Release Notes for Cisco Catalyst IE3x00 Rugged, IE3400 Heavy Duty, and ESS3300 Series Switches, Cisco IOS XE Bengaluru 17.6.x

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Introduction

Cisco Catalyst IE3x00 Rugged Series Switches feature advanced, full Gigabit Ethernet speed for rich real-time data - and a modular, optimized design. These Cisco rugged switches bring simplicity, flexibility and security to the network edge, and are optimized for size, power and performance.

From their end-to-end security architecture to delivering centralized automation and scale with Cisco intent-based networking, the Cisco Catalyst IE3x00 family is the perfect solution to your switching needs in almost any use case.

Cisco Embedded Services 3300 Series Switches (ESS3300) revolutionize Cisco's embedded networking portfolio with 1G/10G capabilities. ESS3300 switches are optimized to meet specialized form-factor, ruggedization, port density, and power needs of many applications requiring customization and complement Cisco's off-the-shelf Industrial Ethernet switching portfolio.

On ESS3300, the small form factor, board configuration options, and optimized power consumption provide Cisco partners and integrators the flexibility to design custom solutions for defense, oil and gas, transportation, mining, and other verticals. The ESS3300 runs the trusted and feature-rich Cisco IOS® XE Software, allowing Cisco partners and integrators to offer their customers the familiar Cisco IOS CLI and management experience on their ESS3300 solutions.



Note The documentation set for this product strives to use bias-free language. For purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

New Features for Cisco Catalyst IE and ESS Switches in Cisco IOS XE 17.6.x

There are no new features in the Cisco IOS XE 17.6.8 release.

There are no new features in the Cisco IOS XE 17.6.7 release.

The following features in 17.6.x apply to both the IE3x00 and ESS3300 switches unless specifically mentioned.

Note For information about SFPs, see the section SFP Support, on page 3.

Feature Name	License Level	Description	Supported Platforms
VRF-Aware SGT	Network Advantage	Extension of IPv6 support for host-to-Security Group Tag (SGT) mapping and binding and subnet-to-SGT bindings.	IE3400/IE3400H
VRF-Aware SGACL	Network Advantage	Extension of IPv6 support for security group access control list (SGACL) enforcement.	IE3400/IE3400H
Increase in number of ingress QoS classes	Network Essentials	The number of user-defined QoS classes for each policy map for ingress and egress has been increased from 7 to 11. The change does not affect the class-default class, and all other functionality with regard to class definition and action remains unchanged. **Note** Number of egress QoS classes remains at 8, including default class.	IE3200/ IE3300 IE3400/IE3400H ESS3300

Feature Name	License Level	Description	Supported Platforms
Features new in the Web User Interface (WebUI)	Network Advantage	*VRRP (IPv4 and IPv6):* Virtual Router Redundancy Protocol (VRRP) enables a group of devices to form a single virtual device to provide redundancy. The LAN clients can then be configured with the virtual device as their default gateway.	IE3200/IE3300 IE3400/IE3400H ESS3300
	Network Essentials	*HSR-SAN*: HSR achieves the same result as PRP but is designed to work in a ring topology with traffic in opposite directions. Singly Attached Nodes (SANs) are attached to the HSR ring through a device called a RedBox (Redundancy Box). In HSR-SAN mode, the RedBox inserts the HSR tag on behalf of the host and forwards the ring traffic.	IE3400/IE3400H
	Network Essentials	*QinQ:* Traditional 802.1Q tunneling (QinQ) performs all-to-one bundling of C-VLAN IDs to a single S-VLAN ID for the port. The S-VLAN is added to the incoming unmodified C-VLAN.	IE3200/IE3300 IE3400/IE3400H

SFP Support

The following table lists the SFPs and supported switch platoforms in the IOS-XE Bengaluru 17.6.x release.

