

D-View 6.0 Network management system User Guide



D-Link Corporation D-View 6.0 SP2 User Manual Published: August 2011

PROPRIETARY NOTICE

This document supports D-Link Network Management System software. This manual is current for D-Link D-View 6.0 with Service Pack 2 installed. Some features and interfaces shown in this manual may require you to update your D-View installation. For more information and updates, please go to the D-View website dview.dlink.com.

D-Link may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from D-Link, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

© 2011 D-Link Corporation. All rights reserved.

Table of Contents

| | About this Guide | 5 |
|----|--|--|
| 1. | Introducing D-View | 7 |
| | 1.1 Overview | 8 |
| | 1.1.1 What's Included | |
| | 1.2 Product Line | |
| | 1.2.1 Hardware and Software Requirements | |
| | 1.2.2. Client-Server Architecture (Professional Edition) | |
| 2. | Upgrading D-View | . 12 |
| | 2.1 Installation Steps | 13 |
| | 2.1.1 Creating a Database (for Professional Edition) | |
| | 2.2 Upgrade Steps | |
| | 2.2.1 Upgrade from Earlier D-View 6 | |
| | 2.2.2 Upgrade from D-View 5.1 or Earlier Version 2.3 D-View 6.0 Licensing | |
| | 2.3 D-View 0.0 Licensing | |
| | 2.3.2 Obtaining the Activation Code | |
| _ | | |
| 3. | Understanding the Architecture | |
| | 3.1 Modular Architecture | |
| | 3.2 Features | |
| | 3.3 Functions | 30 |
| 4. | Understanding the Interface | . 31 |
| | 4.1 Introduction | 32 |
| | 4.1.1 Context-sensitive Menus | |
| | 4.2 Main Menu | |
| | 4.2.1 File | |
| | 4.2.2 View | 36 |
| | | 77 |
| | 4.2.3 Topology | |
| | 4.2.4 Application | 39 |
| | 4.2.4 Application 4.2.5 System | 39 39 |
| | 4.2.4 Application | 39 39 40 |
| | 4.2.4 Application4.2.5 System4.2.6 NetTools | 39 39 40 41 |
| | 4.2.4 Application4.2.5 System4.2.6 NetTools4.2.7 Report | 39 39 40 41 42 |
| 5. | 4.2.4 Application | 39 39 40 41 42 43 |
| 5. | 4.2.4 Application | 39 39 40 41 42 43 44 |
| 5. | 4.2.4 Application 4.2.5 System 4.2.6 NetTools. 4.2.7 Report 4.2.8 Advanced 4.2.9 Help Using D-View | 39 40 41 42 43 44 45 |
| 5. | 4.2.4 Application | 39 40 41 42 43 43 45 45 |
| 5. | 4.2.4 Application | 39 40 41 42 43 43 45 45 45 49 |

| 5.1.5 Startup Wizard 50 |
|---|
| 6. Working with Topologies |
| 6.1 Creating a Topology.556.2 Creating Administrator-specific Topologies586.3 Using Topo Export/Import616.4 Topology Generator Principle626.5 Using Topology Generator.636.6 Rearranging the Topology666.6.1 Using Rearrange Totally666.6.2 Using Rearrange by step.666.6.3 Rolling Back a Topology67 |
| 7. Managing and Monitoring Devices |
| 7. Managing and Monitoring Devices 70 7.1 Identifying Devices 70 7.2 Multi-vendor Support 71 7.3 Customizing Devices 72 7.4 How to Configure Devices not in Supported List 74 7.4.1 Discover Devices 75 7.5 Third Party Devices: Cisco Catalyst 2960 96 7.6 Managing Devices with Device Panel Simulation 109 7.7 Managing Devices with MIB Compiler 112 7.8 Retrieving OID of the device 116 7.9 Batch Configuration 118 7.9.1 Backup and Update the Devices' Configuration 120 7.9.2 Using Device Type Check 123 7.9.3 Using Safeguard Check 124 7.9.4 Labeling Devices 126 7.9.4.1 Device Label 126 7.9.5 Editing Device Information 127 7.10 Managing Events 130 7.10.1 Setting Poll Parameters 130 7.10.2 Setting the Devices to Poll 131 7.10.3 Viewing the Poll Device List 132 7.10.4 Grouping Devices using Device Manager 132 |
| 7.10.4 Grouping Devices using Device Manager |
| 7.10.6 Retrieving Device Event Logs.1397.10.7 Defining Trap Information1427.10.8 Locating the Switch Port1437.10.9 Monitoring the Link Status1457.10.10 Managing Trap and Syslog Service1477.10.11 Locating Devices1477.10.12 Locating Users1507.10.12.1 User Statistics150 |
| 7.10.9 Monitoring the Link Status1457.10.10 Managing Trap and Syslog Service1477.10.11 Locating Devices1477.10.12 Locating Users150 |

| 7.11 Cc | ollector Configuration | 152 |
|------------|-----------------------------------|-----|
| 7.11. | .1 Configuring a Collector | 152 |
| 7.11. | .2 Schedule | 154 |
| 7.11. | .3 Start | 155 |
| 7.11.4 | .4 Device Inventory | 155 |
| 7.11. | .5 Report | 156 |
| 7.11. | .6 Template | 157 |
| 8. Basic O | perations | 159 |
| 8.1.1 | L View Options | 160 |
| | 2 Copy/Paste | |
| 8.1.3 | 3 Zoom In / Out / Fit | 161 |
| 8.1.4 | 4 Set Background | 162 |
| 8.1.5 | 5 Upper Layer | 162 |
| 8.1.6 | 5 System Log | 165 |
| 8.1.7 | 7 Administrator Manager | 165 |
| | 8.1.7.1 Creating a User Group | 165 |
| | 8.1.7.2 Changing Password | 168 |
| 8.1.8 | 3 Restoring and Backing Up D-View | 169 |
| | 8.1.8.1 Backup Procedures | 169 |
| | 8.1.8.2 Restore Procedures | 169 |
| | 9 NetTools | |
| | 8.1.9.1 Device Discovery | 170 |
| | 8.1.9.2 Advanced Device Discovery | 170 |
| | 8.1.9.3 Trace Route | |
| 8.1.1 | LO TFTP | 173 |
| | 11 Retrieving ARP information | |
| | 12 Net Toolbox | |
| 8.1.1 | 13 Port Packet Monitor | 175 |
| | 8.1.13.1 Line Chart | |
| | 8.1.13.2 Bar Chart | |
| | 8.1.13.3 Grid Data | |
| | 14 Performance Monitor | |
| | 8.1.14.1 Line Chart | |
| | 8.1.14.2 Bar Chart | |
| | 8.1.14.3 Grid Data | |
| | 8.1.14.4 Data Distribution Chart | |
| | 8.1.14.5 Port Flow Chart | 181 |
| 9. Index | | 182 |

About this Guide

Scope

Use this document to learn, use, and configure the different features of D-View.

