



Overview

- [About the Cisco Application Policy Infrastructure Controller Enterprise Module, page 1](#)
- [Cisco APIC-EM GUI Overview, page 2](#)
- [Management Applications, page 6](#)

About the Cisco Application Policy Infrastructure Controller Enterprise Module

The Cisco Application Policy Infrastructure Controller - Enterprise Module (APIC-EM) is Cisco's SDN Controller for Enterprise Networks (Access, Campus, WAN and Wireless).

The platform hosts multiple applications (SDN apps) that use open Northbound REST APIs that drive core network automation solutions. The platform also supports a number of south-bound protocols that enable it to communicate with the breadth of network devices that customers already have in place, and extend SDN benefits to both greenfield and brownfield environments.

The Cisco APIC-EM platform supports both wired and wireless enterprise networks across the Campus, Branch and WAN infrastructures. It offers the following benefits:

- Creates an intelligent, open, programmable network with open APIs
- Saves time, resources, and costs through advanced automation
- Transforms business intent policies into a dynamic network configuration
- Provides a single point for network wide automation and control

The following table describes the features and benefits of the Cisco APIC-EM.

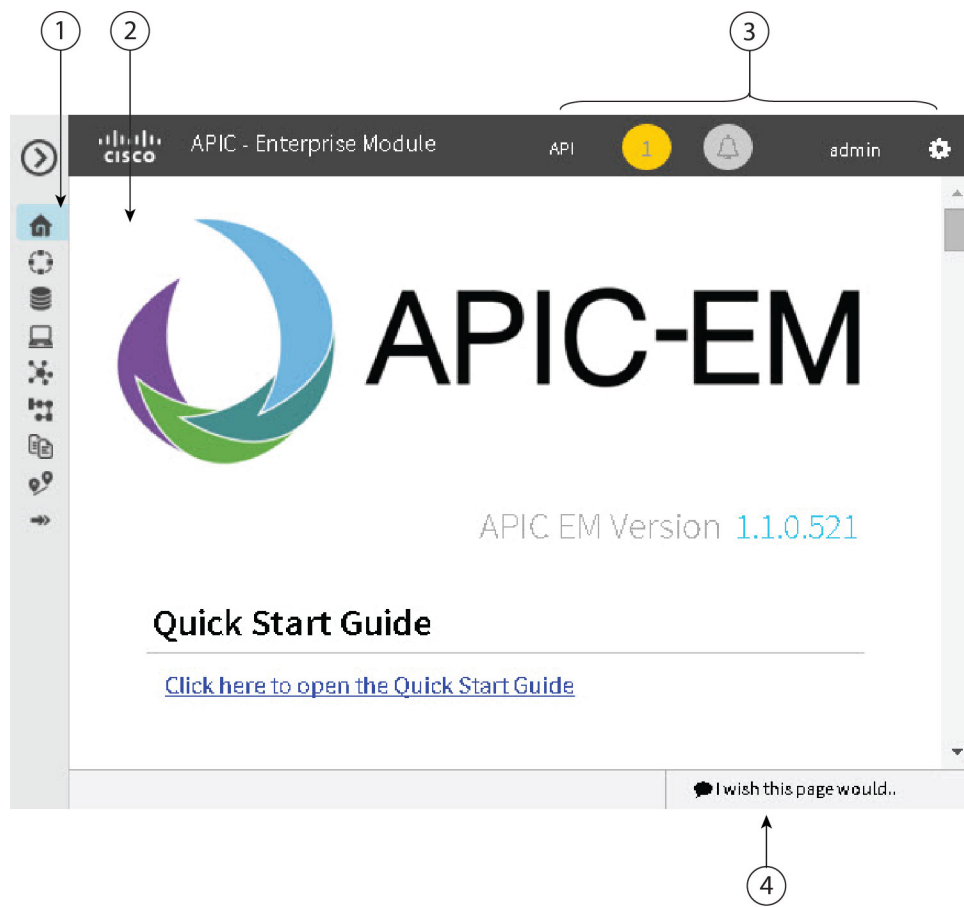
Table 1: Cisco APIC Enterprise Module Features and Benefits

| Feature | Description |
|-------------------------------------|---|
| Network Information Database (NIDB) | The Cisco APIC-EM periodically scans the network to create a “single source of truth” for IT. This inventory includes all network devices, along with an abstraction for the entire enterprise network. |

