

DVSINFO

Switch Cop v1.0
User Manual

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About the Guide

Welcome to Switch Cop v1.0 for monitoring network Switches.

This Manual is divided in 4 Chapters and Appendix.

Chapter 1

Introduction

It provides an overview of Switch Cop. This chapter also contains minimum system requirements for working with Switch Cop.

Chapter 2

Installation

Chapter contains instruction for installation of Switch Cop, registering Switch Cop and basic configuration of Cisco Switch.

Chapter 3

Features

This chapter explains various features of Switch Cop.

Chapter 4

Using Switch Cop

This chapter will guide you how to use Switch Cop.

Appendix

Troubleshooting

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Chapter 1

Introduction

Overview of Switch Cop

Switch Cop v1.0 is a network switch monitoring software. It is based on SNMP (Simple Network Management Protocol) accepted across industry for management of computer networks. It can be used to monitor Managed Switches (i.e. Switch supporting SNMP).

Using Switch Cop you can view basic Switch information, interface details, Spanning Tree Protocol information, Transparent bridging information and VLAN information.

It also enables you to view traffic graphs for specified interface. You can have graphs for InOctets, OutOctet, InErrors and OutErrors.

Minimum System Requirements

Following are the minimum system requirements to use Switch Cop v1.0:

Software

- Operating System Windows9x,XP,2000,NT
- Winsock v2.0 or above

Hardware

- Processor 300MHz or above
- Minimum 32MB RAM
- Hard disk 2.1GB or more
- Network Interface Card configured for TCP/IP
- Screen Resolution 800x600 or higher.

Network Device

- Managed Switch (i.e. supporting Simple Network Management Protocol)

Switches Supported

VLAN Information and *Port Information* features are switch specific and are currently supported only for Cabletron ELS 10-27 Switches, rest of the features are supported for all the Switches.

Chapter 2

Installation

Installation from CD

1. Insert Switch Cop installation CD into the CD Drive.
2. Run setup.exe from D:\install\setup.exe (assuming CD drive is D: on your system)

This will open Switch Cop installation wizard which will guide you for rest of the process.

Downloading from the Internet

1. Another way is to download latest version of Switch Cop from www.dvsinfo.com
2. Unzip into temporary directory and run setup.exe.

Setup program will create shortcut into *Program Files* item. You can optionally run Switch Cop by double clicking SwitchCop.exe in Switch Cop v1.0 directory which have been created in path that you told to the setup program.

Switch Cop always installs as an evaluation version. **Registration** Section contains instruction to register your copy of Switch Cop.

*If you are installing Switch Cop in WinNT/2000, make sure you have log on with **Administrator** User Account.*

Configuration of Switch

You need to configure your Switch little bit in order to monitor it using Switch Cop. Make sure that SNMP is enabled on your Switch.

Registering

When Switch Cop is installed first time on system, it will work for 30 days of evaluation period with full functionality. After that you need to purchase License and Register Switch Cop.

You can Register Switch Cop at any time during evaluation period or after expiration of Switch Cop Evaluation version.

Launch Switch Cop Application

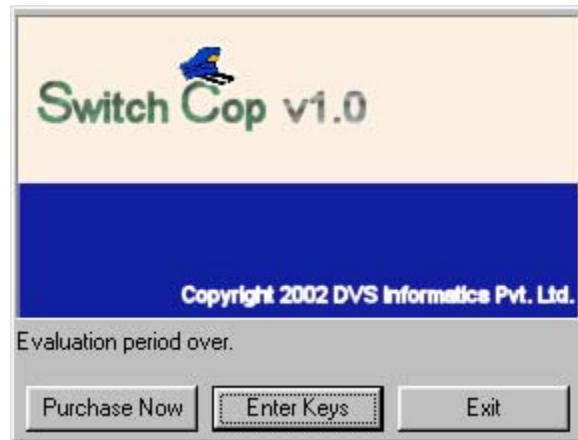


Figure 2-1: Welcome Screen

Click **Purchase Now**, you will automatically go to our Web site from where you can purchase Switch Cop online.

After getting order confirmation, Switch Cop Registration Key will be emailed to you. To continue registration process Click **Enter Keys**



Figure 2-2: Registration Key

Enter Registration Key that you have got by Email and press **Register** that's it.

Please keep this Registration Key in safe and secure place.

Chapter 3

Features

Following figure shows the Switch Cop in action.

