

Release Notes for the Cisco IE 2000U Series Switches, CGS 2520 Switch, and CG Ethernet Switch Module for Cisco IOS Release 15.0(2)EK1

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Cisco IOS Release 15.0(2)EK1 runs on the Cisco IE 2000U Series Switches, CGS 2520 Switch, and CG Ethernet Switch Module (ESM).

These release notes include important information about Cisco IOS Release 15.0(2)EK1 and any limitations, restrictions, and caveats that apply to the release. Verify that these release notes are correct for your switch:

- If you are installing a new switch, see the Cisco IOS release label on the rear panel of your switch.
- If your switch is on, use the **show version** privileged EXEC command. See the "Finding the Software Version and Feature Set" section on page 8.
- If you are upgrading to a new release, see the software upgrade filename for the software version. See the "Deciding Which Files to Use" section on page 9.

For a complete list of Cisco IE 2000U, CGS 2520, and CG ESM switch documentation, see the "Related Documentation" section on page 15.

You can download the switch software from this site (registered Cisco.com users with a login password): http://www.cisco.com/cisco/web/download/index.html

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New Features in Cisco IOS Release 15.0(2)EK1

Table 1 lists the new features added in this release.

Table 1 New Features in Cisco IOS Release 15.0(2)EK1

Feature	Platform	Description	Related Documentation
Parallel Redundancy Protocol (PRP)	IE 2000U	PRP allows a data communication network to prevent data transmission failures by providing network nodes two alternate paths for the traffic to reach its destination.	For feature overview and configuration details, see the <i>Parallel Redundancy Protocol Software Configuration Guide for IE 2000U Series Switches</i> .
		Two local area networks (LANs) provide alternate paths for the traffic over independent LAN segments. However, the two LANs must share a similar topology.	
		An IE 2000U operating with PRP has a Gigabit Ethernet or uplink Fast Ethernet port connection to each of the two LANs. The switch sends two packets simultaneously to each LAN through the two different ports to its destination node. When the destination node receives the first packet successfully, it discards the second packet if it also arrives successfully as well. Each packet sent includes an incremented sequence number that helps the destination node distinguish between duplicate packets.	
Small Form-factor Pluggable (SFP) modules with Digital Optical Monitoring (DOM)	CGS 2520, ESM, CGR 2010	The CGS 2520 switch, CGR 2010 router, and the CG ESM all support SFP modules with DOM, beginning with the 15.0(2)EK1 Release. The DOM feature on an SFP gives the end user the ability to monitor real-time parameters of the SFP, such as optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage. See Table 5 for the supported SFPs, including SFPs with DOM support.	For information about SFP modules, see your SFP module documentation and the Cisco CGS 2520 Hardware Installation Guide, Cisco Connected Grid Routers 2010 Hardware Installation Guide, or Cisco Connected Grid Ethernet Switch Module Interface Card Getting Started Guide.

Table 1 New Features in Cisco IOS Release 15.0(2)EK1 (continued)

Feature	Platform	Description	Related Documentation
Precision Time Protocol (PTP)	CGS 2520, ESM, IE 2000U	PTP is defined in IEEE-1588 as Precision Clock Synchronization for Networked Measurements and Control Systems, and was developed to synchronize the clocks in packet-based networks that include distributed device clocks of varying precision and stability. PTP is optimal for use in distributed systems because it requires minimal bandwidth and little overhead processing. This release adds support for Default Profile Mode, Default Profile MIB, and End-to-End Transparent Clock Mode.	For feature overview and configuration details, see <i>Precision Time Protocol Software Configuration Guide for IE 2000U and Connected Grid Switches</i> .

Table 1 New Features in Cisco IOS Release 15.0(2)EK1 (continued)