| Feature | Description |
|--|--|
| Network topology visualization | The Cisco APIC-EM automatically discovers and maps network devices to a physical topology with detailed device-level data. You can use this interactive feature to troubleshoot your network. |
| EasyQoS | <p>The EasyQoS feature enables you to configure quality of service on the devices in your network that have been discovered by the Cisco APIC-EM.</p> <p>Using EasyQoS, you can group devices and then assign classes of service to those devices. The Cisco APIC-EM takes your QoS selections, translates them into the proper device configurations, and deploys the configurations onto those devices.</p> |
| Cisco Network Plug and Play application | The Cisco Network Plug and Play solution is a converged solution that extends across Cisco's enterprise portfolio. It provides a highly secure, scalable, seamless, and unified zero-touch deployment experience for customers across Cisco routers, switches and wireless access points. |
| Cisco Intelligent WAN (IWAN) application | The separately licensed IWAN application for APIC-EM simplifies the provisioning of IWAN network profiles with simple business policies. The IWAN application defines business-level preferences by application or groups of applications in terms of the preferred path for hybrid WAN links. Doing so improves the application experience over any connection and saves telecom costs by leveraging cheaper WAN links. |
| Public Key Infrastructure (PKI) server | The Cisco APIC-EM provides an integrated PKI service that acts as Certificate Authority (CA) to automate X.509 SSL certificate lifecycle management. Applications, such as IWAN and PnP, use the capabilities of the imbedded PKI service for automatic SSL certificate management. |
| Path Trace application | The path trace application helps to solve network problems by automating the inspection and interrogation of the flow taken by a business application in the network. |
| High Availability (HA) | HA is provided in N+ 1 redundancy mode with full data persistence for HA and Scale. All the nodes work in Active-Active mode for optimal performance and load sharing. |
| Back Up and Restore | The Cisco APIC-EM supports complete back up and restore of the entire database from the controller GUI. |

Cisco APIC-EM GUI Overview

When you log into the Cisco APIC-EM, the **Home** page appears.













| Callout Number | Name | Description |
|----------------|-----------------|---|
| 1 | Navigation pane | Provides access to the Cisco APIC-EM features and additional applications, such as IWAN and Network Plug and Play. |
| 2 | Window | Area where the feature or application interface is displayed. When you click an option in the Navigation pane, its corresponding window opens. |
| 3 | Global toolbar | Area that provides access to tools, such as API documentation, settings, and notifications. For a full explanation of the icons on the Global toolbar, see the Global Toolbar Options table below. |
| 4 | Feedback link | Link to a form where you can provide input about your experience using the Cisco APIC-EM features and its GUI and provide suggestions for improvements. |

Navigation Pane Options

The **Navigation** pane provides options to access the major Cisco APIC-EM features.


Table 2: Navigation Pane Options




| Icon | Name | Description |
|---|-------------------------------|--|
|  | Hide/Unhide Navigation | Allows you to hide and unhide the Navigation pane. |
|  | Home | Displays information about system requirements and supported platforms. |
|  | Discovery | Allows you to configure discovery options for scanning the devices and hosts in your network. |
|  | Device Inventory | Provides access to the inventory database, where you can display, filter, and sort tabular information about the discovered devices in your network. |
|  | Host Inventory | Provides access to the inventory database, where you can display, filter, and sort tabular information about the discovered hosts in your network. Users can have one of three possible states: active, inactive, and deleted. |
|  | Topology | Displays graphical representations of your physical, Layer 2, and Layer 3 networks. |
|  | IWAN | Allows you to configure your network-wide settings, provision sites, and configure application policies. |
|  | EasyQoS | Allows you to configure quality of service on selected devices in your network. |
|  | Path Trace | Allows the controller to review and collect protocol and other types of data from discovered devices in your network and use this data to calculate a path between two hosts or Layer 3 interfaces. |
|  | Network Plug and Play | Provides access to the remote deployment application for your network devices. |

Global Toolbar Options

The **Global** toolbar provides access to other system functions and displays system notifications.

Table 3: Global Toolbar Options

| Icon | Option | Description |
|---|------------|--|
|  | API | Displays the auto-generated documentation of the northbound REST APIs. |

| Icon | Option | Description |
|---|----------------------------------|---|
|  | System Notifications | <p>Opens the System Notifications view. This view provides information about any system notifications. For example, any notifications about software updates or security certificates updates appear in this window. Each notification contains a brief description and an icon that if clicked opens the source Cisco APIC-EM UI window for the notification (where you can take further action).</p> |
|  | Application Notifications | <p>Opens the Application Notifications view. A red square indicates a notification that has not yet been reviewed. A blue square indicates that either there are no notifications or that notifications exist and have been reviewed. Each notification is listed in the order that it occurred with the most recent at the top of the list. Each notification contains a brief description and an icon that, if clicked, opens the source Cisco APIC-EM application for the notification.</p> <p>Note You can also configure to be notified only for events in the current open window (application). By clicking on the link in the Notifications view for the current window (for example, Show only notifications for Discovery), you limit notifications to events that occur in that application.</p> |
|  | Administrative Functions | <p>Opens a window where you can perform functions that are specific to Cisco APIC-EM or to the user:</p> <ul style="list-style-type: none"> • Cisco APIC-EM functions: <ul style="list-style-type: none"> ◦ Settings—Allows you to configure controller settings, such user accounts, discovery credentials, network settings, and other security and maintenance settings. ◦ Logs—Allows you to search the controller's service logs. • User functions: <ul style="list-style-type: none"> ◦ Change Password—Allows you to change your own password. ◦ Sign Out—Logs you out of the Cisco APIC-EM. |

Management Applications

Cisco Network Plug and Play

The Cisco Network Plug and Play application provides a simple and secure solution for new infrastructure deployments of Cisco routers, switches, and wireless access points.

