



Release Notes for Catalyst 3850 Series Switch, Cisco IOS XE Release 3.7.xE

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This release note gives an overview of the features for Cisco IOS XE 3.7E and later releases on the Catalyst 3850 series switch.

Unless otherwise noted, the terms *switch* and *device* refer to a standalone switch and to a switch stack.

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Introduction

The Catalyst 3850 switches are the next generation of enterprise class stackable access layer switches that provide full convergence between wired and wireless networks on a single platform. This convergence is built on the resilience of new and improved 480-Gbps StackWise-480 and Cisco StackPower. Wired and wireless security and application visibility and control are natively built into the switch.

The Catalyst 3850 switches also support full IEEE 802.3 at Power over Ethernet Plus (PoE+), modular and field replaceable network modules, redundant fans, and power supplies. The Catalyst 3850 switches enhance productivity by enabling applications such as IP telephony, wireless, and video for a true borderless network experience.

The Cisco IOS XE software represents the continuing evolution of the preminent Cisco IOS operating system. The Cisco IOS XE architecture and well-defined set of APIs extend the Cisco IOS software to improve portability across platforms and extensibility outside the Cisco IOS environment. The Cisco IOS XE software retains the same look and feel of the Cisco IOS software, while providing enhanced future-proofing and improved functionality.

For more information about the Cisco IOS XE software, see http://www.cisco.com/en/US/prod/collateral/iosswrel/ps9442/ps11192/ps11194/QA_C67-622903.html

Revision History

Table 1 **Revision History**

Modification Date	Modification Details
April 27, 2017	<ul style="list-style-type: none"> • Resolved Caveats in Cisco IOS XE Release 3.7.5E, page 28 <ul style="list-style-type: none"> – Added CSCus83638


New Features

- [What's New in Cisco IOS XE Release 3.7.5E, page 2](#)
- [What's New in Cisco IOS XE Release 3.7.4E, page 3](#)
- [What's New in Cisco IOS XE Release 3.7.3E, page 3](#)
- [What's New in Cisco IOS XE Release 3.7.2E, page 4](#)
- [What's New in Cisco IOS XE Release 3.7.1E, page 4](#)
- [What's New in Cisco IOS XE Release 3.7.0E, page 5](#)

What's New in Cisco IOS XE Release 3.7.5E

There are no new features in this release.

What's New in Cisco IOS XE Release 3.7.4E

Feature Name	Description
Support for –B Domain	<p>The FCC (USA) rule making on 5 GHz released on April 1, 2014 (FCC 14-30 Report and Order) goes into effect for products that are sold or shipped on or after June 2, 2016. Cisco APs and Cisco WLCs will comply with the new rules by supporting the new regulatory domain (– for the US and will create new AP SKUs that are certified under the new rules. Examples of new rules include new 5-GHz band channels permitted for outdoor use, and transmission (Tx) power level increased to 1W for indoor, outdoor, and point-to-point transmissions.</p> <p> Note Cisco APs and Cisco WLCs that are in the –A domain category can continue to operate and even coexist with –B domain devices without any issues.</p> <p>We recommend that you upgrade Cisco APs and Cisco WLCs to the appropriate software release that supports –B domain.</p> <p>–B Domain Compliant Cisco APs starting with Cisco IOS XE Release 3.7.4E are: Cisco Aironet 700, 700W, 1040, 1140, 1260, 1530, 1570, 1600, 1700, 2600, 2700, 3500, 3600, 3700.</p>
CoAP Proxy	Cisco CoAP Proxy as a separate process within IOS Note. (IP Base and IP Services)
Fast PoE	When power is restored post an outage, PoE to the endpoints on switch ports is restored quickly.
Perpetual PoE	Keeps the power on to the lighting endpoints even if the switch reloads. (IP Base and IP Services)
2-event classification	Discovers power requirements of PoE powered devices even before LLDP negotiation kicks in.
Auto Smart Ports Enhancements	Enhancements to include lighting endpoint specific Macros, which will be triggered on detecting a lighting endpoint.

What's New in Cisco IOS XE Release 3.7.3E

Feature Name	Description
Enhancement to Web-auth configuration	Commands under global parameter-map to enable non SVI and VRF aware Web-auth configuration. (LAN Base, IP Base and IP Services/Enterprise Services)
Mobility Controller managing Mobility Agent (MCMA)	The Mobility Controller managing Mobility Agent feature allows you to push the wireless and common configurations from the MC to the MAs. (IP Base, IP Services/Enterprise Services)

Feature Name	Description
OpenFlow 1.0 and OpenFlow 1.3	The OpenFlow feature defines a flow-based forwarding infrastructure (L2-L4 Ethernet switch model) and a standardized application programmatic interface to allow traffic flows on a device to be added or removed. OpenFlow allows a controller to direct the forwarding functions of a switch through a secure channel. (LAN Base, IP Base, IP Services)
Support is added for these access points:	<ul style="list-style-type: none"> • Cisco Aironet 1850 Series Access Points • Cisco Aironet 1830 Series Access Points

What's New in Cisco IOS XE Release 3.7.2E

- Auto-LAG—The auto-LAG feature provides the ability to automatically create EtherChannels on ports connected to a switch. By default, auto-LAG is disabled globally and is enabled on all port interfaces. The auto-LAG applies to a switch only when it is enabled globally.
- LACP Rate Fast—Support for the new **lACP rate** command, to set the rate at which Link Aggregation Control Packets (LACP) packets are sent to LACP-supported interfaces.
- GRE tunneled packets switched on hardware—Support for forwarding GRE tunneled packets on the switch hardware.
- New switch models:
 - WS-C3850-48XS-S
 - WS-C3850-48XS-F-S
 - WS-C3850-48XS-E
 - WS-C3850-48XS-F-E

What's New in Cisco IOS XE Release 3.7.1E

- New parameter **call-station-id** added to the **wireless security dot1x radius mac-authentication** command. The **call-station-id** parameter configures Call Station ID type for MAC authentication.
- SFP BiDirectional (BiDi) Optics—SFP BiDirectional (BiDi) optical transceivers are used to transmit and receive optical signals through only one single fiber. These make use of single strand of SMF. The deployment of BiDi optical transceivers instantly doubles the bandwidth capacity of the existing optical fiber infrastructure.
- Power Supplies for the Stacking Switch—The switch has two power supplies per system, allowing the power load to be split between them. This accommodates the increased maximum power of 30 watts per port provided to a powered device to meet the PoE+ standard (802.3at). With PoE+, a 48-port system would need 1440 Watts to provide 30 Watts per powered device for the PoE ports. Systems with fewer powered devices might require only one power supply. In this case, the additional power supply can provide one-to-one redundancy for the active supply.

In addition, the stacking switch supports StackPower, which allows the power supplies to share the load across multiple systems in a stack. By connecting the switches with power stack cables, you can manage the power supplies of up to four stack members as a one large power supply that provides power to all switches and to the powered devices connected to switch ports. Since power

supplies are most effective when running at 30 to 90% of their maximum load, taking some of the power supplies offline provides maximum power efficiency. Switches in a power stack must be members of the same switch (data) stack.

The Cisco eXpandable Power System (XPS) 2200 is a standalone power system that you can connect to Catalyst switches. The XPS 2200 power ports and internal power supplies can operate in redundant power supply (RPS) mode or stack power (SP) mode.

- SGT and Destination SGT for Flexible Net Flow—Source group and destination group tags are automatically displayed for ingress and egress data based on the CTS configuration.
- Enhancement to port security configuration—Specify a MAC address that is forbidden by port security on all interfaces.
- Increased scale on Catalyst 3850 Switches to support up to 100 access points. Previously, support was up to 50 access points.
- Support for Media Access Control Security (MACsec). The switch supports 802.1AE encryption with MACsec Key Agreement (MKA) on downlink ports for encryption between the switch and host devices.
- New multi-Gigabit stackable switch model that support up to 36 ports at 1G and 12 ports at 100M, 1G, 2.5G, 5G and 10G.
 - WS-C3850-24XU-L
 - WS-C3850-24XU-S
 - WS-C3850-24XU-E
 - WS-C3850-12X48U-L
 - WS-C3850-12X48U-S
 - WS-C3850-12X48U-E
 - WS-C3850-12XS-S
 - WS-C3850-16XS-S
 - WS-C3850-24XS-S
 - WS-C3850-32XS-S
 - WS-C3850-12XS-E
 - WS-C3850-16XS-E
 - WS-C3850-24XS-E
 - WS-C3850-32XS-E

What's New in Cisco IOS XE Release 3.7.0E

- Wireless capability is added to Catalyst 4500E Series Switch Supervisor Engine 8-E.
- Support is added for the following access points:
 - Cisco Aironet 1700 Series Access Point
 - Cisco Aironet 1570 Series Access Point (supported only in Local mode)
- VLAN tagging is supported on Cisco Aironet 700W Series Access Points

- mDNS Service Discovery Gateway Phase 3—The Service Discovery Gateway feature enables multicast Domain Name System (mDNS) to operate across Layer 3 (L3) boundaries. In this phase, features such as de-congestion of incoming mDNS traffic, redistribution of service withdrawal messages, a filter criterion for learning services available on a specific interface, and the periodic browsing of services on specific interfaces are introduced.
- AVC top ‘N’ users per application—This feature enables you to know network usage information on a per user basis within an application. This feature is enabled by default and is available if AVC is enabled.
- AN Infra—Autonomic networking makes network devices intelligent by introducing self-management concepts that simplify network management for the network operator.
- CDP Bypass—The sessions are established in single and multi-host modes for IP Phones. However, if voice VLAN and 802.1x on an interface port is enabled, then the CDP Bypass is enabled when the host mode is set to single or multi host mode.



