Cisco ONE for Access Switching

Contents

Cisco ONE™ Software helps customers purchase the right software capabilities to address their business needs. It helps deliver reduced complexity, simplified buying, and the peace of mind that today's software investments will last into the future. These products offer a greater value to customers with more features at better together pricing.

Cisco ONE Software provides customers with the following main benefits:

- Flexible licensing models to smoothly distribute customer's software spending over time
- Access to updates, upgrades, and new technology from Cisco through Cisco® Software Support Service (SWSS)
- Investment protection for software purchases through software services-enabled license portability
- Software suites that address typical customer use-case scenarios at an attractive price
- Lower cost of entry with new Cisco DNA Subscription for Switching model

Table 1 outlines the common IT challenges and how Cisco ONE Software helps customers deal with these challenges.

Table 1.   IT management challenges and Cisco ONE Software benefits

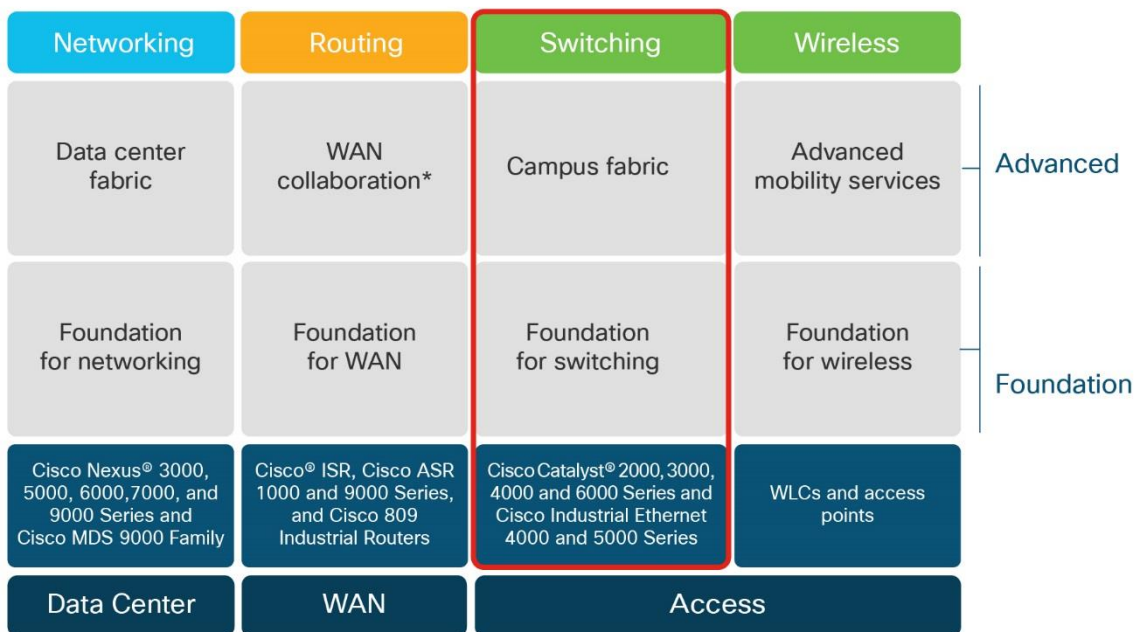| IT management challenges	Cisco ONE Software benefits
Shrinking IT Budgets IT budgets are shrinking while IT demands continue to accelerate. As the costs of IT and downtime skyrocket, companies need to balance shrinking budgets with easy-to-deploy networks that enhance operational efficiency.	**Deliver More Value for Your Money** Cisco ONE Software is designed for common customer use scenarios and offered at a better together price, making it easier and less expensive for you to deploy complete solutions. **Increase Investment Protection** Software services-enabled license portability lets your software licenses stay current through hardware upgrades and replacements at no additional cost.
Infrastructure Inflexibility IT organizations lack an automated way to keep pace with changing business needs and demands for more resources. It often takes weeks to procure and provision a new network service.	**Enhance Business Agility** Cisco ONE Software delivers critical business solutions and provides you with the tools you need to deploy, maintain, and manage your software.
Lack of Buying Options Organizations need more options for buying software to improve their flexibility, reduce risk, and cut costs.	**Flexible Licensing Models** Evenly distribute your software spending over time with subscription-based and other flexible purchasing models.
Implementation Obstacles Deploying software and implementing new use cases can often cause major disruptions to your current operations.	**Reduce Risk and Downtime** Cisco's technical and professional services provide the expertise, smart tools and proven processes that reduce risk and lower downtime.

