Release Notes for Cisco IOS Release 15.2(6)E

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Cisco IOS Release 15.2(6)E runs on these platforms:

- Cisco 2500 Series Connected Grid Switches (CGS 2520)
- Cisco Connected Grid Ethernet Switch Module (CGR 2010 ESM)
- Cisco Embedded Service 2020 Series Switches (ESS 2020)
- Cisco Industrial Ethernet 2000 Series Switches (IE 2000)
- Cisco Industrial Ethernet 2000U Series Switches (IE 2000U)
- Cisco Industrial Ethernet 3000 Series Switches (IE 3000)
- Cisco Industrial Ethernet 3010 Series Switches (IE 3010)
- Cisco Industrial Ethernet 4000 Series Switches (IE 4000)
- Cisco Industrial Ethernet 4010 Series Switches (IE 4010)
- Cisco Industrial Ethernet 5000 Series Switches (IE 5000)

These release notes include important information about Cisco IOS Release 15.2(6)E 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** command. See Finding the Software Version and Feature Set, page 6.
- If you are upgrading to a new release, see the software upgrade filename for the software version. See Deciding Which Files to Use, page 6.

For a complete list of documentation for the platforms associated with this release, see Related Documentation, page 14.

You can download the switch software from this site (registered Cisco.com users with a login password):

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

Organization

This document includes the following sections:

Conventions, page 2	Conventions used in this document.
New Features in Cisco IOS Release 15.2(6)E, page 3	New features supported for Releases 15.2(6)E
System Requirements, page 5	System requirements for Releases 15.2(6)E
Upgrading the Switch Software, page 6	Procedures for downloading software.
Caveats, page 12	Open caveats in Release 15.2(6)E.
Documentation Updates, page 13	Updates to the IE switch product documentation.
Related Documentation, page 14	Links to the documentation for the hardware platforms associated with this release.
Obtain Documentation and Submit a Service Request, page 14	Link to information about Cisco documentation.

Conventions

This document uses the following conventions.

Conventions	Indication
bold font	Commands and keywords and user-entered text appear in **bold** font.
italic font	Document titles, new or emphasized terms, and arguments for which you supply values are in *italic* font.
[ ]	Elements in square brackets are optional.
{x | y | z }	Required 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.
courier font	Terminal sessions and information the system displays appear in `courier` font.
< >	Nonprinting characters such as passwords are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

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

Caution: **Means *reader be careful.* In this situation, you might perform an action that could result in equipment damage or loss of data.**

Warning: **IMPORTANT SAFETY INSTRUCTIONS**

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.

SAVE THESE INSTRUCTIONS

Regulatory: Provided for additional information and to comply with regulatory and customer requirements.

New Features in Cisco IOS Release 15.2(6)E

Table 1 lists new features added in Cisco IOS Release 15.2(6)E.

Table 1 New Feature Summary for Cisco IOS Release 15.2(6)E

Feature	Platform	Description	Related Documentation
Parallel Redundancy Protocol (PRP) Enhancements	IE 4000, IE 4010, IE 5000	■ LED for PRP Port B in the PRP channel ■ Statistics for PRP Ports – contents, display (CLI and Device Manager) ■ SNMP for PRP PRP provides hitless redundancy (zero recovery time) after a failure by providing end nodes, identified as dually-attached nodes (DANs) provide access to two independent, disjointed, parallel networks (LAN-A, LAN-B). (IEC 62439-3)	Device Manager Online Help
Precision time Protocol (PTP) over Parallel Redundancy Protocol (PRP)	IE 4000, IE 4010, IE 5000	PTP is supported over both LAN A and LAN B in the PRP network to provide redundancy for PTP. Previously, PTP traffic was supported over LAN A only.	Parallel Redundancy Protocol (PRP) for IE 4000, IE 4010, and IE 5000 Switches
High-availability Seamless Redundancy (HSR)	IE 4000	High-availability Seamless Redundancy (HSR) is defined in International Standard IEC 62439-3-2016 clause 5. HSR is similar to Parallel Redundancy Protocol (PRP) in providing hitless redundancy, but it is designed to work in a ring topology. Instead of two parallel independent networks of any topology (LAN-A and LAN-B), HSR defines a ring with traffic in opposite directions. Port-A sends traffic counter clockwise in the ring, and Port-B sends traffic clockwise.	High-Availability Seamless Redundancy (HSR) for IE 4000 Configuration Guide
Entity Sensor MIB Support	IE 2000, IE 2000U, IE 3000, IE 4000, IE 4010, IE 5000	CISCO-ENTITY-SENSOR-MIB is used for SNMP support for sensors on IE switches instead of ENTITY-SENSOR-MIB.	
QinQ Support	IE 4000, IE 5000	QinQ support is moved to Lanbase license for IE 4000 and IE 5000.	–