Note By default the host mode is set to single mode in <legacy> mode and multi-authentication in the edge mode.

Use the following commands to configure CDP bypass:

```
Switch> enable
Switch# configure terminal
Switch(config)# interface <interface-id>
Switch(config-if)# switchport mode access
Switch(config-if)# switchport voice vlan <vlan-id>
Switch(config-if)# authentication port-control auto
Switch(config-if)# authentication host-mode single | multi-host
Switch(config-if)# dot1x pae authenticator
```

- WebAuth sleeping client—Allows successfully authenticated devices to stay logged in for a configured period without reauthentication.

The following CLI is added under the webauth parameter map:

sleeping-client timeout *timeout-in-minutes*

Restrictions:

- There is one-to-one mapping between device MAC and username/password. Once an entry is added to sleeping-client cache, the device/user gets policies for the user stored in the cache. Therefore, any other user using the device also gets the same policies as the user stored in the sleeping-client cache. The user can force normal authentication by logging out. To do that, the user must explicitly enter the following URL:


```
http[s]://<Virtual IP/Virtual Host>/logout.html
```
- Mobility is not supported. If the client roams from one controller to another, the client undergoes normal authentication on the foreign controller.
- Regulatory domains for India (–D), Indonesia (–F), Brazil (–Z), Honk Kong (–S) are supported.
- New Flexible NetFlow Collect parameters:
 - **collect wireless afd drop bytes**—Collects the fields for wireless approximate fair drop (AFD) drop bytes
 - **collect wireless afd accept bytes**—Collects the fields for AFD accept bytes

- New CLI is added to view AFD statistics information:
Switch# **show platform qos wireless stats ssid** {ssid-value | all} **client all**
This CLI lists client MAC address, WLAN ID, BSSID, accept byte, and drop byte details.
- New CLI is added to check whether an access point model is supported or not:
Switch# **show ap is-supported** ap-model-part-number
- AutoQoS is supported for wireless.
- MC managing MA is supported.
- Private VLAN support is introduced.
- AutoQoS Compact: This feature hides the auto-QoS-generated commands from the running configuration.
- Netflow IPv6 Exporter/IPv6 Extended Host Mode: This feature enables FNF Export over IPv6.
- MACSec Encryption: Support for CTS (Cisco Trusted Security), which uses MACSec and SAP for securing links between Cisco Catalyst switches. It uses either 802.1x protocol or manual configuration for authentication and authorization between the peers, followed by the Cisco proprietary protocol SAP (Security Association Protocol) for key agreement to encrypt and decrypt traffic.
- IPv6 Source Guard: IPv6 source guard is an interface feature between the populated binding table and data traffic filtering. This feature enables the device to deny traffic when it is originated from an address that is not stored in the binding table. IPv6 source guard does not inspect ND or DHCP packets; rather, it works in conjunction with IPv6 neighbor discovery (ND) inspection or IPv6 address glean, both of which detect existing addresses on the link and store them into the binding table. IPv6 source guard is an interface between the populated binding table and data traffic filtering, and the binding table must be populated with IPv6 prefixes for IPv6 source guard to work.
- IPv6 Prefix Guard: The IPv6 Prefix Guard feature works within the IPv6 Source Guard feature, enabling the device to deny traffic originated from non-topologically correct addresses. IPv6 prefix guard is often used when IPv6 prefixes are delegated to devices (for example, home gateways) using DHCP prefix delegation. The feature discovers ranges of addresses assigned to the link and blocks any traffic sourced with an address outside this range.
- IPv6 Destination Guard: The IPv6 Destination Guard feature works with IPv6 neighbor discovery to ensure that the device performs address resolution only for those addresses that are known to be active on the link. It relies on the address glean functionality to populate all destinations active on the link into the binding table and then blocks resolutions before they happen when the destination is not found in the binding table.
- IPv6 First Hop Security support on Etherchannels: The IPv6 FHS policies can be attached to EtherChannel interfaces (Port Channels).
- IPv6 ACL Wild Card Masking: Support for IPv6 wild card masking when specifying the Layer 3 address of a IPv6 ACL entry.
- VLAN name extension: Maximum characters allowed for a VLAN name has been increased from 32 to 128.
- LDAP source interface and VRF support: Allows you to configure a dedicated LDAP source interface IP address and virtual routing and forwarding (VRF).
- VRF aware DHCPv6 Server/Relay for Prefix Delegation: Ensures that the DHCPv6 server and relay involved in delegating prefixes are VRF aware.
- Webauth Sleeping Client (Webauth remember me): Allows successfully authenticated devices to stay logged in for a configured period without re-authentication.

- VLAN RADIUS Attributes in Access Requests
- Enhances the security for access switches with the use of VLAN RADIUS attributes (VLAN name and ID) in the access requests and with an extended VLAN name length of 128 characters.
- Copy Aware VRF: Enables copying of files to and from a VRF via the **copy** command.
- CWDM SFP+ 10-Gigabit optics are supported.

Supported Hardware

Catalyst 3850 Switch Models

Table 2 Catalyst 3850 Switch Models

Switch Model	Cisco IOS Image	Description
WS-C3850-24T-L	LAN Base	Stackable 24 10/100/1000 Ethernet ports, 1 network module slot, 350 W power supply
WS-C3850-48T-L	LAN Base	Stackable 48 10/100/1000 Ethernet ports, 1 network module slot, 350 W power supply
WS-C3850-24P-L	LAN Base	Stackable 24 10/100/1000 PoE+ ports, 1 network module slot, 715 W power supply
WS-C3850-48P-L	LAN Base	Stackable 48 10/100/1000 PoE+ ports, 1 network module slot, 715 W power supply
WS-C3850-48F-L	LAN Base	Stackable 48 10/100/1000 PoE+ ports, 1 network module slot, 1100 W power supply
WS-C3850-24U-L	LAN Base	Stackable 24 10/100/1000 Cisco UPOE ports, 1 network module slot, 1100 W power supply
WS-C3850-48U-L	LAN Base	Stackable 48 10/100/1000 Cisco UPOE ports, 1 network module slot, 1100 W power supply
WS-C3850-12X48U-L	LAN Base	Stackable 12 100M/1G/2.5G/5G/10G and 36 1G UPOE ports, 1 network module slot, 1100 W power supply
WS-C3850-24XU-L	LAN Base	Stackable 24 100M/1G/2.5G/5G/10G UPOE ports, 1 network module slot, 1100-W power supply
WS-C3850-24T-S	IP Base	Stackable 24 10/100/1000 Ethernet ports, 1 network module slot, 350 W power supply
WS-C3850-48T-S	IP Base	Stackable 48 10/100/1000 Ethernet ports, 1 network module slot, 350 W power supply
WS-C3850-24P-S	IP Base	Stackable 24 10/100/1000 PoE+ ports, 1 network module slot, 715 W power supply
WS-C3850-48P-S	IP Base	Stackable 48 10/100/1000 PoE+ ports, 1 network module slot, 715 W power supply

Table 2 Catalyst 3850 Switch Models (continued)

Switch Model	Cisco IOS Image	Description
WS-C3850-48F-S	IP Base	Stackable 48 10/100/1000 PoE+ ports, 1 network module slot, 1100 W power supply
WS-C3850-24U-S	IP Base	Stackable 24 10/100/1000 Cisco UPOE ports, 1 network module slot, 1100 W power supply
WS-C3850-48U-S	IP Base	Stackable 48 10/100/1000 Cisco UPOE ports, 1 network module slot, 1100 W power supply
WS-C3850-24PW-S	IP Base	Stackable, 24-port PoE IP Base with 5-access point license
WS-C3850-48PW-S	IP Base	Stackable, 48-port PoE IP Base with 5-access point license
WS-C3850-12S-S	IP Base	Stackable 12 SFP module slots, 1 network module slot, 350-W power supply
WS-C3850-24S-S	IP Base	Stackable 24 SFP module slots, 1 network module slot, 350-W power supply
WS-C3850-12XS-S	IP Base	Stackable, 12-port SFP+ transceiver, 1 network module slot, support for up to 10 G SFP+, 350 W power supply
WS-C3850-16XS-S	IP Base	Stackable, 16-port SFP+ transceiver, 1 network module slot, support for up to 10 G SFP+, 350 W power supply. 16 ports are available when the C3850-NM-4-10G network module is plugged into the WS-C3850-12XS-S switch.
WS-C3850-24XS-S	IP Base	Stackable, 24-port SFP+ transceiver, 1 network module slot, support for up to 10 G SFP+, 715 W power supply.
WS-C3850-32XS-S	IP Base	Stackable, 32-port SFP+ transceiver, 1 network module slot, support for up to 10 G SFP+, 715 W power supply. 32 ports are available when the C3850-NM-8-10G network module is plugged into the WS-C3850-24XS-S switch.
WS-C3850-48XS-S	IP Base	Stackable, with SFP+ transceivers, 48 ports that support up to 10 G, and 4 ports that support up to 40 G. 750 W power supply.
WS-C3850-48XS-F-S	IP Base	Stackable, with SFP+ transceivers, 48 ports that support up to 10 G, and 4 ports that support up to 40 G. 750 W power supply.
WS-C3850-12X48U-S	IP Base	Stackable 12 100M/1G/2.5G/5G/10G and 36 1 G UPOE ports, 1 network module slot, 1100 W power supply.