SFP Model	Supported Platform
CWDM-SFP-1470	IE-3200-8P2S-E, IE-3200-8T2S-E IE-3300-8P2S-E/A, IE-3300-8T2S-E/A, IE-3300-8T2X-E/A, IE-3300-8U2X-E/A IE-3400-8T2S-E/A, IE-3400-8P2S-E/A ESS-3300-NCP-E/A

SFP Model	Supported Platform
GLC-BX-D-I	IE-3200-8P2S-E, IE-3200-8T2S-E IE-3300-8P2S-E/A, IE-3300-8T2S-E/A, IE-3300-8T2X-E/A, IE-3300-8U2X-E/A IE-3400-8T2S-E/A, IE-3400-8P2S-E/A ESS-3300-NCP-E/A
GLC-BX-U-I	IE-3200-8P2S-E, IE-3200-8T2S-E IE-3300-8P2S-E/A, IE-3300-8T2S-E/A, IE-3300-8T2X-E/A, IE-3300-8U2X-E/A IE-3400-8T2S-E/A, IE-3400-8P2S-E/A ESS-3300-NCP-E/A
GLC-T-RGD	IE-3200-8P2S-E, IE-3200-8T2S-E IE-3300-8P2S-E/A, IE-3300-8T2S-E/A, IE-3300-8T2X-E/A, IE-3300-8U2X-E/A IE-3400-8T2S-E/A, IE-3400-8P2S-E/A ESS-3300-NCP-E/A
GLC-TE	IE-3200-8P2S-E, IE-3200-8T2S-E IE-3300-8P2S-E/A, IE-3300-8T2S-E/A, IE-3300-8T2X-E/A, IE-3300-8U2X-E/A IE-3400-8T2S-E/A, IE-3400-8P2S-E/A ESS-3300-NCP-E/A
SFP-10G-ER-I	IE-3300-8T2X-E/A, IE-3300-8U2X ESS-3300-NCP-E/A
SFP-10G-ZR-I	IE-3300-8T2X-E/A, IE-3300-8U2X

Important Notes

IE3400: Hardware Changes may Require Action

Some hardware components on the Cisco Catalyst IE3400 Rugged Series and Cisco Catalyst IE3400 Heavy Duty Series switches have changed. The changes, which are automatically handled by the IOS-XE software, do not affect switch functionality or the ordering process.

However, you may need to upgrade the software, depending on which base switch and expansion module you have, as shown in the following table.

Note For detailed information about affected hardware versions, supported software releases, and instructions for different scenarios, see *FN72400 - New Hardware Versions of Cisco Catalyst IE3400 Rugged/IE3400H Heavy Duty Series Will Be Supported with Minimum Software Release - Software Upgrade Recommended* on Cisco.com.

If you have...	Then...
Older versions of the base switch and expansion module	No action is required; however, we recommend that you upgrade to IOS-XE 17.6.1 or later.
Newer versions of the base switch and expansion module	Deploy one of the supported releases of IOS-XE. Otherwise, you see an error message telling you that the release that you are using is not supported. The supported releases are 17.6.1 through 17.6.8. Do not downgrade to earlier releases.
Newer version of the base switch with an older version of the expansion module	
Older version of the base switch with a newer version of the expansion module	Deploy one of the supported releases of IOS-XE. Otherwise, you see an error message telling you that the release that you are using is not supported. The supported releases are 17.6.4 through 17.6.8. Do not downgrade to earlier releases.

Accessing Hidden Commands

Hidden commands have always been present in Cisco IOS XE, but were not equipped with CLI help. This means that entering enter a question mark (?) at the system prompt did not display the list of available commands. Such hidden commands are only meant to assist Cisco TAC in advanced troubleshooting and are therefore not documented. For more information about CLI help, see the *Using the Command-Line Interface → Understanding the Help System* chapter of the Command Reference document.

This section provides information about hidden commands in Cisco IOS XE and the security measures in place, when they are accessed. Hidden commands are meant to assist Cisco TAC in advanced troubleshooting and are therefore not documented. For more information about CLI help, see the *Using the Command-Line Interface → Understanding the Help System* chapter of the Command Reference document.

