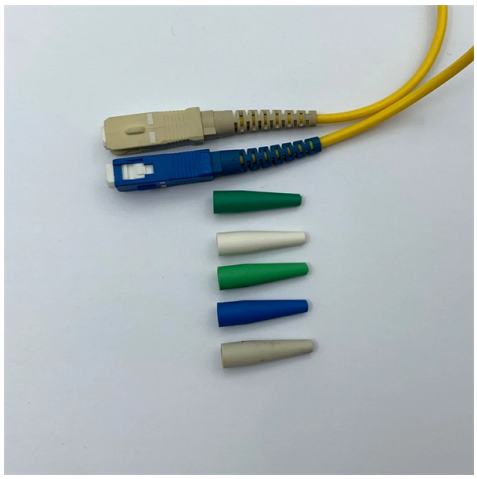
The port connected to the Layer 3 switch is



AI Overview

A Layer 3 switch port is a physical or virtual interface on a switch configured to perform IP routing, connecting networks or VLANs rather than just forwarding Ethernet frames.OverviewA Layer 3 switch port differs from a traditional Layer 2 port in that it operates at the network layer (Layer 3) of the OSI model, using IP addresses to make forwarding decisions instead of just MAC addresses . Layer 3 ports enable inter-VLAN routing, allowing devices in different VLANs to communicate without requiring an external router . These ports can be physical interfaces, called routed ports, or virtual interfaces, known as Switched Virtual Interfaces (SVIs), which connect VLANs to the switch's internal routing engine .Types of Layer 3 PortsRouted Ports: Physical switch ports configured as Layer 3 interfaces. They do not participate in Layer 2 operations like Spanning Tree Protocol (STP) and are ideal for point-to-point links between switches, routers, or firewalls. Routed ports create separate Layer 3 segments, confining broadcast traffic to their subnet .Switched Virtual Interfaces (SVIs): Virtual interfaces that connect VLANs to the switch's internal router. SVIs allow Layer 3 routing for all devices within a VLAN and require at least one active Layer 2 port in the VLAN to function .Configuration and UseTo configure a Layer 3 port, you typically:Convert the port from Layer 2 to Layer 3 using commands like no switchport on Cisco devices .Assign an IP address to the port or SVI to enable routing.Enable routing protocols if dynamic routing is required.Optionally configure subinterfaces for VLAN tagging on a routed interface, allowing multiple Layer 3 subnets on a single physical port . Layer 3 ports are commonly used in core or distribution layers of enterprise networks to optimize inter-VLAN traffic, reduce reliance on external routers, and improve throughput and latency for high-density LAN environments .Ke...

Article Content

Layer 3 Routing – Ubiquiti Help Center

Layer 3 Routing allows a UniFi Switch to route traffic between VLANs and to other destinations using static routes. It is possible use L3 Routing with a UniFi Gateway or third-party gateway. Note: ...

Layer 2, Layer 3, and Layer 4 Switches

Layer 2, Layer 3, and Layer 4 Switches What Is a Layer? A network switch connects devices and switches data between ports. Switches use addressing information from the data packets they

VLAN Routing with Layer 3 Switch Routed Ports

When a Layer 3 switch needs a Layer 3 interface connected to a subnet, and only one physical interface connects to that subnet, the network engineer can choose to use a routed port instead of an SVI.

Ethernet Switching for AI and the Cloud | NVIDIA

Introduction NVIDIA Spectrum Ethernet Switches NVIDIA Spectrum™ Ethernet switches accelerate networking for all layers of software and hardware. Fully standards-based Ethernet, they power

What are the differences between Layer 2 and Layer 3 ports?

A Layer 2 port uses physical addresses and is used for communicating between devices on the same IP network. It is used for switching and can''t be used to send data to other IP networks.

Fortinet FortiSwitch 348G-FPOE Managed Layer 2/3

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Layer 3 switches explained

Layer 3 switches, on the other hand, use a switch backplane that has bandwidth capacity far greater than that of a single or multiple Ethernet interfaces combined in a port channel.

What is a network switch? | Switch vs. router

A network switch forwards data between devices, unlike routers, which forward data between networks. Learn about Ethernet switches, managed switches, and more.

What is Network Hub and How it Works?

A hub is a hardware device used at the physical layer to connect multiple devices in the network. Hubs are widely used to connect LANs. A hub has multiple ports. Unlike a switch, a hub

Summary of Layer 3 Switch Port Concepts

By configuring IP addresses on Layer 3 ports, Layer 3 switches interconnect networks. The port that connects the VLAN to the virtual router is the Switched Virtual Interface (SVI).

Switching | Computer Networks

Frame Reception: The switch receives a data frame from a connected device. MAC Address Extraction: The switch reads the destination MAC address from the frame header. Lookup:

Switching | Computer Networks

The connection remains reserved for the entire duration of the communication session Both ends enjoy a fixed bandwidth and low latency. Analogy: Like reserving a private road for the

Configuring Layer 3 Interfaces

VLAN interface or a switch virtual interface (SVI) is a virtual routed interface that connects a VLAN on the device to the Layer 3 router engine on the same device.

A new Layer 3 switch is connected to a router and is

A new Layer 3 switch is connected to a router and is being configured for interVLAN routing. What are three of the five steps required for the configuration?

Routers and L3 Switches | NetworkAcademy.IO

Interfaces - These are the physical or virtual ports that connect the router to different networks. Each interface belongs to a different subnet and has its own IP address, which is the router''s identity in

Routed Interfaces on Layer-3 Switches and Internal VLANs

In the Router Interfaces and Switch Ports blog post, I described why we have switch ports and routed interfaces on layer-3 switches. Another blog post in the same series described the

Ubiquiti Pro Max Layer 3 Switch USW-PRO-MAX-24-POE

Create your own LAN and connect your PC, laptop, printer and other peripherals with the help of 24 ports Can work as layer 3 routing for scalable network design Rack mounting enables you to

Layer 2 vs Layer 3 Switches in 2026: Optimizing

Use Layer 2 switches for cost-effective, simple connectivity within broadcast domains. Deploy Layer 3 switches where routing, segmentation, and advanced

Basics of Computer Networking

Your All-in-One Learning Portal: GeeksforGeeks is a comprehensive educational platform that empowers learners across domains-spanning computer science and programming, school

Layer 2 vs Layer 3 Switch: What''s the Difference? | Auvik

Layer 2 vs Layer 3 switches The OSI networking model defines a number of network “layers.” (Getting into each layer is beyond the scope of this article but our Network Management in a

Meraki Switches

Meraki cloud-managed network switch models Customers choose Meraki network switches for any location, topology, or connectivity need because they are easy

Layer 3 Switches in Cisco

These switches are capable of taking routing decisions, support routing protocols, and can even inspect the Network Layer for the data frames received, but these Layer 3 Switches don''t have

Layers of OSI Model

The OSI Model is a conceptual framework created by the International Organization for Standardization (ISO) to describe how data is transmitted across a network using a structured seven

MS Layer 3 Switching and Routing

A routed port is a physical port on a switch or router that is configured to act as a Layer 3 interface. It is used for routing IP packets instead of switching layer 2 frames.

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: https://umele-pestovani.eu
Email: info@umele-pestovani.eu
Phone: +49 152 287 6349
Address: Neue Mainzer Straße 66-68, 60311 Frankfurt am Main, Germany

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