Preface

This preface discusses the audience, purpose, and organization of *Cisco MGX and SES Error Messages, Release 4*.

This book supports Software Releases 4.0.00 and 4.0.10 of the following products:

- MGX 8850 (PXM45)
- MGX 8850 (PXM1E)
- MGX 8950
- MGX 8830
- Service Expansion Shelf (SES)

Note The MGX and SES error messages added for Release 4.0.10 start with the "The following error messages were added for Release 4.0.10." section on page 1511. Appending the 4.0.10 error messages caused this manual to go to revision B0."

Audience

Cisco MGX and SES Error Messages, Release 4 is for network operators. These users should be familiar with telecommunications products and networking systems.

Purpose

The purpose of this book is to help operators identify errors on their system or switch, and take corrective action if possible.

Organization

This book describes error messages (also called Events) in the MGX and SES systems with a severity of 1 to 7, 1 being the most severe. A glossary of error message terms and definitions of severity levels are described in the following sections.

Additional information about installing and configuring compatible Cisco network products is listed in the "Related Documentation" section later in this preface.

Glossary

Here is a brief glossary for all the fields in this appendix:

- SEVERITY: Severity of this event. Severity can be Fatal, Major Alert, Minor Alert, Error, Warning, Notice, and Information (explained later), in decreasing order of severity.
- FORMAT: The format for the string printed in the event log on the switch. The place holders like %s, %d will be filled in with the information when logged.
- FLAG: This flag defines if any additional information is captured for this event. It can have these values:
  - Stack Trace: Stack trace is captured when this event happens.
  - Write to BRAM: This event is written to Battery Random Access Memory (BRAM) before finally getting written to disk.
  - Dump Trace: Trace dump (used for debugging) is available for this event.
  - Run Log Function: Extra debugging information may be captured for this event.
- THROTTLING: Events that occur at a fast rate may be throttled to avoid flooding the event logs. This field identifies the rate at which a particular event may be throttled. This field is defined in a static fashion by the development engineer.
- EXPLANATION: Text explaining the circumstances which led to this event being logged.
- RECOMMENDED ACTION: An action expected to be taken by the customer.
- REQUIRED_INFO: Information that must be collected by the customer before calling the Technical Assistance Center (TAC)

Severity Levels

Event security levels are defined as follows:

- EVENT_FATAL (Severity 1): This severity level indicates that the event affects the existing data traffic for the systems and is considered fatal, because the platform can not recover and continue. Events of this type will cause the card to reset. Any error or condition that causes data corruption or loss of live traffic is considered fatal. These events require immediate action.
- EVENT_MAJOR_ALERT (Severity 2): This severity level is used for events that indicate a major service or feature of the platform has been damaged or lost and that existing data traffic is not affected. By posting traps and major alarms, these events alert operators that immediate action is required to recover the platform or service.
- EVENT_MINOR_ALERT (Severity 3): This severity level is used for events that indicate a minor or partial service of the platform has been damaged or lost and that existing data traffic and critical services are not affected. By posting a minor alarm, these events alert operators that eventual action is required to recover the platform or service.
- EVENT_ERROR (Severity 4): This severity level is used for events that indicate an error has occurred, but the error is not severe or the scope of the error's implications is not known to be more severe. Most detected failures will be reported as an error and higher levels of software will determine what action should be taken.
- EVENT_WARNING (Severity 5): This severity level is used for events that indicate some threshold has been reached that could warn of a future error condition occurring.

- EVENT_NOTICE (Severity 6): This severity level is used for events that indicate a normal but significant event has occurred on the platform. Such events include significant configuration changes such as adding lines and ports, or channel alarms occurring.
- EVENT_INFO (Severity 7): This severity level is used for events that are strictly informational. Events of severity level 7 do not indicate abnormal conditions; instead they indicate that interesting information about happenings on the platform is available.

Severity 5 (Warning) through Severity 7 (Informational) generally do not require taking any significant action. Thus, only Severity 1 (Fatal Error) through Severity 4 (Error) events contain information regarding REQUIRED INFO and RECOMMENDED ACTION.

Each error message appears in the format Subsystem-Eventname-Severity, which is the same format in which that error message is logged in the system.

Where known, corrective actions are given in the RECOMMENDED ACTION section.