Hidden commands are available under:

- Category 1: Hidden commands in privileged or User EXEC mode. Begin by entering the **service internal** command to access these commands.
- Category 2: Hidden commands in one of the configuration modes (global, interface and so on). These commands do not require the **service internal** command.

Further, the following applies to hidden commands under Category 1 and 2:

- The commands have CLI help. Entering enter a question mark (?) at the system prompt displays the list of available commands.

Note For Category 1, enter the **service internal** command before you enter the question mark; you do not have to do this for Category 2.

- The system generates a %PARSER-5-HIDDEN syslog message when the command is used. For example:

```
*Feb 14 10:44:37.917: %PARSER-5-HIDDEN: Warning!!! 'show processes memory old-header '
 is a hidden command.
Use of this command is not recommended/supported and will be removed in future.
```

Apart from category 1 and 2, there remain internal commands displayed on the CLI, for which the system does NOT generate the %PARSER-5-HIDDEN syslog message.

Important We recommend that you use *any* hidden command only under TAC supervision. If you find that you are using a hidden command, open a TAC case for help with finding another way of collecting the same information as the hidden command (for a hidden EXEC mode command), or to configure the same functionality (for a hidden configuration mode command) using non-hidden commands.

PoE Limitation on IE3x00

Even when using power supplies that can provide up to a supported maximum (for example, 170W, 240W, or 480W) for the PoE budget, the PoE budget for the IE3x00 defaults to 125W regardless of the power supplies used. You can configure the power budget to use the maximum.

Note Before changing the power budget, the minimum power requirements for the switch need to be considered as well. Please refer to the datasheet for your switch for more details.

To use the power supply's maximum supported wattage for the PoE budget, configure the power supply max wattage in global configuration mode as follows:

1. Verify the maximum amount that the power supplies support for the PoE budget.
2. Enter **power inline max** *max-wattage* to increase the PoE budget based on the power supplies used.

   max-wattage is the maximum available PoE power.

IE3300 with 10Mbps speed in Half-Duplex Mode

CRC errors were observed on the IE3300 platform when the switch is configured with 10Mbps speed in half-duplex mode.

As a workaround, configure **no ptp enable** on the half-duplex interface. This improves ingress and egress latencies considerably and ensures that there are no late collisions (and therefore, no CRC errors).

The issue and workaround apply to Cisco IOS XE releases 17.3.5 and greater.

Cisco Catalyst IE3x00 Rugged, IE3400 Heavy Duty, and ESS3300 Series Switches—Model Numbers (17.6.x)

The following table lists the supported hardware models and the default license levels they are delivered with. For information about the available license levels, see section *License Levels*.

	Default License Level	Description
ESS-3300-NCP-E	Network Essentials	Main Board without a cooling plate. 2 ports of 10 GE fiber, 8 ports of GE copper. 4 of the 8 GE copper ports can also be combo ports. Terminal Power: 16W
ESS-3300-NCP-A	Network Advantage	Main Board without a cooling plate. 2 ports of 10 GE fiber, 8 ports of GE copper. 4 of the 8 GE copper ports can also be combo ports. Terminal Power: 16W
ESS-3300-CON-E	Network Essentials	Main Board conduction cooled 2 ports of 10 GE fiber, 8 ports of GE copper. 4 of the 8 GE copper ports can also be combo ports Terminal Power: 16W
ESS-3300-CON-A	Network Advantage	Main Board conduction cooled 2 ports of 10 GE fiber, 8 ports of GE copper. 4 of the 8 GE copper ports can also be combo ports Terminal Power: 16W
ESS-3300-24T-NCP-E	Network Essentials	Main Board with a 16p Expansion Board without a cooling plate 2 ports of 10 GE fiber, 24 ports of GE copper 4 of 8 GE ports can be combo ports on mainboard 4 of 16 GE ports can be combo ports on expansion board Terminal Power: 24W
ESS-3300-24T-NCP-A	Network Advantage	Main Board with a 16p Expansion Board without a cooling plate 2 ports of 10 GE fiber, 24 ports of GE copper 4 of 8 GE ports can be combo ports on mainboard 4 of 16 GE ports can be combo ports on expansion board Terminal Power: 24W

