



Preface

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Audience

This guide is intended primarily for data center administrators with responsibilities and expertise in one or more of the following:

- Virtual machine installation and administration
- Server administration
- Switch and network administration

New and Changed Information



Note

All the content in this guide was taken over from the published *Cisco APIC Basic Configuration Guide* and several Cisco APIC knowledge base articles, with Cisco APIC Release 2.2(1x).

The following table provides an overview of the significant changes to the chapters in this guide up to the current release. The table does not provide an exhaustive list of all changes made to the topics or of the new features up to this release.

Table 1: New Features and Changed Information for Cisco APIC 3.0(x)

Feature or Change	Description	Where Documented
Q-in-Q Encapsulation Mapping for EPGs	With this release, you can map double-tagged VLAN traffic ingressing on a regular interface, PC, or VPC to an EPG.	<i>Q-in-Q Encapsulation Mapping for EPGs</i>
Enforced Bridge Domain	Enforced bridge domain is supported, in which an endpoint in a subject endpoint group (EPG) can only ping subnet gateways within the associated bridge domain. With this configuration enabled, you can create a global exception list of IP addresses which can ping any subnet gateway.	<i>Enforced Bridge Domain in Bridging</i>
Configuring Leaf Switch Using Port Association	Using these GUI steps, you can now choose the port and then apply a policy to it.	<i>Configuring Leaf Switch Physical Ports Using Port Association</i>

Table 2: New Features and Changed Information for Cisco APIC 2.3(1e) Release

Feature or Change	Description	Where Documented
802.1Q Tunnel enhancements	Now you can configure ports on core-switches for use in Dot1q Tunnels for multiple customers. You can also define access VLANs to distinguish between customers consuming the corePorts. You can also disable MAC learning on Dot1q Tunnels .	<i>802.1Q Tunnels</i>
Symmetric hashing	Symmetric hashing is now supported on port channels.	<i>Port Channels</i>
Reflective relay (802.1Qbg)	Reflective relay transfers switching for virtual machines out of the host server to an external network switch. It provides connectivity between VMs on the same physical server and the rest of the network. It allows policies that you configure on the Cisco APIC to apply to traffic between the VMs on the same server.	<i>Access Interfaces</i>

Feature or Change	Description	Where Documented
Traffic Storm control Unicast/Multicast differentiation	Allows you to configure Storm Control on each traffic type separately.	<i>Traffic Storm Control</i>

Table 3: New Features and Changed Information in Cisco APIC Release 2.2(2e)

Feature or Change	Description	Where Documented
Document Reorganization	<p>The topics in this guide were collected from <i>Cisco APIC Basic Configuration Guide</i> and the following APIC articles:</p> <ul style="list-style-type: none"> • <i>Cisco ACI and 802.1Q Tunnels</i> • <i>Cisco APIC EPG Deployment to Specific Ports Using Domains, Attach Entity Profiles, and VLANs</i> • <i>Cisco APIC and Traffic Storm Control</i> • <i>Cisco APIC and Dynamic Breakout Ports</i> • <i>Cisco APIC and Proxy ARP</i> • <i>Deploying an EPG on a Specific Port Using Cisco APIC</i> 	<i>Cisco APIC Layer 2 Configuration Guide</i>

Table 4: New Features and Changed Behavior in Cisco APIC 2.2 (1n) Release

Feature	Description	Where Documented
FCoE over FEX	You can now configure FCoE over FEX ports.	<i>FCoE Connections</i>
802.1Q Tunnels	You can now configure 802.1Q tunnels on edge ports to enable point-to-multi-point tunneling of Ethernet frames in the fabric, with Quality of Service (QoS) priority settings.	<i>802.1Q Tunnels</i>

Feature	Description	Where Documented
Dynamic Breakout Ports	To enable a 40 Gigabit Ethernet (GE) leaf switch port to be connected to 4-10GE capable (downlink) devices (connected with Cisco 40-Gigabit to 4X10-Gigabit breakout cables), you configure the 40GE port to breakout (split) to 4-10GE ports.	<i>Dynamic Breakout Ports.</i>

Table 5: New Features and Changed Information for Cisco APIC 2.1(x) Release

Feature or Change	Description	Where Documented
Revision to topic <i>Configuring a Traffic Storm Control Policy Using the CLI</i>	The topic was replaced with a new topic that uses the NX-OS Style CLI.	See <i>Configuring a Traffic Storm Control Policy Using the NX-OS Style CLI</i> in <i>Traffic Storm Control</i> .

