

Core switch denies network segment access



Article Overview

A core switch may deny access to a network segment due to ACLs, VLAN misconfigurations, or routing policies applied at the core layer.

Understanding the Core Switch Role

The core switch acts as the high-speed backbone of a network, connecting distribution switches and handling large volumes of traffic with minimal latency . It is responsible for routing between VLANs or subnets and enforcing network-wide policies. If a network segment cannot access another, the issue often originates from access control lists (ACLs), VLAN isolation, or routing restrictions configured on the core switch .

Common Causes of Access Denial

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ACLs Blocking Traffic: ACLs can explicitly deny traffic between VLANs or subnets. For example, a rule like `deny ip source 10.1.1.0 0.0.0.255 destination 10.1.2.0 0.0.0.255` prevents devices in VLAN X from reaching VLAN Y .

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VLAN Misconfiguration: If the VLANs are not properly routed or trunked through the core switch, devices in one segment may not reach another. Ensure that VLAN tagging and inter-VLAN routing are correctly configured....

Article Content

Apr 22, 2026

Network Segmentation

Network segmentation Cheat Sheet Introduction ¶ Network segmentation is the core of multi-layer defense in depth for modern

Jun 08, 2026

Network Segmentation

The only other option I can think of, is using ACL's on the core switches - but they don't offer the same level of flexibility and

Jul 24, 2026

Access, Distribution, and Core Layers Explained

In a large, complex network, core switches reduce cabling requirements and the number of switch ports while still

Dec 18, 2025

Understanding the Core Switch: Key Differences and Uses

Explore the core switch's role as the backbone of your network. Discover key differences,

Aug 21, 2025

Access vs. Distribution vs. Core Switch Comparison Guide

Compare Access, Distribution, and Core switches: understand their roles, features, and differences in enterprise network hierarchy.

Oct 16, 2025

Network Segmentation

Our consultants have suggested that we shouldn't do this (mainly due to performance), and instead invest in another pair of firewalls

Nov 04, 2025

Core Switch vs Access Switch | Definitions and Key Differences

We recommend checking the next-generation RG-S2910XS-E Series Switches from Ruijie Networks with Non-blocking

Mar 16, 2026

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

ACLs on switches only log hits if you're not sending the logs off to a log collector. They also won't tell you if packets were sent out of

Dec 27, 2025

Link between Firewall and Core Switches : r/networking

We will soon be deploying some core switches. When going upstream (towards outside) from the core L3 switches to a set of

Nov 10, 2025

Core, Aggregation, or Access Switches? Choose the Perfect Fits

Discover the crucial differences between core, aggregation, and access switches. Find out which type can best

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Core Switch vs. Distribution Switch vs. Access Switch

In this layer, the layer 2 switches are installed to distribute the data packets to the addressed group of access devices. The layer 2

Jul 14, 2026

Top 8 Network Segmentation Best Practices in 2026

Learn more about network segmentation best practices and how you can limit the spread of a potential cyber attack.

May 31, 2026

Router & Switch Layers: Enterprise Network Components | BizTech

Data Center Core Switch/Router Devices Depending on the size of the building, number of users and amount of traffic sent offsite,

Sep 07, 2025

SD-Access Segmentation Design Guide

Cisco Public SD-Access Segmentation Design Guide Contents Authors Jonothan Eaves Principal Technical Marketing

Feb 03, 2026

Understanding the Hierarchical Switch Layers: Access ...

Modern enterprise networks face two conflicting pressures: the need for agility and the demand for stability. The three

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Solved: VLAN Segmentation

10-15-2020 02:27 PM Creating VLANs on the switches provides L2 segregation between the broadcast domains, you can still route

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Securely Traversing IACS Data Across the Industrial Demilitarized Zone

Note The CPwE Security architecture includes recommendations for a physical IDMZ to recognize IACS application traversal through

Dec 28, 2025

How To Configure A Switch For Network Segmentation?

By following this comprehensive guide, you can effectively learn how to configure a switch for network segmentation,

Sep 25, 2025

Core Switch Vs Distribution Switch Vs Access Switch□What

Core Switch Vs Distribution Switch Vs Access Switch□What's the difference□ Ethernet networks are expanding and their designs

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Solved: Core switch ACL question

I need to be able to do the following: 1) Permit access from a specific host, to a specific host or subnet. 2) Deny all

May 14, 2026

FortiSwitchOS Switching Reference Architecture Guide

Its primary goal is to increase network scalability by providing a single place to interconnect multiple access switches and the core

Aug 01, 2025

Hierarchisches Internetworking-Modell – Wikipedia

Kernschicht Die Kernschicht (engl. core layer) bietet hohe Datenübertragungsraten, hoch-redundante Weiterleitung, um Pakete

Dec 06, 2025

Core switch denies network segment access

Access switches provide connectivity to end-user devices within a LAN, while core switches route data between different networks.

Sep 01, 2025

Routing on firewall or core switches? : r/networking

On Fortigate or core switches. In my research I'm getting mixed suggestions - Some say that core switches are for routing, when

Aug 27, 2025

how to restrict access between network segments

We have to limit access between network segments, Please advise that there is any rule we can create on main core

Sep 07, 2025

Cisco 3 Layer Model

This lesson presents performance enhancement tools for your switching infrastructure in the face of extreme bandwidth requirements.

Jun 25, 2026

Network segmentation: All you need to know about its benefits

What is network segmentation in cybersecurity? Learn about the benefits, common strategies, challenges with

Contact Us

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