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Preface

This guide is intended to help you install your Cisco Global Site Selector 4492R (GSS) and get it ready for operation. It describes how to prepare your site for installation, how to install the GSS 4492R in an equipment rack, and how to maintain and troubleshoot the GSS 4492R hardware.

This preface contains the following major sections:

- Audience
- How to Use This Guide
- Related Documentation
- Conventions
- Warning Definition
- Obtaining Documentation
- Documentation Feedback
- Cisco Product Security Overview
- Obtaining Technical Assistance
- Obtaining Additional Publications and Information

Audience

⚠️ Only trained and qualified personnel should be allowed to install, replace, or service this equipment. 
➡️ Statement 1030

This guide is intended for the following trained and qualified service personnel who are responsible for installing and operating the GSS 4492R:

- System installer
- Hardware technician
- System operator

You should be familiar with networking equipment and cabling, and have a basic knowledge of electronic circuitry and wiring practices.

To complete the installation, including the software configuration for the GSS 4492R, you should be familiar with basic networking principles and configurations, especially web page protocols.
# How to Use This Guide

This section describes the chapters and contents in this guide.

<table>
<thead>
<tr>
<th>Chapter/Appendix</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1, Product Overview</td>
<td>Describes the physical properties and provides a functional overview of the GSS 4492R.</td>
</tr>
<tr>
<td>Chapter 2, Preparing for Installation</td>
<td>Describes safety considerations and provides an overview of the installation and procedures you should perform before the actual installation.</td>
</tr>
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</tr>
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<td>Describes troubleshooting procedures for the hardware installation.</td>
</tr>
<tr>
<td>Chapter 5, Maintaining Your GSS 4492R</td>
<td>Contains the procedures for maintaining your GSS 4492R in proper operating condition.</td>
</tr>
<tr>
<td>Appendix A, Specifications</td>
<td>Lists the hardware specifications for the GSS 4492R.</td>
</tr>
<tr>
<td>Appendix B, Connecting a Modem to the GSS 4492R Console Port</td>
<td>Provides information for configuring a dial-up modem and connecting it to the console port on the GSS 4492R.</td>
</tr>
</tbody>
</table>

## Related Documentation

In addition to this document, the GSS documentation set includes the following:

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco Global Site Selector Getting Started Guide</td>
<td>Information on getting your GSS setup, configured, and ready to perform global server load balancing.</td>
</tr>
<tr>
<td>Cisco Global Site Selector Administration Guide</td>
<td>Provides the procedures necessary to properly set up, manage, and maintain your GSSM and GSS devices, including login security, software upgrades, GSSM database administration, and logging.</td>
</tr>
<tr>
<td>Cisco Global Site Selector GUI-Based Global Server Load-Balancing Configuration Guide</td>
<td>Procedures on how to configure your primary GSSM from the GUI to perform global server load-balancing, such as configuring source address lists, domain lists, answers, answer groups, DNS sticky, network proximity, and DNS rules. This document also provides an overview of the GSS device and global server load balancing as performed by the GSS.</td>
</tr>
</tbody>
</table>
Graphical user interface elements use the following conventions:

- **Bold text** indicates a command in a paragraph.
- **Courier text** indicates text that appears in a command line, including the CLI prompt.
- **Courier bold text** indicates commands and text you enter in a command line.
- **Italic text** indicates the first occurrence of a new term, book title, and emphasized text.

Lists use the following conventions:

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.

   - An indented list indicates that the order of the list subtopics is unimportant.

Notes, cautionary statements, and safety warnings use these conventions:

<table>
<thead>
<tr>
<th>Note</th>
<th>Means <em>reader take note</em>. Notes contain helpful suggestions or references to materials not contained in this manual.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caution</td>
<td>Means <em>reader be careful</em>. You are capable of doing something that might result in equipment damage or loss of data.</td>
</tr>
</tbody>
</table>
Warning Definition

**IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

**SAVE THESE INSTRUCTIONS**
Warning Definition

WICHTIGE SICHERHEITSHINWEISE


BEWAHREN SIE DIESE HINWEISE GUT AUF.

Avvertenza IMPORTANTI ISTRUZIONI SULLA SICUREZZA

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI

Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslerne som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES
Warning! VIKTIGA SÄKERHETSANVISNINGAR


SPARA DESSA ANVISNINGAR

Fontos figyelem FONTOS BIZTONSÁGI ELOÍRÁSOK

Ez a figyelmezet jel veszélyre utal. Sérülésveszélyt rejto helyzetben van. Mielott bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplő figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján kereshető meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!

Предупреждение ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ

重要！安全说明

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告 安全上的重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。
Warning Definition

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA
Este símbolo de aviso significa perigo. Você se encontra em uma situação em que há risco de lesões corporais. Antes de trabalhar com qualquer equipamento, esteja ciente dos riscos que envolvem os circuitos elétricos e familiarize-se com as práticas padrão de prevenção de acidentes. Use o número da declaração fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham o dispositivo.

GUARDE ESTAS INSTRUÇÕES

Advarsel VIGTIGE SIKKERHEDSANVISNINGER

GEM DISSE ANVISNINGER

Upozorenje VAŽNE SIGURNOSNE NAPOMENE
Ovaj simbol upozorenja predstavlja opasnost. Nalazite se u situaciji koja može prouzročiti tjelesne ozljede. Prije rada s bilo kojim uređajem, morate razumjeti opasnosti vezane uz električne sklope, te biti upoznati sa standardnim načinima izbjegavanja nesreća. U prevedenim sigurnosnim upozorenjima, priloženima uz uređaj, možete prema broju koji se nalazi uz pojedino upozorenje pronaći i njegov prijevod.

SAČUVAJTE OVE UPUTE
Warning Definition

Upozornění

DŮLEŽITÉ BEZPEČNOSTNÍ POKyny

Tento upozorňující symbol označuje nebezpečí. Jste v situaci, která by mohla způsobit nebezpečí úrazu. Před prací na jakémkoli vybavení si uvedomte nebezpečí související s elektrickými obvody a seznamte se se standardními opatřeními pro předcházení úrazům. Podle číslo na konci každého upozornění vyhledejte jeho překlad v přeložených bezpečnostních upozorněních, která jsou přiložena k zařízení.

USCHOVEJTE TYTO POKYNY

Предупреждение

ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ

Αυτό το προειδοποιητικό σύμβολο σημαίνει κίνδυνο. Βρίσκεστε σε κατάσταση που μπορεί να προκαλέσει τραυματισμό. Πριν εργαστείτε σε οποιοδήποτε εξοπλισμό, να έχετε υπόψη σας τους κίνδυνους που σχετίζονται με τα ηλεκτρικά κυκλώματα και να έχετε εξουσιοδοτηθεί με τις συνήθεις πρακτικές για την αποφυγή ατυχημάτων. Χρησιμοποιήστε τον αριθμό δήλωσης που παρέχεται στο τέλος κάθε προειδοποίησης, για να εντοπίσετε τη μετάφραση της στις μεταφρασμένες προειδοποιήσεις ασφαλείας που συνοδεύουν τη συσκευή.

ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ
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/techsupport

You can access the Cisco website at this URL:
http://www.cisco.com

You can access international Cisco websites at this URL:
Product Documentation DVD

The Product Documentation DVD is a comprehensive library of technical product documentation on a portable medium. The DVD enables you to access multiple versions of installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the same HTML documentation that is found on the Cisco website without being connected to the Internet. Certain products also have .PDF versions of the documentation available.

