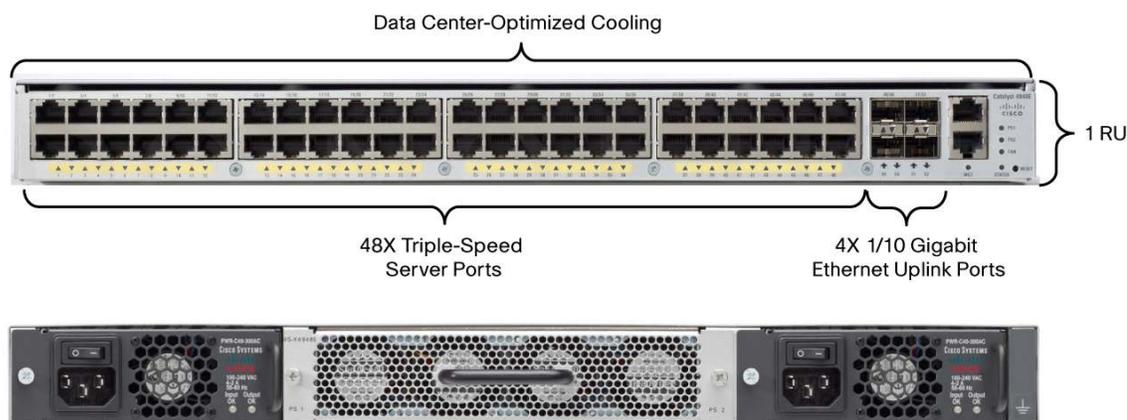


New Cisco Catalyst 4948E Ethernet Switch for High-Performance Data Center Access

PB600212

Cisco is announcing the new Cisco Catalyst[®] 4948E Ethernet Switch optimized for full-featured server-access switching. The Cisco Catalyst 4948E offers forty-eight 10/100/1000-Gbps RJ45 downlink ports and four 1/10 Gigabit Ethernet uplink ports and is designed to simplify data center architecture and operations by offering enterprise-class hardware and software in a one-rack-unit (1RU) form factor optimized for smart top-of-rack (ToR) data center deployments (Figure 1).

Figure 1. Cisco Catalyst 4948E



New Features

The Cisco Catalyst 4948E offers:

- Twice the uplink capacity of the previous switch generation
- 1+1 power supply and fan redundancy for hardware replacement with no downtime
- Strict front-to-back cooling with no side or top venting
- Large shared packet buffers for microburst protection
- Nonblocking internal packet switching for east-to-west traffic patterns
- Full set of Layer 2 and 3 forwarding features
- Outstanding multicast performance
- Zero-touch provisioning with Cisco IOS[®] Embedded Event Manager (EEM)
- Advanced quality of service (QoS)
- IP Version 6 (IPv6) switching and routing in hardware
- Extended MAC address tables to enable server virtualization

Table 1 summarizes the main features of the Cisco Catalyst 4900 Series Switches.

Table 1. Cisco Catalyst 4900 Series Features

Feature	Cisco Catalyst 4948 Switch	Cisco Catalyst 4948 10 Gigabit Ethernet Switch	Cisco Catalyst 4948E Switch
Performance			
Switching capacity	96 Gbps	136 Gbps	176 Gbps
Throughput	72 million packets per second (mpps)	102 mpps	131-mpps IPv4 switching 110-mpps IPv6 switching
CPU	266 MHz	666 MHz	1.0 GHz
Synchronous Dynamic RAM (SDRAM)	256 MB	256 MB	1024 MB
Active VLANs	4096	4096	4096
Multicast entries	<ul style="list-style-type: none"> • 28,000 (Layer 3) • 16,000 (Layer 2) 	<ul style="list-style-type: none"> • 28,000 (Layer 3) • 16,000 (Layer 2) 	<ul style="list-style-type: none"> • 32,000 (IPv4 Layer 3) • 16,000 (IPv6 Layer 3) • 32,000 (Layer 2)
Spanning Tree Protocol instances	1500	1500	3000
Switched virtual interfaces (SVIs)	2000	2000	4000
Security and QoS hardware entries	16,000	16,000	32,000
MAC addresses	32,000	55,000	55,000
Switched Port Analyzer (SPAN)	2 ingress and 4 egress	2 ingress and 4 egress	8 ingress and 8 egress
Minimum software requirement	Cisco IOS Software Release 12.2(20) EWA or later	Cisco IOS Software Release 12.2(25) EWA or later	Cisco IOS Software Release 12.2(54) XO or later

Cisco IOS Software

The Cisco Catalyst 4948E supports three levels of Cisco IOS Software, summarized in Table 2. The basic level is LAN Base, developed for deployments that require data center - class hardware along with Layer 2 switching. The next level of software is IP Base; most customers will deploy this level of software because it offers many of the value-added Cisco® features that provide operational consistency and an easy-to-manage environment. The top level of software is Enterprise Services. Enterprise Services adds support for advanced routing protocols such as Border Gateway Protocol (BGP), Open Shortest Path First (OSPF), Intermediate System to Intermediate System (IS-IS), and Enhanced Interior Gateway Routing Protocol (EIGRP).

