D-Link[®]

D-View 5.1

Network Management System User's Guide



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ABOUT THIS GUIDE

This User's guide provides brief descriptions of how to use the various menus and operations found in the D-View Network Management System. This guide does not discuss network design or management concepts, nor does it provide detailed explanation or definitions of SNMP, MIBs, RMON or associated concepts. It is assumed that the reader is familiar with these standardized networking concepts and protocols; hence variables presented in the D-View menus are self-explanatory. Variables such as MIB objects are listed exactly as they appear on the D-View GUI.

Overview of this User's Guide

Chapter 1, "*Introduction*." Lists system requirements, gives installation procedures. Shows you how to get D-View 5.1 up and running.

Chapter 2, "New Features." Explains D-View 5.1's organization and highlights new features.

Chapter 3, *"How to Manage a Network."* Describes how to manage a network with D-View 5.1. Topics: Discover, How to Monitor and Manage a network, Using Telnet, Changing Device Properties, Collect trap information to log file, Install Plug-in management module, Managing SNMP Devices without a management module (MIB Compiler/Browser), Topology.

Chapter 4, "MIB Utilities." Shows how to use D-View's user-friendly dialogs to manage without using plug-in modules. This chapter is organized according to the drop-down menu items under "MIBs" on the D-View 5.1 GUI.

Chapter 5, "*Internet Tools*." Explains items in the "Tools" drop-down menu in the order of the descending menu items.

Chapter 6, "Advanced Management." Explains how to use trap management functionalities.

Appendix, "Troubleshooting." Provides solutions to different troubleshooting scenarios.



INTRODUCTION

This section gives systems requirements and explains installation procedures.

System Requirements

D-View 5.1 can be installed and operated on a computer that meets the following minimum requirements:

- CPU: 550 MHz
- DRAM: 256MB
- Hard Drive Available space: 100MB
- Ethernet Adapter: 10BASE-T
- Operating System: Windows 2000 or Windows XP
- Windows Component: Simple Network Management Protocol (SNMP)
- Access 2000

Installation

Note: To install D-View 5.1 you must use the Ethernet adapter provided with the software. If you do not use the Ethernet adapter provided with the software installation will fail.

The following is a pictorial guide showing how to install D-View 5.1 and get it up and running:



Step1



Figure 1-1.





InstallShield Wizard	×
License Agreement Please read the following license agreement carefully.	
Press the PAGE DOWN key to see the rest of the agreement.	
D-Link D-View5.1	_
D-Link NO-NONSENSE LICENSE STATEMENT AND LIMITED WARRANTY	
IMPORTANT - READ CAREFULLY This license statement and limited warranty constitutes a legal agreement ("License Agreement") between you (either as an individual or a single entity) and D-Link, Inc. ("D-Link") for the software product ("Software") identified above, including any software, media, and accompanying on-line or printed	
Do you accept all the terms of the preceding License Agreement? If you choose No setup will close. To install D-View5.1, you must accept this agreement.	o, the
InstallShield	
< <u>B</u> ack <u>Y</u> es	<u>N</u> o

Figure 2.

InstallShield Wizard	×
Customer Information Please enter your information.	
Please enter your name, the name of the comp serial number.	any for whom you work and the product
<u>U</u> ser Name:	
Ben	
<u>C</u> ompany Name:	
DLink	
<u>S</u> erial Number:	
InstallShield	
	< <u>Back N</u> ext > Cancel

Figure 3.

InstallShield Wizard	<
Choose Destination Location Select folder where Setup will install files.	
Setup will install D-View5.1 in the following folder.	
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.	
Destination Folder C:\Program Files\D-Link InstallShield	
< <u>B</u> ack (<u>Next</u> >) Cancel	

Figure 4.

InstallShield Wizard	×
Setup Type Select the Setu	up Type to install.
Click the type o	of Setup you prefer, then click Next.
Typical	Program will be installed with the most common options. Recommended for most users.
C Compact	Program will be installed with minimum required options
 <u>c</u>ompact 	r rogram wir be installed with minimum required options.
O Cystom	You may choose the options you want to install. Recommended for advanced users.
InstallShield ———	< <u>B</u> ack <u>N</u> ext > Cancel

Figure 5.

Typical : Installs D-View 5.1 , D-Link SNMP Solutions Modules, DES-3225G, DES-3624I , DES-6000 , DGS-3208TG, DGS-3208F, DHS-3226, DHS-3218, DHS-3210, DES-3226, DHS-3224V, DGS-3224TG, DHS-102, Wireless AP

 $\ensuremath{\textbf{Compact}}:$ Installs D-View 5.1 , D-Link SNMP Solutions

InstallShield Wizard
Select Program Folder Image: Select a program folder.
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.
Program Folders:
D-View5.1
Existing Folders:
Borland C++Builder 5
CadoDraw
D-Link
InstallShield Professional 2000
LinkManager
Lotus 應用軟體
InstallShield
< <u>B</u> ack <u>N</u> ext > Cancel

Figure 6.



Figure 7.

Before you are Running

Note: If device can't be found under discovery, then you must enable SNMP service in Windows service before you run D-View 5.1, and remember to disable the SNMP trap service before you run the D-View

🖬 新增修除程式		
1.	目前安裝的程式	排序方式(③):名稱
變更或移除程 ゴ	Windows元件精靈	x
 22	₩indows 元件 您可以新增及移除 Windows 2000 元件。	3
新増程式	如果您要新增或移除元件,諸按核取方塊。灰色方 如果您要檢視元件內容,諸按 [詳細資料]。 元件 ©:	5塊表示只會安裝部分元件。
新增修除 Windows 元件	🗹 🦻 Indexing Service	0.0 MB 🔺
илжожар14-	🔲 🍓 Internet Information Services (IIS)	18.2 MB
	Management and Monitoring Tools	0.8 MB
	Message Queuing Services	2.6 MB
	描述: 包含監視及提高網路效能的工具。	
	總共需要磁碟空間: 22.3 MB 磁碟可用空間: 20065.2 MB	詳細資料(D)
		B) 下一步(N) 取消

Figure 8-1.

<mark>機</mark> 服務						_ 🗆 ×
」執行(Δ)檢視(Ⅴ)	- → 🛍 💽 😭 😫) 🖪 🔮] ► I			
樹狀目錄	名稱 △	描述 先	態	啓動類型	登入身份	
総。眼弦(木禅)	🖏 QoS RSVP	提供		手動	LocalSystem	
100 NR42 (***125)	Remote Access Auto	當程		手動	LocalSystem	
	Remote Access Conn	建立 图	鋤	手動	LocalSystem	
	🗞 Remote Procedure C	提供 晷	鋤	自動	LocalSystem	
	Remote Procedure C	管理		手動	LocalSystem	
	🍓 Remote Registry Ser	允許 图	鋤	自動	LocalSystem	
	🍓 Removable Storage	管理 图	鋤	自動	LocalSystem	
	🤹 RIP Listener	接聽 图	鋤	自動	LocalSystem	
	🗞 Routing and Remote	提供		停用	LocalSystem	
	🤹 RunAs Service	啓用 唇	鋤	自動	LocalSystem	
	Security Accounts M	儲存 图	鋤	自動	LocalSystem	
	Server 🖏	提供 图	鋤	自動	LocalSystem	
	🦓 Simple Mail Transpo	跨網		自動	LocalSystem	
	Simple TCP/IP Servi	支援 图	鋤	自動	LocalSystem	
	🤹 Smart Card	管理		手動	LocalSystem	
	🤹 Smart Card Helper	提供		手動	LocalSystem	
	SNMP Service	包含 唇	鋤	自動	LocalSystem	
	SNMP Trap Service	接收		手動	LocalSystem	
	System Event Notific	追蹤 唇	鋤	自動	LocalSystem	
	🍓 Task Scheduler	譲程… 唇	錮	自動	LocalSystem	
	TCP/IP NetBIOS Hel	啓用 唇	錮	自動	LocalSystem	-

Figure 8-2.



Figure 9.

System View Edit MIBs Tools Account Window Help Image:	
Create a New Database	
Create a New Database	
Messages Traps	1
	-

Figure 10.

D-View 5.1	×
System Yiew Edit MIBs Tools Account Window Help	
🚳 👅 💾 🐲 📕 Tool User Define	
Messages Traps	
Discovering device	

Figure 11.



New Features

This chapter explains the organization and highlights new features of D-View 5.1.

Organization



D-View is organized into five main components

New Features

Some significant additions are new to this generation of D-View software:

- A number of powerful Layer 3 utilities including IP Forwarding, RIP 2, OSPF, IP MRoute, DVMRP and PIM functions have been added to accommodate the increasing presence of Layer 3 switches and advanced routers in enterprise networks.
- The **DIAP proprietary administrative protocol** used in D-Link SOHO broadband routers has been added so you do not need any additional utility to administer these devices.
- An array of Accounts information functions has been added for client record maintenance.
- A **topology creation program** is an embedded function of D-View. This can be used to create diagrams and schematics useful for network design and layout planning.
- SNMP V3 for major MIBs

MIB II, IF-MIB(RFC2233), Entity MIB(RFC2737), Bridge 802.1D(RFC1493), RMON,802.1P(RFC2674), 802.1Q(RFC2674).

• Trap/Alarm notification by using e-mail

• Multiple views for platform:

After Auto Discover is complete you can view objects in the Ethernet domain by tree view. At the same time you can have a list view display open. Additionally you can create a topology domain in the same workspace to make network management more convenient.



Figure 13.

• Powerful MIB Compiler and Browser:

With an easy to use GUI, MIB Compiler and Browser can be used independent of D-View or can be used with the D-View software. This makes network management more effective and efficient.



Figure 14. MIB Compiler



Figure 15. MIB Browser

• User Account management:

Account is a simple account management system to keep track of the bills.

It has the following features:

- 1. Each client assigned an account with personal authorization IP Address
- 2. Different groups of clients can generate statements with different schedules
- 3. Detects abnormal usage for clients
- 4. Assigns custom taxes to service charges

5. Credit adjust function allow you to insert credit records manually and give credit for wrong or misdialed work.

- 6. Late fee assessment function
- 7. Real-time reporting



How to manage a network using D-View 5.1

This chapter describes how to use the various menus and operations found in the D-View Network Management System with different example scenarios.

Orientation

Using D-View

D-View uses the same conventions as other Windows-based programs in its GUI. Left-click to select a device or domain, left-click to carry out a function from the drop-down menu, and so on. If you double-click on an SNMP device, this will launch the device-specific module if it is installed. If it is not installed, you will be offered an opportunity to download the module from the D-Link website.

The three display panels of the D-View Main Menu:





Figure 16.

Tree View:

Presents the entire network grouped into major domains extending from Root. The major domains for the default setup are Ethernet, CompanyGroup, Favorites and Topology. The Favorites group is a vacant domain available as a convenient means of tracing devices that require frequent monitoring. It can contain any or all devices and can be arranged into subdomains as needed. The Company group is divided into sub-domains according to the device manufacturer. The "tree" in this panel or any domain can be expanded or contracted to view the contents of any group.

List View:

Displays the contents of whatever group is highlighted in the tree view. Large icons are used by default; however, you may choose to use small icons, a simple list or a list that includes device details.

Traps/Messages:

Displays Trap and connect/disconnect messages.

Use the View drop-down menu to customize the display panels.

Topology:

Right-click on Topology under Root in the Tree View display to launch new topology diagram. Use the "Tool" pad and "User Define" pad to modify the topology.

D-View 5.1 - [Topology of N	ewTopolo	nyl													
System View Edit MIBs	Lools <u>A</u> cco	ount <u>W</u> indow	Help			_									그리즈
	User D	efine													
															(
트 🛎 🔍 😫 🖃 💻		2 27													
Koot Ethernet CompanyGroup Favorite Topology NewTopology	0 -100 -200 -300 -400 -500 -600 -700 -800	100 200	- 1 <u>300</u> - 1.	400 1500	1600	1700	1800	<u>1900</u>	1000	1100	1200	1300	1400	1500	11600
	Egnn.														<u> </u>
Messages Trape															
IP: 10.24.60.1 is disconnect	ad at 下午 I	15-20-26													
IP: 10.42.39.10 is disconnect IP: 10.42.41.10 is disconnect	ed at 下午 i ed at 下午 i	05:30:26 05:30:26													
IP: 10.42.41.10 is disconnect IP: 10.42.52.1 is disconnect IP: 10.43.51.100 is disconnect IP: 10.41.89.10 is disconnect IP: 10.44.67.1 is disconnect IP: 10.44.73.111 is disconnect IP: 10.44.73.152 is disconnect	ed at 下午) ed at 下午) ed at 下午) ed at 下午) ed at 下午) ed at 下午) ed at 下午)	uo: 30:26 D5:30:26 D5:30:26 D5:30:26 D5:30:26 D5:30:26 D5:30:26 D5:30:26													T

Figure 17.

lcon	Description
	Unknown device, device type and function not known.
	RADIUS server.
	Device off line or disconnected.
SNM P	SNMP device with SNMP agents.
AP	Wireless Access Point

Smart lcons: The five main icons that appear in D-View 5.1 GUI are summarized below.

Table 1. General Device Icon Summary

Basic Operations

Network Basic Information

The basic information available under System provides graphical and numerical information about device type and role distribution. The information represents the sum total of the basic information communicated by every device including non-SNMP devices. The graphical representation can be viewed as a color-coded pie chart (default) or bar graph. Network make up is broken down by type and role. Select your preference of graph style by clicking the graph icon of choice in the middle of the menu. View network role or type distribution by selecting the appropriate tab. The reference key explains the colors used for the graphs and displays the number of devices in each category.

System→All Basic Information



Figure 18.



Repolling Configuration

By default D-View polls the network for status updates every 30 seconds. This repolling configuration can be changed or turned off using the Repolling Configuration menu under System. Adjust the polling interval from 10 to 60 and the time out (1-10 seconds) and click the Set button to put the settings into effect. Turn off repolling by checking the Don't Repoll box and clicking Set. Default repolling configuration = 30 sec Interval, 3 sec Time Out.

System→Repolling Configuration

×
Set Default Close

Figure 19.

2	n
/	м
_	~

Community String Configuration

Set the Read and Write Community String to allow D-View management access to SNMP devices.

System→Community String Configuration

- Read Community String: input read community string
- Write Community String: input write community string
- OK: click to put settings into effect

🚯 Community String Config 🛛 🛛 🔀						
Read Community String	public	OK				
Write Community String	private	Cancel				



Note: Read/Write Community String settings must be correct otherwise you will not be able to find devices.

Saving D-View Database

Save the current settings arrangement for D-View using the Save Database function located under System. This will save any domains that have been created.

System→Save To Database

Clear Database

To delete the saved arrangements and settings, use the Clear Database function under system.

System→Clear Database

Note: Make sure that the database is one you wish to clear otherwise you will lose your settings (Topology and Favorites).

Find Object

This option allows the user to quickly find a particular device in the system by entering Alias Name, IP Address, or Module Name.

Find Object				×
Search By	Alias Name 👻	2		Start
Input String	Alias Name IP Address Module Name	🔲 Whole words only		Close
Name	IP Address	Domain	Role	
Find Object				×
Search By	Alias Name	7 🔍		Start

Search By	Alias	Name	2		Start
Input String			🔲 Whole words only		Close
[[.=	(- · ·		
Name		IP Address	Domain	Role	
I					

Figure 21.
- Input Search By: select Alias Name, IP Address or Module Name
- Input String: enter Alias Name, IP Address or Module Name

Domain Control

Select a domain or sub-domain in D-View to add or create a new sub-domain. This can be done under the Edit drop-down menu or right click on the selected domain to view the New Sub-domain Form.

Edit→Domain



Figure 22. Create a New Sub-Domain

For example, the Company Group domain can be expanded using a list of companies. Select the company you wish to add from the pull-down menu and click OK. Alternatively, you may select a specific company group and create a new sub-domain within that group. Highlight the company group from the main menu and pull up the New Sub-domain Form. A list of the devices within that group appears listed in the left panel.

Select the devices you want in the new sub-domain and add them to the new group by clicking the arrow

The selected device now appears in the Device List on the right side panel. Type in a name for the new sub-domain and click OK to create it. Large Ethernet domains may be divided into smaller work groups and are more easily managed using this function.

🚯 New SubDomain			
New Domain Name	3Com	•	
Group Name CompanyGroup	[Device List	
D-Link General MP Autoni Microsoft Novell	Delete		

Figure 23.

Edit→New Device

You may create a new device to be managed along with the other domains that already exist via the New Device option. Enter the Device name, IP Address, Read/Write Community Strings, Module Type, and check appropriate boxes in the MIB Database.

🚯 New Device	
Device Information	
Device Name: 10.1.1.1	IP Address: 10.1.1.1
Read Comm: Public	Write Comm: Private
Module Type: DGS3208	
MIB Database	
BRIDGE-MIB	ENTITY-MIB
IANAifType-MIB	Г IF-MIB
🗖 IGMP-STD-MIB	
CSPF-TRAP-MIB	P-BRIDGE-MIB
Q-BRIDGE-MIB	RFC1155-SMI
OK Cancel	

Figure 24.

Input Device Name: name of the device

IP Address: IP address of the device

Read Comm: Read Community string of device

Write Comm: Write Community string of device

Module Type: Module type of new device

MIB Database: Check MIBs that comprise new device

Device Control

Edit→Device

Through the Device menu item under the Edit drop-down menu you may keep inventory and edit the devices in your management database.

D-View S.1 - [L	Edg PEEs Tools	Account Wi	ndow Help							
	Device Donain New Topology	 Properties Copy Delete 	·							
ei	Find Object 10.1.1.151 10.1.1.152 10.1.1.153	10.1.1.151	10.1.1.152		10.1.1.155	10.1.1.158	10.1.1.161	12.1.1.152	1011163	Ĩ
99909	10.1.1.195 10.1.1.198 10.1.1.161 10.1.1.162 10.1.1.163	10.1.1.164	10.1.1.165	10.1.1.167	10.1.1.168	10.1.1.169	10.1.1.171	12.1.1.172	161.1.122	
AGG AVE	10.1.1.164 10.1.1.166 10.1.1.167 10.1.1.168	1611.124	1011125	10.1.1.176	101.1.177	191.1.170	1911.1.179	121.1.183	1	
00000	10.1.1.171 10.1.1.172 10.1.1.173 10.1.1.173	1011.102	10.1.1.102	10.1.1.104	10.1.1.191	10.1.1.192	10.1.1.194	1111196	181.1.197	
	10.1.1.176	10.1.1.254	10.1.104.222	10.10.11.123	10.10.27.133	10.10 27.19	10 10.27.202	10.10.27.218	10.10.27.28	*
Messages Trops	1									
P : 10.11.22.202 P : 10.11.22.202 P : 10.11.22.202 P : 10.10.27.30 P : 10.10.27.30 P : 10.11.22.202 P : 10.11.22.202 P : 10.51.2.10 P : 10.51.2.10 P : 10.39.79.111	is connected at is disconnected at is disconnected at is connected at is connected at is connected at is connected at	上午11:02:12 4上午11:02:12 4上午11:02:12 4上午11:02:12 4上午11:00:12 4上午11:00:42 4上午10:59:42 4上午10:59:12								4
IP: 10.36.56.86	is disconnected a	(上午 10.59.12								-



 $\textbf{Edit} {\rightarrow} \textbf{Device} {\rightarrow} \textbf{Properties} \text{ allows you to control the settings of a particular device by entering}$

- Device Name: Name of device usually in the form of numbers separated by periods.
- IP Address: The IP address of the device.
- Read Comm: The Read Community String setting of the device.
- Write Comm: The Write Community String setting of the device.
- Module Type: The Module type of the device.
- MIB Database: Check boxes of MIBs of which device are comprised.

