

# How to Get VLAN Information From a Catalyst Using SNMP

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## Introduction

Catalyst switches are configured with Virtual Local Area Networks (VLANs) either through command line operation or VLAN Trunk Protocol (VTP). In either case, Simple Network Management Protocol (SNMP) information is sometimes accessed on a per-vlan basis. In order to access that information, you must determine the configured VLANs. This document shows you how to determine what VLANs are configured on a Catalyst switch running either CatOS or IOS.

## Before You Begin

### Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

### Prerequisites

Before attempting this configuration, ensure that you meet the following prerequisites:

- Familiarity with Catalyst switch commands
- Familiarity with SNMP tools and commands such as **snmpget** and **snmpwalk**

### Components Used

The information in this document is based on the software and hardware versions below.

- CatOS 6.3(4)
- Catalyst IOS version 12.0(5)WC5a
- Catalyst 3524XL

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you are working in a live network, ensure that you understand the potential impact of any command before using it.

## Related Products

This configuration can also be used with the following hardware and software versions.

- Other Catalyst switches
- Other Catalyst IOS releases

## Retrieving the VLAN Info

### Task

In this section, you use the CISCO-VTP-MIB and access the vtpVlanState object in order to determine the active VLANs on the device.

### Step-by-Step Instructions

Follow the steps below.

1. Perform an **snmpwalk** on the device in question. An example follows:

```
nms-server2:/home/ccarring> snmpwalk -c public 14.32.100.10 vtpVlanState
CISCO-VTP-MIB::vtpVlanState.1.1 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.2 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.6 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.7 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.8 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.11 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.12 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.14 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.18 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.19 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.20 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.21 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.41 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.42 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.43 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.44 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.100 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.101 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.123 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.401 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.1002 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.1003 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.1004 = INTEGER: operational(1)
CISCO-VTP-MIB::vtpVlanState.1.1005 = INTEGER: operational(1)
```

2. The last number in each object returned is the VLAN id; for each of these VLANs, there is a full set of SNMP information.

You can obtain full information when you query the vtpVlanTable object. These are relevant objects in the table:

- ◆ vtpVlanName The name of the VLAN
- ◆ vtpVlanIndex The unique identification number of the VLAN

# Verify

To verify if the information provided is correct, follow these steps.

1. Telnet to the switch.
2. Issue the **show vlan brief** command, as shown below for a Catalyst running IOS.

```
nms-3524xl-b#show vlan brief
VLAN Name Status Ports
-----
1 default active Fa0/3, Fa0/5, Fa0/6, Fa0/7,
Fa0/8, Fa0/9, Fa0/10, Fa0/11,
Fa0/12, Fa0/13, Fa0/14, Fa0/15,
Fa0/16, Fa0/18, Fa0/19, Fa0/20,
Fa0/21, Fa0/22, Fa0/23
2 vlan2 active
6 vlan6 active Fa0/1, Fa0/24, Gi0/1
7 vlan7 active
8 VLAN0008 active
11 elan1 active
12 VLAN0012 active
14 VLAN0014 active
18 vlan18-spnms active
19 vlan19-spnms active
20 vlan20-spnms active
21 vlan21-spnms active
41 URT_Logon active
42 URT_Priveleged active
43 URT_12_Logon active
44 URT_12_Priveleged active
100 vlan-100 active Fa0/2, Fa0/4, Fa0/17
101 VLAN0101 active
123 VLAN0123 active
401 VLAN0401 active
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active
```

3. You can compare this information with the SNMP output, collected earlier. The VLAN name and number matches these values.

## Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

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## Related Information

- [How To Add, Modify, and Remove VLANs on a Catalyst Using SNMP](#)
  - [Technical Support – Cisco Systems](#)
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