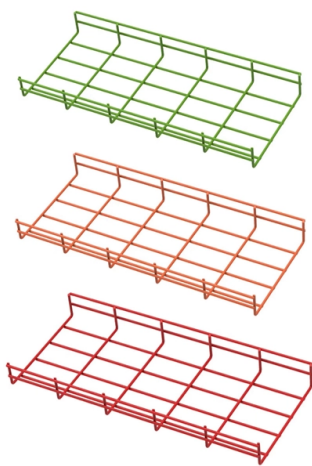


Gigabit Aggregation Switch Configuration



Overview

Interfaces User Guide for Switches You can configure LAGs to connect a QFX Series product or an EX4600 switch to other switches, like aggregation switches.

Key Takeaways

Gigabit aggregation switches can be configured by grouping multiple physical ports into a single logical link using static or LACP-based aggregation for increased bandwidth and redundancy. Key Concepts

Link Aggregation (LAG) allows multiple Ethernet ports to function as a single logical interface, increasing total bandwidth and providing failover if one link fails . Two main modes exist:

- Static (ON) aggregation: Ports are manually grouped without negotiation. Both ends must be configured identically .
- Dynamic aggregation using LACP: Ports negotiate automatically using the IEEE 802.3ad standard. LACP ensures both ends agree on the aggregation settings and provides redundancy .

Pre-Configuration Requirements

Before configuring aggregation, ensure all member ports have consistent settings:

- Speed and duplex: All ports must be full-duplex and the same speed .
- VLAN configuration: Ports should have the same VLAN membership and PVID.

- STP settings: Spanning Tree Protocol must be consistent across all ports.
 - Link type: Trunk, hybrid, or access mode must match .
- Step-by-Step Configuration
- Enable privileged mode on the switch and enter global configuration mode.
 - Create an aggregation group:
 - Assign a channel group ID (e.g., 0–5 on Cisco switches).
 - Choose the mode: on for static, active or passive for LACP .
 - Add member ports to the aggregation group:
 - Enter interface configuration mode for each port.
 - Use the command to assign the port to the channel group with the chosen mode.
 - Configure load balancing:
 - Select a policy such as source MAC, destination MAC, or IP-based hashing to distribute traffic across member links .
 - Verify the configuration:
 - Check that all ports are active in the LAG.
 - Ensure traffic flows correctly and redundancy works if a link fails.

Best Practices

- Configure downstream switches first before upstream devices to avoid misconfigurations .
- Use different physical paths for cables to reduce the risk of simultaneous link failure .
- Monitor LACP PDUs: Ensure MTU is at least 128 bytes to prevent LACP negotiation failures .
- Consistency across devices: When connecting different brands, ensure both support IEEE 802.3ad for interoperability .

Advanced Options

- MC-LAG: For high-availability networks, Multi-Chassis LAG allows two switches to act as a single logical unit, providing load balancing and redundancy across devices .
 - Mixed link speeds: Some platforms allow aggregation of different speeds, but load balancing may be limited and all member links must support the configured speed .
- By following these steps and best practices, you can configure a gigabit aggregation switch to maximize bandwidth, ensure redundancy, and maintain network stability.

Article Content

Cisco Switch Selector

The Cisco Nexus 9500 R-Series is a high-speed, high-density 1, 10, 25, 40, 50, and 100 Gigabit Ethernet modular switch designed

What are link aggregation and LACP and how can I use them in my

You can also configure more than one LAG on the same switch, or add more than two Ethernet links to the same LAG

Link Aggregation and Ethernet Bonding Feature Overview and ...

Introduction and overview This guide includes two sample configurations for Link Aggregation Control Protocol (LACP), or dynamic

How do I activate Multi-Gig Internet with Ethernet port aggregation?

3. Connect your modem and router with two Ethernet cables Ethernet port aggregation allows your modem and router

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Contact Us

Continue your research online:

Website: <https://thegalleryselfcatering.co.za>

Technical inquiry: <https://thegalleryselfcatering.co.za/contact.html>

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