If you have questions about an error message, gather the required information, and contact the Technical Assistance Center (TAC) at http://www.cisco.com/tac.

Related Documentation

This "Related Documentation" section describes the technical manuals and release notes listed in the "Guide to Cisco Multiservice Switch Documentation." That guide, part DOC-7815358=, shipped with your product.

The following Cisco publications contain information related to the operation of this product and associated equipment in a Cisco WAN switching network.

Note Starting in May 2003, the documents listed in the "Related Documentation" section will be available online only.

Cisco WAN Manager Release 12

Table 1 lists the product documentation for the Cisco WAN Manager (CWM) network management system for Release 12.

Table 1 Cisco WAN Manager Release 12 Documentation

Title	Description
Cisco WAN Manager Installation Guide for Solaris 8, Release 12 OL-3837-01	Provides procedures for installing Release 12 of the CWM network management system and Release 5.4 of CiscoView on a Solaris 8 platform.
Cisco WAN Manager User's Guide, Release 12 OL-3838-01	Describes how to use the CWM Release 12 software, which consists of user applications and tools for network management, connection management, network configuration, statistics collection, and security management.

Table 1 Cisco WAN Manager Release 12 Documentation (continued)

Title	Description
Cisco WAN Manager SNMP Service Agent Guide, Release 12 OL-3840-01	Provides information about the CWM Simple Network Management Protocol Service Agent, an optional adjunct to CWM that is used for managing Cisco WAN switches using SNMP.
Cisco WAN Manager Database Interface Guide, Release 12 OL-3839-01	Provides information about accessing the CWM Informix OnLine database that is used to store information about the network elements.

Cisco MGX 8850 (PXM45) Multiservice Switch Release 4

Table 2 lists the product documentation for the installation and operation of the Cisco MGX 8850 (PXM45) Multiservice Switch Release 4.

Table 2 Cisco MGX 8850 (PXM45) Release 4 Documentation

Title	Description
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide OL-3842-01	Describes how to install the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), and the Cisco MGX 8830 switches. This documentation explains what each switch does and covers site preparation, grounding, safety, card installation, and cabling. The Cisco MGX 8850 switch uses either a PXM45 or a PXM1E controller card and provides support for both serial bus based and cell bus based service modules. The Cisco MGX 8950 supports only serial bus based service modules. This hardware installation guide replaces all previous hardware guides for these switches.
*Frame Relay Software Configuration Guide and Command Reference for the Cisco MGX 8850 FRSM12 Card, Release 3** DOC-7810327=	Describes how to use the high-speed Frame Relay (FRSM-12-T3E3) commands that are available in the CLI of the Cisco MGX 8850 (PXM45) switch.
Cisco ATM Services (AXSM) Software Configuration Guide and Command Reference for MGX Switches, Release 4 OL-3852-01	Explains how to configure the AXSM cards and a command reference that describes the AXSM commands in detail. The AXSM cards covered in this manual are the AXSM-XG, AXSM/A, AXSM/B, AXSM-E, and AXSM-32-T1E1-E.
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Software Configuration Guide, Release 4 OL-3845-01	Describes how to configure the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), and the Cisco MGX 8830 switches with PXM45 or PXM1E controller cards to operate as ATM core switches or edge switches. This guide also provides some operation and maintenance procedures.
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Command Reference, Release 4 OL-3846-01	Describes the PXM commands that are available on the CLI of the Cisco MGX 8830, Cisco MGX 8850, and Cisco MGX 8950 switches.
Cisco Frame Relay Software Configuration Guide and Command Reference, Release 4 OL-3851-01	Provides software configuration procedures for provisioning connections and managing the FRSM cards supported in this release. Also provides descriptions for all FRSM commands.

