Release Notes for Cisco Catalyst IE3x00 and IE3100 Rugged, IE3400 Heavy Duty, and ESS3300 Series Switches, Cisco IOS XE Dublin 17.11.x

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Introduction

This document provides release information for the following Catalyst IE and Cisco ESS switches:

- Cisco Catalyst Rugged Series Switches (IE3100, IE3105, IE3200, and IE3300)
- Cisco Catalyst IE3400 Rugged Series (IE3400)
- Cisco Catalyst IE3400 Heavy-Duty Series (IE3400H)
- Cisco Embedded Services 3300 Series (ESS3300)

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. They 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 17.11.x

The following features apply to IE3x00, IE3100, and ESS3300 switches unless mentioned otherwise.

Feature Name	License Level	Description	Supported Platforms
A new Cisco Catalyst IE3100 Rugged Series Switch model became available with this release.	Network Essentials	New switch in Cisco Catalyst IE3100 Rugged Series Switch is available beginning in this release. New switch has 4x 1000BASE-X SFP uplink ports and 8x 1000BASE-T RJ-4 downlink ports.	IE-3100-8T4S-E
Cisco IOx support	Network Essentials	Beginning in this release, Cisco IE3300 base sytem switches with 1 Gig uplinks support the Cisco IOx application environment. The environment combines Cisco IOS and the Linux OS for highly secure networking. It enables you to execute IoT applications with secure connectivity with Cisco IOS software, and get powerful services for rapid, reliable integration with IoT sensors and the cloud. **Note** Cisco IE3300 base system switches with 10 Gig uplinks have supported Cisco IOx since 17.4.1.	Cisco IE-3300-8T2S and IE-3300-8P2S switches with Hardware Version ID 06 or later. See the section "IOx Support for IE3300 Switches" in Important Notes, on page 4.

Feature Name	License Level	Description	Supported Platforms
DLR Support	Network Essentials	Device Level Ring (DLR) is a Layer 2 protocol that enables redundancy in a ring topology, providing fast network fault detection and reconfiguration for industrial networks. A DLR network includes at least one node configured to be a ring supervisor, and any number of normal ring nodes. All DLR ring nodes must have at least two Ethernet ports and incorporate embedded switch technology. DLR is an EtherNet/IP™ protocol that is defined by the Open DeviceNet® Vendors' Association (ODVA).	IE3400, IE3400H
Support for Additional CWDM SFPs	Network Essentials	Support for GE CWDM SFPs: CWDM-SFP-1510= CWDM-SFP-1550= CWDM-SFP-1570= CWDM-SFP-1590=	IE3x00, IE3100
SFP-10G-SR-I SFP Support	Network Essentials	SFP-10G-SR-I SFP support for IE-3300-8U2X and IE-3300-8T2X	IE3300
MRP Support	Network Essentials	Media Redundancy Protocol (MRP) provides fast convergence in a ring network topology for industrial automation networks. It is defined in International Electrotechnical Commission (IEC) standard 62439-2. MRP can be used with the PROFINET standard. When in PROFINET MRP mode—the default—the switch is added and managed by Siemens Totally Integrated Automation (TIA) Framework. The feature also can be used in MRP Command-line interface (CLI) mode. This mode is managed by the Cisco IOS XE CLI and WebUI.	IE3100

Important Notes

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:

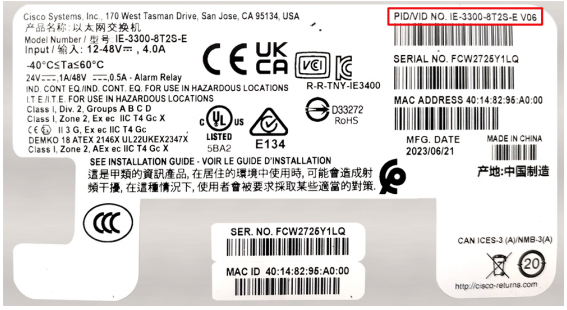
- Key Exchange algorithm:
  - diffie-hellman-group14-sha1
- MAC algorithms:
  - hmac-sha1
  - hmac-sha2-256
  - hmac-sha2-512

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.