	Default License Level	Description
ESS-3300-24T-CON-E	Network Essentials	Main Board with a 16p Expansion Board conduction cooled 2 ports of 10 GE fiber, 24 ports of GE copper 4 of 8 GE ports can be combo ports on mainboard 4 of 16 GE ports can be combo ports on expansion board Terminal Power: 24W
ESS-3300-24T-CON-A	Network Advantage	Main Board with a 16p Expansion Board conduction cooled 2 ports of 10 GE fiber, 24 ports of GE copper 4 of 8 GE ports can be combo ports on mainboard 4 of 16 GE ports can be combo ports on expansion board Terminal Power: 24W
IE-3200-8T2S-E	Network Essentials	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 100/1000 SFP-based ports, non-PoE
IE-3200-8P2S-E	Network Essentials	8 Gigabit Ethernet 10/100/1000 PoE/PoE+ ports, 2 fiber 100/1000 SFP-based ports; PoE power budget of 240W
IE-3300-8T2S-E	Network Essentials	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 100/1000 SFP-based ports, non-PoE
IE-3300-8P2S-E	Network Essentials	8 Gigabit Ethernet 10/100/1000 PoE/PoE+ ports, 2 fiber 100/1000 SFP-based ports; PoE power budget of 360W (including expansion module)
IE-3300-8T2S-A	Network Advantage	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 100/1000 SFP-based ports, non-PoE
IE-3300-8P2S-A	Network Advantage	8 Gigabit Ethernet 10/100/1000 PoE/PoE+ ports, 2 fiber 100/1000 SFP-based ports; PoE power budget of 360W (including expansion module)
IE-3300-8T2X-A	Network Advantage	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 1/10 Gigabit Ethernet SFP-based ports, non-PoE
IE-3300-8T2X-E	Network Essentials	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 1/10 Gigabit Ethernet SFP-based ports, non-PoE
IE-3300-8U2X-E	Network Essentials	8 Gigabit Ethernet 10/100/1000 4PPoE (802.3bt type 3) ports, 2 fiber 1/10 Gigabit Ethernet SFP-based ports; PoE power budget of 480W

	Default License Level	Description
IE-3300-8U2X-A	Network Advantage	8 Gigabit Ethernet 10/100/1000 4PPoE (802.3bt type 3) ports, 2 fiber 1/10 Gigabit Ethernet SFP-based ports; PoE power budget of 480W
IE-3400-8T2S-E	Network Essentials	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 100/1000 SFP-based ports, non-PoE
IE-3400-8T2S-A	Network Advantage	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 100/1000 SFP-based ports, non-PoE
IE-3400-8P2S-E	Network Essentials	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 100/1000 SFP-based ports with PoE
IE-3400-8P2S-A	Network Advantage	8 Gigabit Ethernet 10/100/1000 RJ45 ports, 2 fiber 100/1000 SFP-based ports with PoE
IE-3400H-8T-E	Network Essentials	8x1-Gbps X-Coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, mini-change input for Single power source
IE-3400H-8T-A	Network Advantage	8x1-Gbps X-Coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, mini-change input for Single power source
IE-3400H-8FT-E	Network Essentials	8 100-Mbps D-coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, Mini-change input for Single Power Source .
IE-3400H-8FT-A	Network Advantage	8 100-Mbps D-coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, Mini-change input for Single Power Source .
IE-3400H-16T-E	Network Essentials	16x1-Gbps X-Coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, mini-change input for Single power source
IE-3400H-16T-A	Network Advantage	16x1-Gbps X-Coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, mini-change input for Single power source
IE-3400H-16FT-E	Network Essentials	16 100-Mbps D-coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, Mini-change input for Single Power Source .
IE-3400H-16FT-A	Network Advantage	16 100-Mbps D-coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, Mini-change input for Single Power Source .

