

Layer 3 switch as the core



Overview

A core switch is a high-capacity, high-performance Layer 3 switch positioned at the physical backbone of an enterprise network. Engineered to aggregate massive volumes of data from distribution switches, it provides ultra-low latency and maximum throughput to ensure uninterrupted routing and packet. The most common model is the three-tier hierarchy: Access Layer, Distribution Layer, and Core Layer. This determines network efficacy, dependability, and the speed at which information is exchanged. Simply put, it's the kingpin that keeps your network humming. You may also want to know: Can a Nintendo Switch Play DS Games?

- This white paper introduces the following three types of network switches and further discusses the selection criteria for each switch.



Article Content

Jan 04, 2026

Core Differences Between Layer 2 and Layer 3 Switches

Layer 3 Switch · Layer Positioning: The network layer (Layer 3) of the OSI model, integrating switching and routing capabilities, and supporting dual parsing of MAC addresses and IP ...

Dec 10, 2025

Understanding the Core Switch: Key Differences and Uses

Explore the core switch's role as the backbone of your network. Discover key differences, uses, and insights into layer 3 core switch technology.

Jun 01, 2026

Access, Distribution, and Core Layers Explained

This tutorial provides an overview of the access, distribution, and core layers and explains two-tier and three-tier campus LAN designs.

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Layer 3 Switches Explained: Architecture, Routing Logic, Use Cases, ...

In this model, the core layer usually relies on Layer 3 switches for high-speed data exchange and cross-subnet routing. The access layer usually uses Layer 2 switches to connect ...

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What Is a Core Switch? Network Backbone Architecture Guide

What makes a core switch a “Layer 3” switch? Core switches are considered Layer 3 switches because they utilize Application Specific Integrated Circuits (ASICs) to perform hardware ...

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What Is a Core Switch in a Network?

Core switches are optimized for high-speed routing and forwarding, operating at Layer 3 of the network model. They feature high-speed uplinks but have a lower port density because they ...

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Access vs. Distribution vs. Core Switch Comparison Guide

Distribution Layer Switches: Positioned between the access and core layers, distribution switches aggregate traffic from multiple access switches. They are typically Layer 3 devices responsible for ...

Apr 01, 2026

Core Switch vs. Distribution Switch vs. Access Switch

What is a Core Switch? A core switch is the primary switch installed at the backbone of a layered or hierarchical network. These data switches are responsible for routing and data switching at the core ...

Dec 29, 2025

What Is a Core Switch in Networking?

Unlike access switches, which connect directly to end-user devices, the core switch focuses on aggregating and routing traffic between other switches, minimizing latency and ...

Jan 06, 2026

How to Choose Layer-3 /Core Switches for Enterprise Networks

With this architecture, we can use single-chip box switches to build a more efficient and streamlined next-generation enterprise network. Under the Leaf/Spine network architecture, each ...

Contact Us

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