Audience

This document is written for network managers, system administrators, and IT personnel who needs to work with D-View.

Reader Alert Conventions

Reader alerts are used throughout this document to notify you of essential information. The following table explains the meaning of each alert.

| Reader Alert | Meaning |
|--------------|--|
| Тір 🗾 | Alerts you about supplementary information that is not essential to the completion of the task at hand. |
| Note | Alerts you about supplementary information. |

Style Conventions

| Element | Meaning |
|-----------------------|--------------------------------------|
| Bold font | Use for describing user |
| | interface elements and |
| | characters that you type into |
| | the interface. |
| | For example, Hierarchy |
| | Topology Workplace and type |
| | http://192.168.1.1. |
| <i>Italic</i> font | Variables for which you supply a |
| | specific value. |
| | For example: <i>Filename.ext</i> can |
| | refer to any valid file name. |
| Courier New font | Samples of code and file paths |
| | and names. |
| <u>Underline</u> font | Hyperlink to sections within the |
| | manual. |

The following style conventions are used in this guide.



Introducing D-View

1.1 Overview

D-View 6.0 is powerful network management software designed for SMB (Small and Medium Business) and Enterprise network administrators to efficiently manage their IT infrastructure.

D-View accommodates a wide range of devices including but not limited to the following devices:

- Wireless bridges
- Access points
- SNMP-capable Smart/Managed switches
- SNMP-capable routers
- OLT/ONU devices
- Broadband CO devices
- Servers

10000000

This guide does not discuss network design, management concepts or provide detailed explanations of SNMP, MIB, RMON and associated concepts. We assume the reader is familiar with these networking concepts; hence variables defined in D-View menus are self-explanatory.

1.1.1 What's Included

D-View 6.0 comes with:

- CD with D-View 6.0 and User Manual
- User Manual

1.2 Product Line

There are two editions of D-View:

- D-View 6.0 Standard Edition: D-View Standard Edition targets novice-intermediate users that have a small/mid-scale network of less than 1000 devices with basic requirements.
- D-View 6.0 Professional Edition: D-View Professional Edition targets advanced users that have a small/mid-scale network of more than 1000 devices with higher requirements.

The differences between the two editions are described in the following table:

| Standard Edition | Professional Edition |
|---------------------------|----------------------------|
| Standalone architecture | Client-Server architecture |
| Single user login | Multiple user login |
| Supports ~ 1000 nodes | Supports ~ 5000 nodes |
| Supports Microsoft Access | Supports Microsoft SQL |

1.2.1 Hardware and Software Requirements

| | Standard Edition | Professional Edition | |
|----------------------------------|---|--|--|
| СРИ | 2GHz or above | | |
| Memory | 1GB or above | | |
| Disk Space | 1GB or above | | |
| Supported Operating System | Microsoft Windows 2008 R2 with SP1 Microsoft Windows 2003 with SP2 Microsoft Windows 2000 Server with SP4 Microsoft Windows 2000 Advanced Server with SP4 Microsoft Windows 7 Enterprise (32 bits) Microsoft Windows Vista (32 bits) | Microsoft Windows 2008 R2 with SP1 Microsoft Windows 2003 with SP2 Microsoft Windows 2000 Server with SP4 Microsoft Windows 2000 Advanced Server with SP4 | |

| | Microsoft Windows XP (32bits) Home/Professional with SP2 | |
|---------------------------|--|---|
| Supported Databases | • None | Microsoft SQL Server 2000 with SP2 Microsoft SQL Server 2005 |
| Prerequisit e Software | D-Link D-View 6 with SP1 (6.) Microsoft .NET Framework 3.5 Microsoft Report Viewer 2008 Microsoft Internet Explorer 6 Windows SNMP Service | 5 Redistributable Package |



D-Link recommends using a display with 1024 x 768 resolution or higher.

1.2.2. Client-Server Architecture

(Professional Edition)

By using the remote access feature of SQL Server, **D-View 6.0 Professional Edition** implements Client-Server architecture allowing workstations to share database information. Given below is an illustration of the SQL Server Remote Access chart.

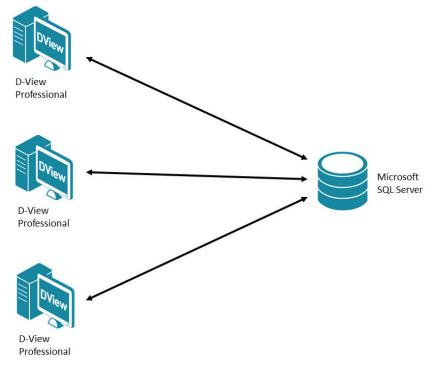


Figure 1: SQL Server Remote Access

To configure and connect to the SQL Server database, refer to <u>2.1</u> <u>Installation Steps</u> and <u>2.1.1 Creating a Database</u> (for Professional Edition).



Upgrading D-View

2.1 Installation Steps

To install D-View 6.0 for both Standard and Professional Edition, follow these procedures:

For Professional Edition:

Prior to installation, ensure the environment on your designated server is compliant with the software requirements given below:

- Ensure the authentication mode on MS SQL 2000 is Mixed Mode (SQL Server and Windows) when installing SQL Server. Use Enterprise Manager for configuration settings.
- Click Microsoft SQL Server > SQL Server Group > Local Windows NT.
- Right-click on Local Windows NT, and select Security.
- Configure Authentication as SQL Server and Windows.
- Insert the CD and wait for the autorun wizard to run. Click Install D-View
 6.0 SP2. If the installer does not start automatically, start the installer by doubleclicking the DV-600SV02.exe or DV-600PV02.exe under the Software folder in the CD drive.

The InstallShield Wizard screen will appear.



Figure 2: InstallShield Wizard screen

D-View Setup initiates the **InstallShield Wizard**, which after loading, will take you through the installation process.

