

How to Migrate Catalyst 3850 Series from RTU to Smart Mode

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Introduction

The article describes the process of migrating Catalyst 3850 Series from traditional right-to-use (RTU) licenses to Smart mode by device led conversion (DLC). DLC is a capability that enables you to upgrade a new device (product instance) to Smart licenses when it is registered in Cisco Smart Software Manager (CSSM). All the licenses on the device will automatically be converted from Classic or Perpetual RTU to Smart licenses without you having to perform any manual conversion. DLC will only be available at latest release of software for devices that support DLC. To identify the devices that support DLC, refer to [Smartsheet](#).

Caution: You can perform DLC only once for each device. This process only supports converting Classic to Smart Licenses. Once you convert the Smart licenses, you will not be able to convert them back to Classic – unless you deregister the device in CSSM and remove all the Smart licenses.

Prerequisites

Requirements

Before you start, ensure that you have the following data at your disposal:

- [Active Cisco.com account](#)
- Smart Account Administrator user role (To request Smart Account Administrator role, refer to [How to Request Access to an Existing Smart Account](#).)
- Access to the device

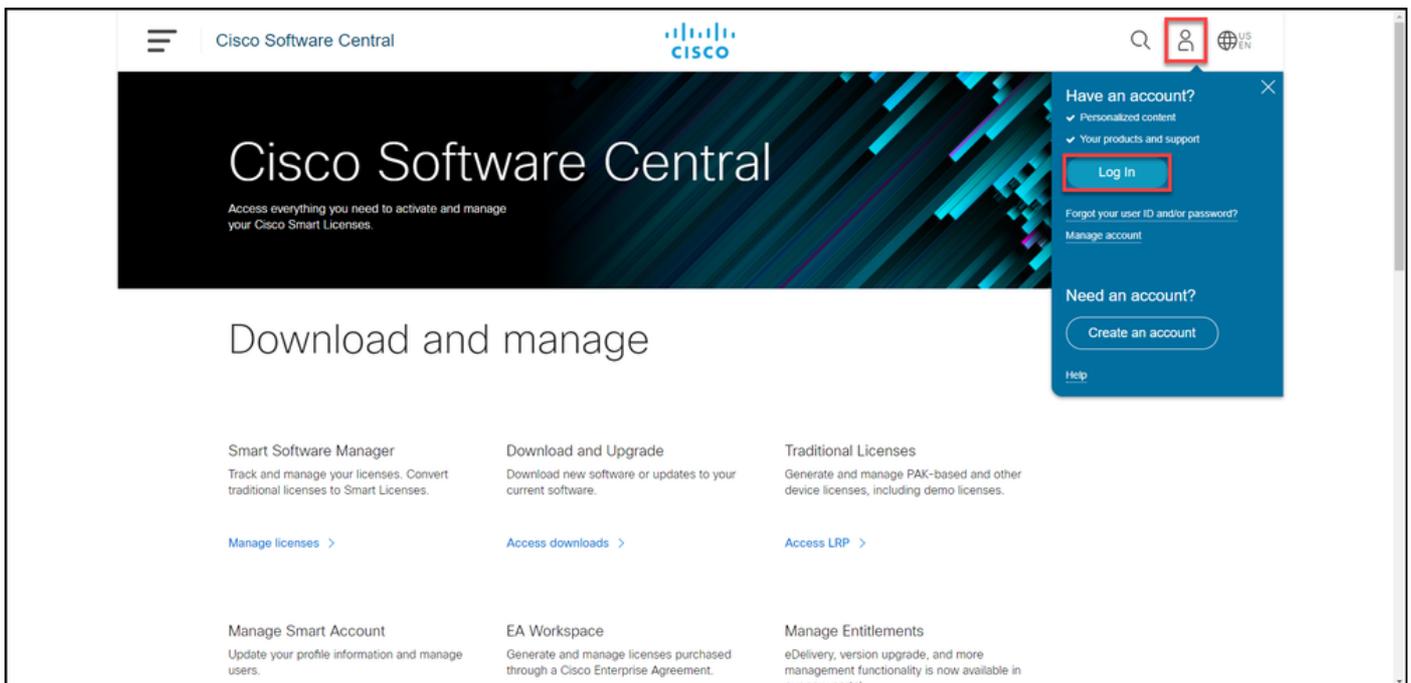
Components Used

The information in this document was created from Catalyst 3850 with IOS version 16.12.05b in a specific lab environment. If your network is live, ensure that you understand the potential impact of any command.

