology
- Supports all the foundational high availability capabilities such as patching, Graceful Insertion and Removal (GIR), Nonstop Forwarding with Stateful Switchover (NSF/ SSO), redundant platinum-rated power supplies, and fansProtected by the Enhanced Limited Lifetime Hardware Warranty (E-LLW)

# Cisco Catalyst campus and branch switching (cont'd)

## Cisco Catalyst 9400 Series Switches



Cisco Catalyst 9400 Series switches are the lead modular enterprise switching access and aggregation platform built for security, mobility, IoT, and cloud. These switches form the foundational building block for Cisco DNA and SD-Access – Cisco's lead enterprise intent-based architecture.

- Provides unparalleled investment protection with a chassis architecture that is capable of supporting up to 9 Tbps system bandwidth and unmatched power delivery for high-density IEEE 802.3bt (60W Power over Ethernet [PoE]) Optimized for enterprise with an innovative dual serviceable fan-tray design and side-to-side airflow, and is crammed closet friendly with a ~16-inch depth
- Can scale up to 384 access ports with a choice of Multigigabit, 1 Gbps copper, 10 Gbps SFP+, and Cisco Universal Power Over Ethernet (Cisco UPOE®) and Power over Ethernet Plus (PoE+) options, as well as flexible uplink support for 1 Gbps, Multigigabit, 10 Gbps, 25 Gbps and 40 Gbps.

# Cisco Catalyst campus and branch switching (cont'd)

## Cisco Catalyst 9300 Series Switches



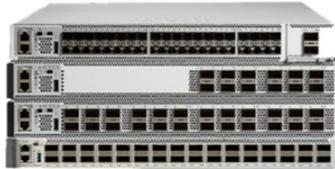
The [Cisco Catalyst 9300 Series](#) is Cisco's lead stackable enterprise access switching platform built for security, mobility, IoT, and cloud and is the next generation of the industry's most widely deployed switching platform.

Cisco Catalyst 9300 Series switches are the industry's first optimized platform for 802.11ax and 802.11ac Wave 2, with support for 1G/2.5G/5G/10G Multigigabit downlinks, Cisco UPOE, and PoE+

- Provides support for the highest density of 802.11ax and 802.11ac Wave 2 access points.
- Offers the most flexible uplink architecture with support for 1 Gbps, Multigigabit, 10 Gbps, 25 Gbps, and 40 Gbps. Offers a choice of Multigigabit (including 2.5, 5 and 10 Gbps), 5 Gbps, 2.5 Gbps, and 1 Gbps copper Ethernet switches with 80 Gbps uplink bandwidth and the industry leading 480 Gbps stacking bandwidth solution. StackWise Virtual technology provides flexibility of deployment for the platform, with support for the best NSF/SSO resiliency architecture for a stackable solution (sub-50 ms)
- Only switching platform in the industry with support for front- and back-panel stacking, optimizing it for a variety of deployments
- Protected by the Enhanced Limited Lifetime Hardware Warranty (E-LLW)

# Cisco Catalyst campus and branch switching (cont'd)

## Cisco Catalyst 9200 Series Switches

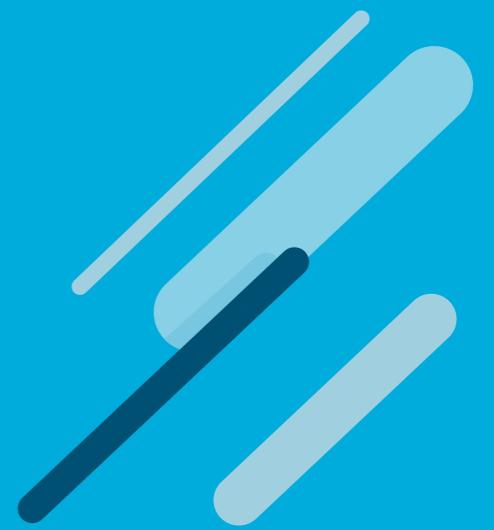
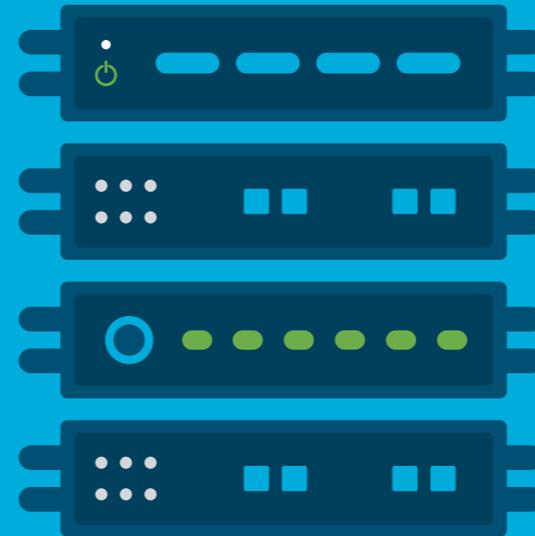