	Default License Level	Description
IE-3400H-24T-E	Network Essentials	24x1-Gbps X-Coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, mini-change input for Single power source
IE-3400H-24T-A	Network Advantage	24x1-Gbps X-Coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, mini-change input for Single power source
IE-3400H-24FT-E	Network Essentials	24 100-Mbps D-coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, Mini-change input for Single Power Source .
IE-3400H-24FT-A	Network Advantage	24 100-Mbps D-coded ports, 1 Alarm input and 1 Alarm output, 1 Console port, Mini-change input for Single Power Source .

Expansion Modules

The following table lists the optional expansion modules for the IE3300 and IE3400 base systems. Modules with IEM-3400-xx are only supported on IE3400 base systems. IEM expansion modules that support PoE are only supported on Base systems that support PoE.

Expansion Module	Description
IEM-3300-4MU	4 copper 2.5Gigabit Ethernet ports. With IEEE 802.3bt type 4 PoE.
IEM-3300-8T	8 copper Gigabit Ethernet ports. Non PoE.
IEM-3300-8P	8 copper Gigabit Ethernet ports. With PoE
IEM-3300-8S	8 SFP Gigabit Ethernet ports. Non PoE.
IEM-3300-16T	16 copper Gigabit Ethernet ports. Non PoE.
IEM-3300-16P	16 copper Gigabit Ethernet ports. With PoE.
IEM-3300-6T2S	6 copper Gigabit Ethernet ports and 2 SFP Gigabit ports. Non PoE.
IEM-3300-14T2S	14 copper Gigabit Ethernet ports, and 2 SFP Gigabit ports. Non PoE.
IEM-3400-8T	8 copper Gigabit Ethernet ports with Advanced features. Non PoE.
IEM-3400-8S	8 SFP Gigabit Ethernet ports with Advanced features. Non PoE.
IEM-3400-8P	8 copper Gigabit Ethernet ports with Advanced features with PoE.

Optics Modules

Cisco Catalyst Series Switches support a wide range of optics and the list of supported optics is updated on a regular basis. Use the Transceiver Module Group (TMG) Compatibility Matrix tool, or consult the tables

at this URL for the latest transceiver module compatibility information: https://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html

The Cisco Catalyst IE3x00 Rugged, IE3400 Heavy Duty and ESS3300 Series Switches datasheets contain the current list of supported SFP and optics.

WebUI System Requirements

The WebUI is a web browser-based switch management tool that runs on the switch. The following subsections list the hardware and software required to access the WebUI.

Minimum Hardware Requirements

Processor Speed	DRAM	Number of Colors	Resolution
233 MHz minimum[1]	512 MB[2]	256	1280 x 800 or higher

1 We recommend 1 GHz
2 We recommend 1 GB DRAM

Software Requirements

Operating Systems

- Windows 10 or later
- Mac OS X 10.9.5 or later

Browsers

- Google Chrome: Version 59 or later (On Windows and Mac)
- Microsoft Edge
- Mozilla Firefox: Version 54 or later (On Windows and Mac)
- Safari: Version 10 or later (On Mac)

Upgrading the Switch Software

This section covers the various aspects of upgrading or downgrading the device software.

Note See the Cisco IOS XE Migration Guide for IIoT Switches for the latest information about upgrading and downgrading switch software.

SSH Algorithms for Common Criteria Certification Limitation

Starting from Cisco IOS XE Release 17.10, the following Key Exchange and MAC algorithms are removed from the default list:

- Key Exchange algorithm:
  - diffie-hellman-group14-sha1
- MAC algorithms:
  - hmac-sha1
  - hmac-sha2-256
  - hmac-sha2-512



Note You can use the **ip ssh server algorithm kex** command to configure the Key Exchange algorithm and the **ip ssh server algorithm mac** command to configure the MAC algorithms.