The Product Documentation DVD is available as a single unit or as a subscription. Registered Cisco.com users (Cisco direct customers) can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at this URL:

http://www.cisco.com/go/marketplace/

Ordering Documentation

Registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

http://www.cisco.com/go/marketplace/

Nonregistered Cisco.com users can order technical documentation from 8:00 a.m. to 5:00 p.m. (0800 to 1700) PDT by calling 1 866 463-3487 in the United States and Canada, or elsewhere by calling 011 408 519-5055. You can also order documentation by e-mail at tech-doc-store-mkpl@external.cisco.com or by fax at 1 408 519-5001 in the United States and Canada, or elsewhere at 011 408 519-5001.

Documentation Feedback

You can rate and provide feedback about Cisco technical documents by completing the online feedback form that appears with the technical documents on Cisco.com.

You can submit comments about Cisco documentation 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.

Cisco Product Security Overview

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


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

- 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:


### 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
  
  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

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

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

**Tip**

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 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:


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

If you do not have or use PGP, contact PSIRT at the aforementioned e-mail addresses or phone numbers before sending any sensitive material to find other means of encrypting the data.

### 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:


Note

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the Tools & Resources link under Documentation & Tools. Choose Cisco Product Identification Tool from the Alphabetical Index drop-down list, or click the Cisco Product Identification Tool link under Alerts & RMAs. The CPI 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.

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 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 offerings. To order and find out more about the Cisco Product Quick Reference Guide, go to this URL:
  

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:
  

- 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](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:
  

- 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:
  
or view the digital edition at this URL:
http://ciscoiq.texterity.com/ciscoiq/sample/

- 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

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:
http://www.cisco.com/discuss/networking

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

This chapter provides a basic functional overview of the Cisco Global Site Selector 4492R (GSS) and describes the hardware, major components, and front and rear panel indicators and controls.

This chapter contains the following major sections:

- Introduction
- System Hardware Features
- Ports and Connectors

Introduction

The GSS is a networking product that provides site selection services that are critical for disaster recovery deployments involving Internet and intranet data centers. The GSS globally load balances traffic between geographically distributed data centers managed by other server load balancers (SLBs), such as:

- Cisco CSS 11500, CSS 11000, or CSS 11150
- Cisco Content Switching Module (CSM) for the Catalyst 6500 series switches
- Cisco LocalDirector
- Cisco IOS SLB

The GSS is the cornerstone of disaster recovery in such distributed deployments and enables businesses to confidently deploy global Internet and intranet applications with the knowledge that users will be quickly routed to standby data centers should problems occur.

The GSS is deployed at strategic locations within your network. The GSS performs two major functions when deployed with other SLBs by:

- Taking an active role in the domain name server (DNS) infrastructure, connecting clients to SLBs that support the requested website.
- Continuously monitoring the load and availability of SLBs in its network, selecting the SLB that is most able to answer each client request.

By off-loading DNS resolution from traditional DNS servers, the GSS optimizes global site selection and increases DNS responsiveness. The GSS increases the fault tolerance and scalability of large websites and data centers through its monitoring of load and availability.
System Hardware Features

The GSS 4492R is designed for AC-input power and has a single AC-input power supply. The GSS 4492R includes:

- Intel 3.4 GHz Pentium D CPU
- 80 GB SATA hard disk drive, 7200RPM
- DVD-ROM drive
- Integrated dual-port Ethernet controller that provides an interface for connecting to 10-Mbps, 100-Mbps, or 1000-Mbps networks, and two 10BASE-T/100BASE-TX/1000BASE-TX Ethernet ports with RJ-45 receptacles
- Serial port

Both Ethernet ports support autonegotiate, full-duplex, or half-duplex operation on an Ethernet LAN.

This section includes the following topics:

- Front Panel Features
- Rear Panel Features

Front Panel Features

The GSS 4492R front panel contains LED indicators and a power button, and a DVD-ROM drive. **Figure 1-1** illustrates the GSS 4492R front panel.
## System Hardware Features

### Figure 1-1 Front Panel View

<table>
<thead>
<tr>
<th>1</th>
<th>DVD-ROM drive</th>
<th>8</th>
<th>System ID button allows you to identify the unit from its other side when it is installed in a rack with multiple devices. When pressed, the blue System ID indicator flashes on the front and rear panels of the unit. Press the front System ID button to activate the blue flashing indicator on the rear panel. Press the rear System ID button to turn off the flashing indicator.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>DVD-ROM activity indicator</td>
<td>9</td>
<td>System ID indicator. Flashes blue when the System ID button on the front or back panel is pressed. Press the System ID button again to turn off the indicator.</td>
</tr>
<tr>
<td>3</td>
<td>DVD-ROM eject button</td>
<td>10</td>
<td>USB port (not supported)</td>
</tr>
<tr>
<td>4</td>
<td>DVD-ROM emergency eject button</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Power button with built-in power indicator. If the indicator is lit, to turn chassis power off press this button. Green = Power On Amber = Standby Mode Off = Power Off</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Nonmaskable Interrupt (NMI) button. You do not need to use this recessed push button to trigger an NMI in normal operation. It is used for debugging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Hard drive indicator blinks when the hard drive is in use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>System ID button allows you to identify the unit from its other side when it is installed in a rack with multiple devices. When pressed, the blue System ID indicator flashes on the front and rear panels of the unit. Press the front System ID button to activate the blue flashing indicator on the rear panel. Press the rear System ID button to turn off the flashing indicator.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>System ID indicator. Flashes blue when the System ID button on the front or back panel is pressed. Press the System ID button again to turn off the indicator.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>USB port (not supported)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Rear Panel Features

The rear panel contains the AC power receptacle, Ethernet connectors, and the console/serial connector. Figure 1-2 illustrates the rear panel ports and connectors.

![Rear Panel View](image)

<table>
<thead>
<tr>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC power receptacle</td>
</tr>
<tr>
<td>2</td>
<td>PS/2 mouse port (not supported)</td>
</tr>
<tr>
<td>3</td>
<td>USB ports (not supported)</td>
</tr>
<tr>
<td>4</td>
<td>Console/serial connector (see Figure 1-4)</td>
</tr>
<tr>
<td>5</td>
<td>VGA port (not supported)</td>
</tr>
<tr>
<td>6</td>
<td>RJ-45 Ethernet 0 connector with 10/100/1000-Mbit/s operation and status LEDs</td>
</tr>
<tr>
<td>7</td>
<td>RJ-45 Ethernet 1 connector with 10/100/1000-Mbit/s operation</td>
</tr>
<tr>
<td>8</td>
<td>System ID button/System status indicator allows you to identify the unit from its other side when it is installed in a rack with multiple devices. When pressed, the blue System ID indicator flashes on the front and rear panels of the unit. Press the rear System ID button to activate the blue flashing indicator on the front panel. Press the front System ID button to turn off the flashing indicator.</td>
</tr>
<tr>
<td>9</td>
<td>PS/2 keyboard port (not supported)</td>
</tr>
</tbody>
</table>

Ports and Connectors

The GSS 4492R supports the following port connectors on the rear of the chassis:

- Ethernet Connectors
- Console Port

Warning: To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables. Statement 1021
Ethernet Connectors

The GSS 4492R has two integrated 10/100/1000-megabit-per-second (Mbps) Ethernet connectors. The Ethernet controller provides an interface for connecting to 10-Mbps, 100-Mbps, or 1000-Mbps networks and supports autonegotiate, full-duplex, or half-duplex operation on an Ethernet LAN.

To access the Ethernet port, connect a Category 3, 4, or 5 unshielded twisted-pair (UTP) cable to an RJ-45 connector on the back of the chassis.

Note

The 100BASE-TX/1000BASE-TX Ethernet standard requires that you use standard four twisted-pair Category 5e cable at lengths up to 328.08 ft. (100 m).

Figure 1-3 illustrates the LED indicators for the Ethernet ports and the pin number assignments for the Ethernet 1 RJ-45 port. The pin number assignments for port 0 are reversed.