Bevice Properties Form	×
Device Name: 10.1.1.153	IP Address: 10.1.1.153
Read Comm: public	Write Comm: private
Module Type: Unknown	Туре
MIB Database	
BRIDGE-MIB	
IANAifType-MIB	IF-MIB
GMP-STD-MIB	P-BRIDGE-MIB
G-BRIDGE-MIB	RFC1155-SMI
BFC-1212	RFC1213-MIB
OK Cancel	

Figure 26.

Press OK to execute property settings or Cancel to cancel.

Multiple View Settings in D-View

1. View→Topology View→50 %, 75%, 100%, 125%, 150%, Custom

🚯 D-View 5.1 - [Topology of NewTopology]	
🚯 System View Edit MIBs Tools Account Window Help	_ 8 ×
Topology View > 50%	
Tree View 75%	
List View > ¥ 100%	
✓ Messages/Traps View 125 % 1400 1500 1600 1700 1800 1900	1000 1100 1200 1300 1400 1500 1600
Background Color 150%	
10.50.95.5 – Customed	
10.50.96.2 Background Color	
10.51.14.1 - Grid	
10,9,68,31	
10.9.68.4	
10.9.68.80 F 500	
10.9.68.91	
X 10.90.90 90	
B NewSubdoma	
E CompanyGroup	
Favorite	
	-1
	Þ
Messages Traps	
IP:10.44.73.33 is connected at 上午 11:39:42	_
$[P: 10, 10, 27, 202]$ is disconnected at $\underline{r+1}$ 11:33:12 $[P: 10, 48, 62, 91]$ is connected at $\underline{r+1}$ 11:38:42	
IP:10.48.62.90 is connected at 上午 11:38:42	
P:10.44.73.33 is disconnected at 上午 11:38:12 P:10.10.27.202 is composed at 上午 11:37:42	
IP:10.10.27.202 is disconnected at $\pm \pm$ 11.36.12	
IP:10.44.73.33 is connected at 上午 11:35:12	
IIP: 10.36.56.86 is disconnected at 工十 11:35:12	<u> </u>

Allows you to have different views of the topology

Figure 27.

View→Topology View→Background Color

Allows you to set background color of the topology

View→Topology View→Grid

Gives you the option of having a grid on the topology

2. View→Tree View

Allows you to see devices in the management network displayed in a tree on the left panel.

3. View→List View

Allows you to view devices in different ways: Icon, Small Icon, List, Report

4. View→Messages/Traps View

Allows you to view messages and traps on the bottom panel of the display screen

5. View→ Background Color

Allow you to set the background color for the Tree View, List View, Messages, and Traps displays.



🚯 D-View 5.1 - [Topology of NewT	Topology]	_ 🗆 🗙
3 System View Edit MIBs Tools	s Account Window Help	_ 8 ×
🙈 😿 🔋 Topology View	▶ r Define	
Tree View		(
🚛 🌉 🕻 List View		
✓ Messages/Traps View		1600 🔺
Background Color	Tree View	
10.50.95.5		
	Messages	
10.51.14.1	- Iraps	
10.51.2.10	200	
10.9.68.16	300	
10.5.66.51	E un	
10.968.4	400	
10.9.68.80		
- 🍜 10.9.68.91	500	
- 📇 10.9.68.97 (8)		
🍊 10.9.68.98 (8(600	
10.90.90.90		
	700	
	1 800	
		►
Messages Traps		
IP : 10.90.90.90 is disconnected a	at 上午 11:43:42	
IP : 10.10.27.202 is disconnected a	#上午 11:43:42 # ト午 11:42:42	
IP:10.18.96.12 is connected a	★上午 11:42:42	
IP: 10.12.13.56 is connected a	x 上午 11:42:42	
IP:10.12.13.219 is connected a	★上午 11:42:42 ★ 上午 11:42:42	
IP: 10.12.13.56 is disconnected a	************************************	
IP : 10.12.13.219 is disconnected a	x上午 11:42:12	

Figure 28.



Starting off in D-View 5.1

When D-View is run the first time it will automatically search all around the net domain and parse the contents in the network. It then creates a database to store the data and creates tree lists, icon lists and the like in its work area.

Since this default search is just a rough search with quick response time it usually loses some hosts. Hosts not discovered the first time could be found using the Discover functionality by giving it a net domain and using unicast SNMP rule. You can search more thoroughly using Discover but this search will be slower than the initial one.

Use this menu to search for a single device or several devices using the IP address or a selected range of IP addresses.

In the Discover window define the following variables:

- **IP Address** Type in a range of IP addresses or a single IP address (in both "From" and "To" spaces). Keep in mind that the time needed to do the search increases as the range of addresses searched becomes larger.
- **SNMP Read** Type in the read community string.
- **Time Out** Range variable from 1000 to 10,000 milliseconds
- **Search Approach** Select Unicast (default) or Broadcast. A Broadcast request is not IP address specific and will cause every device connected at the moment of broadcast to reply.
- **Discover Scheme** Select SNMP or ICMP. ICMP will only report the IP address of connected devices. SNMP discoveries reply with available device information.

• **Search Method** Choose to find a single SNMP agent defined below by the Enterprise ID or all agents in the previously refined search field.

Click on the Start button to begin the discover process. Unicast discovery will send Ping packets to the selected range of IP addresses in ascending consecutive order and repost each reply as it is received. Use the Save & Exit button to insert the device into the Tree View.

🚯 Disc	over			
From I To IP. SNMF TimeO (1000.	P Address 255 255 Address 255 255 P Read public Jut 	255 255 Search Approach C Unicast C Broadcast 255 255 Discover Schema C SNMP C TCMP Search C All Agents C Select Device msec EnterpriseID		Samples 47 Start Stop
No.	IP Address	System Description	•	Exit
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 Found I Found I Found I Found I Found I	10.26.43.124 10.47.54.10 10.28.30.11 10.47.53.201 10.39.79.108 10.26.62.17 10.28.30.10 10.40.9.200 10.48.43.11 10.44.73.222 10.10.27.57 10.50.51.1 10.9.18.100 10.50.82.1 20.20.21.22 Device I IP = 10.44.6 Device I IP = 10.42.5 Device I IP = 10.42.3 Device I IP = 10.42.3	Unknown Unknown Atheros VxWorks SNMPv1/v2c Agent Unknown Atheros VxWorks SNMPv1/v2c Agent Unknown Atheros VxWorks SNMPv1/v2c Agent Hardware: x86 Family 15 Model 2 Stepping 4 AT/AT COM Hardware: x86 Family 15 Model 3 Stepping 2 AT/AT COM Unknown Hardware: x86 Family 6 Model 11 Stepping 1 AT/AT COM Unknown Hardware: x86 Family 15 Model 11 Stepping 2 AT/AT COM Unknown Hardware: x86 Family 15 Model 11 Stepping 2 AT/AT COM Unknown Hardware: x86 Family 15 Model 11 Stepping 2 AT/AT COM Unknown Hardware: x86 Family 15 Model 1 Stepping 2 AT/AT COM Interference 10 Comparison Attention 10 Comparison Hardware: x86 Family 15 Model 1 Stepping 2 AT/AT COM Interference 10 Comparison Attention 10 Comparison Hardware: x86 Family 15 Model 1 Stepping 2 AT/AT COM Interference 10 Comparison Attention 10		

Figure 29.

How to Monitor and Manage a Network

D-View polls all devices automatically. If a device is disconnected, D-View will display a disconnected icon in the work area. Otherwise, it will show a device icon.

The D-View platform allows users to set up special cases to monitor and manage and supports multiple ways of doing so.

Scenario 1:

Monitoring Device 10.1.1.194 DES3225G (shows both connected status and disconnected status)

Connected



Figure 30.

Disconnected (When device does not respond during Repelling)

() D-View 5.1 - [ListViewForm-DomeinA]	
System View Edit MIBs Lools Account Window Help	<u>_8×</u>
🚜 🎢 💾 🚧 🛄 Tool User Define	
Image: 10.48.62.90 (% Image: 10.48.62.31 (% Image: 10.48.62.31 (% Image: 10.48.62.31 (% Image: 10.9.68.31 Image: 10.9.68.31 Image: 10.9.68.31 Image: 10.9.68.31 Image: 10.9.68.31 Image: 10.9.68.37 (8(Image: 10.9.68.37 (
Messages Traps	
Repolling : IP = 10.39.30.90 is disconnected at T+ 03:10:58 Repolling : IP = 10.3.68.97 is disconnected at T+ 03:10:58 Repolling : IP = 10.3.68.91 is disconnected at T+ 03:10:56 Repolling : IP = 10.3.68.31 is disconnected at T+ 03:10:57 Repolling : IP = 10.3.68.31 is disconnected at T+ 03:10:57 Repolling : IP = 10.3.68.31 is disconnected at T+ 03:10:57 Repolling : IP = 10.3.68.31 is disconnected at T+ 03:10:57 Repolling : IP = 10.3.43.61 is disconnected at T+ 03:10:57 Repolling : IP = 10.43.661 is disconnected at T+ 03:10:57 Repolling : IP = 10.43.661 is disconnected at T+ 03:10:57 Repolling : IP = 10.48.62.91 is disconnected at T+ 03:10:57 Repolling : IP = 10.48.62.91 is disconnected at T+ 03:10:57 Repolling : IP = 10.48.62.91 is disconnected at T+ 03:10:57 Repolling : IP = 10.48.62.91 is disconnected at T+ 03:10:57 Repolling : IP = 10.48.62.91 is disconnected at T+ 03:10:57 Repolling : IP = 10.48.62.91 is disconnected at T+ 03:10:57	

Figure 31.

Scenario 2: Managing device 10.1.1.194

Using "Web Configure"

Step 1: Right click on mouse to execute "Web Configure"



Figure 32.

Step 2:



Figure 33.

Using the "D-View Module"

Double-click on the device Icon or right-click on "D-View Module" to execute:



Figure 34.



Figure 35.

Using Telnet

Right-click on mouse to execute telnet.

Step 1



Figure 36.



Figure 37.



Changing device properties

When you need to modify an IP address for a device use the "Properties" menu item on the device pop-up menu to change its identity.

Scenario 1: Changing the device 10.1.1.194 from DES-3225G to DES-3226

Step1: Right-click with mouse on "Properties"

🚯 D-View 5.1 - [ListViewForm-DomainA]	
🚯 System Yiew Edit MIBs Tools Account Windo	w <u>H</u> elp _ 문 ×
🚜 🎢 💾 🐋 🚛 Tool User Define	
	formation ss sg ols >
Messages Traps	
Find Device! IP = 10.1.1.194 at 下午 03:11:53 Discover : 10.1.1.194 at 下午 03:11:53 Repolling : IP = 10.90.90.90 is disconnected at 下午 03:10: Repolling : IP = 10.9.68.97 is disconnected at 下午 03:10:5 Repolling : IP = 10.9.68.91 is disconnected at 下午 03:10:5 Repolling : IP = 10.9.68.31 is disconnected at 下午 03:10:5 Repolling : IP = 10.9.68.31 is disconnected at 下午 03:10:5 Repolling : IP = 10.9.68.11 is disconnected at 下午 03:10:5 Repolling : IP = 10.9.68.11 is disconnected at 下午 03:10:5	58 8 7 7 7 7 7

Figure 38.

🚯 D-View 5.1 - [ListViewForr	n-DomainA]		_ 🗆 🗵
🚯 System Yiew Edit M	IBs <u>I</u> ools <u>A</u> ccount <u>W</u> indow <u>H</u> elp	9	_ & ×
	Tool User Define		
	0 T 2 (7)		
10.48.6	Device Properties Form		
10.48.6	Device Information		
D× 10.49.6 D× 10.9.68	Device Name: 10.1.1.194	IP Address: 10.1.1.194	
D× 10.9.68 D× 10.9.68	Read Comm: public	Write Comm: private	
D¤ 10.9.68 D¤ 10.9.68	Module Type: DES3225G	Туре	
▶ 10.90.9	MIB Database		
⊕ ∰ Microsoft ⊕ ∰ Novell			
⊕ Marconi ⊡ 🛃 Favorite	T IANAifType-MIB	IF-MIB	
🖻 🌺 DomainA	🗂 IGMP-STD-MIB	🗖 OSPF-MIB	
	CSPF-TRAP-MIB	P-BRIDGE-MIB	
Messages Traps	C Q-BRIDGE-MIB	🗖 RFC1155-SMI 📃	
Find Device! IP = 10.1.1.194 Discover : 10.1.1.194 at 下午 Repolling : IP = 10.90.90.90	OK Cancel		A
Repolling : IP = 10.9.68.97 is Repolling : IP = 10.9.68.91 is Repolling : IP = 10.9.68.80 is	s disconnected at 下午 03:10:58 s disconnected at 下午 03:10:58 s disconnected at 下午 03:10:57		
Repolling : IP = 10.9.68.31 is Repolling : IP = 10.9.68.101 Repolling : IP = 10.49.66.1 is	s disconnected at 下午 U3:10:57 is disconnected at 下午 03:10:57 s disconnected at 下午 03:10:57		.

Step2: Press the "Type" Button

Figure 39.

D-View 5.1 - [ListViewForr System View Edit M	n-DomainA] IBs <u>T</u> ools <u>A</u> ccount	<u>W</u> indow <u>H</u> elp			_ D × _ 8 ×
	Tool User Define				
📕 🦉 🧿 🖳 📕	🚯 Change Module Ty	pe			
E Boot	Company: D-Link				
CompanyGroup Company Compa	SCom AxonNetworks CMC DG Emulex	ACC Cayman Comet D-Link Fibronics	AlliedTelesyn Cisco DEC Domain MP		
	Device Module: DE	S3226			
1011	Module		OID		
Topology	DES3226		1.3.6.1.4.1.171.10.36.1.11		
Messages Trans	DES3224R		1.3.6.1.4.1.171.10.36.2		
	DES32240		1.3.5.1.4.1.171.10.35.3	.	
			1.3.0.1.4.1.171.10.37.1		
	<u>DK</u>	Cancel			

Step3: Select D-Link and DES 3226. Then Press OK.

Figure 40.

System Yiew Edit MIBs Tools Account Window Help Image: System Yiew Edit MIBs Tools Account Account Account Accou	🚯 D-Yiew 5.1 - [ListViewForm-DomainA]		
Tool User Define Image: Second sec	w Edit MIB: Tools Account Window Help		
Root Ethernet CompanyGroup General D-Link Microsoft Microsoft Marconi Favorite Ini.1.194	Image: Straight of the straig		
Messages Traps	rnet panyGroup General D-Link HP Microsoft Novell Marconi prite DomainA 10.1.1.194		

Step 4: Properties have been changed.

Figure 41.

Collect trap information to log file

The user can log the trap history. The trap filename and path is /DLINK_INSTALL_PATH/var/log/trap.log. The user can clear it by using any editor to view and clear it.

Log On Trap:

System→Trap Management→Log→Log On

D-View 5.1 - [ListViewForm-D-Link] System View Edit MIBs Tools Discover All Basic Information	Account Window Help ser Define					- 0 × - 8 ×
Repolling Configuration Community String Configure Save To Database Clear Database	10.1.1.12 10.1.1.166	DES- 32256 10.1.1.194	10.11.94.224	10.132.24.6	10.16.79.126	□ <u>▲</u> 10.1
Image Management Exit 10.16.79.36 10.22.45.6 10.24.22.8 [8] 10.24.27.200	Irap Editor Clear Sort By Trap Type Properties Trap View Filter Setting	DES: 3226 10.24.22.8 (802.11x) SNM P	DES- 3326 10.24.37.200	DES- 3624 10.37.11.78 DHS- 3224V	DHS- 32224Vc	10.4
Messages Traps	Log Trap Mail SMTP Setting Trap <u>M</u> ail Setting	✓ Log On Log Off <u>V</u> iew Log Issages				
2002-07-08 09:36:34 192.168 2002-07-08 09:36:34 192.168	100.1 Enterpri 100.1 Enterpri	ise Specific [4] ise Specific [5]	Uptime:0:31:00: . Uptime:0:31:00: .	iso.3.6.1.4.1.41 iso.3.6.1.4.1.41	0.1.3.1.0.0.0.0 0.1.3.1.0.0.0.0	0.0.0

Figure 42.

Log Off Trap:

System→Trap Management→Log→Log Off



Figure 43.

View Trap and Edit:

System→Trap Management→Log→View Log



Figure 44.



Figure 45.

Note: For more on trap management functions please refer to Chapter 6: Advanced Management.



Install Plug-in management module

If you need more management modules for devices, install the plug-in management module. You can get modules from http://www.dlink.com.tw where all D-View supported modules can be found. You can download all of these modules. When the module has been installed, double-click on your chosen icon and a device panel will appear. To date D-View supports many kinds of D-Link SNMP products. You are welcome to visit the D-Link web page for more information.

Scenario: Installing Plug-in DES3326 Device Module

Step 1



Figure 46.



Welcome	×
	Welcome to the DES3326 Setup program. This program will install DES3326 on your computer.
	It is strongly recommended that you exit all Windows programs before running this Setup program.
	Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
	WARNING: This program is protected by copyright law and international treaties.
	Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
InstallShield	< Back Next> Cancel

Figure 47.

User Information			×
	Type your r company yo	name below. You must also type the name of the ou work for.	
	N <u>a</u> me:	Ben	
	<u>C</u> ompany:	DLink	
InstallShield		< <u>B</u> ack <u>N</u> ext > Cancel	

Figure 48.

Choose Destination Location	1 <u>×</u>
The second se	Setup will install DES3326 in the following directory.
	To install to this directory, click Next.
	To install to a different directory, click Browse and select another directory.
	You can choose not to install DES3326 by clicking Cancel to exit Setup.
	Destination Directory C:\\D-LINK\D-View\Modules\DES3326 Browse
InstallShield	<u>≺B</u> ack <u>N</u> ext> Cancel

Figure 49.

Select Program Folder		×
	Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue.	
	Program Folders:	
	DES3326	
	Existing Folders:	
	Borland C++Builder 5 CadoDraw Cumulus D-Link InstallShield Professional 2000 InterBase LinkManager Lotus 應用軟體	
InstallShield		
	< <u>B</u> ack <u>N</u> ext > Cancel	1

Figure 50.

Start Copying Files	<u>×</u>
	Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files. Current Settings:
	Setup Type: Complete Target Folder C:\Program Files\D-LINK\D-View\Modules\DES3326 User Information Name: Ben
InstallShield	Company: DLink Image: Company: DLink

Figure 51.

Setup Complete	
-	Setup has finished installing the application on your computer.
	You may launch the application by selecting the icons installed.
	Click Finish to complete Setup.
InstallShield	< <u>B</u> ack Finish

Figure 52.

Managing SNMP Devices without a management module

MIB Browser

When you need to manage a SNMP device without a plug-in module in the D-View platform use a D-View supported MIB browser with the associated MIBs. Right-click on the chosen icon and you will see a "Properties" item on the pop-up menu. Click it and a dialog box will appear with an area listing many MIBs with checkboxes. Select which MIBs the device supports. Then click OK. Go back to the work area, right-click on the icon again. Select "MIB browser." This will invoke the MIB browser with the MIBs that you selected. Now you can use the MIB browser to manage devices.

Note: Before using MIB browser, you have to retrieve MIB files from a vendor who develops SNMP devices. You can then use the MIB compiler to compile MIBs. If compilation is successful, then the MIB compiler will store MIBs to database, and you will see the entire MIBs list under device properties.



How to Use MIB Browser

Step 1: Choose the device you wish to browse, right-click to bring up a menu and left-click on "Properties"



Figure 53.

Step 2: Enter settings and press OK.

🚯 Device Properties Form	
Device Information	
Device Name: 10.1.1.166	IP Address: 10.1.1.166
Read Comm: public	Write Comm: private
Module Type: DES3225G	Туре
MIB Database	
BRIDGE-MIB	ENTITY-MIB
IANAifType-MIB	F-MIB
🗖 IGMP-STD-MIB	
C Q-BRIDGE-MIB	FREC1155-SMI
F RFC-1212	RFC1213-MIB
OK Cancel	

Figure 54.