Migrating Catalyst 3850 Series from RTU to Smart Mode

Step 1:

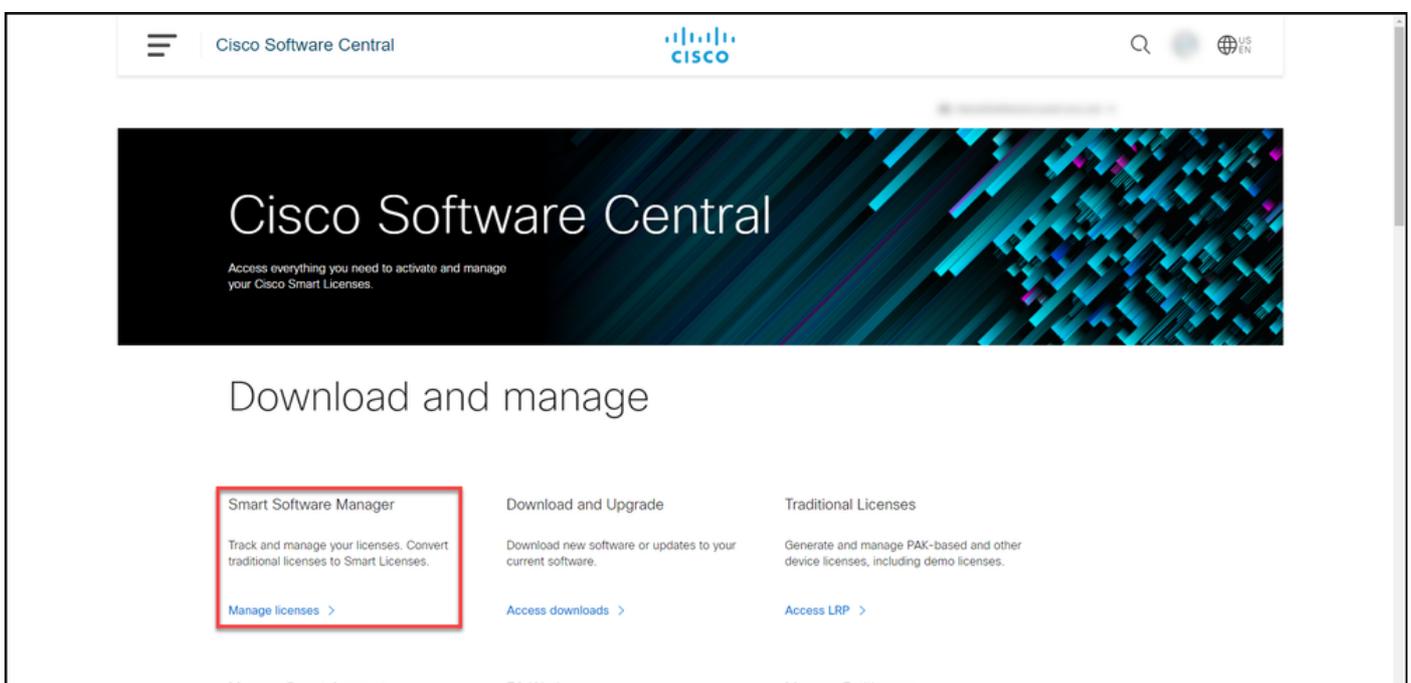
Go to [Cisco Software Central](https://software.cisco.com) and log in with your Cisco.com account.