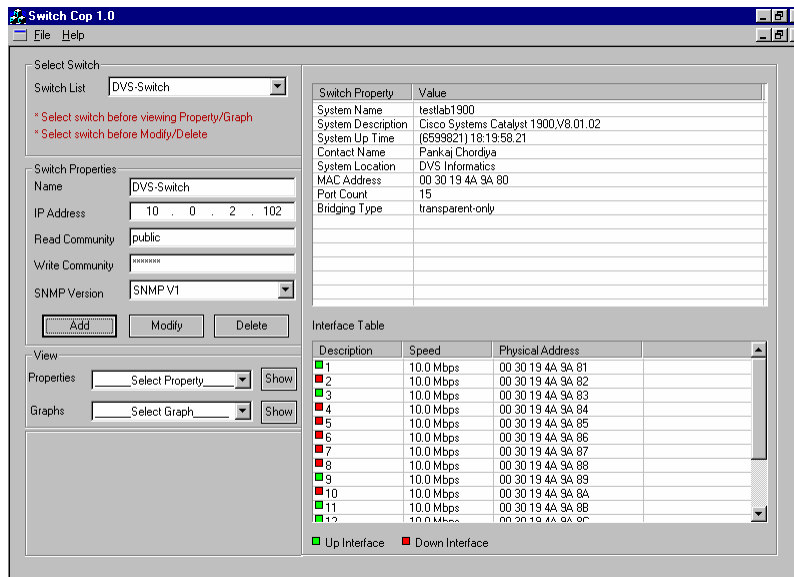


Figure 1-1: Switch Cop Display

3.1 Using Switch Cop you can view:

- **General Information about Switch:** Information like Switch name, its up time, mac address, port count, contact person name etc.

Switch Property	Value
System Name	testlab1900
System Description	Cisco Systems Catalyst 1900,V8.01.02
System Up Time	(6599821) 18:19:58.21
Contact Name	Pankaj Chordiya
System Location	DVS Informatics
MAC Address	00 30 19 4A 9A 80
Port Count	15
Bridging Type	transparent-only

Figure 2-1: General Information

- **Basic Bridging Information:** It includes generic info about every port that is associated with this Switch, and filtering information configured into the Switch by (local or network) management specifying the set of ports to which frames received from specific ports and containing specific destination addresses are allowed to be forwarded.

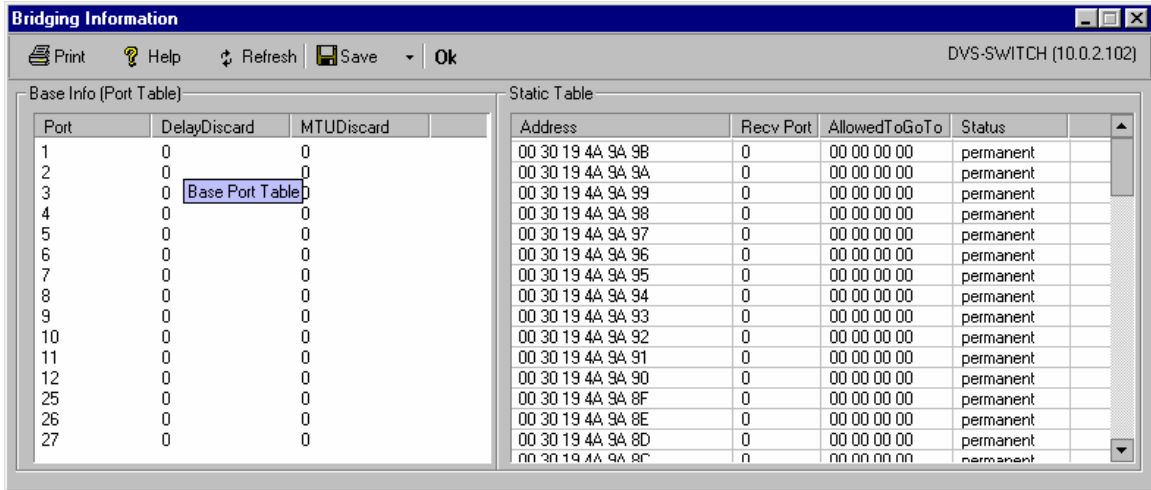


Figure 3-2: Bridge Information

- **Spanning Tree Protocol Information:** If your Switch supports Spanning Tree Protocol than you can view information like protocol specification, time since topology change, path cost etc.