Figure 55.



Contemporary Conte			_ 🗆 🗙
File View Tools Window Help			
1 II II II 🙆			
Browse Agent IP : 10 . 1 . 166	Read Community : public	Write Community : private	
C RFC1213-MIB			

Figure 56.

Step 4: Double-click on RFC1213-MIB

📑 D-Link MIB Browser - [R	FC1213-MIB]	
🌳 File View Tools Windo	ow Help	_ 8 ×
fe: 🎦 🗐 🙆		
Browse Agent IP : 10 . 1	. 1 . 166 Read Community : public Write Community : private	
K Module C: BRIDGE-MIB C: RFC1213-MIB	MIB Tree sysDescr sysDetClD sysUpTime sysContact sysName sysLocation sysServices interfaces interfaces iffNumber iffNumber iff able iff able i	
	ifini InknownProtos	Þ

Figure 57.



Step 5: Use MIB Browser to manage these entities

Figure 58.

💽 Browse Result Node : system	
Agent IP : 10.1.1.166 Time out : 1 Sec. Poll every 30	Sec.
Name OID Syntax Access Value	
sysDescr 1.3.6.1.2.1.1.1.0 Octet String Read Only D-Link Fast Ethernet Switch DES-3225G sysUpTime 1.3.6.1.2.1.1.2.0 Object ID Read Only 1.3.6.1.4.1.171.10.24.1.1 sysUpTime 1.3.6.1.2.1.1.3.0 TimeTicks Read Only 2days, 01:12:25 sysContact 1.3.6.1.2.1.1.4.0 Octet String Read Write 44449 sysLocation 1.3.6.1.2.1.1.6.0 Octet String Read Write 10.1.1.166 sysServices 1.3.6.1.2.1.1.7.0 Integer Read Only 3	
Query Set Stop Close	
Query OK	1.

Figure 59.

MIB Compiler

The MIB Compiler provides another way to manage SNMP devices without a management module. It compiles an original Management Information Base (MIB) textual file into a system recognized format and loads it into a database. It converts a MIB into a graphic tree view. A node of the tree represents an object in the MIB. The relationship between nodes of the tree reflects OIDs of corresponding objects in the MIB.

The compiler shows detailed definitions of each object in the MIB:

- Object name
- OID
- Module to which the object belongs
- Syntax
- Access limit
- Status
- Description, and so on.

The compiler can communicate with a remote device (bridge, switch, or router) to get the current value or to set a new value for the MIB object of interest. This is achieved by sending SNMP requests and receiving SNMP responses to get/set the value of the object of the MIB, which resides in an SNMP enabled device.

Note: Not every MIB is needed to be implemented in any SNMP enabled device

The current values of the MIB objects of a specific device can be obtained in two ways: "Info" or "Table View." "Info" shows more detailed information for objects, both definitions and values. "Table view" shows only the values of objects.

How to Use the MIB Complier:

Step 1: Invoke the MIB Compiler



Figure 60.





Figure 61.

D-Link MIB Compiler - [C:	\Program Files\D-Link\D-Link SNMP Solutions\MIB\RFC1213.MIB] Vindow Help	
隆 🖻 🖺 🔐 °**		
Browse Agent IP : 10 . 1	. 1 . 166 Read Community : public Write Community : private	
MIB	RFC1213-MIB DEFINITIONS ::= BEGIN	-
C BRIDGE-MIB C ENTITY-MIB	IMPORTS	
C IANAifType-MIB	mgmt, NetworkAddress, IpAddress, Counter, Gauge,	
C P-BRIDGE-MIB	FRUM RFUI155-5MI	
C: Q-BRIDGE-MIB	EPOM PEC-1212	
C: RFC1155-SMI		
S RFC1212	This MIB module uses the extended OBJECT-TYPE macro as	
Cr RFC-1215	defined in [14];	
SNMPv2-CONF		
SNMPV2-MIB		
SNMPv2-TC	MIB-II (same prefix as MIB-I)	
Csi SNMPv2-TM	mib-2 OBJECT IDENTIFIER ::= { mgmt 1 }	
	textual conventions	
	DisplayString ::=	
	OCTET STRING	
	This data type is used to model textual information taken	-

Figure 62.





Step 3: Compile the MIB file

Figure 63.





Figure 64.



More on the MIB Compiler

1. How to find the MIB values of a device.

Step 1: Enter Device IP Address by entering the Browser Agent IP address, Read and Write Community settings. Then left-click on the MIB module you wish to view.



Figure 65.

F	🕄 Browse Ro	esult Node : syster	m							_ 0 ×
ľ										
1	Agent IP :	10.42.79.108				Time out :	1	Sec.	Poll every 30	► Sec.
I	Name	OID	Syntax	Access	Value	1				
	sysDescr sysUbjectID sysUpTime sysContact sysName sysLocation sysServices	1.3.61.2.1.1.0 1.3.61.2.1.1.20 1.3.61.2.1.1.30 1.3.61.2.1.1.40 1.3.61.2.1.1.50 1.3.61.2.1.1.60 1.3.61.2.1.1.70	Octet String Object ID TimeTicks Octet String Octet String Octet String Integer	Read Only Read Only Read Write Read Write Read Write Read Only	Fast Ethernet Switch 1.3.6.1.4.1.171.10.32.1 0days, 22:53:35 (NULL) (NULL) (NULL) 2	.1				
					Query	Set		Stop	Close	
C	Query OK									li.

Step 2: Right-click on object and execute "Info."

Figure 66.

ł	🕄 Browse Res	ult Node : if Tab	le									×
	Agent IP : 10).42.79.108					Time out : 1	· ·	Sec. 🗖 Poll ev	ery 30	- Se	:C.
I	! ifIndex	ifDescr	ifType	ifMtu	ifSpeed	ifPhysAddress	ifAdminStatus	ifOperStatus	ifLastChange	ifInOctets	ifInUca	1
I	1	RMON Port 1	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	Odays, 00:00:00	0	0	
I	2	RMON Port 2	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	Odays, 00:00:00	0	0	
I	3	RMON Port 3	62	1500	100000000	00.00.00.12.00.00	up(1)	up(1)	Odays, 00:00:04	1293469037	249537	
I	4	RMON Port 4	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	5	RMON Port 5	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	6	RMON Port 6	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	7	RMON Port 7	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	8	RMON Port 8	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	9	RMON Port 9	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	10	RMON Port 10	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	11	RMON Port 11	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0 -	
I	12	RMON Port 12	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	13	RMON Port 13	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	14	RMON Port 14	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	15	RMON Port 15	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	16	RMON Port 16	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	
I	17	RMON Port 17	62	1500	100000000	00.00.00.12.00.00	up(1)	down(2)	0days, 00:00:00	0	0	₹
l	▲									-		
						Query	Set Table	Add Entry	Stop	CI	ose	
Ī	Query OK											

Left-click on "If Table." Then left-click on "Table View" to display values.

Figure 67.

2. How to set Device MIB values.

After completing 1. , left-click on "MIB Entry." Execute "Set" or "Set Table" to set MIB values. Or double click on "Entry."

🛻 Set Value	
Remote IP 10.42.79.108	
Object Name sysName	
Object ID 1.3.6.1.2.1.1.5.0	
Syntax Octet String	
Community String Read Community String public	Write Community String
Value to Set	
Set	Cancel

Figure 68.

🐅 Add Table Entry	
ipAdEntAddr	
ipAdEntIfIndex	
ipAdEntNetMask	
ipAdEntBcastAddr	
ipAdEntReasmMaxSize	
Add All	Add Checked



0	2
ο	3

3. How to edit the MIB Source file:

Double-click on a MIB Module bring up a tree-view. Under "View" left-click on "MIB Source" and proceed to edit the source file for the compiled MIB.



Figure 70



Figure 71

4. How to print an MIB Source file:

After opening the MIB Source file by left-clicking "MIB Source" under File left-click on "Print."

5. How to save an MIB Source file:

Under "File" left-click on "Save" or "Save As"



6. How to delete an MIB Module:

Highlight MIB Module. Under "File" left-click on "Delete MIB" or right-click on MIB Module and left-click on "Delete MIB."



Figure 72

7. How to set MIB Module font:

Under "View" left-click on "Set Module Font."

Font			? ×
Eont: MS Sans Serif MS Serif MT Extra C Palatino Linotype P PMingLiU PosterBodoni BT	Font style: Regular Regular Italic Bold Bold Italic	Size: 8 10 12 14 18 24	OK Cancel Apply
Effects Strikeout Underline Color: Black	Sample AaBbYyZa Sogipt: Western	2	

Figure 73

8. How to set MIB Module background color:

Under "View" left-click on "Set Module Color."

Color	<u>?</u> ×
<u>Basic colors:</u>	
<u>C</u> ustom colors:	
Define Custom Colors >>	
OK Cancel	

Figure 74

9. How to set the MIB Module tree-view display font:

Under "View" left-click on "Set MIB Tree Font."

Font			? ×
Eont: MS Sans Serif MS Serif T MT Extra C Palatino Linotype PMingLiU PosterBodoni BT	Font style: Regular Italic Bold Bold Italic	Size: 8 10 12 14 18 24	OK Cancel Apply
Effects Strikeout Underline Color:	Sample AaBbYyZz Script: Western	-	

Figure 75

10. How to set the MIB Module tree-view display color:

Color	<u>?</u> ×
<u>B</u> asic colors:	
<u>C</u> ustom colors:	
Define Custom Colors >>	
OK Cancel	

Under "View" left-click on "Set MIB Tree Color."

Figure 76.

Creating a topology

The Topology diagram creation program included with D-View 5.1 is used to graphically represent planned or existing networks to aid network design. This program is designed to be flexible and easy to use. The primary tool for this application is the mouse. Topology diagrams can incorporate user created symbols. You can also use live device icons copied from any domain in the network. The diagrams may be further customized with user selected icons and bitmap files used for the background.

Create a New Topology

To create a new topology right-click on the Topology icon in the Tree View display panel.

Step 1: Right-click on "Topology"



Figure 77.



Step 2: Name New Topology

×
OK
Cancel

Figure 78.

Step 3:	"New"	Topology	Established
---------	-------	----------	-------------

D-View 5.1 - [Topology of new]	
🚯 System View Edit MIBs Tools Account Window Help	_ - • ×
🛞 🧭 💾 🍁 🛄 Tool User Define	
Prot <th< td=""><td>1500 ¹1600 ▲</td></th<>	1500 ¹ 1600 ▲

Figure 79.

Manipulating Icons and Images

Use the **"Tool"** pad and **"User Define"** pad under the tool bar to manipulate icons and images in your new topology.





1. Tool tab

The Tool tab presents a number of tools used to select and move items in the diagram. This guide discusses its functions from left to right order on the tab.

Left-click on "Tool" icon to bring up Tool tab:

3 System View Edit MIBs Tools Account Window Help	<u>_8×</u>
🖄 🖉 💾 🦛 🔚 1001 User Define	
Root 0 100 1200 1300 1400 150	H500 1600 1▲
	▼
Messages Traps	
P:10.36.56.86 is connected at 下午 06:58:25 P:10.47.51.168 is connected at 下午 06:57:55 P:10.36.56.86 is disconnected at 下午 06:57:25 P:10.47.61.168 is disconnected at 下午 06:54:55 P:10.11.22.202 is disconnected at 下午 06:54:25	A
IP:10.47.61.168 is connected at 下午 06:52:55 IP:10.11.22.202 is connected at 下午 06:52:55 IP:10.36.56.86 is connected at 下午 06:51:25 IP:10.10.27.90 is connected at 下午 06:50:25	

Figure 81.

a. Connecting Objects

Objects can be connected using a choice of visually distinct lines, solid lines, dotted lines etc. These lines will remain attached to the connected objects if the object is moved around the diagram.

To connect objects first click on the "line" icon in the toolbar. Clicking on the "down" arrow to the right of the line icon gives you a choice of lines to use in your drawing.



Figure 82.

Left-click on origin object.

Release.

Drag line from point of origin to destination object.

D-View 5.1 - [Topology of new]	
🚯 System View Edit MIBs Iools Account Window Help	_ B ×
A T W I Cool User Define	
□ 🙀 Root 0 100 1200 1300 1400 1500 1600 1700 1800 1900 11000 1100 11200 11300 11400 1500	1600
EuropanyUsroup	
NewObj NewObj	
F 300	
400	
500	
F600	
F 700	
500	
Eano Cano Cano Cano Cano Cano Cano Cano C	_
Messages Traps	
P:10.42.7.45 is disconnected at 下午 07:06:25	
F:10.42.34.126 is connected at Fキロ/105.25 F:10.40.97.3 is disconnected at Fキロ/206.25	
IP:10.47.55.77 is disconnected at 下午 07:06:25	
P:10.254.254.251 is connected at 下午 07.06.25 P:10.456.290 is disconnected at 下午 07.06.25	
[]P:1048.62.91 is disconnected at T↑ 07.06.25	
P:10.1.1.181 is connected at 下午 07:06:25	_
IIF: IU.I.I.163 Is connected at (+U/Ub/25	

Figure 83.

Left-click on destination object.

🚯 D-View 5.1 - [Topology	of new]																_ 🗆	×
🚯 System View Edit MI	Bs <u>T</u> ools	s <u>A</u> cc	ount <u>W</u> ir	ndow <u>H</u> e	elp												_ 8	\times
* *	Tool	User D	efine															
	(mlт	· 💽 8	07														-1
			100		00 1400	1500	leoo	1700	1000	1000	11000	11100	11000	11000	11.400	11500	11000	_
Ethernet		U .	100	200 3	00 '400	'500	'600	700	1800	900	1000	0011	1200	'1300	'1400	1500	1600	-
Euromot E CompanyGroup		F100																
Favorite			1	MB42 -			n i.											
I opology		200		U LILIK		U	link											
		L	N	lewObj		Ne	ewObj											
		300																
		$ _{400}$																
		500																
		L																
		600																
		F200																
		F 800																
		L																-1
		1 900 1															▶	الح
Messages Traps																		
IP : 10.42.7.45 is conne	ected a	1下午	07:06:55															
IP : 10.42.94.42 is conne IP : 10.40.97.3 is conne	ected a	いて十	07:06:55															-1
IP : 10.36.221.7 is discor	nnected a	まで午	07:06:55															
IP : 10.40.9.200 is discor	nnected a	前生生	07:06:55															
IP : 10.49.66.1 is discon IP : 10.48.62.91 is conne	nnected a ected a	∦ ト午 ≬下午	07:06:55															
IP : 10.9.68.31 is discor	nnected a	t下午	07:06:55															-

A line should appear connecting both objects.

Figure 84.

Note: You need to click on open space to discontinue drawing. Otherwise you will continue to be in drawing mode. You can also double-click on the line drawn to undo.

b. Creating a new domain

You can click on the white bubble to place a new domain on the topology.



Figure 85.

c. Writing text

Left-click on the text tool "T" to select the text option then left-click again on diagram to place a text box on the diagram.

🚯 D-¥iew 5.1 - [Topolog	gy of new]	
🚯 System View Edit M	MIBs Tools Account Window Help	B×
😹 🏹 💾 🍂 💻	Tool User Define	
Messages Traps	0 400 1200 300 400 500 500 1700 800 900 1000 4100 4300 4300 4400 4500 46 100 200 ₩₩ NewObj 300 Text 400 500 600 700 800 	

Figure 86.

Left-click once on the text to move text around	. Text will be highlighted in red
rectangle.	

🔔 D-¥iew 5.1 - 🛙 Topolog	v of new]															_ [D] X
🚯 System View Edit 🗹	IBs <u>T</u> ools	Account	Window	<u>H</u> elp												_ 8 ×
	Tool Us	er Define														
	(m		1.00-1													
		T 🛃	4 7													
🖃 🚭 Root	0	100	1200	1300 14	00 ¹ 50	0 ¹ 600	1700	1800	1900	1000	1100	1200	1300	1400	1500	1600
🗄 🥂 Ethernet																
E CompanyGroup		00		-												
			Dilink													
new		200	NewC	lhi												
			148440	.01												
		300	Te	xt												
			10.	<u></u>												
	°	100														
	L.	:00														
	i i i	00														
	. ⊫,	:00														
		700														
		300														
		900														
<u> </u>	I															•
Messages Traps																
IP : 10.24.60.1 is disco	nnected at T	午 07:42:	31													
IP: 10.42.39.10 is disco IP: 10.42.41.10 is disco	nnected at 1 nnected at T	午 07:42: 午 07:42:	31 31													
IP : 10.42.52.1 is disco	nnected at T	午 07:42:	31													
IP : 10.43.51.100 is disco	nnected at T	午 07:42:	31													
IP: 10.41.89.10 is disco IP: 10.44.67.1 is disco	nnected at 1 nnected at T	++ U7:42: 午 N7:42:	31 31													
IP : 10.44.73.111 is disco	nnected at T	午 07:42:	31													
IP : 10.47.44.50 is disco	nnected at T	午 07:42:	31													-

Figure 87.

D-View 5.1 - [Topology	y of new]																	_ 0	×
🚯 System View Edit 🕅	IBs <u>T</u> ools	; <u>A</u> cco	ount <u>M</u>	/indow	Help													_ 8	\times
* * !!!	Tool	User D	efine																
	(рίτ		<u>ئ</u>															
		10	1100	1200	1300	1400	1500	1600	1700	1800	1900	1000	11100	1200	1300	1400	11500	11600	
Ethernet		ľ	100	200	-500	400	-500	1000	100	1000	-500	1000	1100	1200	1000	1400	1000	1000	H
🗄 👹 CompanyGroup		100			_														
Favorite				Dilink															
new		200		NewC	l Ibi														
				140110	· 6)														
		300		Te	xt														
		400																	
		500																	
		Leon																	
		700																	
		L																	
		800																	
		Lann																	T
						1												•	ſ
Messages Traps																			
IP : 10.44.73.33 is disco	innected al	下午	07:44:31																
IP : 10.42.7.45 is disco	innected al	17年	07:44:31 07:44:31																-1
IP : 10.47.44.28 is disco	innected al	t下午 +下午	07:44:31 07:44:31																
IP : 10.132.24.6 is conn	ected at	下午!	07:44:31																
IP : 10.9.68.80 is conn IP : 10.1.1.183 is conn	ected at ected at	「下午」	u7:44:31 07:44:31																
IP: 10.1.1.172 is conn	ected at	(下午)	07:44:31																┚

Left-click twice on the mouse to edit the text.



To delete text left-click once then right-click on text to bring up "Delete" option.

d. Selecting multiple items

The multi-select tool (rectangular-shaped icon on tool pad) enables you to select a number of items (holding the left button down to select) and move these items as a unit.

e. Selecting individual items

You can click on the "hand" icon to select individual items.

2. User Define Tab

Importing Icons

Icons from any of the domains may be used in the diagram simply by selecting and copying them and pasting it into the new diagram.

