Emergency Recovery Installation for Cisco Catalyst IE9300 Rugged Series Switches

First Published: 2022-06-22

Last Modified: 2023-02-15

Emergency Recovery Installation

This document describes how to recover Cisco Catalyst IE9300 Rugged Series Switches that are stuck at the switch prompt.

If the other recovery methods—such as using a different valid image on the flash or a USB drive—fail, the procedure in this document serves as a trap door that you can use to recover the system. Completing the procedure enables you to download the valid released image.

It is likely that the switch is stuck at the `switch:` prompt. However, if you are in a boot loop, you can use the Express Setup button on the front of the switch to break the cycle. Hold the button for approximately 15 seconds, and the switch breaks the cycle and stops at the `switch:` prompt. From the `switch:` prompt, complete the steps in the procedure.

Note Holding the Express Setup button for 15 seconds causes the startup configuration to be renamed. After you fix the issue, the switch boots with the manufacturing default configuration.

Different switches use different terminology to refer to the reset button. Cisco Catalyst IE9300 Rugged Series Switches call this the Express Setup switch or button. Other products may refer to this as the Factory Default Switch. In either case, the functionality is the same.

For more information about using the Express Setup button on Cisco Catalyst IE9300 Rugged Series Switches, see the "Express Setup" chapter of the Cisco Catalyst IE9300 Rugged Series Switch Hardware Installation Guide.

Perform Emergency Recovery

Complete the following steps to perform emergency recovery:

Before you begin

- Ensure that you have a connection to the console of the switch.

  For the connection, you need a console connection from a PC to the RJ-45 or USB console port on the switch. Use a terminal emulation program and set the serial port to 9600, N, 8, 1.

- Connect port Gi1/0/23 on the switch to a device (PC, switch, or router) that can provide a DHCP-assigned IP address and provide access to a TFTP server.

  Access to a TFTP server is needed to download a released IOS-XE image for the switch.

- Download a valid released image file from Cisco.com and store it in the root of the TFTP server.

Procedure

Step 1 Identify and load the emergency boot software image, which is in the `emgy0:` partition.

Example:

```
switch: dir emgy0:

Date       Time    Attribute   Size         Name
========== =====   ==========  ==========   ================
2022/05/09 15:28   -rw-r--r--   255872740   ie9k_iosxe.17.08.01a.SPA.bin

   Total space = 262144 KB
   Available   = 963 KB
```

In the preceding example, you can see that the file `ie9k_iosxe.17.08.01a.SPA.bin` is available. This is the emergency software image.

Note Over time, the name and version of the recovery version may change.

Step 2 Boot the emergency install image.

Example:

```
switch: boot emgy0:ie9k_iosxe.17.08.01a.SPA.bin
```

You may need to enter the command twice. If the bootloader version is not compatible with the IOS-XE version, IOS-XE first makes the bootloader version compatible, and then you must enter the boot command again. The following example shows a case in which the boot command is entered twice:

```
switch: dir emgy0:

Attributes        Size         Name
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
drwx------        4096   lost+found
drwxr-xr-x        4096   user
-rwxr-xr-x   578784245   ie9k_iosxe_npe.17.08.01a.SPA.bin
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -



switch: boot emgy0:ie9k_iosxe_npe.17.08.01a.SPA.bin
boot: attempting to boot from [emgy0:ie9k_iosxe_npe.17.08.01a.SPA.bin]
boot: reading file ie9k_iosxe_npe.17.08.01a.SPA.bin
########################################################################################################################################################
Verifying image emgy0:ie9k_iosxe_npe.17.08.01a.SPA.bin
WARNING: DEV-Keys are installed in box
SecureBoot: REL KEY signed image verified successfully!

              Restricted Rights Legend

Use, duplication, or disclosure by the Government is
subject to restrictions as set forth in subparagraph
(c) of the Commercial Computer Software - Restricted
Rights clause at FAR sec. 52.227-19 and subparagraph
(c) (1) (ii) of the Rights in Technical Data and Computer
Software clause at DFARS sec. 252.227-7013.

           Cisco Systems, Inc.
```

```
            170 West Tasman Drive
            San Jose, California 95134-1706


Cisco IOS Software [Cupertino], Catalyst L3 Switch Software (IE9K_IOSXE), Version 17.8.1a,
 RELEASE SOFTWARE (fc3)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2022 by Cisco Systems, Inc.
Compiled Wed 20-Apr-22 13:53 by mcpre
```

Step 3 Configure an IP address on the switch.

Example:

```
Switch> enable
Switch# configuration terminal
Switch(config)#  interface vlan 1
Switch(config-if)# ip address <ip address> <subnetmask>
Switch(config-if)# end
Switch#
```

Step 4 Ping the terminal that contains the TFTP server in order to test the connectivity:

Example:

```
switch# ping 192.0.2.1
```

Step 5 Enter the escape sequence to terminate.

```
Sending 5, 100-byte ICMP Echoes to 192.0.2.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/4 ms
```

Step 6 Copy the image using TFTP, using the following command: **copy tftp://*location*/directory/*bundle_name* flash:**

Example:

```
switch# copy tftp://10.1.1.1/directory/imagename flash:

<…>
```

Step 7 Restart the system.

Step 8 Boot the just-downloaded image from the switch prompt.

Communications, Services, and Additional Information

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

Cisco Bug Search Tool

Cisco Bug Search Tool (BST) is a gateway to the Cisco bug-tracking system, which maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. The BST provides you with detailed defect information about your products and software.

Documentation Feedback

To provide feedback about Cisco technical documentation, use the feedback form available in the right pane of every online document.