



# **Cisco Content Services Switch Redundancy Configuration Guide**

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# Preface

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This guide provides instructions for configuring the redundancy 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. The Enhanced feature set contains all of the Standard feature set and also includes Network Address Translation (NAT) Peering, Domain Name Service (DNS), Demand-Based Content Replication (Dynamic Hot Content Overflow), Content Staging and Replication, and Network Proximity DNS. Proximity Database and Secure Management, which includes Secure Shell Host and SSL strong encryption, are optional features.

This preface contains the following major sections:

- [Audience](#)
- [How to Use This Guide](#)
- [Related Documentation](#)
- [Symbols and Conventions](#)
- [Obtaining Documentation](#)
- [Documentation Feedback](#)
- [Cisco Product Security Overview](#)
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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
<a href="#">Chapter 1, Configuring VIP and Virtual Interface Redundancy</a>	Configure VIP and virtual interface redundancy on a CSS to maintain network integrity.
<a href="#">Chapter 2, Configuring Adaptive Session Redundancy</a>	Configure Adaptive Session Redundancy (ASR) on a CSS to provide stateful failover of flows.
<a href="#">Chapter 3, Configuring Box-to-Box Redundancy</a>	Configure box-to-box redundancy between two mirrored CSSs.

# 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.
<i>Cisco Content Services Switch Getting Started Guide</i>	This guide describes how to perform initial administration and configuration tasks on the CSS, including: <ul style="list-style-type: none"><li>• Booting the CSS for the first time and a routine basis, and logging in to the CSS</li><li>• Configuring the username and password, Ethernet management port, static IP routes, and the date and time</li><li>• Configuring DNS server for hostname resolution</li><li>• Configuring sticky cookies with a sticky overview and advanced load-balancing method using cookies</li><li>• Installing the CSS Cisco View Device Manager (CVDM) browser-based user interface used to configure the CSS</li><li>• A task list to help you find information in the CSS documentation</li><li>• Troubleshooting the boot process</li></ul>

Document Title	Description
<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"> <li>• Logging, including displaying log messages and interpreting sys.log messages</li> <li>• User profile and CSS parameters</li> <li>• SNMP</li> <li>• RMON</li> <li>• XML documents to configure the CSS</li> <li>• CSS scripting language</li> <li>• Offline Diagnostic Monitor (Offline DM) menu</li> </ul>
<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"> <li>• Management ports, interfaces, and circuits</li> <li>• Spanning-tree bridging</li> <li>• Address Resolution Protocol (ARP)</li> <li>• Routing Information Protocol (RIP)</li> <li>• Internet Protocol (IP)</li> <li>• Open Shortest Path First (OSPF) protocol</li> <li>• Cisco Discovery Protocol (CDP)</li> <li>• Dynamic Host Configuration Protocol (DHCP) relay agent</li> </ul>

Document Title	Description
<i>Cisco Content Services Switch Content Load-Balancing Configuration Guide</i>	This guide describes how to perform CSS content load-balancing configuration tasks, including: <ul style="list-style-type: none"><li>• Flow and port mapping</li><li>• Services</li><li>• Service, global, and script keepalives</li><li>• Source groups</li><li>• Loads for services</li><li>• Server/Application State Protocol (SASP)</li><li>• Dynamic Feedback Protocol (DFP)</li><li>• Owners</li><li>• Content rules</li><li>• Sticky parameters</li><li>• HTTP header load balancing</li><li>• Content caching</li><li>• Content replication</li></ul>
<i>Cisco Content Services Switch Global Server Load-Balancing Configuration Guide</i>	This guide describes how to perform CSS global load-balancing configuration tasks, including: <ul style="list-style-type: none"><li>• Domain Name System (DNS)</li><li>• DNS Sticky</li><li>• Content Routing Agent</li><li>• Client-Side Accelerator</li><li>• Network proximity</li></ul>

<b>Document Title</b>	<b>Description</b>
<i>Cisco Content Services Switch Security Configuration Guide</i>	This guide describes how to perform CSS security configuration tasks, including: <ul style="list-style-type: none"> <li>• Controlling access to the CSS</li> <li>• Secure Shell Daemon protocol</li> <li>• Radius</li> <li>• TACACS+</li> <li>• Firewall load balancing</li> </ul>
<i>Cisco Content Services Switch SSL Configuration Guide</i>	This guide describes how to perform CSS SSL configuration tasks, including: <ul style="list-style-type: none"> <li>• SSL certificate and keys</li> <li>• SSL termination</li> <li>• Backend SSL</li> <li>• SSL initiation</li> <li>• HTTP data compression</li> </ul>
<i>Cisco Content Services Switch Command Reference</i>	This reference provides an alphabetical list of all CLI commands including syntax, options, and related commands.