Table 1 New Feature Summary for Cisco IOS Release 15.2(6)E (continued)

Feature	Platform	Description	Related Documentation
Trustsec – SGACL Support	IE 4010	Allows tracking and ensures protected communication between peers.	Cisco TrustSec Switch Configuration Guide
Profinet – Pluggable SFP module support	IE 4000	You can now manage SFPs for IE 4000 switches with SIMATIC STEP7/TIA Portal. **Note:** The combo port works in both copper and fiber mode.	Pluggable Transceiver (SFP) Configuration Guide for SIMATIC STEP7/TIA Portal
Device Manager Enhancements	IE 2000, IE 3000, IE 4000, IE 4010, IE 5000	Configure Open Plug and Play (PnP) server settings to allow a switch to send a work request to a PnP server such as Industrial Network Director (IND) to allow further device configuration.	Device Manager Online Help
	IE 2000, IE 2000U, IE 4000, IE 4010, IE 5000	IND baseline configuration – Changes within Device Manager to make IOT switches IND discoverable.	
	IE 4000	FPGA profile support (Feature Mode) – Feature Mode allows for efficient allocation of platform resources for the operation of multiple time sensitive, resilient industrial protocols. Availability of Feature Mode on the switch is determined by supported features, applicable software licenses, and currently applied Feature Mode. The switch is configured with a default mode for the most commonly-used feature for each platform. In a running system, if you deactivate the current active Feature Mode, the default mode will be applied.	
	IE 2000, IE 2000U IE 4000, IE 4010, IE 5000	PnP configuration support in Device Manager – On Express setup, the user will point to the PNP server. The switch will send work request to the PNP server for further device configuration.	
	IE4000 (IOx)	MOTD – You can configure a Message of the Day (MOTD) banner to be displayed on the Device Manager Dashboard.	

Table 1 New Feature Summary for Cisco IOS Release 15.2(6)E (continued)

Feature	Platform	Description	Related Documentation
Device Manager Enhancements (cont.)	IE 2000, IE 2000U IE 4000, IE 4010, IE 5000	RSTP/MSTP bridge priority and diagnosis capability - You can select RSTP/MSTP bridge priority per port and display spanning-tree information for the selected VLAN.	Device Manager Online Help
	IE 2000, IE 2000U, IE 3000, IE 4000 (IOS), IE 4000 (IOx), IE 4010, IE 5000	Auto-Logout - If the device manager session is left inactive for the duration of the configured timeout value, the session will be logged out and the user must be re-authenticated. By default session timeout is 3 minutes. The timeout now can be configured only from CLI: ip http session-idle-timeout <1-1200> The session timeout value configured while a user is logged in to DM will be used for auto-logout.	–
Device Manager Localization	IE 2000, IE 2000U, IE 3000, IE 4000 (IOS), IE 4000 (IOx), IE 4010, IE 5000	Online help for the Device Manager is available in the following languages: ■ Chinese (Traditional) (code: 2052) ■ Chinese (Simplified) (code: 1028) ■ Default: English (code: 1033) ■ French (code: 1036) ■ German (code: 1031) ■ Japanese (code: 1041) ■ Spanish (LATAM) (code: 9226)	Device Manager Online Help

System Requirements

This section describes the following system requirements for Cisco IOS Release 15.2(6)E:

■ Express Setup Requirements, page 5

Express Setup Requirements

This section summarizes the hardware and software requirements for the Windows platform.

For a listing of Express Setup documentation, see Table 4 Methods for Assigning IP Information, page 10.

Hardware

- 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor
- 1 gigabyte (GB) RAM (32-bit) or 2 GB RAM (64-bit)

- 16 GB available hard disk space (32-bit) or 20 GB (64-bit)

Software

- PC with Windows 7, Windows 10, or Mac OS 10.6.x
- Web browser (Internet Explorer 10.0 or 11.0, or Firefox 48.x and above) with JavaScript enabled
- Straight-through or crossover Category 5 or 6 cable

Express Setup verifies the browser version when starting a session, and it does not require a plug-in.

Upgrading the Switch Software

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

- Finding the Software Version and Feature Set, page 6
- Deciding Which Files to Use, page 6
- IOS/IOx Upgrade Considerations, page 7
- Archiving Software Images, page 7
- Upgrading a Switch by Using the CLI, page 8
- Installation Notes, page 10

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.