Feature	Platform	Description	Related Documentation
Power over Ethernet plus (PoE+)	CGS 2520, ESM	The 10/100BASE-T PoE+ ports on the Cisco CGS-2520-16S-8PC and CGS-2520-16S-8PC-C models and on the GRWIC-D-ES-2S-8PC switch module provide:	For feature overview and configuration details, see: • "Power over Ethernet Ports" section in the "Configuring Interfaces" chapter of the CGS 2520 Switch
		• Support for IEEE 802.3af-compliant powered devices (up to 15.4 W PoE per port) and support for IEEE 802.3at-compliant powered devices (up to 30 W PoE+ per port).	Software Configuration Guide, 12.2(53)EX • Cisco Connected Grid Ethernet Switch Module Interface Card Software Configuration Guide
		Support for prestandard Cisco powered devices.	Cisco CGS 2520 Hardware Installation Guide
		• Configurable support for Cisco intelligent power management, including:	Cisco Connected Grid Ethernet Switch Module Interface Card Getting Started Guide.
		 enhanced power negotiation 	
		 power reservation 	
		 per-port power policing 	
		On the CGS 2520, each power supply module can support an equivalent PoE load of two PoE+ ports or four PoE ports. When both power supply modules are installed, the system has enough power to support four PoE+ ports, or eight PoE ports. If ports are designated as high priority and low priority PoE or PoE+ ports at the command line interface (CLI), and one power supply module fails or is removed, power to the high priority ports is maintained, and power to the low priority ports is dropped. When assigning priority to PoE or PoE+ ports, it is important to assign priorities on the basis of power supply capacity.	
		On the Connected Grid Ethernet Switch Module Interface Card GRWIC-D-ES-2S-8PC model (Copper model), the first four 10/100BASE-T ports (FE0/1, FE0/2, FE0/3, FE0/4) are PoE+ ports. A maximum of two PoE+ ports or four PoE ports can be supported at one time.	

Table 1 New Features in Cisco IOS Release 15.0(2)EK1 (continued)

Feature	Platform	Description	Related Documentation
TrustSec	CGS 2520	intelligent access control solution that	For more information, go to http://www.cisco.com/en/US/netsol/ns1 051/index.html.

Hardware Support

Table 2 through Table 4 summarize the supported IE 2000U, CSG 2520, and CG Ethernet Switch Module models.

All hardware platforms support LAN Base and IP Services software images. Both software images include support for IEEE 1588 PTP.

Table 5 summarizes the SFP modules supported on the IE 2000U, CGS 2520, CGR 2010, and the ESM.

Table 2 Cisco IE 2000U Models Supported

Model	Description	
IE-2000U-4S-G	4- SFP Fast Ethernet ports and 2- SFP Gigabit Ethernet ports	
IE-2000U-4T-G	4- 10/100 BASE-T ports and 2- 10/100/1000 BASE-T ports.	
IE-2000U-4TS-G	4- 10/100 BASE-T ports and 2- SFP Gigabit Ethernet ports.	
IE-2000U-8TC-G	8- 10/100 BASE-T ports and 2- Gigabit Ethernet dual-purpose ports.	
IE-2000U-16TC-G	16- 10/100 BASE-T ports, 2- Gigabit Ethernet dual-purpose ports, and 2- SFP Fast Ethernet ports.	
IE-2000U-16TC-G-X	16- 10/100 BASE-T ports, 2- Gigabit Ethernet dual-purpose ports, and 2- SFP Fast Ethernet ports.	
	This platform has conformal coating.	
IE-2000U-16TC-GP	16- 10/100 BASE-T ports, 4- Power over Ethernet (PoE) ports, and 2- Gigabit Ethernet dual-purpose ports.	
	Note The four PoE ports can operate as PoE, or as PoE+ ports with certain constraints.	
PWR-IE50W-AC=	IE 2000U Power supply modules.	
PWR-IE65W-PC-AC=		
PWR-IE65W-PC-DC=		

Table 3 Cisco CGS 2520 Models Supported

Model	Description
CGS-2520-24TC	24- 10/100 BASE-T ports, 2- Gigabit Ethernet dual-purpose uplink ports, and 2- 10/100/1000 BASE-T ports and 2- 100/1000 Small Form-Factor Pluggable (SFP) ports on board.
CGS-2520-16S-8PC	16- Fast Ethernet SFP ports, 8- 10/100BaseTX/PoE ports, and 2- Gigabit Ethernet dual-purpose uplink ports.
PWR-RGD-LOW-DC	CGS 2520 Power supply modules.
PWR-RGD-AC-DC	

Table 4 Cisco CG Ethernet Switch Module Models Supported

Model	Description
GRWIC-D-ES-2S-8PC (Copper model)	8x 10/100 Fast Ethernet ports, 1x dual-purpose port (10/100/1000 Base-T copper RJ-45 and 100/1000 SFP fiber), 1x 100/1000 SFP fiber-only port.
GRWIC-D-ES-6S (SFP Fiber model)	4x 100BASE-FX SFP-module ports, 1x dual-purpose port (1x 10/100/1000Base-T copper RJ-45 port and 1x 100/1000 SFP fiber module port), 1x 100/1000 SFP fiber module port.