Finding the Software Version

The package files for Cisco IOS XE software can be found on the system board's internal flash memory device (flash:) or an external USB, depending on the device configuration.

You can use the **show version** privileged EXEC command to see the software version that is running on your switch.



Note Although the **show version** output always shows the software image running on the switch, the model name shown at the end of this display is the factory configuration and does not change if you upgrade the software license.

You can also use the **dir** *filesystem:* privileged EXEC command to see the names and versions of other software images that you might have stored in flash memory.

Software Images 17.6.x

Release	Image Type	Filename
Cisco IOS XE.17.6.8	Universal	ie3x00-universalk9.17.06.08.SPA.bin
		ess3x00-universalk9.17.06.08.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.08.SPA.bin
Cisco IOS XE.17.6.7	Universal	ie3x00-universalk9.17.06.07.SPA.bin
		ess3x00-universalk9.17.06.07.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.07.SPA.bin

Release	Image Type	Filename
Cisco IOS XE.17.6.6a	Universal	ie3x00-universalk9.17.06.06a.SPA.bin
		ess3x00-universalk9.17.06.06a.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.06a.SPA.bin
Cisco IOS XE.17.6.6	Universal	ie3x00-universalk9.17.06.06.SPA.bin
		ess3x00-universalk9.17.06.06.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.06.SPA.bin
Cisco IOS XE.17.6.5	Universal	ie3x00-universalk9.17.06.05.SPA.bin
		ess3x00-universalk9.17.06.05.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.05.SPA.bin
Cisco IOS XE.17.6.4	Universal	ie3x00-universalk9.17.06.04.SPA.bin
		ess3x00-universalk9.17.06.04.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.04.SPA.bin
Cisco IOS XE.17.6.3	Universal	ie3x00-universalk9.17.06.03.SPA.bin
		ess3x00-universalk9.17.06.03.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.03.SPA.bin
Cisco IOS XE.17.6.2	Universal	ie3x00-universalk9.17.06.02.SPA.bin
		ess3x00-universalk9.17.06.02.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.02.SPA.bin
Cisco IOS XE.17.6.1	Universal	ie3x00-universalk9.17.06.01.SPA.bin
		ess3x00-universalk9.17.06.01.SPA.bin
	NPE	ie3x00-universalk9_npe.17.06.01.SPA.bin

Automatic Boot Loader Upgrade

When you upgrade from the existing release on your switch to a later or newer release for the first time, the boot loader may be automatically upgraded, based on the hardware version of the switch. If the boot loader is automatically upgraded, it will take effect on the next reload.

For subsequent Cisco IOS XE releases, if there is a new bootloader in that release, it may be automatically upgraded based on the hardware version of the switch when you boot up your switch with the new image for the first time.

Caution Do not power cycle your switch during the upgrade.

Scenario	Automatic Boot Loader Response

If you boot Cisco IOS XE the first time	Boot loader may be upgraded to version "8.1.2" for IE3x00 and ESS-3300.
	`Checking Bootloader upgrade...`
	`…`
	`Bootloader upgrade successful`

Software Installation Commands

Note For the **install** command to be successful, it is recommended to have a minimum of free space that is twice the size of the image in flash. If there is not enough space available in flash, you are advised to free up space in flash either by issuing the **install remove inactive** command or to manually clean up the flash by removing unwanted core files or any other files that occupy a large amount of space in flash.

Summary of Software Installation Commands for Install Mode	
To install and activate the specified file, and to commit changes to be persistent across reloads—**`install add file`** *`filename`* [**`activate commit`**]	
add file tftp: *filename*	Copies the install file package from a remote location to the device and performs a compatibility check for the platform and image versions.
activate [**auto-abort-timer**]	Activates the file, and reloads the device. The **auto-abort-timer** keyword automatically rolls back image activation.
commit	Makes changes persistent over reloads.
remove	Deletes all unused and inactive software installation files.