The LED in the upper left above the Ethernet ports serves as the indicator for the lower Ethernet 1 port. It glows steady green when the Ethernet link is connected, and it flashes yellow when there is activity. The LED in the upper right serves as the indicator for the upper Ethernet 0 port.

Console Port

The GSS 4492R has one standard RS-232 serial port located on the rear panel that operates as the console port. The integrated serial port uses a 9-pin male D-shell connector. Figure 1-4 shows the pin number assignments for the 9-pin port.

Refer to Table 1-1 for the console port connector pinouts.
Ports and Connectors

Chapter 1  Product Overview

Table 1-1  Console Port Connector Pinouts

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>I/O</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DCD</td>
<td>I</td>
<td>Data carrier detect</td>
</tr>
<tr>
<td>2</td>
<td>SIN</td>
<td>I</td>
<td>Serial input</td>
</tr>
<tr>
<td>3</td>
<td>SOUT</td>
<td>O</td>
<td>Serial output</td>
</tr>
<tr>
<td>4</td>
<td>DTR</td>
<td>O</td>
<td>Data terminal ready</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
<td>N/A</td>
<td>Signal ground</td>
</tr>
<tr>
<td>6</td>
<td>DSR</td>
<td>I</td>
<td>Data set ready</td>
</tr>
<tr>
<td>7</td>
<td>RTS</td>
<td>O</td>
<td>Request to send</td>
</tr>
<tr>
<td>8</td>
<td>CTS</td>
<td>I</td>
<td>Clear to send</td>
</tr>
<tr>
<td>9</td>
<td>RI</td>
<td>I</td>
<td>Ring indicator</td>
</tr>
<tr>
<td>Shell</td>
<td>N/A</td>
<td>N/A</td>
<td>Chassis ground</td>
</tr>
</tbody>
</table>

The console port operates at the settings outlined in Table 1-2. These settings are not user-configurable.

Table 1-2  GSS 4492R Console Port Settings

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud</td>
<td>9600</td>
</tr>
<tr>
<td>Data Bits</td>
<td>8</td>
</tr>
<tr>
<td>Parity</td>
<td>None</td>
</tr>
<tr>
<td>Stop Bits</td>
<td>1</td>
</tr>
<tr>
<td>Terminal Type</td>
<td>VT100/ANSI</td>
</tr>
<tr>
<td>Flow Control</td>
<td>None</td>
</tr>
</tbody>
</table>

RJ-45 to DB-9 or DB-25 Adapter

Table 1-3 lists the cable pinouts for the RJ-45 to DB-9 or DB-25 adapter. The DB-9 adapter is used to connect a rolled RJ-45 cable to the console serial port. The DB-9 or DB-25 adapter is used to connect the other end of the rolled RJ-45 cable to a PC or terminal serial port.
### Table 1-3 Cable Pinouts for RJ-45 to DB-9 or DB-25

<table>
<thead>
<tr>
<th>Signal</th>
<th>RJ-45 Pin</th>
<th>DB-9 /DB-25 Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTS</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>DTR</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>TxD</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>GND</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>GND</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>RxD</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>DSR</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>CTS</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>
Preparing for Installation

This chapter contains important safety information you should review before working with the GSS 4492R. Use the following guidelines to ensure your own personal safety and to help protect your GSS 4492R from potential damage.

Read the Regulatory Compliance and Safety Information for the Cisco Global Site Selector 4492R document before you prepare the GSS 4492R for installation.

This chapter contains the following major sections:

- Safety
- Preparing Your Site for Installation
- Precautions for Rack-Mounting
- Precautions for Products with Modems, Telecommunications, or Local Area Network Options
- Required Tools and Equipment

Safety

This section provides safety information for installing the GSS 4492R. It includes the following topics:

- Warnings and Cautions
- General Precautions
- Maintaining Safety with Electricity
- Protecting Against Electrostatic Discharge

Warnings and Cautions

Read the installation instructions in this document before you connect the GSS 4492R to its power source. Failure to read and follow these guidelines may lead to an unsuccessful installation and possibly damage the GSS 4492R and components.

You should observe the following safety guidelines when working with any equipment that connects to electrical power or telephone wiring. They can help you avoid injuring yourself or damaging the GSS 4492R.
The English warnings in this document are followed by a statement number. To see the translations of a warning into other languages, look up its statement number in the Regulatory Compliance and Safety Information for the Cisco Global Site Selector 4492R document that shipped with your appliance.

The following warnings and cautions are provided to help you prevent injury to yourself or damage to the devices:

**Warning**

**IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

Statement 1071

SAVE THESE INSTRUCTIONS

Statement 1074

**Warning**

Installation of the equipment must comply with local and national electrical codes.

Statement 117

**Warning**

The safety cover is an integral part of the product. Do not operate the unit without the safety cover installed. Operating the unit without the cover in place will invalidate the safety approvals and pose a risk of fire and electrical hazards.

Statement 12

**Warning**

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

Statement 1041

**Warning**

Before opening the chassis, disconnect the telephone-network cables to avoid contact with telephone-network voltages.

Statement 1045

**Warning**

This unit might have more than one power cord. To reduce the risk of electrical shock, disconnect all power supply cords before servicing the unit.

Statement 106

**Warning**

This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations.
Safety

Warning This equipment is intended to be grounded to comply with emission and immunity requirements. Ensure that the switch functional ground lug is connected to earth ground during normal use.
Statement 1064

Warning Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.
Statement 1029

Warning Do not work on the system or connect or disconnect cables during periods of lightning activity.
Statement 1001.

Warning The power supply circuitry for the equipment can constitute an energy hazard. Before you install or replace the equipment, remove all jewelry (including rings, necklaces, and watches). Metal objects can come into contact with exposed power supply wiring or circuitry inside the equipment. This could cause the metal objects to heat up and cause serious burns or weld the metal object to the equipment.
Statement 207

Warning Ultimate disposal of this product should be handled according to all national laws and regulations.
Statement 1040

Warning Before working on a system that has an On/Off switch, turn OFF the power and unplug the power cord.
Statement 1

Warning Read the installation instructions before you connect the system to its power source.
Statement 1004

Warning There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer’s instructions.
Statement 1015
General Precautions

Observe the following general precautions when using and working with your GSS 4492R:

- Keep your GSS 4492R components away from radiators and heat sources, and do not block cooling vents.
- Do not spill food or liquids on your GSS 4492R components, and never operate the product in a wet environment. If the GSS 4492R gets wet, see Chapter 4, Troubleshooting the GSS 4492R Hardware or contact the Cisco Technical Assistance Center. For instructions on contacting the Technical Assistance Center, see the “Obtaining Technical Assistance” section on page xvii.
- Do not push any objects into the openings of your GSS 4492R components. Doing so can cause fire or electric shock by shorting out interior components.
- Position cables and power cables carefully; route all cables and the power cable and plug so that they cannot be stepped on or tripped over. Be sure that nothing rests on your GSS 4492R cables or the power cable.
- Do not modify power cables or plugs. Consult a licensed electrician or your power company for site modifications. Always follow your local/national wiring rules.
- To help avoid possible damage to the system board, wait 5 seconds after turning off the GSS 4492R before removing a component from the system board or disconnecting a peripheral device from the GSS 4492R.