Table 2 Catalyst 3850 Switch Models (continued)

Switch Model	Cisco IOS Image	Description
WS-C3850-24XU-S	IP Base	Stackable 24 100M/1G/2.5G/5G/10G UPoE ports, 1 network module slot, 1100-W power supply
WS-C3850-24T-E	IP Services	Stackable 24 10/100/1000 Ethernet ports, with 350-WAC power supply
WS-C3850-48T-E	IP Services	Stackable 48 10/100/1000 Ethernet ports, with 350-WAC power supply
WS-C3850-24P-E	IP Services	Stackable 24 10/100/1000 Ethernet PoE+ ports, with 715-WAC power supply
WS-C3850-48P-E	IP Services	Stackable 48 10/100/1000 Ethernet PoE+ ports, with 715-WAC power supply
WS-C3850-48F-E	IP Services	Stackable 48 10/100/1000 Ethernet PoE+ ports, with 1100-WAC power supply
WS-C3850-24U-E	IP Services	Stackable 24 10/100/1000 Cisco UPOE ports, 1 network module slot, 1100-W power supply
WS-C3850-48U-E	IP Services	Stackable 48 10/100/1000 Cisco UPOE ports, 1 network module slot, 1100-W power supply
WS-C3850-12S-E	IP Services	Stackable, 2 SFP module slots, 1 network module slot, 350-W power supply
WS-C3850-24S-E	IP Services	Stackable, 24 SFP module slots, 1 network module slot, 350-W power supply
WS-C3850-12XS-E	IP Services	Stackable, 12-port SFP+ transceiver, 1 network module slot, support for up to 10 G SFP+, 350 -W power supply.
WS-C3850-16XS-E	IP Services	Stackable, 16-port SFP+ transceiver, 1 network module slot, support for up to 10 G SFP+, 350 W power supply. 16 ports are available when the C3850-NM-4-10G network module is plugged into the WS-C3850-12XS-E switch.
WS-C3850-24XS-E	IP Services	Stackable, 24-port SFP+ transceiver, 1 network module slot, support for up to 10 G SFP+, 715 W power supply.
WS-C3850-32XS-E	IP Services	Stackable, 32-port SFP+ transceiver, 1 network module slot, support for up to 10 G SFP+, 715 W power supply. 32 ports are available when the C3850-NM-8-10G network module is plugged into the WS-C3850-24XS-E switch.
WS-C3850-48XS-E	IP Services	Stackable, SFP+ transceivers, 48 ports that support up to 10 G, and 4 ports that support up to 40 G. 750 W power supply.

Table 2 Catalyst 3850 Switch Models (continued)

Switch Model	Cisco IOS Image	Description
WS-C3850-48XS-F-E	IP Services	Stackable, SFP+ transceivers, 48 ports that support up to 10 G, and 4 ports that support up to 40 G. 750 W power supply.
WS-C3850-12X48U-E	IP Services	Stackable 12 100M/1G/2.5G/5G/10G and 36 1 G UPoE ports, 1 network module slot, 1100 W power supply
WS-C3850-24XU-E	IP Services	Stackable 24 100M/1G/2.5G/5G/10G UPoE ports, 1 network module slot, 1100-W power supply

Network Modules

Table 3 lists the three optional uplink network modules with 1-Gigabit and 10-Gigabit slots. You should only operate the switch with either a network module or a blank module installed.

Table 3 Supported Network Modules

Network Module	Description
C3850-NM-4-1G	<p>This module has four 1 G SFP module slots. Any combination of standard SFP modules are supported. SFP+ modules are not supported.</p> <p>If you insert an SFP+ module in the 1 G network module, the SFP+ module does not operate, and the switch logs an error message.</p> <p>Note This is supported on the following switch models:</p> <ul style="list-style-type: none"> - WS-C3850-24T/P/U - WS-C3850-48T/F/P/U - WS-C3850-12X48U - WS-C3850-12S - WS-C3850-24S
C3850-NM-2-10G	<p>This module has four slots:</p> <p>Two slots (left side) support only 1 G SFP modules and two slots (right side) support either 1 G SFP or 10 G SFP modules.</p> <p>Note This is supported on the following switch models:</p> <ul style="list-style-type: none"> - WS-C3850-24T/P/U - WS-C3850-48T/F/P/U - WS-C3850-12X48U - WS-C3850-12S - WS-C3850-24S

Table 3 Supported Network Modules (continued)

Network Module	Description
C3850-NM-4-10G	This module has four 10 G slots or four 1 G slots. Note This is supported on the following switch models: <ul style="list-style-type: none"> - WS-C3850-48T/F/P/U - WS-C3850-12X48U - WS-C3850-12XS - WS-C3850-24XS
C3850-NM-8-10G	This module has eight 10 G slots with an SFP+ port in each slot. Each port supports a 1 G or 10 G connection Note This is supported on the following switch models: <ul style="list-style-type: none"> - WS-C3850-12X48U - WS-C3850-24XS
C3850-NM-2-40G	This module has two 40 G slots with a QSFP+ connector in each slot. Note This is supported on the following switch models: <ul style="list-style-type: none"> - WS-C3850-12X48U - WS-C3850-24XS
C3850-NM-BLANK	No uplink ports.

Catalyst 3650 Switch Models

Table 4 Catalyst 3650 Switch Models

Switch Model	Cisco IOS Image	Description
Catalyst 3650-24TS-L	LAN Base	Stackable 24 10/100/1000 Ethernet downlink ports, four 1-Gigabit SFP (small form-factor pluggable) uplink ports, 250-W power supply
Catalyst 3650-48TS-L	LAN Base	Stackable 48 10/100/1000 Ethernet downlink ports, four 1-Gigabit SFP uplink ports, 250-W power supply
Catalyst 3650-24PS-L	LAN Base	Stackable 24 10/100/1000 PoE+ ¹ downlink ports, four 1-Gigabit SFP uplink ports, 640-W power supply
Catalyst 3650-48PS-L	LAN Base	Stackable 48 10/100/1000 PoE+ downlink ports, four 1-Gigabit SFP uplink ports, 640-W power supply
Catalyst 3650-48FS-L	LAN Base	Stackable 48 10/100/1000 Full PoE downlink ports, four 1-Gigabit SFP uplink ports, 1025-W power supply

Table 4 *Catalyst 3650 Switch Models (continued)*

Switch Model	Cisco IOS Image	Description
Catalyst 3650-24TD-L	LAN Base	Stackable 24 10/100/1000 Ethernet downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 250-W power supply
Catalyst 3650-48TD-L	LAN Base	Stackable 48 10/100/1000 Ethernet downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 250-W power supply
Catalyst 3650-24PD-L	LAN Base	Stackable 24 10/100/1000 PoE+ downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48PD-L	LAN Base	Stackable 48 10/100/1000 PoE+ downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48FD-L	LAN Base	Stackable 48 10/100/1000 Full PoE downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 1025-W power supply
Catalyst 3650-48FQ-L	LAN Base	Stackable 48 10/100/1000 Full PoE downlink ports, four 10-Gigabit SFP+ uplink ports, 1025-W power supply
Catalyst 3650-48PQ-L	LAN Base	Stackable 48 10/100/1000 PoE+ downlink ports, four 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48TQ-L	LAN Base	Stackable 48 10/100/1000 Ethernet downlink ports, four 10-Gigabit SFP+ uplink ports, 250-W power supply
Catalyst 3650-24TS-S	IP Base	Stackable 24 10/100/1000 Ethernet downlink ports, four 1-Gigabit SFP uplink ports, 250-W power supply
Catalyst 3650-48TS-S	IP Base	Stackable 48 10/100/1000 Ethernet downlink ports, four 1-Gigabit SFP uplink ports, 250-W power supply
Catalyst 3650-24PS-S	IP Base	Stackable 24 10/100/1000 PoE+ downlink ports, four 1-Gigabit SFP uplink ports, 640-W power supply
Catalyst 3650-48PS-S	IP Base	Stackable 48 10/100/1000 PoE+ downlink ports, four 1-Gigabit SFP uplink ports, 640-W power supply
Catalyst 3650-48FS-S	IP Base	Stackable 48 10/100/1000 Full PoE downlink ports, four 1-Gigabit SFP uplink ports, 1025-W power supply
Catalyst 3650-24TD-S	IP Base	Stackable 24 10/100/1000 Ethernet downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 250-W power supply

Table 4 Catalyst 3650 Switch Models (continued)

