

Article Overview

Dual-broadband aggregation on switches combines multiple physical links into a single logical link to increase bandwidth and provide redundancy, typically using LACP or manual aggregation.

Key Concepts

Link Aggregation allows multiple physical ports to act as one logical link, increasing throughput and providing failover in case a link fails . There are two main types:

- o Static Aggregation (Manual Mode): Ports are manually grouped without negotiation. Both ends must match settings exactly. Provides load balancing but no automatic failover .
- o Dynamic Aggregation (LACP, IEEE 802.3ad): Ports negotiate automatically, providing redundancy and preventing misconfigurations. LACP can operate in Active or Passive mode .

Configuration Guidelines

o Port Selection:

- o Use sequential ports if required by the switch vendor .
- o Ensure all member ports have the same speed, duplex mode (full duplex), and link type (trunk, hybrid, or access), .

o VLAN Consistency:

- o All aggregated ports should have identical VLAN settings, including permitted VLANs and PVID .

o STP Settings:

- o Spanning Tree Protocol (STP) configurations must be consistent across all ports in the aggregation group, including STP enable/disable, priority, and cost .

o LACP Configuration:

- o Active Mode: Port initiates LACP negotiation.
- o Passive Mode: Port responds to LACP negotiation.
- o Assign the same Admin Key to all ports in the group to ensure they aggregate together .
- o System priority and MAC address determine which switch controls aggregation if conflicts arise .

o Order of Configuration:

- o Configure downstream switches first, then move upstream toward the core or gateway .

o Cable Considerations:



Dual-Broadband Aggregation Switch Settings

- o For high throughput, use SFP+ or equivalent high-speed connections between switches or to the gateway .

Best Practices

- o Avoid mixing static and dynamic aggregation on the same link.
- o Ensure all member ports are active and not administratively down.
- o Monitor traffic to verify load balancing and redundancy are functioning.
- o For advanced redundancy, consider MC-LAG (Multi-Chassis Link Aggregation) if supported, which allows two switches to act as a single logical unit .

Summary

Dual-broadband aggregation improves network performance and reliability by combining multiple physical links. Use LACP for dynamic negotiation and failover, maintain consistent port and VLAN settings, and follow vendor-specific guidelines for configuration order and port selection. Proper setup ensures higher bandwidth, redundancy, and efficient load balancing across your network .

This document shows you how to configure the load balancing algorithm, LAG management, and LAG settings on a

Setting up dual WAN link aggregation on an Asus RT-AX88U router with an EdgeRouter X This is a proof of concept I

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

To configure two or more ports, up to eight, as a port aggregate, navigate to Switching > Monitor > Switch ports and

This setup ensures minimal downtime and increased throughput by aggregating multiple links. When configuring MC-LAG, it is

Learn all about the differences (and similarities) between Dual-WAN and Link Aggregation, and the steps to set them

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

You cannot combine a FastEthernet (100 Mbps) and a GigabitEthernet (1 Gbps) port into the same etherchannel.

Note: The wireless router doesn't support link aggregation under the Access Point Mode. Introduction: Some TP-Link

Setting Up Link Aggregation Control Protocol (LACP) on Aggregation Switch Link aggregation is grouping multiple

Link aggregation interfaces have names like "po1" and "sa1" depending on the aggregation method in use. Ethernet bonding is used to

A computer or other device that supports network connections faster than one gigabit per second Setting up your

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

After an aggregation switch goes online in plug-and-play (PnP) mode, configure the wireless PnP VLAN on it and configure its uplink

Hummm, this is an interesting setup. Lets be clear; link aggregation is different than vlan trunking (tagging). You can

Also load balancing is not good for streaming for same reason as the packets from a stream is sent via only one

Web: <https://www.kremgroup.co.za>

