

Field Notice: FN74245 - Cisco Catalyst IE3200, IE3300, IE3400, and IE3400H Switches and Cisco Embedded Services 3300 Series Switches Fail to Boot Cisco IOS

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Impact Rating: High **Cisco Bug IDs:**
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Notice

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Products Affected

Affected Product Name	Description	Comments
ESS-3300-CON-A	Embedded Services Switch 3000 Cond Cooled, Net Adv	
ESS-3300-CON-E	ESS3300 - Main Board (2 10G + 8GE) Conduction Cooled, NE	
ESS-3300-NCP-A	Embedded Services Switch Series 3000, No Cooling Plate, NA	
ESS-3300-NCP-E	ESS3300 - Main Board (2 10G + 8GE) Air Cooled, NE	
IE-3200-8P2S-E	Catalyst IE3200 with 8 GE PoE+ & 2 GE SFP, Fixed System, NE	
IE-3200-8T2S-E	Catalyst IE3200 w/ 8 GE Copper & 2 GE SFP, Fixed System, NE	
IE-3300-8P2S-A	Catalyst IE3300 with 8 GE PoE/PoE+ and 2 GE SFP, Modular, NA	
IE-3300-8P2S-E	Catalyst IE3300 with 8 GE PoE+ and 2 GE SFP, Modular, NE	
IE-3300-8T2S-A	Catalyst IE3300 with 8 GE Copper and 2 GE SFP, Modular, NA	
IE-3300-8T2S-E	Catalyst IE3300 with 8 GE Copper and 2 GE SFP, Modular, NE	
IE-3300-8T2X-A	Catalyst IE3300 w/ 8 GE Copper & 2 10G SFP, Modular, NA	
IE-3300-8T2X-E	Catalyst IE3300 w/ 8 GE Copper & 2 10G SFP, Modular, NE	
IE-3300-8U2X-A	Catalyst IE3300 w/ 8 GE Copper (4PPoE) & 2 10G SFP, Mod, NA	

Affected Product Name	Description	Comments
IE-3300-8U2X-E	Catalyst IE3300 w/ 8 GE Copper (4PPoE) & 2 10G SFP, Mod, NE	
IE-3400-8P2S-A	Catalyst IE3400 with 8 GE PoE/PoE+ and 2 GE SFP, Modular, NA	
IE-3400-8P2S-E	Catalyst IE3400 with 8GE PoE/PoE+, 2GE SFP, Adv. Modular, NE	
IE-3400-8T2S-A	Catalyst IE3400 with 8 GE Copper and 2 GE SFP, Modular, NA	
IE-3400-8T2S-E	Catalyst IE3400 with 8 GE Copper and 2 GE SFP, Modular, NE	
IE-3400H-16FT-A	Catalyst IE3400 Heavy Duty w/ 16 FE M12 interfaces, IP67, NA	
IE-3400H-16FT-E	Catalyst IE3400 Heavy Duty w/ 16 FE M12 interfaces, IP67, NE	
IE-3400H-16T-A	Catalyst IE3400 Heavy Duty w/ 16 GE M12 interfaces, IP67, NA	
IE-3400H-16T-E	Catalyst IE3400 Heavy Duty w/ 16 GE M12 interfaces, IP67, NE	
IE-3400H-24FT-A	Catalyst IE3400 Heavy Duty w/ 24 FE M12 interfaces, IP67, NA	
IE-3400H-24FT-E	Catalyst IE3400 Heavy Duty w/ 24 FE M12 interfaces, IP67, NE	
IE-3400H-24T-A	Catalyst IE3400 Heavy Duty w/ 24 GE M12 interfaces, IP67, NA	
IE-3400H-24T-E	Catalyst IE3400 Heavy Duty w/ 24 GE M12 interfaces, IP67, NE	
IE-3400H-8FT-E	Catalyst IE3400 Heavy Duty w/ 8 FE M12 interfaces, IP67, NE,	
IE-3400H-8T-A	Catalyst IE3400 Heavy Duty w/ 8 GE M12 interfaces, IP67, NA	
IE-3400H-8T-E	Catalyst IE3400 Heavy Duty w/ 8 GE M12 interfaces, IP67, NE	

▼ Defect Information

Defect ID	Headline
CSCwm40031	Switch fails to autoboot IOS unless boot path is configured

▼ Problem Description

A limited number of Cisco Catalyst IE3200, IE3300, IE3400, and IE3400H Switches and Cisco Embedded Services 3300 Series Switches that were shipped with factory-installed Cisco IOS XE releases 17.9.4 and 17.9.5 may fail to boot up and become stuck in a ROM Monitor prompt during one of the following operations:

- When the switch is powered up for the first time (out-of-box)
- When the switch runs the Express Setup procedure, or “Day-0” workflow

This problem is not observed if there is an SD Card plugged into the switch, and if the switch is running Cisco IOS XE Software Release 17.9.6a or later.

▼ Background

When the switch boots up with the default startup configuration (out-of-box or after a write erase), it initiates the plug-and-play (PnP) process or Day-0 workflow. The Day-0 workflow is completed by the user through either the web UI (Express Setup), a console, or a PnP setup.

If the Day-0 workflow is not completed after the device has completed the Cisco IOS XE Software bootup sequence, the switch fails to boot Cisco IOS XE Software automatically during the next reload or power cycle and enters ROM Monitor mode.