Switch Model	Cisco IOS Image	Description
Catalyst 3650-48TD-S	IP Base	Stackable 48 10/100/1000 Ethernet downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 250-W power supply
Catalyst 3650-24PD-S	IP Base	Stackable 24 10/100/1000 PoE+ downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48PD-S	IP Base	Stackable 48 10/100/1000 PoE+ downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48FD-S	IP Base	Stackable 48 10/100/1000 Full PoE downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 1025-W power supply
Catalyst 3650-48FQ-S	IP Base	Stackable 48 10/100/1000 Full PoE downlink ports, four 10-Gigabit SFP+ uplink ports, 1025-W power supply
Catalyst 3650-48PQ-S	IP Base	Stackable 48 10/100/1000 PoE+ downlink ports, four 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48TQ-S	IP Base	Stackable 48 10/100/1000 Ethernet downlink ports, four 10-Gigabit SFP+ uplink ports, 250-W power supply
Catalyst 3650-24TS-E	IP Services	Stackable 24 10/100/1000 Ethernet downlink ports, four 1-Gigabit SFP uplink ports, 250-W power supply
Catalyst 3650-48TS-E	IP Services	Stackable 48 10/100/1000 Ethernet downlink ports, four 1-Gigabit SFP uplink ports, 250-W power supply
Catalyst 3650-24PS-E	IP Services	Stackable 24 10/100/1000 PoE+ downlink ports, four 1-Gigabit SFP uplink ports, 640-W power supply
Catalyst 3650-48PS-E	IP Services	Stackable 48 10/100/1000 PoE+ downlink ports, four 1-Gigabit SFP uplink ports, 640-W power supply
Catalyst 3650-48FS-E	IP Services	Stackable 48 10/100/1000 Full PoE downlink ports, four 1-Gigabit SFP uplink ports, 1025-W power supply
Catalyst 3650-24TD-E	IP Services	Stackable 24 10/100/1000 Ethernet downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 250-W power supply
Catalyst 3650-48TD-E	IP Services	Stackable 48 10/100/1000 Ethernet downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 250-W power supply

Table 4 *Catalyst 3650 Switch Models (continued)*

Switch Model	Cisco IOS Image	Description
Catalyst 3650-24PD-E	IP Services	Stackable 24 10/100/1000 PoE+ downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48PD-E	IP Services	Stackable 48 10/100/1000 PoE+ downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48FD-E	IP Services	Stackable 48 10/100/1000 Full PoE downlink ports, two 1-Gigabit SFP and two 10-Gigabit SFP+ uplink ports, 1025-W power supply
Catalyst 3650-48FQ-E	IP Services	Stackable 48 10/100/1000 Full PoE downlink ports, four 10-Gigabit SFP+ uplink ports, 1025-W power supply
Catalyst 3650-48PQ-E	IP Services	Stackable 48 10/100/1000 PoE+ downlink ports, four 10-Gigabit SFP+ uplink ports, 640-W power supply
Catalyst 3650-48TQ-E	IP Services	Stackable 48 10/100/1000 Ethernet downlink ports, four 10-Gigabit SFP+ uplink ports, 250-W power supply

1. PoE+ = Power over Ethernet plus (provides up to 30 W per port).

Optics Modules

Catalyst switches support a wide range of optics. Because the list of supported optics is updated on a regular basis, consult the tables at this URL for the latest (SFP) compatibility information:

http://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html

Cisco Wireless LAN Controller Models

Table 5 *Cisco WLC 5700 Models*

Part Number	Description
AIR-CT5760-25-K9	Cisco 5760 Wireless Controller for up to 25 Cisco access points
AIR-CT5760-50-K9	Cisco 5760 Wireless Controller for up to 50 Cisco access points
AIR-CT5760-100-K9	Cisco 5760 Wireless Controller for up to 100 Cisco access points
AIR-CT5760-250-K9	Cisco 5760 Wireless Controller for up to 250 Cisco access points
AIR-CT5760-500-K9	Cisco 5760 Wireless Controller for up to 500 Cisco access points

Table 5 Cisco WLC 5700 Models (continued)

Part Number	Description
AIR-CT5760-1K-K9	Cisco 5760 Wireless Controller for up to 1000 Cisco access points
AIR-CT5760-HA-K9	Cisco 5760 Series Wireless Controller for High Availability

Access Points and Mobility Services Engine

Table 6 lists the supported products of the Catalyst 3850 Switch.



Note

On platforms that run Cisco IOS XE releases, the WSSI/3G modules on access points are not supported.

Table 6 Catalyst 3850 Switch Supported Products

Product	Platform Supported
Access Point	Cisco Aironet 700, 700W, 1040, 1140, 1260, 1530, 1570, 1600, 1700, 2600, 2700, 3500, 3600, 3700
Mobility Services Engine	3355, Virtual Appliance

Table 7 lists the specific supported Cisco access points.

Table 7 Supported Access Points

Access Points	
Cisco Aironet 700 Series	AIR-CAP702W-x-K9
	AIR-CAP702I-x-K9
	AIR-CAP702I-xK910
Cisco Aironet 700W Series	AIR-CAP702W _x -K9
	AIR-CAP702W-xK910
Cisco Aironet 1040 Series	AIR-AP1041N
	AIR-AP1042N
	AIR-LAP1041N
	AIR-LAP1042N
Cisco Aironet 1140 Series	AIR-AP1141N
	AIR-AP1142N
	AIR-LAP1141N
	AIR-LAP1142N

Table 7 **Supported Access Points (continued)**

Access Points	
Cisco Aironet 1260 Series	AIR-LAP1261N
	AIR-LAP1262N
	AIR-AP1261N
	AIR-AP1262N
Cisco Aironet 1530 Series	AIR-CAP1532I-x-K9
	AIR-CAP1532E-x-K9
Cisco Aironet 1570 Series	AIR-AP1572EAC-A-K9
	AIR-AP1572ECx-A-K9
	AIR-AP1572ICx-A-K9
Cisco Aironet 1600 Series	AIR-CAP1602E
	AIR-CAP1602I
Cisco Aironet 1700 Series	AIR-CAP1702I-x-K9
	AIR-CAP1702I-xK910
Cisco Aironet 2600 Series	AIR-CAP2602E
	AIR-CAP2602I
Cisco Aironet 2700 Series	AIR-CAP2702I-x-K9
	AIR-CAP2702E-x-K9
Cisco Aironet 3500 Series	AIR-CAP3501E
	AIR-CAP3501I
	AIR-CAP3501P
	AIR-CAP3502E
	AIR-CAP3502I
	AIR-CAP3502P
Cisco Aironet 3600 Series	AIR-CAP3602E
	AIR-CAP3602I
Cisco Aironet 3700 Series	AIR-CAP3702I
	AIR-CAP3702E
	AIR-CAP3702P

Compatibility Matrix

Table 8 lists the software compatibility matrix.

Table 8 Software Compatibility Matrix

Catalyst 3850	Cisco 5700 WLC	Cisco 5508 WLC or WiSM2	MSE	ISE	ACS	Cisco PI
03.07.00E	03.07.00E	8.0 7.6	8.0 ¹	1.3	5.2 5.3	2.2
03.06.01E 03.06.00E	03.06.01E 03.06.00E	8.0 7.6	8.0 ²	1.2	5.2 5.3	2.1.2 or 2.1.1 if MSE is also deployed ³ 2.1.0 if MSE is not deployed
03.03.03SE 03.03.02SE 03.03.01SE 03.03.00SE	03.03.03SE 03.03.02SE 03.03.01SE 03.03.00SE	7.6 ⁴ 7.5 ⁵	7.6 7.5	1.2	5.2 5.3	2.0

1. Because of SHA-2 certificate implementation, MSE 7.6 is not compatible with Cisco IOS XE Release 3.6E and later. Therefore, we recommend that you upgrade to MSE 8.0.
2. Because of SHA-2 certificate implementation, MSE 7.6 is not compatible with Cisco IOS XE Release 3.6E and later. Therefore, we recommend that you upgrade to MSE 8.0.
3. If MSE is deployed on your network, we recommend that you upgrade to Cisco Prime Infrastructure 2.1.2.
4. Cisco WLC Release 7.6 is not compatible with Cisco Prime Infrastructure 2.0.
5. Prime Infrastructure 2.0 enables you to manage Cisco WLC 7.5.102.0 with the features of Cisco WLC 7.4.110.0 and earlier releases. Prime Infrastructure 2.0 does not support any features of Cisco WLC 7.5.102.0 including the new AP platforms.

For more information on the compatibility of wireless software components across releases, see the *Cisco Wireless Solutions Software Compatibility Matrix*.

OpenFlow Version and Cisco IOS Release Support

The OVA package is available for download in the same location as your system image (.bin) file, on cisco.com



Note

The OVA package is compatible only with its corresponding system image file name - as listed in the table below. Do not use an older version of the OVA package with a newer system image file, or a newer OVA package with an older system image file.

Cisco IOS Release	Cisco OpenFlow Plug-In Version	Cisco OpenFlow Plug-In	Image Name
IOS XE 3.7.3E	2.0.4	ofa-2.0.4-r3-cat3000-SPA-k9.ova	cat3k_caa-universalk9.SPA.03.07.03.E.152-3.E3.bin

Wired Web UI (Device Manager) System Requirements

Hardware Requirements

Table 9 Minimum Hardware Requirements

Processor Speed	DRAM	Number of Colors	Resolution	Font Size
233 MHz minimum ¹	512 MB ²	256	1024 x 768	Small

1. We recommend 1 GHz.
2. We recommend 1 GB DRAM.

Software Requirements

- Windows 2000, Windows 2003, Windows XP, Windows Vista, or Windows 7
- With JavaScript enabled: Internet Explorer 6.0 and 7.0, or Firefox 26.0

Wireless Web UI Software Requirements

- Operating Systems
 - Windows 7
 - Windows 8
 - Mac OS X 10.8
- Browsers
 - Google Chrome—Version 35
 - Microsoft Internet Explorer—Versions 10 or 11
 - Mozilla Firefox—Version 30
 - Safari—Version 6.1

Finding the Software Version and Feature Set

Table 10 shows the mapping of the Cisco IOS XE version number and the Cisco IOS version number.