2. The License Agreement screen will appear.

Click **Yes** to proceed.

| tallShield Wizard icense Agreement | | 6 |
|--|---|----------|
| Please read the following license ag | reement carefullu | |
| The deteriod with teller wing license ag | point contraity. | |
| D-View 6.0 will be installed in your c carefully. | computer. Please read the software license ag | reement |
| D-Link D-\ | view 6.0 | <u> </u> |
| Software Lice | ense Agreement | _ |
| IMPORTANT READ CAREFULLY: | | |
| This Software End-User License / agreement between you (either an | | |
| and D-Link for the SOFTWARE(s) the User's Guide, any associated |) identified above, which includes SOFTWARE components, any media, | -1 |
| , | | <u> </u> |
| Press 'No' to exit the installation. P | iess res to continue. | |
| allShield | | |
| | < Back Yes | No |
| | / Didny 162 | INU |

Figure 3: License Agreement screen

3. The **Choose Destination Location** screen will appear.

By default D-View is installed in C:\Program Files\D-Link\D-View. Alternately, you can choose to install D-View in your preferred designated folder. Click **Browse** to select the target location and then click **Next** to continue.

| InstallShield Wizard | × |
|--|---|
| Choose Destination Location Select folder where Setup will install files. | |
| Setup will install D-View in the following folder. | |
| To install to this folder, click Next. To install to a another folder. | a different folder, click Browse and select |
| Destination Folder C:\Program Files\D-Link\D-View | Browse |
| | |

Figure 4: Choose Destination Location screen

4. The **Select Program Folder** screen displays.

The Setup will add program icons into the Program Folder. Click **Next** to continue.

| tallShield Wizard | |
|---|--|
| Select Program Folder Please select a program folder. | |
| | |
| Setup will add program icons to the Pro name, or select one from the existing fo | gram Folder listed below. You may type a new folder Iders list. Click Next to continue. |
| Program Folders: | |
| D-View | |
| Existing Folders: | |
| Accessories | |
| Administrative Tools HyperSnap-DX 4 | |
| Microsoft SQL Server | |
| Microsoft SQL Server - Switch SiS VGA Utilities | |
| Startup | |
| | |
| 1 | |
| tallShield | |
| | < Back Next> Cancel |
| | <back next=""> Cancel</back> |

Figure 5: Select Program Folder screen

5. The **Start Copying Files** screen will appear.

Verify the settings before clicking **Next**. To make changes, click **Back**.

| stallShield Wizard | | | |
|--|--|---------|-------------|
| Start Copying Files | | | |
| Review settings before cop | ying files. | | |
| | on to start copying the program Back. If you are satisfied with I | | |
| Current Settings: | | | |
| [User Info]: User Name: Company Name: License Code: [Application Info]: OS Directory :C:\W Setup Directory :C:\F | 'INNT\ 'rogram Files\D-Link\D-View | | * * * |
| stallShield | < Bac | k Next> | Cancel |

Figure 6: Start Copying Files screen

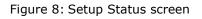
The **Setup Status** screen will appear.

6. This screen indicates that D-View installation is in progress.

| InstallShield Wizard | | × |
|-------------------------------|-------------------------|--------|
| Setup Status | | |
| D-View Setup is performing th | e requested operations. | |
| Installing: | | |
| | 32% | |
| | | |
| | | |
| | | |
| InstallShield | | |
| | | Cancel |

Figure 7: Setup Status screen

| InstallShield Wizard | × |
|--|--------|
| Setup Status | |
| D-View Setup is performing the requested operations. | |
| | |
| 100% | |
| | |
| | |
| | |
| InstallShield | |
| | Cancel |



 Once the D-View installation is successfully completed, the Welcome to the Microsoft XML Parser and SDK Setup Wizard window will appear. Click **Next** to continue installing Microsoft XML Parser and SDK on your server.

| 🕞 Microsoft XML Parser and SDK | Setup | X |
|--------------------------------|---|---|
| Ð | Welcome to the Microsoft XML Parser and SDK Setup Wizard | |
| | The Setup Wizard will install Microsoft XML Parser and SDK on your computer. Click Next to continue or Cancel to exit the Setup Wizard. | |
| | | |
| | | |
| | | |
| | Cancel | |

Figure 9: Welcome to the Microsoft XML Parser and SDK Setup Wizard

The End-User License Agreement screen will appear.
 Select I accept the terms in the License Agreement and click Next to continue.

| nd-User License Agreement Please read the following license a | greement carefully | 9 |
|---|---|---|
| END-USER LICENSE AGRE | | 3 |
| MICROSOFT XML CORE S | ERVICES (MSXML) 4.0 | |
| Agreement ("EULA") is a legal ag single entity) and Microsoft Corp above, which may include comput and "online" or electronic docume | LLY: This Microsoft End-User License geement between you (either an individual or a oration for the Microsoft software identified ter software, associated media, printed materials, intation ("SOFTWARE"). By downloading, gives the SOFTWARE are one to be bound | • |
| • I accept the terms in the Licer | nse Agreement | |
| C I do not accept the terms in t | he License Agreement | |

Figure 10: End-User License Agreement screen

9. The **Customer Information** screen will appear.

Enter the **User Name** and the name of your **Organization**. Click **Next** to continue.

| Microsoft XML Parser and SDK S | |
|------------------------------------|----------------------|
| Please enter your customer informa | ation |
| | |
| User Name: | |
| dlink | |
| Organization: | |
| dlink | |
| 1 | |
| | |
| | |
| | |
| | |
| | |
| | |
| | < Back Next > Cancel |
| | |

Figure 11: Customer Information screen

10. The **Choose Setup Type** screen will appear.

Use the **Customize** option to select the program location. Click **Install Now** to continue with the installation (recommended).

| Hicrosoft XML Parse | r and SDK Setup |
|---------------------|--|
| | e that best suits your needs |
| | Install Now Install MSXML 4.0 at C:\Program Files\MSXML 4.0 Customize Allows users to choose which program features will be installed and where they will be installed. Recommended for advanced users. |
| | < Back Mext > Cancel |
| | |

Figure 12: Choose Setup Type screen

11. The **Completing the Microsoft XML Parser and SDK Setup Wizard** screen will appear. Click **Finish**.



Figure 13: Completing the Microsoft XML Parser and SDK Setup Wizard screen

12. The Device Modules Setup screen will appear.

To install to this folder click **Next**. To install to a different folder, click **Browse** and select another folder.

| Device Modules Setup | <u>د</u> |
|--|--|
| Choose Destination Location Select folder where Setup will install files. | |
| Setup will install Device Modules in the follow | wing folder. |
| To install to this folder, click Next. To install t another folder. | to a different folder, click Browse and select |
| | |
| | |
| | |
| Destination Falder | |
| Destination Folder C:\Program Files\D-Link\DevModule | Browse |
| | |
| nstallShield | |
| | < Back Next > Cancel |
| | |

Figure 14: Device Modules Setup screen

The Setup Status screen will appear.

| Device Modules Setup | × |
|--|--------|
| Setup Status | |
| Device Modules Setup is performing the requested operations. | |
| Installing: | |
| 37% | |
| | |
| InstallShield | |
| | Cancel |

Figure 15: Setup Status screen

13. The Setup is installing the required device modules. Once completed, the **Installation Completed** screen will appear.