Table 6: New Features and Changed Information for Cisco APIC 2.0(2x) Release

Feature or Change	Description	Where Documented
Revision to topic <i>Configuring a Traffic Storm Control Policy Using the Advanced GUI</i> .	Advanced GUI revisions have changed the navigation path to the Storm Control Interface Policy work pane.	<i>Traffic Storm Control</i>
Proxy ARP	Proxy ARP in Cisco ACI enables endpoints within a network or subnet to communicate with other endpoints without knowing the real MAC address of the endpoints. Proxy ARP is aware of the location of the traffic destination, and offers its own MAC address as the final destination instead.	<i>Proxy ARP</i>

Table 7: New Features and Changed Behavior in Cisco APIC for Cisco APIC Release 2.0(1m)

Feature or Change	Description	Where Documented
Fibre Channel over Ethernet (FCoE) support	An overview and configuration topics for implementing FCoE connectivity over the ACI fabric.	<i>FCoE Connections</i>

Table 8: New Features and Changed Behavior in Cisco APIC for Cisco APIC Release 1.3(1g)

Feature or Change	Description	Where Documented
-	Removed object model CLI procedure and replaced with NX-OS-Style CLI procedures.	<i>Creating AEP, Domains, and VLANs to Deploy an EPG on a Specific Port Using the NX-OS CLI</i> <i>Deploying and EPG on a Specific Port with APIC Using the NX-OS Style CLI</i>

Document Conventions

Command descriptions use the following conventions:

Convention	Description
bold	Bold text indicates the commands and keywords that you enter literally as shown.
<i>Italic</i>	Italic text indicates arguments for which the user supplies the values.
[x]	Square brackets enclose an optional element (keyword or argument).
[x y]	Square brackets enclosing keywords or arguments separated by a vertical bar indicate an optional choice.
{x y}	Braces enclosing keywords or arguments separated by a vertical bar indicate a required choice.
[x {y z}]	Nested set of square brackets or braces indicate optional or required choices within optional or required elements. Braces and a vertical bar within square brackets indicate a required choice within an optional element.
variable	Indicates a variable for which you supply values, in context where italics cannot be used.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Examples use the following conventions:

Convention	Description
screen font	Terminal sessions and information the switch displays are in screen font.

Convention	Description
boldface screen font	Information you must enter is in boldface screen font.
<i>italic screen font</i>	Arguments for which you supply values are in italic screen font.
<>	Nonprinting characters, such as passwords, are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

This document uses the following conventions:



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the manual.



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.



Warning

IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

Related Documentation

Application Policy Infrastructure Controller (APIC) Documentation

Companion documents for APIC, *Cisco APIC Getting Started Guide*, *Cisco APIC Basic Configuration Guide*, *Cisco APIC Layer 2 Networking Configuration Guide*, *Cisco APIC Layer 3 Networking Configuration Guide*, *Cisco APIC NX-OS Style Command-Line Interface Configuration Guide*, *Cisco APIC REST API Configuration Guide*, *Cisco APIC Layer 4 to Layer 7 Services Deployment Guide*, and *Cisco ACI Virtualization Guide* are available at the following URL: <http://www.cisco.com/c/en/us/support/cloud-systems-management/application-policy-infrastructure-controller-apic/tsd-products-support-series-home.html>

Cisco Application Centric Infrastructure (ACI) Documentation

The broader ACI documentation is available at the following URL: <http://www.cisco.com/c/en/us/support/cloud-systems-management/application-policy-infrastructure-controller-apic/tsd-products-support-series-home.html>.

Cisco Application Centric Infrastructure (ACI) Simulator Documentation

The Cisco ACI Simulator documentation is available at <http://www.cisco.com/c/en/us/support/cloud-systems-management/application-centric-infrastructure-simulator/tsd-products-support-series-home.html>.

Cisco Nexus 9000 Series Switches Documentation

The Cisco Nexus 9000 Series Switches documentation is available at <http://www.cisco.com/c/en/us/support/switches/nexus-9000-series-switches/tsd-products-support-series-home.html>.

Cisco Application Virtual Switch Documentation

The Cisco Application Virtual Switch (AVS) documentation is available at <http://www.cisco.com/c/en/us/support/switches/application-virtual-switch/tsd-products-support-series-home.html>.

Cisco Application Centric Infrastructure (ACI) Integration with OpenStack Documentation

Cisco ACI integration with OpenStack documentation is available at <http://www.cisco.com/c/en/us/support/cloud-systems-management/application-policy-infrastructure-controller-apic/tsd-products-support-series-home.html>.

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to apic-docfeedback@cisco.com. We appreciate your feedback.

