Unable to access the internet when connected to the core switch



Overview

We are in the process of replacing a switch and I am configuring/testing it. For some reason I am unable to get internet to the switch or ping the firewall from the switch.

Key Takeaways

A core switch cannot access the internet usually due to missing NAT on the firewall, incorrect VLAN routing, or misconfigured default gateways.

Key Causes

Firewall NA

T Configuration If the core switch is connected to a firewall (e.g., FortiGate), the firewall must perform NAT for all internal VLANs to allow internet access.

Without NA

T, devices in different subnets cannot reach external networks even if the core switch can ping the firewall itself (Giuseppe, Cisco Community).

Routing Between VLA

Ns Each VLA

N on the core switch must have a default gateway pointing to the firewall or a Layer 3 interface capable of routing traffic. Additionally, the firewall must have static routes back to all internal VLANs so that return traffic can reach the originating devices.

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Interface Type and VLAN Tagging

Access ports: Frames are untagged and belong to a single VLAN. Trunk ports: Frames are tagged with VLAN IDs. Connecting the firewall to the core switch via an access port requires the firewall interface to be in the same subnet as the VLAN.

For multiple VLANs, a trunk port with subinterfaces on the firewall is recommended.

Incorrect NA

T Interface on Router If a router is involved, ensure NAT is applied to the WAN interface with the public IP, not the LAN interface.

Misconfigured NA

T can prevent the core switch from reaching the internet even if the router itself can ping external addresses.

DNS and DHC

P Settings Devices may fail to access the internet if DNS is misconfigured. Using a public DNS (e.g., 8. 8.

8. 8) instead of the firewall's LAN IP can resolve name resolution issues.

Troubleshooting Steps

Verify VLA

N and SVI ConfigurationEnsure all VLANs exist on the core switch. Confirm each VLAN has an SVI (Switched Virtual Interface) with the correct IP and subnet mask.

Check Routing and Default Gateways

Use show ip route on the core switch to verify routes to the firewall and internet. Ensure the firewall has static routes for all internal VLANs.

Test Connectivity

Ping the firewall from the core switch. Ping an external IP (e.g., 8. 8.

8. 8) from the core switch using the VLAN SVI as the source.

Check NA

T translation tables on the firewall or router to confirm traffic is being translated.

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Review Firewall NAT Rules Ensure NA T is configured for all internal subnets. Confirm that the firewall allows outbound traffic from each VLAN. Check Physical and Port Configurations Verify cables and port status. Confirm trunk/access port settings match the intended VLAN design. Summary To restore internet access for a core switch and all VLANs: Configure NAT on the firewall for all internal subnets. Ensure static routes exist on the firewall back to each VLAN. Verify VLA Ns, SVIs, and default gateways on the core switch. Confirm correct interface types (access vs trunk) and DNS settings. Test connectivity and NAT translation to identify where traffic is blocked. Following these steps addresses the most common causes of a core switch being unable to access the internet and ensures all VLANs can reach external networks reliably.

Article Content

Solved: can''t access internet via core switch

You need also to configure NAT for all internal subnets to allow them access to the Internet. Simply put the configuration on the core switch is correct and complete you need to

Unable to get internet to core switch from firewall

We are in the process of replacing a switch and I am configuring/testing it. For some reason I am unable to get internet to the switch or ping the firewall from the switch. We are using a

Network Switch Troubleshooting Guide: Common Problems and

A comprehensive switch troubleshooting from the physical layer to the data link layer to the network layer to find out why your network switch is not working.

Internet not reaching Core/Access Switch

Corrected but still no internet access on Core Switch. Have you looked at the vlan database and verified that the core switches had the vlans created ? It seems to me you are routing

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Having trouble connecting to the internet through a network switch? Learn about common issues and troubleshooting tips from our comprehensive guide.

Fix Network Switch Failure: Step-by-Step Guide

Whether using a managed or unmanaged switch, diagnosing and fixing switch failures requires a structured approach. This guide will help you troubleshoot and resolve network switch failures,

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What should I do if my switch has no Internet access?

There are many factors causing the switch cannot access the Internet. Here we will list some common factors in this article. Step 1. Check LED lights on switch. Power light and port lights

Troubleshooting Guide: Why Won''t My Switch Connect to the Internet?

Switch not connecting to the internet? Explore the most common network issues and follow step-by-step troubleshooting tips to get back online.

ITPro Today, Network Computing, IoT World Today combine

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Internet not reaching Core/Access Switch

Router has internet but Core Switch not picking, what i''m i missing? Router and Switch can ping each other Router Configs Router#sh run Building configuration... Current configuration :

How to Create and Run Virtual Machines With Hyper-V

Click the Virtual Switch Manager link first. Select External in the list to give virtual machines access to the external network, and click Create Virtual Switch. Give the virtual switch a

connecting core switch to the internet

- Buy a set of switches to facilitate the layer-2 connection between te routers and to connect the outside of the ASA''s. - Instead of buying 2 new switches, create a new unrouted vlan on

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Why Can''t I Connect To The Internet Through A

Having trouble connecting to the internet through a network switch? Learn about common issues and troubleshooting tips from our comprehensive

Internet not reaching Core/Access Switch

Oooh yes, that was a typo. Corrected but still no internet access on Core Switch You can use the “show ip nat” commands on the router to find out what is and is not working. do these tests

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I can''t ping to the switch before I ping the core!

If you can reach it from there then it''s probably a firewall/access control issue. If you can''t reach it even from its LAN then it''s possible that the management IP settings on the switch are

Unable to connect to Core Switch

Hello All, I have a problem with extending the LAN on a client site . They are looking to extend the LAN with a 2960S-series switch. Already in place is a 4510 switch which the 2960 is

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

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