Click **Finish** to exit and complete the installation.

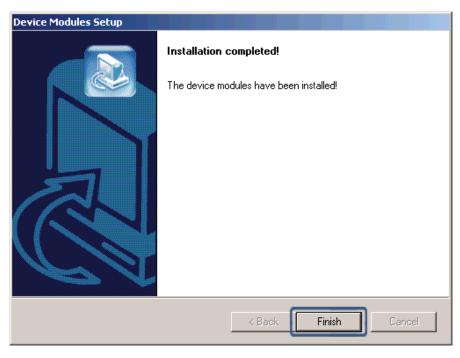


Figure 16: Installation Completed screen

14. The screen indicates that D-View 6.0 and Microsoft XML Parser and SDK software have been installed.

Click **Complete** to close this window.



Figure 17: Setup Complete screen

15. To start D-View, double click the **D** on the desktop.

The **Login D-View** screen will appear. Refer to <u>5.1 Getting Started</u> to continue working with D-View and <u>2.3 D-View 6.0 Licensing</u> to receive the activation code.

2.1.1 Creating a Database

(for Professional Edition)

Once D-View and Microsoft XML Parser and SDK software installation is complete, create a database for D-View.



To create a database, SQL 2000 server must be installed with SQL service running on the server.

To create a database, follow the steps below:

 Double-click MakeDB.exe under Software directory. The D-View Database Tool window will appear.

| ew | Da | taba | se To | ol | | | | |
|-----|----|------|---|-------|--------|-------|---------------|-------|
| DBI | MS | Cont | îg — | | | | | |
| • | SG | LSe | erver 2 | 000 C |)ataba | se | | |
| c | SG | LSe | erver 2 | 005 C |)ataba | se | | |
| 2 | 93 | | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 0051 | ataba | | | |
| T | | | | | | | | |
| | | _ | | | | | | |
| | | | | | | | 1 10 | |
| | | | | | Gre | ateDB | | Glase |
| | | | | | | | - 17 - | |

Figure 18: D-View Database Tool screen

2. D-View Database Tool is in the process of creating a database. Click **OK** to close the window.

| MakeDB | × |
|--------|---|
| ⚠ | D-View Database has been created successfully ! |
| | ОК |

Figure 19: MakeDB screen

- 3. To edit information in the hosts file, go to:
 - C:\WINNT\system32\drivers\etc\hosts

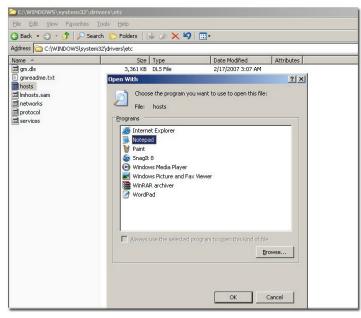


Figure 20: Etc Folder screen

4. Right-click **hosts** and select **Open With**. In the Open With window, select **Notepad**.



D-Link recommends using Notepad to edit the hosts file.

| New | Ctrl+N | 93-1999 Microsoft Corp. | _ |
|-------------------------------------|---------------------|--|-----|
| Open | Ctrl+O | | |
| Save | Ctrl+S | HOSTS file used by Microsoft TCP/IP for Windows. | |
| Save <u>A</u> s | | hs the mappings of IP addresses to host names. Each kept on an individual line. The IP address should | |
| Page Setu | p | first column followed by the corresponding host na | ne. |
| Print | Ctrl+P | hd the host name should be separated by at least on | e |
| | | | |
| E⊻it | | | 1 |
| # lines # # For ex. | or follow ample: | mments (such as these) may be inserted on individua wing the machine name denoted by a '#' symbol. | 1 |
| - # # # For ex # # 1 | or follow | wing the machine name denoted by a '#' symbol. .97 rhino.acme.com # source server | 1 |

Figure 21: Hosts File screen

- 5. Update the host file with the following information, for example:
 - 127.0.0.1: localhost
 - dview-test : 10.90.90.101
 - 10.90.90.101: SQL-server (Follow this format to connect to the server, i.e. "IP Address: SQL-server").



To implement the client-server architecture, ensure that D-View 6.0 Professional Edition is installed in required servers to connect with the SQL database.

6. Click **Save** to save the file.



D-View utilizes SQL-Server alias name to query the SQL database, so therefore make sure the name entered is the same as the alias name. Ensure the IP address of your server is added in the hosts file. Check with the system administrator for the correct IP address of your server.

The **Login D-View** screen will be displayed. Refer to <u>5.1 Getting Started</u> to continue working with D-View.

2.2 Upgrade Steps

2.2.1 Upgrade from Earlier Version of D-View 6

- 1. Make sure D-Link D-View 6 SP1 (6.0.01B03) has been installed in your system.
- 2. Make sure Microsoft .NET Framework 3.5 has been installed in your system.
- Make sure Microsoft Report Viewer 2008 Redistributable Package has been installed in your system. (Note: D-View 6 SP2 does not support Microsoft Report Viewer 2010)
- 4. Make sure Windows SNMP service has been installed in your system.
- 5. Install D-View SP2 installation package.

2.2.2 Upgrade from D-View 5.1 or Earlier

Version

To upgrade from D-View 5.1 or earlier versions to D-View 6, uninstall all the programs related to the old version and then re-install the new version.

2.3 D-View 6.0 Licensing

2.3.1 Trial Version

When you install D-View, the trial version is automatically installed and allows you to evaluate the product for a period of 30 days. During this 30-day period, D-Link recommends that you request a permanent license for D-View. For every single license key obtained, you can run D-View on up to five different computers. Skip the **Activation** step as seen in Figure 24 and continue working with D-View.



During the trial period, every time D-View is started, a message is displayed indicating the time remaining before the trial version will expire.

2.3.2 Obtaining the Activation Code

If you opt to buy D-View, you must register online to get your activation code. There are three ways to get to the online site to register:

OPTION A

The most direct way to register is to go to http://dview.dlink.com.tw and enter user related information such as license key and MAC address of the server where D-View is to be installed. You can find the license key on the back cover of the user manual.

OPTION B

1. Start **D-View**.

The **D-View 6.0 Activation Wizard** screen will appear.

2. Click **Next** to continue.





- The **Input Activation Key** screen will appear.
- 3. Click **Register** to open the registration website and update the information on-line.

| D-View 6.0 Activ | ation Wizard |
|-----------------------|--|
| D-View Version 6.0 | Input Activation Key |
| | Please enter the Activation Key and click "Activate". |
| | After successfully activating D-View, you can experience all its features. If you do not have an Activation Key, click "Register" to register your product online. |
| | Activation Key : |
| | (Format: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| D-Link | Activate Register Skip |

Figure 23: Input Activation Key screen

OPTION C

Start **D-View**, go to **Help>D-View Activation Wizard**. Follow the steps accordingly to register for D-View.