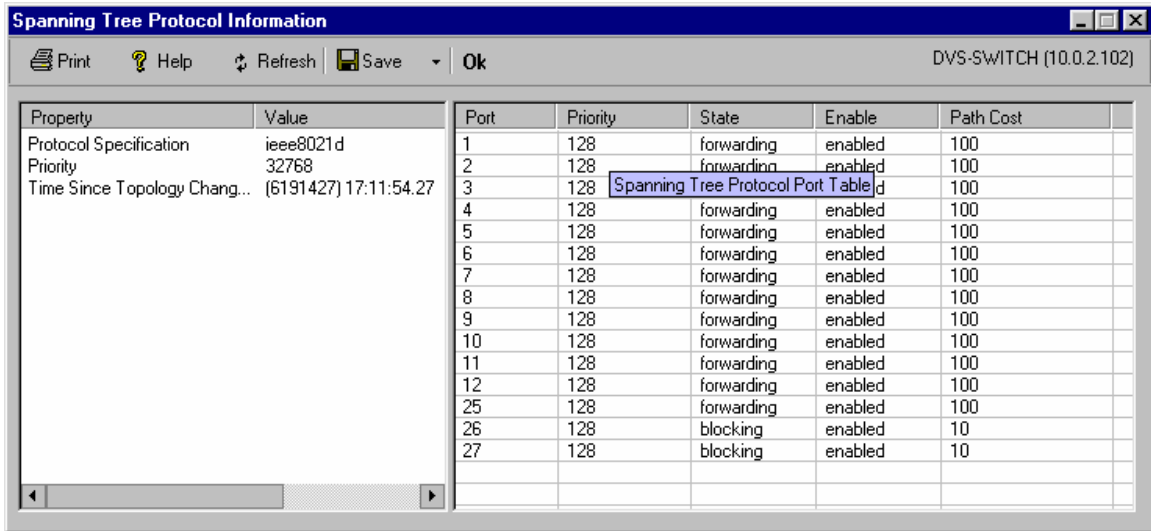


Figure 3-3: STP Information

- **Transparent Bridging Information:** If the bridging is of transparent type than information about every port that is associated with this transparent bridge (MaxInfo, InFrames, OutFrames, and InDiscards) can be seen.

The screenshot shows a window titled "Transparent Bridging Information" for a device named "DVS-SWITCH (10.0.2.102)". It contains two tables: "Fdb Table" and "Port Table".

Fdb Table		Port Table				
Address	Port	Port	MAxInfo	InFrames	OutFrames	In Discards
00 30 19 1B CD 80	6	1	1500	12851	24815	0
00 00 21 E1 80 6B	11	2	1500	0	0	0
00 80 48 C9 0E 26	12	3	1500	17642	35343	0
00 80 C8 58 0F 59	9	4	1500	110134	128861	0
00 C0 26 A1 6A B0	10	5	1500	1316	14304	0
00 50 BF 37 6D A0	4	6	1500	16735	43030	6202
00 40 05 71 77 98	1	7	1500	0	0	0
00 80 48 FD BA 9F	9	8	1500	0	0	0
00 00 21 2C 21 3C	0	9	1500	4605	15068	0
00 30 19 4A 9A 9B	0	10	1500	4858	17414	0
00 30 19 4A 9A 9A	0	11	1500	152570	162836	0
00 30 19 4A 9A 99	0	12	1500	15628	27972	0
00 30 19 4A 9A 98	0	25	1500	0	34595	0
00 30 19 4A 9A 97	0	26	1500	0	0	0
00 30 19 4A 9A 96	0	27	1500	0	0	0
00 30 19 4A 9A 95	0					

Figure 3-4: Transparent Bridging Information

- **VLAN Information***: In case VLAN is configured on your network *VLAN Information* show you VLAN Version, Active VLANs, VLAN Index, Name, Ports associated with the VLANs etc.
- **Port Information***: It includes port index, its type, sub type, and address.
- **Interface's details**: Details about the interface of the Switch like their description, speed and status.

The screenshot shows a window titled "Interface Table" with a table of interface details. A legend at the bottom indicates that green squares represent "Up Interface" and red squares represent "Down Interface".

Description	Speed	Physical Address
1	10.0 Mbps	00 30 19 4A 9A 81
2	10.0 Mbps	00 30 19 4A 9A 82
3	10.0 Mbps	00 30 19 4A 9A 83
4	10.0 Mbps	00 30 19 4A 9A 84
5	10.0 Mbps	00 30 19 4A 9A 85
6	10.0 Mbps	00 30 19 4A 9A 86
7	10.0 Mbps	00 30 19 4A 9A 87
8	10.0 Mbps	00 30 19 4A 9A 88
9	10.0 Mbps	00 30 19 4A 9A 89
10	10.0 Mbps	00 30 19 4A 9A 8A
11	10.0 Mbps	00 30 19 4A 9A 8B
12	10.0 Mbps	00 30 19 4A 9A 8C

Figure 3-5: Interface Table

3.2 Switch Cop can show Interface Traffic Graphs, like graphs for:

- Incoming Octets Vs Outgoing Octets
- Inbound packets that contained errors Vs Outbound packets that could not be transmitted because of errors, on the specified Interface.