Cisco Catalyst 9200 Series switches extend the power of intent-based networking and Catalyst 9000 hardware and software innovation to a broader set of deployments. Compared to the scale and feature richness of Catalyst 9300 Series switches, Catalyst 9200 Series switches are optimized for simple branch deployments. With its family pedigree, Catalyst 9200 Series switches offer simplicity without compromise – it is secure, always on and provides a new level of IT simplicity.

- With access to Cisco's best in class security portfolio anchored by Talos, Trustworthy Systems, MACsec encryption and segmentation, the platform provides advanced security features that protect the integrity of the hardware as well as the software and all data that flows through the switch and the network.
- Catalyst 9200 Series switches provide enterprise-level resiliency and keep your business up and running seamlessly with FRU power supplies and fans options, modular uplinks options, cold patching, perpetual PoE, and the industry's highest MTBF.
- Offers flexible uplink architecture with support options for 1 Gbps and 10 Gbps (25 Gbps and 40 Gbps future)
- Protected by the Enhanced Limited Lifetime Hardware Warranty (E-LLW)

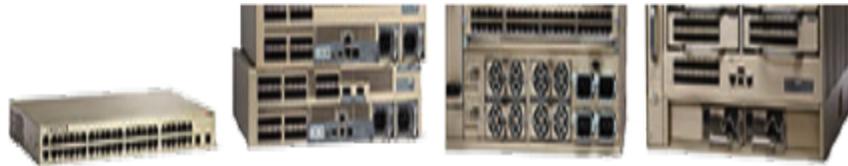


# Cisco Catalyst Switches



# Cisco Catalyst campus and branch switching (cont'd)

**Cisco Catalyst 6800 Series Switches:** Enterprise backbone of the digital organization



Get the scale, security, and simplicity you need to meet your business challenges. [Cisco Catalyst 6800 Series](#) switches are powerful campus backbone switches optimized for secure 1, 10 and 40 Gbps services.

- Highly available modular and stackable design
- 8 port 40 Gbps line cards
- Compatible with the Cisco Catalyst 6500-E Series Chassis and existing line cards
- Fully supports Cisco DNA and SD-Access

# Cisco Catalyst campus and branch switching (cont'd)

**Cisco Catalyst 6500 Series Switches:** Deploy a comprehensive enterprise backbone



Get resiliency, security, and more. [Cisco Catalyst 6500 Series](#) switches are widely deployed campus backbone switches. They are optimized for Multigigabit Ethernet services to help you protect your network investment.

- High-performance and scalability - up to 44 ports 40 GE, 534 ports 1GE
- Fully supports Cisco DNA and SD-Access

# Cisco Catalyst campus and branch switching (cont'd)

## Cisco Catalyst 3650 and 3850 Series Switches: Cisco DNA ready



Cisco Catalyst 3650 and 3850 Series Switches are enterprise-class, stackable access switches that provide the foundation for full wired and wireless convergence on a single platform. This series is for voice, data, video, mobility, and IoT and includes:

- Integrated wireless controller
- Layer 2 and 3 access
- Cisco StackWise 160 Gbps and 480 Gbps
- 10 Gbps (SFP+) and 40 Gbps (QSFP+) uplinks
- Multigigabit Ethernet technology
- Network as a Sensor and Enforcer support
- LAN Base, IP Base, IP Services
- Fully supports Cisco DNA, SD-Access, and programmability (NETCONF and YANG)
- Protected by the Enhanced Limited Lifetime Hardware Warranty (E-LLW)

