

How to configure aggregation on a managed switch

Article Overview

Aggregation on managed switches consolidates multiple physical links into a single logical connection to increase bandwidth, provide redundancy, and optimize network traffic flow.

Understanding Aggregation Switches

An aggregation switch consolidates traffic from multiple access switches, wireless access points, or edge devices and forwards it to core switches or routers, operating at Layer 2 or Layer 3 depending on the network design . Aggregation switches support link aggregation protocols such as LACP (Link Aggregation Control Protocol) and static link aggregation, which combine multiple physical ports into a single logical link, enhancing throughput, redundancy, and failover capability . They are commonly deployed in enterprise backbones, data centers, and large campus networks.

Deployment Approaches

When configuring aggregation on managed switches, there are three main deployment modes:

- o Automatic Deployment via Network Plan Import: Import device and Eth-Trunk information using an Excel template. Devices automatically go online after physical links are connected, without manual configuration .
- o Manual Device Addition with Auto-Negotiation: Manually add devices to the controller, enable management VLAN auto-negotiation, and allow Eth-Trunks to auto-negotiate. LLDP detects link relationships automatically .
- o Manual Device Addition with Manual Eth-Trunk Configuration: Manually add devices, enable management VLAN auto-negotiation, but configure Eth-Trunks manually on device ports through the controller . For large-scale deployments, batch importing device and Eth-Trunk information is recommended to streamline initial setup and enable plug-and-play online functionality.

Step-by-Step Configuration

- o Access the Switch Interface: Use a web browser or console connection to access the managed switch .
- o Configure Management VLAN: Set the core switch as the management subnet gateway and enable management VLAN auto-negotiation to allow aggregation and access switches to go online temporarily using a single physical link .
- o Create Eth-Trunks (Link Aggregation):
 - o On access switches, create uplink Eth-Trunks connecting to aggregation switches.
 - o On aggregation switches, create downlink Eth-Trunks connecting to access switches.
- o Assign Eth-Trunk IDs and select member interfaces to be aggregated .
- o Choose Aggregation Protocol:

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- o LACP: Dynamic negotiation, supports failover and load balancing.
- o Static Aggregation: Manual configuration, simpler but less flexible .
- o Verify Connectivity and Redundancy: Ensure that only one physical member interface is temporarily up during initial management VLAN negotiation to prevent conflicts, then bring up the full Eth-Trunk .
- o Security and Optimization: Configure VLANs, QoS, ACLs, and port-based authentication (802.1X) to secure and optimize traffic flow .

Best Practices

- o Use unique Eth-Trunk names across the network to avoid conflicts .
- o Batch import devices for large deployments to reduce manual errors .
- o Monitor LLDP and link status to ensure proper negotiation and failover.
- o Document VLAN and aggregation configurations for future maintenance and troubleshooting. By following these steps, managed switches can be effectively aggregated, providing higher bandwidth, redundancy, and improved network performance across enterprise or campus networks.

The router supports link aggregation but the modem does not. Is it possible to plug a cat7 cable into a managed switch and then set

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

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

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

Set to Active LACP to actively use LACP to negotiate 802.3ad aggregation. For trunk members, select Select Members, select the

Using Link Aggregation it is simple to have these multiple Ethernet connections to act as one logical connection,

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

Using the Netgear switch web administration interface to perform link aggregation between two netgear switches by

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In this article, I'm going to describe how to set up Link Aggregation between two managed switches to provide connectivity,

LACP (Link Aggregation Control Protocol): LACP is an industry-standard protocol (802.3ad) that dynamically manages link

Managed switches provide many advantages for a growing network, including support for VLANs, QoS, and Trunking.

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

Managed switches are fantastic devices with a wealth of features to enhance your local area network (LAN). Most

When you set up a LAG between two Insight Managed switches, the following requirements apply: You must configure

We do know that an out-of-the-box managed switch can operate with no configurations, but ONLY as an unmanaged

To configure an aggregate, simply choose the ports to be aggregated by checking their respective boxes (under

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