Maintaining Safety with Electricity

Follow these guidelines when working on equipment powered by electricity:

- Do not work alone if potentially hazardous conditions exist anywhere in your work space.
- Never assume that power is disconnected from a circuit; always check the circuit.
- Look carefully for possible hazards in your work area, such as moist floors, ungrounded power extension cables, frayed power cords, and missing safety grounds.
- If an electrical accident occurs, proceed as follows:
  - Use caution; do not become a victim yourself.
  - Disconnect power from the system.
  - If possible, send another person to get medical aid. Otherwise, assess the condition of the victim, and then call for help.
  - Determine if the person needs rescue breathing or external cardiac compressions; then take appropriate action.
- Use the product within its marked electrical ratings and product usage instructions.
- Install the product in compliance with local and national electrical codes.
- If any of the following conditions occur, contact the Cisco Technical Assistance Center:
  - The power cable or plug is damaged.
  - An object has fallen into the product.
  - The product has been exposed to water.
  - The product has been dropped or damaged.
  - The product does not operate correctly when you follow the operating instructions.
Use the correct external power source. Operate the product only from the type of power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult the Cisco Technical Assistance Center or a local power company.

Use approved power cable(s) only. You have been provided with a power cable for your GSS 4492R that is intended for its use (approved for use in your country, based on the shipping location). Should you have to purchase a power cable, ensure that it is rated for the product and for the voltage and current marked on the product’s electrical ratings label. The voltage and current rating of the cable should be greater than the ratings marked on the product.

To help prevent electric shock, plug the GSS 4492R, components, and peripheral power cables into properly grounded electrical outlets. These cables are equipped with three-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable.

Observe power strip ratings. Make sure that the total ampere rating of all products plugged into the power strip does not exceed 80% of the rating.

To help protect your GSS 4492R and components from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).

Do not modify power cables or plugs. Consult a licensed electrician or your power company for site modifications. Always follow your local and national wiring rules.

Protecting Against Electrostatic Discharge

Static electricity can harm delicate components inside your product. To prevent static damage, discharge static electricity from your body before you touch any of your product’s electronic components, such as the microprocessor. You can do so by touching an unpainted metal surface on the equipment chassis.

As you continue to work inside the product, periodically touch an unpainted metal surface to remove any static charge your body may have accumulated.

Work on ESD-sensitive parts only at an approved static-safe station on a grounded static dissipative work surface, for example, an ESD workbench or static dissipative mat.

You can also take the following steps to prevent damage from electrostatic discharge (ESD):

- When unpacking a static-sensitive component from its shipping carton, do not remove the component from the antistatic packing material until you are ready to install the component in your computer. Just before unwrapping the antistatic packaging, be sure to discharge static electricity from your body.
- When transporting a sensitive component, first place it in an antistatic container or packaging.
- Handle all sensitive components in a static-safe area. If possible, use antistatic floor pads and workbench pads.

To remove and replace components in a chassis, follow these steps:

---

**Step 1** Remove all static-generating items from your work area.

**Step 2** Use a static dissipative work surface and wrist strap.

**Note** Disposable wrist straps, typically those included with an upgrade part, are designed for one time use.

**Step 3** Attach the wrist strap to your wrist and to the terminal on the work surface. If you are using a disposable wrist strap, connect the wrist strap directly to an unpainted metal surface of the chassis. (See Figure 2-1.)
Preparing Your Site for Installation

This section describes the requirements your site must meet for safe installation and operation of your GSS 4492R. Before you select an installation site for the GSS 4492R, read the electrical, environmental, and physical requirements as described in Appendix A, Specifications. Ensure that your site is properly prepared before beginning installation.

This section includes the following requirements:

- Environmental
- Choosing a Site for Installation
- Ensuring Overcurrent Protection
- Grounding the GSS 4492R
- Creating a Safe Environment
- AC Power
- Cabling
Environmental

When planning your site layout and equipment locations, remember the precautions described in this section to help avoid equipment failures and reduce the possibility of environmentally caused shutdowns. If you are experiencing shutdowns or unusually high errors with your existing equipment, these precautions will help you isolate the cause of failures and prevent future problems.

Use the following precautions when planning the operating environment for your GSS 4492R.

- Always follow the ESD-prevention procedures described in the “Protecting Against Electrostatic Discharge” section to avoid damage to equipment. Damage from static discharge can cause immediate or intermittent equipment failure.
- Make sure that the chassis cover is secure. The chassis allows cooling air to flow effectively within it. An open chassis allows air leaks, which could interrupt and redirect the flow of cooling air from internal components.
- Electrical equipment generates heat. Ambient air temperature might not be adequate to cool equipment to acceptable operating temperatures without adequate circulation. Make sure that the room in which you operate has adequate air circulation.

Choosing a Site for Installation

Warning This unit is intended for installation in restricted access areas. A restricted access area is where access can only be gained by service personnel through the use of a special tool, lock and key, or other means of security. Statement 1017

Follow these guidelines when choosing a site for installation:

- Choose a site with a dry, clean, well-ventilated and air-conditioned area.
- Choose a site that maintains an ambient temperature of 0° to 40°C (32° to 104°F).

Ensuring Overcurrent Protection

The GSS 4492R relies on the protective devices in the building installation for protection against short-circuit, overcurrent, and earth (grounding) fault. Ensure that the protective devices in the building installation are properly rated to protect the GSS 4492R, and that they comply with national and local codes.

Grounding the GSS 4492R

Warning This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024
Creating a Safe Environment

Follow these guidelines to create a safe operating environment:

- Keep tools and chassis components off the floor and away from foot traffic.
- Clear the area of possible hazards, such as moist floors, ungrounded power extension cables, and missing safety grounds.
- Keep the area around the chassis free from dust and foreign conductive material (such as metal flakes from nearby construction activity).

AC Power

Ensure that the plug-socket combination is accessible at all times, because it serves as the main disconnecting device. Refer to Appendix A, Specifications, for the GSS 4492R power requirements.

⚠️ **Warning**

This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations. Statement 1045

Power Supply Guidelines

Follow these guidelines for power supplies:

- Check the power at the site before installing the chassis to ensure that the power is free of spikes and noise. Install a power conditioner, if necessary, to ensure proper voltages and power levels in the source voltage.
- Install proper grounding for the site to avoid damage from lightning and power surges.
- The chassis does not have a user-selectable operating range. Refer to the label on the chassis for the correct AC-input power requirement.
- Several types of AC-input power supply cords are available; make sure that you have the correct type for your site.
- Install a UPS for your site.

Cabling

Use the cables in the accessory kit to connect the GSS 4492R console port to a console or computer that is running a console program. In addition to using the console cable, use the provided standard Ethernet cable to connect the GSS 4492R to your network. Refer to Chapter 1, Product Overview, for information on cable requirements.
Precautions for Rack-Mounting

**Warning**
To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006

**Note**
Component refers to any server, storage system, or appliance, and to various peripherals or supporting hardware.

Observe the following precautions for rack stability and safety. Also refer to the rack installation documentation accompanying the rack for specific warnings and caution statements and procedures.

- Do not move large racks by yourself. Due to the height and weight of the rack, a minimum of two people are needed to accomplish this task.
- Ensure that the rack is level and stable before extending a component from the rack.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80% of the branch circuit rating.
- Do not step or stand on any system or component when servicing other systems and components in a rack.
- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.
- Enclosed racks must have adequate ventilation. Make sure the rack is not overly congested because each chassis generates heat. An enclosed rack should have louvered sides and a fan to provide cooling air.
- When mounting a chassis in an open rack, make sure the rack frame does not block the intake or exhaust ports. If the chassis is installed on slides, check the position of the chassis when it is seated all the way into the rack.
- In an enclosed rack with a ventilation fan in the top, excessive heat generated by equipment near the bottom of the rack can be drawn upward and into the intake ports of the equipment above it in the rack. Make sure you provide adequate ventilation for equipment at the bottom of the rack.
• Baffles can help to isolate exhaust air from intake air, which also helps to draw cooling air through the chassis. The best placement of the baffles depends on the airflow patterns in the rack. Experiment with different arrangements to position the baffles effectively.