IOx Support for IE3300 Switches

To see if the IE-3300-8P2S switch or IE-3300-8T2S switch supports IOx application environment, check the Hardware Version ID on the switch label. The Hardware Version ID is in the upper-right corner of the label, as shown in the following illustration. Support for the feature is available only with Hardware Version ID 06 or later. In the following illustration, the Version ID appears as "V06" at the end of the string inside the red rectangle in the upper-right corner of the label.

Figure 1: IE3300 Switch Label



You also can see the Version ID by entering the **show version** command and examining the output, as shown in the following example:

```
IE-3300#show version
Base Ethernet MAC Address          : b0:c5:3c:99:c8:a0
Motherboard Assembly Number        : 73-101289-11
Motherboard Serial Number          : FOC27151WEZ
Model Revision Number              : V06
Motherboard Revision Number        : B
```

```
Model Number                     : IE-3300-8T2S
System Serial Number             : FCW2507P4CV
Top Assembly Part Number         : 68-102662-01
Top Assembly Revision Number     : B0
System FPGA version              : 0.89.2
CIP Serial Number                : 0x1999C8A0
SKU Brand Name                   : Cisco
```

Note IE-3300-8U2X and IE-3300-8T2X switches have supported IOx since the Cisco IOS-XE 17.4.1 release.

Startup Config is Always Read from Flash

Beginning in Cisco IOS XE Release 17.10.1, the startup configuration is always read from flash. The latest configuration is available only in flash when you save the running config, irrespective of the booted media (for example, flash, sdflash, or usbflash) and the boot mode (install or bundle).

Note Also beginning in the Cisco IOS XE Release 17.10.1, you can configure Cisco Catalyst embedded switches to use USB Flash as the primary boot device. See the Cisco IOS XE Migration Guide for IIoT Switches on cisco.com.

SMU Installation: Boot in Install Mode

Software Maintenance Upgrade (SMU) installation has been supported in both bundle boot and install mode. However, beginning in Cisco IOS XE 17.9.1, the switch must be booted up in install mode to support SMU installation.

SMU installation stops if the device is booted up in bundle mode. If the device is booted up in install mode, SMU installation continues to work as before.

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. New units shipped after May 31, 2022 have the hardware change.

However, you may need to upgrade the software, depending on which base switch and expansions 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 *Field Notice Title* on Cisco.com.

If you have...	Then...
Older versions (shipped before May 31, 2022) of the base switch and expansion module	No action is required.

If you have...	Then...
Newer versions (shipped after May 31, 2022) of the base switch and expansion module	Deploy one of the supported releases of IOS-XE. Refer to *Field Notice Title* on Cisco.com for details that are appropriate to your deployment.
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	

FPGA Profile

FPGA Profile is supported in Cisco IOS XE release 17.8 and later. In a Cisco IOS XE upgrade from an earlier release that does not support FPGA Profile, for example, an upgrade from Cisco IOS XE 17.7.1 to 17.8.1, the default FPGA Profile is installed. Any features controlled by FPGA Profile that are configured in the switch running the earlier release and that are not included in the default profile will be rejected.



Note This feature is supported for Cisco Catalyst IE3400 Rugged Series Switches and Cisco Catalyst IE3400 Heavy-Duty Series Switches.

For example, CTS IPv6 is not supported in the default profile, so CTS IPv6 configurations are rejected during bootup after the upgrade. Similarly, after a Cisco IOS XE upgrade where the cts-ipv6 profile is loaded, existing PRP configurations are rejected upon bootup.

To keep the existing profile and feature configurations after an upgrade:

1. After booting the switch, selected the required FPGA Profile as described in "Changing the FPGA Profile", in System Management Configuration Guide, Cisco Catalyst IE3x00 Rugged, IE3400 Heavy Duty, and ESS3300 Series Switches, chapter "Configuring FPGA Profile".

