Switch Port Aggregation



Overview

Configuring port aggregation on a UniFi switch is straightforward using the UniFi Network Controller (or UniFi OS Console).

Key Takeaways

Switch port aggregation combines multiple physical ports into a single logical link to increase bandwidth, provide redundancy, and improve network performance. What is Port Aggregation? Port aggregation, also known as link aggregation or EtherChannel, is a networking technique that groups multiple physical switch ports into a single logical interface.

This allows traffic to be distributed across multiple links, increasing overall throughput and providing redundancy in case one link fails. A group of aggregated ports is called a Link Aggregation Group (LAG).

Benefits of Port Aggregation

Increased Bandwidth: Multiple ports combined can handle more traffic than a single port, which is useful for high-demand environments or server connections. Redundancy and Fault Tolerance: If one physical link fails, traffic is automatically redirected to the remaining links, ensuring uninterrupted connectivity. Load Balancing: Traffic can be distributed across all aggregated links, preventing bottlenecks and optimizing network performance.

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Configuration Methods

Static Aggregation (ON Mode): Ports are manually grouped without negotiation. Both ends must be configured identically. This method does not require LACP but lacks automatic failover.

Dynamic Aggregation (LACP): Uses the Link Aggregation Control Protocol (LACP, IEEE 802.1AX/802.3ad) to automatically negotiate and manage the aggregation.

LAC

P provides automatic failover and reduces misconfiguration risks. Active Mode: Port initiates LACP negotiation. Passive Mode: Port responds to LACP negotiation but does not initiate it.

Best Practices

Ensure consistent configuration across all aggregated ports, including speed, duplex mode (full duplex only), VLAN settings, and STP parameters. Use sequential port numbers when configuring LAGs, especially on UniFi switches. For high-performance connections, consider SFP+ or fiber links for aggregation between switches or gateways.

Configure aggregation starting from the most downstream switch and move upstream to avoid misconfigurations. Use CasesSwitch-to-Switch Aggregation: Increases bandwidth between switches and provides redundancy for backbone links.

Switch-to-

Client Aggregation: Useful for high-performance servers or NAS devices that require more bandwidth than a single port can provide. Port aggregation is a powerful tool for improving network performance and reliability, particularly in enterprise or high-traffic environments. Proper configuration and adherence to best practices ensure maximum benefit from aggregated links.

Article Content

How to Aggregate Ports on UniFi Switch

Configuring port aggregation on a UniFi switch is straightforward using the UniFi Network Controller (or UniFi OS Console). The process involves selecting the ports you wish to combine,

Switch Aggregation

Faster replacement and priority support, covered for 5 years. An 8-port, Layer 2 switch made for 10G SFP+ connections.

Link aggregation

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OSI layer 2 (data link layer, e.g. Ethernet frame in LANs or multi-link PPP in WANs, Ethernet MAC address) aggregation typically occurs across switch ports, which can be either physical ports or

What Is an Aggregation Switch and How to Choose?

An aggregation switch is a network device that consolidates traffic from multiple access switches, wireless access points, or other edge devices and forwards it to core switches or routers.

Switch Aggregation

Faster replacement and priority support, covered for 5 years. High-performance 10G SFP modules for optimal connectivity. An 8-port, Layer 2 switch made for 10G

What are Link Aggregation Groups (LAGs) and how do

Link aggregation lets a switch treat multiple physical links between two endpoints as a single logical link. All the physical links in a Link Aggregation

Switch Ports

Meraki''s MS switches allow for the configuration of a single port to thousands of ports through our industry-first Virtual Stacking technology. Virtual Stacking provides centralized

Understanding Switch Aggregation: A Comprehensive

: Unifi Switch Aggregation Review: This video review examines the Unifi switch aggregation, a new eight port ten gb sfp+ switch from

EtherChannel Port Aggregation Protocol (PAgP)

Port Aggregation Protocol or PAgP is an EtherChannel technology that is a Cisco proprietary protocol. It is a form of logical aggregation of Cisco Ethernet switch ports, and it enables data/traffic load balancing.

What is Port Aggregation?

Port aggregation provides a multi-lane highway. That means if there''s an accident in one lane, you can redirect traffic to other lanes. So, bringing the analogy back home, one router can link

What Are Link Aggregation, LAG, and LACP?

What Is LAG and How Does It Work? Link Aggregation Group (LAG) is the practical implementation of link aggregation, where multiple physical ports are combined into a single logical

How To Set Up Switch Link Aggregation

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We covered both switches here a while back. Link Aggregation can also be set up with multiple NICs between a server and a switch, which we''ll leave to a future article. Figure 1: Linksys SRW2008

Unlock Speed with Ethernet Port Aggregation Guide

Ethernet Port Aggregation bonds multiple Ethernet ports into one logical link for more speed and redundancy using protocols like LACP.

Link Aggregation and Load Balancing

This is often referred to as link aggregation, link bonding or EtherChannel. To configure two or more ports, up to eight, as a port aggregate, navigate to Switching > Monitor > Switch ports

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

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

What is Link Aggregation (LAG) in Networking?

Link aggregation is a technique used in networking to bundle multiple physical ports on a network device to operate as a single link. The aggregated link acts as a single logical port functioning at a speed

What is “link aggregation” and how does it benefit your network?

Using Link Aggregation it is simple to have these multiple Ethernet connections to act as one logical connection, hardening the network in case a wire fails, and increasing total bandwidth

Ethernet Switch Port Aggregation: Unlocking the Dual Code of

Ethernet Switch Port Aggregation: Unlocking the Dual Code of Network Bandwidth and Reliability In the welding workshop of an automobile manufacturing factory in Zhejiang, when 200 welding robots were

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