# Cisco Catalyst campus and branch switching (cont'd)

**Cisco Catalyst 2960-X/XR Series Switches:** Cost-effective access switches that scale



Cisco [Catalyst 2960-X/XR Series](#) access switches are the next generation of the Catalyst 2960 Series, helping provide smart, simple, scalable, and secure services for enterprise-class access switching networks. This series is for voice, data, and video. Features include:

- Layer 2 and 3 access
- 80 Gbps stacking
- 10 Gbps SFP+ uplinks
- Network as a Service (NaaS) with Cisco ONE Foundation Lite
- LAN Lite, LAN Base, IP Lite
- Protected by the Enhanced Limited Lifetime Hardware Warranty (E-LLW)

# Cisco Catalyst campus and branch switching (cont'd)

## **Cisco Catalyst 4500E Series Switches:** Ideal for converged enterprise



The [Cisco Catalyst 4500E Series](#) Switches are enterprise-class, modular access and fixed-core switches that provide the foundation for a digital-ready enterprise network. Highly scalable, the 4500 Series switches are optimized for secure 1 Gbps and 10 Gbps services.

- Highly available modular and stackable design
- High-performance CPU for Layer 3 protocol convergence and stability
- Scalable IP routing and MPLS functions accelerated in hardware, without performance impact
- Fully supports Cisco DNA and SD-Access
- Cisco Catalyst 3560-CX and 2960-CX Series Switches

# Cisco Catalyst campus and branch switching (cont'd)

**Cisco Catalyst 3560-CX and 2960-CX Series Switches:** Compact PoE switches you can use anywhere



The [Cisco Catalyst 3560-CX](#) and [2960-CX Series](#) Switches are stackable fixed-configuration Gigabit Ethernet (10/100/1000) switches offering network connectivity for enterprise, midmarket, and branch locations. They enable reliable and secure business operations with innovative features, including Cisco FlexStack-Plus, Application Visibility and Control, PoE+, innovative power management, and SmartOperations.

- 8 and 12 Gbps
- 6x Gigabit Ethernet plus 2x Multigigabit Ethernet
- PoE+, 240W total
- IP Base, LAN Base
- Fanless design and silent operation
- Protected by the Enhanced Limited Lifetime Hardware Warranty (E-LLW)

# Cisco Catalyst campus and branch switching (cont'd)

**Cisco Catalyst 2960-L Series Switches:** Get a next-generation switch at a great value



The [Cisco Catalyst 2960-L Switches](#) are stackable fixed-configuration Gigabit Ethernet (10/100/1000) switches offering network connectivity for enterprise, midmarket, and branch locations. They enable reliable and secure business operations with innovative features, including Cisco FlexStack-Plus, Application Visibility and Control, PoE+, innovative power management, and SmartOperations.

- 8, 16, 24, and 48 Gbps
- 8x to 48x Gigabit Ethernet plus 2x Multigigabit Ethernet
- Up to 195W total PoE+
- IP Base, LAN Base
- Fanless design and silent operation (8- to 24-port models)
- Protected by the Enhanced Limited Lifetime Hardware Warranty (E-LLW)

# Cisco Catalyst campus and branch switching (cont'd)

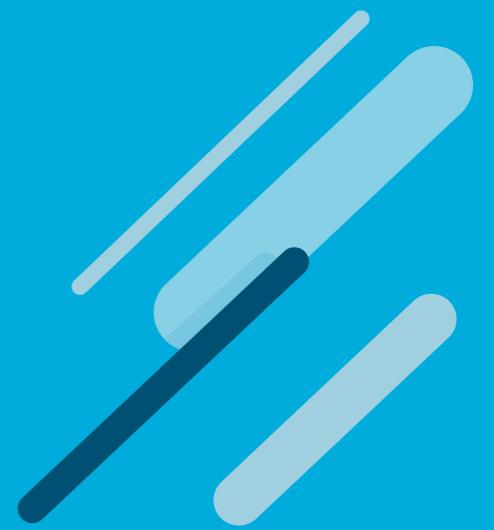
## Cisco Catalyst Digital Building Series Switches



The [Cisco Catalyst Digital Building Series](#) consists of stackable fixed-configuration Gigabit Ethernet (10/100/1000) switches. These plenum-rated Cisco UPOE fanless switches are designed for smart buildings and optimized for low-voltage PoE. Combine lighting, air conditioning, security systems, and more on one IP network with seamless security and easy installation and management.