**Precautions for Products with Modems, Telecommunications, or Local Area Network Options**

Observe the following guidelines when working with these components:

• Do not connect or use a modem or telephone during a lighting storm. There may be a risk of electrical shock from lightning.

• Never connect or use a modem or telephone in a wet environment.

• Do not plug a modem or telephone cable into the Ethernet connector.

• Disconnect the modem cable before opening a product enclosure, touching or installing internal components, or touching an uninsulated modem cable or jack.

• Do not use a telephone line to report a gas leak while you are in the vicinity of the leak.

**Required Tools and Equipment**

You need the following tools and equipment to install the Cisco Global Site Selector 4492R:

• Number 2 Phillips screwdriver

• Tape measure and level

• Antistatic mat or antistatic foam

• ESD grounding strap with an alligator termination clip
Installing the GSS 4492R

This chapter explains how to install the GSS 4492R in an equipment rack. This chapter also provides instructions for connecting cables, AC power, and for booting the GSS 4492R.

Warning: Read the installation instructions before connecting the system to the power source. Statement 1004

This chapter contains the following major sections:

- Unpacking and Inspecting the GSS 4492R
- Installing Your GSS 4492R
- Connecting Cables
- Connecting AC Power
- Booting the GSS 4492R
- Establishing a Serial Console Connection
- Checking the Front Panel LEDs
- Removing or Replacing a GSS 4492R

Before you begin the installation, be sure you have read:

- Chapter 2, Preparing for Installation
- Regulatory Compliance and Safety Information for the Cisco Global Site Selector 4492R
Unpacking and Inspecting the GSS 4492R

The GSS 4492R shipment contains the following items:

- One RJ-45 to female 25-pin sub-d connector
- Two RJ-45 to female 9-pin sub-d connectors
- One RJ-45 rolled (console) cable
- One four-post rack mount kit
- Cisco Product Documentation CD-ROM and Warranty Package
- Regulatory Compliance and Safety Information for the Cisco Global Site Selector 4492R

The GSS 4492R is shipped in a protective shipping carton. It is shipped as a self-contained chassis; no components can be added or removed.

Follow these steps to unpack the GSS 4492R:

1. Remove the GSS 4492R accessories from the shipping carton. Save the packing materials in case you need to repack the GSS 4492R later.
2. Check the configuration of the GSS 4492R and the accessories against the items listed on the packing slip. Report any discrepancies as described in “If the Product is Damaged”.
3. Before installing the GSS 4492R, review the information outlined in Chapter 2, Preparing for Installation.

If the Product is Damaged

If any portion of the unit or component is damaged in transit, forward an immediate request to the delivering carrier to perform an inspection of the product and to prepare a damage report. Save the container and all packing materials until the contents are verified.

Concurrently, report the nature and extent of the damage to Customer Service. Report the problem or deficiency to Customer Service along with the model number and serial number. Upon receipt of this information, you will be provided with service instructions, or a Return Material Authorization (RMA) number and shipping information. To obtain assistance, refer to the “Obtaining Technical Assistance” section on page xvii.

Installing Your GSS 4492R

This section provides instructions for installing the Cisco Global Site Selector 4492R in a four-post rack. The rack must be properly secured to the floor, ceiling, or upper wall, and where applicable, to adjacent racks. The rack should be secured using floor and wall fasteners and bracing as specified by industry standards.

Racks are marked in vertical increments of 1.75 inches (4.44 cm). Each increment is referred to as a rack unit (RU). A 1-RU device is 1.75 inches (4.44 cm) tall.

Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

Statement 1030
Before installing the GSS 4492R, be sure you have read Chapter 2, Preparing for Installation, to familiarize yourself with the proper site and environmental conditions. Failure to read and follow these guidelines may lead to an unsuccessful installation and possible damage to the GSS 4492R and its components. Perform the steps below when installing and servicing the GSS 4492R.

When installing and servicing the GSS 4492R:

- Disconnect all power and external cables before installing the GSS 4492R.
- Install the GSS 4492R in compliance with your local and national electrical codes:
  - Canada: Canadian Electrical Code, Part, I, CSA C22.1.
  - Other countries: If local and national electrical codes are not available, see IEC 364, Part 1 through Part 7.
- Do not work alone under potentially hazardous conditions.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- Do not attempt to install the Cisco Global Site Selector 4492R in a rack that has not been securely anchored in place. Damage to the GSS 4492R and personal injury may result.
- Due to the size and weight of the GSS 4492R, never attempt to install it by yourself.

Refer to Chapter 2, Preparing for Installation and the “Precautions for Rack-Mounting” section on page 2-9 for additional safety information on rack installation.

The GSS 4492R can be installed in a system 1U rack. Figure 3-1 illustrates the rack rail components.
Attaching the Chassis Rail Mount

You must first remove the chassis rail mount section from the server rail and attach it to the chassis as shown in the following steps.

**Step 1**  See Figure 3-2. Extend the server rail as far as it will go. When fully extended, the server rail locks into the extended position.
Step 2  See Figure 3-3. Slide the white tab (1) in the direction of its arrow and slide out the chassis rail mount part. (Set it aside for attaching to the chassis in the next step.)

Step 3  Align the holes in the chassis rail mount to the pegs on the chassis (1 and 2 in Figure 3-4).
Step 4 See Figure 3-5. Align the holes (1) and then slide the rail until it locks into place (2).

Figure 3-6 shows the chassis rail mount locked into place.
Chapter 3      Installing the GSS 4492R

Installing Your GSS 4492R

Figure 3-6     Chassis Rail Mount in Locked Position

Now that you have mounted the chassis rail mount, you need to retract the server rail that you previously extended and then attach it to the rack. If you have already retracted the server rail, go to step 2.

Step 1
To retract the arm of the server rail, push the tab shown in Figure 3-7. Then slide the arm back in.

Figure 3-7     Retracting the Server Rail

Step 2
Attach the server rail to the rack as shown in the figure that corresponds to your rack:
- For a square-peg rack, see Figure 3-8.
- For a circular-peg rack, see Figure 3-9.

*Figure 3-8  Attaching Rail to a Square-Peg Rack*
**Step 3** Repeat this process with the other rail and rack assembly.

---

### Note
Leaving some play between the bracket and the rail until you install the rail into the rack will make affixing the rail to the rack easier. After the rail is attached to the rack, you can tighten the screws.

---

### Sliding the Chassis On the Rack

Follow this procedure to slide the chassis onto the rack.

**Step 1** See Figure 3-10. On the chassis rail mount, slide and hold the blue plastic tab in the direction of the arrow. This allows the chassis rail mount to slide on to the rail.
Step 2  Insert the chassis in the rack. See Figure 3-11.

Slide the chassis backward and forward in the telescopic rails a few times. Fasten with all of the screws.

Warning  This product relies on the building’s installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 120 VAC, 15A (U.S./CAN); 240 VAC, 10A (INTERNATIONAL). Statement 1005

Connecting Cables

Warning  Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001
To connect network and console cables to your GSS 4492R:

1. For network connections, connect a Category 3, 4, or 5 unshielded twisted-pair (UTP) cable to the Ethernet 0 or Ethernet 1 connector on the GSS 4492R back panel (see Figure 1-2 on page 1-4).

   **Note**  
   The 100BASE-TX/1000BASE-TX Ethernet standard requires that you use standard four twisted-pair Category 5e cable at lengths up to 328.08 ft. (100 m).

2. Connect the other end of the network cable to a hub or switch in your network.

3. Connect the console cable as shown in Figure 3-12 so that you have either a DB-9 or DB-25 connector on one end, as required by the serial port for your console/computer, and on the other end, you have a DB-9 connector for the GSS 4492R console serial port. Connect the RJ-45 rolled (console) cable between the two d-sub adapters.