Table 5 SFP Models Supported on the IE 2000U, CGS 2520, CGR 2010, and the ESM

Model	Description
Rugged and Industrial SFPs	GLC-SX-MM-RGD
	• GLC-LX-SM-RGD
	• GLC-ZX-SM-RGD
	• GLC-FE-100LX-RGD
	• GLC-FE-100FX-RGD

Table 5 SFP Models Supported on the IE 2000U, CGS 2520, CGR 2010, and the ESM

Model	Description	
Commercial SFPs	GLC-BX-D with digital optical monitoring (DOM) support	
	GLC-BX-U with DOM support	
	• GLC-FE-100LX	
	• GLC-FE-100BX-D	
	• GLC-FE-100BX-U	
	• GLC-FE-100FX	
	• GLC-FE-100EX	
	GLC-FE-100ZX	
	CWDM SFP with DOM support	
Extended temperature SFPs	SFP-GE-L with DOM support	
	SFP-GE-S with DOM support	
	SFP-GE-Z with DOM support	
	GLC-EX-SMD with DOM support ¹	

^{1.} Not supported on CGR 2010, but supported on CGS 2520, ESM, and IE 2000U.



For additional information about SFP modules, including installation procedures and cable specifications, see the Hardware Installation Guide for the applicable platform as listed in the "Related Documentation" section on page 15.

System Requirements

This section describes the following system requirements for Cisco IOS Release 15.0(2)EK1:

- Cisco Configuration Professional, page 7
- Express Setup, page 8
- Upgrading to a New Software Release, page 8

Cisco Configuration Professional

Table 6 lists the minimum software requirements for the Cisco Configuration Professional.

Table 6 Minimum Software Requirement for Cisco Configuration Professional

Component	Minimum Software Requirement
Cisco Configuration Professional	Version 2.8

Express Setup

Table 7 lists the minimum hardware requirements for Express Setup. You can find its minimum software requirements summarized under the table.

Table 7 Express Setup Minimum Hardware Requirements for a PC

Processor Speed	DRAM	Number of Colors	Resolution	Font Size
233 MHz ¹	Hardware ²	256	1024 x 768	Small

^{1.} We recommend 1 GHz.

Express Setup Minimum Software Requirements for a PC

- PC with Windows 2000, XP, Vista, or Windows Server 2003
- Web browser (Internet Explorer 6.0, 7.0, or Firefox 1.5, 2.0, 3.0) with JavaScript enabled Express Setup verifies the browser version when starting a session, and it does not require a plug-in.
- Straight-through or crossover Category 5 or 6 cable

Upgrading to a New Software Release

These are the procedures for downloading software. Before downloading software, read these sections for important information:

- Finding the Software Version and Feature Set, page 8
- Deciding Which Files to Use, page 9
- Archiving Software Images, page 9
- Upgrading a Switch by Using the CLI, page 10
- Installation Notes, page 11

Finding the Software Version and Feature Set

The Cisco IOS image is stored as a bin file in a directory that is named with the Cisco IOS release. A subdirectory contains the files needed for web management. The image is stored on the compact flash memory card.

You can use the **show version** privileged EXEC command to see the software version that is running on your switch. The second line of the display shows the version.

You can also use the **dir** *filesystem*: privileged EXEC command to see the directory names of other software images stored in flash memory. For example, use the **dir flash**: command to display the images in the flash memory.

^{2.} We recommend 1 GB of DRAM.

Deciding Which Files to Use

The upgrade procedures in these release notes describe how to perform the upgrade by using a combined tar file. This file contains the Cisco IOS image file and the files needed for the embedded device manager. You must use the combined tar file to upgrade the switch through the device manager. To upgrade the switch through the command-line interface (CLI), use the tar file and the **archive download-sw** privileged EXEC command.

Table 8 lists the filenames for this software release.



If you download the IP services image and plan to use Layer 3 functionality, you must use the Switch Database Management (SDM) routing template. To determine the currently active template, enter the **show sdm prefer** privileged EXEC command. If necessary, enter the **sdm prefer** global configuration command to change the SDM template to a specific template. For example, if the switch uses Layer 3 routing, change the SDM template from the default to the routing template. You must reload the switch for the new template to take effect.