Step 2:

In the **Smart Software Manager** section, click **Manage licenses**.

Step result: You enter **Cisco Smart Software Manager (CSSM)**.



Step 3:

On the **Convert to Smart Licensing** tab, select **Conversion Settings**, and then in the **Device Led Conversion to Smart Licensing** section, enable DLC by selecting one of the following options:

a. Enabled on All Virtual Accounts

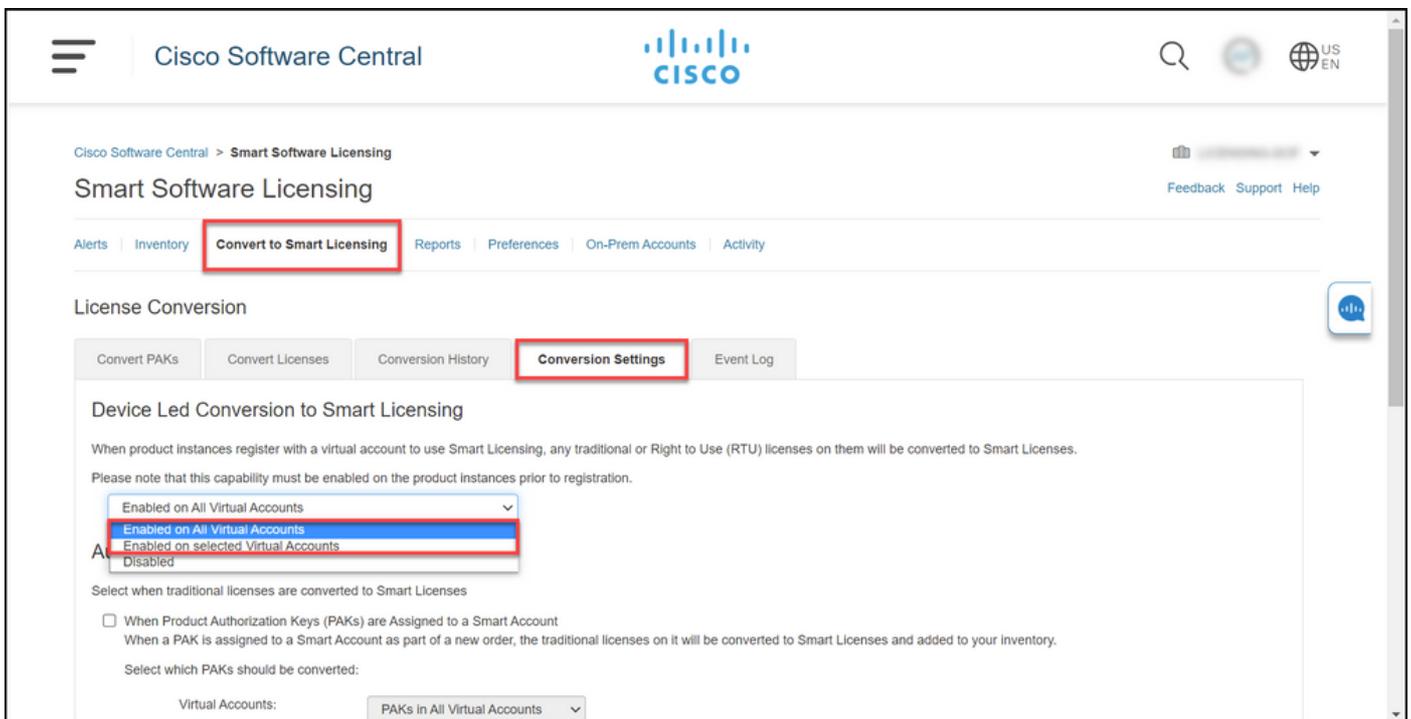
Click **Save**.