Table 10 Cisco IOS XE to Cisco IOS Version Number Mapping

Cisco IOS XE Version	Cisco IOSd Version	Cisco Wireless Control Module Version	Access Point Version
03.07.00E	15.2(3)E	10.3.100.0	15.3(3)JNB
03.06.01E	15.2(2)E1	10.2.111.0	15.3(3)JN3
03.06.00E	15.2(2)E	10.2.102.0	15.3(3)JN

Table 10 Cisco IOS XE to Cisco IOS Version Number Mapping

Cisco IOS XE Version	Cisco IOSd Version	Cisco Wireless Control Module Version	Access Point Version
03.03.03SE	15.0(1)EZ3	10.1.130.0	15.2(4)JB5h
03.03.02SE	15.0(1)EZ2	10.1.121.0	15.2(4)JB5
03.03.01SE	15.0(1)EZ1	10.1.110.0	15.2(4)JB2
03.03.00SE	15.0(1)EZ	10.1.100.0	15.2(4)JN

The package files for the Cisco IOS XE software are stored on the system board flash device (flash:). 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 directory names of other software images that you might have stored in flash memory.

Upgrading the Switch Software

For information about how to upgrade the switch software, see the *System Management Configuration Guide, Cisco IOS XE Release 3E (Catalyst 3850 Switches)* at the following URL:

http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3850/software/release/3e/system_management/configuration_guide/b_sm_3e_3850_cg.html.

Table 11 Software Images

Image	File Name
Universal	cat3k_caa-universalk9.SPA.03.07.00.E.152-3.E1.bin
Universal without DTLS	cat3k_caa-universalk9ldpe.SPA.03.07.00.E.152-3.E1.bin

Important Upgrade Note

After you upgrade to Cisco IOS XE Release 3.7E, the WebAuth success page behavior is different from the behavior seen in Cisco IOS XE Release 3.3.X SE. After a successful authentication on the WebAuth login page, the original requested URL opens in a pop-up window and not on the parent page. Therefore, we recommend that you upgrade the Web Authentication bundle so that the bundle is in the format that is used by the AireOS Wireless LAN Controllers.

To download a sample Web Authentication bundle, follow these steps:

-
- Step 1** Browse to <http://software.cisco.com/download/navigator.html>.
- Step 2** Navigate to **Products > Switches > Campus LAN Switches - Access > Cisco Catalyst 3850 Series Switches**.
- Step 3** Click a switch model.
- Step 4** Click **Wireless Lan Controller Web Authentication Bundle**.
- Step 5** Choose Release 3.7.0 and click **Download**.
- Step 6** After the download, follow the instructions provided in the Read Me file that is attached in the bundle.

**Note**

When you upgrade to Cisco IOS XE Release 3.7.5E the SSH access is lost, because it cannot use the CISCO_IDEVID_SUDI_LEGACY RSA server key. Before upgrade, generate the server key using the **crypto key generate rsa** command in global configuration mode. To verify whether the RSA server key is available on your device, run the **show crypto key** command.

**Note**

In a High Availability scenario, if you download the Web Authentication bundle to the active controller, the bundle cannot be synchronized with the standby controller. Therefore, we recommend that you also manually download the Web Authentication bundle to the standby controller.

**Note**

During an IOS image upgrade or downgrade on a PoE or UPoE switch, the microcode is updated to reflect applicable feature enhancements and bug fixes. Do not restart the switch during the upgrade or downgrade process. With Cisco IOS 3.7E and later releases, the process takes approximately 9 minutes to complete. The microcode update occurs only during an image upgrade or downgrade on PoE or UPoE switches. It does not occur during switch reloads or on non-PoE switches.

Features

The Catalyst 3850 switch supports three different feature sets:

- LAN Base feature set—Provides basic Layer 2+ features, including access control lists (ACLs) and quality of service (QoS) and up to 255 VLANs.
- IP Base feature set—Provides Layer 2+ and basic Layer 3 features (enterprise-class intelligent services). These features include access control lists (ACLs), quality of service (QoS), ACLs, QoS, static routing, EIGRP stub routing, IP multicast routing, Routing Information Protocol (RIP), basic IPv6 management, the Open Shortest Path First (OSPF) Protocol, and support for wireless controller functionality. The license supports up to 4094 VLANs.
- IP Services feature set—Provides a richer set of enterprise-class intelligent services and full IPv6 support. It includes IP Base features plus Layer 3 routing (IP unicast routing and IP multicast routing). The IP Services feature set includes protocols such as the Enhanced Interior Gateway Routing Protocol (EIGRP), the Open Shortest Path First (OSPF) Protocol, and support for wireless controller functionality. The license supports up to 4094 VLANs.

**Note**

A separate access point count license is required to use the switch as a wireless controller.

For more information about the features, see the product data sheet at this URL:

http://www.cisco.com/en/US/products/ps12686/products_data_sheets_list.html

Interoperability with Other Client Devices

This section describes the interoperability of this version of the switch software release with other client devices.

Table 12 lists the client types on which the tests were conducted. The clients included laptops, handheld devices, phones, and printers.

Table 12 **Client Types**

Client Type and Name	Version
Laptop	
Intel 4965	11.5.1.15 or 12.4.4.5, v13.4
Intel 5100/6300	v14.3.0.6
Intel 6205	v15.10.5.1
Intel 6235	V15.10.5.1
Intel 6300	v15.10.4.2
Intel 7260(11AC)	17.0.0.34, Windows 8.1
Dell 1395/1397	XP/Vista: 5.60.18.8 Win7: 5.30.21.0
Dell 1505/1510/Broadcom 4321MCAG/4322HM	5.60.18.8
Dell 1515 (Atheros)	8.0.0.239
Dell 1520/Broadcom 43224HMS	5.60.48.18
Dell 1530 (Broadcom BCM4359)	v5.100.235.12
Cisco CB21	v1.3.0.532
Atheros HB95	7.7.0.358
MacBook Pro (Broadcom)	5.10.91.26
Broadcom 4360(11AC)	6.30.163.2005
Macbook Air (11AC)	10.9.3
Macbook Air	10.9.3
Handheld Devices	
Apple iPad	iOS 5.0.1
Apple iPad2	iOS 6.0.1
Apple iPad3	8.0.2(12A405)
Apple iPad Air	8.0.2(12A405)
Apple iPad Mini	8.0.2(12A405)
Samsung Galaxy Tab	Android 3.2
Intermec CK70	Windows Mobile 6.5 / 2.01.06.0355
Intermec CN50	Windows Mobile 6.1 / 2.01.06.0333
Symbol MC5590	Windows Mobile 6.5 / 3.00.0.0.051R

Table 12 *Client Types (continued)*

Client Type and Name	Version
Symbol MC75	Windows Mobile 6.5 / 3.00.2.0.006R
Phones and Printers	
Cisco 7921G	1.4.2.LOADS
Cisco 7925G	1.4.2.LOADS
Ascom i75	1.8.0
Spectralink 8030	119.081/131.030/132.030
Vocera B1000A	4.1.0.2817
Vocera B2000	4.0.0.345
Apple iPhone 4	iOS 6.0.1
Apple iPhone 4S	8.0.2(12A405)
Apple iPhone 5s	8.0.2(12A405)
Apple iPhone 5c	8.0.2(12A405)
Apple iPhone 6	8.0.2(12A405)
Ascom i62	2.5.7
HTC Sensation	Android 2.3.3
Samsung Galaxy S II	Android 2.3.3
SpectraLink 8450	3.0.2.6098/5.0.0.8774
Samsung Galaxy Nexus	Android 4.0.2
Samsung Galaxy S4 (GT-I9500)	4.4.2
Samsung Galaxy Note (SM-900)	4.4.2

Important Notes

- A switch stack containing a mix of Catalyst 3850 and Catalyst 3650 switches is not supported.
- With Cisco Prime Infrastructure 2.1.1, the refresh config and inventory collection tasks from the switch might take anywhere from 20 minutes to 40 minutes. For more information, see CSCum62747 on the Bug Search Tool.
- Sometimes a delay is seen in the handling of ICMP reply packets when the packet timer is set to milliseconds (if the value is under 1 second). This is an expected behavior.
- Although visible in the CLI, the following commands are not supported:
 - **collect flow username**
 - **authorize-lsc-ap** (CSCui93659)
- The following features are not supported in Cisco IOS XE Release 3.7E:
 - Mesh, FlexConnect, and OfficeExtend access point deployment
 - IP-in-IP (IPIP) Tunneling
 - Wireless Guest Anchor Controller (The Catalyst 3850 switch can be configured as a foreign controller.)

