

How to configure network aggregation on a switch



Overview

The Ultimate Guide to Installing and Configuring the The Ubiquiti UniFi Switch Aggregation (USW-Aggregation) is a powerful, high-capacity Port Aggregation.

Key Takeaways

Use Link Aggregation (LAG) to combine multiple switch ports into a single logical link for increased bandwidth and redundancy. Understanding Link Aggregation

Link Aggregation allows multiple physical ports on a switch to act as a single logical connection, increasing throughput and providing failover if one link fails . It is commonly used for:

- Switch-to-Switch connections to handle higher traffic loads and ensure redundancy .
- Switch-to-Server connections where a single device requires more bandwidth than one port can provide .
- Backbone connections in large networks to optimize port usage and network performance .

Key Considerations

- Port Consistency: All ports in a LAG must have the same speed, duplex mode, and link type (trunk, hybrid, or access) to function correctly .
- VLAN Configuration: Ensure VLAN settings are consistent across all aggregated ports. Ports in a LAG should not have conflicting VLAN assignments .

- Redundancy: Run cables over different physical paths to minimize the risk of simultaneous link failure .

- Port Selection: Use sequential ports if required by your switch, and avoid assigning ports already in another LAG .

Steps to Configure Link Aggregation

- Choose Aggregation Type:

- Static LAG: Manually configure ports on both ends; no negotiation protocol is used. Provides redundancy but requires careful configuration .

- Dynamic LAG (LACP): Uses the Link Aggregation Control Protocol (802.3ad) to automatically negotiate and manage the LAG, providing failover and reducing misconfiguration risk .

- Configure the Aggregation Group:

- Enter the switch's configuration mode.

- Assign a Channel Group ID to the aggregation group.

- Add the selected ports to the group using the appropriate mode (on for static, active or passive for LACP dynamic), .

- Enable Trunking:

- Configure the LAG as a trunk if connecting switches or as an access link if connecting a server.

- Apply the configuration to all ports in the group; most switches automatically synchronize settings across the LAG .

- Verify Configuration:

- Check that all ports are active and part of the LAG.

- Test redundancy by temporarily disconnecting one link to ensure traffic continues over remaining links .

- Load Balancing:

- Configure the load balancing policy, typically based on source MAC, destination MAC, or IP addresses, depending on switch capabilities .

- Ensure traffic is evenly distributed across all aggregated links.

Best Practices

- Use LACP dynamic aggregation whenever possible for easier management and automatic failover .

- Avoid mixing different port speeds or media types in the same LAG .

- For critical connections, consider Multi-Chassis LAG (MC-LAG) if supported, allowing two switches to act as a single logical unit for higher resilience .

- Document your LAG configuration and monitor traffic to ensure optimal performance. By following these steps and best practices, you can configure an aggregation switch to increase network bandwidth, provide redundancy, and optimize traffic flow across your network infrastructure .

Article Content

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Port Aggregation FAQs

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How to enable Link Aggregation (LAG) on UniFi Switches

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

How To Set Up Switch Link Aggregation

I'm going to set up Link Aggregation between two gigabit switches: an 8 port Linksys SRW2008; and a 16 port Netgear GS716GT,

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Port Aggregation Configurations

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Use this task to configure a TAP aggregation policy on an IP or MAC ACL, allowing you to redirect and monitor

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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

Link Aggregation: Static vs Dynamic, LACP, and MLAG

Understand how link aggregation (LACP, MLAG, static vs dynamic) improves bandwidth and

Configuring Link Aggregation Group (LAG) on a Switch

Article ID:2860 Configuring Link Aggregation Group (LAG) on a Switch Objective Link Aggregation Group (LAG)

Configuring LAG Settings on a Switch through the Command Line ...

The objective of this article is to show you how to configure LAG settings on a switch through CLI.

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Additionally, the access switch includes user management features like address authentication, user authentication,

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Losing one cable in an aggregate Ethernet setup doesn't stop the connection. The switch and router reroute traffic to

Aggregation Switch: Increasing the Priority of Special Traffic

Deployment Procedure Configure devices at core, aggregation, and access layers to ensure connectivity of the basic network. For

How to Configure EtherChannel Link Aggregation Control Protocol

Manual Etherchannel Configuration - Without using any negotiation protocol listed above Link Aggregation Control Protocol (LACP)

Optimizing Your Network: A Comprehensive Guide to Link Aggregation

Explore how Link Aggregation and LACP (Link Aggregation Control Protocol) can boost your network's performance,

Data Center Aggregation Layer Design and Configuration with

Introduction This chapter covers the design recommendations for a data center design deployment consisting of a Cisco Nexus®

How to configure Link Aggregation with NETGEAR switches by Derek ...

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How to Configure Link Aggregation on NETGEAR GS748TS

In this video, we guide you through the process of configuring link aggregation on the

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Ideally, those switches will be connected to each other, allowing for connectivity between devices. Link aggregation,

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.

What is link aggregation and how do I set it up in Insight?

On each device, specify at least two ports as members of the LAG. After you configure the LAG, connect the member

Link Aggregation Switches: A Guide to LACP, LAG, and Throughput

Learn how link aggregation (LAG) and LACP increase network bandwidth and provide redundancy. Compare static vs. dynamic link

Correct network switch setup for link aggregation

Hello! What is the correct setup for link aggregation (not sure about the term, what I want is to increase bandwidth from gigabit to 2

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An aggregation switch is a network device that consolidates traffic from multiple access switches, wireless access

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How to Configure Link Aggregation on Network Switch? Here is a step-by-step guide for setting up link aggregation

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