How to configure a Layer 2 switch



Overview

Layer 2 VLAN Configuration on a Cisco Switch (with Example)Learn how to create and assign Layer 2 VLANs on Cisco switches and configure trunk ports between.

Key Takeaways

Configuring a Layer 2 switch involves setting up VLANs, assigning ports as access or trunk, managing MAC addresses, and optionally configuring a management interface for remote access. Step 1: Configure VLANsVLANs segment a network into separate broadcast domains. By default, most switches have only VLAN 1.

To create additional VLANs: Enter global configuration mode. Use the command vlan to create a VLAN. Assign a name with name.

Assign switch ports to VLANs using interface followed by switchport mode access and switchport access vlan for access ports. Step 2: Configure Trunk PortsTrunk ports carry multiple VLANs between switches: Enter interface configuration mode for the port connecting to another switch. Use switchport mode trunk to enable trunking.

Optionally, specify allowed VLANs with switchport trunk allowed vlan. Step 3: Configure MAC Address TableLayer 2 switches maintain MAC address tables to forward traffic: Static MAC addresses can be configured to bind a MAC to a specific port using mac-address-table static vlan interface. This ensures consistent forwarding and overrides dynamically learned addresses.

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Step 4: Enable Full-Duplex and Speed SettingsTo maximize bandwidth and reduce collisions: Configure each port with duplex full and set the speed with speed if needed. Step 5: Configure Management Interface (Optional)For remote management: Assign an IP address to a Switch Virtual Interface (SVI) using interface vlan followed by ip address and no shutdown. Set a default gateway with ip default-gateway to allow remote access.

Step 6: Save ConfigurationAfter completing the configuration, save it to ensure persistence across reboots: Use copy running-config startup-config or write memory depending on the switch model.

Additional Considerations

Ensure VLA

Ns are consistent across multiple switches to avoid connectivity issues. Use trunk ports for inter-switch links to propagate VLANs. Implement security measures such as port security to limit MAC addresses per port.

Monitor the MA

C address table and port status to troubleshoot connectivity problems. By following these steps, a Layer 2 switch can be effectively configured to segment traffic, manage bandwidth, and support remote administration.

Article Content

Layer 2 VLAN Configuration on a Cisco Switch (with Example)

Learn how to create and assign Layer 2 VLANs on Cisco switches and configure trunk ports between switches. See a network scenario and step-by-step configuration comma

Chapter: Layer 2 LAN Port Configuration

Layer 2 Ethernet ports on Cisco switches support simultaneous, parallel connections between Layer 2 Ethernet segments. Switched connections between Ethernet segments last only for

Configure Basic Parameters in a Layer 2 Switch

Now that you know how to use the CLI in Cisco Packet Tracer, the first thing you''re going to do is configure the basic parameters for a layer 2 switch. To access the switch remotely, you need to

Cisco Switch Layer2 Layer3 Design and Configuration

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One simple and popular switch design scenario will be shown in the following tutorial. This scenario will fit most SMB networks (or even bigger ones) that have a few layer 2 VLANs and consequently a few

How to Configure a Cisco Switch in 10 Steps

In this step-by-step guide, we walk you through configuring Cisco switches and look at some FAQs. Configuring a Cisco switch is a fundamental task for network administrators, as it lays

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Layer 2 Switch is an indispensable part of Network setup in LAN environments. Configuration of Switch is little different from that of Router or firewall where the interfaces are Layer

Configure a Layer 2 Switch — Network+ and A+ Lab | 101 Labs

Installing, configuring, and troubleshooting layer 2 switches will be part of your day-to-day routine as a network engineer. In this lab we cover basic VLAN and trunk configuration.

Claude Code model configuration | Claude Help Center

This guide shows you three ways to change which Claude model you''re using with Claude Code: the quick /model command for instant changes, the --model flag for one-time session

Router Configuration With Cisco Packet Tracer

Router (config-if)#interface FastEthernet0/1 Router (config-if)#ip address 192.168.20.1 255.255.255.0 Router (config-if)#no shutdown Step-2 (Configuring PCs): Assign IP Addresses to

Layer 2 vs Layer 3 Switch: What''s the Difference? | Auvik

A network switch is a fundamental piece of any network, so it''s critical that you as an IT professional understand the role of a switch in a properly functioning network. And to best

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In this article What is Transport Layer Security (TLS)? Who can benefit from this article? TLS support in Framework Recommendations Audit your code and make code changes If you

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IEEE 802.1x Multi-Domain Authentication on Cisco Catalyst Layer 3

Configure the Catalyst Switch for 802.1x Multi-Domain Authentication This sample switch configuration includes: How to enable 802.1x multi-domain authentication on the switch ports

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Multi Protocol Label Switching (MPLS)

Multi Protocol Label Switching Note: MPLS lies between Layer 2 (Data Link) and Layer 3 (Network Layer) of the OSI model, which is why it is often referred to as a Layer 2.5 protocol. Why

M365 Cross-Cloud and Cross-Tenant Collaboration Scenarios

To make it easier to consume, my colleague @Paul Meacham and I created a series of videos illustrating how each one works and what steps you need to take to configure them, when

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SNMP is an application layer protocol defined by the Internet Architecture Board in RFC1157 for exchanging management information between network devices. Learn more OpManager!

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