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Configure P-LTE-450 Module using Cisco Catalyst SD-WAN Manager for SD-Routing Devices, Release 17.18.x

What's new and changed

This table lists the features available with the current release :

Table 1: What's new and changed in this release

Cisco IOS XE release	Feature name	Description	Supported platforms
Cisco IOS XE 17.18.1a	Configure P-LTE-450 module using Cisco Catalyst SD-WAN Manager	This feature introduces support to configure P-LTE-450 module using Cisco Catalyst SD-WAN Manager.	• Cisco IR1101 Series Platforms • Cisco IR1800 Series Platforms

Benefit of configuring P-LTE-450 module using Cisco Catalyst SD-WAN Manager

This section outlines the benefit associated with configuring P-LTE-450 module Cisco Catalyst SD-WAN Manager.

Customers can easily configure and monitor P-LTE-450 module without the need to input and manage multiple commands therefore leading to quicker deployments and easier module management.

Limitation of configuring P-LTE-450 module using Cisco Catalyst SD-WAN Manager

This section outlines the various limitations associated with configuring P-LTE-450 module using Cisco Catalyst SD-WAN Manager.

- Configuring P-LTE-450 module as the primary link for Plug and Play (PNP) deployments is not supported.
- Configuring P-LTE-450 module on the Rugged Series Platforms is only supported on a single slot in the router due to hardware limitations. So, If you are configuring P-LTE-450 module on a Cisco Catalyst 1101 Rugged Router, you can only use slot 0/1 or slot 0/4. Whereas on a Cisco Catalyst IR1800 Rugged Series Router, only slot 0/4 is supported.

Workflow to configure P-LTE-450 module

These are the different stages in configuring P-LTE-450 module:

Summary

Configuring a P-LTE-450 module involves setting up network and cellular connection parameters for the module using **CLI Add-on Profile**. An **Ethernet Interface** is then set up using **Configuration Groups** to establish network connectivity and traffic forwarding within the local network.

Workflow

1. Configure network and cellular connection parameters using **CLI Add-on Profile**.
2. Configure **Ethernet Interface** using **Configuration Group**.
3. Associate and deploy the **Configuration Group** to an SD-Routing device.
4. Monitor the P-LTE-450 module using Cisco Catalyst SD-WAN Manager.

Steps to configure and monitor P-LTE-450 module	To know more
Configure authentication using CLI Add-on Profile	Configure network and cellular connection parameters for the P-LTE-450 module . See, Configure network and cellular connection parameters using CLI Add-on Profile, on page 2
Configure Ethernet Interface using Configuration Group	Configure **Ethernet Interface** to establish network connectivity and traffic forwarding within the local network. See,Configure Ethernet Interface using Configuration Group, on page 3 .
Associate and deploy the Configuration Group to an SD-Routing device	Associate the **Configuration Group** to one or more devices and provisioning the configuration changes. See, Associate and deploy the Configuration Group to an SD-Routing device, on page 3.
Monitor the P-LTE-450 module using Cisco Catalyst SD-WAN Manager	You can monitor the detailed hardware, radio-related, and network-specific information about the P-LTE-450 module using Cisco Catalyst SD-WAN Manager. See, Monitor the P-LTE-450 module using Cisco Catalyst SD-WAN Manager, on page 4.

Configure network and cellular connection parameters using CLI Add-on Profile

This section covers details on configuring the network and cellular connection parameters for the P-LTE-450 module.

Before you begin

The P-LTE-450 username and password for accessing the management interface are typically found on a sticker attached to the module itself. These credentials are required for configuring the module's settings, including network parameters and security protocols.

Step 1 On the Cisco Catalyst SD-WAN Manager, select **Create Configuration Group**. Specify a name and description.

Step 2 Click **+ Add Profile** and select **CLI Add-on Profile**. Select **+ Create New** to create a new **CLI Add-on Profile** or select an existing profile from the list.

