



## Importing a Device Package

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## About Device Packages

The Application Policy Infrastructure Controller (APIC) requires a device package to configure and monitor service devices. You add service functions to the Cisco APIC through the device package. A device package manages a single class of service devices and provides the Cisco APIC with information about the device and its capabilities. A device package is a zip file that contains the following parts:

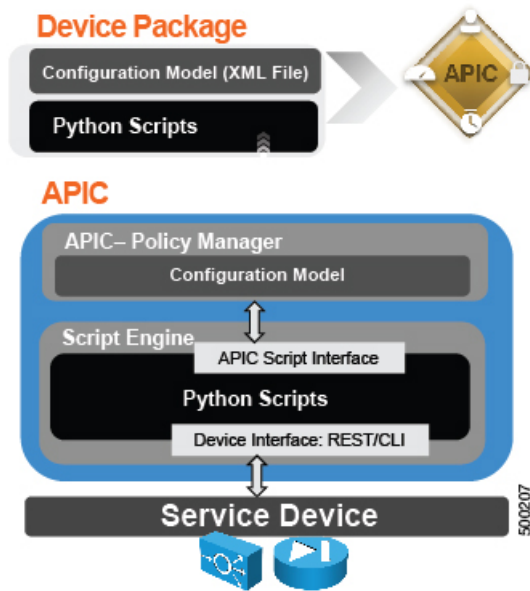
Device specification	An XML file that defines the following: <ul style="list-style-type: none"><li>• Device properties:<ul style="list-style-type: none"><li>• <b>Model:</b> Model of the device.</li><li>• <b>Vendor:</b> Vendor of the device.</li><li>• <b>Version:</b> Software version of the device.</li></ul></li><li>• Functions provided by a device, such as load balancing, content switching, and SSL termination.</li><li>• Interfaces and network connectivity information for each function.</li><li>• Device configuration parameters.</li><li>• Configuration parameters for each function.</li></ul>
Device script	A Python script that interacts with the device from the Cisco APIC. Cisco APIC events are mapped to function calls that are defined in the device script. A device package can contain multiple device scripts. A device script can interface with the device by using REST, SSH, or any similar mechanism.
Function profile	Function parameters with default values that are specified by the vendor. You can configure a function to use these default values.

Device-level configuration parameters	A configuration file that specifies parameters that are required by a device. This configuration can be shared by one or more graphs using a device.
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You can create a device package or it can be provided by a device vendor or Cisco.

The following figure illustrates the interaction of a device package and the Cisco APIC:

**Figure 1: Device Package and the Cisco APIC**

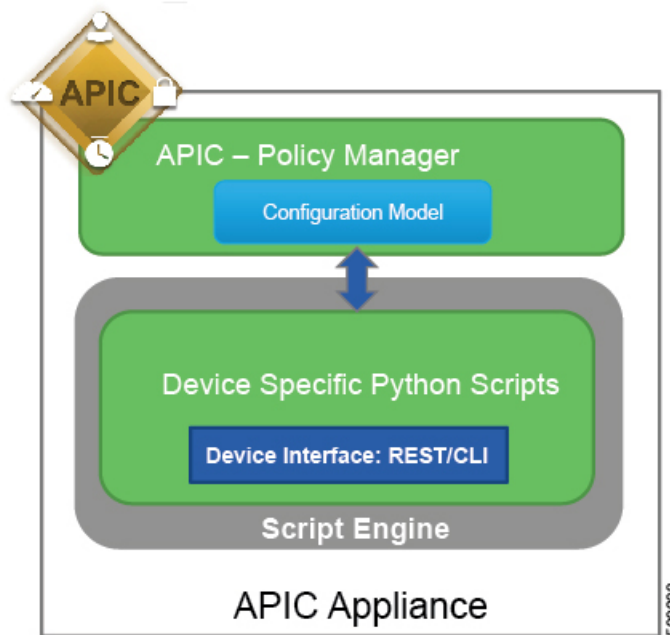


The functions in a device script are classified into the following categories:

- Device/Infrastructure: For device level configuration and monitoring
- Service Events: For configuring functions, such as a server load balancer or Secure Sockets Layer, on the device
- Endpoint/Network Events: For handling endpoint and network attach/detach events

The Cisco APIC uses the device configuration model that is provided in the device package to pass the appropriate configuration to the device scripts. The device script handlers interface with the device using its REST or CLI interface.

Figure 2: How the Device Scripts Interface with a Service Device



The device package enables an administrator to automate the management of the following services:

- Device attachment and detachment
- Endpoint attachment and detachment
- Service graph rendering
- Health monitoring
- Alarms, notifications, and logging
- Counters

For more information about device packages and how to develop a device package, see the *Cisco APIC Layer 4 to Layer 7 Device Package Development Guide*.

## Installing a Device Package Using the REST API

You can install a device package using an HTTP or HTTPS POST.

Install the device package.

- If HTTP is enabled on the Application Policy Infrastructure Controller (APIC), the URL for the POST is as follows:  
`http://10.10.10.10/ppi/node/mo/.xml`
- If HTTPS is enabled on the APIC, the URL for the POST is as follows:  
`https://10.10.10.10/ppi/node/mo/.xml`

The message must have a valid session cookie.

The body of the POST should contain the device package being uploaded. Only one package is allowed in a POST.

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## Importing a Device Package Using the GUI

Before performing any configuration based on service graphs, you must download and install the appropriate device package in the Application Policy Infrastructure Controller (APIC). A device package specifies to the Cisco APIC what devices you have and what the devices can do.



**Note** Beginning in the 3.1(1) release, choosing a device package that uses the cloud orchestrator mode provides a simpler interface. The cloud-orchestrator mode device package is automatically created in the Cisco APIC. If the device package is deleted by mistake, it can be uploaded again. See also [Configuring Cloud Orchestrator Mode](#).

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**Step 1** Download an appropriate device package. You can find the list of partners at the following URL:

<http://www.cisco.com/c/en/us/solutions/data-center-virtualization/ecosystem.html>

This URL is the Partner Ecosystem page, where you can download the appropriate device package.

**Step 2** Log in to the Cisco APIC as the provider administrator.

**Step 3** On the menu bar, choose **L4-L7 Services > Packages**.

**Step 4** In the **Navigation** pane, choose **L4-L7 Service Device Types**.

**Step 5** In the **Work** pane, choose **Actions > Import Device Package**. The **Import Device Package** dialog box appears.

**Step 6** Click **Browse...** and browse to the device package that you want to use.

For information about creating device packages, see the *Cisco APIC Layer 4 to Layer 7 Device Package Development Guide*.

**Step 7** Click **Open**.

**Step 8** Click **Submit**.

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