



How to Use Cisco Smart PHY

The task below describes how to use the Cisco Smart PHY application:

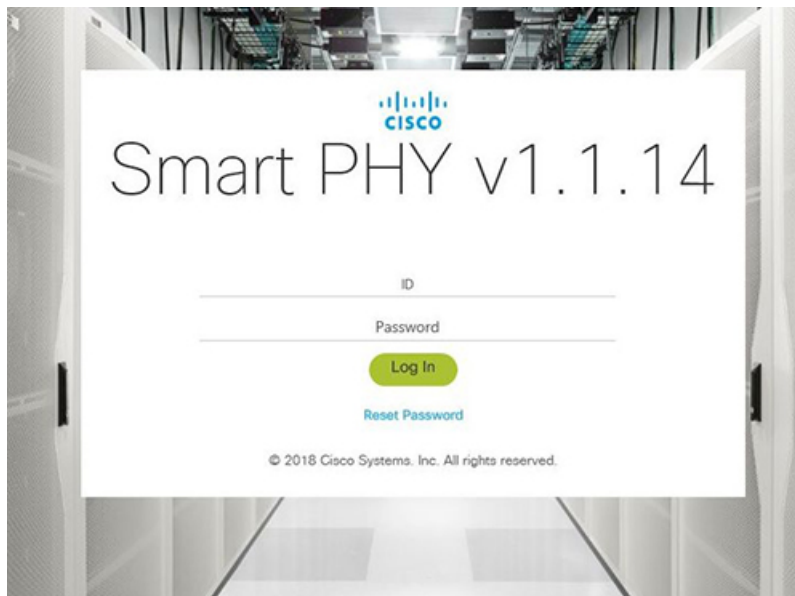
- [How to Log In using a Browser, page 2](#)
- [How to Bring Up the RPD, page 3](#)
- [How to Add an RPD using Mobile Application, page 6](#)
- [How to Create a New Credential Profile, page 7](#)
- [How to Apply Device Credential from Credential Profiles, page 7](#)
- [How to Apply a Different Credential Profile to Existing Devices, page 8](#)
- [How to Apply Different Credential Profile in Bulk, page 8](#)
- [How to Delete a Device from the Inventory, page 9](#)
- [How to Create CSV File for Importing Devices, page 9](#)
- [How to Export Device Information to a CSV File, page 10](#)
- [How to Add Devices through GUI, page 10](#)
- [How to Import Device Information in Bulk, page 11](#)
- [How to Delete a Credential Profile, page 11](#)
- [How to Create a New Service Definition, page 12](#)
- [How to Specify RPD Assignment, page 13](#)
- [How to View RPD History, page 13](#)

How to Log In using a Browser

Procedure

-
- Step 1** Make sure that the iptables.sh script has been executed for the management interface.
- Step 2** Launch one of the supported browsers (see Supported Web Browsers).
- Step 3** In the browser's address bar, enter **https://server_name:30604**.
The Cisco Smart PHY web GUI displays the Login window. When you access Cisco Smart PHY for the first time, some browsers display a warning that the site is untrusted. When this happens, follow the prompts to add a security exception and download the self-signed certificate from the Cisco Smart PHY server. After you do this, the browser accepts the Cisco Smart PHY server as a trusted site in all future login attempts.

Figure 1: Login



- Step 4** Enter the web GUI username and password as specified when you installed the server, then click Log In. The default username is **admin** and password is **admin**.
- Step 5** To exit the web GUI, close the browser window or click the Settings icon in the top right of the Cisco Smart PHY home page and choose Log out.
Exiting a Cisco Smart PHY web GUI session does not shut down Cisco Smart PHY on the server.
If a system administrator stops the Cisco Smart PHY server during your Cisco Smart PHY session, your session ends. Your session does not reassociate to Cisco Smart PHY when the server restarts; you must start a new Cisco Smart PHY session.
-

How to Bring Up the RPD

Procedure

- Step 1** Log into the Cisco Smart PHY application.
Go to **https://<HostOS_IP>:30604**.
- Username: **admin**
Password: **admin**
- Step 2** Create Credential Profile.
- 1 Choose **Inventory > Credential Profiles**.
 - 2 Add Admin, SSH, and SNMP credentials of the Cisco cBR router that will be added in the Inventory.
Note Admin profile requires SSH to log in directly to the `exec` mode on the Cisco cBR-8 router.
 - 3 Click **Save**.