   Do not copy running-config to startup-config or write memory.

2. Reload the switch.

   The required feature configurations will not be discarded because they are supported by the selected profile.

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 data sheet for your switch for more details.

The attached power supply powers the IE3x00 switch operation as well as PoE power. When increasing the maximum PoE budget, you must subtract the power draw of the IE3x00 switch from the capacity of the attached power supply. You do so to prevent the IE3x00 switch from overdrawing the capacity of the attached power supply. For example, the IE3400 switch with an expansion module supports a maximum PoE budget of 480W. The IE3400-8P2S with an attached IEM-3400-8P draws 67W. With a 480W capacity power supply, the maximum you should configure the PoE budget is (480W-67W) 413W.

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. Subtract the operating power of the IE3x00 switch according to its datasheet from the maximum capacity of the power supply. This is your max PoE budget.
3. 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.

IE3200 and IE 3300 with 10Mbps or 100Mbps speed in Half-Duplex Mode

CRC errors were observed on the IE3200 and IE3300 platforms when the switch is configured with 10Mbps or 100Mbps 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 later.

Cisco Catalyst IE and ESS Switches: Model Numbers (17.11.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*.

Model Number	Default License Level	Description
IE-3100-4T2S-E	Network Essentials	4x Gigabit Ethernet 10/100/1000 RJ45 ports, 2x 100/1000 SFP fiber ports
IE-3100-8T2C-E	Network Essentials	8x Gigabit Ethernet 10/100/1000 RJ45 ports, 2x dual-purpose 1000Base-T RJ45 or 2 100/1000 SFP fiber ports
IE-3100-18T2C-E	Network Essentials	18x Gigabit Ethernet 10/100/1000 RJ45 ports, 2x dual-purpose 1000Base-T RJ45 or 2x 00/1000 SFP fiber ports

Model Number	Default License Level	Description
IE-3105-8T2C-E	Network Essentials	8x Gigabit Ethernet 10/100/1000 RJ45 ports, 2x dual-purpose 1000Base-T RJ45 or 2x 100/1000 SFP fiber ports
IE-3105-18T2C-E	Network Essentials	18 Gigabit Ethernet 10/100/1000 RJ45 ports, 2x dual-purpose 1000Base-T RJ45 or 2x 100/1000 SFP fiber ports
IE-3100-8T4S-E	Network Essentials	8x Gigabit Ethernet 10/100/1000 RJ45 ports, 4x 100/1000 SFP fiber ports
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

Model Number	Default License Level	Description
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
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)

Model Number	Default License Level	Description
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
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

Model Number	Default License Level	Description
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 .
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 .

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.

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 17.11.x

The following table provides the filenames for the IOS XE 17.11.x software image for Cisco Catalyst IE3x00 Rugged, IE3400 Heavy Duty, and ESS3300 Series Switches and Cisco Catalyst IE3100 Rugged Series Switches.

Release	Image Type	Filename
Cisco IOS XE.17.11.1	Universal	ie3x00-universalk9.17.11.01.SPA.bin
		ess3x00-universalk9.17.11.01.SPA.bin
		ie31xx-universalk9.17.11.01.SPA.bin
	NPE	ie3x00-universalk9_npe.17.11.01.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

This section provides 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.

License Types

The following license types are available:

- Permanent: for a license level, and without an expiration date.
- Term: a time-based license for a three, five, or seven year period.
- Evaluation: a license that is not registered.

Note Evaluation licenses are only used in Cisco IOS XE Release 17.3.1. Starting with Cisco IOS XE Release 17.3.2, Evaluation licenses are no longer used by Smart Licensing.