   **Note**  
   Use the console port to connect to a computer, console, or communications server to enter configuration commands. Locate the serial cable from the accessory kit. The serial cable assembly consists of a rolled (console) cable with RJ-45 connectors, two DB-9 connector adapters PN 74-0495-01, and a DB-25 connector adapter PN 29-0810-01.

---

**Figure 3-12  Console Connection**

1. RJ-45 rolled serial cable (null-modem)
2. DB-9 adapter to the GSS 4492R console serial port
3. Console serial port
4. DB-25 or DB-9 adapter to computer/console serial port
Connecting AC Power

Warning

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024

To connect AC power to your GSS 4492R:
1. Ensure that you have reviewed the safety information outlined in Chapter 2, Preparing for Installation.
2. Plug the AC power cord into the power cord receptacle at the rear of the GSS 4492R (see Figure 1-2 on page 1-4).
3. Connect the other end of the power cord to a power source.
4. Power up all externally-connected devices.
5. Press the power control button on the front of the GSS 4492R.

Booting the GSS 4492R

When you power up the GSS 4492R, the boot process:
- Performs hardware initialization and power-on self tests
- Initializes the BIOS
- Initializes the Linux boot manager, LILO (Linux Loader)
- Boots the GSS 4492R image (kernel and software)
- Displays the startup banner and splash screen for strong encryption
- Prompts you to log in to the GSS 4492R

Note

During power-up, the green power LED on the front of the GSS 4492R is on.

At this point, you are ready to use the GSS 4492R. Refer to the:
- Cisco Global Site Selector Getting Started Guide for details on setting up and configuring the GSS 4492R
- Cisco Global Site Selector Administration Guide for procedures to properly manage and maintain your GSSM and GSS devices
- Cisco Global Site Selector GUI-Based Global Server Load-Balancing Configuration Guide for procedures to configure your GSS devices from the GUI to perform global server load balancing
- Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide for procedures to configure your GSS devices from the CLI to perform global server load balancing

If you are booting the GSS 4492R for the first time and it boots without a startup-configuration file, a setup script automatically runs to guide you through the process of initially configuring the GSS 4492R. Refer to the Cisco Global Site Selector Getting Started Guide for details about using the setup script.
Establishing a Serial Console Connection

Before you configure the Cisco Global Site Selector 4492R, you should establish a serial console connection to it. This requires a PC, two DB-9 to RJ-45 adapters (provided), a rolled RJ-45 cable (provided), and terminal emulation communication software (Hyper Terminal or equivalent). You may also use a serial concentrator connection, if desired.

To establish a serial console connection:

1. Connect a console to the serial console port on the rear panel:
   a. Attach a DB-9 to RJ-45 adapter to the serial port of the console.
   b. Attach a DB-9 to RJ-45 adapter to the serial port of the Cisco Global Site Selector 4492R. For the location of the serial port, see Figure 1-2 on page 1-4.
   c. Use the rolled RJ-45 cable to connect the console to the Cisco Global Site Selector 4492R.

2. If you have not already done so, power up the GSS 4492R as described in the “Booting the GSS 4492R” section.

3. Open your terminal emulation application on your PC to access the GSS CLI. The following procedure uses HyperTerminal for Windows:
   a. Launch HyperTerminal. The Connection Description window appears.
   b. Enter a name for your session in the Name field.
   c. Click OK. The Connect To window appears.
   d. From the drop-down list, choose the COM port to which the device is connected.
   e. Click OK. The Port Properties window appears.
   f. Set the port properties:
      Baud Rate = 9600
      Data Bits = 8
      Flow Control = none
      Parity = none
      Stop Bits = 1
   g. Click OK to connect.
   h. Press Enter to display the CLI prompt.

4. Once you create a session, choose Save As from the File menu to save the connection description. Saving the connection description has the following two advantages:
   - The next time you launch HyperTerminal, the session is listed as an option under Start > Programs > Accessories > HyperTerminal > Name_of_session. This option lets you reach the CLI prompt directly without repeating the configuration steps.
   - You can connect your cable to a different device without configuring a new HyperTerminal session. If you use this option, ensure that you connect to the same port on the new device as was configured in the saved HyperTerminal session. Otherwise, a blank screen appears without a prompt.
Checking the Front Panel LEDs

When the GSS 4492R is up and running, observe the front panel LEDs to monitor GSS 4492R operating status. Figure 1-1 on page 1-3 shows the location of front panel LEDs and describes their function.

Removing or Replacing a GSS 4492R

**Warning**

Before working on a system that has an on/off switch, turn OFF the power and unplug the power cord.

Statement 1

**Warning**

Ultimate disposal of this product should be handled according to all national laws and regulations.

Statement 1040

Before physically removing or replacing a GSS 4492R, use the primary GSSM GUI to logically remove the GSS 4492R from the network. You may need to logically remove a GSS 4492R from your network when you:

- Move a GSS device between GSS networks
- Remove or replace a GSS or standby GSSM
- Send the GSS or standby GSSM out for repair or replacement

For details about using the primary GSSM GUI to logically remove a GSS device or the standby GSSM from the GSS network, refer to Chapter 1, Managing GSS Devices from the GUI, in the *Cisco Global Site Selector Administration Guide*.

**Note**

Do not logically remove the primary GSSM from the GSS network. If you need to physically take the primary GSSM offline for either maintenance or repair, temporarily switch the roles of the primary and standby GSSMs as outlined in the *Cisco Global Site Selector Administration Guide*.

To physically remove a GSS 4492R from your network:

1. Power down the GSS 4492R by pressing the power button on the front panel of the GSS 4492R.
2. Disconnect the power cords and network cables.
3. Physically remove the chassis from the rack.

To physically replace a GSS 4492R, install the new GSS 4492R and configure it using the same configuration parameters (such as IP address) that you used for the removed GSS 4492R. Refer to the *Cisco Global Site Selector Getting Started Guide* for details.
Troubleshooting the GSS 4492R Hardware

If your GSS 4492R is not working as expected, begin troubleshooting using the procedures in this chapter. This chapter guides you through some initial checks and procedures that can solve basic GSS 4492R problems.

This chapter contains the following major sections:

- Checking the Basics
- Checking Connections

Checking the Basics

To solve some basic GSS 4492R problems, follow these steps:

1. Was an alert message issued by the GSS software?
   - Yes. Check the component named in the alert message.
   - No. Go to step 2.

2. Visually inspect the GSS 4492R. Is the GSS 4492R wet or damaged?
   - Yes. Liquid spills, splashes, and excessive humidity can cause damage to the GSS 4492R. If the GSS 4492R gets wet, contact your service representative for instructions. Refer to the “Obtaining Technical Assistance” section on page xvii.
     If the GSS 4492R was dropped or damaged while being moved, you should check it to see if it functions properly. If an external device attached to the GSS 4492R is dropped or damaged, contact your service representative for instructions. Refer to the “Obtaining Technical Assistance” section on page xvii.
   - No. Go to step 3.

3. Perform the steps in the “Checking Connections” section.
   Is the problem resolved?
   - Yes. The power to the GSS 4492R was faulty, or the connections were loose. You have fixed the problem.
   - No. Go to step 4.
4. Did the GSS 4492R complete the boot routine?
   - Yes. The GSS 4492R configuration information was correct.
   - No. Call your service representative. Refer to the “Obtaining Technical Assistance” section on page xvii.

Checking Connections

Loose, incorrect, or improperly connected cables are the most likely source of problems for the GSS 4492R or other external equipment. A quick check of all the cable connections can solve most problems. Refer to Chapter 1, Product Overview, for the location of the front panel controls and indicators and for the location of back panel connections on the GSS 4492R.

