Port Aggregation Switch Configuration



Overview

Learn how to configure, test, and verify the Port Aggregation Protocol (PAgP) on Cisco switches through a Packet Tracer example.

Key Takeaways

Port aggregation combines multiple physical switch ports into a single logical link to increase bandwidth, provide redundancy, and enable load balancing.

Key Concepts

Port aggregation (also called link aggregation or LAG) allows multiple physical ports to act as one logical connection. This improves network throughput and provides failover if one link fails. Aggregation can be static (manual configuration) or dynamic using LACP (Link Aggregation Control Protocol), which automatically negotiates and manages the aggregated links.

Prerequisites

Ensure all ports in the aggregation group have consistent settings: STP configuration (enabled/disabled, priority, cost)VLAN settings (permitted VLANs, PVID)Port attributes (speed, duplex mode—full duplex only, and link type: trunk, hybrid, or access), Verify that the connected device supports the same aggregation protocol (LACP for dynamic aggregation),. Plan the network topology to avoid loops or misconfigurations. Configuration Steps (UniFi Example)Select Ports: Choose sequential ports on the switch to aggregate (e.g., ports 3 and 4 on both switches),.

Enable Aggregation: Access the switch via the UniFi Network Controller or UniFi OS Console. Navigate to Port Management. Click the first port, select Aggregate from the dropdown, and choose the other port(s) to combine.

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Apply Changes: Confirm the configuration on the first switch, then repeat the same steps on the connected switch. Verify: Check that the aggregated ports are displayed as a single logical link, with one parent port and child ports indicated. Modes of AggregationON Mode: Static aggregation; no LACP negotiation required.

Up to 8 ports can be grouped. Active Mode: Dynamic aggregation; LACP actively negotiates with the connected device. Passive Mode: Dynamic aggregation; waits for LACP negotiation initiated by the other device.

Best Practices

Configure aggregation starting from the most downstream switch and move upstream. Use sequential ports to avoid misconfiguration. For high resilience, consider MC-LAG (Multi-Chassis Link Aggregation) to aggregate links across two switches as a single logical unit.

After configuration, test failover and load balancing to ensure proper operation. Port aggregation is particularly useful in data centers, enterprise networks, or high-traffic environments, where maximizing bandwidth and minimizing downtime are critical. Following these steps ensures a reliable, high-performance aggregated link.

Article Content

Port Aggregation FAQs

In what order should I configure port aggregation on my switches? You should be certain that configuration changes are first done on the most downstream switch, and then move upstream

Port Aggregation Protocol (PAgP) Explained

Learn how to configure, test, and verify the Port Aggregation Protocol (PAgP) on Cisco switches through a Packet Tracer example.

OLT Port Configuration, Cisco Catalyst PON Series Switches

Port aggregation allows you to group multiple physical ports into one unit. Port aggregation is useful for implementing load balancing and provides a redundant link backup. To

Link Aggregation and Load Balancing

To configure two or more ports, up to eight, as a port aggregate, navigate to Switching > Monitor > Switch ports and select the target ports, then choose "Aggregate".

EtherChannel Port Aggregation Protocol (PAgP)

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This post explains Port Aggregation Protocol (PAgP) and provides a sample configuration that can help you with your CCNA 200-301 study.

Switch Ports

To configure an aggregate, simply choose the ports to be aggregated by checking their respective boxes (under Switching > Monitor > Switch Ports page) and then select the Aggregate

UniFi link aggregation: the ultimate guide | UniHosted

Need more bandwidth or failover on UniFi switches? What LACP link aggregation does, which devices support it, setup and troubleshooting steps.

Combine physical ports to create ONTAP interface groups

A static multimode interface group requires a switch that supports link aggregation over multiple switch ports. The switch is configured so that all ports to which links of an interface group are connected are

SODOLA 12 Port 10Gb Managed Switch, 8x10G SFP

□Hybrid 10G Port Flexibility□This 10Gb managed swirch unlocks versatile connectivity with 810G SFP+ ports (supports fiber/DAC) and 410GBase-T RJ45

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This enables link aggregation of ports across both switches to effectively load balance traffic, and more importantly provide nearly instant failover in the event of a link failure, port failure, or even an entire

Cisco SRW224P 24-Port 10/100 + 2-Port Gigabit

The Cisco ® SRW224P 24-Port 10/100 + 2-Port Gigabit Switch (Figure 1) offers a highly secure way to expand your network. Web-based

IP-COM Switch 8Port Gigabit 9xGE+1xSFF PoE 102W G2210P Cloud

TEG2210P-8-120W 9GE+1SFP Cloud Managed PoE Switch - Support QVLAN, DHCP Snooping, loop protection,etc - Single port output power 30W, maximum output power 110W - Support Web platform

HPE Aruba Networking CX switches

HPE Aruba Networking CX 6400 Switch Series High-availability modular chassis and line card switches for versatile edge aggregation, core, and data center deployments.

Network Switches

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Our rack-mount industrial switches provide versatile connectivity with PoE, high-speed ports, stacking capabilities, and built-in security. These attributes make

HPE Aruba Networking CX 6300 Switch Series

This data sheet describes key features, supported standards and specifications for the HPE Aruba Networking CX 6300 Switch Series ideal for enterprise access and aggregation networks.

S3410L-24TF-P, 24-Port Ethernet L2+ PoE+ Switch, 24 x PoE+ Ports

OverviewThe S3410L-24TF-P is a Layer 2+ Ethernet switch equipped with 24 x 10/100/1000Mbps PoE+ ports and 4 x 1Gb SFP uplink ports. Designed for access-layer deployment, this switch utilizes a

Cross-Stack EtherChannel on a Catalyst 3750 Switch Configuration ...

This document provides a sample configuration for the configuration of cross-stack EtherChannel on a Cisco Catalyst 3750 Switch that runs Cisco IOS? system software. EtherChannel

Switch Ports

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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