

Do access layer switches still use VLANs



Overview

Each access switch (or stack) becomes a Layer 3 device, not just a Layer 2 island. End devices are still in VLANs, but the default gateway SVI lives on the access switch, not on the core. Routing protocols (OSPF. Scenario: A layer 3 switch is handling multiple VLANs, such as Staff, IT, Guest, IoT, and CCTV. I need to define access rules to control which VLAN can access which VLAN. My questions: In layer 3 access does this mean that the user vlans are configured on all the access switches instead and the uplinks to the distro layer are all L3 interfaces?

If this is the case then what are the distribution switches doing?

Instead of using 802.1Q VLAN trunking between switches and. VLANs (Virtual Local Area Networks) have long been essential in networking, allowing network segmentation to improve security, efficiency, and traffic management. VLANs operate at the OSI model's Data Link Layer (Layer 2).



Article Content

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Inter-VLAN Routing: Configuration Examples

In some cases, administrators must completely isolate VLANs and disallow any traffic between them. However, it is usually necessary to allow some traffic to flow

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The differences between managed and unmanaged

Unmanaged switches do not require IP addresses, as they focus solely on forwarding Ethernet frames and use the MAC address to determine how

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Understanding VLAN Interfaces: What They Are and

Besides the Router on a Stick, more advanced configurations can use Layer 3 switches, reducing the need for external routers and thus streamlining

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Consolidated Platform Configuration Guide, Cisco IOS

VLAN access control lists (ACLs) or VLAN maps access-control all packets (bridged and routed). You can use VLAN maps to filter traffic between

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What is the Cisco Three-Layered Hierarchical Model?

Layer 3 and L2 vlans are implemented at the distribution layer and the vlans are propagated to the appropriate access layer devices. As and when required, complex ACLs, prefix lists, QOS, L3

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What is VLAN and how it works

A VLAN is a virtual LAN, a subgroup within a local network. VLANs make it easy for network administrators to separate a single switched network into multiple groups to match the functional and

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Data Center Access Layer Design

The VLANs are configured on the access layer uplink 802.1Q trunks and are extended between the aggregation layer switches (note the dashed line designating the Layer 2 and Layer 3 boundaries).

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

In addition to knowing when to choose Layer 2 or Layer 3 switches, it's also important to understand their roles in broader network environments.

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What does a layer 3 access design look like? : r/networking

I often hear it's advantageous to utilize layer 3 at the access layer devices to avoid having broadcasts spanning the network and not having to deal with huge STP topologies. But what exactly does this

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Understanding the Differences Between Layer 2 and

Layer 3 switches can connect different VLANs, and offer more security features than Layer 2 switches. Other functions, such as Quality of Service (QoS), allow for the

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What is a VLAN (Virtual LAN)?

A VLAN, like the LAN it sits atop, operates at Layer 2 of the network, the Ethernet level. VLANs partition a single switched network into a set of

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What is a VLAN? Secure your network with virtual LANs

Set up VLAN specifications: Using the switch's management interface, create VLANs and assign names to them for easier management. Note

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Layer 2 vs Layer 3 Switch: Key Differences and Use Cases

In practice, Layer 2 switches fit access-layer endpoint connectivity, while Layer 3 switches are better for inter-VLAN routing, segmentation, and

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What Is a VLAN? Definition, Core Components

What is a VLAN, how do VLANs work, and where do they fit into modern security strategies? Uncover everything you need to know about how

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Switching Architectures: VLANs

- This means that switches from different vendors are able to exchange VLAN traffic. Traffic between VLANs must now go through a router. VLANs! Cisco's Nexus switches run NX-OS not IOS and are

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Configure Inter-VLAN Routing with Catalyst Switches

This step is important because this configuration does not use routing protocols. If you have two L3 switches in your network, you can connect the

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Layer 2 vs Layer 3 in Access Networks: When It's Time

Each access switch (or stack) becomes a Layer 3 device, not just a Layer 2 island. End devices are still in VLANs, but the default gateway SVI lives

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The Future of VLANs: Are They Still Relevant in 2026?

VXLANs offer better scalability and support for cloud-based architectures, but VLANs still provide simple, effective networking technologies

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Why Devices on Different VLANs but on the Same

A common confusion arises when devices are on different VLANs but share the same IP subnet: they can't communicate with each other. Learn why

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What is VLAN? | Understanding Virtual LANs in Networking

Discover what is VLAN, how it works, its types, configurations, and benefits in networking. Learn how VLANs enhance security and efficiency.

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UniFi Guides: Setup, Gateways, VLANs, VPNs, Wi-Fi, and UniFi Protect

VLANs, firewall rules, and multiple Wi-Fi networks are all useful, but they also add more ways to break things if you do them too early. Why I Use UniFi The biggest reason I use UniFi is usability. I can

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Best practice for controlling inter-VLAN access

When you're implementing inter-vlan access control on a L3 switch, the most effective and manageable option is to use routed ACLs "RACL" applied to SVIs. These operate at L3 and allow you

Mar 10, 2026

Virtual Local Area Networks (VLANs) - Basics about Network

The main aim of this post is to give you a comprehensive guide and introduction about the basics how VLANs, inter-VLAN routing and VLAN Access control lists (ACLs) will work and how

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