In the **Select Virtual Accounts - Convert to Smart Licensing** dialog box, from the **Available Virtual Accounts** list box, select the Virtual account for which you want to enable DLC, and then click the arrow to transfer the selected Virtual account to the **Selected Virtual Accounts** list box. Click **OK**. Then click **Save** on the **Conversion Settings** tab. Refer to [Figure 1-10](#).

b. Enabled on Selected Virtual Accounts

Note: To remove the Virtual account from the **Selected Virtual Accounts** list box, select the Virtual account that you want to remove, then click the arrow to transfer it to the **Available Virtual Accounts** list box.

Note: You need to enable license conversion before you start the conversion. Failure to enable license conversion will result in CSSM displaying an insufficient licenses error.



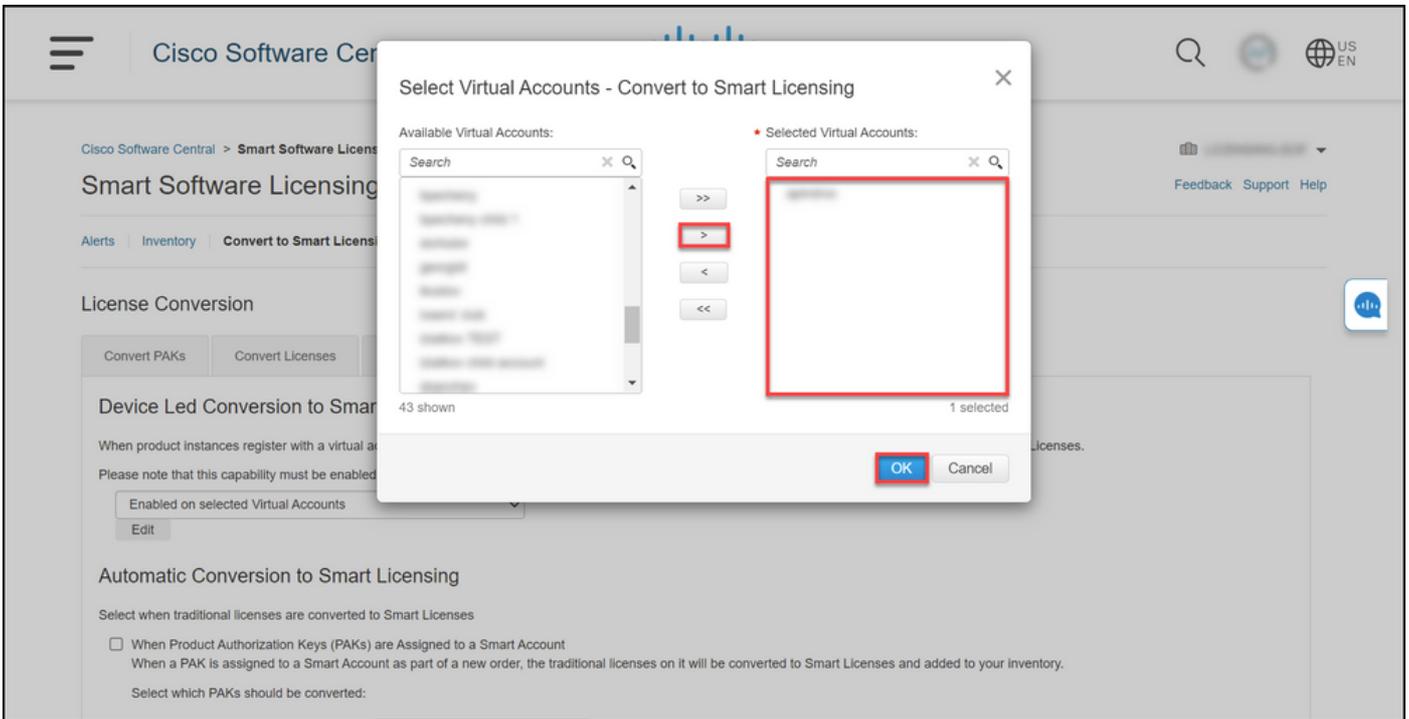


Figure 1 - Selection of Virtual accounts for the Enabled on selected Virtual Accounts option

(Optional) Step 4:

In CSSM, click **Preferences**, and in the **Notifications** section, ensure that you select the **Receive a daily summary containing the events selected below** check box. To receive email notifications after successful DLC, select the **New Licenses** check box from the **Informational Events** section. To receive email notifications if licenses are not converted, select the **Licenses Not Converted** check box from the **Alert Events** section. Click **Save**.