Using the Cisco Network Plug and Play application, you can pre-provision devices by specifying the required image, configuration, and other details. When you install and power up a Cisco network device, the device automatically connects with the Cisco APIC-EM controller using DHCP or DNS, and the Cisco Network Plug and Play application provisions the device with the preconfigured information.

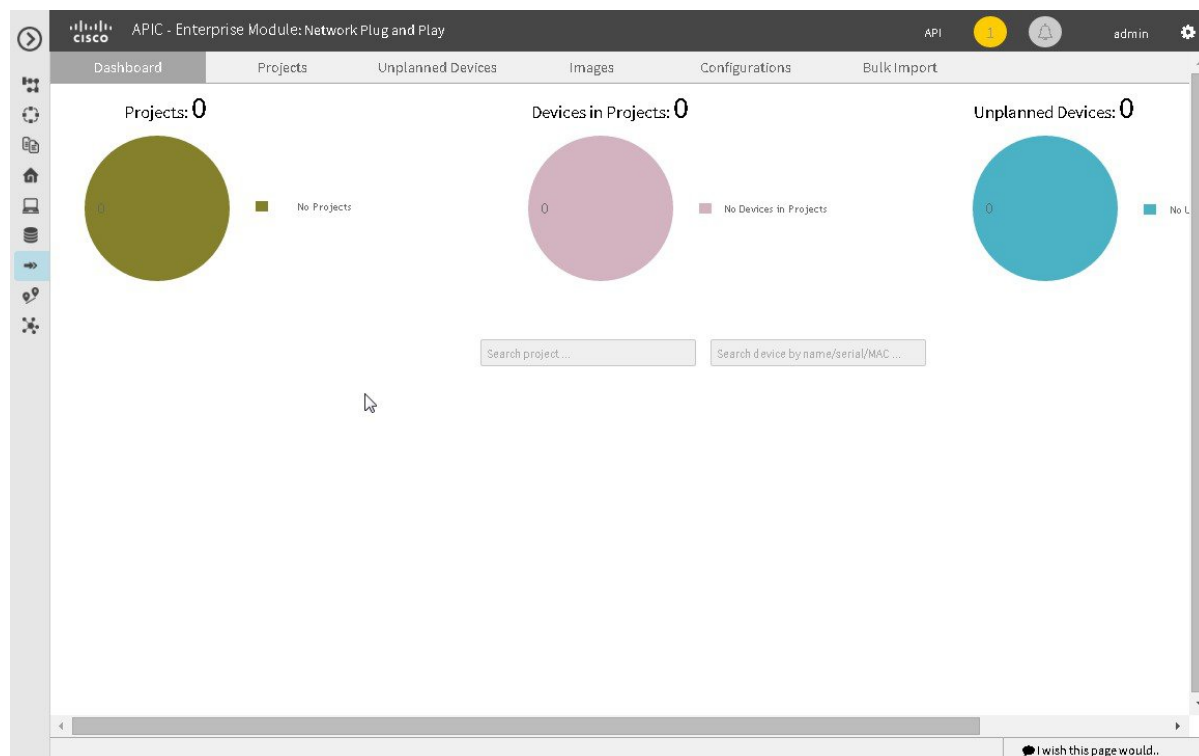
The PnP solution comprises the PnP server, the PnP app, and the PnP agent. The PnP server interacts with the PnP app (which resides on the controller) and the PnP agent (which resides on PnP-enabled nnetwork devices.)

See the Cisco Network Plug and Play documentation for information about Cisco Network Plug and Play configuration procedures.

**Note**

You may need to import a proxy gateway certificate if the PnP application is enabled on the controller and a proxy gateway exists in the DMZ between the PnP-enabled devices and the controller. For more information, see the *Cisco Application Policy Infrastructure Controller Enterprise Module Deployment Guide*.

Figure 1: Cisco Network Plug and Play Dashboard



Cisco Intelligent WAN (IWAN)

The Cisco Intelligent WAN (IWAN) application with APIC-EM extends Software Defined Networking (SDN) to the branch with an application-centric approach based on business policy and application rules. This provides IT centralized management with distributed enforcement across the network.

The IWAN application helps IT deliver an uncompromised user experience over any connection while lowering operational costs. IWAN also simplifies IT operations through a software-based controller model, automating management tasks to ensure faster, more successful deployments.

The Cisco IWAN application leverages the APIC-EM to abstract the network devices into one system to eliminate network complexity, and provide centralized provisioning of the infrastructure to speed up application and service roll outs.

From the IWAN application, you can configure your network-wide settings, provision sites, and configure application policies.

See the Cisco IWAN documentation for information about Cisco IWAN network configuration procedures.

**Note**

You may need to import a proxy gateway certificate if the IWAN application is enabled on the controller and a proxy gateway exists in the DMZ between network devices and the controller. For more information, see the *Cisco Application Policy Infrastructure Controller Enterprise Module Deployment Guide*.

Figure 2: IWAN Dashboard