Step 1: Left-click on "New" under "User Define"
🚯 D-View 5.1 - [Topolog	y of new]	1																_ [0] ×[
🚯 System View Edit 🕅	IBs <u>T</u> ool	s <u>A</u> cc	ount	<u>W</u> indow	Help													_ Ð ×
8 7 💾 🐋 🌉	Tool	User D	efine															
		0 1	: 💽	27														
Koot King CompanyGroup Good Com		0 -100 -200 -300 -400 -500 -500 -700 -700	100	1200	300	1400	500	1600	700	1800	900	1000	1100	1200	1300	1400	1500	
		Egnn I∎				1												• •
Messages Traps																		
IP: 10.36.56.86 is com IP: 10.47.61.168 is com IP: 10.36.56.86 is disc IP: 10.47.61.168 is disc IP: 10.47.61.168 is disc IP: 10.47.61.168 is disc IP: 10.47.61.168 is com IP: 10.47.61.168 is com IP: 10.47.61.168 is com IP: 10.47.61.22.02 is com IP: 10.47.61.68 is com IP: 10.47.61.68 is com IP: 10.47.61.68 is com IP: 10.47.61.68 is com IP: 10.12.2202 is com IP: 10.36.56.86 is com IP: 10.10.27.90 is com	nected a nected a onnected a onnected a onnected a nected a nected a nected a	ut 下午午午午午午午午午午午午午午午午午午午午午午午午午午	06:58:2 06:57:2 06:57:2 06:54:2 06:54:2 06:52:5 06:52:5 06:52:5 06:51:2 06:50:2	25 25 25 25 25 25 25 25 25 25 25 25														•



Open					? ×
Look jn: 🔂	Мар	- + 1	💣 🎟 •	(331x366)	۵
1980 hsinchu				анна ала отератора отератора отер оте	a o dan hi o dan hi o dan hi o dan hi o dan hi o dan hi dan hi o dan hi o d
File <u>n</u> ame:	hsinchu		<u>O</u> pen	A. 1- H-44	
Files of <u>type</u> :	JPG	•	Cancel	新竹幕	0.5

Step 2: Allows you to bring up icon to be imported

Figure 90.

Step 3: Drag domain icon into workspace. Pictured below is the default D-Link "New Object" icon

🚯 D-View 5.1 - [Topology of 1]			<u> </u>
System View Edit MIBs Too	ls <u>A</u> ccount <u>W</u> indow <u>H</u> elp UserDefine		_B×
			(
		00 1500 1600 1700 1800	900 110
Ethernet CompanyGroup Favorite Topology	T100 1200 300 440	JU '500 '600 YUU '800	
Messages Traps			

Figure 91.

An Example: Creating a Topology Diagram

Step1: Click on New Topology



Figure 92.

Step 2: Name new topology and press OK.



Figure 93.





Figure 94.



Step 4: Import background picture by clicking on "New Background Picture."

Figure 95.



Step 5: Import .jpg or .bmp file





Step 6: Set background size and press OK.

Set Background Size	×
 Real Size (2240 x 1600) 	OK
C Customed	Cancel
Width[10008000]	
Height[10008000]	

Figure 97.



Step 7: Background picture imported

Figure 98.

Step 8: You can drag devices directly from Tree View onto the Topology diagram or copy and paste.



Figure 99.



Step 9: Use the line function on the tool pad to connect devices in the topology drawing and set colors.

Figure 100.



Step 10: Save to Database

Figure 101.

MIB UTILITIES

This chapter explains how to use MIBs tools and other utilities located under the MIBs drop-down menu. It is organized according to the top to bottom, left to right order of the menu items. These menus will allow you to view statistics and to configure Layer 2 and Layer 3 functions. For many of the menu items an information table (RFCs—technical reports called Internet Requests for Comments) is presented along with a path diagram to illustrate how to utilize the particular functionality.

Note: In order to use MIB Utilities you need to first select an SNMP-enabled device.

The menus in this group include:

- Device SNMP Configuration
- MIB II Information and Statistics Windows
- IF MIB Information Tables
- Entity MIB Information Tables
- Bridge 802.1d Information and Port Configuration Table
- Spanning Tree Information and Port Configuration Table

- Transparent Bridge Forwarding and Static Filter Tables and Port Counter
- RMON Statistics, History and Event Windows
- 802.1p Priority Configuration Including GMRP and GARP
- 802.1Q VLAN Information and Configuration Including Forwarding/Filtering and Unicast/Multicast Configuration
- Port VLAN Traffic Statistics
- Layer 3 Utilities Including IP Forwarding, RIP2, OSPF, IP Multicast, DVMRP and PIM Configuration
- SNMP Configuration

Device SNMP Configuration

You can change the SNMP configuration of the device. Otherwise you will use the default settings.

🚯 Device SNMP (Configuration	×
I P: 10.1.1.153	Port: 161	SN <u>M</u> P Protocol Version SNMPv <u>1</u> O SNMPv <u>2</u> c O SNMPv <u>3</u>
Security Name:	noAuthUser 🔽	Context Engine ID: 010000a1d4
Auth Password:	AuthPassword	PrivPassword: PrivPassword
Aut <u>h</u> Protocol:	NONE	Priv Protocol: NONE
<u>R</u> ead Community S	String : public	Security Level: NoAuthNoPriv
<u>W</u> rite Community S	itring : private	
		OK Cancel

Figure 102.

MIB II Menus

MIB II pop-up menus are accessed as side (client) menus and can be viewed alone. You can also have multiple windows opened simultaneously.

Information

Use the MIB II Information window to view and write basic device SNMP information. Enter the following:

- System Contact,
- System Name

• System Location

Type in the new text and click on set to make these change effective.

🚯 MIB Information	n Table : 10.1.1.141	<u> </u>
System Description System OID System Up Time System Contact System Name System Location System Service	D-Link DHS-3224V Ethernet over VDSL Switch 1.3.6.1.4.1.171.10.38.2 2 days, 23:37:04:48 3	Refresh Set
Get:DISNMP : Ok! Req	uest:.Receive at 03:40:31 PM.	

Figure 103.

The remaining menus under MIB II are the following read-only table and counter windows (examples pictured on next page):

- IF Table
- IF Counters
- IP Counters
- IP Routing
- IP Address Table
- ICMP Counters
- UDP Counters
- SNMP Counters

MIB II Read-only Windows

Read-only menus can be refreshed, reset and paused; you may adjust the poll interval for the counters. A few examples screen captures are pictured here:

🚯 IF Counters	5:10.1.1.153					
Index Descrip	otion				-	System Time
2 Physic	al Port 2					N++ 08:11:11
3 Physic	al Port 3					
4 Physic	al Port 4					Refresh
5 Physic	al Port 5					
6 Physic	al Port 6					
7 Physic O Dhusia	al Port /					
Index 1		Description Pl	nysical Port 1			Poll Interval
Name	Value	Delta	Rate	Peak	Peak Occure	
InOctets	60497702	3170	3170	3170	下午 08:11:11	
InUcastPkts	43525	1	1	1	下午 08:11:11	
InNUcastPkts	43881	<u></u> ৩	3	3	下午 08:11:11	Reset
InDiscards	5	0	0	0	下午 08:11:10	
InErrors InUnknownPro	0	0	0	0	〒〒 06:11:10	Start
DutOctete	762959992	102204	102204	102204	下午 08:11:10	
OutUcastPkts	44487	0	0	0	下午 08:11:10	Pause
OutNUcastPkts	3005035	325	325	325	下午 08:11:11	
OutDiscards	0	0	0	0	下午 08:11:10	
OutErrors	0	0	0	0	下午 08:11:10	

Figure 104. Example of MIB II Read-Only Menus

🚯 IP Counters : 10	0.1.1.153					
Name	Value	Delta	Rate	Peak	Peak Occured at	Sustem Time
ipInReceives	266821	438	438	590	下午 08:11:55	5ystem 1 me
ipInHdrErrors	0	0	0	0	下午 08:11:50	11100.11.00
ipInAddrErrors	0	0	0	0	下午 08:11:50	
ipForwDatagrams	0	0	0	0	下午 08:11:50	1 -
ipInUnknownProtols	0	0	0	0	下午 08:11:50	Poll Interval
ipInDiscards	1027	0	0	0	下午 08:11:50	
ipInDelivers	265794	438	438	590	下午 08:11:55	
ipOutRequests	77	2	2	2	下午 08:11:51	Posst
ipOutDiscards	0	0	0	0	下午 08:11:50	
ipOutNoRoutes	0	0	0	0	下午 08:11:50	
						Start
						Pause
[
Set:DISNMP : Ok! Red	quest:.Receive	e at 08:11:56 下午.				

Figure 105.

🞒 IP Routing	g : 10.1.1.153					
ipRouteDest	ipRoutelfIndex	ipRouteMetric1	ipRouteMetric2	ipRouteMetric3	ipF	
0.0.0.0	256	1	-1	-1	-1	
10.0.0.0	256	1	-1	-1	-1	
						Refresh
Get:DISNMP : C	k! Request:.Rece	eive at 08:12:26 ⁻	下午.			

Figure 106.

🐌 IP Addres	s:10.1.1.153				>
ipAdEntAddr	ipAdEntIfIndex	ipAdEntNetMask	ipAdEntBcastAddr	ipAdEntReasmM	
10.1.1.153	256	255.0.0.0	1	65535	
					Refresh
41					
•					

Figure 107. Figure Examples of MIB II Read-only Menus

IF MIB Tables

The following table gives a brief description of the IF MIB:

IF-MIB (RFC 2233)

- 1. The ifGeneralInformationGroup. This group contains those objects applicable to all types of network interfaces, including bit-oriented interfaces.
- 2. The ifPacketGroup. This group contains those objects applicable to packet-oriented network interfaces.
- 3. The ifFixedLengthGroup. This group contains the objects applicable not only to character-oriented interfaces, such as RS-232, but also to those subnetwork technologies, such as cell-relay/ATM, which transmit data in fixed length transmission units. As well as the octet counters, there are also a few other counters (e.g., the error counters) which are useful for this type of interface, but are currently defined as being packet-oriented. To accommodate this, the definitions of these counters are generalized to apply to character-oriented interfaces and fixed-length-transmission interfaces.

It should be noted that the octet counters in the if Table aggregate octet counts for unicast and non-unicast packets into a single octet counter per direction (received/transmitted). Thus, with the above definition of fixed-length-transmission interfaces, where such interfaces which support non-unicast packets, separate counts of unicast and multicast/broadcast transmissions can only be maintained in a media-specific MIB module.

Table	2.
-------	----

The IF MIB General Information and IF Stack tables:

IF Table Last Change	0:00:00:00	Bafrash
IF Stack Last Change	0:00:00:00	

Figure 108

125

ifIndex	ifName	ifInMulticastPkts	ifInBroadcastPkts	ifOutMulticastPkts	ifOutBroa 🔺	
1		4287230	629388	1974	7	
2		0	0	0	0	[
3		0	0	0	0	Refresh
4		0	0	0	0	
5		0	0	0	0	Set
6		0	0	0	0	
7		0	0	0	0	
B		0	0	0	0	
9		0	0	0	0	
10		4194	7	3510479	560264	
11		0	0	0	0	
12		0	0	0	0	
13		0	0	0	0	
14		0	0	0	0	
15		0	0	0	0	
16		0	0	0	0	
17		0	0	0	0	
18		0	0	0	0	
19		0	0	0	0	
20		0	0	0	0	
21		0	0	0	0 1	
22		n,	n	n	n 🎽	
<u> </u>						
LinkU	p/LinkDov	vn Trap	•	Alias		
- P.	omisquous	Mode				

Figure 109.

To enable Link Up/Link Down Trap, assign an Alias or enable Promiscuous Mode highlight the appropriate index and supply the information at the bottom of the menu.

Entity

The following table gives information about the Entity MIB:

Entity MIB (RFC 2737)

- Logical Entity
A managed system contains one or more logical entities, each represented by at
most one instantiation of each of a particular set of MIB objects. A set of
management functions is associated with each logical entity. Examples of logical
entities include routers, bridges, print-servers, etc.
- Physical Entity

A "physical entity" or "physical component" represents an identifiable physical resource within a managed system. Zero or more logical entities may utilize a physical resource at any given time. It is an implementation-specific manner as to which physical components are represented by an agent in the EntPhysicalTable. Typically, physical resources (e.g., communications ports, back planes, sensors, daughter-cards, power supplies, the overall chassis) which can be managed via Functions associated with one or more logical entities are included in the MIB.

- Containment Tree

Each physical component may be modeled as 'contained' within another physical component. A "containment-tree" is the conceptual sequence of entPhysicalIndex values which uniquely specifies the exact physical location of a physical component within the managed system. It is generated by 'following and recording' each 'entPhysicalContainedIn' instance 'up the tree towards the root', until a value of zero indicating no further containment is found.

Table 3.

🚯 Logical Table	: 10.24.22.8			
entLogicalIndex	entLogicalDescr	entLogicalType	entLogicalCommunity	
1	entLogicalDescr D-LINK Bridge Ver.4.00.073	entLogical1ype	(NULL)	1 Sample Refresh
A Get Okl Request I	ovical Table Received at 02-21	13 下午	×	

Figure 110. Entity Logical Table



Figure 111. Entity Physical Table

Bridge 802.1d

Bridge 802.1d Information and Port Table

First some Bridge 802.1D (RFC 1493) MIB Group Definitions:

Bridge 802.1D (RFC 1493) MIB Groups

The dot1dBase Group

This mandatory group contains the objects, which are applicable to all types of bridges.

The dot1dStp Group

This group contains the objects that denote the bridge's state with respect to the Spanning Tree Protocol. If a node does not implemented the Spanning Tree Protocol, this group will not be implemented.

The dot1dSr Group

This group contains the objects that describe the entity's state with respect to source route bridging. If source routing is not supported this group will not be implemented. This group is applicable to source route only, and SRT bridges. This group will be described in a separate document applicable only to source route bridging.

The dot1dTp Group

This group contains objects that describe the entity's state with respect to transparent bridging. If transparent bridging is not supported this group will not be implemented. This group is applicable to transparent only and SRT bridges.

The dot1dStatic Group

This group contains objects that describe the entity's state with respect to destination-address filtering. If destination-address filtering is not supported this group will not be implemented. This group is applicable to any type of bridge which performs destination-address filtering.

Relationship to Other MIBs



As described above, some IEEE 802.1d management objects have not been included in this MIB because they overlap with objects in other MIBs applicable to a bridge implementing this MIB. In particular, it is assumed that a bridge implementing this MIB will also implement (at least) the 'system' group and the 'interfaces' group defined in MIB-II.

Relationship to the 'system' group

In MIB-II, the 'system' group is defined as being mandatory for all systems such that each managed entity contains one instance of each.

Table 4. Bridge 802.1D (RFC 1493) MIB Group Definitions

Bridge aging time can be adjusted in the Information window; otherwise Bridge 802.1 windows are read-only.

Bridge 802.1d Information : 10.15.1.66						
Bridge Address Number of Ports Bridge Type	0080C8000006 40 transparent-only	Refresh Set				
Learned Entry Discard	0					
T-Bridge Aging Time (10-1000000)	300					
Get:DISNMP++: Ok!Requ	est:.Receive at 03:22:23 PM.					

Figure 112. Bridge 802.1d Information

Port	IfIndex	Circuit		MtuExceededDiscards		
1	1	0.0	0	0		
2	2	0.0	ñ	ň		
3	3	0.0	Ō	ŏ		
4	4	0.0	Ō	ō		4
5	5	0.0	Ō	ō		Refresh
6	6	0.0	ō	Ō		Landina
7	7	0.0	Ō	Ō		
8	8	0.0	ō	Ō		
9	9	0.0	Ō	Ō		
10	10	0.0	Ō	Ō		
11	11	0.0	0	0		
12	12	0.0	0	0		
13	13	0.0	0	0		
14	14	0.0	0	0		
15	15	0.0	0	0		
16	16	0.0	0	0		
17	17	0.0	0	0		
18	18	0.0	0	0		
19	19	0.0	0	0		
20	20	0.0	0	0		
21	21	0.0	0	0	-	
22	22	0.0	n	n		

Figure 113. Bridge 802.1d Port Table

Γ

Path: MIE	8s → 802.1D Information/Port Table
Bridge 802.1D Information	Bridge Address, Number of Ports, Bridge Type, Learned Entry Discard
Port Table Information	Port, IfIndex, Circuit, DelayExceededDiscards, MtuExceededDiscards

 Table 5. Bridge 802.1D Information/Port Table

Spanning Tree

Spanning Tree Information

Use the STP Information window for global changes to the selected device. User configurable global STP settings include **Priority**, **Maximum Aging Time**, **Hello Time** and **Forward Delay**.

Protocol	ieee8021d	
Priority (0-65535)	32768	Refresh
Fime Since Topology Change	6:11:37:00	Set
Number of Topology Changes	0	
Designated Root	800000055DF93287	
Root Cost	0	
Root Port	0	
Maximum Aging Time	2000	
HelloTime	200	
Hold Time	100	
Forward Delay	1500	
Maximum Aging Time(600-4000)	2000	
Hello Time(100-1000)	200	
Forward Delay(400-3000)	1500	

Figure 114. Figure 2. Spanning Tree Information

Path: MIBs \rightarrow Spanning Tree \rightarrow Information					
Read-only Information	Protocol, Time Since Topology Change, Number of Topology Changes, Designated Root, Root Cost, Root Port, Maximum Aging Time, Hello Time, Forward Delay				
Set VariablesMaximum Aging Time(600-4000), Hello Time(100-100 Forward Delay(400-3000)					

Table 6. Spanning Tree Information

Spanning Tree Port Table

The STP Port Table allows you to configure STP port settings. Select the port you wish to configure and type in the desired Priority and Path Cost for the port. The Status pull-down menu is used to enable or disable the STP settings for the port.

ons	r noncy			E anni - nsr	LitesignatedBoot		
	129	forwarding	onabled	19	200000055DE92297	10000	
<u>,</u>	120	disabled	enabled	10	20000000000000000000000000000000000000		
; ;	120	disabled	enabled	10	90000000000000000000000000000000000000		
	120	disabled	enabled	19	20000000000000000000000000000000000000		
	120	disabled	onabled	10	000000000000000000000000000000000000000		Refresh
	120	disabled	onabled	10	000000000000000000000000000000000000000		
,	120	disabled	onabled	10	000000000000000000000000000000000000000		
5	120	disabled	onabled	10	000000000000000000000000000000000000000		
1	120	disabled	onabled	10	000000000000000000000000000000000000000		
, 10	120	disabled	onabled	10	00000000000000000000000000000000000000		
1	120	disabled	onabled	10	00000000000000000000000000000000000000		
5	120	disabled	onabled	10	00000000000000000000000000000000000000		
5	120	disabled	onabled	19	20000000000000000000000000000000000000		
1	120	disabled	onabled	10	20000000000000000000000000000000000000		
5	120	disabled	onabled	10	000000000000000000000000000000000000000	ΨÌ	
1	120	uisabieu	enableu	13	000000000000000000000000000000000000000	تے	
			i		<u></u>	L J	
Pric	onty (U-2:	55J					
Sta	atus	Г		-			
Pal	th Cost (*	1-65535)					

Figure 115. STP Port Table

Path: MIBs \rightarrow Spanning Tree \rightarrow Port Table				
Read-only Information	Port, Port Priority, State, Status, Path Cost, DesignatedRoot, DesignatedCost, DesignatedBridge, DesignatedPort, Forwarding Transitions			
Set Variables	Priority, Status, Path Cost			

Table 7. Spanning Tree Port Table

Transparent Bridge

Transparent Bridge Forwarding & Static Filtering Tables

Highlight to select the device and access these read-only menus from the Transparent Bridge side menu.

🚯 Trans	paren	t Bridge	Forwarding Table: 10.15.1.66	
Address	Port	Status	▲	
004005	65	learn		
004005	7	learn		
004005	65	learn		
004096	65	learn		Defrech
004846	66	learn		[
004854	66	learn		
004854	66	learn		
00508B	66	learn		
0050B	65	learn		
0050B	65	learn		
0050B	65	learn		
0050B	66	learn		
0050B	65	learn		
0050B	66	learn		
0050B	65	learn		
0050B	65	learn		
0050B	65	learn		
0050B	66	learn		
0050B	65	learn	-	
0050R	88	learn		
Get:DISNM	P : Ok!	Request:	Receive at 01:59:25 PM.	//

Figure 116. Transparent Bridge Forwarding Table

🚯 Transparent Bridge Forwarding Table: 10.1.1.141 📃 🔲 🗙				
Address	Port	Status]
000010	25	learn]
000081	25	learn		
0000E2	25	learn		
0000E2	25	learn		Befreeh
0000E2	25	learn		nellesn
0000E2	25	learn		
0000E2	25	learn		
0000E2	25	learn		
0000F8	25	learn		
000103	25	learn		
000130	25	learn		
000196	25	learn		
00023F	25	learn		
00055	25	learn		
00055	25	learn		
00055	25	learn		
00055	25	learn		
00055	25	learn		
00055	25	learn		1
00055	25	learn		1
Get:DISNMP : Ok! Request:.Receive at 10:52:38 AM.				