The screenshot shows the Cisco Software Central interface for Smart Software Licensing. The breadcrumb trail is "Cisco Software Central > Smart Software Licensing". The page title is "Smart Software Licensing" with links for "Feedback", "Support", and "Help". A navigation bar includes "Alerts", "Inventory", "Convert to Smart Licensing", "Reports", "Preferences" (highlighted with a red box), "On-Prem Accounts", and "Activity".

License Configuration

- Show License Transaction Details in Inventory Tab: Enabled
- Reserved License Preinstallation: Enabled on All Virtual Accounts

Notifications

Daily Event Summary

- Receive a daily email summary containing the events selected below

Email Address: [Redacted]

Alert Events:

- Insufficient Licenses - Usage in account exceeds available licenses
- Licenses Expiring - Warning that term-limited licenses will be expiring. Sent 90, 60, 30, 14, 7, 3 and 1 day prior to expiration.
- Licenses Expired - Term-limited licenses have expired. Only displayed if Licenses Expiring warning have not been dismissed.
- Product Instance Failed to Connect - Product has not successfully connected during its renewal period
- Product Instance Failed to Renew - Product did not successfully connect within its maximum allowed renewal period.
- On-Prem Synchronization Overdue - On-Prem has not synchronized within the expected time period.
- On-Prem Unregistered and Removed - On-Prem failed to synchronize in 90 days and has been removed.
- Licenses Not Converted - One or more traditional licenses were not automatically converted to Smart during Product Instance Registration.

Informational Events:

- New Licenses - An order has been processed and new licenses have been added to the account
- New Product Instance - A new product instance has successfully registered with the account
- Licenses Reserved - A product instance has reserved licenses in the account

Status Notification

- Receive an email when a On-Prem synchronization file has finished processing by Smart Software Manager

Virtual Assistant

- Ask if I need help when I am inactive

Buttons:

Footer: [Contacts](#) | [Feedback](#) | [Help](#) | [Site Map](#) | [Terms & Conditions](#) | [Privacy Statement](#) | [Cookie Policy](#) | [Trademarks](#)