Understanding the Architecture

3.1 Modular Architecture

D-View 6.0 is a vendor-independent platform with user plug-in modules. This new adaptive architecture comprises multiple components such as DBMS access, basic modules, and plug-in modules.

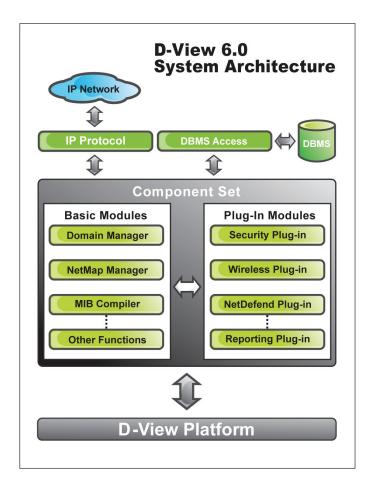


Figure 24: D-View System Architecture

D-View follows three-tier architecture that is client-server architecture in which an application is executed by more than one distinct software agent. For example, an application that uses middleware to service data requests between a user and a database employs three-tier architecture.



D-View modules are also compatible with HP's OpenView Network Node Manager (NNM v6.40, NNM v6.41, NNM v7.50, and NNM v7.51).

3.2 Features

With the addition of new features to D-View, administrators can now:

- Automatically create topology maps of device relationships.
- Graphically represent the real-time status of devices.
- Centrally manage multiple D-Link devices. Administrators can view and manage multiple devices within the LAN.
- Customize third party devices to integrate with D-View.
- Define trap events using the **Trap Editor**.
- Generate reports on the network topology using the **Report** tool.
- Manage multiple identical devices at the same time using Batch
 Configuration (Firmware updates, Save config, RMON Enable and more).
- Manage third-party devices using the **MIB Compiler** and **MIB Browser**.
- Schedule when batch actions will be done for Save, Reboot, Firmware Update and Config functions.
- Supports SNMPv3 for major MIBs.
- Monitor the status of network devices by polling network devices periodically.
- View and check the status of the Safeguard Engine from the topology map.
- Handle events based on severity and notify the users with e-mail or sound alerts.
- Generate a user-defined report using the **Reporting Tool**.
- Generate a list of devices using **Inventory Management.**

3.3 Functions

The following section briefly describes the various functions of D-View:

- New Device Identifier: D-View constantly monitors the network for new devices. Once a device is plugged in, administrators can add the device into the topology.
- Database Access Component: Provides an interface to access Microsoft Access and SQL Server 2000/2005 out of the box. If required, functional components can be changed to access other DBMS such as Oracle or Sybase.
- Domain Management: D-View allows administrators to categorize network devices into single or multiple domains.
- Multiple Views: D-View supports tree and list views for viewing devices in the domain.
- Polling: D-View polls network devices and displays any abnormal behavior on the Message Board. Devices are polled using ICMP (Internet Control Message Protocol) or SNMP (Simple Network Management Protocol).
- Performance Management: D-View provides flexible mechanisms to retrieve SNMP OID information. For example, using the Performance Monitor function, the administrator can monitor data ratio per port.
- Report Tool: Create collectors to gather information from the network and generate reports.
- **Syslog Management:** Maintain user action log information.
- System Config: Configure global parameters of the network, for example, Local and Radius Authentication.
- SNMP v3 Support: For major MIBs including MIB II, IF- MIB (RFC2233), Entity MIB (RFC2737), Bridge 802.1D(RFC1493), RMON, 802.1P (RFC2674) and 802.1Q (RFC2674).
- Resource Management: Manage, add, or remove network device resources from/to a topology.
- Device Customization: Include customized network devices by manually entering device type information.
- Layer 3 Utilities: Layer 3 utilities include IP forwarding, RIP 2 (Routing Information Protocol), OSPF (Open Shortest Path First), IP MRoute, DVMRP (Distributed Vector Multicast Routing Protocol) and PIM (Protocol Independent Multicast) functions for managing switches and advanced routers in enterprise networks.
- **Topology Generator:** Create diagrams and schematics for network design and layout planning.
- Topology Import/Export: Import or export topology information to/from XML.



Understanding the Interface

4.1 Introduction

D-View's user interface provides access to all views and tools from a single location.

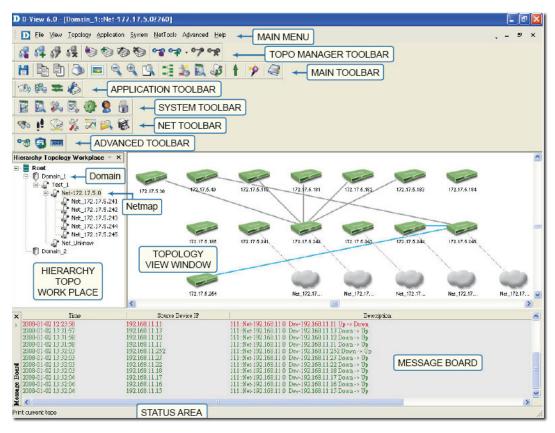


Figure 25: D-View User Interface

The key interface elements are:

- Domain: A subnetwork comprised of netmaps. Dividing the network into domains improves performance and security.
- Netmap: A netmap is a graphical representation of your domain/network. You can also refer to it as a network topology map.
- Menu Toolbar: Access different functional modules from the Menu toolbar.
- Hierarchical Topology Workplace: Displays a tree-like structure of the topology.
- Main Toolbar: Use the Main toolbar for quick access of the functional modules.
- **Topology View Window:** Displays the net cells that include devices, links and netmaps.
- Message Board: View event messages of various devices in the domain.
- Advanced Toolbar: Use the Advanced toolbar for quick access of the functional modules.

- Net Toolbar: Use the Net toolbar for quick access of the functional modules.
- **System Toolbar:** Use the System toolbar for quick access of the functional modules.
- **Application Toolbar:** Use the Application toolbar for quick access of the functional modules.
- **Topo Manager Toolbar:** Use the Topo Manager Toolbar for quick access of the functional modules.
- Status Area: Provides context-sensitive information about the current state of what you are viewing in the window.

Refer to <u>4.2 Main Menu</u> for the different functional modules.

Drag and drop the toolbar to rearrange elements around the user interface to suit your working model.

4.1.1 Context-sensitive Menus

Most items in D-View have context-sensitive menus. Select an item in the topology and then right-click the mouse to view additional details.