Table 8 Cisco IOS Software Image Files

Filename	Description
ie2000u-ipserviceslmk9-tar.150-2.EK1	IE 2000U IP services image file, which includes PTP
ie2000u-lanbaselmk9-tar.150-2.EK1	IE 2000U LAN base image file, which includes PTP
cgs2520-ipserviceslmk9-tar.150-2.EK1	CGS 2520 IP services image file, which includes PTP
cgs2520-lanbaselmk9-tar.150-2.EK1	CGS 2520 LAN base image file, which includes PTP
grwicdes-ipserviceslmk9-tar.150-2.EK1	ESM IP services image file, which includes PTP
grwicdes-lanbaselmk9-tar.150-2.EK1	ESM LAN base image file, which includes PTP

Archiving Software Images

Before upgrading your switch software, make sure that you archive copies of both your current Cisco IOS release and the Cisco IOS release to which you are upgrading. Keep these archived images until you have upgraded all devices in the network to the new Cisco IOS image and verified that the new Cisco IOS image works properly in your network.

Cisco routinely removes old Cisco IOS versions from Cisco.com. See *Product Bulletin 2863* for information:

http://www.cisco.com/en/US/prod/collateral/iosswrel/ps8802/ps6969/ps1835/prod_bulletin0900aecd80 281c0e html

You can copy the bin software image file on the flash memory to the appropriate TFTP directory on a host by using the **copy flash: tftp:** privileged EXEC command.



Although you can copy any file on the flash memory to the TFTP server, it is time consuming to copy all of the HTML files in the tar file. We recommend that you download the tar file from Cisco.com and archive it on an internal host in your network.

You can also configure the switch as a TFTP server to copy files from one switch to another without using an external TFTP server by using the **tftp-server** global configuration command.

Upgrading a Switch by Using the CLI

This procedure is for copying the combined tar file to the switch. You copy the file to the switch from a TFTP server and extract the files. You can download an image file and replace or keep the current image.



Make sure that the compact flash card is in the switch before downloading the software.

To download software, follow these steps:

- **Step 1** Use Table 8 on page 9 to identify the file that you want to download.
- **Step 2** Download the software image file. If you have a SMARTNet support contract, go to this URL, and log in to download the appropriate files:

http://software.cisco.com/download/navigator.html

For example, to download the image for a IE 2000U switch, click **Cisco IE 2000U software**. To obtain authorization and to download the cryptographic software files, click **IE 2000U 3DES Cryptographic Software**

Step 3 Copy the image to the appropriate TFTP directory on the workstation, and make sure that the TFTP server is properly configured.

For more information, see the "Assigning the Switch IP Address and Default Gateway" chapter in the applicable document listed in Table 9.

- **Step 4** Log into the switch through the console port or a Telnet session.
- **Step 5** (Optional) Ensure that you have IP connectivity to the TFTP server by entering this privileged EXEC command:

Switch# ping tftp-server-address

For more information about assigning an IP address and default gateway to the switch, see Table 9.

Step 6 Download the image file from the TFTP server to the switch.

If you are installing the same version of software that currently exists on the switch, overwrite the current image by entering this privileged EXEC command:

Switch# archive download-sw /overwrite /reload
tftp:[[//location]/directory]/image-name.tar

- The **/overwrite** option overwrites the software image in flash memory with the downloaded one.
- The /reload option reloads the system after downloading the image unless the configuration has been changed and not saved.
- For *Illocation*, specify the IP address of the TFTP server.
- For *Idirectorylimage-name.*tar, specify the directory (optional) and the image to download. Directory and image names are case sensitive.

This example shows how to download an image from a TFTP server at 198.30.20.19 and to overwrite the image on the switch:

Switch# archive download-sw /overwrite tftp://198.30.20.19/image-name.tar

You can also download the image file from the TFTP server to the switch and keep the current image by replacing the /overwrite option with the /leave-old-sw option.

Installation Notes

You can assign IP information to your switch using the methods shown in Table 9.

