

How to configure a core access Layer 2 switch



AI Overview

A core switch can be configured as a Layer 2 access switch by setting up VLANs, access/trunk ports, and link aggregation while ensuring redundancy and high-speed connectivity.

Key Considerations

- Core vs Access Role:** Core switches are typically designed for high-capacity routing and aggregation, but they can function as Layer 2 access switches if the network requires high-speed connections to servers or devices. The labels “core” or “access” are vendor suggestions and do not restrict functionality.
- Port Configuration:** Configure each port as either an access port (for a single VLAN) or a trunk port (to carry multiple VLANs). Full-duplex mode should be enabled to maximize bandwidth and prevent collisions.
- VLAN Setup:** Create VLANs to segment traffic logically. Assign each access port to the appropriate VLAN. For multiple VLANs, trunk ports can extend VLANs across switches.
- Link Aggregation (Port-Channel):** For high-bandwidth connections, configure port-channels or LAGs to combine multiple physical links into a single logical link. This improves throughput and provides redundancy.
- Redundancy and VSX/MC-LAG:** If using Aruba or similar switches, configure VSX pairs or MC-LAG to allow multi-chassis link aggregation. This ensures that if one core switch fails, traffic continues through the other switch without disruption.
- MAC Address Management:** Maintain MAC address tables for Layer 2 forwarding. Static MAC addresses can be configured for critical devices to ensure consistent connectivity.
- Management and Monitoring:** Configure out-of-band management interfaces for switch monitoring and VSX keepalives. Enable logging and monitoring to track port status, errors, and performance.

Example Configuration Steps (Cisco NX-OS)

```
Enter configuration mode: configure terminal
Create VLANs: vlan
10 ... name Servers
Assign access ports:
CodeCopy
interface Ethernet1/1
switchport...
```

Article Content

Access, Distribution, and Core Layers Explained

This tutorial provides an overview of the access, distribution, and core layers and explains two-tier and three-tier campus LAN designs.

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Cisco Switch Layer2 Layer3 Design and Configuration

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

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Layer 2 vs Layer 3 Switch: Key Differences and Use Cases

Layer 2 vs Layer 3 switch explained. Learn MAC vs IP forwarding, inter-VLAN routing, performance differences, and when to choose each switch type.

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

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

This post will deal with creating Layer 2 VLANs on Cisco switches and performing all relevant configurations. Up to 4094 VLANs can be configured on Cisco catalyst switches.

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Campus LAN: Core, Distribution, Access Layers

Access layer is composed of switches (access switches) that connects to the end devices. For example, PCs, Access Points, and Servers are

Core Switch and Access Switch configuration

We have Data VLAN and Voice VLAN on 3850 switch. i need to bypass the voice traffic from the firewall. all voice traffic should go via 3850 switch to avoid load on firewall. Solved: HI TEAM,

How to Configure a Firewall in Cisco Switch?

Configure a Firewall on Cisco Switch: Access lists are supported for network traffic filtering by the Cisco 850 and Cisco 870 series routers. The

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Configuring Layer 2 Switching

You can configure Layer 2 switching ports as access or trunk ports. Trunks carry the traffic of multiple VLANs over a single link and allow you to extend VLANs across an entire network. All Layer 2

SSMS roadmap

As we make SSMS 20 generally available, we'll share information about the current SSMS roadmap.

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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

Two-Tier Core | Validated Solution Guide

Configure Two-Tier core switches as a VSX pair for Layer 2 aggregation of the data center access switches, spanning tree, lossless ethernet features and IP data center services.

Network Switches

Cisco network switches deliver performance, flexibility, and security. Cisco switches are scalable and cost-efficient and meet the demands of hybrid work.

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