To check all the connections:
1. Power down the GSS 4492R. Disconnect all the power cables from their electrical outlets.
2. If the GSS 4492R is connected to a power strip or power distribution unit, turn the power strip off and then on again.
   - Is the power strip receiving power?
     - Yes. Go to step 5.
     - No. Go to step 3.
3. Plug the power strip into another electrical outlet.
   - Is the power strip receiving power?
     - Yes. The original electrical outlet probably does not function. Use a different electrical outlet.
     - No. Go to step 4.
4. Connect a known working GSS 4492R directly to the electrical outlet.
   - Does the GSS 4492R receive power?
     - Yes. The power strip is probably not functioning properly. Use another power strip.
     - No. Go to step 5.
5. Reconnect the GSS 4492R to the electrical outlet or power strip.
   - Make sure that all connections fit tightly together. Ensure that the Ethernet and Console cables are correct for use with the GSS 4492R (refer to Chapter 1, Product Overview).
6. Power up the GSS 4492R.
   - Is the problem resolved?
     - Yes. The connections were loose. You have fixed the problem.
     - No. Call your service representative. Refer to the “Obtaining Technical Assistance” section on page xvii.
Maintaining Your GSS 4492R

Proper use of preventive maintenance procedures can ensure that the GSS 4492R operates properly and can minimize the need for time-consuming service procedures. This chapter contains maintenance procedures that you should perform regularly.

This chapter includes the following major sections:

- Maintaining Your Site Environment
- Using Power Protection Devices

Maintaining Your Site Environment

An exhaust fan in the power supply cools the power supply and the GSS 4492R by drawing in air through various openings and blowing it out through the back panel. However, the fan may also draw dust and other particles into the GSS 4492R, causing contaminant buildup, which increases the chassis internal temperature and interferes with the operation of various GSS 4492R components.

To avoid these conditions, we recommend keeping your work environment clean to reduce the amount of dust and dirt around the GSS 4492R, thereby reducing the amount of contaminants drawn into it by the power supply fan.

This section discusses various environmental factors that can adversely affect GSS 4492R performance and longevity. It covers:

- Temperature
- Humidity
- Altitude
- Dust and Particles
- Corrosion
- Electrostatic Discharge
- Electromagnetic and Radio Frequency Interference
- Magnetism
- Power Source Interruptions
Temperature

Temperature extremes can cause a variety of problems, including premature aging and failure of chips or mechanical failure of devices. Extreme temperature fluctuations can cause chips to become loose in their sockets and cause expansion and contraction of disk drive platters, resulting in read or write data errors.

To minimize the negative effects of temperature on GSS 4492R performance, follow these guidelines:

- Ensure that the GSS 4492R is operated in an environment no colder than 32°F (0°C) or hotter than 104°F (40°C).
- Ensure that the GSS 4492R has adequate ventilation. Do not place it within a closed-in wall unit or on top of cloth, which can act as insulation. Do not place it in direct sunlight. Do not place it next to a heat source of any kind, including heating vents during winter.
- Adequate ventilation is particularly important at high altitudes. GSS 4492R performance may not be optimum when operating at high temperatures as well as high altitudes.
- Ensure that all slots and openings on the GSS 4492R remain unobstructed, especially the fan vent on the back of the GSS 4492R.
- Clean the GSS 4492R at regular intervals to avoid any buildup of dust and debris, which can cause it to overheat.
- If the GSS 4492R has been exposed to abnormally cold temperatures, allow a 2-hour warm-up period to bring it up to normal operating temperature before turning it on. Failure to do so may cause damage to internal components, particularly the hard disk drive.

Humidity

High-humidity conditions can cause moisture in the GSS 4492R. This moisture can cause corrosion of internal components and degradation of properties such as electrical resistance, thermal conductivity, physical strength, and size. Extreme moisture buildup inside the GSS 4492R can result in electrical shorts, which can cause serious damage.

Each GSS 4492R is rated to operate at 8 to 80 percent relative humidity, with a humidity gradation of 10 percent per hour. Buildings in which climate is controlled by air conditioning in the warmer months and by heat during the colder months usually maintain an acceptable level of humidity for the GSS 4492R. However, if a GSS 4492R is located in an unusually humid location, use a dehumidifier to maintain the humidity within an acceptable range.

Altitude

Operating a GSS 4492R at high altitude (low pressure) reduces the efficiency of forced and convection cooling and can result in electrical problems related to arcing and corona effects. This condition can also cause sealed components with internal pressure, such as electrolytic capacitors, to fail or perform at reduced efficiency.

The GSS 4492R is for use at a maximum altitude of 6500 feet (2000 meters).
Dust and Particles

A clean operating environment can greatly negate the effects of dust and other particles, which act as insulators and interfere with the operation of mechanical components. Also, in addition to regular cleaning, follow these guidelines to deter contamination of the GSS 4492R equipment:

- Do not permit smoking anywhere near the GSS 4492R
- Do not permit food or drink near the GSS 4492R
- Use dust covers when the GSS 4492R is not in use
- Close windows and outside doors to keep out airborne particles

Corrosion

The oil from a person’s fingers or prolonged exposure to high temperature or humidity can corrode the gold-plated edge connectors and pin connectors on various devices in the GSS 4492R. This corrosion on GSS 4492R connectors is a gradual process that can eventually lead to intermittent failures of electrical circuits.

To prevent corrosion, avoid touching contacts on boards and cards. Protecting the GSS 4492R from corrosive elements is especially important in moist and salty environments, which tend to promote corrosion. Also, as a further deterrent to corrosion, the GSS 4492R should not be used in extreme temperatures, as explained in the “Temperature” section on page 5-2.

Electrostatic Discharge

Electrostatic discharge (ESD) results from the buildup of static electricity on the human body and certain other objects. Static electricity is often produced by simple movements such as walking across a carpet. ESD is a discharge of a static electrical charge that occurs when a person whose body contains such a charge touches a component in the GSS 4492R, especially chips, and causes the component to fail.

ESD is a problem particularly in dry environments where the relative humidity is below 50 percent.

To reduce the effects of ESD, observe the following guidelines:

- Wear a grounding wrist strap. If a grounding wrist strap is unavailable, touch an unpainted metal surface on the chassis periodically to neutralize any static charge.
- Keep components in their antistatic packaging until they are installed.
- Avoid wearing clothing made of wool or synthetic materials.

Electromagnetic and Radio Frequency Interference

Electromagnetic interference (EMI) and radio frequency interference (RFI) can adversely affect devices such as radio and television (TV) receivers operating near the GSS 4492R. Radio frequencies emanating from the GSS 4492R can also interfere with cordless and low-power telephones. Conversely, RFI from high-power telephones can cause spurious characters to appear on a monitor screen.
RFI is defined as any EMI with a frequency above 10 kHz. This type of interference can travel from the GSS 4492R to other devices through the power cable and power source or through the air like transmitted radio waves. The Federal Communications Commission (FCC) publishes specific regulations to limit the amount of EMI and RFI emitted by computing equipment. Each GSS 4492R meets these FCC regulations.

To reduce the possibility of EMI and RFI, follow these guidelines:

- Operate the GSS 4492R only with its cover installed.
- Ensure that the screws on all peripheral cable connectors are securely fastened to their corresponding connectors on the back of the GSS 4492R.
- Always use shielded cables with metal connector shells for attaching peripherals to the GSS 4492R.