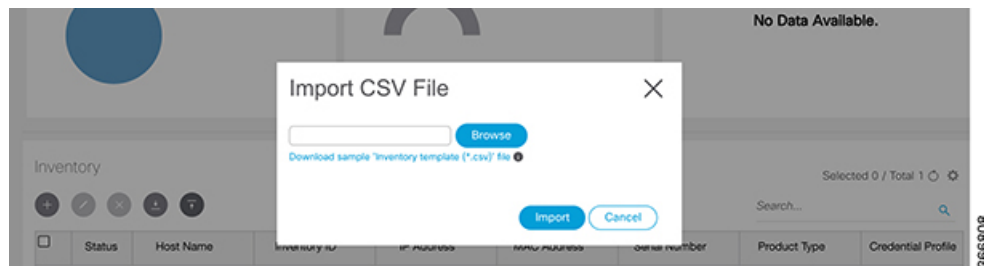
The screenshot shows the 'Inventory > Credential Profiles' page. On the left, there is a sidebar with a 'Create New' button and a list of existing profiles: Smart, csm, nso, and rpd_default. The main area is titled 'New Profile' and contains several sections for entering credentials:

- Profile Name ***: A red-bordered text input field.
- Admin Credential**: Fields for Admin Username and Admin Password.
- SSH Credential**: Fields for SSH Username, SSH Password, and SSH Enable Password.
- Telnet Credential**: Fields for Telnet Username, Telnet Password, and Telnet Enable Password.
- Netconf Credential**: Fields for Netconf Username and Netconf Password.
- HTTP Credential**: Fields for HTTP Username and HTTP Password.

At the top right of the main area, it says 'Selected 0 / Total 4'. A vertical ID number '367179' is visible on the right side of the form area.

- Step 3** Add the Cisco cBR router inventory and reference the credential profile. Device can be added manually or by importing from a CSV file.
- 1 Choose **Inventory > Inventory**.
 - 2 To upload a CSV file, click on **Upload**, select the file and click on **Import**. The Import dialog box also holds a link to a sample CSV file which can be downloaded for reference. Make sure you save the edited file in CSV format.
The following values should be set for the Cisco cBR device.

- IP Address—This is the key for the Cisco cBR router
- Product Type—CBR-8-CCAP-CHASS
- Connectivity Type—SSH
- Product Family—Cisco
- Software Type—IOS-XE

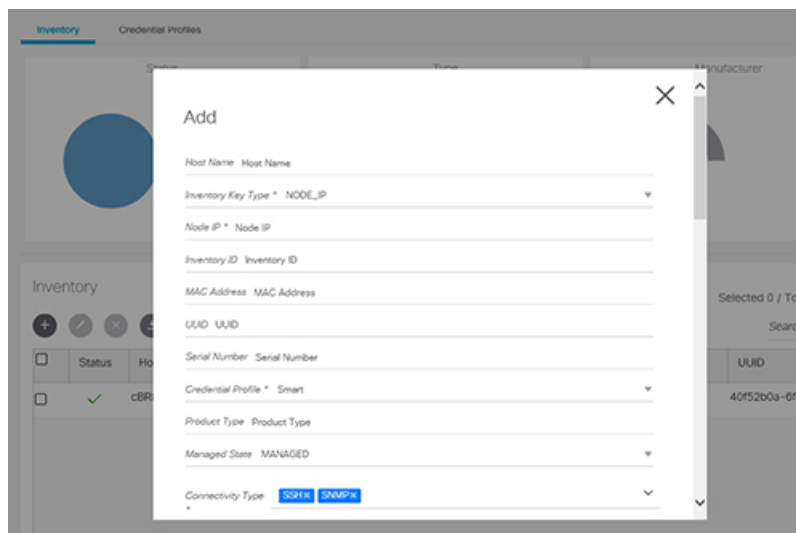


Or

To manually add a device, click the + icon and provide the required information and save.

