



Staging Area Quick Reference Sheet for ISDP Networks

Audience

This quick reference sheet is for staging area personnel who stage new, RMA, or field-return IP set-tops for use with the Cisco® IPTV Services Delivery System (ISDS).

Scope

This document contains a brief summary of the procedures required to stage IP set-tops. For additional staging preparations and procedures, refer to the *ISDP Set-Top Staging Guide* (part number 4021173).

Note: This document only addresses staging for IP set-tops. For information on staging RF set-tops, refer to the *Explorer Digital Home Communications Terminal Staging Guide* (part number 734375).

Document Version

This is the first release of this document.

Permission to Copy

You may photocopy this page for use in your staging area.

Additional Documentation

For more detailed information about staging and other concepts discussed in this sheet, read the following publications:

- *Downloading Client Application Software to ISDP Set-Tops Installation Instructions* (part number 4021172)
- *ISDP Set-Top Staging Guide* (part number 4021173)

Staging New and RMA IP Set-Tops

Complete these steps to stage new or RMA IP set-tops.

1. Check with your ISDS operator and billing system operator to verify that EMM data (for the set-tops you are preparing to stage) has been properly installed. Refer to the *Downloading Client Application Software to ISDP Set-Tops Installation Instructions* for more information.
2. Scan the set-tops into the billing system using the appropriate procedures authorized by your billing system provider.
Important: Ensure that the billing system operator does not send transactions to the ISDS at this time.
3. Unpack the set-tops and place them onto the staging rack.
4. Connect the **Network** port to the network.
5. Ensure that a default download group for this set-top type is created using the correct software.
6. Connect the set-tops to AC power. The set-tops download the software from the ISDS. (Red record LED is blinking rapidly to indicate that a SW download is taking place.)
7. Wait for the set-tops to indicate that the download is complete and software has been flashed to the set-top. (Link LED is lit and the Power LED is flashing).
8. From the billing system, send a "hit" to the ISDS to place the set-tops in service with at least one base package, and with DMS enabled.
Note: A base package needs to be added to verify encrypted content.
9. Connect the TV OUT port on each set-top to a TV monitor, access the diagnostics screens, and verify the EMMs received (at least 33).
Note: See *Verifying EMMs for Set-Tops That Failed to Stage*, later in this guide, for the detailed procedure.

10. Use the TV monitors to verify the following:

- Receipt of authorized channels
- DVR functionality (if DVR package assigned)

11. Does your business process require inventory set-tops to be authorized for service?*

- If **yes**, go to step 12.
- If **no**, downgrade (disable) the set-tops in accordance with your site's process.

12. Disconnect the set-tops and either return them as staged inventory to your warehouse or give them to technicians to install at the subscribers' locations.

* **Note:** Some sites reverse steps 10 and 12 to let the installers see services during the installation before having the set-top receive a hit with the subscriber's contracted services. If your site does this, the set-tops will only display service if it is installed within the EMM timeout period (by default, 30 days). After the timeout period, the set-top will need to receive a hit before it can display secure services.

Set-Top Ready Indications

When the set-top is connected to the network, has booted and finished downloading software and the **Link** LED is lit with all other LEDs OFF, the set-top is authorized for services and ready to transmit video. Press the **Power** button to view TV.

Resetting the Set-Top to the Factory Default Configuration

Follow these steps to reset the set-top to the factory default configuration. This process sets the set-top to default configuration and clears all recordings.

1. On the remote control, press **Menu**.
2. In the onscreen menu, select **Settings**.
3. In the onscreen menu, select **Troubleshooting**.
4. In the onscreen menu, select **Restore Factory Settings** on the **Diagnostics** tab.
5. On the remote control, click **OK**.
6. In the onscreen menu, select **Yes**.
7. In the onscreen menu, enter the PIN code to clear the existing set-top settings and restore the factory settings.
8. Press the **Exit** key on the remote control.

Verifying EMMs for Set-Tops That Failed to Stage

1. With the set-top powered on (no longer in standby mode) and authorized on the network, press and hold the **OK** button on the remote control. The **Power** LED will flash until the HD indicator on the set-top begins to flash.
2. Press the **DOWN** button on the remote control while the **HD** indicator on the set-top is flashing. The diagnostic screens appear.
3. Use the **RIGHT** button on the remote control to navigate to the **Options** page, and then to the **Conditional Access** page.
4. From the Conditional Access page, select **MsgRcvTable** and press **OK** to access the MsgRcvTable page.
5. Does the MsgRcvNum table display an EMM count of 33?
 - If **yes**, you have completed this procedure.
 - If **no**, send an instant hit again. If the MsgRcvNum table still fails to show increments of 33, contact Cisco Services.

LED Indicators Displayed During Boot Sequence or Software Updates

The following table shows an example of front panel LED boot sequence blinking patterns that appear after AC power is applied to the set-top or after the set-top is rebooted.

Note: The times are approximate and vary based on image size and download rate.

● = On ○ = Off ◎ = Fast Blink ◉ = Blink

Time Elapsed (Approx)	Pwr LED	Link LED	HD LED	REC LED	Status
2 sec	○	○	○	○	Power on / reset
1 sec	◉	●	●	●	All on
< 1 sec	◉	○	○	○	Begin bootloader startup
5 sec	◉	○	○	○	Power-on self-test / check flash CRCs
2 sec	◉	○	○	○	Begin DHCP / network activity
1 sec	◉	●	○	○	IP address acquired
1 sec	◉	●	○	◉	Downloading directory
Typically 5 to 10 minutes	◉	●	○	◉	Downloading update image
10 sec	◉	●	○	◉	Integrity and authentication check
10 sec	◉	●	○	◎	Erasing flash
20 sec	◉	●	○	◎	Writing flash
n/a	◉	●	○	○	Flash write complete
20 sec	●	●	○	○	Authentication check
n/a	○	●	○	○	Control passing to next stage (Link LED is actual link state)

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Notes:

- When complete, the **Power** LED goes off for a long period of time.
- The stages shown in the shaded rows are only performed when downloading updates.

LED Error Indications

The following table shows an example of the front panel LED display if an error occurs during the boot sequence or the software update.

● = On ○ = Off ◎ = Fast Blink ◉ = Blink

Time Elapsed (Approx)	Pwr LED	Link LED	HD LED	REC LED	Status
n/a	◉	◉	◉	◉	Hard-error (non-recoverable)
n/a	◉	◉	◉	●	Soft-error (recoverable, will reboot)

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