Figure 117. Transparent Bridge Static Filtering Table

Path: MIBs → Transparent Bridge →Forwarding Table/Static Table

Transparent Bridge Forwarding Table Information	Address, Port, Status
Transparent Bridge Static Filtering Table Information	Address, ReceivePort, AllowedtoGoTo, Status

Table 8. Transparent Bridge Forwarding/Static Filtering Table

Transparent Bridge Port Counter Table & Port Traffic Graph

Counter tables and traffic graphs can be paused or reset as desired. The user can change the Poll Interval and Count, graphs may use a three dimensional line by checking the 3D Line box.


Figure 118. Transparent Bridge Port Counter

Path: MIBs \rightarrow Transparent Bridge \rightarrow Port Counter

Transparent Bridge Port Counter Table	dot1dTpPort, dot1dTpPortMaxInfo, Port Number, Max Info Name, Value, Delta, Rate, Peak, Peak Occ.

 Table 9. Transparent Bridge Port Counter

RMON

View RMON statistics for any port on the selected device by clicking the index (port) number. By default the **Statistics Table** is displayed for index 1. **Port Utilization**, **Error** and **Packet Distribution** are displayed graphically. Check the 3D Line for more readily visible graph lines.

Remote Network Monitoring Object Groups

The Ethernet Statistics Group

The Ethernet statistics group contains statistics measured by the probe for each monitored Ethernet interface on this device. This group consists of the etherStatsTable. In the future other groups will be defined for other media types including Token Ring and FDDI.

These groups should follow the same model as the Ethernet statistics group.

The History Control Group

The history control group controls the periodic statistical sampling of data from various types of networks. This group consists of the historyControlTable.

The Alarm Group

The alarm group periodically takes statistical samples from variables in the probe and compares them to previously configured thresholds.

If the monitored variable crosses a threshold, an event is generated. A hysteresis mechanism is implemented to limit the generation of alarms. This group consists of the alarmTable and requires the implementation of the event group.

The Event Group

The event group controls the generation and notification of events from this device. This group consists of the event Table and the log Table.

Table 10. RMON Statistics



Figure 119. RMON Statistic (Packet Distribution Graph)

Use the Add and Modify function to add an index or change a selected index's variables. Clicking the Add or Modify button will bring up the Control Table pop-up menu. The Control Table pop-up screen is used to input index variables. Statistics information displayed may be frozen at any point and resumed using the Start and Stop buttons.

Path: MIBs \rightarrow RMON \rightarrow Statistics

RMON Statistics Table Information

Index, Data source, Owner, Ststus, Name, Value, Delta, Rate, Pea, Peak Occurred At

Table 11. RMON Statistics

RMON History

View the history table and graphs including Utilization, Error and Packet Distribution. Add or modify and index with the Control Table.

🚯 Rmo	on : His	tory Form : 1	10.1.1.16	i6							
Index	Data S	Source		Buckets	Requested (Buckets Gr	anted	Interval	Owner		- · · ·
1	IfInde	e 1		50		50		30	monitor		System Lime:
2	IfInde:	ĸ1		50		50		1800	monitor		11 - 00.00.04
3	IfInde:	ĸ.2		50		50		30	monitor	1	Add
4	IfInde:	ĸ.2		50		50		1800	monitor	r	
5	IfInde:	ĸ.3		50		50		30	monitor	r	Modify
6	IfInde:	ĸ.3		50		50		1800	monitor	r	
7	IfInde:	ĸ.4		50		50		30	monitor	_	Delete
l i l − 1	10			50		50		1000	it		No.
Table	Utiliza	ition Error	Packet D	istribution							Refresh
Index	: 1	D)ata Sourc	e : IfIndex	1	Owner : m	nonitor				Interval (sec) (103600)
Time S	tamp	Drop Events	Octets	Packets	Broadcast	Multicast	CRC	Align 🛛 Ui	ndersize	Over:	10 💌
2 days,	. 1:4	0	0	0	0	0	0	0		0	Count(10-120)
2 days,	, 1:5	0	1035	12	0	0	0	0		0	30 💌
2 days,	, 1:5	0	0	0	0	0	0	0		0	
2 days,	, 1:5	0	0	0	0	0	0	0		0	
2 days,	, 1:5	0	0	0	0	0	0	0		0	🔲 3D Line
2 days,	, 1:5	0	0	0	0	0	0	0		0	
2 days,	, 1:5	0	0	0	0	0	0	0		0	Stop
2 days,	, 1:5	0	0	0	0	0	0	0		0	
2 days,	, 1:5	0	0	0	0	0	0	0		0	Start
2 days,	, 1:5	0	1025	8	1	1	0	0		0	Beest
2 days,	, 1:5	0	0	0	0	0	0	0		0	neset
2 days,	, 1:5	0	0	0	0	0	0	0		0	
2 days,	, 1:5	0	0	0	0	0	0	0		0 🖵	
Î	1 -	<u>^</u>	0	^	0		2	0			ОК

Figure 120. RMON History Table

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Figure 121. RMON History Graph

Pat	h: MIBs \rightarrow RMON \rightarrow History
RMON History Table Information	Index, Data source, Buckets Requested, Buckets Granted, Interval, Owner, Status, Time Stamp, Drop Events, Octets, Packets, Broadcast, Multicast, CRCAlign, Umndersize, Oversize, Fragments, Jabbers, Collisions, Utilizations

Table 12. RMON History

RMON Alarm

To add an alarm and define parameters for it click the Add button. The Alarm Table pop-up will accept a user-defined index number or you can use the index automatically generated.

l	RMO	N : Alarm	&Event Form:10.1	.1.194				
ľ	Alarm	Event I	Log					Sustem Time:
	Index	Interval	Variable	SampleType	Value	StartupAlarm	F	5ystem rine. 下午 03:23:51
I	1	1	etherstatsOctets.1	deltaValue	0	Rising	1	
I	2	1	etherstatsOctets.2	deltaValue	0	Rising	1	
I	3	1	etherstatsOctets.3	deltaValue	0	Rising	1	
I	5	1	etherstatsOctets.5	deltaValue	0	Rising	1	
I	6	1	etherstatsOctets.6	deltaValue	0	Rising	1	(
I	7	1	etherstatsOctets.7	deltaValue	0	Rising	1	Add
								Delete
								Modify
								Refresh
	•						►	Exit

Figure 122. RMON Alarm Table

🚯 Alarm Table : Add	×
Alarm Entry	StartUp
Index: 28559 Interval: 10	Sampling: absoluteValue 💌
Variable: etherStatsOctets	Threshold Value Rising 65535
Owner: Owner	Falling 0
Rising Event	Falling Event
Activate Rising Event Index: 24466	Activate Falling Event Index: 25859
Description: Rising Event	Description: Falling Event
Community: public	Community: public
Type: log-and-trap	Type: log-and-trap
	OK Cancel

Figure 123. RMON Alarm Table: Add

Path: MIBs → RMON → Alarm/Event		
RMON Alarm Table Information	Index, Interval, Variable, SampleType, Value, StartupAlarm, RisingThreshold, FallingThreshold, RisingEvent, FallingEvent, Owner, Status	
RMON Alarm : Add/Modify Parameters	Index, Interval, Variable, Owner, StartUp Sampling, Threshold Value: Rising/Falling, Rising Event: Activate/Index/Description/Community/Type Falling Event: Activate/Index/Description/Community/Type	

Table 13. RMON Alarm Table

RMON Event

The Event controls work in a similar fashion. Add or modify an Event control and define its parameters by clicking the Add or Modify button, the Event Control pop-up menu appears.

🚯 RMO	N : Alarm&Event	Form : 10.1.1.1	94				<u> </u>
Alarm	Event Log						Sustem Time:
Index	Description	Туре	Community	TimeSent	Owner	Sta	下午 03:28:41
1	Rising Event	log-and-trap	public	0:00:00.00	Owner	vali	
2	Rising Event	log-and-trap	public	0:00:00.00	Owner	vali	
3	Rising Event	log-and-trap	public	0:00:00.00	Owner	vali	
5	Rising Event	log-and-trap	public	0:00:00.00	Owner	vali	
6	Rising Event	log-and-trap	public	0:00:00.00	Owner	vali	6.4.4
7	Rising Event	log-and-trap	public	19 days, 18:21:00.11	Owner	vali	Add
							Delete
							Modify
							Refresh
•						Þ	Exit

Figure 124. RMON Event

🚯 RMON : Aları	n&Event	Form : 10.1.1.194			
Alarm Event	Log				Sustem Time:
logEventIndex	logIndex	logTime	logDescription		下午 03:29:57
7	14614	19 days, 9:41:04.64	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 30		
7	14615	19 days, 9:53:40.62	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 36		
7	14616	19 days, 9:59:35.63	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 19		
7	14617	19 days, 9:59:58.62	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 14		
7	14618	19 days, 10:00:16	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 37		× 1.1
7	14619	19 days, 10:05:33	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 11		Add
7	14620	19 days, 10:07:02	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 19		Dialata
7	14621	19 days, 10:13:15	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 20		Delete
7	14622	19 days, 10:25:49	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 60		Madifu
7	14623	19 days, 10:39:01	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 19		moony
7	14624	19 days, 10:45:23	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 92		Refresh
7	14625	19 days, 10:58:37	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 11		
7	14626	19 days, 11:04:18	.1.3.6.1.2.1.16.1.1.1.4.7 (delta = 59	-1	Exit
17	14007	19 days 11-04-20	1001011011117(dalka_10		

Figure 125. RMON Log

Path: MIBs → RMON → Alarm/Event			
RMON Alarm Event Table	Index, Description, Type, Community, TimeSent, Owner, Status		
Information	LogEventIndex, logIndex, logTime, logDescription		

Table 14. RMON Alarm Event Table

802.1P & 802.1Q

802.1P

802.1P Priority Settings

Use the 802.1P side menus to view and set 802.1P port priority as well as **GMRP** and **GARP** settings. The read-only **Port Capability Form** is accessed as a side menu.

802.1P / 802.1Q (RFC2674) MIBs

1pPriority Group

This group contains the objects for configuring and reporting status of priority-based queuing mechanisms in a bridge. This includes per-port user priority treatment, mapping of user priority in frames into internal traffic classes and outbound user priority and access priority.

1pGarp Group

This group contains the objects for configuring and reporting on operation of the Generic Attribute Registration Protocol (GARP).

1pGmrp Group

This group contains the objects for configuring and reporting on operation of the GARP Multicast Registration Protocol (GMRP).

Dot1qBase Group

This mandatory group contains the objects, which are applicable to all bridges implementing IEEE 802.1Q virtual LANs.

The dot1qTp Group

This group contains objects that control the operation and report the status of transparent bridging. This includes management of the dynamic Filtering Databases for both unicast and multicast forwarding. This group will be implemented by all bridges that perform destination-address filtering.

The dot1qStatic Group

This group contains objects that control static configuration information for transparent bridging. This includes management of the static entries in the Filtering Databases for both unicast and multicast forwarding.

The dot1qVlan Group

This group contains objects that control configuration and report status of the Virtual LANs known to a bridge. This includes management of the statically configured VLANs as well as reporting VLANs discovered by other means e.g. GVRP. It also controls configuration and reports status of per-port objects relating to VLANs and reports traffic statistics. It also provides for management of the VLAN Learning Constraints.

Table 15.

802.1P Basic Configuration

Set the Traffic Class State (true, false) and GMRP Status.

Device Capabilities	4B	Betresh
Traffic Classes State	true	• I I I I I I I I I I I I I I I I I I I
GMRP Status	disabled	Set Set

Figure 126. 802.1P Basic Configuration

Path: MIBs \rightarrow 802.1P \rightarrow Basic Configuration		
802.1P Basic	Read-only	Device Capabilties
Configuration	Set	Traffic Class Status, GMRP Status

Table 16. 802.1P Basic Configuration

Priority Information Form

Choose the appropriate tab to view information listed by port number:

6	User Priorities To Trafi	fic Class	Port Outbound Access Priorities	24
Derault User Phonities of Each Port		or Each Folt	Regenerated User Priorities	Samples
ortNumber	Default serPrioritu	PortNumTrafficPlasses		
oravambor	0	A		
	0	4		Refresh
	Ĩ	4		
	0	4		Set
	0	4		
	0	4		
	0	4		
	0	4		
	0	4		
0	0	4		
1	0	4		
2	0	4		
3	0	4	-	
4	0	4		
5	0	4		
5	U	4		
(Q	0	4	-	-1
o Iort Numbor	0	T Supported Traffic Class	-	-
on number	3	Supported Hame classi	=s Num[1-0] [4	
efault User	Priority (0-71 0	-		

Figure 127. Priority Information Form

Select the port number and type in the appropriate priority values; click Set to effect the change.

155

Path: MIBs \rightarrow 802.1P \rightarrow Priority Information Form					
Default User Priorities of Each Port	Table Information	PortNumber, DefaultUserPriority, PortNumTrafficClasses			
	Set	SupportedTrafficClassesNum, DefaultUserPriority			
Regenerated User	Table Information	PortNumber, UserPriority, RegeneratedUserPriority			
Priorities	Set	UserPriority			
User Priority To Traffic	Table Information	PortNumber, TrafficClassPriority, MappedTrafficClass			
Class	Set	MappedTrafficClass			
Port Outbound Access Priority	Table Information	PortNumber, RegenerateUserPriority			

Table 17. Priority Information Form

Port Capability

The Port Capability window (accessed as a side menu from 802.1P submenu) is read-only and lists Port Capabilities Entry Messages listed by port number.

🚯 Port Capab	ility Form : 10.43.10.8	
PortNumber	dot1dPortCapabilities	
1	05	24
2	05	Samples
3	05	2
4	05	Refresh
5	05	
6	05	
7	05	
8	05	
9	05	
10	05	
11	05	
12	05	
13	05	
14	05 👻	
Get:DISNMP :		



Path: MIBs \rightarrow 802.1P \rightarrow Ports Capability

Table Information

PortNumber, dot1dPortCapabilities

Table 18. Ports Capability

GMRP

The GMRP Form allows you to enable GMRP for a selected port. To enable GMRP for a given port, highlight to select, choose Enable from the pull-down menu and click Set.

Path: MIBs \rightarrow 802.1P \rightarrow GMRP			
GMRP Table Information	PortNumber, Status, GmrpFailed, GmrpLastPduOrign		
Table 40 CMRR Table			

Table 19. GMRP Table

GARP

GARP settings are expressed in Centi-seconds (hundredths of a second) for each port.

GARP Form	: 10.43.10.8			
PortNumber	GARPJoinTime	GARPLeaveTime	GARPLeaveAllTime	24
1	20	60	1000	Camalan
2	20	60	1000	Samples
}	20	60	1000	
k) – j	20	60	1000	Befrech
5	20	60	1000	mencan
i	20	60	1000	0.1
	20	60	1000	Set
l) –	20	60	1000	2
)	20	60	1000	
10	20	60	1000	
1	20	60	1000	
2	20	60		
3	20	60	1000	
4	20	5U 60	1000	
0	20	5U CO	1000	
15	20	6U CO	1000	
/ 0	20	60 CO	1000	
0	20	60	1000	
5	20	60	1000	
20	20 20	60	1000	
л	20	00	1000	
GARP Join Tim	ne (0214	17483647) 20	Centiseconds	
GARP Leave T	lime (0214	7483647) 60	Centiseconds	
	Ul Time (0 214	17483647) 1000	Centiseconds	



Path: MIBs → 802.1P → GARP			
GARP Table Information	PortNumber, GarpJoinTime, GarpLeaveTime, GarpLeaveAllTime		
Set	GarpJoinTime, GarpLeaveTime, GarpLeaveAllTime		

Table 20. GARP Table

802.1Q

802.1Q Ports Information

Configure VLANs settings for the selected device in the VLAN Ports Information side menu.

PortNumber	r PortVLANID	AcceptableFra	ameTypes	IngressFilterin	g GVRPStatus	GVRP		
1	1	admitAll	02/0	false	disabled	0		24
2	1	admitAll		false	disabled	0		Samples
3	1	admitAll		false	disabled	0		
4	1	admitAll		false	disabled	0		
5	1	admitAll		false	disabled	0		Befresh
3	1	admitAll		false	disabled	0		
7	1	admitAll		false	disabled	0	i i i	6.4
3	1	admitAll		false	disabled	0		Set
8		admitAll		false	disabled	0		
10	1	admitAll		false	disabled	0		
11	1	admitAll		false	disabled	0		
12	1	admitAll		false	disabled	0		
13	1	admitAll		false	disabled	0		
14	1	admitAll		false	disabled	0	_	
15	1	admitAll		false	disabled	0		
16	1	admitAll		false	disabled	0		
17	1	admitAll		false	disabled	0		
18	1	admitAll		false	disabled	0	_	
19 •	1	admitAll		false	disabled	0	۲	
Port VLAN	ID 1		Acceptable	Frame Types	admitAll]	
Ingress Filt	ering false	•	GVRP Stati	us	disabled 💌]		

Figure 130. 802.1Q VLAN Port Information Form



Path: MIBs \rightarrow 802.1Q \rightarrow 802.1Q Bridge \rightarrow Ports Information				
VLAN Ports	Table Information	PortNumber, PortVlanID, AcceptableFrameTypes, IngressFiltering, GvrpStatus, GvrpFailedRegistrations, GvrpLastPduOrigin		
Form	Set	PortVlanID, AcceptableFrameTypes, IngressFiltering, GvrpStatus		

Table 21. Ports Information

802.1Q Learning Constraint Table

Set Default VLAN Constraint Value and Default Constraint Type.

To add a new listing to the Constraint Table or Modify and existing one, highlight it and select Status and Type from the pull-down menus. Click the Add/Update button effect the changes.

Path: MIBs \rightarrow 802.1Q \rightarrow 802.1Q Bridge \rightarrow Learning Constraint Table				
l earning	Table Information	ConstraintVlanID, ConstraintSet, Type, Status		
Constraint	Set	DefaultVlanConstraintSet, DefaultVlanConstraintType		
Table	Configure	ConstraintVlanID, Type, ConstraintSet, Status		

Table 22. Learning Constraint Table

802.1Q VLAN

The Basic VLAN Configuration Form presents in two tables to display VLAN Static and VLAN Current information.

U2.1Q VLAN Configure Form : 10.16.79.36	
an Static Lable VLAN Current Table	1
AN ID VI AN Name Editess Ports Eorbidden Editess Ports Untagged Ports	Samples
DEFAULT FFFFFFC0 00000000 FFFFFFC0 4	Refresh
	Set
	Add
	Delete
Next Free Local VLAN Index 4096	
AN Information Egress Ports Forbidden Ports Untagged Ports	
VLAN ID VLAN Name	
Status 🖉	

Figure 131. 802.1Q VLAN

Path: MIBs → 802.1Q → 802.1Q VLAN				
VLAN	Table Information	VLAN ID, VLAN Name, Egress Ports, Forbidden Egress Ports		
Table	Set	VLAN Information, Egress Ports, Forbidden Ports, Untagged Ports		
VLAN Current Table	Table information	VLAN ID, VLAN Name, Egress Ports, Forbidden Egress Ports, Untagged Ports, Status		
	Set	Egress Ports, Untagged Ports		

Table 23. 802.1Q VLAN

802.1Q Forwarding/Filtering

Forwarding and Filtering information is presented in four separate menus. The menus listed here appear as tabs in the Forwarding/Filtering Form.