The following values should be set for the Cisco cBR device.

- IP Address—This is the key for the Cisco cBR router
- Product Type—CBR-8-CCAP-CHASS
- Credential Profile—Specify the credential profile. Devices with the same credentials can use the same credential profile.



Step 4 Configure the Cisco cBR to send syslog messages to the Cisco Smart PHY application. The Cisco Smart PHY application uses syslog messages to monitor the state of the RPD on the Cisco cBR. Run the following command on the Cisco cBR router:

```
logging host <Smart PHY interface connected to the Cisco cBR> transport udp port 8514
```

Step 5 Create a Service Template.

Note Fields not marked as optional are mandatory.

- 1 Choose **Cable RPD Automation > Service Definitions**.
- 2 Specify Profiles as pre-configured on the Cisco cBR router.
- 3 Click **Save**.

The screenshot shows the 'Service Definitions' page in the Cisco Smart PHY interface. On the left, there is a 'Templates' section with a '+ Create New' button and two existing templates: 'Gold' (Data only, 3 Assigned) and 'SystemTemplate' (Data only, 0 Assigned). The main area is the 'New Template' form, which includes the following fields:

- Name * (with a 'Set as Default' checkbox)
- Description
- Event Profile * (Range from 0 to 63)
- R-DTI Profile * (Range from 1 to 64)
- Primary Service
- Service Group Profile *
- Downstream Controller Profile * (Range from 0 to 255)
- Upstream Controller Profile * (Range from 0 to 511)
- Video Service (optional)
 - Narrowcast Controller Profile (Range from 0 to 255)
 - Broadcast Controller Profile (Range from 0 to 255)
- Out Of Band (optional)
 - Downstream VDM ID (Range from 1 to 10)
 - Downstream Profile ID (Range from 1 to 4294967295)
 - Upstream VARP ID (Range from 1 to 32)
 - Upstream Profile ID (Range from 1 to 4294967295)

Buttons at the bottom are 'Save', 'Save & Assign', and 'Cancel'. A vertical ID '366814' is on the right side.

Step 6 Pair an RPD with a Cisco cBR router and service template.

Note Fields with an asterisks is a mandatory field.

- 1 Choose **Cable RPD Automation > RPD Assignment**.
- 2 RPD Assignment can be specified manually or by importing a CSV file.
To upload a CSV file, click **Upload**, select the file and click **Import**.

The screenshot shows the 'RPD Assignment' page. The 'Associate RPDs' dialog is open, displaying an 'Import CSV File' window. The dialog includes buttons for 'Assign', 'Clear', 'Import', and 'Cancel'. The background shows a table of RPDs with the following columns: Status, RPD MAC Address, Service Template, CCAP Core, Primary Interface, and Data Service Gr... A vertical ID '366813' is on the right side.

Or

To specify RPD assignment manually, click **Add** or **Edit**.

Click **Save**.

- Step 7** In the DHCP server, enter the IP address of the Smart PHY host OS in the **CCAP Core** field for the RPD. After retrieving the IP address from the DHCP server, the RPDs are redirected to the Smart PHY application. When the RPD resets, it gets the new DHCP server attributes and values from the DHCP server and connects to the Smart PHY application.

How to Add an RPD using Mobile Application

Procedure

- Step 1** Log into the Cisco Smart PHY mobile application.
- Step 2** Click **Add**.
Name is a mandatory field.
- Step 3** Scan the RPD barcode.
The RPD is listed in the **Devices** tab.
- Step 4** Register the device.

When you add or update an RPD by providing a street address, the detailed view does not show the street address.

How to Create a New Credential Profile

Before You Begin

Make sure that the SSH and SNMP are configured on Cisco cBR-8 router.