- 6x 10/100 plus 2x 10/100/1000 uplinks
- 240W (PoE+) to 480W (Cisco UPOE) total
- IP Base, LAN Base
- Fanless design, fixed power supply, and silent operation
- Protected by the Enhanced Limited Lifetime Hardware Warranty (E-LLW)

# Meraki Campus and Branch Switching



# Meraki campus and branch switching

## Cloud-managed switching with Meraki

Meraki simplifies enterprise campus and branch switching with the Meraki dashboard. Meraki switches are configured from any browser, anywhere in the world with an internet connect. Our switches do not require a separate controller and updates are made seamlessly from the cloud (user-scheduled) to keep your deployment running smoothly.

- Reduce the complexity of enterprise network management. Configure switches, security appliances, cameras, and manage end-point devices all through a single pane of glass.
- Take full control of your switch ports with Virtual Stacking. Virtual Stacking lets you configure each network switch port individually and remotely, regardless of whether the switches are physically stacked.
- Configure your entire network before your equipment arrives with Zero-Touch-Provisioning. Simply claim your Meraki switches and start building your network.
- Meraki switches are designed to begin transmitting data automatically minutes after powering up.

Meraki switches are available in stacking/non-stacking models with PoE+ support options.

# Meraki campus and branch switching (cont'd)

## Meraki Family of Cloud-Managed Switches

### Meraki MS120-8 Series Compact Access Switches



Meraki MS120-8 Series provides 1G, non-stacking Layer 2 switching with a sleek and compact form-factor. The integrated wall mounting plate makes placing the switch on desks, walls, or cabinets easy. The Meraki MS120-8 comes in non-powered, 67W, and 124W models. Configure multiple ports simultaneously across switches not physically stacked with Virtual Stacking.

### Meraki MS120 Series Non-stacking Access Switches



Meraki MS120 Series provides 1G, non-stacking Layer 2 switching with 24 and 48 port models. The switch is designed for SOHO deployments or where physical stacking is not a requirement. The switch series comes in 370W and 740W models with PoE+ support. Configure multiple ports simultaneously across switches not physically stacked with Virtual Stacking.

# Meraki campus and branch switching (cont'd)

## Meraki MS200/300 Series Stacking Access switches



### Meraki offers several access switches (Meraki MS 350 shown) with stacking capabilities, including:

- MS210: Layer 2, 1G stacking switch with PoE+ support, compatible with the MS225
- MS225: Layer 2, 10G stacking switch with PoE+ support, compatible with MS210
- MS250: Layer 3, 10G stacking switch with PoE+ support and hot swappable PSU/Fans
- MS350: Layer 3, 10G stacking switch with Cisco UPOE, Multigigabit support and hot swappable PSU/Fans

All switches are built for enterprise campus level deployments of any size. Configure multiple ports simultaneously across switches not physically stacked with Virtual Stacking.