Table 2 Cisco MGX 8850 (PXM45) Release 4 Documentation (continued)

Title	Description
Cisco Circuit Emulation Software Configuration Guide and Command Reference, Release 4 OL-3853-01	Provides software configuration procedures for provisioning connections and managing the CESM cards supported in this release. Also provides descriptions for all CESM commands.
PNNI Network Planning Guide for MGX and SES Products OL-3847-01	Provides guidelines for planning a PNNI network that uses Cisco MGX 8830, MGX 8850 (PXM45 and PXM1E), Cisco MGX 8950, and Cisco BPX 8600 switches. When connected to a PNNI network, each Cisco BPX 8600 series switch requires an SES for PNNI route processing.
Cisco MGX Route Processor Module (RPM-XF) Installation and Configuration Guide, Release 4 OL-3186-01	Describes how to install and configure the Cisco MGX Route Processor Module (RPM-XF) in the Cisco MGX 8850 (PXM45) and MGX 8950 Release 4 switch. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and basic Cisco IOS configuration information.
*Cisco VISM Installation and Configuration Guide, Release 3** OL-2521-01	Describes how to install and configure the Voice Interworking Service Module (VISM) in the Cisco MGX 8850, Cisco MGX 8950, and Cisco MGX 8830 Release 4 switches. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and Cisco CLI configuration information.
*Regulatory Compliance and Safety Information for the Cisco MGX 8830, MGX 8850 (PXM45 and PXM1E), and MGX 8950 Switches. ** DOC-7814790=	Provides regulatory compliance, product warnings, and safety recommendations for the Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), and Cisco MGX 8950 switches.

** This book was last updated for Release 3.*

Cisco MGX 8850 (PXM1E) Multiservice Switch Release 4

Table 3 lists the product documentation for the installation and operation of the Cisco MGX 8850 (PXM1E) Multiservice Switch Release 4.

Table 3 Cisco MGX 8850 (PXM1E) Release 4 Documentation

Title	Description
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide OL-3842-01	Describes how to install the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), and the Cisco MGX 8830 switches. This documentation explains what each switch does and covers site preparation, grounding, safety, card installation, and cabling. The Cisco MGX 8850 switch uses either a PXM45 or a PXM1E controller card and provides support for both serial bus based and cell bus based service modules. The Cisco MGX 8950 supports only serial bus based service modules. This hardware installation guide replaces all previous hardware guides for these switches.
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Software Configuration Guide, Release 4 OL-3845-01	Describes how to configure the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), and the Cisco MGX 8830 switches with PXM45 or PXM1E controller cards to operate as ATM core switches or edge switches. This guide also provides some operation and maintenance procedures.
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Command Reference, Release 4 OL-3846-01	Describes the PXM commands that are available on the CLI of the Cisco MGX 8830, Cisco MGX 8850, and Cisco MGX 8950 switches.
Cisco Circuit Emulation Software Configuration Guide and Command Reference, Release 4 OL-3853-01	Provides software configuration procedures for provisioning connections and managing the CESM cards supported in this release. Also provides descriptions for all CESM commands.
Cisco Frame Relay Software Configuration Guide and Command Reference, Release 4 OL-3851-01	Provides software configuration procedures for provisioning connections and managing the FRSM cards supported in this release. Also provides descriptions for all FRSM commands.
*Cisco AUSM Software Configuration Guide and Command Reference for Cisco MGX 8850 (PXM1E) and Cisco MGX 8830, Release 3** DOC-7814254=	Provides software configuration procedures for provisioning connections and managing the AUSM cards supported in this release. Also provides descriptions for all AUSM commands.
PNNI Network Planning Guide for MGX and SES Products OL-3847-01	Provides guidelines for planning a PNNI network that uses Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), Cisco MGX 8950, and Cisco BPX 8600 switches. When connected to a PNNI network, each Cisco BPX 8600 series switch requires an SES for PNNI route processing.
*Cisco VISM Installation and Configuration Guide, Release 3** OL-2521-01	Describes how to install and configure VISM in the Cisco MGX 8850, Cisco MGX 8950, and Cisco MGX 8830 Release 4 switches. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and Cisco CLI configuration information.

Table 3 Cisco MGX 8850 (PXM1E) Release 4 Documentation (continued)

Title	Description
Regulatory Compliance and Safety Information for the Cisco MGX 8830, MGX 8850 (PXM45 and PXM1E), and MGX 8950 Switches. * DOC-7814790=	Provides regulatory compliance, product warnings, and safety recommendations for the Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), and Cisco MGX 8950 switches.

** This book was last updated for Release 3.*

Cisco MGX 8950 Multiservice Service Release 4

Table 4 lists the product documentation for the installation and operation of the Cisco MGX 8950 Multiservice Switch Release 4.