- Resilient Ethernet Protocol
- MVR (Multicast VLAN Registration)
- IPv6 routing - OSPFv3 Authentication
- Call Home
- DVMRP Tunneling
- Port Security on EtherChannel
- 802.1x Configurable username and password for MAB
- Link State Tracking (L2 Trunk Failover)
- Disable Per VLAN MAC Learning
- IEEE 802.1X-2010 with 802.1AE support
- Command Switch Redundancy
- CNS Config Agent
- Dynamic Access Ports
- IPv6 Ready Logo phase II - Host
- IPv6 IKEv2 / IPsecv3
- OSPFv3 Graceful Restart (RFC 5187)
- Fallback bridging for non-IP traffic between VLANs
- DHCP snooping ASCII circuit ID
- Protocol Storm Protection
- Per VLAN Policy & Per Port Policer
- Packet Based Storm Control
- Ingress/egress Shared Queues
- Trust Boundary Configuration
- Cisco Group Management Protocol (CGMP)
- Device classifier for ASP
- IPSLA Media Operation
- Passive Monitoring
- Performance Monitor (Phase 1)
- AAA: RADIUS over IPv6 transport
- AAA: TACACS over IPv6 Transport
- Auto QoS for Video endpoints
- EX SFP Support (GLC-EX-SMD)
- IPv6 Strict Host Mode Support
- IPv6 Static Route support on LAN Base images
- VACL Logging of access denied
- RFC5460 DHCPv6 Bulk Leasequery
- DHCPv6 Relay Source Configuration
- RFC 4293 IP-MIB (IPv6 only)

- RFC 4292 IP-FORWARD-MIB (IPv6 only)
 - RFC4292/RFC4293 MIBs for IPv6 traffic
 - Layer 2 Tunneling Protocol Enhancements
 - UniDirectional Link Routing (UDLR)
 - Pragmatic General Multicast (PGM)
 - DAI, IPSG Interoperability
 - Ingress Rate Limiting
 - Ingress Strict Priority Queuing (Expedite)
 - Weighted Random Early Detect (WRED)
 - Improvements in QoS policing rates
 - Fast SSID support for guest access WLANs
- From Cisco IOS XE Release 3.7.4E and higher, the command **radius-server host** {hostname | ip-address} is deprecated. Instead, use the new **radius server** hostname command.

Scaling Guidelines

Table 13 **Scaling Guidelines**

System Feature	Maximum Limit
Number of HTTP session redirections system-wide (wired/wireless)	Up to 100 clients per second
Number of HTTPS session redirections system-wide (wired/wireless)	Up to 20 clients per second

Limitations and Restrictions

- You cannot configure NetFlow export using the Ethernet Management port (g0/0).
- The maximum committed information rate (CIR) for voice traffic on a wireless port is 132 Mb/sec.
- On WS-C3850-48 switches, if the cable plugged into port 1 has a long cable boot, the boot may stay in contact with the mode button and cause the switch to reload and reset the configuration. To workaround this issue, use the **no setup express** command to disable Express Setup, or remove the cable boot from the cable in port 1.
- MACSec Key Agreement (MKA) encryption is not supported between switches and host devices.
- Outdoor access points are supported only when they are in Local mode.
- VRRPv3 for IPv4 and IPv6 is not supported.
- When configuring QoS queuing policy, the sum of the queuing buffer should not exceed 100%.
- For QoS policies, only switched virtual interfaces (SVI) are supported for logical interfaces.
- QoS policies are not supported for port-channel interfaces, tunnel interfaces, and other logical interfaces.
- Restrictions for Cisco TrustSec:
 - Cisco TrustSec can be configured only on physical interfaces, not on logical interfaces.

- Cisco TrustSec for IPv6 is not supported.
- Dynamic binding of IP-SGT is not supported for hosts on Layer 3 physical routed interfaces because the IP Device Tracking feature for Layer 3 physical interfaces is not supported.
- Cisco TrustSec cannot be configured on a pure bridging domain with IPSG feature enabled. You must either enable IP routing or disable the IPSG feature in the bridging domain.
- Cisco TrustSec on the switch supports up to 255 security group destination tags for enforcing security group ACLs.
- Cisco TrustSec VLAN-to-SGT binding cannot be enabled in pure bridging domain. You have to either manually enable IP device tracking on the ports in the VLAN, or enable SVI interface for the VLAN.
- For Cisco IOS Release 3.7E and later, Cisco TrustSec VLAN-to-SGT binding cannot be enabled in pure bridging domain. You have to either manually enable IP device tracking on the ports in the VLAN, or enable SVI interface for the VLAN.
- Cisco TrustSec MACSec for switch-to-switch security is supported only on switches running the IP base or IP services feature set. It is not supported on switches running the NPE or LAN base feature set.
- For the WS-C3850-12X48U-L, WS-C3850-12X48U-S and WS-C3850-12X48U-E switch models, a maximum of 28 ports are available for UPoE connections.
- Restrictions for Cisco Plug-in for OpenFlow:
 - STRIP VLAN cannot work for L2 packets that do not have a payload.
- Restrictions for CoAP:
 - Support for Observe not implemented
 - Blockwise requests are not supported.
 - DTLS support is only for RawPublicKey and Certificate Based modes.
 - IPv6 DTLS is not supported on Catalyst 3850 series switches.
 - Switch does not act as DTLS client, but only as DTLS endpoints.
 - Endpoints are expected to handle and respond with CBOR payloads.
 - Client side requests are expected to be in JSON.
 - Due to an IPv6 broadcast issue, switch cannot advertise itself to other Resource Directories as IPv6.
 - Configuration of Fast PoE, Perpetual PoE or 2-event classification has to be done before physically connecting any endpoint. Alternatively, do a manual shut/no-shut of the ports drawing power.
 - Power to the ports will be interrupted in case of MCU firmware upgrade and ports will be back up immediately after the upgrade.
- When a logging discriminator is configured and applied to a device, memory leak is seen under heavy syslog or debug output. The rate of the leak is dependent on the quantity of logs produced. In extreme cases, the device may crash. As a workaround, disable the logging discriminator on the device.
- The switch supports physical ports and Etherchannel ports in access and trunk modes.

Caveats

- [Cisco Bug Search Tool](#), page 27
- [Open Caveats](#), page 27
- [Resolved Caveats in Cisco IOS XE Release 3.7.5E](#), page 28
- [Resolved Caveats in Cisco IOS XE Release 3.7.4E](#), page 30
- [Resolved Caveats in Cisco IOS XE Release 3.7.3E](#), page 32
- [Resolved Caveats in Cisco IOS XE Release 3.7.2E](#), page 33
- [Resolved Caveats in Cisco IOS XE Release 3.7.1E](#), page 34
- [Resolved Caveats in Cisco IOS XE Release 3.7.0E](#), page 35

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 <https://tools.cisco.com/bugsearch/>.
2. Enter the bug ID in the **Search For:** field.

Open Caveats

Bug ID	Headline
CSCuo75037	High Priority Access Point Keeps Flapping when License Count is Exceeded
CSCuq40421	Unable to Upgrade sw FIPS Edison
CSCuu13106	Traffic not recovered over cts link after hot swap of uplink
CSCuu86712	FED Process Traceback @al_lookup_add_generic_entry while enabling IPSG
CSCuz19779	ENH. DHCP malformed Offer packets get dropped (as per RFC) on 3850 CPU
CSCuz75030	license feature display issue after IOS upgrade
CSCva28133	3650 stack generates IPSG messages: %EM-4-AGED:
CSCvb26404	8 port group showing as not connect on code 3.7.3
CSCvb30329	WS-C3850-48XS/3.7.4E POST: Thermal, Fan Tests : End, Status Failed
CSCvb39796	SNMP Trap is not include entPhysicalDescr and entPhysicalName on C3850

Bug ID	Headline
CSCvb61022	LACP is not negotiated via Q in Q tunnel
CSCvc47165	SFP port detect link-flap error and it's in error-disabled state on 3650
CSCvc63975	Ping fails when RSPAN is configured and SRC port/vlan are in same trunk as the DEST remote-span vlan
CSCvc73079	"Speed nonegotiate" disappeared after a couple of ORI'ing SFP cables on back-to-back switch
CSCvd17125	Traceback seen after switchover with SPAN configuration

Resolved Caveats in Cisco IOS XE Release 3.7.5E

Bug ID	Headline
CSCud22987	STANDBY wcm: %OSAPI-4-TIME_SHIFT_DETECTED: Detected backward time shift
CSCun71347	Catalyst 3850 crash in Cisco Express Forwarding: IPv4 process while processing ARP throttle elements.
CSCup05919	3850 - Power given, but State Machine Power Good wait timer timed out
CSCus83638	5-GHz radio on Cisco AP beaconing but not accepting client associations
CSCuv65173	Scrubs Delta FEP Supply not responding in slot B
CSCuw17864	3650 will not forward 5246 with ip helper
CSCuw41152	'%NGWC_PLATFORM_FEP-1-FRU_PS_SIGNAL_FAULTY' message is not output
CSCuy67349	3650/3850 IPv6 ND RAGUARD drops RS packets (ICMPv6 type 133)
CSCuy83302	Catalyst 3850 - Port-security may interfere with spantree bpdu guard
CSCuy99151	3850 failing Inline Power Controller Tests
CSCuz06686	Port-channel no drops although member port drops on C3650/C3850
CSCuz08086	PD's not getting PoE on multiple interfaces in 3850 stack
CSCuz24063	Storm-control configured on port-channel cannot reflect to member link
CSCuz28295	TCN generate late and mac learn issue on 3650 stack after RSTP TCN
CSCuz54670	WS-C3850-24XS: Local port still up when TX fiber removed from 10G SFP
CSCuz57493	High CPU observed in punjectrx fed-ots-main thread
CSCuz60141	SDP drops causing stack issues.

