Firewall protection for core switches

Article Overview

Core switches should handle high-speed routing while firewalls enforce security boundaries, with careful integration to balance performance and protection.

Core Switch and Firewall Integration

In modern enterprise networks, core switches are optimized for high-throughput forwarding using ASIC-based hardware, capable of handling 10G, 40G, or 100G+ line rates with microsecond latency. They are ideal for east-west traffic within the network, such as inter-VLAN routing and aggregation of multiple access and distribution layers . Firewalls, on the other hand, are designed to enforce security policies, inspect traffic, and prevent threats, rather than serve as high-volume routing devices .

Recommended Architecture
• Layered Design: Use a hierarchical model with access, aggregation, and core layers. The core layer connects aggregation switches and provides links to firewalls for north-south traffic .
• Firewall Placement: Deploy firewalls at the edge of the core or between core and aggregation layers to inspect cross-zone traffic. Core switches handle intra-zone traffic to maintain performance .
• Redundancy and High Availability: Implement multiple core switches and firewalls in active-active or active-passive clusters. FortiGate devices, for example, can use FGCP for failover, ensuring uninterrupted service even if one firewall fails .
• VLAN and VRF Segmentation: Use VLANs and VRF-lite on core switches to logically isolate traffic. Firewalls can enforce inter-VRF policies, allowing centralized security...

Article Content

Core layer | FortiSwitch 7.6.0 | Fortinet Document Library

The FortiGate devices in the core layer can use FGCP in active-passive mode with two to four firewalls or in active-active mode for

ISP Hooked Up to Core Switch First... Instead of Straight to ...

They''ve just pinched some ports on the core switch to use as an intermediary switch between you firewall/router, it''s a simple way of

Network Segmentation

As we would be having two cores, this would offer some redundancy too - to address our single point of failure. Our consultants have

Internet Connection Termination: Core Switch vs Firewall

I recently had a spirited discussion with a colleague about the best practice for terminating internet connections in a corporate

When to Route on Core Switches vs Next-Gen Firewalls in Enterprise

Learn when to use core switch routing vs next-generation firewall routing in enterprise networks. Explore performance, security

Internal Firewall vs. ACLs on Core Switches : r/networking

Our smart firewalls enable you to shield your business, manage kids'' and employees'' online activity, safely access the Internet while

Internet switch placement after firewall

He told that firewall will take care. I told if core switch is compromised we can''t tell its impact will be. Can anybody

FortiSwitchOS Switching Reference Architecture Guide

This network topology offers next-generation firewalls with advanced security, core routing, switching, and wireless. This single-pane

Solved: Firewall to 2 core switches

Look at this picture and tell me, is it possible to add another core switch and have them wired to firewall so, that it could

Routing on firewall or core switches? : r/networking

In my research I''m getting mixed suggestions - Some say that core switches are for routing, when others say that core switches have

SonicWall TZ Series: Advanced Protection for SMBs | Entry Level

Introducing Gen 8 TZ Series Next-Generation Firewall (NGFW) Protect your small business or branch location from intrusion,

Internal Firewall vs. ACLs on Core Switches : r/networking

22 votes, 34 comments. Do y''all prefer to setup internal firewalls, pure ACLs on switches, a mix of both with VRFs and route leaking,

Solved: Firewall to 2 core switches

Hi Folks! Seems like my firs post here. So sorry if the question is quite stupid - I don''t know much about firewall yet.

Solved: Connectivity from Core to Firewall

You want to simply extend L2 all the way from the access switch to the firewall so all ports need to be L2 until they get

Contact Us

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