Topology Workspace

| <u>R</u> efresh <u>A</u> dd Netmap Topo Export/Import | Reload the hierarchy topology data Add Netmap into the current topology Backup or Restore the topology data | |
|---|---|--|
| <u>D</u> omain Manager | Call domain manager | |
| Polling Config | Config the poll device list | |
| Event Viewer by Netmap | Retrieve the event data of devices | |
| Topology Generator | Call Topology Generator to create topology | |

Figure 26: Context-sensitive menu accessed from the Topology Workspace

Topology View Window

| Copy Ctrl+C Paste Ctrl+V | Copy the selected device Add the device into the topology from clipboard |
|--|---|
| <u>D</u> elete | To delete the selected net cell |
| P <u>r</u> operty | To modify the property of the selected net cell |
| <u>D</u> -View Module | Call the device module to manage the selected device |
| Management Module 🔸 | Call up E2ES or wireless management module |
| Remote Management 🕨 | Manage devices remotely using Telnet, SSH, HTTP or HTTPS |
| Run Ba <u>t</u> ch | Call batch tool to operate the selected devices |
| Add to Po <u>I</u> I List | Add the selected devices into poll device list |
| Delete from Poll List | Delete the selected devices from poll device list |
| Rearrange Topology 🕨 | Rearrange the topology after selecting one device |
| View Op <u>t</u> ions | Set the display option for topology |
| Set <u>B</u> ackground | Set the topology background |
| <u>U</u> pper Layer | Activate the upper topology |
| Zoom <u>I</u> n | Zoom in the netcell in the topology |
| Zoom <u>O</u> ut | Zoom out the netcell in the topology |
| Zoom <u>F</u> it | Display all the netcells according to window size |
| Device Manager 🔹 🕨 | Operate the net cell: Device |
| Link Manager 🔹 🕨 | Operate the net cell: Link |
| Netmap Manager | Operate the net cell: Netmap |
| Topology <u>R</u> ollback | Reload the topology data and cancel all modifications |

Figure 27: Context-sensitive menu accessed from the Topology View Window

Hierarchy Topology Workspace

| 🖌 Menu Toolbar | Display or Hide the Main Menu window |
|--------------------------------|--|
| 🔽 Hierarchy Topology Workplace | Display or Hide the Topology Workplace |
| 🔽 Message Board | Display or Hide the message board window |

Figure 28: Context-sensitive menu accessed from the Hierarchy Topology Workspace

4.2 Main Menu

D-View's **Main Menu** is the entry point for accessing most of the features. It runs along the top of the screen. This section briefly describes the available menu options.

4.2.1 File

| Menu Item | Description |
|----------------|---|
| Save | Save the current topology. |
| Startup Wizard | The wizard guides you to create a |
| | topology. Refer to 5.1.5 Startup Wizard |
| | for more information. |
| Close | Close the current Topology View |
| | window. |
| Close All | Close all open Topology View |
| | windows. |
| Print | Print the current topology. |
| Preview | Preview the current topology. |
| Page Setup | Set printer options, properties and |
| | paper size. |
| Lockup | Locks D-View; only the current user or |
| | an administrator can unlock the |
| | system. |
| Logout admin | Logout of D-View and sign in as a |
| | different user. |
| Exit | Exit D-View. |

The following table lists the **File** menu items and their descriptions.

4.2.2 View

The **View** menu enables you to view or hide various D-View Toolbars. The following table describes the different toolbars.

| Toolbar | Description |
|----------------------|--|
| Advanced Toolbar | Access Link |
| | Capacity Check Safeguard Check ARP info |
| Net Toolbar | Access Device |
| 🦔 📫 😒 💥 🔯 | Discovery Trace route File Transport NET Toolbox Performance monitor |
| System Toolbar | Access System |
| | Log System Config Administrator Management Change Password. |
| Application Toolbar | Topo Export |
| * | Import Device Customization. |
| Topo Manager Toolbar | Access Select |
| | Netmap Add Netmap Edit Netmap Delete Netmap Select device Add device Edit device Edit device Select link Add link Edit link Delete link |
| Main Toolbar | Access Save Conv |
| | CopyPaste |

| | Print Background Zoom out Zoom in Zoom fit Domain Manager Configure the devices want to be polled Query the event log by netmap Search the devices in the network and create a topology automatically Upper Layer Startup wizard Help |
|------------------------------|--|
| Status Area | View status or details at bottom of page. |
| Menu Bar | Access Main Menu. |
| Hierarchy Topology Workspace | Access Topology. |
| Message Board | Access Message Board. |
| Cascade | Cascades the different topologies one behind the others. |
| Tile Vertically | Arranges the different topologies one below the other. |

4.2.3 Topology

The following table lists the **Topology** menu items and their descriptions.

| Menu Item | Description |
|-----------------|-------------------------|
| Device Label: | Shows the respective |
| • Device IP and | information in topology |
| Name | diagram. |
| Device Type | |
| SafeGuard Info | |

| Link Label Display link port and link speed • Link Port in topology diagram. • Link Speed Choose to enable or disable View Options Choose to enable or disable display tips, display direction and display redundancy. |
|--|
| Link Speed View Options Choose to enable or disable display tips, display direction |
| View Options Choose to enable or disable display tips, display direction |
| display tips, display direction |
| |
| I and display redundancy |
| |
| Copy Copy the selected device. |
| Paste Add the device into the |
| topology from clipboard. |
| Device Manager Select, add, edit, or delete a |
| Select Device device. |
| Add Device |
| Edit Device |
| Delete Device |
| Link ManagerSelect, add, edit, or delete a |
| Select Link link. |
| Add Link |
| • Edit Link |
| Delete Link |
| Netmap ManagerSelect, add, edit, or delete a |
| Select Netmap netmap. |
| Add Netmap |
| Edit Netmap |
| Delete Netmap |
| Zoom In Zoom into the netcell in the |
| topology. |
| Zoom Out Zoom out of the netcell in the |
| topology. |
| Zoom Fit Display all the netcell according |
| to window size. |
| Topology RollbackReload the topology data and |
| cancel all modifications. |
| Rearrange TopologyRearrange the topology after |
| Rearrange Totally selecting one device. |
| Rearrange by Step |
| Set Background Set a color or image for the |
| background. |
| Upper Layer Move to the topology above the |
| current one. |

4.2.4 Application

| Menu Item | Description |
|-------------------------------------|--------------------------------|
| Batch Config: | Execute a sequence of |
| Advanced Option | operations in D-View such as |
| Run Batch | Save Configuration, Retrieve |
| | Port Status, and so on. Refer |
| | to 7.9 Batch Configuration for |
| | more information. |
| Topo Export Import | Restore and backup D-View. |
| | Refer to 6.3 Using Topo |
| | Export/Import for more |
| | information. |
| Device Customization | Add, modify and delete |
| | devices. Refer to 7.3 |
| | Customizing Devices for more |
| | information. |

The following table lists the **Application** menu items and their descriptions.