Procedure

- Step 1** Choose **Inventory > Credential Profiles**.
 - Step 2** Click **Create New**.
 - Step 3** Enter a profile name and description. If you will have many credential profiles, make the name and description as informative as possible because that information will be displayed on the **Credential Profiles** panel.
 - Step 4** Enter the credentials for the profile. When a device is added or updated using this profile, the content you specify here is applied to the device.
 - Step 5** Click **Save**.
-

How to Apply Device Credential from Credential Profiles

Credential profiles are collections of device credentials for SNMP, Telnet/SSH, HTTP, and TL1 network devices. Using credential profiles lets you apply credential settings consistently across devices. When you add or import devices, you specify the credential profile the devices use. If you need to make a credential change, such as changing a device password, you can edit the profile to update the settings across all devices that use that profile.

Procedure

- Step 1** To view the existing profiles, choose **Inventory > Credential Profiles**.
- Step 2** Click the profile you want to view. Credential profiles can be shared by multiple devices. Large networks might have similar credentials for hundreds of devices.
The mandatory fields are:
 - Profile Name
 - Username
 - Password
 - Admin Username
 - Admin Password

How to Apply a Different Credential Profile to Existing Devices

You can use the Inventory user interface to edit device information, including changing the credential profile in the inventory record. This operation overwrites any existing association between a device and a credential profile. You can also use this operation to synchronize device configurations with new settings.

Before You Begin

You need a credential profile to complete this task.

Procedure

- Step 1** To view inventory, choose **Inventory > Inventory**.
 - Step 2** (Optional) In the **Inventory** section, filter the list of devices by entering text in the **Search** field or filtering on the individual headings.
 - Step 3** Check the check boxes of the devices you want to change, and click the **Edit** icon.
 - Step 4** Choose a different credential profile from the **Credential Profile** drop-down list, for example, or make other changes in the device records.
 - Step 5** Click **Save**.
-

How to Apply Different Credential Profile in Bulk

This is an alternative to changing the credential profile for devices within the Cisco Smart PHY Inventory Manager GUI. If you are changing the credential profile for a large number of devices, you may find it more efficient to make the change by using a CSV file rather than the Cisco Smart PHY UI. Export a CSV file, make the changes, and import the changed CSV file. This operation overwrites any existing association between a device and a credential profile. You can also use this operation to synchronize device configurations with new settings.

Procedure

- Step 1** (Optional) To review the contents of a credential profile, choose **Inventory > Credential Profiles**. Click the profile you want to use. Else, create a new profile.
- Step 2** To view device inventory, choose **Inventory > Inventory**.
- Step 3** Choose which device records to change by including them in the CSV file. Do one of the following:
 - Click the **Export** icon to include all devices.
 - Filter the list of devices by entering text in the **Search** field or by filtering on the individual headings, and then click the **Export** icon to include the filtered list of devices.

- Check the check boxes for the device records you want to change, and then click the **Export** icon to include the selected devices.

- Step 4** Edit and save the new CSV file. Note: You must save the file opened in MS Excel as a CSV file only.
- Step 5** In the Import CSV File dialog box, click **Browse**, select the new CSV file, and click the **Import** icon.
- Step 6** In the **Replace Existing Node** dialog box, click **Yes to All**.
- Step 7** Click **Save**.
-

How to Delete a Device from the Inventory

Procedure

- Step 1** Choose **Inventory > Inventory**.
- Step 2** (Optional) In the **Inventory** section, filter the device list by entering text in **Search** or filtering specific columns.
- Step 3** Check the check boxes for the devices you want to delete.
- Step 4** Click **Delete**.
- Step 5** In the confirmation dialog box, click **Delete**.
-

How to Create CSV File for Importing Devices

To add information for multiple devices to Inventory Manager, create a CSV file. Inventory Manager contains a sample template CSV file. The GUI for adding individual devices contains field information that also applies to the contents of the CSV files that you create for device import.