# Meraki campus and branch switching (cont'd)

## Meraki MS400 Series Aggregation Switches



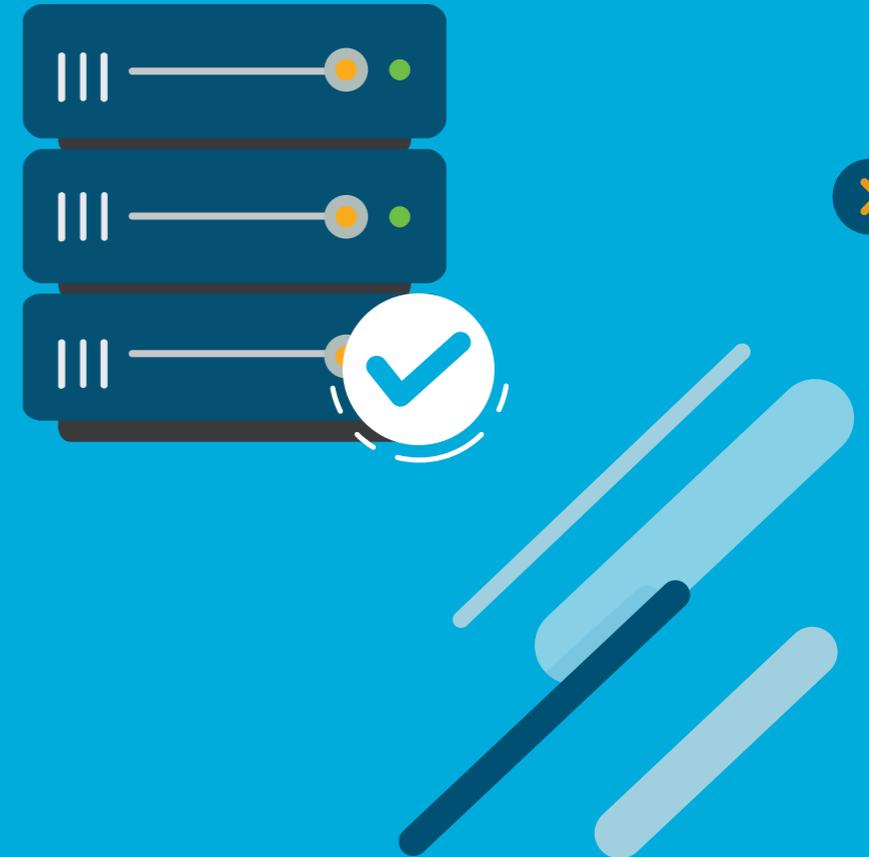
Meraki offers top-tier aggregate switching for very large enterprise deployments. The Meraki MS410 and MS425 aggregate switches offer highly scalable L3 routing and up to 800Gbps of switching capacity. The switches come in 16 and 32 port models with 1G/10G fiber ports and 2 x QSFP+ stacking ports (MS425 only).

Configure multiple ports simultaneously across switches not physically stacked with Virtual Stacking.

# Data center switching

The modern data center workload must excel in server-to-server traffic with intensive communication across hundreds and even thousands of servers. Hence, you need automation across the data center infrastructure, operations, and business processes to enable users and their businesses to respond faster to the application changes in real time. You can meet these requirements with Cisco Nexus, purpose-built for next-generation data center. You get:

- Unmatched scale and performance with Cloud Scale ASIC
- Automation and simplified operations with Cisco ACI
- Dramatically improved security with Cisco Tetration
- Network compliance with Network Assurance Engine



# Data center switching (cont'd)

## Cisco Nexus 9000 Series Data Center Switches



The [Cisco Nexus 9000](#) Series delivers proven high performance and density, low latency, and exceptional power efficiency in a range of form factors. The switches operate in Cisco NX-OS Software or Application Centric Infrastructure (Cisco ACI™) modes with ground-breaking Cloud Scale ASIC technology. Cisco ACI, the industry's leading SDN solution, makes the application the focal point of the infrastructure. It enables an agile, open, and secure architecture, reducing TCO, automating IT tasks, and accelerating data center application deployments.

## Cisco Nexus 9200 Data Center Switches



Built on the latest Cisco Cloud Scale technology, the [Cisco Nexus 9200](#) platform consists of industry-leading ultra-high-density fixed-configuration data center switches with line-rate Layer 2 and 3 features that support enterprise and commercial applications, service provider hosting, and cloud computing environments. These switches support a wide range of port speeds with flexible combinations of 1, 10, 25, 40, 50, and 100 Gbps connectivity in compact form factors. Using the widely deployed industry-leading Cisco NX-OS Software operating system, the Cisco Nexus 9200 platform delivers a programmable fabric that offers flexibility, mobility, and scale for service providers, for infrastructure-as-a-service (IaaS) and cloud providers, and for DevOps operation models and tool sets.