**Magnetism**

Because they store data magnetically, hard disk drives are extremely susceptible to the effects of magnetism. Do not store hard disk drives near magnetic sources such as:

- Monitors
- TV sets
- Printers
- Telephones with real bells
- Fluorescent lights

**Power Source Interruptions**

The GSS 4492R is especially sensitive to variations in voltage supplied by the AC power source. Overvoltage, undervoltage, and transients (or spikes) can erase data from memory or even cause components to fail. To protect against these types of problems, always properly ground power cables. Use one or both of the following methods:

- Use one of the power protection devices described in the “Using Power Protection Devices” section on page 5-5.
- Place the GSS 4492R on a dedicated power circuit (rather than sharing a circuit with other heavy electrical equipment). In general, do not allow the GSS 4492R to share a circuit with any of the following equipment:
  - Copier machines
  - Air conditioners
  - Vacuum cleaners
  - Space heaters
  - Power tools
  - Teletype machines
  - Adding machines
  - Laser printers
  - Facsimile machines
  - Any other motorized equipment
In addition to these appliances, the greatest threats to the GSS 4492R power supply are surges or blackouts caused by electrical storms. Whenever possible, turn off the GSS 4492R and any peripherals and unplug them from their power sources during thunderstorms.

If a blackout occurs—even a temporary one—while the GSS 4492R is turned on, turn it off immediately and disconnect it from the electrical outlet. Leaving the GSS 4492R on may cause problems when the power is restored; all other appliances left on in the area can create large voltage spikes that can damage the GSS 4492R.

**Using Power Protection Devices**

A number of devices are available that protect against power problems such as power surges, transients, and power failures. The following subsections describe some of these devices.

**Surge Protectors**

Surge protectors are available in a variety of types and usually provide a level of protection commensurate with the cost of the device. Surge protectors prevent voltage spikes, such as those caused during an electrical storm, from entering a GSS 4492R through the electrical outlet. Surge protectors, however, do not offer protection against brownouts, which occur when the voltage drops more than 20 percent below the normal AC line voltage level.

**Line Conditioners**

Line conditioners go beyond the overvoltage protection of surge protectors. Line conditioners keep the GSS 4492R AC power source voltage at a fairly constant level and therefore can handle brownouts. Because of this added protection, line conditioners cost more than surge protectors—up to several hundred dollars. However, these devices cannot protect against a complete loss of power.

**Uninterruptible Power Supplies**

Uninterruptible power supply (UPS) systems offer the most complete protection against variations in power because they use battery power to keep the GSS 4492R running when AC power is lost. The battery is charged by the AC power while it is available, so once AC power is lost, the battery can provide power to the GSS 4492R for a limited amount of time—from 15 minutes to an hour or so—depending on the UPS system.

Surge protectors should be used with all UPS systems, and the UPS system should be Underwriters Laboratories (UL) safety-approved.
Specifications

This appendix contains the following sections that list specifications for the Cisco GSS 4492R:

- **Electrical Specifications**
- **Environmental Specifications**
- **Physical Specifications**
- **Port Specifications**

**Electrical Specifications**

Table A-1 describes the GSS AC electrical specifications.

<table>
<thead>
<tr>
<th>AC Specification</th>
<th>Operational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage (V)</td>
<td>100 to 240 VAC</td>
</tr>
<tr>
<td>Input Voltage (F)</td>
<td>50 to 60 Hz</td>
</tr>
<tr>
<td>Current Draw</td>
<td>3.5 Amps</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>345 Watts</td>
</tr>
<tr>
<td>Heat Dissipation</td>
<td>1314 BTU/hr</td>
</tr>
</tbody>
</table>

**Environmental Specifications**

Table A-2 describes the GSS environmental specifications.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Operational</th>
<th>Non-operational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>32°F to 104°F (0° to 40° C)</td>
<td>-4°F to 140°F (-20° to 60° C)</td>
</tr>
<tr>
<td>Humidity</td>
<td>90% at 104°F (40° C) (non-condensing)</td>
<td>90% at 140°F (60° C) (non-condensing)</td>
</tr>
<tr>
<td>Shock</td>
<td>31 G halfsine</td>
<td>71 G halfsine, 20 G square</td>
</tr>
</tbody>
</table>
Physical Specifications

Table A-3 describes the GSS physical specifications.

Table A-3 Physical Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chassis Dimensions</td>
<td>1.50 in x 16.92 in x 20.04 in</td>
</tr>
<tr>
<td>(H x W x D)</td>
<td>(42.4 mm x 430 mm x 509 mm)</td>
</tr>
<tr>
<td>Chassis Shipping Weight</td>
<td>40.0 lbs. (18.2 kg)</td>
</tr>
<tr>
<td>Chassis Weight</td>
<td>30.8 lbs. (14 kg)</td>
</tr>
</tbody>
</table>

Port Specifications

Table A-4 describes the GSS port specifications.

Table A-4 Port Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>• 1000BASE-T, 100BASE-T, 10BASE-T (dual) Ethernet ports</td>
</tr>
<tr>
<td></td>
<td>• Console serial port</td>
</tr>
</tbody>
</table>
Connecting a Modem to the GSS 4492R Console Port

This appendix explains how to configure a dial-up modem and connect it to the console port on the GSS 4492R. Connecting a modem to the GSS 4492R allows you to remotely perform the same GSS 4492R console operations as you would locally. The GSS 4492R supports the following modems:

- 3Com (US Robotics) Courier Model 3453 Modem
- 3Com OfficeConnect Model 3294 Modem
- 3Com (US Robotics) Sportster Model 5686 Modem
- MultiTech Model MT5634ZBA Modem

This appendix includes the following sections:

- Configuring a Modem
- Cabling a Modem to the GSS 4492R

Configuring a Modem

You must configure the modem before you can connect it to the GSS 4492R. You can connect the modem to a terminal or a PC using a terminal emulation program, such as Hyperterminal. If you connect the modem to the COM port on a PC, you need the following cable and connectors:

- RJ-45-to-RJ-45 rolled cable
- RJ-45-to-DB-25 modem adapter
- DB-9-to-RJ-45 terminal adapter

Figure 1-4 on page 1-6 shows the pin number assignments for the 9-pin, male D-shell console port connector on the back of the GSS 4492R. These pin number assignments conform to the industry standard.

Table 1-1 on page 1-6 lists the connector pinouts for the GSS 4492R console port.

You configure the modem by entering commands from the Attention (AT) command set and, if applicable, setting the configuration switches on the modem. Although the process to configure the modem may vary from one modem to another, configure your modem so that its resulting behavior is as follows:

- Answers a call on the first ring
- Disables both hardware and software flow control mechanisms
• Ignores modem control signals DTR and RTS
• Suppresses echoing of command mode input
• Disables recognition of AT commands

Cabling a Modem to the GSS 4492R

After you configure the modem, perform the following steps to connect a modem to the GSS 4492R:

1. Unplug the flat rolled RJ-45-to-RJ-45 cable from the terminal adapter on the PC and connect the cable to the console port on the rear panel of the GSS 4492R (see Figure 1-2 on page 1-4).

2. Ensure that the settings on the remote console match the GSS 4492R default settings specified in Table B-1.

Table B-1  Console Port Default Settings

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Default Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud</td>
<td>9600</td>
</tr>
<tr>
<td>Data Bits</td>
<td>8</td>
</tr>
<tr>
<td>Parity</td>
<td>None</td>
</tr>
<tr>
<td>Stop Bits</td>
<td>1</td>
</tr>
<tr>
<td>Terminal Type</td>
<td>VT100/ANSI</td>
</tr>
<tr>
<td>Flow Control</td>
<td>None</td>
</tr>
</tbody>
</table>

Note

When you remotely log in to the GSS 4492R through a modem, ensure that you log out before disconnecting from the session. Use the `exec-timeout timeout` command to set the maximum amount of time that the console session can be idle on the GSS 4492R before it logs out. By default, the timeout is 150 minutes.
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