



About This Book

This preface describes who should read the *Cisco GGSN Release 10.2 Configuration Guide, Cisco IOS Release 12.4(24)YE4*, how it is organized, and its document conventions.

Document Revision History

The following table lists the major changes made to this document each release, with the most recent changes listed first.

Revision	Date	Change Summary
OL-2405-03	5/15/2011	Release 10.2, Cisco IOS Release 12.4(24)YE4. Information for the following features and enhancements was added: • Credit-Control-Failure-Handling (CCFH) vendor-specific attribute value pair (AVP) tuning for prepaid and postpaid subscribers. • Diameter Credit Control Application (DCCA) Credit Control Requests (CCRs) enhancements: • Delayed quota reauthorization for DCCA subscribers.
OL-2405-02	2/24/2011	Release 10.1, Cisco IOS Release 12.4(24)YE3. Information for the following features was added: • RADIUS Controlled Redirection • Enhancements to the show gprs gtp pdp-context msidn command output.
OL-2405-01	12/07/2010	Release 10.0, Cisco IOS Release 12.4(24)YE2. Information for the “Overlapping Local IP Address Pools” feature was added.
OL-2405-01	02/25/2010	First publication.

Audience

This publication is designed for network administrators and other people who are responsible for setting up, installing, configuring, and operating the Cisco Gateway GPRS Support Node (GGSN).

Organization

This publication is organized as follows:

Chapter	Description
Chapter 1, “Overview of GPRS and UMTS”	Briefly introduces the 2.5G general packet radio service (GPRS) and the 3G Universal Mobile Telecommunications System (UMTS) technologies, and their implementation in Cisco GGSN software
Chapter 3, “Planning to Configure the GGSN”	This chapter provides information that you should know before configuring a Cisco GGSN.
Chapter 4, “Configuring GTP Services on the GGSN”	Describes how to enable a Cisco GGSN and how to configure GPRS tunneling protocol (GTP) options.
Chapter 5, “Configuring IPv6 PDP Support on the GGSN”	Describes how to configure support for Internet Protocol Version 6 (IPv6) packet data protocol (PDP) contexts on a Cisco GGSN.
Chapter 6, “Configuring GGSN GTP Session Redundancy”	Describes how to configure GTP session redundancy (GTP-SR) between two GGSNs.
Chapter 7, “Configuring Charging on the GGSN”	Describes how to configure the charging function on a gateway GPRS support node (GGSN).
Chapter 8, “Implementing Enhanced Service-Aware Billing”	Describes how to implement the Cisco GGSN as a enhanced service-aware GGSN that is capable of real-time credit-control for prepaid subscribers and service-aware billing for postpaid and prepaid subscribers.
Chapter 9, “Configuring Network Access to the GGSN”	Describes how to configure access from the Cisco GGSN to a serving GPRS support node (SGSN), public data network (PDN), and optionally to a Virtual Private Network (VPN). This chapter also includes information about configuring access points on the GGSN.
Chapter 10, “Configuring PPP Support on the GGSN”	Describes the different methods of Point-to-Point Protocol (PPP) support on the GGSN and how to configure those methods.
Chapter 11, “Configuring QoS on the GGSN”	Describes how to configure Quality of Service (QoS) functions to differentiate traffic flow through the Cisco GGSN.
Chapter 12, “Configuring Security on the GGSN”	Describes how to configure security features on the Cisco GGSN, including Authentication, Authorization, and Accounting (AAA), and Remote Authentication Dial-In User Service (RADIUS).
Chapter 13, “Configuring Dynamic Addressing on the GGSN”	Describes how to configure dynamic IP addressing on the Cisco GGSN.
Chapter 14, “Configuring Load Balancing on the GGSN”	Describes how to configure a Cisco GGSN to support load balancing functions using the Cisco IOS software Server Load Balancing (SLB) feature.

Chapter	Description
Appendix A, “Monitoring Notifications”	Describes enabling and monitoring Cisco GGSN SNMP notifications in order to manage GPRS/UMTS-related issues.
Appendix B, “Supported AVPs in DCCA Messages”	Lists the vendor-specific attribute value pairs (AVPs) supported by the Cisco GGSN in Diameter Credit Control Application (DCCA) Credit-Control-Request (CCR) and Credit-Control-Answer (CCA) messages.

Conventions

This publication uses the following conventions:

Convention	Description
boldface font	Commands and keywords are in boldface .
<i>italic font</i>	Arguments for which you supply values are in <i>italics</i> .
[]	Elements in square brackets are optional.
{ x y z }	Alternative keywords are grouped in braces and separated by vertical bars.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
screen font	Terminal sessions and information that the system displays are in screen font.
boldface screen font	Information that you must enter is in boldface screen font .
<i>italic screen font</i>	Arguments for which you supply values are in <i>italic screen font</i> .
^	The symbol ^ represents the key labeled Control—for example, the key combination ^D in a screen display means hold down the Control key while you press the D key.
< >	Nonprinting characters, such as passwords are in angle brackets.

Notes use the following conventions:



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.

Tips use the following conventions:



Tip

Means *the following information will help you solve a problem*. The tips information might not be troubleshooting or even an action, but could be useful information.

Cautions use the following conventions:



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Related Documentation

For more detailed installation and configuration information, see the following publications:

- *Release Notes for Cisco GGSN Release 10.0 on the Cisco SAMI*, Cisco IOS Release 12.4(24)YE
- *Cisco Service and Application Module for IP User Guide*
- *Cisco IOS Network Management Configuration Guide*
- *Release Notes for Cisco IOS Release 12.2SR for the Cisco 7600 Series Routers*
- *Cisco 7600 Series Cisco IOS Software Configuration Guide*
- *Cisco 7600 Series Cisco IOS Command Reference*
- *Cisco IOS Quality of Service Solutions Configuration Guide*, Cisco IOS Release 12.4
- For information about MIBs, see:
<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>
- Cisco IOS Configuration Guides and Command References, Release 12.4

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<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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