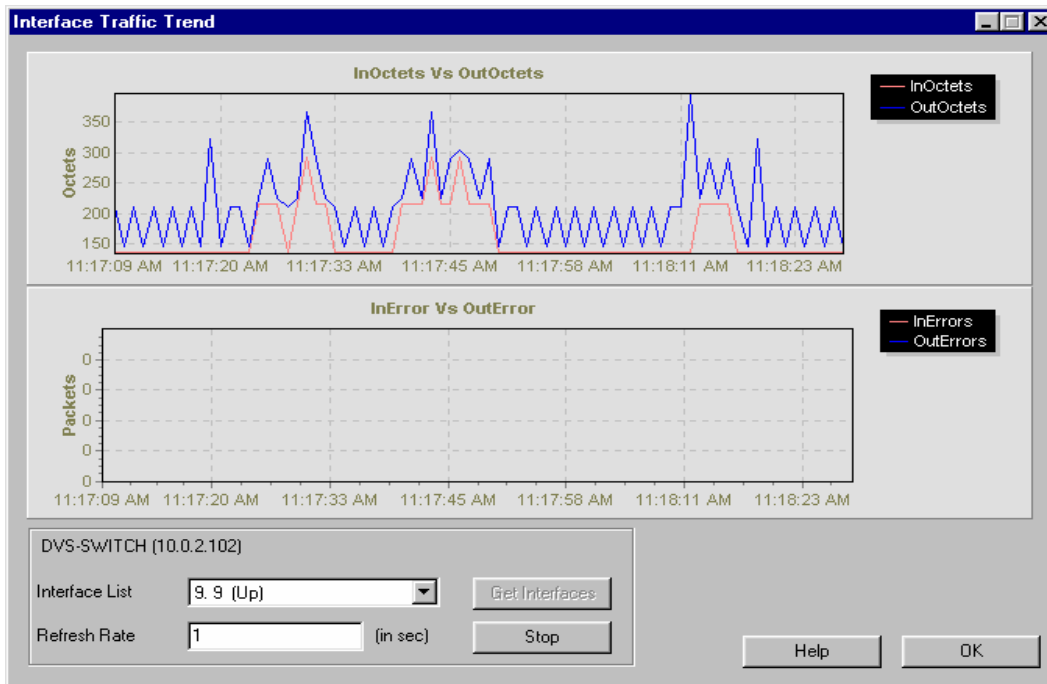


Figure 3-6: Interface Graphs

3.3 It facilitates Reporting (i.e. printing of important information is supported)

3.4 Switch Cop enables you to take Backup of important information in following two formats:

- Text Format
- MS Excel Sheet Format

***NOTE:** *VLAN Information* and *Port Information* features are only supported for Cabletron ELS 10-27 Switches.

Chapter 4

Using Switch Cop

Getting Started

Following are the main steps to start monitoring your switch:

1. Run the Switch Cop v1.0
2. In order to monitor any switch on your network you are first required to add it into the switch list.



Figure 4-1: Switch List

To do that, specify the following information about the switch:

- a. Name of the switch by which you want to refer it (must be unique in the list)
- b. IP Address of the switch
- c. Read Community string
- d. Write Community string
- e. SNMP version (as supported by your switch)

As can be seen in the following snapshot:

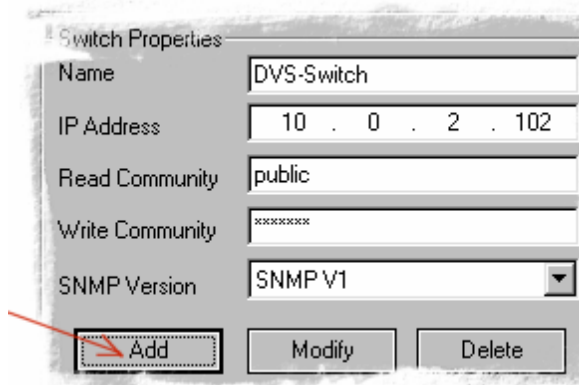


Figure 3-2: Adding Switch

3. Now press the *Add* button this will add the switch in the switch list.

4. Select the added switch from the Switch List.
5. Now you can perform any of the following operations:
 - I. Modify switch properties
 - II. Delete it
 - III. View
 - Basic Bridging Information
 - Spanning Tree Protocol Information
 - Transparent Bridging Information
 - VLan Information
 - Port Information
 - Interface Traffic Graph

Viewing Switch Information

Following are the steps to view Switch information:

1. Once you have added the Switch in the Switch List, select it.
2. Now from the *Properties List* select the property that you want to view.