Path: MIBs \rightarrow 802.1Q \rightarrow Forwarding/Filtering Form					
Unicast Forwarding Info	Table Information	Fdb Id, FdbMacAddress, PortNumber, Status			
Tp Group Destination Forwarded	Table Information	VLAN ID, GroupAddres, EgressPorts, GMRPLearntPorts			
	Configure	EgressPorts, GMRPLearntPorts			
Multcast Forwarding Info	Table information	VLAN ID, AllPorts, StaticPorts, ForbiddenPorts			
	Configure	AllForwardedPorts, AllStaticPorts, AllForbiddenPorts			
Forward Unregistered Info	Table Information	VLAN ID, UnregisteredPorts, Unregistered,StaticPorts			
	Configure	UnregisteredPorts, UnregisteredStaticPorts, UnregisteredForbiddenPorts			

Table 24. Forwarding/Filtering Form

Unicast/Mu nicast Info	ulticast Stat Multicast	ic Filter Ta Info	ble : 10.4.	3.10.8				
ndex Un 000 000	icastAddre 100000000 100000000 1000000000	ss Rece 1 0 12 0 13 0	ivePort	PortsUnic 80000000 40000000 20000000	:astAllowe)))	dToGoTo	Status perm perm	Samples Refresh Set
VID MAC Ad Allow To G	1 dress 000	0000000	1	Statu	us permar	nent	<u> </u>	
№ 1	□ 2 □ 10	□ 3 □ 11	□ 4 □ 12	□ 5 □ 13	□ 6 □ 14	□ 7 □ 15		
F 17	F 18	L 19	r 20	r 10 □ 21	L 22	Г 23	☐ 24	
	Oki Par-	och Door	un at 02.4	10-10下午				

Figure 132. Unicast Multicast Static Filter Table

Path: MIBs \rightarrow 802.1Q \rightarrow Unicast/Multicast Static Filter Table							
Unicast Info	Table Information	UnicastAddress, ReceivePort, PortsUnicastAllowedToGoTo, Status					
	Configure	VID, MAC Address, Status, Allow To Go To Ports (select ports)					
VLAN Current Table	Table information	MAC Address, Receive Port, Egress Port, Forbidden Ports, Status					
	Configure	VID, MAC Address, Status, Egress Ports, Forbidden Ports (select ports)					

Table 25. Unicast/Multicast Static Filter Table

Traffic Statistics

Traffic Statistics

Port traffic statistics for selected devices are viewed by highlighting the chosen port and clicking on the Statistics Info button. A new menu pops up displaying port statistics in line graph form.

Port VLAN Statistics

🕽 802.1Q Po	rts VLAN 9	statistic Fo	orm : 10.1.1.	153			<u>_ ×</u>
PortIndex V	'LANIndex	InFrames	OutFrames	InDiscards	InOverflowFrames	OutOverflowFrames	0 Samples Refresh
✓ I Statistic Data Port Index [Name	Received	/Trasmitted VLAN Ind Value	Frames Erro ex 0	rFrames	e Peak		Times Count 10 V Interval
InFrames OutFrames InDiscards InOverflowFra OutOverflowF PortInOverflo	ames Frames wDiscards	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	6:43:41 PM 6:43:41 PM 6:43:41 PM 6:43:41 PM 6:43:41 PM 6:43:41 PM	☐ 3D Chart Stop Start
et:DISNMP : I	Ok! Reques	tReceive a	it 06:43:41 PN	1.			

Figure 133.

100	1	68
-----	---	----

Layer 3 Utilities

Layer 3 Utilities

To access Layer 3 utilities located under the MIBs proceed as follows: MIBs \rightarrow 802.1Q \rightarrow Layer 3 Utilities.

IP Forwarding

IP Forward (RFC 2096) MIB

The MIB consists of two tables and two global objects.

- 1. The object ipForwardNumber indicates the number of current routes. This is primarily to avoid having to read the table in order to determine this number.
- 2. The ipForwardTable updates the RFC 1213 ipRouteTable to display multipath IP Routes. This is in turn obsoleted by the ipCidrRouteTable.
- 3. The ipCidrRouteTable updates the RFC 1213 ipRouteTable to display multipath IP Routes having the same network number but differing network masks.

Table 26.

CidrRouteNumber						0 Samples
CidrRouteDestIp Route	Mask RouteTyp	peOfService (CidrRouteNe	extHop Cid	rRoutelfIndex	Ti Refresh
d		1				DisableOIDs
CidrRouteDestIp		RouteMask	Ē			
RouteTypeOfService		CidrRouteN	extHop			
CidrRoutelfIndex		RouteType	6	other	*	
Protocol		Age	Γ			
RouteInfo		NextHopAS	Num [
	Metric2	Y	Metric3			
Metric1			-			

Figure134. IP Forwarding

Path: MIBs \rightarrow Layer 3 utilities \rightarrow IP Forwarding							
	Table Information	CidrRouteNumber, CidrRouteDestlp, RouteMask, RouteTypeOfService, CidrRouteNextHop, CidrRouteIndex, RouteType, Protocol, Age, RouteInfo, NextHopASNum, Metric 1, Metric 2, Metric 3, Metric 4, Metric 5, Status					
CIDR Table	Configure	CidrRouteNumber, CidrRouteDestlp, RouteMask, RouteTypeOfService, CidrRouteNextHop, CidrRouteIndex, RouteType, Protocol, Age, RouteInfo, NextHopASNum, Metric 1, Metric 2, Metric 3, Metric 4, Metric 5, Status					
IP Forward	Table information	IpForwardEntriesNumber, ipForwardMask, ipForwardIndex, ipForwardNextHopAS, ipForwardType, IpForwardInfo					
Table	Configure	IpForwardEntriesNumber, ipForwardMask, ipForwardIndex, ipForwardNextHopAS, ipForwardType, IpForwardInfo					

Table 27. IP Forwarding

RIP 2

RIP2 (RFC 1724) MIB

The RIP-2 MIB contains global counters, useful for detecting the deleterious effects of RIP incompatibilities; two "interfaces" tables, which contains interface-specific statistics and configuration information; and an optional "peer" table, containing information that may be helpful in debugging neighbor relationships. Like the protocol itself, this MIB takes great care to preserve compatibility with RIP-1 systems and controls for monitoring and controlling system interactions.

Global Counters

These counters are intended to facilitate debugging quickly changing routes or failing neighbors Implementation of this Group is Optional

This group provides information about active peer relationships intended to assist in debugging. An active peer is a router from which a valid RIP updated has been heard in the last 180 seconds.

Table 28. RIP 2 Form

Path: MIBs \rightarrow Layer 3 utilities \rightarrow RIP 2						
Subnet Information	Read-only Information	GlobalRouteChanges, GlobalQueriesResponse SubnetIPAddress, NumOfTriggeredRIPStates, Status				
internation	Set	Subnet IP Address, Status				
Subnet Configuration	Read-only Information	IP Address				

	Set	AuthenticationType, AuthenticationKey, InterfaceSends, AcceptedRIPVersion, DefaultMetric, Status, InterfaceSourceAddress
Routing Peer Information	Table Information	SrcIpAddress, PeerDomainReceivedPackets, sysUpTimeOfLastUpdate, VersionNumber, RcvBadPackets, RcvBadRoutes

Table 29. RIP 2

OSPF

OSPF (RFC 1850)

OSPF is a powerful routing protocol, equipped with features to handle virtually any configuration requirement that might reasonably be found within an Autonomous System. With this power comes a fair degree of complexity, which the sheer number of objects in the MIB will attest to. Care has therefore been taken, in constructing this MIB, to define default values for virtually every object, to minimize the amount of parameterization required in the typical case. That default configuration is as follows: Given the following assumptions:

- -IP has already been configured
- -The if Table has already been configured
- -if Speed is estimated by the interface drivers
- The OSPF Process automatically discovers all IP
- Interfaces and creates corresponding OSPF Interfaces
- The TOS 0 metrics are autonomously derived from if Speed
- -The OSPF Process automatically creates the Areas required for the Interfaces

The simplest configuration of an OSPF process requires that:

- The OSPF Process is enabled.
- Area Data Structure and Area Stub Metric Table
- The Area Data Structure describes the OSPF Areas that the router participates in. The Area Stub Metric Table describes the metrics advertised into a stub area by the default router(s).

Link State Database and External Link State Database

The Link State Database is provided primarily to provide detailed information for network debugging.

Address Table and Host Tables

The Address Range Table and Host Table are provided to view configured Network Summary and Host Route information.

Interface and Interface Metric Tables

The Interface Table and the Interface Metric Table together describe the various IP interfaces to OSPF. The metrics are placed in separate tables in order to simplify dealing with multiple types of service, and to provide flexibility in the event that the IP TOS definition is changed in the future. A Default Value specification is supplied for the TOS 0 (default) metric.

Virtual Interface Table

Likewise, the Virtual Interface Table describes virtual links to the OSPF Process.

Neighbor and Virtual Neighbor Tables

The Neighbor Table and the Virtual Neighbor Table describe the neighbors to the OSPF Process.

OSPF Traps

OSPF is an event driven routing protocol, where an event can be a change in an OSPF interface's link-level status, the expiration of an OSPF timer or the reception of an OSPF protocol packet. Many of the actions that OSPF takes as a result of these events will result in a change of the routing topology. As routing topologies become large and complex it is often difficult to locate the source of a topology change or unpredicted routing path by polling a large number or routers. Another approach is to notify a network manager of potentially critical OSPF events with SNMP traps.

Tabl	е	30.
------	---	-----

OSPF : 10.43.10.8				_ 🗆 ×
RouterId .		TOS Support	true 💌	
AdministrativeStatus	enabled 💌	NumOforiginatesNewLsas		Refresh
DSPF VersionNum		RxNewLsas		Set
AreaBorderRoterStatus		ExtLsdbLimit[-12147483647]	-1	
ASBorderRouterStatus	true 💌	BitMaskOfMulticast	0	
ExternLsaCount		ExitRiverflowInterval (02147483647)	0	
ExternLsaChecksum		DemandRoutingSupport	true 💌	

Figure 135. OSPF General Information

Path: MIBs \rightarrow Layer 3 utilities \rightarrow OSPF \rightarrow OSPF General					
Read-only	NumOforiginatesLsas, OSPF VersionNum, RxNewLsas, AreaBorderRouterStatus, ExternLsaCount, ExternLsaChecksum				
Set	Routerld, Support Service Type, ASBorderRouterStatus, ExtLsdbLimit, ASBorderRouterStatus, BitMaskOfMulticast, ExitOverflowInterval, DemandRoutingSupport				

Table 31. OSPF General Information
Path: MIBs \rightarrow Layer 3 utilities \rightarrow OSPF \rightarrow OSPF Area Information				
Area Table	Read-only Information	GlobalRouteChanges, GlobalQueriesResponse SubnetIPAddress, NumOfTriggeredRIPStates, Status		
	Set	Areald, Type Area Summary, Area Status, ImportASExternLsa		
Stub Area Table	Read-only Information	Stub Area, Type Of Service		
	Set	Metric, Metric Type, Status		
Area Aggregate	Read-only Information	AggreagateAreaID, AggregateNet, AggregateMask		
lable	Set	AggregateEffect, LsdbType, AggregateStatus		
Area Range Table	AreaRangeAreald, AreaRangeNet, Set AreaRangeMask, AreaRangeEffect, AreaRangeStatus			

Table 32. OSPF Area Information

Path: MIBs \rightarrow Layer 3 utilities \rightarrow OSPF \rightarrow OSPF Lsdb Form			
Link State Database	Table Information	LsdbAreald, Type, LinkStatID, RouterID, SequenceNum, Age, Checksum, Advertisement	
Ext Link State Database	Table Information	LsdbType, LinkStateID, RouterID, SequenceNum, Age, Checksum, Advertisement	

Table 33. OSPF Lsdb Form

OSPF Host Table

Path: MIBs \rightarrow Layer 3 utilities \rightarrow OSPF \rightarrow OSPF Host Table Form		
Table Information	HostIpAddress, TypeOfService, Metric, Status, HostAreaID	
Set	HostIpAddress, TypeOfService, Metric, Status	

Table 34. OSPF Host Table Form

Path: MIBs \rightarrow Layer 3 utilities \rightarrow OSPF \rightarrow OSPF Interface				
Interface Table	Table Read-only Information	IfIpAddress, AddressLessInterface		
	Set	Type, Priority, Status, ArealdOfInterfaceConnected, TransitDelay, AuthenticationKey, RetransInterval, IfMulticastForwarding, HelpInterval, Administrative Status, RouterDeadInterval, IfDemand, PollInterval, Authentication Type		
Interface Metric Table	Table/Read-only Information	IpAddress, AddressLessInterface, TypeOfService		
	Set	MetricValue, Status		
Virtual Interface Table	Table Read-only Information	Areald, NeighborID		
	Set	TransitDelay, Hellointerval, RetransInterval, RtrDeadInterval,		

Table 35. OSPF Interface

OSPF Neighbor Form

	10 0000					0
pAddress	AddressLessIndex	NbrRouterId 0	ptions Pi	iority Relatior	nshipState	Samples
						Refresh
						Set
						DisableOIDs
I		1			Þ	
1 xAddress			Priority [(0-255) [1		

Figure 136. OSPF Neighbor Form

Path: MIBs \rightarrow Layer 3 utilities \rightarrow OSPF \rightarrow OSPF Neighbor			
Neighbor	Table/Read-only Information	IpAddress, AddressLessIndex	
Table	Set	Priority, Status	

Virtual Neighbor Table	Table Information	TransitAreaID, NbrRouterId, VirtualNbrIpAddr, Options, State, Events, RetransmissionQueueLen, HelloSuppressed
------------------------------	-------------------	---

Table 36. OSPF Neighbor

Path: MIBs \rightarrow Layer 3 utilities \rightarrow OSPF \rightarrow OSPF Trap Form		
Table Information	OspfSetTrap, ConfigErrorType, PacketType, PacketSrc	
OSPF Trap Events		

Table 37. OSPF Trap Form

IP Mroute

IP MRoute (RFC 2932) MIB

This MIB module contains one scalar and five tables. The tables are:

- 6. The IP Multicast Route Table containing multicast routing information for IP data grams sent by particular sources to the IP multicast groups known to a router.
- 7. The IP Multicast Routing Next Hop Table containing information on the next-hops for the routing IP multicast data grams. Each entry is one of a list of next-hops on outgoing interfaces for particular sources sending to a particular multicast group address.
- 8. The IP Multicast Routing Interface Table containing multicast routing information specific to interfaces.
- 9. The IP Multicast Scope Boundary Table containing the boundaries configured for multicast scopes.
- 10. The IP Multicast Scope Name Table containing human-readable names of multicast scope.

Table 38.

PMRouteForm : 10.43.10.8	
IPM Route Table Next Hop Table Interface Table BoundaryEntry Table	
MulticastRouteEnable enabled Set	0 Samples
Group Source SourceMask UpstreamNeighbor InlfIndex UpTime ExpiryTim	Refresh
	StatisticalChart

Figure 137. IPMroute Form

Path: MIBs \rightarrow Layer 3 utilities \rightarrow IP Mroute			
IPMRoute Table	Table Information	Group, Source, Source Mask, Upstream Neighbor, ReceivedIpDatagramsSource, UpTime, ExpiryTime, RoutePkts, DiferentSourcePackets, NumOfOctetsInIPDatagrams, RouterProtocol	
	Set	MulticastRouteEnable	

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Next Hop Table	Table Information	NextHopGroup, NextHopSource, NextHopSoureMask, NextHopIndex, NextHopAddress, State, UpTime, ExpiryTime, ClosestMemeberHops, Protocol, ForwardPkts	
Interface Table	Table Read-only Information	Index	
	Set	TTL Threshold, Interface Protocol	
BoundaryEntry Table	Table Read-only Information	IfIndex, Address, AddressMask, Status	
	Set	Status	

Table 39. IP Mroute

DVMRP

DVMRP

DVMRP is an "interior gateway protocol"; suitable for use within an autonomous system, but not between different autonomous systems. DVMRP is not currently developed for use in routing non-multicast data grams, so a router that routes both multicast and unicast data grams must run two separate routing processes. DVMRP is designed to be easily extensible and could be extended to route unicast data grams.

DVMRP was developed to experiment with the algorithms in RIP was used as the starting point for the development because an implementation was available and distance vector algorithms are simple, as compared to link-state algorithms. In addition, to allow experiments to traverse networks that do not support multicasting, a mechanism called "tunneling" was developed.

The multicast-forwarding algorithm requires the building of trees based on routing information. This tree building needs more state information than RIP is designed to provide, so DVMRP is much more complicated in some places than RIP. A link-state algorithm, which already maintains much of the state needed, might prove a better basis for Internet multicasting routing and forwarding. DVMRP differs from RIP in one very important way. RIP thinks in terms of routing and forwarding data grams to a particular destination. The purpose of DVMRP is to keep track of the return paths to the source of multicast data grams. To make explanation of DVMRP more consistent with RIP, the word "destination" is used instead of the more proper "source", but the reader must remember that data grams are not forwarded to these destinations, but originate from them.

Table 40.

Route Table	NextHop	Alter Net Table	
General Info Table	Interface Table	DVMRP Neighbor	1 Sample
DVMRPVersion	Version 3		Refresh
DVMRPGenerationId	0		
NumberOfRoutes	0		
ReachableRoutes	0		

Figure 138. DVMRP

Path: MIBs \rightarrow Layer 3 utilities \rightarrow DVMRP				
General Info Table	Read-only Information	DVMRPVersion, DVMRPGenerationId, NumberOfRoutes, ReachableRoutes		

Table 41. DVMRP

PIM

	PIM MIB
This MI	B module contains one scalar and eight tables.
The tab	les contained in this MIB are:
1.	The PIM Interface Table contains one row for each of the router's PIM interfaces.
2.	The PIM Neighbor Table contains one row for each of the router's PIM neighbors.
3.	The PIM IP Multicast Route Table contains one row for each multicast routing entry whose
	incoming interface is running PIM.
4.	The PIM Next Hop Table which contains one row for each outgoing interface list entry in the
	multicast routing table whose interface is running PIM, and whose state is pruned.
5.	The (deprecated) PIM RP Table contains the PIM (version 1) information for IP multicast
	groups which is common to all RPs of a group.
6.	The PIM RP-Set Table contains the PIM (version 2) information for sets of candidate
	Rendezvous Points (RPs) for IP multicast group addresses with particular address prefixes.
7.	The PIM Candidate-RP Table contains the IP multicast groups for which the local router is to
	advertise itself as a Candidate-RP. If this table is empty, then the local router advertises itself
	as a Candidate-RP for all groups.
8.	The PIM Component Table contains one row for each of the PIM domains to which the router
	is connected.

Table 42.

