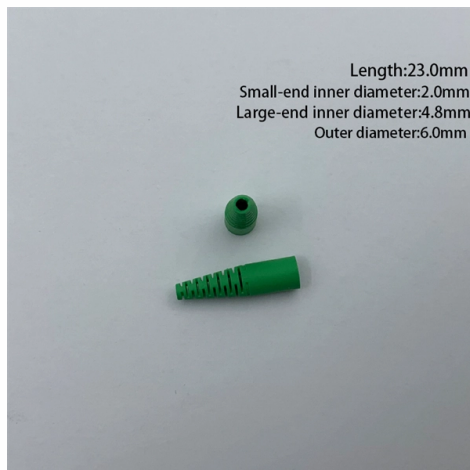


Switch Fiber Port Stacking Configuration



Overview

Cisco IOS XE 17 Stacking is the process of connecting multiple physical network switches together, so they function as a single, logical Stacking and High.

Key Takeaways

Switch fiber port stacking allows multiple switches to operate as a single logical unit, improving management, redundancy, and scalability. Overview of Fiber Port Stacking

Fiber port stacking uses SFP/SFP+ ports or dedicated stacking ports to interconnect multiple switches, enabling them to function as a single logical switch. This simplifies management, provides redundancy, and aggregates bandwidth across the stack . Stacking can be implemented in chain or ring topologies:

- Chain Topology: Each switch connects to its immediate neighbor; the first and last switches are not connected. This is simpler but offers less redundancy .
- Ring Topology: The last switch connects back to the first, forming a loop. This provides fast stack link failover and higher redundancy in case of a link or switch failure .

Configuring Fiber Ports for Stacking

- Select Stack Ports: Identify the SFP/SFP+ ports on each switch to be used for stacking. On some models, any two eligible ports can be configured as stack ports .
- Connect Switches: Use fiber cables to connect the selected ports according to the chosen topology. Ensure connectors are properly aligned and finger-tightened .

- Power-On Sequence: Power on the switch intended to be the active/master unit first, then sequentially power on the remaining switches .
 - Configure Stack Settings via CLI:
 - Enter Global Configuration mode.
 - Use the stack unit command to select the unit context.
 - Configure stack ports and assign unit IDs using stack configuration links unit-id .
 - Optionally, enable auto-numbering with unit-id auto.
 - Save the configuration to the startup file to persist after reboot .
 - Set Switch Priority: Assign a priority value (1-15) to influence which switch becomes the active unit. Higher priority increases the likelihood of being elected master .
- Active Switch Selection

The active switch is chosen based on:

- System uptime: The unit with the longest uptime is preferred.
- Unit ID: If uptime is equal, the lowest manually defined unit ID is selected.
- MAC address: If both uptime and unit ID are equal, the lowest MAC address is chosen .

Operational Considerations

- Redundancy: Ring topology ensures minimal downtime with fast stack link failover. Standby units can take over if the active switch fails .
- Compatibility: Only switches of the same model or family should be stacked to ensure consistent performance and feature support .
- Maximum Stack Size: Cisco Catalyst 1300 Series supports up to 8 switches per stack .
- Dedicated Stack Ports: Stack ports are reserved for inter-switch communication and cannot carry user traffic or VLANs .
- Firmware Synchronization: All switches must run compatible IOS versions to avoid stack instability .

Best Practices

- Use ring topology for critical networks to maximize redundancy.
- Power on the master switch first and configure priorities to control active unit selection.
- Ensure consistent firmware and feature sets across all stack members.
- Regularly backup configurations before making changes to the stack .

- Monitor stack health using commands like show switch stack or show switch neighbors to verify connectivity and active unit status . By following these steps, fiber port stacking can provide a highly available, scalable, and easily managed network infrastructure.

Article Content

Cisco IOS XE 17

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So, the easiest way to do this is by stacking the 2 switches in rack-1 and uplink them to the core and also stack 3

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Switch Stacks

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Also this method is NOT to be confused with "Fabric Stacking" which is available on the 2920,2930M,3800,3810M

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The stack will not split as long as one physical link is available between the member switches. If the logical stack ports on two ends

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Configuration Auto-install: You can auto-configure a stand-alone switch by connecting it to a TFTP server reachable

Configuring a Stack

Configure switches that will use alternate stacking ports as described in Using Ethernet Ports for Stacking (SummitStack-V Feature).

Typical Stack Configuration of Fixed Switches

S300, S500, S2700, S3700, S5700, S6700, S7700, and S9700 Series Switches Typical Configuration Examples (V200) This

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Configure Stack Settings on a Switch through the CLI

A device without any stack port can be thought of as the active device in a stack of only itself or as a standalone device. To stack two

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