IT management challenges	Cisco ONE Software benefits
Excessive Time and Costs for Maintenance The majority of your IT budget and most of your workloads are focused on routine maintenance, limiting your ability to innovate and grow your business.	**Accelerate ROI and Time-to-Value** Optimize the performance of your networks to get the most out of your technology investments. Accelerate your business outcomes with expert guidance from Cisco technical and professional services.

Cisco ONE for Access Switching ordering information

For a complete list of Cisco ONE for Access Switching product and service part numbers, click here.

Product overview

Cisco ONE for Access Switching powers Cisco Catalyst® Family switches by introducing a simpler and more economical way to deploy access, aggregation, and core switches across enterprise campus and branch locations. It helps you create, manage, and scale a connected borderless bussiness. Cisco ONE for Access Switching is available through flexible subscriptions and perpetual buying options (Figure 1).

Networking	Routing	Switching	Wireless	
Data center fabric	WAN collaboration*	Campus fabric	Advanced mobility services	Advanced
Foundation for networking	Foundation for WAN	Foundation for switching	Foundation for wireless	Foundation
Cisco Nexus® 3000, 5000, 6000, 7000, and 9000 Series and Cisco MDS 9000 Family	Cisco® ISR, Cisco ASR 1000 and 9000 Series, and Cisco 809 Industrial Routers	Cisco Catalyst® 2000, 3000, 4000 and 6000 Series and Cisco Industrial Ethernet 4000 and 5000 Series	WLCs and access points	
Data Center	WAN	Access		

*Foundation suite optional

Figure 1.
Cisco ONE Software: Perpetual license overview

Cisco ONE for Access Switching perpetual license offers

Cisco ONE perpetual license offers for switching provide comprehensive solutions for enterprise campus and branch offices. Foundation for Switching includes capabilities needed to implement a complete, secure, and feature-rich access infrastructure. Campus Fabric builds on the capabilities of Foundation for Switching with powerful tools to scale, secure, and optimize your network (see Figure 1).

Cisco ONE Campus Fabric

Access Switching Campus Fabric delivers a better user experience in complex switching environments. Add scalability for network for business expansion and increase resiliency for mission-critical applications:

- Transparently manage heterogeneous and distributed LANs.
- Scale your network for business expansion with advanced Layer 3 features.
- Add resiliency for mission-critical applications.
- Segment your network for security, compliance, and complex business processes.
- Optimize utilization of network infrastructure.
- Conserve bandwidth and improve network efficiency with advanced multicast capabilities.

Key components of Cisco ONE Campus Fabric

- Access to full Layer 3 routing on the Access Switching portfolio.
- Easy Virtual Network (EVN) delivers traffic separation and path isolation capabilities on a shared network infrastructure.
- IP Multicast allows a host to send packets to a subset of all hosts as a group transmission.
- IP Services, Enterprise Services, and Advanced Enterprise Services)* provide advanced Layer 3 routing, route virtualization (using VRF), Nonstop Forwarding (NSF), and multicast features. The IP Services image provides a rich set of enterprise-class features, which includes advanced hardware-based IP unicast and IP multicast routing.

Cisco ONE Foundation for Switching

Connect, secure, and manage users and devices for a connected organization:

- Connect users to your network with comprehensive capabilities for Layer 2 and Layer 3 switching, mobility, security, application visibility, segmentation, and QoS.
- Use one management platform for wired, wireless, and VPN users and devices.
- Authenticate and authorize any user or device with a single policy and a guest portal. Centralize and unify network access policy management to provide consistent, secure access for end users across wired and wireless networks.
- Reduce operating expenses by simplifying network deployment, operations, and management with a unified solution for wireless and wired lifecycle management and assurance.