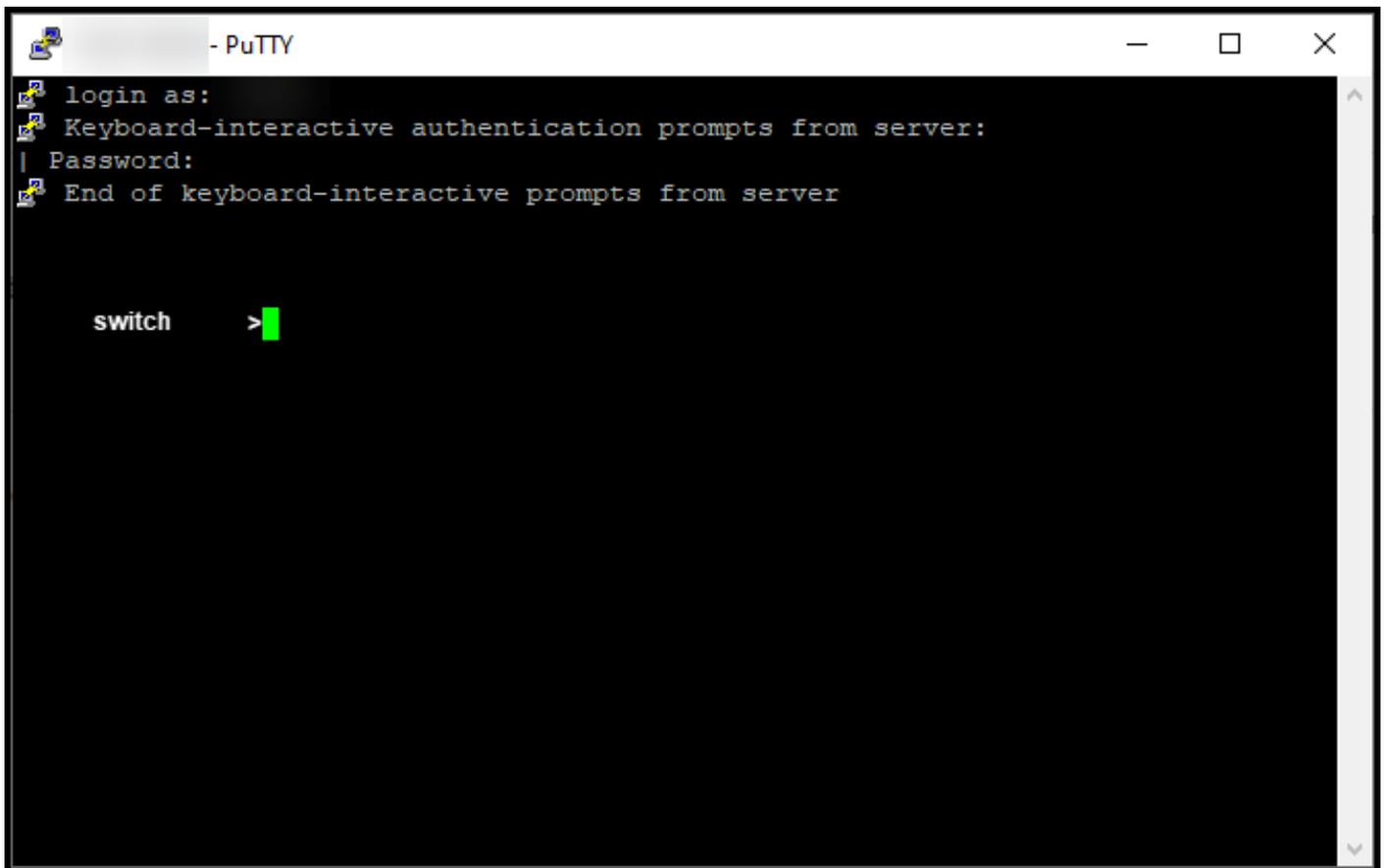
Step 5:

Register your device with a Smart account. To register your device with a Smart account, refer to [How to Register a Device with a Smart Account \(Cloud Connect\)](#).

Step 6:

Log in to the IOS of the device with the login and password by using one of the clients or console.

Step result: You enter the user EXEC mode of the IOS.



```
login as:  
Keyboard-interactive authentication prompts from server:  
| Password:  
End of keyboard-interactive prompts from server  
  
switch >
```

Step 7:

Type the **enable** command in the command line, and then enter the password to access the privileged EXEC mode.

Step result: You enter the privileged EXEC mode.

```
login as:
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server

switch      >enable
Password:
switch      #
```

Step 8:

In the privileged EXEC mode, initiate DLC by entering the **license smart conversion start** command.

Step result: The system migrates the license to CSSM.

```
login as:
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server

switch      #license smart conversion start
switch      #
```

