

Public and internal network access to Layer 2 switch



AI Overview

A Layer 2 switch can provide internal LAN access directly, while public network access is typically enabled through a router or Layer 2 NAT configuration.

Internal Network Access

Layer 2 switches operate at the Data Link layer of the OSI model, forwarding frames based on MAC addresses within a LAN segment . Each connected device can communicate with others on the same VLAN or subnet. To manage internal access:

- VLAN Segmentation: Assign ports to VLANs to separate traffic logically, even if devices share the same physical switch .
- MAC Address Learning: The switch maintains a MAC address table to forward frames efficiently to the correct port .
- Access Layer Deployment: Layer 2 switches are typically deployed at the access layer, connecting end devices like computers, IP phones, and modems .

Public Network Access

Layer 2 switches cannot perform Layer 3 routing, so access to external networks (e.g., the Internet) requires integration with a router or NAT-enabled device :

- Router as Gateway: Configure the router to act as the default gateway for devices on the switch. The router handles IP routing and NAT for Internet access .

Article Content

Layer 2 Networking | Junos OS | Juniper Networks

Layer 2, also known as the Data Link Layer, is the second level in the seven-layer OSI reference model for network protocol design.

Layer 2 Network Address Translation

This process demonstrates how layer 2 NAT translates addresses between sensors on a 192.168.1.x internal network and a line

Layer 2 Switch

Layer 2 switches can be installed transparently into networks. They do not interfere with communication between

Public and Private Networks on the same Switch

I have Internet connections coming into a public network switch, with NOTHING but public IPs vlan'ed out to different

Layer 2 vs Layer 3 Switch, What's the Difference?

Learn the key differences between Layer 2 and Layer 3 switches, their applications, and how to choose the right one

Configuring Layer 2 NAT

One-to-one (1:1) Layer 2 Network Address Translation (NAT) is a service that allows the assignment of a unique public IP address to

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

Difference between layer-2 and layer-3 switches

Layer 2 switches operate at the data link layer, forwarding data based on MAC addresses, while layer 3 switches route

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.

Layer 2 vs Layer 3 Switch: Which One Do You Need?

Compare Layer 2 and Layer 3 switch to optimize your network. Learn how L2 handles local traffic while L3 offers

Overview of Layer 2 Switched Networks and Communication

Media Access Control (MAC): Perform Layer 2 functions like switching, physical addressing etc. Basically what I am

Comparing Layer 3 and Layer 2 Switches

This article discusses the difference between layer 2 and layer 3 switches and the appropriate use cases for each.

Layer 2 Engineering - VLANs

You want to segment your network into multiple subnets, without buying more switches Separate broadcast domains for wired,

Layer 2, Layer 3, and Layer 4 Switches

Layer 3 switches also feature all the functionality of Layer 2 switches. Therefore, Layer 2 switches are used to provide cheap and

Can I set up a Layer2 only VLAN to pass public ISP to my UDM

I'm thinking about using the native VLAN for private traffic and then setting up a VLAN 100 for internet/public traffic. However, when I

Data Center Access Layer Design

Overview of Access Layer Design Options Access layer switches are primarily deployed in Layer 2 mode in the data center. A Layer

Understanding Layer 2 Switches: A Comprehensive Guide

They operate at the Data Link layer (Layer 2) of the OSI model, making them essential for directing data within a

Example for Configuring a Layer 2 Switch to Work with a Firewall for ...

In Figure 2-41, a company has multiple departments that belong to different network segments, and each department

Data Center Access Layer Design

In a Layer 2 looped access topology, a pair of access layer switches are connected to the aggregation layer using

Layer 2 and Layer 3 switches

Network switches are often described as Layer 2 or Layer 3. But what exactly does that mean and what are the

Layer 2 and Layer 3 switch in networking

In this article I describe the role and function of Layer 2 and Layer 3 switch in networking. Switch forwards the data packets within the

Layer 2 switching

Layer 2 switches are faster than routers because they don't take up time looking at the Network layer header information. Instead,

L1 vs L2 vs L3 Switches: Key Differences Explained Simply

Confused between L1, L2, and L3 switches? Learn the key differences, features, and use cases to pick the right one

networking

I am wondering if it would be safe to setup my network with a single switch running both internal and external interfaces. Currently I

Layer 2 Switching Software Configuration Guide for Cisco IE 2000U

This document describes how to configure Layer 2 switching features on the Cisco Industrial Ethernet 2000U Series

Layer 2 Switch

Layer 2 switches are generally used in combination with routers to create larger networks. Layer 2 switches are used

Layer 2 Security

Unfortunately this means if one layer is hacked, communications are compromised without the other layers being aware of the

Remote management of layer 2 switch

I was wondering what would be best practice, or the preferred method to remotely manage a layer 2 switch from a

Overview of Layer 2 Switched Networks

Media Access Control (MAC): Perform Layer 2 functions like switching, physical addressing etc. Basically what I am going to explain

Contact Us

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

Website: <https://kilitech.co.za>

Email: info@kilitech.co.za

Phone: +44 20 7183 2649

Address: 1st Floor, The Shard, 32 London Bridge Street, London, SE1 9SG,
United Kingdom

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