

# Which layer does the aggregation switch belong to



## Article Overview

Aggregation switches typically operate at Layer 2 and Layer 3 of the OSI model, forming the aggregation (distribution) layer between access and core switches.

### Role in Network Architecture

Aggregation switches sit in the middle tier of a network, consolidating traffic from multiple access switches, wireless access points, or other edge devices, and forwarding it to the core layer . This layer is often called the aggregation or distribution layer and serves as a convergence point for traffic, enabling efficient routing, filtering, and policy enforcement . By operating at both Layer 2 and Layer 3, aggregation switches can handle inter-VLAN routing, traffic segmentation, and IP-based forwarding while also supporting high-speed switching within VLANs .

### Functions of Aggregation Switches

- Routing and Forwarding: Directs traffic between VLANs and toward the core layer .
- Traffic Filtering and Security: Implements access control lists (ACLs) and identity-based access .
- Load Balancing and QoS: Manages bandwidth allocation and prioritizes critical traffic .
- Link Aggregation: Combines multiple physical links into a single logical connection for redundancy and higher throughput .
- Multicast and Broadcast Control: Reduces unnecessary traffic to improve network...

## Article Content

### Datacenter Core and Aggregation Design

Introduction Layered Datacenter Architecture Datacenter Core Layer Datacenter Aggregation Layer Datacenter

#### Aggregation Layer

Aggregation-layer submodule The aggregation-layer submodule plays a pivotal role in providing a highly reliable, scalable “middle

#### What Is an Aggregation Switch and How to Choose?

These aggregation switches typically operate at Layer 2 or Layer 3 of the OSI model, depending on the network

#### What is an Aggregation Switch?

As the physical entity of the aggregation layer, the aggregation switch's primary function is

#### Understanding the Different Layers of Routing and Switching

Routing and switching layers are integral components of an enterprise network that managers can identify and separate to optimize

#### What Is an Aggregation Switch and How It Works

The aggregation switch connects to multiple access switches and consolidates their traffic. Rather than having every

#### What is an Aggregate Switch?

An aggregate switch consolidates traffic from access switches, while a core switch forms the backbone of the

#### Link Aggregation: What is it, and How Does it Work?

Link aggregation is a way of bundling a bunch of individual Ethernet links together so they

### Data Center Multi-Tier Model Design

Data Center Core Layer The data center core layer provides a fabric for high-speed packet switching between

#### Link Aggregation and Ethernet Bonding Feature Overview and ...

Link aggregation interfaces have names like "po1" and "sa1" depending on the aggregation method in use. Ethernet bonding is used to

#### What is Aggregation Layer in Networking | SPOToclub

Learn about the aggregation layer in networking, its purpose, and how it connects to the distribution layer. Discover

Aggregation layer | FortiSwitch 7.6.0 | Fortinet Document Library

The most appropriate FortiSwitch unit to form the aggregation layer comprises many 10/25/40 gigabit Ethernet ports to address the

SMB Switch: Access Switch vs Aggregation Switch vs Core Switch

There are so many kinds of switches in the market, which one should we buy? For most companies, they only need to

Everything You Need to Know About Aggregation Switch

An aggregation switch operates at Layer 2 or Layer 3 of the OSI model, depending on the configuration and topology

What Are Link Aggregation, LAG, and LACP?

What Is LAG and How Does It Work? Link Aggregation Group (LAG) is the practical implementation of link

What is Switch Aggregation, Its Role and Selection Advice

Aggregation switches are positioned in the middle of the network architecture, similar to mid-level managers in a

The relationship between access layer switches, aggregation ...

You may think that the access layer switch, the aggregation layer switch, and the core layer switch belong to the

Aggregation Switches

Aggregation switches consolidate data traffic from multiple network access switches into a single high-bandwidth link

LANCOM Techpaper Hierarchische Switch-Infrastrukturen

Eine redundante Verschaltung der Aggregation Switches (Stacking) erhöht die Verfügbarkeit im Aggregation Layer und kann bei

What Is an Aggregation Switch?

An aggregation switch sits between access layer switches and the core network, acting as an intermediary. It collects

Aggregation Router

An "Aggregation Router" is a device located in the services aggregation layer of a data center LAN that integrates important network

## What is an Aggregation Switch? | Features and Practical Benefits

Additionally, the access switch includes user management features like address authentication, user authentication,

## Understanding Switch Aggregation: A Comprehensive Guide

Defining switch aggregation and its role in network architecture Switch aggregation, also known as link aggregation or

## Aggregation layer | FortiSwitch 7.2.3 | Fortinet Document Library

This model allows the aggregation switches to easily accommodate thousands of devices passing through this layer while simplifying

## What Is an Aggregation Switch and How It Works

What an Aggregation Switch Actually Does The aggregation layer is where most of the network's intelligence lives. Its

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