Table 4 Cisco MGX 8950 Release 4 Documentation

Title	Description
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide OL-3842-01	Describes how to install the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), and the Cisco MGX 8830 switches. This documentation explains what each switch does and covers site preparation, grounding, safety, card installation, and cabling. The Cisco MGX 8850 switch uses either a PXM45 or a PXM1E controller card and provides support for both serial bus based and cell bus based service modules. The Cisco MGX 8950 supports only serial us based service modules. This hardware installation guide replaces all previous hardware guides for these switches.
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Software Configuration Guide, Release 4 OL-3845-01	Describes how to configure the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), and the Cisco MGX 8830 switches with PXM45 or PXM1E controller cards to operate as ATM core switches or edge switches. This guide also provides some operation and maintenance procedures.
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Command Reference, Release 4 OL-3846-01	Describes the PXM commands that are available on the CLI of the Cisco MGX 8830, Cisco MGX 8850, and Cisco MGX 8950 switches.
Cisco ATM Services (AXSM) Software Configuration Guide and Command Reference for MGX Switches, Release 4 OL-3852-01	This guide explains how to configure the AXSM cards and a command reference that describes the AXSM commands in detail. The AXSM cards covered in this manual are the AXSM-XG, AXSM/A, AXSM/B, AXSM-E, and AXSM-32-T1E1-E.
PNNI Network Planning Guide for MGX and SES Products OL-3847-01	Provides guidelines for planning a PNNI network that uses Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), Cisco MGX 8950, and Cisco BPX 8600 switches. When connected to a PNNI network, each Cisco BPX 8600 series switch requires an SES for PNNI route processing.

Table 4 Cisco MGX 8950 Release 4 Documentation (continued)

Title	Description
Cisco MGX Route Processor Module (RPM-XF) Installation and Configuration Guide, Release 4 OL-3186-01	Describes how to install and configure the Cisco MGX Route Processor Module (RPM-XF) in the Cisco MGX 8850 Release 4 switch. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and basic Cisco IOS configuration information.
*Regulatory Compliance and Safety Information for the Cisco MGX 8830, MGX 8850 (PXM45 and PXM1E), and MGX 8950 Switches. ** DOC-7814790=	Provides regulatory compliance, product warnings, and safety recommendations for the Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), and Cisco MGX 8950 switches.
** This book was last updated for Release 3.*	

SES PNNI Release 4

Table 5 lists product documentation for understanding, installing, and operating the Service Expansion Shelf (SES) Private Network-to-Network Interface (PNNI) Controller.

Table 5 SES PNNI Controller Release 4 Documentation

Title	Description
*Cisco SES PNNI Controller Software Configuration Guide, Release 3** DOC-7814258=	Describes how to configure, operate, and maintain the SES PNNI Controller.
*Cisco SES PNNI Controller Command Reference, Release 3** DOC-7814260=	Provides a description of the commands used to configure and operate the SES PNNI Controller.
PNNI Network Planning Guide for MGX and SES Products OL-3847-01	Provides guidelines for planning a PNNI network that uses Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), Cisco MGX 8950, and Cisco BPX 8600 switches. When connected to a PNNI network, each Cisco BPX 8600 series switch requires an SES for PNNI route processing.
*Cisco Service Expansion Shelf Hardware Installation Guide, Release 1*** DOC-786122=	Provides instructions for installing and maintaining an SES controller.
* Last updated for Release 3 ** Last updated for Release 1	

Cisco MGX 8830 Multiservice Switch Release 4

Table 6 lists the product documentation for the installation and operation of the Cisco MGX 8830 Multiservice Switch Release 4.