Step 3 In the **CLI** pane, enter these commands to configure network parameters and security protocols:

```
interface GigabitEthernet0/4/0
description Management Interface
 no shutdown
 ip address dhcp
 ipv6 address autoconfig
```

```
ipv6 enable
negotiation auto

lte450 credential username admin password sXt4XGTLLmKda7tv

lte450 band 31

lte450 profile id 1 apn ims authentication none pdn-type ipv4v6 vlan 2
```

To know more about the commands, see Cellular Pluggable Interface Module Configuration Guide

Step 4 Modify the parameters as per your requirement. Click **Save** and **Done**.

Configure Ethernet Interface using Configuration Group

Configuring an **Ethernet Interface** is crucial for establishing network connectivity and enabling traffic forwarding within the local network.

Step 1 On the Cisco Catalyst SD-WAN Manager, select **Configuration** > **Configuration Groups**. Select the solution type as **SD Routing**

Step 2 Select a **Configuration Group** from the list that is displayed. Create a new **Transport and Management profile** or select an existing profile. Select the profile, click **Edit**.

Step 3 Select **Global VRF**. Click **Add New** to configure the **Global VRF**. Specify a name to identify the **Global VRF**. Optionally, add a description for the **Global VRF**. See Configure Global VRF, for details on parameters for **Global VRF**.

Step 4 Select **+ Add New Feature**. Click **Ethernet Interface** and select **Add New** to configure an **Ethernet Interface**. Configure Ethernet Interface.

Note If you are configuring P-LTE-450 module on a Cisco Catalyst 1101 Rugged Router, specify the slot and port number as GigabitEthernet0/4/0.2 or GigabitEthernet 0/1/0.2 and for the Cisco Catalyst IR1800 Rugged Series Routers specify the slot and port number as GigabitEthernet 0/1/0.2.

What to do next

After configuring the Ethernet Interface option, associate the **Configuration Group** to a device. See, Understand the order of upgrading firmware.

Associate and deploy the Configuration Group to an SD-Routing device

This task involves associating the **Configuration Group** to one or more devices and provisioning the configuration changes.

Ensure that the configuration group you select is created for SD-Routing devices.

Step 1 On Cisco Catalyst SD-WAN Manager, select the **Configuration Group** created earlier.

Step 2 Click **+ Add** and select the devices from the list. Click **Save** to attach the configuration group to the selected devices.

Step 3 To provision the configuration changes, click **Deploy**.

a) Select the device on which you want to provision the configuration changes. Click **Next**.

b) For each device, review or update the **IP address**, **hostname**. Specify the **password** to access these devices. Click **Next**.

c) If you want to review the configuration changes, click **Preview CLI**. Select the device to view the configuration changes either inline or side by side. The configurations that are removed are highlighted in red and the new

configuration is highlighted in green. To remove or add any device from the list of selected devices, click **Edit Device List**.

d) Click **Deploy** to provision the configuration changes on the devices.

Monitor the P-LTE-450 module using Cisco Catalyst SD-WAN Manager

You can monitor the detailed hardware, radio-related, and network-specific information about the P-LTE-450 module using Cisco Catalyst SD-WAN Manager.

Monitor the P-LTE-450 module using Monitoring dashboard

This section provides details on how to monitor Raw Socket transport using Monitor dashboard in Cisco Catalyst SD-WAN Manager.

Step 1 On the Cisco Catalyst SD-WAN Manager, select **Monitor** > **Devices**. Select a device from the list.

Step 2 Select **Real Time**. From **Device Options**, select an option to view more details.

Device Option	Description
Cellular LTE450 Hardware	Displays the details of modem and PIM information.
Cellular LTE450 Radio	Displays the signal quality.
Cellular LTE450 Network	Displays the mobile network status.

Monitor the P-LTE-450 module using commands

You can monitor the hardware, radio, and network-specific details of the P-LTE-450 module using these commands

Commands	Description
show lte450 0/1/0 hardware	Displays the details of modem and PIM information.
show lte450 0/1/0 radio	Displays the signal quality.
show lte450 0/1/0 network	Displays the mobile network status.