Table 9 Methods for Assigning IP Information

Method	Platform	Document
Express setup program	IE 2000U	Cisco IE 2000U Switch Getting Started Guide
	CGS 2520	Cisco CGS 2520 Getting Started Guide
	CG ESM	Connected Grid Ethernet Switch Module Interface Card Getting Started Guide
CLI-based setup program	IE 2000U	Cisco IE 2000U Switch Hardware Installation Guide
	CGS 2520	Cisco CGS 2520 Hardware Installation Guide
	CG ESM	Cisco Connected Grid Ethernet Switch Module Interface Card Software Configuration Guide
DHCP-based autoconfiguration	IE 2000U	Cisco Connected Grid Switches System Management Software Configuration Guide
	CGS 2520	CGS 2520 Switch Software Configuration Guide
	CG ESM	Cisco Connected Grid Ethernet Switch Module Interface Card Software Configuration Guide
Manually assigning an IP address	IE 2000U	Cisco Connected Grid Switches System Management Software Configuration Guide
	CGS 2520	CGS 2520 Switch Software Configuration Guide
	CG ESM	Cisco Connected Grid Ethernet Switch Module Interface Card Software Configuration Guide

Configuring the Device Manager and HTTP Server Interface

We recommend this browser setting to enhance loading speed of the device manager from Microsoft Internet Explorer.

From Microsoft Internet Explorer:

- 1. Choose **Tools** > **Internet Options**.
- 2. Click **Settings** in the "Temporary Internet files" area.
- 3. From the Settings window, choose Automatically.
- 4. Click OK.
- **5.** Click **OK** to exit the Internet Options window.

The HTTP server interface must be enabled to display the device manager. By default, the HTTP server is disabled on the switch. Use the **show running-config** privileged EXEC command to see if the HTTP server is enabled or disabled.

Beginning in privileged EXEC mode, follow these steps to configure the HTTP server interface:

	Command	Purpose	
Step 1	configure terminal	Enter global configuration mode.	
Step 2	ip http authentication {aaa enable local}	Configure the HTTP server interface for the type of authentication that you want to use.	
		aaa—Enables the authentication, authorization, and accounting feature. You must enter the aaa new-model interface configuration command for the aaa keyword to appear.	
		• enable—Enables password, which is the default method of HTTP server user authentication, is used.	
		• local—Uses the local user database, as defined on the Cisco router or access server.	
Step 3	end	Return to privileged EXEC mode.	
Step 4	copy running-config startup-config	(Optional) Saves the configuration change to the startup configuration file.	
Step 5	show running-config	Verify your entries.	

The device manager uses the HTTP protocol (the default is port 80) and the default method of authentication (the enable password) to communicate with the switch through any of its Ethernet ports and to allow switch management from a standard web browser.

If you change the HTTP port, you must include the new port number when you enter the IP address in the browser **Location** or **Address** field (for example, http://10.1.126.45:184, where 184 is the new HTTP port number). Be sure to write down the port number through which you are connected. Use care when changing the switch IP information.

If you are *not* using the default method of authentication (that is, **enable password**), you need to configure the HTTP server interface with the method of authentication used on the switch.

Beginning in privileged EXEC mode, follow these steps to configure the HTTP server interface:

	Command	Purpose	
Step 1	configure terminal	Enter global configuration mode.	
Step 2	ip http authentication {enable local tacacs}	tication {enable Configure the HTTP server interface for the type of authentication that you want to use.	
		• enable —Enables password as the default method of HTTP server user authentication.	
		• local—Uses the Local user database, as defined on the Cisco router or access server.	
		• tacacs—Uses the TACACS server.	
Step 3	end	Return to privileged EXEC mode.	
Step 4	show running-config	Verify your entries.	

Important Notes

Guidelines and Limitations

Refer to the "Guidelines and Limitations" section of each chapter within the guides listed in the "Related Documentation" section on page 15 as well as the highlighted Notes, Warnings, and Cautions.

POE+ Power Consumption Limit

The global command **power inline consumption default 15400** fails to lock and restrict a PoE+ port's power consumption to 15.4W and the port defaults to the maximum of 30 Watts.

Instead of using the global consumption command, use the interface level consumption command to restrict the power consumption of PoE+ ports.

FPGA Upgrade for Parallel Redundancy Protocol (PRP) Feature

When upgrading from a previous installed release, use the "tar" image (instead of the .bin image file alone) to perform the upgrade, to also upgrade the Backplane FPGA. The FPGA upgrade is required for the PRP feature.

Caveats

This section addresses the open caveats in this release and provides information on how to use the Bug Search Tool to find further details on those caveats. This section includes the following topics:

- Open Caveats, page 13
- Accessing Bug Search Tool, page 15

Open Caveats

• CSCui17515

Symptom: The system allows configuration of more than 16 VRFs.

Conditions: After you configure more than 16 VRFs, the system does not display the error message Max VRF limit (16) reached !!! and creates the VRF.

Workaround: There is no workaround for this issue.

