

How to configure routing on a core switch



AI Overview

Core switch routing configuration involves setting up VLANs, SVIs, inter-switch links, and routing protocols to ensure efficient Layer 3 traffic flow and high availability.

VLAN and SVI Configuration On a Layer 3 core switch, VLANs are created to segment network traffic, and Switched Virtual Interfaces (SVIs) are assigned IP addresses to enable routing between VLANs. For example, if you have a public /21 subnet from your ISP, you can break it into smaller /24 subnets and assign each to a VLAN with an SVI interface. Each SVI acts as the default gateway for devices in that VLAN.

Routing Protocols To avoid manually adding static routes for every subnet, enable a dynamic routing protocol such as OSPF or EIGRP between the core switch and upstream routers. This allows automatic route propagation and reduces administrative overhead. If dynamic routing is not possible, static routes can be configured per subnet, e.g., `ip route 1.1.3.0 255.255.255.0 1.1.1.2` where 1.1.1.2 is the uplink to the router.

Inter-Switch Links and Redundancy For high availability, core switches are often deployed in VSX or MC-LAG pairs, which allow multi-chassis link aggregation to access switches. This ensures that if one core switch fails, traffic can still flow through the other switch. Link Aggregation Groups (LAGs) are used for inter-switch links (ISLs) to provide redundancy and load balancing.

Firewall and ISP Integration When connecting firewalls and ISPs, configure interconnection VLANs on the core switch and bind them to VPN instances if needed to isolate public and private traffic. Internet-bound traffic should be routed through firewalls before reaching the ISP, ensuring security compliance.

Best Practices

- Backplane bandwidth:** Ensure the core switch has sufficient backplane capacity to handle inter-VLAN and inter-switch traffic without bottlenecks.
- Modular scalability:** Use slots and modules to expand ports and interface types as network demands grow.
- OOB management:** Configure out-of-band management interfaces for monitoring and VSX keepalives.
- R...**

Article Content

How to Enable IP Routing on a Cisco Router or Switch

In order for these devices to communicate with one another, the VLAN switches or routers need to have IP routing enabled and configured to route traffic between the two devices. This

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Introduction to Core Switch Configuration

The most important purpose of the layer 3 switch is to speed up the data exchange within the large LAN, and the routing function is also for this purpose. It can do one route and multiple forwarding.

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Inter-VLAN Routing using Layer 3 Switches (4.3)

In this sample chapter from Switching, Routing, and Wireless Essentials Companion Guide (CCNAv7) for Cisco Networking Academy students, you will learn how to troubleshoot common inter-VLAN

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Configure Inter-VLAN Routing with Catalyst Switches

When configuring interfaces and routes, you need to specify a VPN instance to isolate public network routes from the return routes from the firewalls destined for the egress routers through

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

How to configure a Cisco Layer3 Switch-InterVLAN

The focus of this article is to show you how to configure the Layer2 and Layer3 switches to provide routing between VLANs using regular IOS based catalyst

How to Configure OSPF Between Firewall and Core Switch

In this video, we configure OSPF routing between a Core Switch and a Firewall and perform complete failover testing to verify redundancy, dynamic route exchange, and high availability.

The Telegraph

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Configuring Interconnection Interfaces and Routes for the Core Switch ...

In this example, Internet access traffic of users passes through the BRAS, and then reaches the egress network of the firewall through the core switch. Traffic passing through the BRAS is classified into

How to setup special routing of internet traffic in Layer 3 switch?

At my work, I want to change the way our internet traffic routes through our core switch at the main office and eventually the satellite offices, but I'm unsure on exactly how to do this.

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SSMS roadmap

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

How to Configure a Cisco Switch (step by step)

If you're looking to configure a switch for the first time, this post is for you. Learn step-by-step configuration commands for Cisco IOS Switches.

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