Software components of Cisco ONE for Access Switching perpetual license offers

Cisco ONE Campus Fabric provides a rich set of enterprise-class features, including complete Layer 3, advanced hardware-based IP unicast, and IP multicast routing.

- IP Services, Enterprise Services, and Advanced Enterprise Services provide advanced Layer 3 routing, route virtualization (using VRF), Nonstop Forwarding (NSF), and multicast features. The IP Services image provides a rich set of enterprise-class features, which includes advanced hardware-based IP unicast and IP multicast routing.

Cisco ONE Foundation for Switching helps manage, secure, and optimize your wired network.

- The IP Base feature set includes advanced QoS, rate limiting, Access Control Lists (ACLs), and basic static and Routing Information Protocol (RIP) functions for complete Layer 2 (access layer) features and enterprise Layer 3 (access layer) features.

- Cisco Identity Services Engine (ISE) Base enhances security policy management and control by simplifying access control and security compliance for wired and wireless devices including integration of third-party devices. It provides secure access (AAA and IEEE 802.1x), guest management, basic BYOD support, and link encryption (MACsec).

- Cisco Prime Infrastructure is network management that connects the network to the device to the user to the application: end to end and all in one. Its capabilities permit simplified deployment of Cisco value-added features and single-pane management. It increases application visibility and serves as the core management solution for wireless and wired lifecycle management and assurance.

Cisco platforms supported by Cisco ONE for Access Switching perpetual license offers

Cisco ONE for Access Switching perpetual license offers are available on the following platforms:

- Cisco Industrial Ethernet 4000 and 5000 Series Switches

- Cisco Catalyst 2000 Series Switches (Cisco Catalyst 2960X and 2960-XR)

- Cisco Catalyst 3000 Series Switches (Cisco Catalyst 3560-CX, 3650 and 3850 fiber and nonfiber switches)

- Cisco Catalyst 4500 Series Switches (Cisco Catalyst 4500E and 4500-X)

- Cisco Catalyst 6800 Series Switches (Cisco Catalyst 6880-X, 6840-X and 6807-XL)

Table 2 lists the Cisco IOS Software feature sets for the various Cisco ONE perpetual software offers.

Table 2.   Cisco IOS Software feature set across the Cisco ONE Software offers

Cisco IOS Software licenses	Cisco Industrial Ethernet 4000 and 5000 Series	Cisco Catalyst 2000 Series	Cisco Catalyst 3650 and 3850 (nonfiber) Series	Cisco Catalyst 3850 (fiber) Series	Cisco Catalyst 4000 Series (4500E and 4500X)	Cisco Catalyst 6800 Series
Base Platform	LAN Base	LAN Base	LAN Base	IP Base	LAN Base (4500) IP Base (4500X)	IP Services
Foundation	–	–	IP Base	–	IP Base (4500) – (4500X)	–
Advanced	IP Services	–	IP Services	IP Services	Enterprise Services	Advanced Enterprise Services

Table 3 lists the features and capabilities of Cisco ONE for Access Switching. The top part of the table lists the features for Cisco ONE Foundation for Access Switching across the different platforms. The bottom part of the table lists features for Cisco ONE Campus Fabric.

Table 3.   Features and capabilities of Cisco ONE for Access Switching

	Cisco Industrial Ethernet 4000 and 5000 Series	Cisco Catalyst 2000 Series	Cisco Catalyst 3000 Series	Cisco Catalyst 4000 Series (4500E and 4500X)	Cisco Catalyst 6800 Series
Cisco ONE Foundation for Access Switching					
Application experience					
Cisco Flexible NetFlow	✓ (NetFlow Lite)	✓	✓	✓	✓
Media features (Mediatrace, Metadata, Performance, and Monitor)			✓	✓	✓
Web Cache Communications Protocol			✓	✓	✓
Wireshark			✓	✓	
IT simplicity and programmability					
Smart Install	✓	✓	✓	✓	✓
IP Service-Level Agreements	✓		✓	✓	✓
Embedded Event Manager	✓		✓	✓	✓
Auto Smart Ports	✓	✓	✓	✓	✓
Service Discovery Gateway (Bonjour)			✓	✓	✓
Plug and Play	✓	✓	✓	✓	✓
Protect Your Network with Robust Security					
Secure Group Tags (SGT) and Secure Group Access Control Lists	✓		✓	✓	✓
MACsec	✓		✓	✓	✓
SGT Exchange Protocol	✓	✓	✓	✓	✓
IEEE 802.1x	✓	✓	✓	✓	✓
Device Sensor		✓	✓	✓	✓
Resiliency					
Cisco StackPower®			✓		