Verify

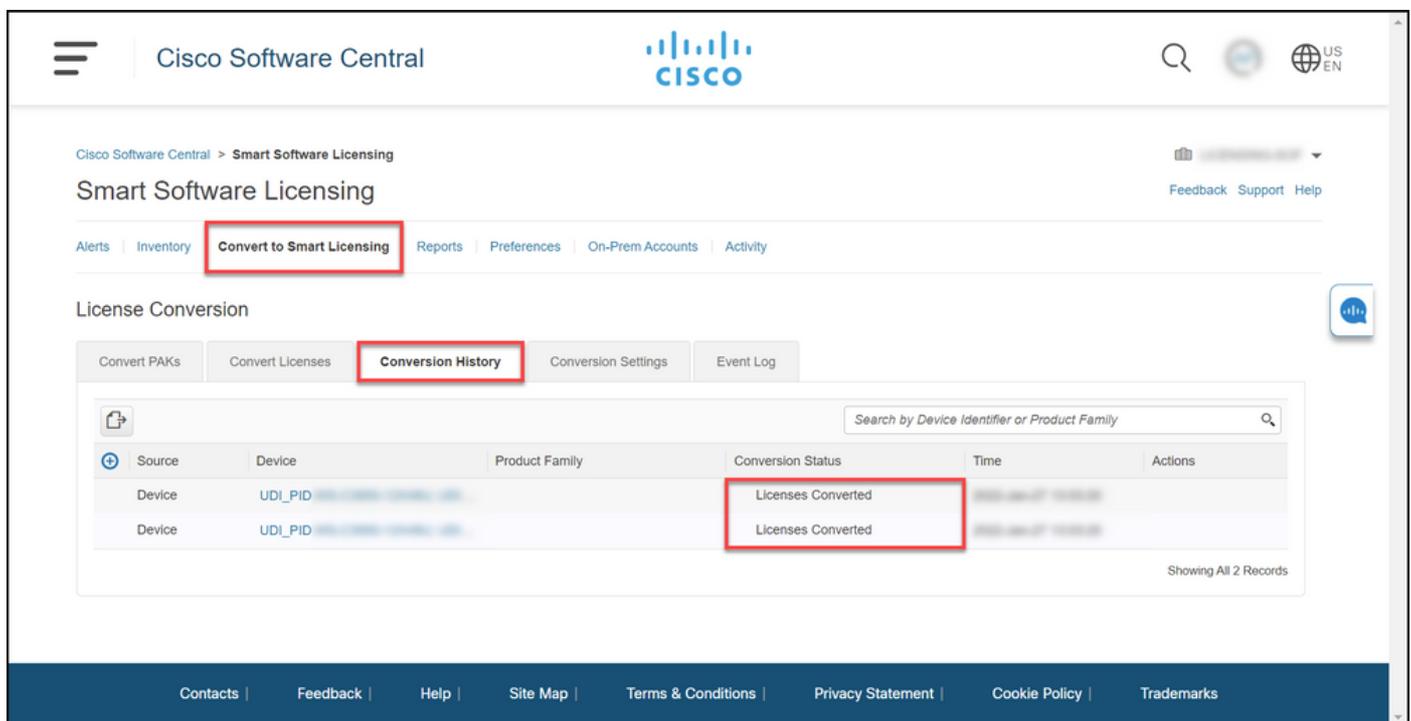
Use this section to confirm that you properly migrated Catalyst 3850 Series from RTU to Smart mode.

Option 1:

Verification Step: In **Cisco Smart Software Manager (CSSM)**, click **Convert to Smart Licensing**, and then click **Conversion History**. Check the status of your device in the **Conversion Status** column.

Step result: The system displays the status of **Conversion Status** as **Licenses Converted**.

Tip: If you have a long conversion history, you can search for your device in the search bar by entering a device identifier or product family.



The screenshot shows the Cisco Software Central interface. The top navigation bar includes the Cisco logo and the text 'Cisco Software Central'. Below this, the breadcrumb trail reads 'Cisco Software Central > Smart Software Licensing'. The main heading is 'Smart Software Licensing', with links for 'Feedback', 'Support', and 'Help'. A secondary navigation bar contains 'Alerts', 'Inventory', 'Convert to Smart Licensing' (highlighted with a red box), 'Reports', 'Preferences', 'On-Prem Accounts', and 'Activity'. Underneath, the 'License Conversion' section is active, with sub-tabs for 'Convert PAKs', 'Convert Licenses', 'Conversion History' (highlighted with a red box), 'Conversion Settings', and 'Event Log'. A search bar is present with the placeholder text 'Search by Device Identifier or Product Family'. Below the search bar is a table with the following structure:

