

Access Switch Layer 3 Interface



Overview

“Layer 3 access” or “routed access” is not a specific vendor feature — it's a design pattern: Each access switch (or stack) becomes a Layer 3 device, not just a Layer 2 island. End devices are still in VLANs, but the default gateway SVI lives on the access switch, not. Layer 3 interfaces forward packets to another device using static or dynamic routing protocols. You can configure a port as a Layer 2 interface or a Layer 3 interface. In one common topology, known as a “router on a stick” or a “one-armed router,” you connect a router to an access switch with connections to. In Figure 2-12, PC1, PC2, and PC3 are on three network segments, and SwitchC, SwitchD, and SwitchE are access switches for the three network segments, respectively. To enable SwitchA and SwitchB to communicate with each other and provide high link bandwidth, Layer 3 Eth-Trunk interfaces need to be. The goal is not to declare “Layer 2 bad, Layer 3 good,” but to give you a practical mental model: When should I stop stretching VLANs and start routing closer to the edge?

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Article Content

Apr 24, 2026

MS Layer 3 Switching and Routing

Layer 3 routing capabilities are available on most Cisco Meraki switches. This allows the switches to route traffic between VLANs in a campus network without the need for an additional layer

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Fixed Port L3 Managed Ethernet Switches

These powerful Layer 3 access switches are easy to deploy and manage with advanced security and network management tools like HPE Aruba Networking

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What Is an Access Layer Switch? Guide complet

An access layer switch is the entry point for users and devices into your network—and a critical piece of both performance and security. For SMB IT managers and system integrators, choosing the right

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HPE Aruba CX 6100 48-Port PoE(740W) 4xSFP+ Switch | R9Y04A

The HPE Aruba R9Y04A is a entry level Layer 3 access switch with 48 x 1G PoE ports, 4 x 1/10G SFP+ ports and a single fixed power supply.

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The Network Layer: Understanding layer 3 of the OSI Model

A Layer 3 switch is simply a Layer 2 device that also does routing (a Layer 3 function). Another key aspect of routers is that each interface on a router has its own IP address, because

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Example: Configuring Layer 3 Subinterfaces for a Distribution Switch ...

This example describes how to create Layer 3 subinterfaces on trunk interfaces of a distribution switch and access switch so that you can route traffic among multiple VLANs:

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Layer 3 Lite vs Layer 3 Basic vs Layer 3 Dynamic vs Layer 3 ...

This guide provides a comparison of Layer 3 network switches: Lite, Basic, Dynamic, and Advanced, to help you make informed decisions for your network.

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What Is a Layer 3 Switch? Definition, How It Works,

What is a Layer 3 switch? Learn the definition, how it works, use cases, pros and cons, and when to choose a multilayer switch for enterprise LANs.

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Fortinet FortiSwitch FS-424E Layer 2/3 FortiGate Network switch

Fortinet FortiSwitch FS-424E Layer 2/3 FortiGate Network switch 24xGE ports SFP+ FortiSwitch Secure Access Series FortiSwitch Secure Access switches deliver a Secure, Simple, Scalable Ethernet

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Routed Interfaces on Layer-3 Switches and Internal VLANs

In the Router Interfaces and Switch Ports blog post, I described why we have switch ports and routed interfaces on layer-3 switches. Another blog post in the same series described the

Apr 10, 2026

Layer 3 Switches Explained: Architecture, Routing Logic, Use Cases,

Layer 3 Switches Explained: Architecture, Routing Logic, Use Cases, and Network Design Guide Technical guide to Layer 3 switches, covering L2 switching, IP routing, ASIC

Jan 03, 2026

Cisco C9350 Series Smart Switches Data Sheet

Series highlights Cisco C9350 Series Smart Switches are the evolution of enterprise-class stackable fixed campus access-layer switches designed to deliver security, scale, and flexibility while

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Layer 2 vs Layer 3 in Access Networks: When It's Time

Each access switch (or stack) becomes a Layer 3 device, not just a Layer 2 island. End devices are still in VLANs, but the default gateway SVI lives

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Configuring Layer 3 Interfaces

VLAN interface or a switch virtual interface (SVI) is a virtual routed interface that connects a VLAN on the device to the Layer 3 router engine on the same device.

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What does a layer 3 access design look like? : r/networking

But what exactly does this design look like? I generally believed that in a traditional hierarchical model that the uplinks from access switches to the distribution switch were trunk ports, the user vlans/SVIs

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Managed network switches | D-Link

DGS-3130-54PS 54-Port Lite Layer 3 Stackable Managed Gigabit PoE Switch Compare Showing 9 of 12 products Show all

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Example for Switching an Interface to Layer 3 Mode

To enable SwitchA and SwitchB to communicate with each other and provide high link bandwidth, Layer 3 Eth-Trunk interfaces need to be used between SwitchA and SwitchB. In addition,

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Grandstream - 16-Port Gigabit PoE+ Layer 3 Managed Switch

The Grandstream GWN7812P 16-Port Gigabit PoE+ Layer 3 Managed Switch is a high-performance networking solution built for enterprise-grade connectivity, advanced traffic management, and reliable

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Layer-Three Switching and Forwarding

Under the interface configuration for each Switched Virtual Interface (SVI) is an ip helper-address command to forward local DHCP, H323, SIP, and mDNS. Ability to support cases where DHCP

Nov 30, 2025

HPE Aruba Networking CX 6200 Switches

The HPE Aruba Networking CX 6200 Switch Series provides Layer 2/3 access switching with high performance, security, and ease of use for latency-sensitive,

Feb 10, 2026

Difference between layer-2 and layer-3 switches

Layer 2 switches operate at the data link layer, forwarding data based on MAC addresses, while layer 3 switches route traffic using IP addresses.

Oct 12, 2025

Layer 3 switches explained

Layer 3 switches are explained in this tip, including the difference between a switch, a router and a Layer 3 switch.

Dec 01, 2025

Layer 3 Switch Example

On the Distribution Switch, three layer 3 interfaces will be required. One for the uplink to the Firewall (which acts as the switch's default route), one for the data VLAN, and one for the voice VLAN.

Contact Us

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