PimJo	inPruneInterval	(Sec) 60			Set			Samples
ndex (IPAddress	NetMask	Mode	DesignedRouter	HelloInterval	Status	J	Set
6	10.16.79.36	255.0.0.0	dense	10.16.79.36	30	notInServi	ice 6	Refresh
								DisableOIDs
								DisableOID:
								DisableOIDs
1							×	DisableOIDs
 Index		256		н	elloInterval(1-65	i <u>535)</u>	×	DisableOIDs
 Index PAddre	355	256	5.79.36	H	lelloInterval(1-65	535)	×	DisableOIDs
 Index PAddre	958 ik	256 10.16 255.0	5.79.36	H	lelloInterval(1-65 30	:535)	Þ	DisableOIDs
 Index PAddre etMas pinPru	ess sk neinterval (Sec	256 10.16 255.0	3.79.36 1.0.0	H	iellointerval(1-65 30 tode dense tatus notinServ	i535) T	×	DisableOIDs

Figure 139. PIM

Path: MIBs \rightarrow Layer 3 utilities \rightarrow PIM \rightarrow PIM Info			
RP Table	Table Information	RPGroupAddress, RPAddress, RPState, RPStateTimer, RPLastChange	
Set RPRowStatus		RPRowStatus	
RpSetTable	Table Information	ble RPSetGorupAddress, RPSetGrouMask, ion RPSetAddress, RPSetHoldTime, RPSetExpiryTime	
CandidateR PEntrvTabl	Table Information	CandidateRPGroupAddress, CandidateRPGroupMask	
e Set		RowStatus	

Table 43. PIM Information

Path: MIBs \rightarrow Layer 3 utilities \rightarrow PIM \rightarrow Rendezvous Points Info			
PIM Interface	Table/Read-only Information	IPAddress, NetMask	
Table	Set	PimJoinPruneInterval, IfIndex, JoinPruneInterval, Candidate Bootstrap Router, HelloInterval, Mode, Status	
Neighbor Table	Table Table Information NeighborAddress, IfIndex, UpTime, ExpiryTime Mode Mode NeighborAddress, IfIndex, UpTime, ExpiryTime		
PIM Component Information		ComponentIndex	
Info	Set	Status, CRPHoldTime	

Table 44. Rendezvous Points Information

SNMPv3 Configuration

Use the SNMPv3 menu to configure SNMPv3 security settings and new user setup. Choose SNMPv1, SNMPv2 or SNMPv3 as appropriate in the SNMP Version entry field.

SNMP V3 Configuration		
IP: 10.1.1.194 Port: 161	SNMP Protocol Version SNMPv1 SNMPv2c SNMPv3	
Security Name: noAuthUser	Context Engine ID: 010000a1d4	<u>S</u> et
Auth Password: AuthPassword	Priv Password: PrivPassword	<u> </u>
Auth Protocol: NONE	Priv Protocol: NONE	MPD
Context Name: public	Security Level: NaAuthNoPriv	TARGET
Write Community String : private	<u>Iime-out:</u> 2 <u>B</u> etries: 2	<u>U</u> SM
	Use buttons to access pop-up menus	<u>V</u> ACM E <u>x</u> it
		,/,/,/,/,/,//,//,_

Figure 140. SNMPv3 – SNMP Protocol Preferences

Path: MIBs \rightarrow SNMPv3

Table/Read-only Information	System Description, System Object ID, Sytem Uptime, System Contact, System Name, System Location
User Defined Parameters	IP Address, Port Number, Security Name, Context Engine ID, Auth Password, Priv Password, Auth Protocol, Priv Protocol, Contact Name, Security Level, Write Community String, Time-out, Retries

Table 45. SNMPv3 – SNMP Protocol Preferences

SNMP	Protocol	Settings	Pop-up	Menus
------	----------	----------	--------	-------

🚯 MPD (RFC2572)			
UnknownSecurityModels	InvalidMsgs	UnknownPDUHandlers	
Note: SNMP protocol preferen	ces pop-up menus	are	
SNMP Configuration menu. Use	s on the right sid these menus exa c	ctly as	Refresh
menus useu in previous example.	5.		Set
-			 Close
SNMP : SNMP request timed	out!		1.



Path: MIBs → SNMPv3 (click MPD button)

MPD (RFC 2572) Table

SecurityModels, InvalidMsgs, UnknownPDUHandlers

Table 46. MPD (RFC 2572) SNMP Parameter Pop-up Menu

Path: MIBs \rightarrow SNMPv3 (click Target button)		
AddEntry_Table	AddrName, AddrTDomain, AddrTAddress, AddrTimeout, AddrRetryCount, AddrTagList, AddrParams, AddrStorageType, AddrRowStatus	
ParamsEntry_Table ParamsSecurityName, ParamsRowStatus ParamsStorageType, ParamsRowStatus		

Table 47. Target (RFC 2573) SNMP Parameter Pop-up Menu

Path: MIBs → SNMPv3 (click USM button)			
Stats Table	UnsupportedSecLevels, NotInTimeWindows, UnknownUserNames, UnknownEngineIDs, WrongDigests,		
-	DecryptionErrors		
UserEntry_Table EngineID, Name, SecurityName, CloneForm, AuthProtocol AuthKeyChange, OwnAuthKeyChange, PrivChange, PrivKeyChange, OwnPrivKeyChange, Public, StorageType Status			
Table 48, USM (RFC 2574) SNMP Parameter Pop-up Menu			

Path: MIBs \rightarrow SNMPv3 (click VACM button)					
ContextEntry_Table	vacmContextEntryName				
SecurityToGroupEntry_Table	SecurityName, SecurityModel, GroupName, SecurityToGroupStorageType, SecurityToGroupStatus				
Entry_Table	ContextPrefix, SecurityLevel, SecurityModel, ContextName, ReadViewName, WriteViewName, NotifyViewName, StroageType, Status				

Table 49. VACM (RFC 2575) SNMP Parameter Pop-up Menu

INTERNET TOOLS

This chapter explains items in the "Tools" drop-down menu in the order of the descending menu items.

DIAP

D-View includes standard network management utilities such as TFTP and Ping Test user convenience. D-View 5. 1 also includes D-Link's proprietary administration utility DIAP. DIAP allows the user to have limited administrative access to D-Link broadband devices such as ADSL and ISDN routers, ADSL modems and Wireless routers. This tool can be used to assign IP settings to such devices. DIAP will automatically discover all DIAP enabled devices and display IP settings and MAC information in a separate window.



🔥 DIAP Configura	ition			_ 🗆 🗵
MAC Address 00FFC8000001 00055D000001 0050BA02BC0B 0050BA02BBFB 0050BA0D308C 0024E4D7F55F 00FF50DB40FF	Module Name DWL-6000 DWL-6000 DI-1162 DI-1162 DI-1162 DWL-6000 DWL-6000	IP Address 10.1.40.88 10.47.76.5 10.254.254.254 10.21.97.34 10.47.92.1 10.48.22.133 10.48.22.53	NetMask 255.0.0.0 255.255.255.0 255.0.0.0 255.0.0.0 255.0.0.0 255.0.0.0 255.0.0.0	Discover Set Close
MAC Address		IP Address NetMask Password		

Figure 142. DIAP

TFTP

The Trivial File Transfer Protocol server can be activated under the Tools heading of the Main Menu. The TFTP server is active upon launch and can transfer files located on the host system to any SNMP device. File transfer information is displayed in the TFTP Server window. This information includes the IP address of the file recipient, the type and name of the file transferred and the status of the transfer. Error messages appear in the bottom field display.

🚯 D-Link	CTFTP Server					
Name Open	e D-View Manag ed 下午 04:09:11	er	IP Address Action Session	10.25.7.100 0		0 Total
Index	Action IP	Туре	TFTP File Name	e	Status	TOCAL
						Clear
						Close
•	1				F	
						About

Figure 143. TFTP Server

BOOTP Server

Use the BOOTP server window to set up BOOTP service for BOOTP enabled devices. This utility is similar to the TFTP server except it does not require that the host system or D-View be running at the time of the transfer. D-View can assign other servers on the network to act as BOOTP servers or it may use the host system as the server.

🚯 BOOTP TFTP Serve	r				
			a 1	Receive	ed Message
IV Enable Server _		Modify Save	Liose	Count	MAC Address
Client MAC Address	Client IP	TFTP IP	TFTP File Name		
•		1	•		<u> </u>

Figure 144. BOOTP Server

PING Test

The PING Test utility uses this standard test for connectivity. This tests connectivity from the D-View host to the tested device. Type the IP address of the device you want to Ping, You may also define the Data Length, Interval, Time Out and Iteration.

🚯 PING			
IP Addr Interval (110	ress 2 Time Ou) 2 (110	Data Length 0 (0256) tt 5 Iteration 1 (199999)	Start Close
No.	IP Address	Status	

Figure 145. PING Test



ADVANCED MANAGEMENT

This chapter explains how to use **trap management** functions found under the System dropdown menu. It is organized in the order of the descending menu items. It explains how to access the Trap Editor, how to edit a TRF file, how to control and view the trap log, and how to change SMTP trap settings.

This chapter then explains how to add plug-in utilities.

The end of this chapter describes how to use the Account administration utilities to monitor and analyze client devices and maintain client records. It is organized in the order of the descending menu items under the Account drop-down menu.

Trap Management

Trap Editor

Use the Trap Editor to modify MIB object names for modules and devices on the network. Select the device/module from the list in the top panel. MIB objects are indexed according to class. Click on the index number to view that object class group. To change the alias name of a single object, double click it or highlight it and click on the Modify icon just above the object list. Use the Change Alias Name pop up window to modify the object alias name.

🞒 Trap Editor							
(7)							
Module	OID						
DFE-2600 DHS-102D	.iso.3.6.1.4.1.171.10.8.1 .iso.3.6.1.4.1.171.11.40.1.2						
Index	<u> </u>						
2	Object	Туре	Alias Name				
3	stkConfigGrpGrpIndex		group000				
5	stkConfigGrpType	INTEGER	group type				
6 —	stkConfigGrpStatus	INTEGER	group status				
Description :			Option Data	Value			
The trap is sent	whenever a group is added or r	removed		- 1			
from the stackat	ole hub						
Messages			,				

Figure 146.

Clear Trap Alerts

To clear the trap alerts from the scrolling message panel (Trap tab) at the bottom of the main menu, under System go to Trap Management and left click on Clear.

Sort Trap Alerts

To change the order of presentation of the trap alerts, under System go to Trap Management then to Sort By and left click on your choice of Time (default), Received From or Trap Message (type).

Trap Type Properties

Trap alerts can be color coded by type to make them easier to distinguish in the list. Open the Trap Type Properties pop-up window to edit the font and background color of the most urgent trap types.

	Font Color		Background Color
Cold Start			
Warm Start]	
Link Down]	
Link UP			
Auth.Failure			
Neighbor Loss]	
Enterprise	1		

Figure 147.

Trap View Filter Settings

Use the Trap View Filter Setting pop up window to limit both the device from which trap alerts are listed and the type of traps listed. Type the IP address of any device you want to designate for trap viewing and click the Add button. Highlight a device in the list and click Remove to remove that device from the trap list.

The OIDs tab allows you to limit traps to specific OIDs. Specify OIDs to view by typing in the OID and clicking Add. To remove an OID from the list, highlight it and click Remove.

🞒 Trap View Filter Setting	×
IP Address OIDs	
IP Address	
New IP Address	
Add	
Filtered IP Address	
Remove	
OK Cancel	

Figure 148.

How to Edit a TRF File



Figure 149.

Note: Before editing a TRF file, you need to compile the primary module's MIB files and view their trap entires, type, and value to know how to edit the module's TRF file.

<Install Directory>5.1ConfTrap gives the path for a TRF file. TRF files that are .txt files are composed with the following syntax and parameters:

1. TRAP_MODULE < Module Name>

At the beginning of the TRF file, define which device is associated with the file. The <Module Name> parameter is the device name.

2. OBJECT_ID {<Module's OID>}

Define this device's OID number. <Module's OID> parameter is this device's OID number.

3. INSTANCE <Index>

Define the trap group index number of this device. <Index> is the trap group number of this device.

4. OBJECT {<trap's original name>,<trap type>,<trap's alias name>,.....}

Define trap entry's name, trap data type and its alias name. <Trap's original name> is the trap entry name, <trap type> is this trap's data type, and <trap's alias name> is this trap's entry alias name.

5. SYNTAX {<option name>,<option value>.....}

Define trap entry's option value, if the trap has option value. <Option name> is this trap entry's option name; <option value> is the associated value.

6. **DESCRIPTION** {<description>}

<description> gives a definition of the MIB group.

Trap Log

To turn the trap log on or off, or to view the log, go to System \rightarrow Trap Management \rightarrow Log select: Log On, Log Off or View Log.



Figure150. Trap Log File

SMTP Setting Form

Use the SMTP Setting form to enable email alerts to be sent to the network administrator. Type the SMTP server and domain name, and Port number used, choose Simple Login and provide the account and password information if you prefer to use authentication, otherwise select None. Mail Sender Name is the name that appears as the sender in the email summary. Supply a sender and

receiver address, and you can option to send a CC to one other email account. Use the Mail Test button to test if all information has been correctly entered and the system is functioning.

Use the Tra	p Mail	Setting	Form	to	specify	the	type	of	alert	sent	and	how	frequently	mail	alerts
should be se	ent.														
												_			

Trap Mail SMTP Setting					
SMTP Setting					
SMTP Server	smtpserver.comapny.com				
Po <u>r</u> t	25				
<u>T</u> ype:	Simple Login 💌				
Sender Account	111111				
Sender Password	*****				
Mail Sender Name	client company network				
Sender Mail Address	client@company.com				
- Mail Baceiver					
Heceiver Mail Address	admin@company.com				
Carbon Copy Recipient	admin1@company.com				
Set	Close Mail Test				

Figure 151. Trap Mail SMTP Settings Form

Trap Mail Settings Forms

Use the IP Address tab specify the device and alarm. The Alarm Level pull-down menu has standard alarms to choose from. Type the message that accompanies the mail alert in Alarm Message.

The OID tab is used for proprietary or other objects used to trigger the email alert. Add and remove items for email alerts the same as with other menus.

ap Mail Settin PAddress 0	ଞ IID Alarm M	ail Interval	د
IP Address Alarm Level Alarm Messag	Cold Start		Add
IP Address 10.44.46.1	Alarm Level Cold Start	Alarm Message TrapMsg1	Remove

Figure 152. Trap Mail Setting Forms

Alarm Mail Interval

Use the Alarm Mail Interval menu tab to specify the frequency with which email alarms are sent. Alarm mail intervals may be specified using the Alarm Interval to specify the number of minutes between emails, or use the Alarm Time to specify times when emails are sent daily. Alarm mail intervals can be set up using both definitions if desired. Alarm Time asks you to specify the hour (HH) and minute (MM) using 24-hour military time.

Trap Mail Setting	×
IP Address OID Alarm Mail Interval Alarm Interval Image: Constraint of the second seco	
Alarm Time	
I Alarm Time HH MM Send trap mail at ☐ : ☐ daily	[bbA
Hour Minute	
14 00	Hemove
OK Cancel	

Figure 153. Alarm Mail Interval
Example: Receiving alarm/trap messages by e-mail

Step 1: Set the SMTP settings

🚯 D-View 5.1	A REAL PROPERTY OF THE OWNER WATER AND ADDRESS OF THE OWNER WATER ADDRESS OF THE OWNER ADDRESS	
System View Edit MIBs Io	ols Account ∭indow Help	
Discover	User Define	
<u>All Basic Information</u>		
Repolling Configuration		
Community String Configure		
Save To Database	-	
_ Clear Database		
Tran Management	Tran Editor	
Trob LucaseBourser	Clear	
Exit	Sort By +	
	Tran Time Pronerties	
	Trap View Filter Setting	
	Fog	
	Trap Mail SMTP Setting	
	Trap Mail Setting	
Massagas J Turne J]	
messages 119b2		
1	ſ	

Figure 154.

Step 2: After settings the settings you can use "Mail Test" to test whether the settings are correct.

Trap Mail SMTP Settin	g 🔀	
SMTP Setting		
SMTP Server	smtpserver.comapny.com	
Po <u>r</u> t	25	
<u>Т</u> уре:	Simple Login	
Sender Account	111111	
Sender Password	******	
Mail Sender Name	client company network	
Sender Mail Address	ess client@company.com	
Mail Receiver		
Receiver Mail Address	admin@company.com	
Carbon Copy Recipient	admin1@company.com	
Set	Close Mail Test	

Figure 155.

Step 3

🚱 D-View 5.1		<u>_ 0 ×</u>
System Yiew Edit MIBs Too	ls <u>A</u> ccount <u>W</u> indow <u>H</u> elp	
Discover	User Define	
<u>All Basic Information</u>	- OT : 01	
<u>Repolling</u> Configuration		
Community String Configure		
<u>S</u> ave To Database		
<u>C</u> lear Database		
<u>T</u> rap Management	Irap Editor	
Exit	Clear	
2.0.	Sort By	
	Trap Type Properties	
	Trap View Filter Setting	
	Log ·	
	Trap Mail SMTP Setting	
	Trap <u>M</u> ail Setting	
Messages Traps		
]		

Figure 156.

Irap Mail Settin, IP Address 0	3 ID Alarm M	ail Interval		×
IP Address Alarm Level Alarm Messag	Cold Start		1	 Add
IP Address 10.44.67.1	Alarm Level Cold Start	Alarm Message Cold		Remove
		ОК	Cancel	

Step 4: Set alarm time, alarm interval and conditions for sending trap mail.

Figure 157.

rap Mail Setting IP Address OID Alarm Mai OID IP Address Alarm Message	il Interval		∠
OID 1.3.6.1.4.1.171.10.36.1.11	IP Address 10.33.28.1	Alarm Message TrapMsg1	Remove
	ОК	Cancel	

Figure 158.

Trap Mail Setting	×
IP Address OID Alarm Mail Interval Alarm Interval ▼ Alarm Interval Send trap mail every 60 minutes Alarm Time	
I Alarm Time HH MM Send trap mail at □ : □ daily	[Add]
Hour Minute 12 00 14 00	Remove
OK Cancel	

Figure 159.

Adding Plug-In Utilities

You can develop execution files to plug into the D-View platform

How to install self-developed device SNMP module:

SNMP Module execution files must have four parameters:

/NdeviceModuleName /IIPAddress /RreadCommunityString /WwriteCommunity String

"/N," "/I,""/R,""/W" respectively stand for Module Name, IP Address, Write Community String, Read Community String.

Re-install Windows Registry and set up as follows:

Execute Regedit.

Run	? ×
<u> </u>	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:	regedit
	OK Cancel <u>B</u> rowse

Figure 160.

Under **HKEY_LOCAL_MACHINE→SOFTWARE→D-Link→Modules** there are four data folders. Enter data into these four data folders as below:

1. **ExePath:** Record SNMP Device Module execution file with Device OID as Key. Select and then right-click with mouse on newly added words value. At the value name input Device OID. Input execution file name. Add /N before the execution file name.

🎲 Registry Editor			
<u>R</u> egistry <u>E</u> dit <u>V</u> iew <u>F</u> avorites <u>H</u> elp			
SOFTWARE	Name	Туре	Data
🗄 💼 ACD Systems	(Default)	REG_SZ	(value not set)
E Adobe	a)1.3.6.1.4.1.171.10.23.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DGS-3208\DG.
I ⊕ — Altiris	a)1.3.6.1.4.1.171.10.24.1.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3225G\D.
Analog Devices	a)1.3.6.1.4.1.171.10.25.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3624\DE.
	a)1.3.6.1.4.1.171.10.28.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-6000\DE.
E → Borland	a) 1.3.6.1.4.1.171.10.36.1.11	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3226\DE.
	ab 1.3.6.1.4.1.410.1.1.2.1.0	REG SZ	C:\Program Files\D-Link\D-View\Modules\WirelessAP\W
		-	
E Compag			
D-Link			
🗄 💼 D-Link Mib Browser			
🗄 🛅 D-Link Mib Compiler			
📄 💼 Modules 📃			
HelpPath			
IconPath			
ModuleInfo			
SNMP SOLUTIONS			
			1
My Computer\HKEY_LOCAL_MACHINE\SOFT\	WARE\D-Link\Modules\ExePath		

Figure 161.

Edit String	<u>? ×</u>
Value <u>n</u> ame:	
1.3.6.1.4.1.171.10.23.2.1	
⊻alue data:	
rogram Files\D-Link\D-View\Modules\	DGS-3208\DGS3208 /NDGS3208
	OK Cancel



2. **HelpPath:** Record Help file location using Device OID as Key. Select and right click to added words value. At name value input Device OID. Under data value input Help file location and full path name.

