

Cisco CSS 11150 Content Services Switch

CREATE HIGH-PERFORMANCE WEB SITES WITH CUSTOMER-FOCUSED WEB NETWORK SERVICES



The Cisco CSS 11150 content services switch is a compact, high-performance solution for small-to medium-sized Web sites. Featuring Cisco Web Network Services (Web NS) software, the Cisco CSS 11150 enables Web and application service providers, Web content providers, and enterprises engaged in e-commerce to build global Web networks optimized for e-commerce transactions and Web content delivery. With its patented content switching technology, the Cisco CSS 11150 gives businesses maximum control in ensuring availability of their Web sites, securing Web site resources without compromising performance, and allocating Web site resources efficiently.

Running on the Cisco CSS 11150, Cisco Web NS software knows who the user is, what the user wants to do, and how best to service the user's request within a global Web infrastructure. The Cisco CSS 11150 supports wire-speed flow forwarding between a client and a Web server, based on the requested content's full URL, as well as user cookie and extensive resource verification information.

Built for Web Traffic

The Cisco CSS 11150 combines centralized processing and memory resources for policy-based flow setup with distributed network processors that support wire-speed flow forwarding, in a single platform. The Cisco CSS 11150 Content Policy Engine consists of a high-speed RISC processor, 128 MB of memory, and 5.0 Gbps of throughput and delivers per-flow prioritization based on hundreds of user-defined policies. Distributed flow-forwarding engines feature per-port programmable network processors for wire-speed delivery of Web content.

Built to address the requirements of Web traffic, this unique architecture combines performance and intelligence, allowing Web site operators to flexibly distribute content in a local or distributed Web farm. This intelligence also allows users to reduce costs by maximizing the use of server, cache, and network resources for specific customers, applications, or content.



Cisco Web NS Software

With the industry's most comprehensive URL- and cookie-based switching, Cisco Web NS software lets network managers tailor customer or content-specific service agreements, offer premium services for preferred customers, and deploy content delivery services for streaming audio and video, distance learning, and Internet audio and video broadcasting. Support for "sticky" connections based on IP address, secure socket layer (SSL) session ID, and cookies ensures reliability and security for e-commerce transactions.

The unique Cisco content replication technology enables dynamic expansion of site capacity in response to sudden "flash crowds" for "hot" content, or seasonal peaks in traffic that can overwhelm servers.

Local, Global, and Application Load-Balancing

Cisco CSS 11000 series switches learn where specific content resides, either locally or remotely, and dynamically select the best Web server or cache for specific content requests—ending frustrating error messages such as "Server Not Found." In a distributed Web site, Cisco CSS 11000 series switches perform comprehensive resource verification before routing user requests, ensuring they are directed to the location that has the best response time and the least load for the requested content. Local server selection is based on server load and application response time, as well as traditional least connections and round-robin algorithms. Global server load balancing is based on Domain Name System (DNS) and proximity by source IP address. Any application that uses standard Transmission Control Protocol (TCP) or User Datagram Protocol (UDP) protocols can also be load-balanced including firewalls, mail, news, chat, and lightweight directory access protocol (LDAP).

Site and System Security

Cisco CSS 11000 series switches ensure high levels of security without compromising site performance, providing wire-speed, per-flow filtering of content requests. Security policies can be implemented based on any combination of source address, destination address, protocol, type, or content URL. Intelligent flow inspection

prevents common denial of service attacks such as SYN floods, ping floods, and "smurfs." Wire-speed network address translation protects server IP addresses.

For backend system security, Cisco CSS 11000 series switches intelligently direct traffic across multiple routers, SSL encryption hardware, and firewall security servers. Firewall load balancing eliminates system downtime that results when an overloaded security server fails or shuts down, closing off the connection to the network, and disrupting e-commerce purchases or other mission-critical transactions.

Advanced System Management

System management capabilities include a powerful command line interface (CLI), a graphical user interface (GUI), and support for Simple Network Management Protocol (SNMP), remote monitoring (RMON), and log files. Effective management tools reduce the ongoing cost of operating a business-critical Web site.

Cisco CSS 11150 Benefits

- Provides high-speed Web content delivery by selecting the best site and server based on full URL, cookie, and resource availability information
- Offers site-level security with wire-speed denial-of-service (DoS) prevention; firewall load-balancing provides scalable security for back-end data-bases and applications
- Delivers up to 400 percent improvement in Web cache efficiency for transparent, proxy, and reverse proxy configurations
- Provides 12 or 16 full-duplex fast Ethernet ports or 12 fast Ethernet plus 2 gigabit Ethernet ports
- Supports all TCP- and UDP-based Web protocols, wire-speed network address translation (NAT), and integrated IP routing
- Optimizes both content requests and delivery for HTTP, passive File Transfer Protocol (FTP), and streaming media protocols
- Enables advanced service level agreements (SLAs), and a variety of new fee-based services

Cisco CSS 11150 Specifications

Mechanical

- Dimensions: 2.62 x 17.0 x 15.0 in. (H x W x D)
- Slot configuration: Fixed
- Switch bandwidth: 5.0 Gbps

Environmental

- Operating temperature: 32° to 104°F (0° to 40°C)
- Storage temperature: -4° to 149°F (-20° to 65°C)
- Relative humidity: 10 to 95%, noncondensing

Electrical

- Input voltage AC: 100 to 240 VAC, 50 to 60 Hz
- Current AC: 3.1A (max)
- Power consumption: 310W (max)

Interface Specifications

Part Number	Specifications
CSS-11151-AC	12 10/100BASE-TX ports
CSS-11152-AC	16 10/100BASE-TX ports
CSS-11153-AC	12 10/100BASE-TX ports and 4 100BASE-FX ports
CSS-11154-AC	12 10/100BASE-TX ports and 2 1000BASE-SX ports

Certifications

- Safety: UL 1950; CSA 950; EN60950; GS Mark
- EMC: FCC Part 15 Class A; EN55022 Class A; EN 50082-1; VCCI Class 1
- Factory approvals: UL; TUV; BABT 340



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