Overview

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.
Cisco 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. This feature saves costs by application experience over any connection and using otherwise inactive or backup links.
Public Key Infrastructure (PKI) server	The Cisco APIC-EM provides an integrated PKI server for Trust manager service. It automates the lifecycle management of issuing, renewing, and revoking the PKI X.509 certificate for applications such as IWAN application. With this feature, the IWAN application greatly simplifies the process of establishing and keeping trust in the network.
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.

Figure 1: Home Page
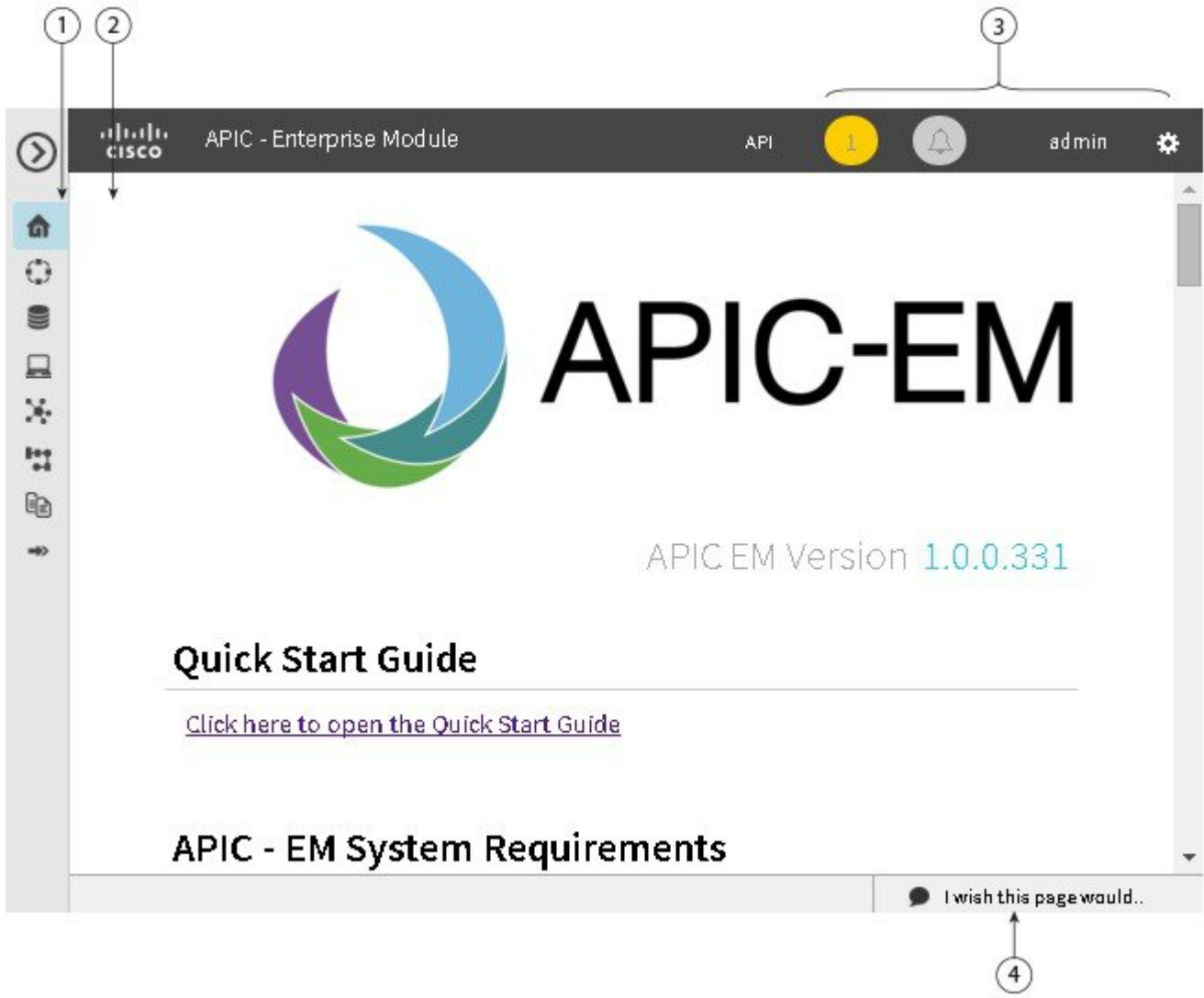
Callout Number	Name	Description
1	**Navigation** pane	Provides access to the Cisco APIC-EM features and additional applications, such as IWAN and Network Plug and Play.
2	Window	Area where the feature or application interface is displayed. When you click an option in the **Navigation** pane, its corresponding window opens.

Callout Number	Name	Description
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.
	Topology	Displays graphical representations of your physical, Layer 2, and Layer 3 networks.
	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.
	IWAN	Allows you to configure your network-wide settings, provision sites, and configure application policies.
	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	**API**	Displays the auto-generated documentation of the northbound REST APIs.
	System Notifications	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).
	Application Notifications	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. **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.

Icon	Option	Description

admin ⚙	**Administrative Functions**	Opens a window where you can perform functions that are specific to Cisco APIC-EM or to the user:
		
		• Cisco APIC-EM functions:
		
		  ◦ **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:
		
		  ◦ **Change Password**—Allows you to change your own password.
		
		  ◦ **Sign Out**—Logs you out of the Cisco APIC-EM.