

Article 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

- o Backplane bandwidth: Ensure the core switch has sufficient backplane capacity to handle inter-VLAN and inter-switch traffic without bottlenecks .
- o Modular scalability: Use slots and modules to expand ports and interface types as network demands grow .
- o OOB management: Configure out-of-band management interfaces for monitoring and VSX keepalives .
- o Route summarization: Summarize routes where possible to reduce routing table size and improve efficiency.

Core Switch Routing Configuration

o Monitoring and SLA tracking: Implement SLA tracking or link monitoring to detect ISP or link failures and trigger failover automatically .

By combining VLAN/SVI setup, dynamic routing, VSX redundancy, and firewall integration, a core switch can efficiently manage Layer 3 traffic, provide high availability, and scale with network growth.

Configure Two-Tier core switches as a VSX pair for Layer 2 aggregation of the data center access switches, IP data

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

We're currently upgrading our flat L2 switch topology to a three-tier design using SG-class switches in a building

The above feature means that you can implement Layer 3 functionality in your network without using a regular router. If you don't

Learn how to Configure a Cisco Switch. Follow along this Step-by-Step guide that will get you using Commands via

"Gateway + Core Switch + Aggregation Switch + Access Switch + WAC + AP + AR180"
Networking: Local Entire Network

You can replace the existing unmanaged switches with a layer 2 vlan on your main switch. You do not need any

When configuring interfaces and routes, you need to specify a VPN instance to isolate public network routes from the

Cisco IT built a Layer 3 (routing) core in the San Jose MAN while still using Cisco Catalyst 6500 Series switches by adding the Cisco

Core switches are crucial in effective network design. They stand at the network's heart, speeding up data transfer

What is a core switch and how it works? This article builds the basics of this kind of switch for the ones who don't

Core Switch Routing Configuration

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

A core switch differs from a standard switch in the volume of data it can handle and

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

Switch configuration on your own can seem like a daunting task. Use this handy guide to get your network switch up

Conclusion: Is It Time for a Core Switch? If your organization requires high-speed, always-on network connectivity, a core switch is

Web: <https://in-au.co.za>