Bug ID	Headline
CSCuz87489	brelay: No crashinfo generated since core resource was not set
CSCuz89095	3850 switch at Provisioned state after a random reload/power outage
CSCuz98375	OSPF flaps on Cat3850 with 1s/3s timers with 03.07.03E
CSCva02227	C3850s in stack don't return ports 45-48 when polled through SNMP
CSCva13231	CRC/Corrupted packets after a link failure with MACSEC and 802.1q (3850)
CSCva21500	Cat3650 interface don't up when "speed nonegotiate" is applied
CSCva22528	3850:Traffic only flowing between ports on Port Asic
CSCva22545	LACP with mode active doesn't come up in 3.7.4 .
CSCva25359	NOVA: Evaluation of glibc vulnerabilities on IOS/IOS-XE
CSCva40478	ip dhcp snooping trust on port-channel does not reflect on member link
CSCva43372	Interoperability - remote side CRC error
CSCva55550	incorrect CDP/LACP/UDLD neighbor information on 3850 - 3.7.3 and 3.7.4
CSCva76630	BENI MR5: RSPAN traffic is not encrypted on CTS MACSEC SAP link
CSCva92074	%PLATFORM_PM-6-MODULE_ERRDISABLE output when inserting SFP
CSCva98034	EICORE_GET_NEXT_MC: end of items / Error using the collection / Cat3850
CSCvb22505	Port security mac address not aging out when relearned from a Channel
CSCvb26637	IGMPv2 leave messages sent back to ingress interface
CSCvb34556	Cat3850 - 10G member of Ether-channel with LACP is continuously flapping
CSCvb56934	commit to 3.7.x and 16.3.x Zero RX counters on te1/1/3 port on bootup
CSCvb60511	SSH doesn't work with MACSEC configured between 3850 and 4500
CSCvb65304	Output drops and Output errors increment simultaneously in show interfaces
CSCvb97732	3850/3650 Switch Crashes Following "network-policy" Configuration Change on Interface
CSCvc26787	%LINEPROTO-5-UPDOWN: Line protocol on Interface TenGigabitEthernet1/1/4, changed state to down
CSCvc62241	SGACL enforcement under VRF unexpectedly blocking traffic

Resolved Caveats in Cisco IOS XE Release 3.7.4E

Bug ID	Headline
CSCuq46932	Crash on dhcpd_find_binding_by_hw
CSCur31055	Ten gig links gets err-disable after "UDLD enable" on 3850
CSCur54635	Cat3850/SSH: Traceback and dummy watched message after switch deployment
CSCur81577	LED status change while adding/removing vlan to trunk interface
CSCut87886	SFP/sfp+ goes to errdisable upon bootup and OIR
CSCuu25580	VTY0-4 settings are modified if switch is accessed via WebUI
CSCuu43892	Switch crash on qpair_full after executing dhcpd_* functions
CSCuv14431	Switch crashed on adding member to the stack
CSCuv59145	Duplex is full one end and half on the other with speed nonegotiate
CSCuw01266	ffm crash when adding 3.3.x switch to 3.6.3 stack
CSCuw02650	Ping packet loss (20~27s) during a switch add into stack
CSCuw20728	C3850-S Link goes up during reboots
CSCuw38988	C3850: show interface transceiver slow in response, console/VTY may hang
CSCuw49406	"no ip routing protocol purge interface" delete with reload
CSCuw53025	Cat3850 reports "Error, ECI has run out of event blocks" message
CSCuw65792	CWS not associating CN with nested groups when "," (comma) is used
CSCuw67380	3850 3.6.3 dACL Remark EPM Parser error
CSCuw86386	AAA crash when removing TACACS servers
CSCuw91080	Cat3850 stack standby side span broken after reloading the stack
CSCuw93850	3850 not able to modify AP port qos config if autoqos voip is applied
CSCuw97476	Q-in-Q configured on 3850 stack is not working appropriately
CSCux10319	Multiple stack members crash with ffm_link_is_to_same_target
CSCux11452	Cat3850 crash while executing "no queue-limit" command
CSCux14199	Error "Command rejected: Bad VLAN list" when default interface config
CSCux14720	3850/3650: %DATACORRUPTION-1-DATAINCONSISTENCY and traceback are output
CSCux19272	FED crash at fed_init_l3if_stats
CSCux22760	On reload, 1G SFP is connected/up on 3750x while 3850 is notconnect/down
CSCux26097	Debug logging - parser issue
CSCux27384	Multicast packet drop seen after switchover for 9-18 sec
CSCux32504	DHCP client in native vlan do not receive an ip address
CSCux32833	SVI on 3850 will fail to ping after one/more reload(s)

CSCux39490	c3850 core 0 high /fed and fed-ots-main abnormal
CSCux40358	Pim Auto-rp information lost on device
CSCux46432	AAA crash on multiple username deletions
CSCux46898	NTP associations vulnerability
CSCux52544	PnP Fails to Initiate with Non-VLAN1 Feature Configured
CSCux54732	NSF Takes 30s to Process after Reloading Stack Master.
CSCux69225	MAC filtering option "None" sends blank password
CSCux77481	Webauth : switch crash on config 'custom-web fail page file Fail.html'
CSCux77511	3850: Webauth not working when incorrect username/password entered
CSCux85039	3650/3850 syslog produces no o/p when set to logging queue-limit X
CSCux95796	Crash while bringing up wired Guest host in MC GC scenario
CSCux99025	Evaluation of Cisco IOS and IOS-XE1 for NTP January 2016
CSCuy05927	IPC-WATERMARK and CHKPT-5-HIGHBUFFER logs leading to reload
CSCuy18386	To complete the fixes in bugs CSCuu53316/CSCtk67768- DHCP crashed
CSCuy21675	Crash@username_command with service pwd-encryption & common-criteria cfg
CSCuy24302	NGWC CMM doesn't allow to change config despite MA has no MC config
CSCuy26878	Stdby or member switch crash , process auth manager
CSCuy32255	"Test cable-diagnostics tdr interface" reloads a 3850
CSCuy43459	Crash while polling module details
CSCuy46133	IOS-XE unable to parse automate-tester cmd after save, gone after reload
CSCuy53713	NGWC / 3850 / not responding to Multicast Pings
CSCuy54762	IPv4 DHCP traffic is intercepted by L3 SVI interface with ACL log
CSCuy61470	6 member 385012X48U stack crashed during continuous reload test
CSCuy73381	Shaping is not working on 3850
CSCuy75466	BW of interfaces port-channel shows wrong after master switch down
CSCuy87667	Crash due to Block overrun by AAA banner
CSCuz02766	NOVA: Crash in IOSd with 'EPC SM Liaison Update proc'

Resolved Caveats in Cisco IOS XE Release 3.7.3E

Bug ID	Headline
CSCup29363	Http head method is getting status_code: 404 response from server.
CSCuq60981	Mab is not taking priority over dot1x in concurrent authentication
CSCuq70273	MCMA - Moving MA to Centrally Managed mode doesn't trigger auto reload
CSCus17795	Same port name displays in lower and upper case during OpenFlow configuration
CSCus84849	ipdt difference in config and default configuration
CSCus99269	MCMA: dACL should not be synced to MA & should be allowed on MA as well
CSCut14397	Bad parsing when keyword is truncated during OpenFlow LXC configuration
CSCut87285	MAC address being learnt on an individual Port-channel member interface
CSCut88813	WLAN cannot be configured with a space in psk shared key on NGWC 3.7
CSCuu09331	CTS link not passing traffic after SSO
CSCuu15831	Switch reboots when SPAN configured under "cts manual"
CSCuu34717	3850 cts enforcement for multicast traffic
CSCuu36487	Cat3k: OF: Vlan strip action doesnot work for ipv6 packets
CSCuu56466	"Total output drops" counter of a certain ports does not increment
CSCuu56511	OutDiscards counter does not increment
CSCuu82607	Evaluation of all for OpenSSL June 2015
CSCuu85807	Switch returns wrong OID when standalone
CSCuu87659	CpmCPUTotal5minRev average value of stack switch 2 on 3850 is incorrect.
CSCuu97048	Traffic is dropped due to static mac entry on foreign interface
CSCuu97550	4500X - SNMP dot1dTpFdbPort retuning incorrect value
CSCuv02964	Memory leak with dot1x on IOS-XE switch
CSCuv07427	TCP connection cannot be established with Openflow agent due to
CSCuv13351	MAC address is learned on RSPAN vlan after stack switchover
CSCuv14890	DHCPv6 solicit frame (IPv6 multicast) frame replication issues
CSCuv19773	"nmsp attach suppress" not being added into run-config on WS-C3850-24P
CSCuv20921	mac address-table learning command should not be allowed for RSPAN vlan
CSCuv22736	After reload, C3850-NM-4-10G/GLC-SX-MM not linkup with speed nonegotiate
CSCuv36348	management port can be added to OpenFlow config

Bug ID	Headline
CSCuv42533	Flow addition failing with wildcard match
CSCuv62574	GRE tunnel in up/down state when tunnel source configured via interface
CSCuv78424	Unicast ARP packets are duplicated
CSCuv78993	Enqueue should work even after applying qos policy on OF port
CSCuv85232	openflow exclusive config not cleared on standby
CSCuv88334	mismatch in the rf parameters mode between cli/gui
CSCuw06386	Flows are not prgrmd in PD after consecutive clearopenflow switch1 cntrl
CSCuw19798	GRE Tunnel not working on Catalyst 3850
CSCuw21694	Invalid flow count increasing in PD when i remove and add OF ports
CSCuw22050	Switch reports Power device detected when non device is connected
CSCuw28638	3650 Rebooting during EAP-TLS authentication
CSCuw36865	L2 switched traffic matched by L3 SVI VACL in the output direction
CSCuw38233	Mobility tunnel between MA/MC drops when default egress policy is deny
CSCuw39020	access-session vlan-assignment ignore-errors breaks dynamic vlan assign
CSCuw55669	Crash is seen in iosd on switch and auth-mgr
CSCuw67734	CFD CSCun37216 entAliasMappingIdentifier broken on 03.07.02E...
CSCuw73525	3650 DHCPv6 Guard does not block rogue DHCP server to provide IPv6 addr
CSCuw82216	Catalyst3850: Upgrade in install mode corrupts the flash - EXT2-fs error
CSCuw98232	Fixing build breakage for 15.2(3)E/3.7.3E which happened with CSCuv62574

