Managing Smart Licensing with IoT-FND 4.6.1 and greater

Note   If you are an existing pre-paid license customer using IoT FND 4.6.1 and greater, you do not need to enable Smart Licensing.Smart Licensing is used only to manage post-paid licenses. Additionally, you cannot manage both pre-paid and post-paid licenses at the same time.

However, if you accidentally turn on smart licensing in your network, you can switch to Classic Licensing by selecting Disable Smart Licensing. Navigate to ADMIN > SYSTEM MANAGEMENT > LICENSE CENTER page and click Settings icon in the Smart Licenses tab.

Here is a summary of the products and supported licenses that you can manage with IoT-FND 4.6.1 and greater:

Supported IoT FND License Types

License Type	Description
IOTFND-MSLA-CGR1K	IoT FND MSLA License for CGR1K
IOTFND-MSLA-EP	IoT FND MSLA License for managing endpoints.
IOTFND-MSLA-BEP	IoT FND MSLA License for managing battery endpoints.
IOTFND-MSLA-IR500	IoT FND MSLA License for managing IR509 IR510

License Type	Description
IOTFND-MSLA-IR800	IoT FND MSLA License for managing IR800
IOTFND-MSLA-IR1100	IoT FND MSLA License for managing IR1100
IOTFND-MSLA-LORAWA	IoT FND MSLA License for managing LoRAWAN gateway

Prerequisites

Smart Licensing allows FND 4.6.1 to track the status of licenses usage by product. Before you can use this capability you must do the following with Cisco:

- Create a Smart Account if you do not already have one. See Cisco Smart Licensing and Smart Accounts on the Cisco.com website.

- Create a Virtual Account. One virtual account per customer if FND is used in a way to manage multiple customer accounts

- Install satellite agent next to IoT FND/TPS. Refer to the following guide for details:

  Smart Software Manager Satellite Classic Edition: Installation Guide (version 5.1)

Note All references to 'Satellite' in this document refer to the Cisco Smart Software Manger satellite version 5.1. Please note that this satellite service has been renamed to Cisco Smart Software Manager On-Prem. However, MSLA only works with Cisco Smart Software Manager satellite version 5.1

- Place an order in Cisco Commerce Workplace (CCW). Link the order to the above created Cisco Smart Virtual Account.

- Install and upgrade the FND instance.

- Verify that the Licenses appear in the Satellite/CSSM with Billing column as By Usage under the Licenses tab.

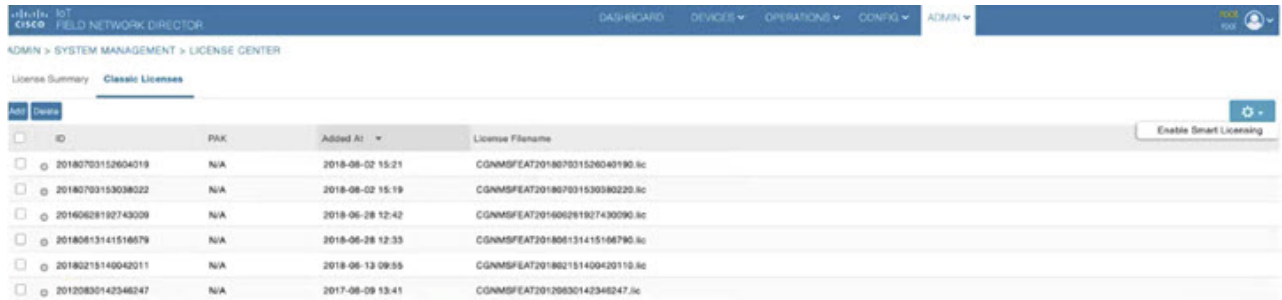- Generate the token in the Satellite's virtual account.

Note All licensing updates for FND 4.6.1 are performed by satellite.

Enable Smart Licensing in IoT FND

Step 1   Go to ADMIN > SYSTEM MANAGEMENT > LICENSE CENTER page. Select the Classic Licenses tab.

Step 2   To enable tracking of Smart Licensing on FND, click the downward arrow next to the COG icon found in the far-right corner of the screen and select Enable Smart Licensing.

A new page appears with two tabs: License Summary and Smart Licenses tab.

The License Summary page lists all supported license types being managed by FND 4.6.1 and indicates how many (count) of each device type (such as CGR1K) is being managed as given in the Licenses Consumed column for each device.

Step 3   When you select the Smart Licenses tab in the screen, a new page appears indicating that you are operating in Evaluation Mode, the transition period from Classic to Smart Licenses. Evaluation mode lasts for 90 days. The license counts in the license summary are updated instantaneously.

Note   Customers must register their systems within 90 days which is when the Evaluation Mode ends. After 90 days, FND will automatically place all devices in an Unmanaged State, so it is imperative to complete registration before the 90 day expiration date.

In the Smart Software Licensing Usage section, you can also track the usage level of the Smart Licenses for products being managed by FND. This information is summarized at the bottom of the screen.

Note   The counts noted in the Smart Software Licensing Usage section are updated nightly.

Step 4   In the Smart Software Licensing Status section, you must set the Transport Settings to: Gateway/Satellite. To enter that information, click the View/Edit link (found next to Transport Settings) in the screen to open a window in which you can enter the URL information for the Satellite (Cisco Smart Software Manager (CSSM) Transport Gateway Setting Screen).

