Upgrade Firmware for Cisco IEC6400 Edge Compute Appliance

Contents

Introduction

This document describes how to upgrade the IEC6400 firmware to Release 1.2.0.

Background Information

The Cisco IEC6400 Edge Compute Appliance is an industrial gateway that combines Standalone Ultra-Reliable Wireless Backhaul (URWB) capabilities with a Cisco UCS C220 M6 Rack Server platform to deliver resilient wireless backhaul connectivity. In Standalone URWB deployments, it can operate as either a Mesh Endpoint (Mesh END) or a Gateway to support reliable communications in large-scale industrial networks.

Release 1.2.0 can be downloaded from here:

https://software.cisco.com/download/home/286331621/type/286331613/release/1.2.0

Prerequisite

- When upgrading to 1.2.0 from an older release, you must first install a special TAC-provided image to initialize secure storage on the device.
- Attempting to upgrade directly to 1.2.0 without installing the special image causes the upgrade to fail.

Obtaining the Special Image

Open a Cisco TAC case and provide this for each IEC6400:

- IEC6400 Serial Number
- IEC6400 Mesh ID

TAC provides the required special image (often referred to as the “TAM” image).

Open a case using this URL:

https://mycase.cloudapps.cisco.com/case

Upgrade Process

- The IEC6400 firmware upgrade cannot be performed via GUI.
- Upgrade is performed via CLI, using a TFTP server reachable from the IEC6400.

Prepare the TFTP Server

1. Stand up a TFTP server on a reachable IP address.
2. Place these files in the TFTP root directory:

- The TAC special image (example: IEC6400_TAM_<timestamp>.img)
- The IEC6400 1.2.0 image (example: IEC6400-1.2.0.5.img)

3. Confirm the IEC6400 has IP reachability to the TFTP server (routing/VLAN/firewall rules allow UDP/69).

CLI Command Reference (tftp-fw-upgrade)

From the IEC6400 CLI, the upgrade utility provides these options:

- tftp-server — set the TFTP server IP address
- upgrade-fw-image — specify the firmware image to download and install
- automatic-upgrade — enable/disable periodic checks and automatic upgrade
- check-period — set periodic check interval (hours)
- check-now — trigger an immediate firmware check/download/upgrade

Upgrade Procedure

Step 1:

Run the upgrade pointing to the TAC-provided image.

- The SSH session can disconnect during the upgrade/reboot process. This can be expected—wait for the device to come back online.
- Do not interrupt power during upgrade.

```
# tftp-fw-upgrade tftp-server 10.122.136.38 upgrade-fw-image IEC6400_TAM_20260128115452.img check-now
Starting TFTP file transfer for IEC6400_TAM_20260128115452.img, TFTP server 10.122.136.38 ...
New firmware: IEC6400_TAM_20260128115452.img. Start downloading...
1M
TFTP firmware upgrade...
WARNING: DO NOT POWER OFF THE UNIT DURING A FIRMWARE UPGRADE
starting upgrading...
Firmware already upgrading.
Rtp6395@5.69.163.198:~# Connection to 14.2.210.110 closed by remote host.
Connection to 14.2.210.110 closed.
```

Step 2

Upgrade to IEC6400 Release 1.2.0

After the device is back online (post Step 1), run the upgrade again using the 1.2.0 firmware image:

```
# tftp-fw-upgrade tftp-server 10.122.136.38 upgrade-fw-image IEC6400-1.2.0.5.img
Starting TFTP file transfer for IEC6400-1.2.0.5.img, TFTP server 10.122.136.38 ...
New firmware: IEC6400-1.2.0.5.img. Start downloading...
449M
TFTP firmware upgrade...
WARNING: DO NOT POWER OFF THE UNIT DURING A FIRMWARE UPGRADE
starting upgrading...
Rtp6395@5.69.163.198:~# Connection to 14.2.210.110 closed by remote host.
Connection to 14.2.210.110 closed.
```