	Cisco Industrial Ethernet 4000 and 5000 Series	Cisco Catalyst 2000 Series	Cisco Catalyst 3000 Series	Cisco Catalyst 4000 Series (4500E and 4500X)	Cisco Catalyst 6800 Series
Stateful Switchover			✓	✓	✓
Save time and enhance visibility					
Cisco Prime Infrastructure	✓	✓	✓	✓	✓
Cisco Prime Assurance	✓	✓	✓	✓	✓
Protect your infrastructure down to the port level					
Cisco Identity Services Engine (ISE) Base AAA and RADIUS[1], Basic BYOD, Cisco TrustSec® (SGT), MACsec, and External Representational State Transfer (REST) Services	✓ (50 endpoints)	✓ (50 endpoints)	✓ (50 endpoints)	✓ (150 endpoints)	✓ (150 endpoints)
Higher bandwidth speeds up to 10 Gbps (including IEEE 802.11ac Wave 2) over traditional Cat 5e cabling or above					
Multigigabit Ethernet (Mgig) Access			✓ Catalyst 3850		
Layer 3 features and routing					
RIP, OSPF Routed Access (1000 routes), EIGRP Stub, HSRP, VRRP	✓		✓	✓	✓
Policy-Based Routing, Unicast Reverse Path Forwarding	✓		✓	✓	✓
Protocol-Independent Multicast	✓		✓	✓	✓
Cisco ONE Campus Fabric					
Advanced routing					
BGP	✓		✓	✓	Foundation
EIGRP	✓		✓	✓	Foundation
IS-IS	✓		✓	✓	✓
Full OSPF	✓		✓	✓	Foundation
Protocol-Independent Multicast	✓		✓	Foundation	Foundation
IPv6 Routing (OSPFv3, EIGRPv6, etc.)	✓		✓	✓	✓
Policy-Based Routing	✓		✓	✓	✓
Virtualization					
VRF			✓	✓	Foundation

	Cisco Industrial Ethernet 4000 and 5000 Series	Cisco Catalyst 2000 Series	Cisco Catalyst 3000 Series	Cisco Catalyst 4000 Series (4500E and 4500X)	Cisco Catalyst 6800 Series
VRF Lite	✓		✓	✓	Foundation
Layer 2 VPNs					✓
MPLS Layer 3 VPNs					✓
L3VPN over mGRE					✓
Easy Virtual Network				✓	✓
Security					
ACL Dry Run					✓
ACL Atomic Commit					✓
Layer 3 Secure Group Tags	✓		✓	Foundation	Foundation
Stealthwatch[*] (visibility and threat detection across the network) [*]**Flow collector and management license included**		✓ (25 flows of Stealthwatch)			
Resiliency and availability					
Nonstop Forwarding with Stateful Switchover			✓	Foundation	Foundation
IP Service-Level Agreements (IPSLAs)	✓		✓	Foundation	✓
Enhanced Object Tracking for IPSLAs			✓	Foundation	✓
Service Advertising Framework				✓	✓
Multiprotocol					
Multiprotocol BGP				✓	✓
Ethernet over MPLS					✓
Native VPLS					✓
Advanced VPLS					✓

[2] Additional Identity Services Engine features such as profiling, posture, and TACACS+ need to be purchased individually. For more information, refer to the Identity Services Engine data sheet at https://www.cisco.com/c/en/us/products/collateral/security/identity-services-engine/data_sheet_c78-656174.html?cachemode=refresh.