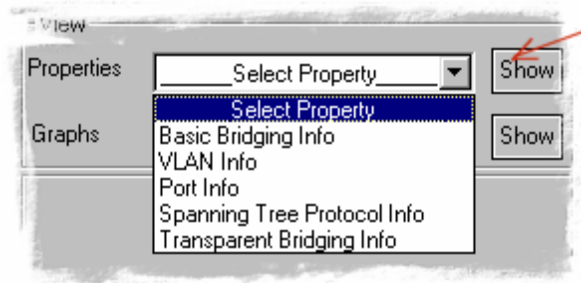


Figure 4-3: Switch Properties List

3. Press the *Show* button corresponding to the Properties List.
4. This will open a window containing information for the selected Property.
5. This window contains a toolbar, with following options:
 - Help
 - Print
 - Save (In Text/Excel Sheet format)

As can be seen in the snapshot below:

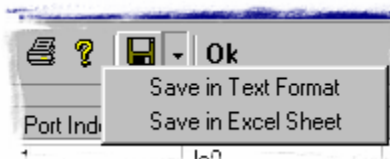


Figure 4-4: Save Information

NOTE: Save, Help and Print options are applicable for the selected table on the Information Dialog box. (To select any table just click on it, and its gridlines will disappear)

Viewing Graphs

1. Once you have added the Switch in the switch list, select it.
2. Now from the *Graph List* select the *Interface Traffic Trend* option.

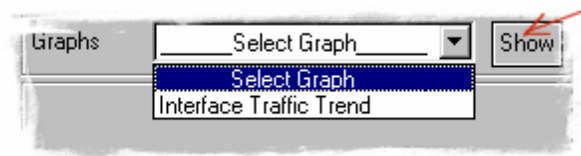


Figure 4-5: Graph List

3. Press the *Show* button corresponding to the *Graph List*. This will open *Interface Traffic Trend* window.
4. On this newly open window press the *Get Interface* button to bring the information about the Interfaces.
5. Select the Interface for which you want to monitor the traffic.
6. At last press the *Show Graph* button to view the graph.

Following image shows the above mentioned options:

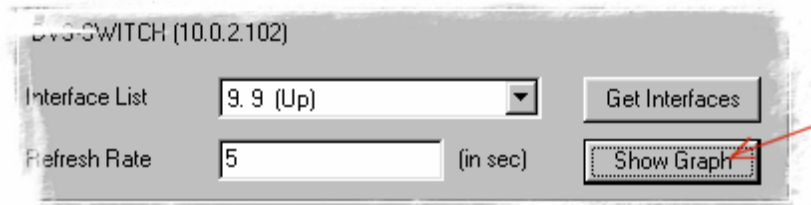


Figure 4-6: Showing Graphs

Appendix

Troubleshooting

Following table shows the possible Errors that may occur when you use Switch Cop. You may check the list of Possible Causes for a particular Error and take the specified action.

Sr.	Error Description	Possible Causes
1.	Timeout	<ul style="list-style-type: none"> ➤ Switch specified is not present on the network. Do> Specify a Switch which is present on the network. ➤ SNMP is not enabled on the Switch. Do> Enable it. ➤ You may have entered wrong community string. Do> Enter proper community string. ➤ High network traffic producing delays. Do> Retry. ➤ Any physical problem in the network. Do> Check your network for any such physical problem.
2.	Table Empty	<ul style="list-style-type: none"> ➤ Table is really empty, i.e. having no data. ➤ In case of <i>Port Information</i> and <i>VLAN Information</i> this error may occur if your Switch is not Cabletron ELS 10-27 switch.
3.	Socket Error	<ul style="list-style-type: none"> ➤ Winsock is not installed on your computer. Do> Install WinSock version 2.2 or above. ➤ Older version of Winsock is installed. Do> Switch Cop requires WinSock version 2.2 or so upgrade your Winsock from Microsoft site.