Table 6 Cisco MGX 8830 Release 4 Documentation

Title	Description
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide OL-3842-01	Describes how to install the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), and the Cisco MGX 8830 switches. This documentation explains what each switch does and covers site preparation, grounding, safety, card installation, and cabling. The Cisco MGX 8850 switch uses either a PXM45 or a PXM1E controller card and provides support for both serial bus based and cell bus based service modules. The Cisco MGX 8950 supports only serial bus based service modules. This hardware installation guide replaces all previous hardware guides for these switches.
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Software Configuration Guide, Release 4 OL-3845-01	Describes how to configure the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), and the Cisco MGX 8830 switches with PXM45 or PXM1E controller cards to operate as ATM core switches or edge switches. This guide also provides some operation and maintenance procedures.
Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Command Reference, Release 4 OL-3846-01	Describes the PXM commands that are available on the CLI of the Cisco MGX 8830, Cisco MGX 8850, and Cisco MGX 8950 switches.
Cisco Circuit Emulation Software Configuration Guide and Command Reference, Release 4 OL-3853-01	Provides software configuration procedures for provisioning connections and managing the CESM cards supported in this release. Also provides descriptions for all CESM commands.
Cisco Frame Relay Software Configuration Guide and Command Reference, Release 4 OL-3851-01	Provides software configuration procedures for provisioning connections and managing the FRSM cards supported in this release. Also provides descriptions for all FRSM commands.
*Cisco AUSM Software Configuration Guide and Command Reference for MGX 8850 (PXM1E) and MGX 8830, Release 3**DOC-7814254=	Provides software configuration procedures for provisioning connections and managing the AUSM cards supported in this release. Also provides descriptions for all AUSM commands.
PNNI Network Planning Guide for MGX and SES Products OL-3847-01	Provides guidelines for planning a PNNI network that uses Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), Cisco MGX 8950, and Cisco BPX 8600 switches. When connected to a PNNI network, each Cisco BPX 8600 series switch requires an SES for PNNI route processing.
*Cisco VISM Installation and Configuration Guide, Release 3** OL-2521-01	Describes how to install and configure VISM in the Cisco MGX 8850, Cisco MGX 8950, and Cisco MGX 8830 Release 4 switches. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and Cisco CLI configuration information.

Table 6 Cisco MGX 8830 Release 4 Documentation (continued)

Title	Description
*Regulatory Compliance and Safety Information for the Cisco MGX 8830, MGX 8850 (PXM45 and PXM1E), and MGX 8950 Switches.** DOC-7814790=	Provides regulatory compliance, product warnings, and safety recommendations for the Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), and Cisco MGX 8950 switches.
** This book was last updated for Release 3.*	

Cisco WAN Switching Software Release 9.4

Table 7 lists the product documentation for the installation and operation of the Cisco WAN Switching Software Release 9.4.

Table 7 Cisco WAN Switching Release 9.4 Documentation

Title	Description
9.4.00 Version Software Release Notes Cisco WAN Switching System Software OL-3189-01	Provides new feature, upgrade, and compatibility information, as well as known and resolved anomalies.
Cisco BPX 8600 Series Installation and Configuration, Release 9.3.30 DOC-7812907=	Provides a general description and technical details of the Cisco BPX broadband switch.
Cisco WAN Switching Command Reference, Release 9.3.30 DOC-7812906=	Provides detailed information on the general command line interface commands.
Cisco IGX 8400 Series Installation Guide OL-1165-05	Provides hardware installation and basic configuration information for Cisco IGX 8400 Series switches that are running Switch Software Release 9.3.30 or later.
Cisco IGX 8400 Series Provisioning Guide OL-1166-03	Provides information for configuration and provisioning of selected services for the Cisco IGX 8400 Series switches that are running Switch Software Release 9.3.30 or later.
Cisco IGX 8400 Series Regulatory Compliance and Safety Information DOC-7813227=	Provides regulatory compliance, product warnings, and safety recommendations for the Cisco IGX 8400 Series switch.

MGX 8850 (PXM1) Edge Concentrator Release 1.2.20

Note The Release 1.x books have not been updated recently. Please check the Release Notes for the latest information.

Table 8 lists the product documentation for the installation and operation of the Cisco MGX 8850 Edge Concentrator.