Resolved Caveats in Cisco IOS XE Release 3.7.2E

Bug ID	Headline
CSCum86031	Roam from 5508 to 5760 - Not Applying correct QOS policy
CSCup29940	PnP DHCP discovery success Autoinstall/Ease of use features not aborted
CSCup55828	Need error message when using a wrong image to do software install
CSCur83076	Ingress SSID policy shouldn't install if number of filters per class > 5
CSCur86271	Beni: Wireshark limit packet does not end session

Bug ID	Headline
CSCur98423	MCMA - Converting a CM MA stack to non CM - standby switch remains CM
CSCus69196	After overnight ping traffic on active, standby sw#6 crashes at iosd
CSCus89656	Trust, DSCP transparency, COPP not working when a member comes up
CSCut25533	PnPA: non-vlan CLI should only apply to newly bootup devices
CSCut26365	Packet drop on 3850 by an unrelated ACL entry
CSCut49440	3850 class-map "match" doesn't work correctly
CSCut48464	sh env power for DC power supply reports supply failure
CSCut81363	sh inv and sh env do not display full SN of power supply
CSCut87639	Forty FCS-Err and Xmit-Err counters are incremented when traffic sends
CSCuu09487	"VTP mode Server" related config does not get applied from a saved file.
CSCuu33745	show inventory stores the old register of AOC cables even its removed
CSCuu49195	Access session cache entries not getting updated
CSCuu51627	Failing to deploy vlan.dat database prevents working of basic switching.
CSCuu56431	5 minute wait until reload due to GOLD memory test
CSCuu58381	mib:SysUptime display different output on 3850-48XS
CSCuu66387	Remove Unknown uplink module inserted msg from 3850-48XS
CSCuu66503	HTTPS: IOS HTTPS client not enforcing subject-name verification
CSCuu72752	Swapping 4x1G module to 2x10G causing 1G ports to go in err-disable
CSCuv19160	Config lock mode during redundancy prevents PnP redirection.
CSCuv19204	NTP Server take 15 - 18 minutes to sync with API-EM clock

Resolved Caveats in Cisco IOS XE Release 3.7.1E

Bug ID	Headline
CSCur44010	HA IOSd crash in crypto_lib_keypair_delete
CSCur41848	Subnet broadcast and Multicast is not working
CSCup92808	No CWA redirect for client in case it roamed in webauth-reqd state
CSCur24788	CWA flow break if accounting enabled in GA scenario
CSCur79033	In the client details, VLAN group name is not shown
CSCur33695	Packet drop observed AMSDU enabled and AMPDU disabled.
CSCur61190	FED crash observed after SSO
CSCut01521	Crash with web authentication / sleeping client

Resolved Caveats in Cisco IOS XE Release 3.7.0E

Bug ID	Headline
CSCtg09555	Enhancements to reload reason
CSCun23546	Add debugs to root cause issue - green port LEDs with nothing plugged in
CSCun37216	Phones not tracked correctly/at all on chassis/stack switches
CSCun70919	Unbalanced power issue after OIR a member ON 3850 stack.
CSCun77458	FED Crash on one of the 9M edison, Invalid LC obtained from standby err
CSCuo14901	Crash/High CPU when enabling nbar for Flexible Netflow
CSCuo15054	3rd party Wireless AP (Onity) not detected by Cat3850
CSCuo46878	Incomplete arp issue seen as incorrect bridging for arp packet w IPDT
CSCuo68044	Cat3850 stop forwarding packet via SPAN
CSCuo77295	Secondary WLC5760 crashed during reverting back from Primary
CSCuo83872	Power Controller reports Short detected when non PoE device connected
CSCuo84770	3850/3.3.2SE/Not forwarding double dot1Q tagged packets
CSCuo91792	IPDT:Wired stale entries learned via ARP not clearing out
CSCuo98789	ARP broadcast for vlan which is not SVI punted to CPU incase of Layer 2
CSCup04121	Redirection loop when WCCP "OUT" enabled on SVI on Cat-3850
CSCup05630	Changing Aging timer does not change timer on Active/Local switch
CSCup08164	multicast traffic not leaving 3850 after ACL was applied on SVI int
CSCup10155	3850 ACL is dropping flows matching an "established" acl entry
CSCup24700	Switch reloaded on "mac address-table static mac vlan int" cmd
CSCup40892	Wireless clients may be stuck in idle state when FQDN feature is enabled
CSCup47260	3850 FED crash on member switch with %PDSLIB-3-OBJFREE
CSCup48618	3850: Crash @ dot1x_switch_handle_vlan_removal
CSCup49704	3850 FED Crash - Waiting for SPI channels FED_SPI_FLCD,FED_SPI_FAST ...
CSCup53338	3850 IOSD crash Signal=SIGSEGV(11) @ pm_port_data_from_swidb
CSCup62150	After Inter-Switch Roam, QoS policy is not applied to Client
CSCup63798	ping failed after 3850 reload
CSCup67570	3850 - Counters on mgmt port are broken
CSCup76790	FNF flow doesn't age out after 50 days
CSCup76944	HSRP dual Active at 3850 after port-channel down/up

Bug ID	Headline
CSCup86090	Warning messages reported on solarwinds due to incorrect temperature
CSCup86496	unicast ARP replies not destined to 3850 are forwarded to ARP module
CSCup91453	SNMP query cportQosStatsEntry with invalid ifindex prints hwidb is null
CSCup92246	NG3K: Default deny SGACL policy dropping management traffic
CSCuq02722	Web redirect does not work when AP connected to standby switch port 1-24
CSCuq08184	ip cef accounting non-recursive - on 3850 causes CPU to spike
CSCuq22460	COMMON-1-WDOG_CPUHOG: 1 fed: CPU usage time exceeded
CSCuq26920	3850/3650 Access-List not permitting ICMP Fragments
CSCuq31741	WS-C3850-48P/3.6.0E:sh sys sysmgr ser UUID nnn policies cause crash
CSCuq43575	3850 - Traffic matches wrong class-map after reboot
CSCuq55384	NG3K SNMP support for cefcModuleOperStatus CISCO-ENTITY-FRU-CONTROL-MIB
CSCuq68535	3.6.0E:switchport block multicast causes arp packet to get dropped
CSCuq73836	C3850 sends unexpected GARP
CSCuq76831	TS: WebUI support for Auto AP passthrough
CSCuq80452	Incorrect oututs for "sh platform qos dscp-cos counters gi x/y"
CSCur07909	Stack merge due to active and standby lost connectivity
CSCur16145	Edison:QoS:trust edvice behavior issue
CSCur24801	DUT Fails to hit (SGT, DGT) in the absence of inline/SXP and IPDT entry
CSCur30447	3850 fiber ports unstable/dead after pumping 64Byte pkts @ line rate
CSCul20918	"rmon XX" casue standby crash during HA sync up process
CSCum26261	start-up config is initialized after executing password recovery.
CSCuo62332	CISCO-BGP-MIBv8.1 - Add support for cbgpPeer2Type in BGP traps/notif
CSCul72429	Deny Entry programmed for IPv6 ACL with remark.
CSCun06200	3850: CoA sess terminate from ISE live sessions failing for wireless EP
CSCum45713	C2k_Scale: UUT crashed for scale session
CSCun79185	3850: Standby reload with PKI
CSCup39353	IOSd reboots at @ ios_syncmgr_lock_pop_errmsg
CSCuq04574	WS-C4500X-16 with 3.5.3E crashes due to SNMP polling
CSCur11227	[Amur-MR1] - Corrupted output with 'show memory detail proc iosd summ'

Bug ID	Headline
CSCur68934	Proxy switch if in PROVISIONED state doesn't send work req to PnP server
CSCuo47485	Wrapper API in generated code to find the CMI/SPI IOSd application leaks
CSCuo07995	IOSD leak @ be_ip2access_add_acl_item2
CSCup22590	Multiple Vulnerabilities in IOS/IOSd OpenSSL - June 2014
CSCuh09324	udp entries not deleted from flowmgr table

Troubleshooting

For the most up-to-date, detailed troubleshooting information, see the Cisco TAC website at this URL:
<http://www.cisco.com/en/US/support/index.html>

Choose **Product Support** > **Switches**. Then choose your product and click **Troubleshoot and Alerts** to find information for the problem that you are experiencing.

Related Documentation

- Cisco IOS XE 3E Release documentation at this URL:
<http://www.cisco.com/c/en/us/support/ios-nx-os-software/ios-xe-3e/tsd-products-support-series-home.html>
- Catalyst 3850 switch documentation at this URL:
http://www.cisco.com/go/cat3850_docs
- Cisco SFP and SFP+ modules documentation, including compatibility matrixes at this URL:
http://www.cisco.com/en/US/products/hw/modules/ps5455/tsd_products_support_series_home.html
- Cisco Validated Designs documents at this URL:
<http://www.cisco.com/go/designzone>
- Error Message Decoder at this URL:
<https://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi>

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