▼ Problem Symptom

The device remains in ROM Monitor mode, and the following symptoms are observed:

- The device system LED does not turn solid green.
- The device console displays an error message as shown in the following image:

```
Initializing disk drivers...
SD Card is not present
Initializing file systems...

*****
* Rom Monitor for IE3x00 *
* Copyright (c) 2017-2021 by Cisco Systems, Inc. *
* All rights reserved. *
*****

* Version: 7.1.14
* Compiled: Wed 20-Apr-22 22:19 [RELEASE SOFTWARE]
* Boot Partition: qspi-upgrade-bootloader
* Reset Reason: Power On Reset

Loading "flash:.installer/rollback/rb_points/0/packages.conf" to memory...
Error: file "flash:.installer/rollback/rb_points/0/ie3x00-rp_iot.17.09.05c.SPA.pkg" not found or already open

switch:
```

▼ Workaround/Solution

To recover the device from ROM Monitor mode and boot a Cisco IOS XE Software image, use any of the following methods:

1. Insert an SD Card that is running Cisco IOS XE Release 17.9.6a or later and power on (or power cycle) the switch. When the switch has booted up using the image from the SD card, set the system boot path variable using the configuration command **boot system <image path flash or SD Card>**, as shown in the following image:

```
IE3300_ESC#
IE3300_ESC#
IE3300_ESC#config t
Enter configuration commands, one per line. End with CNTL/Z.
IE3300_ESC(config)#boot system flash:ie3x00-universalk9.17.12.03.SPA.bin
IE3300_ESC(config)#end
IE3300_ESC#
IE3300_ESC#
*May 9 14:59:40.644: %SYS-5-CONFIG_I: Configured from console by console
IE3300_ESC#show boot
Current Boot Variables:
BOOT variable = flash:ie3x00-universalk9.17.12.03.SPA.bin;

Boot Variables on next reload:
BOOT variable = flash:ie3x00-universalk9.17.12.03.SPA.bin;
MANUAL_BOOT variable = no
ENABLE_BREAK variable = yes
IE3300_ESC#
```

2. Using the console, set the boot path variable to a valid Cisco IOS XE Software image from the ROM Monitor prompt and issue the **boot** command, as shown in the following image:

```
switch:
switch:
switch:
switch:
switch: set var BOOT=flash:ie3x00-universalk9.17.12.03.SPA.bin
switch: set
```

```
Environment variables in var:
BOOT=flash:ie3x00-universalk9.17.12.03.SPA.bin
BSI=0
CSDL_ENTROPY_REQUIREMENT_DISABLE=
CSDL_MODE_DISABLE=
ConfigReg=0x102
DISABLE_USB_FLASH_0=no
DISABLE_USB_FLASH_1=no
ENABLE_FLASH_PRIMARY_BOOT=yes
FIPS_MODE=
MANUAL_BOOT=yes
PN_SNMP_SYS_CONTACT=
PN_SNMP_SYS_DOMAIN_NAME=
PN_SNMP_SYS_HOSTNAME=
PN_SNMP_SYS_LOCATION=
POST_ENABLE=no
PROFINET_CONN_PREV=0
PROFINET_DEVICE_NAME=
PROFINET_DEV_IM_DATE=
PROFINET_DEV_IM_DISC=
PROFINET_DEV_IM_FUNC=
PROFINET_DEV_IM_LOC=
RANDOM_NUM=267733386
RET_2_RCALTS=1715266885
RET_2_RTS=
SDM_TEMPLATE_ID=0
SYSTEM_SERIAL_NUM=FCW2709Y08A
TERMLINES=0
```

```
Environment variables in qspiflash:
```

```
switch:
switch: b
Loading "flash:ie3x00-universalk9.17.12.03.SPA.bin" to memory...
Verifying image "flash:ie3x00-universalk9.17.12.03.SPA.bin"...
Image passed digital signature verification
```

Note: After the switch boots up in Cisco IOS XE mode, delete the following file from flash using the exec command **delete flash:installer/rollback/rb_points/0/packages.conf**, as shown in the following image:

```

IE3300_ESC#
IE3300_ESC#dir flash:.installer/rollback/rb_points/0/
Directory of flash:.installer/rollback/rb_points/0/

64900  -rw-          0  Jan 24 2025 01:29:55 +00:00  packages.conf

1697755136 bytes total (1068183552 bytes free)
IE3300_ESC#
IE3300_ESC#del
IE3300_ESC#delete flash:.installer/rollback/rb_points/0/packages.conf
Delete filename [.installer/rollback/rb_points/0/packages.conf]?
Delete flash:.installer/rollback/rb_points/0/packages.conf? [confirm]
IE3300_ESC#
IE3300_ESC#dir flash:.installer/rollback/rb_points/0/
Directory of flash:.installer/rollback/rb_points/0/

No files in directory

1697755136 bytes total (1068183552 bytes free)
IE3300_ESC#

```

✓ How to Identify Affected Products

To determine if a serial number is affected, see the **Serial Number Validation** section of this field notice.

✓ Additional Information

List of PIDs affected:

- Cisco Catalyst IE3200 Series Switches
- Cisco Catalyst IE3300 Series Switches
- Cisco Catalyst IE3400 Series Switches
- Cisco Catalyst IE3400H Series Switches
- Cisco Embedded Services 3300 Series Switches

Serial Number Validation

Cisco provides the Serial Number Validation Tool to verify whether a device is impacted by this issue. To check the device, enter the serial number in the Serial Number Validation Tool.

Important: For security reasons, you must click the **Serial Number Validation Tool** link that is provided in this section. Do not copy and paste the link into a browser. Use of the Serial Number Validation Tool URL external to this field notice will fail.

Revision History

Version	Description	Section	Date
1.0	Initial Release	–	2025-FEB-06

For More Information

For further assistance or for more information about this field notice, contact the Cisco Technical Assistance Center (TAC) using one of the following methods:

- Open a service request on Cisco.com
- By email or telephone

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