

Aggregating two ports on a switch

Article Overview

Port aggregation combines two or more physical switch ports into a single logical link to increase bandwidth and provide redundancy.

What Port Aggregation Is

Port aggregation, also called link aggregation or LAG (Link Aggregation Group), allows multiple Ethernet connections to function as a single logical link. This increases total throughput, provides failover if one link fails, and can improve load balancing across the aggregated ports . For example, combining two 1 Gbps ports can theoretically provide 2 Gbps in one direction or 4 Gbps total bidirectional throughput .

Key Benefits

- o Increased Bandwidth: Multiple ports share traffic, effectively multiplying available throughput .
- o Redundancy: If one cable or port fails, traffic continues over the remaining links .
- o Load Balancing: Traffic is distributed across aggregated ports, preventing a single port from becoming a bottleneck .
- o Improved Switch-to-Switch or Server Connectivity: Ideal for high-traffic environments like data centers or NAS connections .

Requirements and Considerations

- o Sequential Ports: On UniFi switches, aggregated ports must be sequential (e.g., ports 2 and 3, not 2 and 4), .
- o Protocol Support: Both ends of the link must support the same aggregation protocol, typically LACP (802.3ad) for dynamic negotiation and automatic failover . Static LAG is less common and requires manual configuration on both ends, which can be prone to misconfiguration .
- o Device Compatibility: Ensure connected devices (switches, servers, NAS) support link aggregation .
- o Network Planning: Proper topology planning is essential to avoid loops or misconfigurations .

How to Configure on a UniFi Switch

- o Open the UniFi Network Controller or UniFi OS Console.
- o Select the ports you want to aggregate.
- o Create a new Link Aggregation Group (LAG) and assign the selected ports.
- o Apply the configuration, starting from the downstream switch and moving upstream toward the controller .
- o Verify that the aggregated link is operational and that traffic is balanced across the ports .

Limitations

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- o Single Device Throughput: A single TCP connection may still be limited to the speed of one physical port; multiple devices are needed to fully utilize the aggregated bandwidth .
- o No Multi-Chassis LAG (MC-LAG) on basic setups: Standard aggregation does not allow two switches to act as a single logical unit; MC-LAG is a more advanced option for redundancy and load balancing . Port aggregation is a powerful tool for enhancing network performance, especially in high-traffic or critical environments, by combining multiple physical links into a single, resilient logical connection.

With UniFi switches, there is a requirement to use sequential ports. Below is an example of a LAG setup that would

Link Aggregation in UniFi allows you to combine two or more ethernet ports into one. This is great when you want to

Follow the device's guide to group ports, set link requirements, and pick a monitoring interval. Some setups include

Inspect physical ports that correspond to the disabled interfaces for looped connections. At the patch panel, this could

Learn how to use Link Aggregation between UniFi switches or clients to increase bandwidth and redundancy.

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Next up: setting up the switch. You'll need a switch that supports link aggregation, whereby there's management

Link Aggregation Group (LAG) is the practical implementation of link aggregation, where multiple physical ports are

This guide covers what port aggregation / link aggregation (LAG) is and how to enable and use it within UniFi. We'll

Link aggregation, also called port trunking, is the process of combining multiple Ethernet connections into one logical link. It provides

In this tutorial you will learn how to Aggregate Unifi Switch Ports on your UniFi Controller 7.0. Link aggregation is a

This switch has 48 SFP+ ports and 6 40-GbE uplink ports. Goal: To the greatest extent possible, I would like

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to provide 10-GbE line

Aggregating ports on a UniFi switch allows you to combine multiple network links into a single, logical connection.

Cisco - Aggregating Switch Links ¶ Switch Port Aggregation with Ether Channels ¶ Under normal circumstances STP will only allow

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

Configuring MC-LAG in UniFi Network Multi-Chassis Link Aggregation Group (MC-LAG) enables redundancy and load balancing by

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