

# Emergency Recovery Installation for Cisco Catalyst IE3x00 Rugged and IE3400 Heavy Duty Switches

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## Emergency Recovery Installation

This document describes how to recover Cisco Catalyst IE3x00 Rugged and IE3400 Heavy Duty 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. If the other recovery methods fail, the switch has a trap door method that you can use to recover the system.

It is likely that the switch is stuck at the `switch:` prompt. However, if you are in a boot loop and have a IE3x00 series switch, 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.



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**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.

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Different switch use different terminology to refer to the reset button. The Cisco IE3x00 series switches call this the Express Setup switch. Other products may refer to this as the Factory Default Switch. In either case, the functionality is the same.

## 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 the port 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.

The port that you connect depends upon the model of switch. For IE3x00 series switches, connect port is Gi1/3. For IE3400H switches, connect either Gi1/1 or Fa1/1, depending on model of IE3400H.

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     ie3x00-universalk9.16.11.01a.SPA.bin

Total space = 262144 KB
Available   = 963 KB

```

In the preceding example, you can see that the file `ie3x00-universalk9.16.11.01a.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:ie3x00-universalk9.16.11.01a.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  ie3x00-universalk9.16.11.01a.SPA.bin
-----

```

```

switch: boot emgy0:ie3x00-universalk9.16.11.01a.SPA.bin
boot: attempting to boot from [emgy0:ie3x00-universalk9.16.11.01a.SPA.bin]
boot: reading file ie3x00-universalk9.16.11.01a.SPA.bin
#####
Verifying image emgy0:ie3x00-universalk9.16.11.01a.SPA.bin
WARNING: DEV-Keys are installed in box
SecureBoot: REL KEY signed image verified successfully!

```

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**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.

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