Table 2. Software Configuration Options

Enterprise Services		
IP Base		
LAN Base	<ul style="list-style-type: none"> • AutoQoS • Cisco EnergyWise • Flexlink+ • Layer 2 traceroute • Multicast Listener Discovery (MLD) snooping • Rapid Per VLAN Spanning Tree Plus (RPVST+) • Static routing • Routing Information Protocol (RIP) • Cisco SmartPort macros • VLAN access control list (VACL) and port ACL (PACL) 	<ul style="list-style-type: none"> • EIGRP-stub • OSPF for routed access • IEEE 802.1Q-in-IEEE 802.1Q (QinQ) • IP service-level agreement (IP-SLA) responder • Network Mobility Service Protocol (NMSP) • Layer 2 Protocol Tunneling (L2PT) • Stub IP multicast • Cisco IOS EEM • Gateway Load Balancing Protocol (GLBP)
		<ul style="list-style-type: none"> • BGPv4 • EIGRP • OSPFv2 and v3 • IS-IS • IP-SLA • Nonstop Forwarding (NSF) • Policy-Based Routing (PBR) • Virtual Route Forwarding Lite (VRF-Lite) • Multicast VRF-Lite

Ordering Information

Table 3 provides ordering information for the Cisco Catalyst 4948E.

Table 3. Ordering Information

Description	Part Number
Hardware	
Catalyst 4948E 48x 10/100/1000(RJ45)+4*10GbE(SFP+), opt sw, no p/s	WS-C4948E
Catalyst 4948E 48x 10/100/1000(RJ45)+4*10GbE(SFP+), IP Base IOS, AC p/s	WS-C4948E-S
Catalyst 4948E 48x 10/100/1000(RJ45)+4*10GbE(SFP+), Ent Ser IOS, AC p/s	WS-C4948E-E
Green Bundle 10x WS-C4948E	WS-C4948E-BDL
Catalyst 4948E 300WAC power supply rear exhaust (spare)	PWR-C49E-300AC-R(=)
Catalyst 4948E 300WAC redundant power supply rear exhaust	PWR-C49E-300AC-R/2
Catalyst 4948E 300WDC power supply (spare)	PWR-C49-300DC(=)
Catalyst 4948E 300WDC redundant power supply (spare)	PWR-C49-300DC/2
Software	
Cisco IOS Software for Cisco Catalyst 4948E Series Switches (LAN Base image)	S49LB-12254XO(=)
Cisco IOS Software for Cisco Catalyst 4948E Series Switches (LAN Base image with Triple Data Encryption)	S49LBK9-12254XO(=)
Cisco IOS Software for Cisco Catalyst 4948E Series Switches (IP Base image)	S49IPB-12254XO(=)
Cisco IOS Software for Cisco Catalyst 4948E Series Switches (IP Base image with Triple Data Encryption)	S49IPBK9-12254XO(=)
Cisco IOS Software for Cisco Catalyst 4948E Series Switches (Enterprise Services image with BGP support)	S49ES-12254XO(=)
Cisco IOS Software for Cisco Catalyst 4948E Series Switches (Enterprise Services image with 3DES and BGP support)	S49ESK9-12254XO(=)
Catalyst 4948 IP Base Upgrade License for LAN Base IOS	WS-C4900-SW-LIC
Power Cables	
AC Power cord, 110V North America, Japan	CAB-US515-C15-US(=)
AC Power cord, 220V North America	CAB-N5K6A-NA(=)
AC Power cord (Australia, New Zealand)	CAB-AS3112-C15-AU(=)
AC Power cord (Europe)	CAB-CEE77-C15-EU(=)
AC Power cord CD12 (Italy)	CAB-C2316-C15-IT(=)
AC Power cord (Argentina)	CAB-IR2073-C15-AR(=)
AC Power cord (South Africa, India)	CAB-SABS-C15-IND(=)
AC Power cord (United Kingdom)	CAB-BS1363-C15-UK(=)
AC Power cord (Switzerland)	CAB-9K10A-SW(=)
Accessories	
Cisco Catalyst 4948E spare fan tray rear exhaust	WS-X4993(=)

Cisco Services

Cisco Services makes networks, applications, and the people who use them work better together.

Today, the network is a strategic platform in a world that demands better integration of people, information, and ideas. The network works better when services, together with products, create solutions aligned with business needs and opportunities.

The unique Cisco Lifecycle approach to services defines the requisite activities at each phase of the network lifecycle to help ensure service excellence. With a collaborative delivery methodology that joins the forces of Cisco, our skilled network of partners, and our customers, we achieve the best results.

For More Information

For more information about the Cisco Catalyst 4948E, visit <http://www.cisco.com/go/4900>.



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