License Levels - Usage Guidelines

- Base licenses (Network Advantage) are ordered and fulfilled only with a permanent license type.
- Network Essentials license is the default license. It is permanent. A connection to the Smart Licensing server is not required if the IE switch will be deployed with a Network Essentials license.
- Add-on licenses (DNA Essentials, DNA Advantage) are ordered and fulfilled only with a term license type.
- An add-on license level is included when you choose a network license level. If you use DNA features, renew the license before term expiry, to continue using it, or deactivate the add-on license and then reload the switch to continue operating with the base license capabilities.
- Evaluation licenses cannot be ordered. They are not tracked via Cisco Smart Software Manager and expire after a 90-day period. Evaluation licenses can be used only once on the switch and cannot be regenerated. Warning system messages about an evaluation license expiry are generated only 275 days after expiration and every week thereafter. An expired evaluation license cannot be reactivated after reload.

Note Evaluation licenses are only used in Cisco IOS XE Release 17.3.1. Starting with Cisco IOS XE Release 17.3.2, Evaluation licenses are no longer used by Smart Licensing.

Smart Licensing Using Policy

An enhanced version of Smart Licensing is available, with the overarching objective of providing a licensing solution that does not interrupt the operations of your network, rather, one that enables a compliance relationship to account for the hardware and software licenses you purchase and use.

With this licensing model, you do not have to complete any licensing-specific operations, such as registering or generating keys before you start using the software and the licenses that are tied to it. Only export-controlled and enforced licenses require Cisco authorization *before* use. License usage is recorded on your device with timestamps, and the required workflows can be completed at a later date.

Multiple options are available for license usage reporting – this depends on the topology you implement. You can use the Cisco Smart Licensing Utility (CSLU) Windows application, or report usage information directly to Cisco Smart Software Manager (CSSM). A provision for offline reporting for air-gapped networks, where you download usage information and upload to CSSM, is also available.

Starting with this release, Smart Licensing Using Policy is automatically enabled on the device. This is also the case when you upgrade to this release.

By default, your Smart Account and Virtual Account in CSSM is enabled for Smart Licensing Using Policy.



Note Starting with Cisco IOS XE Amsterdam 17.3.2, with the introduction of Smart Licensing Using Policy, even if you configure a hostname for a product instance or device, only the Unique Device Identifier (UDI) is displayed.

This change in the display can be observed in all licensing utilities and user interfaces where the hostname was displayed in earlier releases. It does not affect any licensing functionality. There is no workaround for this limitation.

The licensing utilities and user interfaces that are affected by this limitation include only the following: Cisco Smart Software Manager (CSSM), Cisco Smart License Utility (CSLU), and Smart Software Manager On-Prem (SSM On-Prem).

For more information about Smart Licensing, see Smart Licensing Using Policy for Cisco Enterprise Routing Platforms.

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 Dublin 17.11.1

Identifier	Description
CSCwe02210	IE31xx: MRP ring is not converging while changing speed in ethernet combo ports
CSCwe18850	IE3x00: 802.1x and MAB authentication fails against the RADIUS server over IPv6 transport

Resolved Caveats in Cisco IOS XE Dublin 17.11.1

Identifier	Description
CSCwd02557	IE3x00 without exp module shows error in topology
CSCwd73631	IE3300 could not handle fragmented PIM bootstrap received in Trunk port
CSCwd14921	IE3x00: lldp packets sent by Lenze and SEW devices are rejected by Profinet
CSCwd54449	IE3x00: Input errors are observed on Interface
CSCwd97578	IE3x00: Log is generated after link flapping: Error: LPM IPv4 100% capacity is reached
CSCwd49796	IE3400H: Express setup physical press is not working
CSCwd41453	IE3x00: Ingress feature configured on SPAN destination port stops working when port is bounced
CSCwd74622	IE3x00: User in Isolated PVLAN is Unable to Ping Primary VLAN SVI
CSCwd40311	IE3x00: config: Logging buffered max returns no memory available
CSCwd19424	IE3x00: PTPv1 is not working on Tengig ports when forward-mode is enabled on IE3x00 device
CSCwc72101	IE3400: OSPFv3 neighbor stuck at EXSTART
CSCwc58174	IE3x00: Loop Triggered when use wrong Portchannel member
CSCwe29525	IE3100: Rspan session-1 monitoring traffic is impacted when Rspan session-2 is configured

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

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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