Table 8 MGX 8850 Edge Concentrator Release 1.2.20 Documentation

Title	Description
Release Notes for Cisco WAN MGX 8850 (PXM1), MGX 8250, and MGX 8230 Software Version 1.2.20 OL-3244-01	Provides new feature, upgrade, and compatibility information, as well as known and resolved anomalies.
Cisco MGX 8850 Edge Concentrator Installation and Configuration, Release 1.1.3 DOC-7811223=	Provides installation instructions for the Cisco MGX 8850 edge concentrator.
Cisco MGX 8800 Series Switch Command Reference, Release 1.1.3 DOC-7811210=	Provides detailed information on the general command line for the Cisco MGX 8850 edge concentrator.
Cisco MGX 8800 Series Switch System Error Messages, Release 1.1.3 DOC-7811240=	Provides error message descriptions and recovery procedures.
Cisco MGX 8850 Multiservice Switch Overview, Release 1.1.3 OL-1154-01	Provides a technical description of the system components and functionality of the Cisco MGX 8850 edge concentrator from a technical perspective.
Cisco MGX Route Processor Module Installation and Configuration Guide, Release 1.1 DOC-7812278=	Describes how to install and configure the Cisco MGX Route Processor Module (RPM/B and RPM-PR) in the Cisco MGX 8850, the Cisco MGX 8250, and the Cisco MGX 8230 edge concentrators. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and basic Cisco IOS configuration information.
Cisco VISM Installation and Configuration Guide, Release 3 OL-2521-01	Describes how to install and configure VISM in the Cisco MGX 8850, Cisco MGX 8250, and Cisco MGX 8230 switches. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and Cisco CLI configuration information.

MGX 8250 Edge Concentrator Release 1.2.20

Table 9 lists the product documentation for the installation and operation of the Cisco MGX 8250 Edge Concentrator.

Table 9 MGX 8250 Multiservice Gateway Documentation

Title	Description
Release Notes for Cisco WAN MGX 8850 (PXM1), MGX 8250, and MGX 8230 Software Version 1.2.20 OL-3244-01	Provides new feature, upgrade, and compatibility information, as well as known and resolved anomalies.
Cisco MGX 8250 Edge Concentrator Installation and Configuration, Release 1.1.3 DOC-7811217=	Provides installation instructions for the Cisco MGX 8250 Edge Concentrator.
Cisco MGX 8250 Multiservice Gateway Command Reference, Release 1.1.3 DOC-7811212=	Provides detailed information on the general command line interface commands.
Cisco MGX 8250 Multiservice Gateway Error Messages, Release 1.1.3 DOC-7811216=	Provides error message descriptions and recovery procedures.
Cisco MGX 8250 Edge Concentrator Overview, Release 1.1.3 DOC-7811576=	Describes the system components and functionality of the Cisco MGX 8250 Edge Concentrator from a technical perspective.
Cisco MGX Route Processor Module Installation and Configuration Guide, Release 1.1 DOC-7812278=	Describes how to install and configure the Cisco MGX Route Processor Module (RPM/B and RPM-PR) in the Cisco MGX 8850, the Cisco MGX 8250, and the Cisco MGX 8230 edge concentrators. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and basic Cisco IOS configuration information.
Cisco VISM Installation and Configuration Guide, Release 3 OL-2521-01	Describes how to install and configure VISM in the Cisco MGX 8850, Cisco MGX 8250, and Cisco MGX 8230 switches. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and Cisco CLI configuration information.

MGX 8230 Edge Concentrator Release 1.2.20

Table 10 lists the product documentation for the installation and operation of the Cisco MGX 8230 Edge Concentrator.

Table 10 MGX 8230 Edge Concentrator Documentation

Title	Description
Release Notes for Cisco WAN MGX 8850 (PXM1), MGX 8250, and MGX 8230 Software Version 1.2.20 OL-3244-01	Provides new feature, upgrade, and compatibility information, as well as known and resolved anomalies.
Cisco MGX 8230 Edge Concentrator Installation and Configuration, Release 1.1.3 DOC-7811215=	Provides installation instructions for the Cisco MGX 8230 Edge Concentrator.
Cisco MGX 8230 Multiservice Gateway Command Reference, Release 1.1.3 DOC-7811211=	Provides detailed information on the general command line interface commands.
Cisco MGX 8230 Multiservice Gateway Error Messages, Release 1.1.3 DOC-78112113=	Provides error message descriptions and recovery procedures.
Cisco MGX 8230 Edge Concentrator Overview, Release 1.1.3 DOC-7812899=	Provides a technical description of the system components and functionality of the Cisco MGX 8250 Edge Concentrator from a technical perspective.
Cisco MGX Route Processor Module Installation and Configuration Guide, Release 1.1 DOC-7812278=	Describes how to install and configure the Cisco MGX Route Processor Module (RPM/B and RPM-PR) in the Cisco MGX 8850, the Cisco MGX 8250, and the Cisco MGX 8230 edge concentrators. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and basic Cisco IOS configuration information.
Cisco VISM Installation and Configuration Guide, Release 3 OL-2521-01	Describes how to install and configure VISM in the Cisco MGX 8850, Cisco MGX 8250, and Cisco MGX 8230 switches. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and Cisco CLI configuration information.

