Recommended Configuration for 10 Gigabit Aggregation Switch

Overview

If you want to stay in the Unifi line, the USW-Aggregation is the best bang for the buck, especially if, as you stated, you want more than 4 ports at 10 gigabit.

Key Takeaways

To configure aggregation on a 10 Gigabit switch, use LACP or static LAG to combine multiple 10GbE ports into a single logical link, ensuring consistent speed, full-duplex mode, and proper VLAN assignment for load balancing and redundancy.

Key Concepts

Link Aggregation (LAG) allows multiple physical interfaces to act as a single logical interface, increasing bandwidth and providing redundancy.

LA

G can be configured as: Static LAG: Manually configured on both ends; no automatic failover and prone to misconfiguration.

LAC

P (Link Aggregation Control Protocol): IEEE 802. 3ad standard; dynamically negotiates aggregation, provides automatic failover, and ensures both ends agree on settings. MC-LAG (Multi-Chassis LAG): Advanced setup where two switches act as a single logical unit, providing load balancing and redundancy across chassis.

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Configuration Steps

Verify Port Capabilities: Ensure all member ports support 10GbE, full-duplex, and compatible SFP modules. Clear Existing Configurations: Remove any VLAN, isolation, or previous aggregation settings on the ports to avoid conflicts. Create the Aggregated Interface: On Cisco/Juniper/H3C switches, define a port channel or aggregated Ethernet interface.

Assign member ports to the aggregation group, ensuring all ports have the same speed and duplex mode.

Assign VLA

Ns: Configure the aggregated interface as a trunk or access port depending on your network design.

Map VLA

Ns to the aggregated interface to allow traffic segregation.

Enable LAC

P (if used): Activate LACP on both ends of the link to allow dynamic negotiation and failover. Verify that all member ports are in the "active" state. Traffic Prioritization (Optional): For special traffic, configure ACLs, traffic classifiers, and QoS policies to prioritize certain VLANs or IP ranges.

Apply traffic policies to the aggregated interface to ensure high-priority traffic is forwarded efficiently.

Best Practices

Consistent Port Configuration: All member ports must have identical speed, duplex, and MTU settings.

Downstream-to-

Upstream Configuration: Apply changes first on downstream devices, then upstream, to prevent traffic disruption. Monitor and Verify: Use commands like show port-channel summary (Cisco) or display ae interface (Huawei/H3C) to verify aggregation status. Check load balancing and failover behavior during link failure tests.

VD

C Considerations (Cisco Nexus): If using virtual device contexts, assign 10GbE ports in groups to VDCs and avoid running critical traffic through the master VDC unless necessary. By following these steps, a 10 Gigabit switch can be configured for high availability, increased bandwidth, and efficient traffic distribution across aggregated links.

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You can configure LAGs to connect a QFX Series product or an EX4600 switch to other switches, like aggregation switches, servers, or routers. This example describes how to configure LAGs to connect

10GbE Switch Recommendations : r/homelab

However, I am missing one important part, I need a 10GbE switch, with at least 6 ports. Ports could be RJ-45 or SFP+, doesn''t matter to me, as this will act like an aggregation switch.

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For best possible performance in your distributed networks, we recommend the switch aggregation via SFP+ (10G). The R&S®LANCOM Access Switches listed here are equipped with SFP+ ports and

D-Link 24-port Gigabit Smart Managed Switch with 4x 10G SFP+

The D-Link DGS-1250 Series Smart Managed Switches deliver real value as an Enterprise Access and Small-to-Medium Business (SMB) Access/Aggregation solution. They provide a range of physical

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Introduction This chapter covers the design recommendations for a data center design deployment consisting of a Cisco Nexus® 7000 Series Switch at the aggregation layer and a Cisco Nexus 5000

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The UniFi Switch 10 Gigabit 16-Port Managed Aggregation Switch by Ubiquiti Networks is a flexible and high-performing device designed for modern

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