Licensing

The information about the licensing packages for features available on Cisco Catalyst IE3x00 Rugged, IE3400 Heavy Duty, and ESS3300 Series Switches and Cisco Catalyst IE3100 Rugged Series Switches are available at: https://www.cisco.com/c/en/us/td/docs/iot/collections/cisco-iiot-licensing.html.

Important Note

Multicast traffic not registered with the switch will be distributed to every port.

Caveats

Caveats describe unexpected behavior in Cisco IOS XE releases. Caveats listed as open in a prior release are carried forward to the next release as either open or resolved.

Cisco Bug Search Tool

Cisco Bug Search Tool 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.

Click the link for the caveat in the sections below to view details for the caveat in Bug Search Tool.

Open Caveats in Cisco IOS XE Bengaluru 17.6.x

There are no open caveats for Cisco IOS XE Bengaluru 17.6.8.

There are no open caveats for Cisco IOS XE Bengaluru 17.6.7.

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.8

Identifier	Description
CSCwj43321	VACL with echo-reply in ACE works in only one direction instead of egress or ingress or both.

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.7

Identifier	Description
CSCwh75542	IE3400 and IE3400H switches are increasing the memory usage.
CSCwi01476	Memory leak in "Pool manager", small buffers leaking memory due to PTP packets.
CSCwi23741	EAP-TLS auth issue after updating IE3400 Switches from 17.1.x or 17.3.x releases to 17.7.x and above.
CSCwa10428	Unable to manually shut AppGigabitEthernet1/1.
CSCvz57320	SE Linux Denials for IOx Container.

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.6a

Identifier	Description
CSCwh87343	Cisco IOS XE Software Web UI Privilege Escalation Vulnerability

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.6

Identifier	Description
CSCwd74622	User in Isolated PVLAN is Unable to Ping Primary VLAN SVI
CSCwe44846	IOT switch reaches critical memory level when running Cyber Vision with 2GB of memory
CSCwd97578	Log is generate after link flapping: Error: LPM IPv4 100% capacity is reached
CSCwe18850	802.1x and MAB authentication fails against the RADIUS server over IPv6 transport
CSCwe36005	[SNMP] Traceback observed with get-bulk of LRE MIB's
CSCwf74861	REP is not working correctly on Rugged IE-3x00 with MACSEC enabled on REP ports

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.5

Identifier	Description
CSCwb68465	IE3x00: MRP IP connectivity issue.
CSCwc52194	ESS-3300-CON drops DHCP Discovery packets when ipv6 dhcp guard policy is enabled on an interface.
CSCwc58174	Loop Triggered when using wrong Portchannel member.
CSCwc72101	IE3400 OSPFv3 neighbor stuck at EXSTART.
CSCwd02557	IE3x00 - without exp module shows error in topology.
CSCwd14921	lldp packets sent by Lenze and SEW devices are rejected by Profinet.
CSCwd40311	config: Logging buffered max returns no memory available
CSCwd41453	Ingress feature configured on SPAN destination port stops working when port is bounced
CSCwd54449	IE3x00: Input errors are observed on Interface
CSCwd73631	IE3300 could not handle fragmented PIM bootstrap received in Trunk port

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.4

Identifier	Description
CSCwb66011	interface vlan with unassigned ip address generating ICMPv6 Router Solicitation (IE-3300)
CSCwc00070	IE3400H - SD Card partitioning for iox unsuccessul

Identifier	Description
CSCwb08531	Auto negotiate to 10 Gbps instead of 1 Gbps with GLC-TE SFP
CSCwb32319	EPC on IE3300 switches dropping packets of flows not allowed in the ACL filter
CSCwb46595	IE3300 16P expansion module granting POE to ports where power inline never was configured
CSCwb41302	Interface Gi2/1 in expantion module IEM-3400-8S not working in 17.X releases
CSCwc07172	When we are having IOX/Cybervision enabled on the switch and attempt to soft reload it hangs
CSCwb95588	IE3200--Profinet GSD folder is empty on loading image