Obtaining Documentation

Cisco provides several ways to obtain documentation, 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 on the World Wide Web at this URL:

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

You can access the Cisco website at this URL:

http://www.cisco.com

International Cisco websites can be accessed from this URL:

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

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html

All users can order monthly or quarterly subscriptions through the online Subscription Store:

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

How to Find Multiservice Switch Customer Documents Online

There are several ways you can find Multiservice Switch customer documents online.

If the Part Number is Known

Use the following procedure if you know or can find the document's part number.

Step 1 Obtain the document's part number from the "Guide to Multiservice Switch Documentation" that shipped with your product, or from the "Related Documentation" section in this Preface.

Step 2 In your browser's URL field, type **www.cisco.com**.

Step 3 In the top right search field, enter the document part number (for example, *OL-3842-01*) and click on GO.

If the Part Number is Not Known

Use the following procedures if you do not know or cannot find the document's part number.

Finding Cisco WAN Manager Documents

To find Cisco WAN Manager customer documents online:

Step 1 In your browser's URL field, type **http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cwm**.

Step 2 Look for the CWM release number.

Finding Multiservice Switch Documents

To find Multiservice Switch customer documents online:

Step 1 In your browser's URL field, type **http://www.cisco.com/univercd/cc/td/doc/product/wanbu/index.htm**.

Step 2 Look for the switch name, then release number (for example, *MGX 8850 (PXM1E)*, then *Release 4*).

Ordering Documentation

Note Starting in May 2003, the documents listed in the "Related Documentation" section will be available online only. To find these documents, please refer to the "How to Find Multiservice Switch Customer Documents Online" section on page 14 for tips on finding these documents online.

You can find instructions for ordering other documentation at this URL:

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

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:

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

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

Documentation Feedback

You can submit comments electronically on Cisco.com. On the Cisco Documentation home page, click **Feedback** at the top of the page.

You can e-mail your comments to bug-doc@cisco.com.

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

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

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com, which includes the Cisco Technical Assistance Center (TAC) website, as a starting point for all technical assistance. Customers and partners can obtain online documentation, troubleshooting tips, and sample configurations from the Cisco TAC website. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC website, including TAC tools and utilities.

Cisco.com

Cisco.com offers a suite of interactive, networked services that let you access Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com provides a broad range of features and services to help you with these tasks:

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

To obtain customized information and service, you can self-register on Cisco.com at this URL:

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

Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available: the Cisco TAC website and the Cisco TAC Escalation Center. The type of support that you choose depends on the priority of the problem and the conditions stated in service contracts, when applicable.

We categorize Cisco TAC inquiries according to urgency:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration. There is little or no impact to your business operations.
- Priority level 3 (P3)—Operational performance of the network is impaired, but most business operations remain functional. You and Cisco are willing to commit resources during normal business hours to restore service to satisfactory levels.
- Priority level 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively impacted by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.
- Priority level 1 (P1)—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.

Cisco TAC Website

The Cisco TAC website provides online documents and tools to help troubleshoot and resolve technical issues with Cisco products and technologies. To access the Cisco TAC website, go to this URL:

http://www.cisco.com/tac

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC website. Some services on the Cisco TAC website require a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

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

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC website, you can open a case online at this URL:

http://www.cisco.com/tac/caseopen

If you have Internet access, we recommend that you open P3 and P4 cases online so that you can fully describe the situation and attach any necessary files.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

Before calling, please check with your network operations center to determine the Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

Obtaining Additional Publications and Information

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

- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the *Cisco Product Catalog* at this URL:

  http://www.cisco.com/en/US/products/products_catalog_links_launch.html

- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: *Internetworking Terms and Acronyms Dictionary, Internetworking Technology Handbook, Internetworking Troubleshooting Guide,* and the *Internetworking Design Guide.* For current Cisco Press titles and other information, go to Cisco Press online at this URL:

  http://www.ciscopress.com

- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access *Packet* magazine at this URL:

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

- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

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

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

  http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

  http://www.cisco.com/en/US/learning/le31/learning_recommended_training_list.html