Source	Device	Product Family	Conversion Status	Time	Actions
Device	UDI_PID		Licenses Converted		
Device	UDI_PID		Licenses Converted		

The 'Conversion Status' column for both rows is highlighted with a red box. At the bottom right of the table, it says 'Showing All 2 Records'. The footer of the page contains links for 'Contacts', 'Feedback', 'Help', 'Site Map', 'Terms & Conditions', 'Privacy Statement', 'Cookie Policy', and 'Trademarks'.

Option 2:

Verification Step: In **Cisco Smart Software Manager (CSSM)**, click **Inventory**, select your Virtual account, and then click **Licenses**.

Step result: The system displays your converted licenses in the table.

Tip: If you have a long list of licenses, you can search for your license in the search bar.

Cisco Software Central > Smart Software Licensing

Smart Software Licensing

Alerts **Inventory** Convert to Smart Licensing Reports Preferences On-Prem Accounts Activity

Virtual Account: [dropdown] 1 Minor Hide Alerts

General **Licenses** Product Instances Event Log

Available Actions Manage License Tags License Reservation... Show License Transactions Search by License

License	Billing	Purchased	In Use	Substitution	Balance	Alerts	Actions
<input type="checkbox"/> C3850_48_Ipserv	Prepaid	2	2	-	0		Actions
<input type="checkbox"/> Source: DLC Device Conversion SN: [redacted]			1	Expires: -never-			
<input type="checkbox"/> Source: DLC Device Conversion SN: [redacted]			1	Expires: -never-			
<input checked="" type="checkbox"/> Cisco FMC 2K Series Strong Encryption (3DES/AES)	Prepaid	1	0	-	+1		Actions
<input checked="" type="checkbox"/> UC Manager Basic License	Prepaid	1	0	-	+1		Actions
<input checked="" type="checkbox"/> UC Manager Enhanced License	Prepaid	2	0	-	+2		Actions
<input checked="" type="checkbox"/> UC Manager Enhanced Plus License	Prepaid	1	0	-	+1		Actions
<input checked="" type="checkbox"/> UC Manager Essential License	Prepaid	1	0	-	+1		Actions
<input checked="" type="checkbox"/> UC Manager Telepresence Room License	Prepaid	1	0	-	+1		Actions

Showing All 7 Records

Contacts | Feedback | Help | Site Map | Terms & Conditions | Privacy Statement | Cookie Policy | Trademarks

Option 3:

Verification Step: In the IOS of the device, enter the privileged EXEC mode, and then enter the **show license status** command.

Step result: The system displays the status of the **License Conversion** as **Successful**.

```
switch #show license status
Smart Licensing is ENABLED

Utility:
  Status: DISABLED

Data Privacy:
  Sending Hostname: yes
  Callhome hostname privacy: DISABLED
  Smart Licensing hostname privacy: DISABLED
  Version privacy: DISABLED

Transport:
  Type: Callhome

Registration:
  Status: REGISTERED
  Smart Account:
  Virtual Account:
  Export-Controlled Functionality: ALLOWED
  Initial Registration: SUCCEEDED on
  Last Renewal Attempt: None
  Next Renewal Attempt:
  Registration Expires:

License Authorization:
  Status: AUTHORIZED on
  Last Communication Attempt: SUCCEEDED on
  Next Communication Attempt:
  Communication Deadline:

License Conversion:
  Automatic Conversion Enabled: False
  Active: PID:
  Status: Successful on
  Standby: PID:
  Status: Successful on

Export Authorization Key:
  Features Authorized:
  <none>

switch #
```

Troubleshooting

If you experience an issue during the process of migrating Catalyst 3850 Series from RTU to Smart mode, refer to the [job aid](#). If you are still not able to resolve the issue after troubleshooting, then open a case in [Support Case Manager \(SCM\)](#).