4.2.5 System

The following table lists the **System** menu items and their descriptions.

| Menu Item | Description |
|----------------------|-------------------------------------|
| System Log | Store logged events. Refer |
| | to <u>8.1.6 System Log</u> for more |
| | information. |
| Domain Manager | Manage domain information. |
| | Refer to 5.1.4 Domain Manager |
| | for more information. |
| Event Manager | Monitor and manage events. |
| • Event Viewer by | Refer to 7.10 Managing Events |
| Netmap | for more information. |
| • Event Viewer by IP | |
| Device Group | |
| Manager | |
| Polling Config | |
| Device Event | |
| Config | |
| • Trap Editor | |
| Resource Manager | Locate devices using IP or MAC |

| MAC Locator | address. |
|------------------------------------|------------------------------------|
| Device Locator | |
| User Locator | |
| Device Collector | |
| User Statistic | |
| Device Statistic | |
| System Config | Configure the root domain |
| | name, management station |
| | and authentication |
| | information. Refer to <u>5.1.1</u> |
| | Login to D-View for more |
| | information. |
| Administrative Manager | Create user groups and provide |
| | access rights for certain |
| | functional modules to an |
| | administrator. Refer to 8.1.7 |
| | Administrator Manager for |
| | more information. |
| Change Password | Change password after login. |
| | Refer to 8.1.7.2 Changing |
| | Password for more information. |

4.2.6 NetTools

The following table lists the $\ensuremath{\textbf{NetTools}}$ menu items and their descriptions.

| Menu Item | Description |
|------------------|------------------------------------|
| Device Discovery | Search for devices by IP address. |
| | Refer to 8.1.9.1 Device Discovery |
| | for more information. |
| Advanced Device | Search for devices within IP |
| Discovery | segment by IP address and |
| | update topology automatically by |
| | selecting response from provided |
| | options. Refer to <u>8.1.9.2</u> |
| | Advanced Device Discovery for |
| | more information. |
| Trace Route | Lists all the intermediate routers |
| | a connection must pass through |
| | to get to reach its destination. |
| | Refer to 8.1.9.3 Trace Route for |
| | more information. |
| TFTP | Upload/Download/Update |
| | configuration files to and from |

| | devices. Refer to $8.1.10$ TFTP for |
|---------------------|-------------------------------------|
| | more information. |
| NetToolbox | Manage devices through Telnet, |
| | Web, Ping and Device Configure |
| | using the IP address. Refer |
| | to 8.1.12 Net Toolbox for more |
| | information. |
| Port Packet Monitor | Monitor the port packet |
| | performance. Refer to 8.1.13 Port |
| | Packet Monitor for more |
| | information. |
| Performance Monitor | Monitor the RMON performance |
| | of a device. Refer to 8.1.14 |
| | Performance Monitor for more |
| | information. |
| MIB Tools | Manage and configure non D-Link |
| MIB Compiler | devices. Refer to 7.4 How to |
| MIB Browser | Configure Devices not in |
| | Supported List for more |
| | information. |
| Topology Generator | Tool to generate a Topology. Refer |
| | to 6.5 Using Topology Generator |
| | for more information. |

4.2.7 Report

The following table lists the **Report** menu items and their descriptions.

| Menu Item | Description |
|------------------|-----------------------------------|
| Configure | Configure a Collector. Refer |
| | to 7.11.1 - Configuring a |
| | Collector for more information. |
| Schedule | Schedule a Collector. Refer |
| | to 7.11.2 - Schedule for more |
| | information. |
| Start | Start a Collector. Refer |
| | to <u>7.11.3 - Start</u> for more |
| | information. |
| Template | Schedule a collector to gather |
| Port Utilization | port, CPU or memory usage |
| CPU Utilization | information. Refer to 7.11.6 - |

| Memory Utilization | Template for more information. |
|--------------------|---|
| Device Inventory | Displays list of devices. Refer |
| | to <u>7.11.4 - Device Inventory</u> for |
| | more information. |
| Report | View report on collected |
| | information. |
| | Refer to 7.11.5 - Report for |
| | more information |

4.2.8 Advanced

| Menu Item | Description |
|---------------------|-----------------------------------|
| Link Capacity Check | Monitor and modify the link |
| | status. Refer to 7.10.9 |
| | Monitoring the Link Status for |
| | more information. |
| Device type Check | Check the network for new and |
| | updated devices. Refer to 7.9.2 |
| | Using Device Type Check for |
| | more information. |
| Safeguard Check | Check the safeguard status of |
| | devices. Refer to 7.9.3 Using |
| | Safeguard Check for more |
| | information. |
| All of ARP info | Retrieve ARP information from |
| | devices in the topology. Refer to |
| | 8.1.11 Retrieving ARP |
| | information for more details. |
| Services Manager | Configure Trap Service or |
| | Syslog Service. Refer |
| | to 7.10.10 - Managing Trap and |
| | Syslog Services. |

The following table lists the **Advanced** menu items and their descriptions.

4.2.9 Help

| Menu Item | Description |
|---------------------------------|---------------------------------|
| D-View Help | Opens D-View online help. |
| Devices Supported | Displays a list of devices |
| | supported by D-Link. |
| D-View Activation Wizard | Helps you obtain the activation |
| | code. |
| D-View Site | Opens up D-View website in |
| | browser |
| About D-View | Displays the About D-View |
| | window. |

The following table lists the **Help** menu items and their descriptions.



Using D-View

5.1 Getting Started

Before proceeding with this section, D-Link recommends you familiarize yourself with the User Interface. Refer to 4.1 Introduction section.

5.1.1 Login to D-View

After successfully installing D-View, type the default Account and Password for D-View. The default **Account** is Admin and the default **Password** is 111111.

| Enter your acc | ount and password: | \cap |
|----------------|--------------------|--------|
| Account | admin | |
| Password | ***** | |
| | 1 | 0 |

Figure 29: D-View Login screen

Click Option to login to D-View by using different domain-specific administrator accounts to view different topology maps.

5.1.2 Managed IP Feature

The **Managed IP** feature enables the administrator to control which domain can be managed by which user. After the user has successfully logged in with the domain's managed IP, the user will only be able to see that domain. The **Managed IP** feature differs between **Standard Edition** and **Professional Edition**.

Standard Edition: Since D-View Standard is a standalone platform, the Managed IP feature is used to control which user can manage which domain locally. The domain can be divided by different departments or locations, with each department or location having a dedicated user who monitors the network status. Professional Edition: D-View Professional supports Client-Server architecture, thus allows for users to install D-View Professional to different locations. Each user can manage and monitor their responsible domain. The administrator at the company headquarters can user the Super Domain account to manage and monitor all domains.