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 Express Setup. To upgrade the switch through the command-line interface (CLI), use the tar file and the **archive download-sw** privileged EXEC command.

Table 2 lists the filenames for this software release.

Note: 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.

Note: Beginning with Cisco IOS Release 15.2(5)E, we **no longer release** the IE 3000 IP services image. The latest release for the IP services image on the IE 3000 is 15.2(4)EA1.

Table 2 Cisco IOS Software Image Files

File Name	Description
cgs2520-ipserviceslmk9-tar.152-6.E.tar	CGS 2520 IP services image file
cgs2520-lanbaselmk9-tar.152-6.E.tar	CGS 2520 LAN base image file
c2020-universalk9-tar.152-6.E.tar	ESS 2020 universal image file
ie2000-universalk9-tar.152-6.E.tar	IE 2000 universal image file
ie2000u-ipserviceslmk9-tar.152-6.E.tar	IE 2000U IP services image file
ie2000u-lanbaselmk9-tar.152-6.E.tar	IE 2000U LAN base image file
ie3010-ipservicesk9-tar.152-6.E.tar	IE 3010 IP services image file
ie3010-lanbasek9-tar.152-6.E.tar	IE 3010 LAN base image file
ies-lanbasek9-tar.152-6.E.tar	IE 3000 LAN base image file
grwicdes-ipserviceslmk9-tar.152-6.E.tar	ESM IP services image file
grwicdes-lanbaselmk9-tar.152-6.E.tar	ESM LAN base image file
ie4000-universalk9_iox-tar.152-6.E.tar	IE 4000 Universal image file bundles Cisco IOx and IOS
ie4000-universalk9-tar.152-6.E.tar	IE 4000 Universal image file (Cisco IOS only)
ie4010-universalk9-tar.152-6.E.tar	IE 4010 Universal image file
ie5000-universalk9-tar.152-6.E.tar	IE 5000 Universal image file

IOS/IOx Upgrade Considerations

Before upgrading, note the following Cisco IOS/IOx version incompatibilities:

- With switch running IOS 15.2.5E2, IOX upgrade from version 1.3 to 1.4 is not supported
- IOx 1.3 is not supported with Cisco IOS 15.2.6E2

Table 3 Compatible Cisco IOS and IOx Versions

Cisco IOS Release	IOx Release	Compatible
15.2.5E2a(ED)	1.3	Yes
15.2.5E2a(ED)	1.4	No
15.2.6E2(ED)	1.4	Yes
15.2.6E2(ED)	1.3	No

We recommend that you upgrade using the IOS and IOx bundle image to move to the higher version software. IOS/IOx bundle images will always have a compatible combination of IOS and IOx.

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_bulletin0900aecd80281c0e.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.

Note: 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.

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

To download software, follow these steps:

1. Use Table 2 on page 7 to identify the file that you want to download.
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 an IE 2000 switch, select Products > Switches > Industrial Ethernet Switches > Cisco Industrial Ethernet 2000 Series Switches, then select your switch model. Select IOS Software for Software Type, then select the image you want to download.
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 for your switch as listed in Table 4.
4. Log into the switch through the console port or a Telnet session.
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 4.
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 command above untars/unzips the file.The system prompts you when it completes successfully.

   – The **/overwrite** option overwrites the software image in flash memory with the downloaded one.

   If you specify the command without the **/overwrite** option, the download algorithm verifies that the new image is not the same as the one on the switch Flash device. If the images are the same, the download does not occur. If the images are different, the old image is deleted, and the new one is downloaded. If there is not enough space to install the new image and keep the current running image, the download process stops, and an error message displays.

- The **/reload** option reloads the system after downloading the image unless the configuration has been changed and not saved.
- For **//** *location*, specify the IP address of the TFTP server. or hostname.
- For **/***directory***/***image-name***.tar**, specify the directory and the image to download. Directory and image names are case sensitive. The directory is for file organization and it is generally a *tftpboot/user-ID* path.

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. If there is not enough space to install the new image and keep the current running image, the download process stops, and an error message displays.

Upgrading IOS and FPGA on the Ethernet Switch Module (ESM)

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.

To download software, follow these steps:

1. Refer to Deciding Which Files to Use, page 6 to identify the file that you want to download.
2. Download the software image file. If you have a SMARTnet support contract, go to the URL below and log in to download the appropriate files.

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

   For example, to download the image for a Connected Grid 10-Port Ethernet Switch Module Interface Card, select Products > Cisco Interfaces and Modules > Connected Grid Modules > Connected Grid 10-Port Ethernet Switch Module Interface Card. Select IOS Software for Software Type, then select the image you want to download.