Enter the following URL information for the satellite:

https://'IP_Address|FQDN:'port'/Transportgateway/services/DeviceRequestHandler

where https://'IP_Address|FQDN|':'port' refers to the Satellite HTTPS User Access link in the browser.

Note   The above link info is also specified in the first screen visible after you log in to the Satellite UI.

Transport Settings ✕

Configure how to communicate with Cisco

○ Direct - product communicates directly with Cisco's licensing servers

URL : https://tools-dev.cisco.com/its/service/oddce/services/DDCEService

● Transport Gateway - proxy data via Transport Gateway or Smart Software Manager satellite

URL* `https://172.27.89.142:8443/Transportgateway/services/DeviceReque`

○ HTTP/HTTPS Proxy - send data via an intermediate HTTP or HTTPS proxy

IP Address* _____

Port* _____

[Save]

Step 5 You must go to the Satellite to create a Registration Token. To do so, log into the satellite and under the General tab, click on New Token. After you connect to the satellite, you will be prompted to create a registration token.

Create Registration Token Help ✕

This dialog will generate the token required to register your product instances with your Smart Account.

Virtual Account: IOT_Test_Veera

Description: _____

Expire After: 30 days

Enter a value between 1 and 365, but Cisco recommends a maximum of 30 days.

☑ Allow export-controlled functionality on the products registered with this token ⓘ

[Create Token] [Cancel]

Note Your Virtual Account is noted on the page.

a) Enter the number of days that you want the new token to be active

    b) Be sure to uncheck the box next to the statement, 'Allow export controlled functionality on the products registered with this token'. (the box is checked by default). Add any relevant information in the Description field to describe the registration token.

    c) Click Create Token button to generate the new Registration Token.

Step 6   You will enter the Registration Token that you created in the previous step into the field, Product Instance Registration Token, within the Smart Software Licensing Registration screen. The Registration screen appears when you click the Register button.

After registration completes, a panel appears confirming that all licenses are confirmed and authorized.

The screen above confirms that smart licenses are registered (Registration Status) and authorized (License Authorization Status), as well as the date of registration (Registration Status), License Registration Status, Smart Account name, Virtual Account name, Product Instance Name, Export Controlled Functionality (Not Allowed) and Transport Setting (Gateway/Satellite) which notes how we connect to the Cisco Smart Account.

Note　　After registration, any products being managed by IoT FND that are not one of the seven approved license types noted in Table 1: Supported IoT FND License Types will display with a status of 'unmanaged'.

IoT FND License Types

Additionally, it provides a summary of supported License Types, their Count and Status (Authorized). (The Status column is found right to the Count column). To view and manage Cisco Smart Licenses, go to the Cisco Smart Software Manager by clicking the Smart Software Manager link at the top of the page in the information panel (i).

Smart License Options Available After Registration and Authorization

After your licenses are registered and authorized, the following options will display under the COG icon drop-down menu:

- Renew Authorization Now

- Renew Registration Now

- Reregister

- Deregister

- Disable Smart Licensing

Note	You should not have to use any of the five options noted above once your licenses are active in your network. These options will only be necessary if there are any issues in the registration and authorization process due to timeouts and lost connectivity to the satellite, and the devices have moved to an unmanaged state. As a reminder, you can only apply these actions to the seven license types supported as noted in Supported IoT FND License Types.

Smart Software Manager Satellite Interface

The screen below is the user interface for the Satellite.

Note	The Synchronize Now button is found in the upper-right hand corner of the screen to the right of the date. In the left panel, select the Reports tab to review the Raw Utility Data Report from the satellite.
	FND sends count information every four hours to the Satellite via the Smart Agent. Each four hour period contains 15 minute interval based count data for all types managed by FND.

Raw Utility Data report: Provides information about Device Types and their corresponding counts. You can identify the device type under the meta-entitlement_tag column. This report generally takes about 15 minutes to generate.The satellite in turn sends the collected count data to the CSSM back-end every 8 hours.

For example, CGR1000 is identified as MSLA_CGR1K as seen in the following entitlement tag:

regid.2019-01.com.cisco.MSLA_CGR1K,1.0_e2b9d68c-6365-479f-9959-e65aa7e70de1

Similar entries can also found for the IR500, LORAWAN, BATTERY_ENDPOINT, ENDPOINT, IR800 and IR1100 under the meta-entitlement_tag column.

You will see this information along with other details on the product such as serial number and count within CSSM and the Satellite.

Cisco Smart Software Manager

The CSSM user interface is primarily for managing a smart /virtual account. The virtual account is identified as an On-Prem Virtual Account and registration tokens need to be done from the satellite.

Note The Synchronize Now button is found in the upper-right hand corner of the screen to the right of the date. It is not visible in User Interface for CSSM.

Column Entry Notes

• In the Billing column for customers, By Usage will display.

• The In Use column shows how many FND instances are connected and consuming that device license. In addition, when you click on the number within the In Use column it will display a panel indicating the actual MSLA license and units consumed as well as a serial number.

Note   For further information on Smart Accounts and Managed Services, please refer to the following documents on Cisco.com:

- Cisco Smart Accounts

- Managed Services: Overview

- Managed Services for Small and Mid-Sized Customers

- Managed Services for Large Customers