🎲 Registry Editor			
<u>R</u> egistry <u>E</u> dit <u>V</u> iew <u>F</u> avorites <u>H</u> elp			
SOFTWARE	Name	Туре	Data
ACD Systems	(Default)	REG_SZ	(value not set)
	at 1.3.6.1.4.1.171.10.23.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DG5-3208\DG.
I III Altiris	at 1.3.6.1.4.1.171.10.24.1.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3225G\D.
H H Analog Devices	at 1.3.6.1.4.1.171.10.25.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3624\DE.
	at 1.3.6.1.4.1.171.10.28.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-6000\DE.
	at 1.3.6.1.4.1.171.10.36.1.11	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3226\DE.
	at 1.3.6.1.4.1.410.1.1.2.1.0	REG_SZ	C:\Program Files\D-Link\D-View\Modules\WirelessAP\A.
Ė D-Link			
🕀 💼 D-Link Mib Browser			
🗄 💼 D-Link Mib Compiler			
🕀 🧰 DView5.1			
ExePath			
HelpPath			
IconPath			
E → Logitech			
	•		
My Computer\HKEY_LOCAL_MACHINE\SOFT	///////Wodules\HelpPath		

Figure 163.



Edit String	?×
Value <u>n</u> ame:	
1.3.6.1.4.1.171.10.23.2.1	
<u>V</u> alue data:	
C:\Program Files\D-Link\D-View\Modules\DGS-3208\DGS3208.hlp	
OK Canc	el



3. **Icon Path**: Record the position of icons used using the Device OID as Key. Select and right click on mouse on newly added words value. Under name value input Device OID. Under data value input Icon file location and full path name.

Note: Please make sure you have both the .ico file and the .bmp file of the same picture. For example, you must have dgs3208.ico and dgs3208.bmp.

🕼 Registry Editor			
<u>R</u> egistry <u>E</u> dit <u>V</u> iew <u>F</u> avorites <u>H</u> elp			
- SOFTWARE	Name	Туре	Data
ACD Systems	ab)(Default)	REG_SZ	(value not set)
E dobe	at 1.3.6.1.4.1.171.10.23.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DGS-3208\Mo.
I III Altiris	at 1.3.6.1.4.1.171.10.24.1.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3225G\M.
Analog Devices	at 1.3.6.1.4.1.171.10.25.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3624\Mo.
	at 1.3.6.1.4.1.171.10.28.2.1	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-6000\Mo.
	at 1.3.6.1.4.1.171.10.36.1.11	REG_SZ	C:\Program Files\D-Link\D-View\Modules\DES-3226\Mo.
	at 1.3.6.1.4.1.410.1.1.2.1.0	REG_SZ	C:\Program Files\D-Link\D-View\Modules\WirelessAP\M.
	·		
Compag Computer Corporation			
📄 🧰 D-Link			
🗄 📄 D-Link Mib Browser			
🕀 💼 D-Link Mib Compiler			
🕀 🧰 DView5.1			
🕀 💼 D-View5.1			
📄 🧰 Modules 📃			
ExePath			
HelpPath			
IconPath			
ModuleInfo			
SNMP SOLUTIONS			
			P
My Computer\HKEY_LOCAL_MACHINE\SOFT\	WARE\D-Link\Modules\IconPath		1.

Figure 165.

Edit String ? 🗙
Value <u>n</u> ame:
1.3.6.1.4.1.171.10.23.2.1
<u>V</u> alue data:
ogram Files\D-Link\D-View\Modules\DGS-3208\ModuleI.con\dgs3208.ico
OK Cancel



4. **Module Info**: Record utility related information with OID of Device as Key. Select and right-click on mouse for newly added words value. Under name value input Device OID. Under data value there are four values separated by commas: Device Role, Module Name, Home page, Company Name.



🍻 Registry Editor			
<u>R</u> egistry <u>E</u> dit <u>V</u> iew <u>F</u> avorites <u>H</u> elp			
- SOFTWARE	Name	Туре	Data
ACD Systems	(Default)	REG_SZ	(value not set)
	1.3.6.1.4.1.171.10.23.2.1	REG_SZ	Switch;DGS3208;www.DLink.com.tw;D-Link;
	a)1.3.6.1.4.1.171.10.24.1.1	REG_SZ	Switch;DES3225G;www.DLink.com.tw;D-Link;
Analog Devices	a)1.3.6.1.4.1.171.10.25.2.1	REG_SZ	Switch;DES3624;www.DLink.com.tw;D-Link;
Aveo	a)1.3.6.1.4.1.171.10.28.2.1	REG_SZ	Switch;DES6000;www.DLink.com.tw;D-Link;
	a)1.3.6.1.4.1.171.10.36.1.11	REG_SZ	Switch;DES3226;www.DLink.com.tw;D-Link;
	a)1.3.6.1.4.1.410.1.1.2.1.0	REG_SZ	Switch;AP;www.DLink.com.tw;D-Link;
	-		
E Compag Computer Corporation			
🗄 💼 Corel			
🚊 💼 D-Link			
🗄 💼 D-Link Mib Browser			
🗄 📄 D-Link Mib Compiler			
E DView5.1			
ExePath			
SIMP SOLUTIONS			
🗄 💼 Kodak			
🗄 💼 Logitech 📃 👻			
	•		• •
My Computer\HKEY_LOCAL_MACHINE\SOFT	WARE\D-Link\Modules\ModuleInfo		1

Figure 167.

Edit String ? 🗙
Value <u>n</u> ame:
1.3.6.1.4.1.171.10.23.2.1
⊻alue data:
Switch;DGS3208;www.DLink.com.tw;D-Link;
OK Cancel



Install common tools and plug-in to menu item.

Step 1: Type /DLINK_INSTALL_PATH?Conf/Resources/NewMenu.ini. For example, install DIAP2 pathway under Tools Menu.



Figure 169.

Application Name: execution file name

Application Path: execution file pathway

Parameters: Execution file parameters

🚺 D-View 5.1 - [ListViewForm-Man	coni]					_0	X
🚯 System Yiew Edit MIBs 🗍	<u>T</u> ools <u>A</u> ccount <u>W</u> i	indow <u>H</u> elp				- 8	×
	MIB Tools DIAP IFTP Server	7					
Ethernet	<u>B</u> OOTP <u>P</u> ING				SNMP	ES- 1300SX	
CompanyGroup General CompanyGroup General CompanyGroup General HP Microsoft Microsoft Marconi 10.1.1.152 10.1.1.195 	T <u>E</u> LNET DIPA2	10.1.1.195	10.1.1.196	10.10.11.120	10.15.1.32	10.16.79.133	1(
Messages Traps							<u> </u>

Step2: execution outcome

Figure 170.

Account

Account is a simple account management system to keep track of the bills. It has the following new features:

- Each client is assigned an account with personal authorization IP Address. Each IP Address will link to one Device Port. The system can verify and track devices in this manner.
- Setting statement schedule allows flexibility. Different groups of clients can generate statements at difference schedules.
- Detects abnormal usage for clients
- Assigns custom taxes to service charges (weekly, monthly, every three months, biannually, annually)
- Credit adjust function allows you to insert credit records manually and give credit for wrong or misdialed work.
- Late fee assessment function allows you to assign late payment charges with fixed charge or a percentage of late pay amount.
- Real-time reporting, including current client summary, credit limit status report, payment report, and the like.



Figure 171.

The Account system can bundle customer equipment just like the telephone system. As with telephone numbers, you can manage customers by means of equipment management.

The menus available are the following:

- Client Update
- Client Record Query
- Client Online Query
- Client Abnormal Situation
- Device Utilization
- Pay Rate Configuration



Figure 172. Creating a Client Entry

In the previous figure we establish a new customer entry by setting up the basic information. We charge users a service charge, place time limits on usage, and create an IP Address that corresponds to a specific port in a device. Thus customer data is established.

Client Update

Use the client update menu to view basic client information including Name, Phone, IP Address, Switch IP Address, Switch Port used, Status, Pay and E-Mail address. To add a new client, click the Add button to bring up the Client Manager menu (see below). Update or change existing client information by highlighting the client on the table and clicking the Modify button. Use the Query button to locate client records form the database.



🚯 Client Upo	late					
Client Name	Client Phone	Client Address	Client IP /	Address	Sw	
						M Francisco I
						Untreeze Llient
						Hay Check
						Reg Ports Check
						Client Status
						Close(<u>C)</u>
•					F	
Client Name		Query (Q)	Add (A) De	lete (<u>D</u>) Ec	lit (<u>E</u>)	

Figure 173. Client Update

Use the Freeze Client and Unfreeze Client buttons to disable (Freeze) or enable (Unfreeze) a frozen port linked to the selected client. The Pay Check button is used to view the client's payment status. The Port Check button is used to detect the port number and status of the client and update the device records from the database. The Client Status button is used to check a client's expiration status or to change client payment terms and expiration deadline.

Client Manager

The Client Manager "Add" is identical to the "Modify" menu.

🚯 Client Manager : Add Client Entry	×
Client Name* Lucious Industries LLC Client IP Address* 168 18 45 26 Client Phone (206). 5553636 Pay Type* Six Month ▼	
Client Address 1212 Mockingbird Ave. Clydeston NY 10114	🗸 ок
Client E-Mail [grunde@lucious.com	🗶 Cancel
Switch IP* 10.44.73.38 Switch Port* Pay* Yes	
Phone number must be 0 to 9	1

Figure 174.

How to Manage a Client



Figure 175.

When we begin to manage a client we need to determine first whether the client has paid for services or whether it is past due. If payment is past due we close the connection (disable its link port) and prevent the client from being connected to the network. We also need to decide whether

the client is experiencing abnormal usage. Depending on the situation, we may disable the client's link port and notify the client so as to not jeopardize other clients.

Client Record Query

Locate and view client records using various search conditions including device IP address, link port, client name and client pay status. Define the parameters and click the Query button to view the record search results in the record table.

🚯 Client Reco	rd Query					
General						
Switch IP	All	•	Switch Port All		-	
Client Name			Pay Status All	•	-	🔏 Query(Q)
Client IP			to .		_	
Client Name	Client Phone	Client Address	Client IP Address	Switch IP Address	Switch Port	
						_
						-
						_
						_
						_
						-
						<u> </u>



Client Online Query

🞒 Client	Online Query			
10.1.1.19 10.15.1.6 10.42.73. 10.16.79. 10.16.79. 10.16.79. 10.16.79. 10.44.73. 10.9.68.3 10.44.73. 10.16.79. 10.1.1.15 10.1.1.16 10.37.11. 10.44.73.	4 6 221 126 128 36 36 188 1 88 1 240 133 2 6 6 78 78			Close(C)
No.	Client Name	Client IPAddress	Client Status	
Device : 1	5		,	

View client users currently connected to a selected device.



Client Abnormal Situation

🚯 Client Abnorm	al Situation				
Client Name	Switch IP Address	Switch Port	Team	Group	Now : 2002/7/15 下午 05:41:32 Update Time : 2002/7/10 下午 12:21:28
					Configuration
Start Time Yea	r 2002 ▼ M r 2002 ▼ M Delete(<u>D</u>) De	10nth 1 10nth 1 elete All(<u>A</u>)	▼ Day 1	•	

Use this to check client usage and logs of abnormal situations for a chosen device.

Figure 178. Client Abnormal Situation

Device Utilization

🚯 Device Utiliz	ation			
Group Name	Sum of ports	Sum of opened ports	Percent of open	
D-Group	94	0	0%	
				 21100 C
				 💦 Query(Q)
				Close(<u>C</u>)

Analyze network usage and query total number of ports and ports open for a device.

Figure 179. Device Utilization

Device Group Manager

Grouping Devices





Use the Group Manager to group devices according to purpose, location, team etc. Select devices from the tree and drag them to another group. Add or Delete groups and teams with the buttons on the bottom of the menu.

🚯 Group Manage	r				<u>_ </u>
Switch Name	Switch Type	Switch IP	Address Team		
10.1.1.194	DES3225G	10.1.1.19	4 unselecte	:d	
10.15.1.66	DES6000	10.15.1.6	6 unselecte	d	
10.42.73.221	DES3326	10.42.73.	221 unselecte	d	
10.16.79.126	DES3226	10.16.79.	126 Team Sub	o-group	
10.16.79.128	DES3226	10.16.79.	128 Team Sub	o-group	
10.50.8.24	DES3326	10.50.8.2	4 Team Sub	o-group	「何が Remove(R)
10.16.79.36	DES3326	10.16.79.	36 Team Sub	o-group	
10.44.73.188	DES3225G	10.44.73.	188 Team Sub	o-group	Reck Ports Check
10.9.68.31	DES3225G	10.9.68.3	1 Team Sub	o-group	
10.44.73.240	DES3624	10.44.73.	240 Team Sub	o-group 📕	
1910 70100	EC 40000V	10.10.70	'n T C'	لنے	
Manager					
D.Grour	_				
	y 				
⊡…, jea	im Sub-group				
-	10.16.79.126				
	10.16.79.128				
	10.50.8.24				
	10.16.79.36				
	10 44 73 188				
	1096931				
	10.3.00.31				
	10.44.73.240				- 1
	10.16.79.133				🛛 😓 Close(<u>C)</u>
	Add Group	Delete Group	Add Team Dele	te Team	
Group : 1	Team : 1	Device : 15			

Figure 181. Device Group Manager

Pay Rate Configuration

To Add, Modify or Delete pay rate categories, type or select information in the spaces provided at the bottom of the menu.

🚯 Pay I	🚯 Pay Rate Configuration 📃 🔲 🗙						
No.	Name	Cost(dollars)	Туре	Time(days)			
1	One Week	100	One Week	0			
2	One Month	300	One Month	0			
3	Three Month	800	Three Month	0			
4	Six Month	1200	Six Month	0			
	One Year		One Year	0	<pre> Add(A)</pre>		
Nar	ne One Year	Туре (Dne Year	-			
Co	ost 2000	Time)				

Figure 182. Pay Rate Configuration



TROUBLESHOOTING

- **Problem:** Can't open D-View with database error.
- **Solution:** Please install Access 2000.
- **Problem:** Can't find any SNMP devices in D-View.
- Solution: Please check the SNMP read community string.

X



- **Problem:** Can't use MIB Utilities to manage the device in D-View
- **Solution:** Please check the write community string and read community string in the device and check if this device supports MIBs.

S Device Properties Form	
Device Information	IP Address: 10.151.66
Dead Carry Dublic	Write Commingations
Module Type: JDES6000	Туре
MIB Database	
BRIDGE-MIB	
☐ IANAifType-MIB	☐ IF-MIB
☐ IGMP-STD-MIB	
C Q-BRIDGE-MIB	E RFC1155-SMI
RFC-1212	🗖 RFC1213-MIB 📃
OK Cancel	

Figure 184.

- **Problem:** Can't send trap mail.
- **Solution:** Check the Trap Mail SMTP Settings (SMTP Server, Port, Type, etc.) and Trap Mail Interval Settings (IP Address, Alarm Level, Alarm Message)

Trap Mail SMTP Setting		×
SMTP Setting		
SMTP Server		
Po <u>r</u> t	25	
<u>T</u> ype:	Simple Login 💌	
Sender Account		
Sender Password		
Mail Sender Name	Name	
Sender Mail Address		
Mail Beceiver		
Receiver Mail Address	J	
Carbon Copy Recipient		
Set	Close Mail Test	

Figure 185.

Trap Mail Setting	×
IP Address OID Alarm Mail Interval	
IP Address Alarm Level Cold Start	Add
IP Address Alarm Level Alarm Message	Remove
OK Cancel	

Figure 186.
- **Problem:** Auto-discover can't find the device you want.
- **Solution:** Use the Discover function (under System) to find the device you want.

🚯 Discover		
From IP Address 10 48 73	111 Search Approach 📀 Unicast 🔿 Broadcast	Samples
To IP Address 10 48 73 SNMP Read public	Discover Schema © SNMP © ICMP	0 Start
TimeOut (100010000)	All Agents C Select Device EnterpriseID	Stop Save & Exit
No. []	P Address System Description	Exit
		-

Figure 187.

- **Problem:** Can't inset a device into the D-View 5.1 platform manually.
- **Solution:** To insert a device into D-View 5.1 manually, right-click on tree view or list view in the D-View Platform with the mouse to bring up the pop-up menu. Select "Add Device" then shows the "new device form." Input parameters and click the ok button.
- **Problem:** Can't import the new device module into D-View 5.1.
- **Solution:** You can install the device module from the D-View 5.1 CD-Rom. If you want to upgrade the device module, you can download the latest Module Setup file from the D-Link web site http://www.dlink.com.
- **Problem:** Can't find wireless AP module in D-View 5.1
- **Solution:** You can't find wireless AP because the wireless AP does not support standard MIB (RFC1213), thus D-View 5.1 can't find it. You can only insert it manually.



MENU/COMMAND QUICK REFERENCE

System	View	Edit	MIBs	Tools	Account	Window
Discover	Topology View	Device	SNMP Device Configuration	MIB tools	Client Update	Cascade
		Properties		MIB Browser,		
Basic Information		Сору	MIB II (read-only menus)	MIB Compiler	Client Record Query	Tile
	Tree View	Delete	Information,			
Repolling Configuration			IF Table,	DIAP	Client Online Query	Minimize
O	List Marine	Domain	IF Counters,		Olivert Henry	
Community String	LIST VIEW	New	IP Counters,		Client Unusual	
Conliguration		SubDomain	IP Routing,	TETP Server	Situations	
Save to Database	MessagesTraps View	New Device	Counters UDB Counters		Device Litilization	
Save to Database	Wessages haps view	Baste	SNMP Counters	PootD	Device Otilization	
Trap Management	Background Color	Delete	Bridge 802 1d	BUULF	Device Group	
Trap Editor	Buoligiounia color	Doloto	Information		$(Tools \rightarrow)$ Rate	
Trap Mail SMTP		New	Port Table	Ping	Configuration.	
Settinas		Topology	Spanning Tree		Detect Device Ports	
			Information.			
		Find Object	Port Table	Telnet		
			Transparent Bridge			
			Forwarding Table, Static			
			Table,			
			Port Counters			
			RMON			
			Statistics, History,			
			Alarm/Event			
			802.1P			
			Basic Configuration, Priority			
			Information, Port			
			Capability, GMRP, GARP			
			(802.1Q			
			Configuration			
			Ports Information General			
			Information. Learning			
			Constraint Information			
			802.1Q VLAN.			
			Forwarding/Filtering,			
			Unicast//Multicast, Static			
			Filtering			
			Traffic statistics			
			Port VLAN Statistics			
			Information, High Capacity			
			Port, VLAN Statistics			
			Information			
			Layer 3 Utilities			
			IP Forwarding, RIP 2, OSPF			
			→ (USPF pop-up menus)			
			IP THOUTE, DVMRP			
			SINIVIE' VO			

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Your title at organization:		
Telephone:	Fax:	
Organization's full address:		

Country: _____ Date of purchase (Month/Day/Year):

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Fax:

(* Applies to adapters only)

Product was purchased from:

Reseller's name: Telephone:

Reseller's full address:

Answers to the following questions help us to support your product:

1. Where and how will the product primarily be used? □Home □Office □Travel □Company Business □Home Business □Personal Use

2. How many employees work at installation site?

□1 employee □2-9 □10-49 □50-99 □100-499 □500-999 □1000 or more

3. What network protocol(s) does your organization use ?

4. What network operating system(s) does your organization use ? □Banyan Vines □DECnet Pathwork □Windows NT □Windows NTAS □Windows '95 □Others

5. What network management program does your organization use ? D-View DHP OpenView/Windows DHP OpenView/Unix DSunNet Manager DNovell NMS NetView 6000 DOthers______

6. What network medium/media does your organization use ? □Fiber-optics □Thick coax Ethernet □Thin coax Ethernet □10BASE-T UTP/STP □100BASE-TX □100BASE-T4 □100VGAnyLAN □Others______

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Desktop publishing Descent Dword processing DCAD/CAM Database management DAccounting Dothers

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