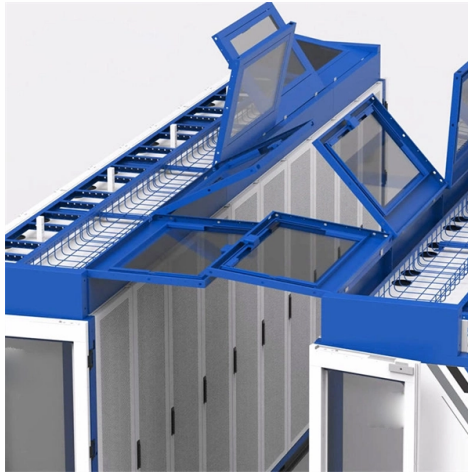


Interconnecting two core switches



Overview

Solved: interconnecting two core switches Yes, I'm connecting a pair of switches configured in VSS mode to another pair of switches configured in VSS mode.

Key Takeaways

Core switches are typically interconnected using multiple high-speed links with VLAN trunking and static or dynamic routing to ensure redundancy and high availability. Key Considerations



1. **Physical Connectivity:** Use fiber optic links for long-distance or high-bandwidth connections between core switches. Single-mode fiber is preferred for distances over a few hundred meters, while multi-mode fiber works for shorter distances. Pre-terminated fiber cables with LC or SC connectors simplify installation and reduce errors. For redundancy, deploy at least two physical links, ideally across different linecards or port groups to avoid a single point of failure.
2. **VLAN and Trunk Configuration:** Create a transport VLAN dedicated to inter-switch communication. Assign IP addresses to the VLAN interfaces on each switch for routing purposes. Configure the interconnect ports as trunk ports and allow the transport VLAN along with any other VLANs that need to traverse the link. Ensure that VLAN IDs are unique and consistent across both switches to prevent MAC address conflicts.
3. **Routing Between Switches:** If each core switch manages its own VLANs, use static routes or a dynamic routing protocol (e.g., OSPF or EIGRP) over the transport VLAN to enable inter-VLAN communication. For example, on CS1, you might configure `ip route 12.0.0.0 255.255.255.0 10.0.0.2` pointing to CS2's transport VLAN IP. Verify connectivity with ping tests and check MAC address tables to ensure proper forwarding.
4. **Redundancy and Bandwidth Aggregation:** Consider link aggregation (LACP) to combine multiple physical links into a single logical interface, increasing bandwidth and providing failover. Avoid single-link interconnects, as they create a bottleneck and a single point of failure.
5. **Topology Choices:**
 - **Cascading:** Simple method connecting two switches via trunk ports; each switch remains independently managed.
 - **Stacking:** If supported, allows switches to operate as a single logical unit with shared management and backplane bandwidth, but usually requires same-vendor hardware.
 - **Daisy Chain or Star Topology:** For multiple switches, daisy chain is simple but less redundant; star topology centralizes traffic through a main switch, improving performance and manageability.
6. **Verification and Troubleshooting:**
 - Use `show cdp neighbor` to confirm the switches see each other.
 - Use `show vlan` and `show interface trunk` to verify VLANs are active and not pruned.
 - Check MAC addresses to ensure no conflicts exist on the transport VLAN. By following these practices, you can interconnect two core switches efficiently, ensuring high availability, proper routing, and scalable bandwidth for your network.

Article Content

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In a Two-Tier architecture, each ToR access switch is connected to both core switches using MC-LAG to provide link

Connecting multiple switches correctly

Thank you, both of these examples seem to be the same, now I'm starting to understand

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The topology I've recommended gives you the Core-Distribution-Access architecture that is commonly deployed. If your IOS can

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Best practice for chaining switches together?

So, for example, if building 3 has fiber runs from all the other 5 buildings, you could install a set of core switches like

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How to configure redundant core switch in collapsed core?

I am currently working with IOL Cisco devices in a virtual lab and have a collapsed core design. I have 2 core/distribution switches.

Designing a redundant switching infrastructure

Your core switches appear to be a core/distribution setup and you really want to separate your core switches so they

Linking of multiple Ethernet switches

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Internet connection to two core switches

Hi, I want to add some redundancy to my network by adding one more core switch. The problem is that I have only one internet

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Access Switches come to one Switch Core and this connect to a Firewall to reach Internet. Now, I would like to set up

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For example, the core switching fabric in my office is two gigabit switches with 4 ports connecting them, providing a

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Hello, I am currently setting up a new network at my company and have a question about my design. We have 2

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So if you have 1G access ports you most likely want 10 gigabit inter switch interconnects with a 10G core switch. Unfortunately there

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HSRP between 2 access switches and 2 core switches

There is a L2 Trunk interconnecting Core-Main/Backup & as well as Access-Main/Backup Switches allowing VLAN10 to

Edge switch redundancy to two core switches

I want to provide best redundancy for an access switch (Cisco 3650) when connecting to two core switches (Cisco

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The data transmitted from one switch goes to the core switch, which is further sent to the destination node that is the

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