# Data center switching (cont'd)

## Leaf and Access Data Center Switches: Cisco Nexus 9300 and 9300-EX, FX and FX2



The [Cisco Nexus 9300](#) platform is the next generation of fixed Cisco Nexus 9000 Series Switches. Based on Cisco's Cloud Scale ASIC, the 9300 platform supports cost-effective cloud-scale deployments, an increased number of endpoints, and cloud services with wire-rate security and telemetry. The 9300-EX platform offers a variety of interface options that transparently migrate existing data centers from 100 Mbps, 1 Gbps, and 10 Gbps speeds to 25 Gbps at the server, and from 10 and 40 Gbps speeds to 50 and 100 Gbps at the aggregation layer. The Cisco Nexus 9300 and 9300-EX platforms support both Cisco ACI and Cisco NX-OS.

## Cisco Nexus 9500 Data Center Switches



The Cisco Nexus 9500 platform offers three modular options designed to scale as your network requirements grow: the Cisco Nexus 9504 Switch with 4 slots, the Cisco Nexus 9508 Switch with 8 slots, and the Cisco Nexus 9516 Switch with 16 slots. The Cisco Nexus 9500 platform consists of Layer 2 and 3 nonblocking Ethernet switches with backplane bandwidth of up to 172.8 Tbps. The 9504, 9508, and 9516 switches support 1, 10, 25, 40, 50, and 100 Gigabit Ethernet interfaces through a comprehensive selection of modular line cards. Configurable with up to 2304x 10 Gigabit Ethernet ports, 2048x 25 Gigabit Ethernet ports, 576x 40 Gigabit Ethernet ports, 1024x 50 Gigabit Ethernet ports, or 512x 100 Gigabit Ethernet ports, they provide ample capacity for both access- and aggregation-layer deployments. The 9500 platform supports both Cisco ACI and Cisco NX-OS.

# Data center switching (cont'd)

## Cisco Nexus 7000 Series

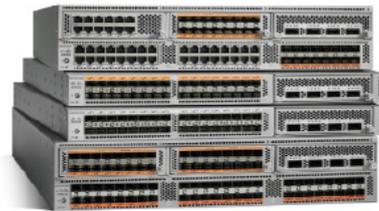
Build a next-generation network



These modular switches deliver full NX-OS features and open-source programmable tools for software-defined deployments. Get high-density 10, 40, and 100 Gigabit Ethernet with application awareness, high programmability, and performance analytics.

## Cisco Nexus 5000 Series

Gain a fabric-extensible, innovative platform



Cisco Nexus 5000 Series Switches are designed to deliver high-density top-of-rack (ToR) Layer 2 and Layer 3, 10/40 Gigabit Ethernet with unified ports in compact one-, two-, and four-rack-unit form factors. The Cisco Nexus 5000 Series includes the Cisco Nexus 5500 and 5600 platforms as part of the Cisco Unified Fabric portfolio.

The comprehensive Cisco NX-OS feature set and 10/40 Gigabit Ethernet scalability of the Cisco Nexus 5000 Series deliver high performance, operational efficiency, and design flexibility

# Data center switching (cont'd)

## Cisco Nexus 3000 Series

Get top-of-rack, Layer 2 and 3 switching



The Cisco Nexus 3000 Series offers low-latency, highly programmable, high-density switches. They are excellent for general-purpose deployments, high-performance computing, high-frequency trading, massively scalable data center, and cloud networks.



# Summary

We now live in a “disrupt or be disrupted” world where no industry is immune.

From caring for the sick or the homesick to manufacturing the next spinners or the next genius, your business and the network that drives your business will need to change.

Today, you need a network that constantly learns, constantly adapts, and constantly protects.

Cisco Catalyst, Meraki, and Nexus switches have been designed to constantly adapt to help you solve new challenges. Integrated security, visibility and assurance helps you address ever-changing threats and proactively verify network behavior. Automation helps you scale to manage and maintain your evolving mobility, IoT, and multi-cloud networks.

Whether you operate in a traditional environment or in full fabric-control mode, Cisco Catalyst, Meraki and Nexus switches offer more capabilities and higher densities at competitive prices that can handle the demands of your network today with an eye on handling the needs of the future.

Explore our switches for your access, distribution, core and data center networks.

Cisco Switch Selector Tool

Cisco Switching Portfolio

Cisco Digital Network Architecture