Procedure

- Step 1** Choose **Inventory > Inventory**.
- Step 2** In the **Inventory** section, click **Import**.
You will be prompted to open or save the sample CSV file. Save the CSV file.
- Step 3** Edit the CSV file and save it as a CSV file on your system. Upload this CSV file to import devices.
- The mandatory fields are:
 - Product Type
 - Credential Profile
 - One IP Address and its Connectivity Type
 - MAC Address

- Serial Number or Inventory ID
-

How to Export Device Information to a CSV File

When you export the device list to a file, all device information is exported into a CSV file. The exported file includes device credentials, but does not include credential profiles.

**Caution**

The CSV file lists all of the credentials for the exported devices. Handle the CSV file with care. Ensure that only users with special privileges can perform a device export.

Procedure

- Step 1** Choose **Inventory > Inventory**.
 - Step 2** (Optional) In the **Inventory** section, filter the device list by entering text in the **Search** field or filtering specific columns.
 - Step 3** Check the check boxes for the devices you want to export.
 - Step 4** Click **Export**.
-

How to Add Devices through GUI

If you have many devices to add to the Inventory Manager, you may find it more efficient to put the information in a CSV file and import the file.

Procedure

- Step 1** Choose **Inventory > Inventory**.
- Step 2** In the **Inventory** section, click **Add**.
- Step 3** Enter the values for the device. The mandatory fields are:
 - Product Type
 - Credential Profile
 - One of the following:
 - Inventory ID
 - IP Address
 - MAC Address

- Serial Number

- Step 4** Click **Save**.
- Step 5** (Optional) Repeat to add more devices.
-

How to Import Device Information in Bulk

Before starting this procedure, you need to create a CSV file that contains the device information.

Procedure

- Step 1** Choose **Inventory > Inventory**.
- Step 2** Click **Import**.
- Step 3** In the Import CSV File window, click **Browse**, select the CSV file, and click **Import**. If any primary keys are duplicates with existing device records, Inventory Manager alerts you.
-

How to Delete a Credential Profile

To delete a credential profile from Inventory Manager, disassociate the profile from any devices. Inventory Manager displays an alert if you attempt to delete a credential profile that is associated with devices.

(Optional) Check whether any devices are using the obsolete credential profile and change the credential profile before attempting deletion.

- 1 Choose **Inventory > Inventory**.
- 2 In the **Inventory** section, enter the obsolete credential profile name in the **Search** field.
- 3 Check the check boxes for the devices that use the obsolete credential profile, and click **Edit**.
- 4 Choose a different credential profile from the **Credential Profile** drop-down list.
- 5 Click **Save**.

Procedure

- Step 1** Choose **Inventory > Credential Profiles**.
- Step 2** Click on a profile, and click **Delete**.

How to Create a New Service Definition

Procedure

-
- Step 1** Choose **Cable RPD Automation > Service Definitions**.
 - Step 2** Click **+ Create New**.
 - Step 3** Enter a name and description. If you will have many service definitions, make the name and description as informative as possible because that information will be displayed on the **RPD Assignment** and **Overview** tabs.
 - Step 4** (Optional) Check the **Set as Default** check box.
 - Step 5** Enter the definitions for the service. See [definitions](#). When a device is added or updated using this service definition, the content you specify here is applied to the device. All fields that are not marked as optional are mandatory.
 - Step 6** Click **Save** or **Save & Assign**.
-

How to Specify RPD Assignment

Procedure

- Step 1** Choose **Cable RPD Automation > RPD Assignment**.
 - Step 2** RPD Assignment can be specified manually or by importing a CSV file. Click + to assign a service template to an RPD. Fill in all the fields.
To upload a CSV file, click **Upload**, select the file and click **Import**.
 - Step 3** Click **Save**.
 - Step 4** Click **Assign**.
-

How to View RPD History

Procedure

- Step 1** Choose **Cable RPD Automation > RPD Assignment..**
 - Step 2** Select the RPD and click the **Details** button.
The RPD window shows the RPD Summary, RPD State History, RPD CLI, and RPD Automation Errors.
-

