

How many VLANs can a core switch support



Overview

A switch supports a maximum of 4096 VLANs, among which VLANs 0 and 4095 are reserved for system use, and VLAN 1 is the default VLAN. Therefore, you can only create VLANs 2 to 4094. You can repeat the vlan command multiple times. The interviewer asked me, "What is the maximum number of vlans does a switch supports" I said "A switch supports 1001 vlans and in extended vtp mode it supports upto 4000" then he asked "What if I have 5000 users in lan and I want to assign a vlan to each individual user then what would you do. The factory default number of VLANs is 256. The maximum VLAN values for the switch documented in this guide are as follows: VLAN Virtual. Configuring a switch to support multiple VLANs isolates network traffic, improving security and performance. we got switches using extended VLAN id 1000+ and would like to determine if STP (i got a mix of MST, PVST, RSTP), on the switch will support it. is there a unique/other command to check this aside from the usual 'show span'?

08-30-2021 03:11 AM Hello @johnlloyd_13, in my experience it is platform.



Article Content

Jul 02, 2025

What is the maximum number of VLAN that can be configured on a

12 bits used for the VLAN ID means that 4096 VLANs can theoretically be supported i.e. $2^{12} = 4096$. However, all 0s (0x000 in hexadecimal) and all 1s (0xFFF in hexadecimal) are reserved bringing the

Apr 13, 2026

Changing the number of VLANs allowed on the switch

In the default VLAN configuration, the switch allows a maximum of 256 VLANs. Use this command to specify the maximum VLANs to allow, and specify any value from 1 to 2048.

Jul 21, 2025

VLAN Configuration Guide, Cisco IOS XE 17.13.x

If you plan to configure many VLANs on the device and to not enable routing, you can set the Switch Database Management (SDM) feature to the Access template,

Dec 03, 2025

How to Configure a Switch to Support Multiple VLANs?

The number of VLANs you can create on a switch depends on the switch's capabilities. Most enterprise-grade switches support the 802.1Q

Nov 25, 2025

What is VLAN and how it works

The Management VLAN The management VLAN is a single network shared by all switches, no matter how many other VLANs exist on the network. For security, a specific port can be assigned to the

Mar 17, 2026

Bridging and VLANs | Junos OS | Juniper Networks

Note: For Ethernet, Fast Ethernet, Tri-Rate Ethernet copper, Gigabit Ethernet, 10-Gigabit Ethernet, and aggregated Ethernet interfaces supporting

Feb 09, 2026

VLAN Configuration Guide, Cisco IOS XE Cupertino

If you plan to configure many VLANs on the device and to not enable routing, you can set the Switch Database Management (SDM) feature to the

Mar 04, 2026

Virtual LAN (VLAN)

Features VLAN Tagging (IEEE 802.1Q): Inserts a 4-byte VLAN tag into Ethernet frames to identify the VLAN to which the frame belongs. VLAN

Aug 25, 2025

Cisco Switch Maximum number of VLAN support

my question is, what determine the maximum number of VLANs supported in a cisco switch? is it the platform/hardware, VTP version, or STP version (MST, PVST+, etc)?

Feb 06, 2026

The number of VLANs allowed on a switch

The factory default number of VLANs is 256. You can reconfigure the switch to support more VLANs using the max-vlans command or the GUI. The maximum VLANs allowed varies according to the

May 09, 2026

Configuring VLANs

If you plan to configure many VLANs on the device and to not enable routing, you can set the Switch Database Management (SDM) feature to the Access template, which configures system resources to

Jun 05, 2026

VLAN Configuration Guide, Cisco IOS Release 15.2 (7)E3k (Catalyst

One spanning-tree instance is allowed per VLAN. The switch supports only IEEE 802.1Q trunking methods for sending VLAN traffic over Ethernet ports. VLAN Port Membership Modes You

May 15, 2026

q_a_ethernet_switching

Currently, T2500/T2500G/T2600G/T2700G/T3700G/T3710G series switches support three link types: Access, Trunk and General. You can add ports to a VLAN in a

Oct 24, 2025

How Many VLAN Types Exist? Which One Fits Your

But one common point of confusion is the variety of VLAN types, each serving a distinct purpose. Whether you're configuring a new switch or optimizing an

Dec 15, 2025

Core Switch & VLANNING

Hi folks - don't flame me too bad but some questions rolling around I have to ask on how you do this in the real world. I know how to create vlan etc. But my question is this I have a 4507 Core

Dec 06, 2025

Guide to VLANs: What They are, How They Work, and

How Many Switches Can a VLAN Support? The beauty of VLANs is that they transcend switches. This allows VLANs to function across a network as

Jun 13, 2026

What is the maximum number of VLANs that can be configured on a

Q)The maximum number of VLANs that can be configured on a switch supporting the IEEE 802.1Q protocol is 4096(12-bit VID field minus reserved values at each end of the range, ie; 0 and 4095

Jun 15, 2026

VLAN Configuration Guide, Cisco IOS XE 17.14.x (Catalyst 9400 Switches)

If you plan to configure many VLANs on the device and to not enable routing, you can set the Switch Database Management (SDM) feature to the Access template, which configures system

Nov 14, 2025

What Is a VLAN?

A switch supports a maximum of 4096 VLANs, among which VLANs 0 and 4095 are reserved for system use, and VLAN 1 is the default VLAN. Therefore, you can only create VLANs 2

Jan 01, 2026

What is VLAN? How to Implement, Secure, and Manage

Devices on a tagged VLAN can be connected to the same physical switch or multiple switches interconnected via trunk ports. The VLAN ID is included in the Ethernet frame's header,

Jan 10, 2026

Solved: Amount VLAN Supported,

Solved: Hi All, I have problem with my switch please help me ! I have cisco switch 3560X and I try to configure it with more that 2000 VLANs but I got

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