## 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**

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

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**Note**

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

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**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. This section explains the product documentation resources that Cisco offers.

### Cisco.com

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

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

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](http://www.cisco.com/public/countries_languages.shtml)

## Product Documentation DVD

The Product Documentation DVD is a library of technical product documentation on a portable medium. The DVD enables you to access installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the HTML documentation and some of the PDF files found on the Cisco website at this URL:

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

The Product Documentation DVD is created and released regularly. DVDs are available singly or by subscription. Registered Cisco.com users can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

## Ordering Documentation

You must be a registered Cisco.com user to access Cisco Marketplace. Registered users may order Cisco documentation at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

If you do not have a user ID or password, you can register at this URL:

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

## Documentation Feedback

You can provide feedback about Cisco technical documentation on the Cisco Technical Support & Documentation site area by entering your comments in the feedback form available in every online document.

# Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you will find information about how to do the following:

- Report security vulnerabilities in Cisco products
- Obtain assistance with security incidents that involve Cisco products
- Register to receive security information from Cisco

A current list of security advisories, security notices, and security responses for Cisco products is available at this URL:

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

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you have identified a vulnerability in a Cisco product, contact PSIRT:

- For emergencies only — [security-alert@cisco.com](mailto:security-alert@cisco.com)

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- For nonemergencies — [psirt@cisco.com](mailto:psirt@cisco.com)

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

**Tip**

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We encourage you to use Pretty Good Privacy (PGP) or a compatible product (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.x through 9.x.

Never use a revoked encryption key or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

The link on this page has the current PGP key ID in use.

If you do not have or use PGP, contact PSIRT to find other means of encrypting the data before sending any sensitive material.

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## Product Alerts and Field Notices

Modifications to or updates about Cisco products are announced in Cisco Product Alerts and Cisco Field Notices. You can receive Cisco Product Alerts and Cisco Field Notices by using the Product Alert Tool on Cisco.com. This tool enables you to create a profile and choose those products for which you want to receive information.

To access the Product Alert Tool, you must be a registered Cisco.com user. (To register as a Cisco.com user, go to this URL: <http://tools.cisco.com/RPF/register/register.do>) Registered users can access the tool at this URL: <http://tools.cisco.com/Support/PAT/do/ViewMyProfiles.do?local=en>

## Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid

Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

## Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation 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 at this URL:

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

Access to all tools on the Cisco Technical Support & Documentation 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>



### Note

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Use the **Cisco Product Identification Tool** to locate your product serial number before submitting a request for service online or by phone. You can access this tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link, clicking the **All Tools (A-Z)** tab, and then choosing **Cisco Product Identification Tool** from the alphabetical list. This tool offers three search options: by product ID or model name; by tree view; or, for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

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### Tip

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Displaying and Searching on Cisco.com

If you suspect that the browser is not refreshing a web page, force the browser to update the web page by holding down the Ctrl key while pressing F5.

To find technical information, narrow your search to look in technical documentation, not the entire Cisco.com website. On the Cisco.com home page, click the **Advanced Search** link under the Search box and then click the

**Technical Support & Documentation** radio button.

To provide feedback about the Cisco.com website or a particular technical document, click **Contacts & Feedback** at the top of any Cisco.com web page.

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## 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 provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco 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 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)—An existing 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 operations 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 the network is impaired while 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.

- The Cisco Online Subscription Center is the website where you can sign up for a variety of Cisco e-mail newsletters and other communications. Create a profile and then select the subscriptions that you would like to receive. To visit the Cisco Online Subscription Center, go to this URL:

<http://www.cisco.com/offer/subscribe>

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco channel product offerings. To order and find out more about the *Cisco Product Quick Reference Guide*, go to this URL:

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