

Access-level switches

Article Overview

Access-level switches are network edge devices that connect end-user devices to the broader network, providing port density, PoE, VLAN management, and security controls.

Role in Network Architecture

Access switches operate at the access layer of a hierarchical network, which typically consists of three layers: core, distribution, and access . They serve as the first point of connection for end-user devices such as computers, IP phones, wireless access points, cameras, and IoT devices . Unlike core or distribution switches, access switches focus on port density, user connectivity, and local traffic forwarding, rather than high-speed backbone routing .

Key Functions

- **Device Connectivity:** Connects end devices to the network and forwards traffic upstream to distribution or core switches .
- **Power over Ethernet (PoE):** Supplies power to devices like IP phones and cameras directly through network cables .
- **VLAN Management:** Segments network traffic for security and efficiency, ensuring devices are placed in the correct VLANs .
- **Traffic Forwarding:** Handles local traffic efficiently, often performing Layer 2 switching based on MAC addresses. Layer 3 access switches can also perform inter-VLAN routing and IP-based forwarding .
- **Security Controls:** Implements access policies, including port security, ACLs, and u...

Article Content

Aug 22, 2025

What is an Access Level?

Access Level explained with types & security importance. Learn how to implement access control and

Jun 28, 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

May 12, 2026

Core Switch vs. Distribution Switch vs. Access Switch

The access layer consists of layer 3 switches, which take routed and switched data packets from the distribution switches and then

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Access layer | FortiSwitch 7.6.0 | Fortinet Document Library

Using this design, you can go up to eight switches and never need more than 4x10-GbE ports per switch to interconnect other

Mar 26, 2026

Understanding Access Switches: Key Components of Your Network

Explore the role of access switches in your LAN setup. Understand their key components, functions in the access layer,

Sep 20, 2025

What is the Access Switch?

A typical enterprise hierarchical LAN campus network design includes an access layer, distribution layer, and the core layer. In each

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L2 vs L3 Switch: How to Choose for Your Access Layer

This article breaks down the differences between L2 and L3 switches in the access layer, analyzes key decision

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What is the Access Switch?

This article will introduce what the access switch is and how to select the right access layer switches for your enterprise network. In

Jul 08, 2026

Controlling Switch Access with Passwords and Privilege Levels

Restrictions for Controlling Switch Access with Passwords and Privileges The following are the restrictions for controlling switch

Apr 29, 2026

Security Configuration Guide, Cisco IOS XE 17.15.x (Catalyst 9500 Switches)

This chapter provides configuration information about controlling switch access with passwords and privilege levels.

Jul 01, 2026

Access layer | FortiSwitch 7.6.0 | Fortinet Document Library

The 100G Series switches are featured entry-level access switches that provide 802.3bt PoE (90W) options with 2.5 GbE and 5 GbE,

Jan 06, 2026

Access vs. Distribution vs. Core Switch Comparison Guide

Distribution Layer Switches: Positioned between the access and core layers, distribution switches aggregate traffic from multiple

Feb 03, 2026

Security Configuration Guide, Cisco IOS XE Bengaluru 17.5.x

Secret password type 4 is not supported. Information About Controlling Switch Access with Passwords and Privileges

May 10, 2026

Access, Distribution, and Core Layers Explained

Switches in this layer are called access switches. End devices connect to the LAN through

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Understanding the Role of an Access Switch in Your

Explore the crucial role of an access switch in your network. Learn how it connects end

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Core Switch vs. Distribution Switch vs. Access Switch

Comprehensive guide to Core, Distribution, and Access Switches. Roles in the network and important parameters explained.

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Controlling Switch Access with Passwords and Privilege Levels

Information About Controlling Switch Access with Passwords and Privileges This section provides information about controlling

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Access vs. Distribution vs. Core Switch Comparison Guide

Access Layer Switches: Operating at the network's edge, access switches connect end-user devices like PCs, printers, IP phones,

Oct 16, 2025

Security Configuration Guide, Cisco IOS XE Fuji 16.8.x (Catalyst 3850 ...

Controlling Switch Access with Passwords and Privilege Levels Restrictions for Controlling Switch Access with

Apr 08, 2026

Choose access layer switch for the access layer network

What is the main function of an access layer? What does an access layer switch do? How to choose the right network

Apr 27, 2026

Security Configuration Guide, Cisco IOS XE Everest 16.5.1a (Catalyst ...

This section describes how to control switch access with passwords and privilege levels.

Jan 01, 2026

Controlling Switch Access with Passwords and Privilege Levels

Cisco devices use privilege levels to provide password security for different levels of switch operation. By default, the Cisco IOS

Dec 30, 2025

What is an access switch and how to select access switches?

Access switches directly connect to end users and are at the bottom layer of the network architecture. They mainly

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