



Preface

This guide provides instructions for configuring the SSL features of the Cisco 11500 Series Content Services Switches (CSS). Information in this guide applies to all CSS models except where noted.

The CSS software is available in a Standard or optional Enhanced feature set. Proximity Database and Secure Management, which includes Secure Shell Host and SSL strong encryption for the Device Management User Interface software, are optional features.

This preface contains the following major sections:

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Audience

This guide is intended for the following trained and qualified service personnel who are responsible for configuring the CSS:

- Web master
- System administrator
- System operator

How to Use This Guide

This guide is organized as follows:

Chapter	Description
Chapter 1, Overview of CSS SSL	Overview of SSL cryptography and the CSS SSL features.
Chapter 2, SSL Configuration Quick Starts	Configure the CSS SSL features quickly and easily using procedural tables with command examples followed by running-config examples for each table.
Chapter 3, Configuring SSL Certificates and Keys	Import, create, and associate certificates and key pairs.
Chapter 4, Configuring SSL Termination	Configure the CSS and the SSL Acceleration Module to perform Secure Sockets Layer (SSL) termination between the client and the Web servers.
Chapter 5, Configuring Back-End SSL	Configure the CSS and the SSL Acceleration Module to accept SSL encrypted data from a client, decrypt the data to make a load-balancing decision, then reencrypt the data and send it to a back-end SSL server.

Chapter	Description
Chapter 6, Configuring SSL Initiation	Configure the CSS and the SSL Acceleration Module to accept clear text from a client and perform SSL encryption between the CSS and the Web servers.
Chapter 7, Displaying SSL Configuration Information and Statistics	Display data and statistics related to your CSS SSL configuration.
Chapter 8, Examples of CSS SSL Configurations	Description of SSL flow processing in the CSS and running-config examples of the various SSL configurations available on a CSS.

Related Documentation

In addition to this guide, the Content Services Switch documentation includes the following publications.

Document Title	Description
<i>Release Note for the Cisco 11500 Series Content Services Switch</i>	This release note provides information on operating considerations, caveats, and command line interface (CLI) commands for the Cisco 11500 series CSS.
<i>Cisco 11500 Series Content Services Switch Hardware Installation Guide</i>	This guide provides information for installing, cabling, and powering the Cisco 11500 series CSS. In addition, this guide provides information about CSS specifications, cable pinouts, and hardware troubleshooting.

Document Title	Description
<i>Cisco Content Services Switch Getting Started Guide</i>	<p>This guide describes how to perform initial administration and configuration tasks on the CSS, including:</p> <ul style="list-style-type: none"> • Booting the CSS for the first time and a routine basis, and logging in to the CSS • Configuring the username and password, Ethernet management port, static IP routes, and the date and time • Configuring DNS server for hostname resolution • Configuring sticky cookies with a sticky overview and advanced load-balancing method using cookies • A task list to help you find information in the CSS documentation • Troubleshooting the boot process
<i>Cisco Content Services Switch Administration Guide</i>	<p>This guide describes how to perform administrative tasks on the CSS, including upgrading your CSS software and configuring the following:</p> <ul style="list-style-type: none"> • Logging, including displaying log messages and interpreting sys.log messages • User profile and CSS parameters • SNMP • RMON • XML documents to configure the CSS • CSS scripting language • Offline Diagnostic Monitor (Offline DM) menu

Document Title	Description
<i>Cisco Content Services Switch Routing and Bridging Configuration Guide</i>	<p>This guide describes how to perform routing and bridging configuration tasks on the CSS, including:</p> <ul style="list-style-type: none">• Management ports, interfaces, and circuits• Spanning-tree bridging• Address Resolution Protocol (ARP)• Routing Information Protocol (RIP)• Internet Protocol (IP)• Open Shortest Path First (OSPF) protocol• Cisco Discovery Protocol (CDP)• Dynamic Host Configuration Protocol (DHCP) relay agent
<i>Cisco Content Services Switch Content Load-Balancing Configuration Guide</i>	<p>This guide describes how to perform CSS content load-balancing configuration tasks, including:</p> <ul style="list-style-type: none">• Flow and port mapping• Services• Service, global, and script keepalives• Source groups• Loads for services• Dynamic Feedback Protocol (DFP)• Owners• Content rules• Sticky parameters• HTTP header load balancing• Content caching• Content replication

Document Title	Description
<i>Cisco Content Services Switch Global Server Load-Balancing Configuration Guide</i>	<p>This guide describes how to perform CSS global load-balancing configuration tasks, including:</p> <ul style="list-style-type: none"> • Domain Name System (DNS) • DNS Sticky • Content Routing Agent • Client-Side Accelerator • Network proximity
<i>Cisco Content Services Switch Redundancy Configuration Guide</i>	<p>This guide describes how to perform CSS redundancy configuration tasks, including:</p> <ul style="list-style-type: none"> • VIP and virtual interface redundancy • Adaptive session redundancy • Box-to-box redundancy
<i>Cisco Content Services Switch Security Configuration Guide</i>	<p>This guide describes how to perform CSS security configuration tasks, including:</p> <ul style="list-style-type: none"> • Controlling access to the CSS • Secure Shell Daemon protocol • Radius • TACACS+ • Firewall load balancing
<i>Cisco Content Services Switch Command Reference</i>	<p>This reference provides an alphabetical list of all CLI commands including syntax, options, and related commands.</p>
<i>Cisco Content Services Switch Device Management User's Guide</i>	<p>This guide describes how to use the Device Management user interface, an HTML-based Web-based application that you use to configure and manage your CSS.</p>

Symbols and Conventions

This guide uses the following symbols and conventions to identify different types of information.



Caution

A caution means that a specific action you take could cause a loss of data or adversely impact use of the equipment.



Warning

A warning describes an action that could cause you physical harm or damage the equipment.



Note

A note provides important related information, reminders, and recommendations.

Bold text indicates a command in a paragraph.

Courier text indicates text that appears on a command line, including the CLI prompt.

Courier bold text indicates commands and text you enter in a command line.

Italics text indicates the first occurrence of a new term, book title, emphasized text, and variables for which you supply values.

1. A numbered list indicates that the order of the list items is important.
 - a. An alphabetical list indicates that the order of the secondary list items is important.
- A bulleted list indicates that the order of the list topics is unimportant.
 - An indented list indicates that the order of the list subtopics is unimportant.

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool automatically provides recommended solutions. If your issue is not resolved using the recommended resources, your service request will be assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553 2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:
<http://www.cisco.com/go/marketplace/>
- The Cisco *Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:
<http://cisco.com/univercd/cc/td/doc/pcat/>
- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:
<http://www.cisco.com/packet>

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>