CSCuj84136

Symptom: The **show power inline** command on the ESM can display incorrect power values for Available/Used.

Conditions: This issue has been observed when ESM PoE ports are connected to Powered Device (PD) simulators such as Sifos simulators.

Workaround: Reload the ESM, or perform a **shut down/no shut down** of the interfaces connected to the Sifos simulator until the used power is zero. Wait for the power negotiation to stabilize every time you turn the interfaces on and off, then shut down all interfaces. The switch should return all power reserved.

Check the PoE values on individual ports using the **show power inline Fastethernet 0/<1-4> detail** command that lists the actual power allocated and used by that PD.

• CSCul01182

Symptom: Redundant PRP packets on the same PRP link are not filtered out by the switch.

Conditions: PRP is a redundancy protocol that allows the same PRP-tagged packet to be sent on two separate PRP-enabled Ethernet switch ports. Upon receiving these two packets, the switch will remove one of them. However, PRP does not allow more than one identical packet on each link. Identical packets (two or more) appearing on the same link will NOT be filtered out.

Workaround: This is a fundamental limitation of PRP duplicate discard and there is no workaround.

CSCum46907

Symptom: In a PTP over PRP configuration, Gi0/1 is not able to read the Gi0/2 phy timestamp.

Conditions: When the PRP channel is configured, PTP traffic will not go to the LAN B port.

Workaround: In this PRP release, because of hardware limitations, PTP packets will not have redundancy (redundancy of PTP packets is not implemented according to the specification). However, because most of the uplink ports need to connect to the grand master clock in some of the network topology, PTP packets are allowed to tunnel through the PRP pair ports.

Due to the system design, in this release, PRP only supports PTP packets to be tunneled to the PRP LAN A port.

In the network design, you can put a grand master clock in LAN A, which provides the time source for the downlink port slave.

CSCum60922

Symptom: Occasionally, when one of the two PRP LAN cables are disconnected (causing a LINK_DOWN condition) and then reconnected, a small number of packet drops and/or CRC errors may be observed on the PRP LAN link that did not go down. The number of packet drops may be in the 1-4 range, and the number of CRC errors may be in the 1-2 range.

CRC errors and packet drops on the link that was taken down may also occur, but of course these are expected (due to LINK DOWN).

Conditions: This condition will worsen as the traffic rate increases.

Workaround: Do not take the link down. For example, you can add a small Ethernet switch to ensure that both PRP links stay up even in the event of network disturbance.

CSCum62419

Symptom: Tracebacks were seen while configuring a backup interface on the ESM.

Conditions: Tracebacks were seen while issuing the **default int** *interface-type interface-number* command on an interface with **switchport backup interface** configured on the GRWIC-D-ES.

Workaround: Use the **no switchport backup interface** command instead of the **default int** *interface-type interface-number* command.

Resolved Caveats

CSCum81770

Symptom: Ping failed and CTS STG hung on lanbase images for Cisco IOS Release 15.0(2)EK.

Conditions: Ping failed and CTS STG hung on lanbase images installed on IE 2000U switches when Release 15.0(2)EK was installed.

Workaround: This issue is resolved in Cisco IOS Release 15.0(2)EK1.

Accessing Bug Search Tool

You can use the Bug Search Tool to find information about caveats for this release, including a description of the problems and available workarounds. The Bug Search Tool lists both open and resolved caveats.

To access Bug Search Tool, you need the following items:

- Internet connection
- Web browser
- Cisco.com user ID and password

To access the Bug Search Tool, enter the following URL:

https://tools.cisco.com/bugsearch/search

To access the Bug Search Tool to search on a specific caveat, enter the following URL:

https://tools.cisco.com/bugsearch/search/<BUGID>

Accessing Error Message Decoder

You can look up explanations for console error message strings found in system logs at the following location:

http://www.cisco.com/en/US/partner/support/tsd_most_requested_tools.html

Related Documentation

- Cisco CGS 2520 switch product documentation:
 - www.cisco.com/go/cgs2520
- Cisco CG ESM for the CGR 2010 and other Connected Grid Modules documentation:
 - www.cisco.com/go/cg-modules
- Cisco CGR 2010 router product documentation:
 - Cisco 2000 Series Connected Grid Routers
- Cisco IE 2000U switch product documentation:
 - Cisco Industrial Ethernet 2000U Series Switches
- Cisco Configuration Professional (CCP) user documentation:
 - http://www.cisco.com/en/US/products/ps9422/tsd products support series home.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

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