For a complete list of Cisco ONE for Access Switching product and service part numbers, click here.

Cisco and partner services

Our industry-leading methodology and tools, expertise, best practices, and established partner relationships help our customers deliver extraordinary outcomes. We take a holistic approach to planning, implementing, and managing your next-generation network. With our services, you quickly recognize the full value of your Access Switching investment. For more information about this and other Cisco Services, contact your local account representative or visit https://www.cisco.com/site/us/en/services/index.html.

Cisco ONE Software Services

Services from Cisco and our certified partners enable the primary features of Cisco ONE Software to help you maximize business outcomes and protect your investment. Pairing software and hardware support together provides the best set of benefits to reduce costs and keep your business on track.

Cisco ONE Software Foundation and Advanced Applications suites both use Cisco Software Support Service (SWSS) for ongoing support and maintenance. SWSS provides the technical support expertise you need to successfully navigate the rich features and functionality of Cisco ONE Software, and is required for a minimum of 12 months. SWSS protects your investments through access to ongoing innovation, license portability, major software upgrades, minor software updates and maintenance, access to our award-winning Technical Assistance Center (TAC), and instant access to online resources. By providing an integrated and comprehensive service, we help you quickly resolve issues while seeing cost savings and productivity gains.

Your SWSS contract provides:

- Access to the TAC for software issues 24 hours a day, 7 days a week
- Major upgrades, minor updates, and maintenance for licensed software applications
- Software license portability entitlement
- Access to ongoing innovation
- Access to online resources
- Investment protection

To help ensure coverage for your Cisco base OS software and hardware, Cisco Smart Net Total Care (SNTC) is highly recommended. SNTC provides 24-hour global support for the underlying hardware platforms where Cisco ONE Software is deployed.

Cisco Smart Net Total Care includes access to TAC for hardware and entitlement to smart capabilities to reduce your operating expenses and free your IT staff to focus on business innovation. Entitlement provides self-service access to the SNTC portal, free download of the Cisco collector software, and community support for the portal and collector. SNTC includes:

- Access to the TAC for hardware and base OS software issues 24 hours a day, 7 days a week
- Software updates for base OS software
- Access to online resources
- Advance hardware replacement
- Entitlement to smart capabilities

By providing an integrated and comprehensive service, we help you quickly resolve issues while seeing cost savings and productivity gains.

Professional services for Cisco ONE Software

Professional services for Cisco ONE Software include optional Quick Start enablement services to support Cisco ONE Software bundles and use cases. These services help you quickly deploy Cisco ONE Software feature and capabilities.

The expert guidance, processes, and tools from Cisco and our partner professional services organizations help you fully realize the technology benefits, reduce implementation risk, and achieve faster time-to-value. These fixed-scope, fixed-price services can be ordered alongside Cisco ONE Software products, greatly simplifying the ordering process.

Quick-start services include basic end-to-end turn-up of new capabilities and may include one or more of the following:

- Technology transformation and strategy workshop

- Readiness assessment of software environment

- Design guidance for underlying network infrastructure

- Software installation, configuration, and integration

- Workflow automation

- Migration and on-boarding

- Feature and functionality test

- Development of operational run books

- Knowledge transfer

Cisco also offers an optional set of day-2 services for adoption, change management, and optimization for Cisco ONE Software, including ongoing support for:

- Change governance

- Continuous assessment, monitoring, and optimization of software features and capabilities

- Basic enablement and design for additional capabilities

- Basic enablement and design for system integration

- Planning for technology optimization and transformation

- Proactive bug scrubs, metrics measurement, and software reviews

The combination of day-1 (Quick Start planning and deployment) and day-2 (Adoption, Change Management, and Optimization) professional services delivers optimal support for Cisco ONE Software and enhances your ability to achieve your desired business outcomes.

Cisco Capital

Flexible Payment Solutions to Help You Achieve Your Objectives Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

For more information

To learn more about how Cisco ONE Software can help your organization, visit the Cisco ONE website: https://www.cisco.com/go/one. If you're interested in having a conversation about Cisco ONE Software, please contact your account manager or authorized reseller.