   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 4 Methods for Assigning IP Information, page 10.
3. Copy the image to the appropriate TFTP directory on the workstation, and make sure that the TFTP server is properly configured.
4. Log in to the switch through the console port or a Telnet session.
5. (Optional) Ensure that you IP connectivity to the TFTP server by entering this privileged EXEC command:

   Switch# ping *tftp-server-address*
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 tftp: //*location* **/***directory* **/***image-name***.tar**

   The command above untars/unzips the file.The system prompts you when it completes successfully.

   - The **/overwrite** option overwrites the software image in flash memory with the downloaded one.

If you specify the command without the **/overwrite** option, the download algorithm verifies that the new image is not the same as the one on the switch Flash device. If the images are the same, the download does not occur. If the images are different, the old image is deleted, and the new one is downloaded. If there is not enough space to install the new image and keep the current running image, the download process stops, and an error message displays.

- The **/reload** option reloads the system after downloading the image unless the configuration has been changed and not saved.
- For **//** *location*, specify the IP address of the TFTP server. or hostname.
- For **/***directory***/***image-name***.tar**, specify the directory and the image to download. Directory and image names are case sensitive. The directory is for file organization and it is generally a *tftpboot/user-ID* path.

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. If there is not enough space to install the new image and keep the current running image, the download process stops, and an error message displays.

7. After the download and the untar are complete, power cycle the CGR2010.

Installation Notes

You can assign IP information to your switch using the methods shown in Table 4

Table 4 Methods for Assigning IP Information

Method	Platform	Document
Express setup program	IE 2000	Cisco IE 2000 Switch Hardware Installation Guide
	IE 3000	*Cisco IE 3000 Switch Getting Started Guide,* Device Manager Online Help
	ESM	*Connected Grid Ethernet Switch Module Interface Card Getting Started Guide*
	IE 4000	Cisco IE 4000 Switch Hardware Installation Guide
	IE 4010	Cisco IE 4010 Switch Hardware Installation Guide
	IE 5000	Cisco IE 5000 Hardened Aggregator Hardware Installation Guide

Table 4 Methods for Assigning IP Information (continued)

Method	Platform	Document
CLI-based setup program	ESS 2020	Cisco Embedded Service 2020 Series Software Configuration Guide
	IE 2000	*Cisco IE 2000 Switch Hardware Installation Guide*
	IE 2000U	*Cisco IE 2000U Switch Hardware Installation Guide*
	IE 3000	*Cisco IE 3000 Series Switch Hardware Installation Guide*
	IE 3010	*Cisco IE 3010 Switch Hardware Installation Guide*
	CGS 2520	*Cisco CGS 2520 Hardware Installation Guide*
	ESM	*Cisco CGS 2520 Hardware Installation Guide* **Note:** The *Cisco CGS 2520 Hardware Installation Guide* serves as CLI-based Setup reference for the ESM.
	IE 4000	Cisco IE 4000 Switch Hardware Installation Guide
	IE4010	Cisco Industrial Ethernet 4000, 4010 and 5000 Switch Software Configuration Guide
	IE 5000	Cisco IE 5000 Hardened Aggregator Hardware Installation Guide
DHCP-based autoconfiguration	ESS 2020	Cisco Embedded Service 2020 Series Software Configuration Guide
	IE 2000	*Cisco IE 2000 Series Switch Software Configuration Guide*
	IE 2000U	*System Management Software Configuration Guide for Cisco IE 2000U and Connected Grid Switches*
	IE 3000	*Cisco IE 3000 Series Switch Software Configuration Guide*
	IE 3010	*Cisco IE 3010 Series Switch Software Configuration Guide*
	CGS 2520	*CGS 2520 Switch Software Configuration Guide*
	ESM	*Cisco Connected Grid Ethernet Switch Module Interface Card Software Configuration Guide*
	IE 4000	Cisco Industrial Ethernet 4000 Series Switch Software Configuration Guide
	IE4010	Cisco Industrial Ethernet 4000, 4010 and 5000 Switch Software Configuration Guide
	IE 5000	Cisco IE 5000 Hardened Aggregator Hardware Installation Guide

Table 4 Methods for Assigning IP Information (continued)