Resolved topics in Cisco IOS XE Bengaluru 17.6.3

Identifier	Description
CSCvz98362	IE3400H - SD card partitioning fails.
CSCwa08069	Policer is not working, after detach & reattach of the policy-map from the interface.
CSCwa20262	QoS policy-map with just the class-default does not apply its marking action [reworked].
CSCwa30349	VACL affecting traffic on non-specified vlans on IE3x00.
CSCwa62280	fhs ipv6 RAGUARD policy is not blocking RA traffic (IE-3400).

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.2

Identifier	Description
CSCvv58266	IE-3300 switch + 17.02.01 unable to communicate with the radius server if not using server-private.
CSCvy51154	CRC errors observed in IE3300 with auto speed and duplex settings.
CSCvy77196	No support for Yang model: device_hardware, ARP_oper.
CSCvz35663	SD card not showing but still functioning in switch.
CSCvz63447	EIGRP Hello counter increased by 2 for each received Hello packet.
CSCvz76260	QoS policy-map with just the class-default does not apply its marking action.

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.1

Identifier	Description
CSCvw67744	IE3x00: PTP devices from a specific vendor fail to synchronize clocks when device is in forward mode.
CSCvw69183	FNF entries created for the traffic received at spanning tree BLOCKED port.
CSCvw93228	IPv6 source-specific multicast packets choke the traffic manager queue (internal queue in CPU punt path), resulting in loss of multicast traffic (in sparse-mode).
CSCvx52273	Smart License registration through a proxy server fails.
CSCvx52870	IE3400H: Dying gasp signal not generated.
CSCvx66354	IE-3300/IE-3400: L4 ACLs not summarized properly, causing some entries to not take effect.
CSCvx82341	IE3200: No VLAN tag in dying-gasp trap packet.

Troubleshooting

For the most up-to-date, detailed troubleshooting information, see the Cisco TAC website at this URL:

https://www.cisco.com/en/US/support/index.html

Go to **Product Support** and select your product from the list or enter the name of your product. Look under Troubleshoot and Alerts, to find information for the problem that you are experiencing.

Related Documentation

Information about Cisco IOS XE at this URL: https://www.cisco.com/c/en/us/products/ios-nx-os-software/ios-xe/index.html

All support documentation for Cisco Catalyst IE3100 Rugged Series Switches is at this URL: https://www.cisco.com/c/en/us/support/switches/catalyst-ie3100-rugged-series/series.html

Allsupport documentation for Cisco Catalyst IE3100H Heavy Duty Series Switches is at this URL: https://www.cisco.com/c/en/us/support/switches/catalyst-ie3100-heavy-duty-series/series.html

All support documentation for Cisco Catalyst IE3200 Rugged Series Switches is at this URL: https://www.cisco.com/c/en/us/support/switches/catalyst-ie3200-rugged-series/tsd-products-support-series-home.html

All support documentation for Cisco Catalyst IE3300 Rugged Series Switches is at this URL: https://www.cisco.com/c/en/us/support/switches/catalyst-ie3300-rugged-series/tsd-products-support-series-home.html

All support documentation for Cisco Catalyst IE3400 Rugged Series Switches is at this URL: https://www.cisco.com/c/en/us/support/switches/catalyst-ie3400-rugged-series/tsd-products-support-series-home.html

All support documentation for Cisco Catalyst IE3400H Heavy Duty Series Switches is at this URL: https://www.cisco.com/c/en/us/support/switches/catalyst-ie3400-heavy-duty-series/tsd-products-support-series-home.html

All support documentation for Cisco ESS3300 Series Switches is at this URL: https://www.cisco.com/c/en/us/support/switches/embedded-service-3000-series-switches/tsd-products-support-series-home.html

Cisco Validated Designs documents at this URL: https://www.cisco.com/go/designzone

To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

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