Method	Platform	Document
Manually assigning an IP address	IE 2000	*Cisco IE 2000 Series Switch Software Configuration Guide*
	IE 2000U	*System Management Software Configuration Guide for Cisco IE 2000U and Connected Grid Switches*
	IE 3000	*Cisco IE 3000 Series Switch Software Configuration Guide*
	IE 3010	*Cisco IE 3010 Series Switch Software Configuration Guide*
	CGS 2520	*CGS 2520 Switch Software Configuration Guide*
	ESM	*Cisco Connected Grid Ethernet Switch Module Interface Card Software Configuration Guide*
	IE 4000	Cisco Industrial Ethernet 4000 Series Switch Software Configuration Guide
	IE4010	Cisco Industrial Ethernet 4000, 4010 and 5000 Switch Software Configuration Guide
	IE 5000	Cisco IE 5000 Hardened Aggregator Hardware Installation Guide

Caveats

- Cisco Bug Search Tool, page 12
- Open Caveats, page 13
- Resolved Caveats, page 13

Cisco Bug Search Tool

The Bug Search Tool (BST), which is the online successor to Bug Toolkit, is designed to improve the effectiveness in network risk management and device troubleshooting. The BST allows partners and customers to search for software bugs based on product, release, and keyword, and aggregates key data such as bug details, product, and version. The tool has a provision to filter bugs based on credentials to provide external and internal bug views for the search input.

To view the details of a caveat listed in this document:

1. Access the BST (use your Cisco user ID and password) at bst.cloudapps.cisco.com/bugsearch
2. Enter the bug ID in the Search For: field.

Open Caveats

Table 5 Open Caveats in Cisco IOS Release 15.2(6)E

Bug ID	Headline
CSCvd21083	Profinet: TIA alarm is not cleared if SFP is plugged in after switch bootup
CSCvd42080	Profinet: SD card alarm not available to TIA but STEP7 only
CSCve12164	DM: ." SSL_WEAK_SERVER_CERT_KEY" issue seen with Mozilla Version 47.0.1 after Factory defaults
CSCve99439	PRP channel should be suspended when there is a speed mismatch on the PRP interfaces
CSCvf13976	IE4K MRP: Default mode CLI moves the node to mode client when configured manager and vice versa
CSCvf20668	After Express Setup redirect to login screen not working popup authentication
CSCvf23753	Express Setup Not Adding Access VLAN to Settings

Resolved Caveats

Table 6 Resolved Caveats in Cisco IOS Release 15.2(6)E

Bug ID	Headline
CSCvb01492	FNF: Configuration rejection of incomplete record not seen for members
CSCvc04363	OLH: Some help pages appear in English on launching OLH in other languages
CSCvc28935	IE 4010 reloads after configuring NTP
CSCvd23231	VTP_INVALID_DATABASE_DATA, TRACEBACK=82A1C4z 2CEEA50z 2CFC2D4z
CSCvd51141	802.1AS: Performance degraded in offset testing.
CSCve17336	IE 4000 IOX: Use IPv4 Link-Local Addresses for internal communications

Documentation Updates

This section includes the following latest updates to documentation for IE switches:

Related Documentation

Table 7 Related Documentation

Device or Feature	Related Documents
Cisco 2500 Series Connected Grid Switches	http://www.cisco.com/go/cgs2520
Cisco Embedded Service 2020 Series Switches (ESS 2020)	http://www.cisco.com/c/en/us/support/switches/embedded-service-2020-series-switches/tsd-products-support-series-home.html
Cisco Ethernet Switch Module (ESM) for CGR 2010	http://www.cisco.com/go/cgr2000
Cisco Industrial Ethernet 2000 Series Switches	http://www.cisco.com/go/ie2000
Cisco Industrial Ethernet 2000U Series Switches	http://www.cisco.com/go/ie2000u
Cisco Industrial Ethernet 3000 Series Switches	http://www.cisco.com/go/ie3000
Cisco Industrial Ethernet 3010 Series Switches	http://www.cisco.com/go/ie3010
Cisco Industrial Ethernet 4000 Series Switches	http://www.cisco.com/go/ie4000
Cisco Industrial Ethernet 4010 Series Switches	http://www.cisco.com/go/ie4010
Cisco Industrial Ethernet 5000 Series Switches	http://www.cisco.com/go/ie5000

Communications, Services, and Additional Information

- To receive timely, relevant information from Cisco, sign up at Cisco Profile Manager.
- To get the business impact you're looking for with the technologies that matter, visit Cisco Services.
- To submit a service request, visit Cisco Support.
- To discover and browse secure, validated enterprise-class apps, products, solutions and services, visit Cisco Marketplace.
- To obtain general networking, training, and certification titles, visit Cisco Press.
- To find warranty information for a specific product or product family, access Cisco Warranty Finder.

Cisco Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

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