The user can also configure each account's access rights to limit features available while using D-View. This can be done by accessing **System > Administrator Manager**.

To enable **Managed IP** click **Option** on the D-View login screen.

| D Login D-¥iew : Local Mode | |
|---|---|
| Enter your account and password: Account Password Password | |
| Login <u>C</u> ancel <u>O</u> ption>> | , |

Figure 30: D-View Login screen option button

| D Login D-∀iew Enter your acc | : Local Mode | |
|----------------------------------|-------------------------------------|----|
| Account | admin | |
| Password | ***** | |
| Managed IP | 172 . 17 . 5 . 41 | |
| | Login <u>C</u> ancel <u>O</u> ption | << |

Figure 31: D-View Login screen Managed IP feature

To configure Managed IP:

1. Click System > Domain Manager.

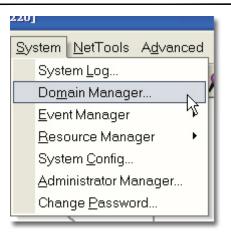


Figure 32: Domain Manager selection

- 2. Select a domain.
- 3. Click on the **Workstation** tab.

| D Domain Manager 🔀 |
|--|
| Domain Name: Domain Information Workstation D-Link HQ Manage Station D-Link Taiwan Workstation Name Workstation IP Super Admin 172.17.5.40 Station Info Station Name: Super Admin Station Info Station IP: 172 . 17 . 5 . 40 Open Create Modify Delete Close |

Figure 33: Domain Manager

4. Enter the Station Name and Station IP.

Repeat the above process for all domains.

When logging in using **Super Domain**, the administrator can manage and monitor all domains.

| D D-View 6.0 - [Super Domain::Roof?1] | - 6 🛛 |
|--|-------|
| 🖸 Elle View Iopology Application System NetTools Advanced Plug-In UserMar Help | - 8 × |
| | |
| Illenamber Topology W X Image: Constrained and the second and the se | |
| | > |
| Time Source Device IP Description Image: Source Device IP Description | |

Figure 34: Super Domain

When logging in using the account for the company headquarters, the administrator can only manage and monitor the devices situated in the headquarters.

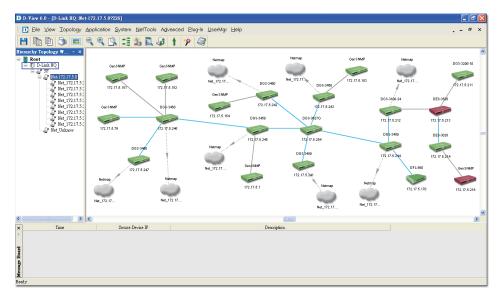


Figure 35: Headquarters account

When logging in using the account for branch office, the administrator can only manage and monitor the devices situated in the branch office.

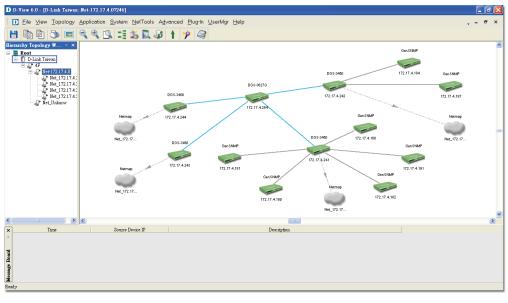


Figure 36: Branch office account

5.1.3 System Configuration

D-View supports two modes of authentication – **Local** and **Radius Authentication**. To configure the root domain name, management station and authentication information, go to **System** > **System Config**. By default D-View uses **Local Authentication**.

| asic Config loot Topo Name : | Root | Authentication Config | n 🦳 Radius Auth | entication | |
|---------------------------------|--------------|-----------------------|-----------------|------------|-------|
| Management Stati | | Radius IP | Port | Key | |
| Management IP : | 172.17.5.101 | | | | Add |
| Local IP : | 172.17.5.154 | IP: | Port: | Key: | Delei |

Figure 37: System Config screen

Local Authentication

The account and password information is stored in the D-View database.

Radius Authentication

- The information is stored in the Radius server database.
- If the account and password information entered is valid, the server accepts the authentication and allows the administrator to manage and monitor the network.

5.1.4 Domain Manager

In a real environment administrators often need to manage multiple domains of the network. D-View can divide the entire network into many designated domains for administrators to manage different network. An administrator needs to create a domain before working on any topology. When creating a new domain, the administrator should allocate IP address of the workstation.

Use **Domain Manager** to create, delete and modify the domain information.



After logging in, D-View creates a Super Domain and the IP address of the workstation by default. A super domain is a virtual domain which manages the topologies of all the domains. Refer to <u>6.1 Creating a</u> <u>Topology</u> to manually create a topology using Domain Manager.

5.1.5 Startup Wizard

The **Startup Wizard** helps you create a Topology. The Wizard will automatically create a new topology based on the information you provide. **To create a topology using the Startup Wizard:**

1. Click **File> Startup Wizard**. The **Startup Wizard** screen displays.



Figure 38: Startup Wizard screen

2. Click Next. The Domain Manager screen displays.

| D Domain Manager | | × |
|--------------------------------------|---|---|
| Domain Name: Super Domain Test | Domain Information Workstation | |
| | Domain Name: Test | |
| | Please specify a domain name to create a domain for management. To modify or delete a domain, select it from the Domain Name list and then click "Modify" or "Delete". | |
| | Crea <u>t</u> e <u>M</u> odify <u>D</u> elete <u>N</u> ext | |

Figure 39: Domain Manager screen

- 3. Enter the name of your new **Domain**.
- 4. Click **Next**. The **Add Netmap** screen displays.

| D Add Netmap | | |
|--------------|--------------|--|
| Netmap Info | | |
| Name: | Topology | |
| Description: | Test | |
| | | |
| | <u>N</u> ext | |

Figure 40: Add Netmap screen

- 5. Enter the **Netmap Name** and **Description**.
- 6. Click Next. The Select Network Adapter screen displays.

| Select a network | adaptor and proceed. | |
|------------------|----------------------|---|
| IP Address | MAC Address | 1 |
| 0.0.0.0 | 00:16:41:B2:F6:A9 | - |
| 10.254.0.134 | 00:18:DE:1F:1E:59 | |
| 192.168.11.10 | 00:18:F3:54:93:8A | |
| | | |

Figure 41: Select Network Adapter screen

- 7. Select a network adapter to build the topology.
- 8. Click **OK**. The **Topology Generator Wizard** screen displays.

| ology Generator Wizard | |
|--|-------|
| The Topology Generator Wizard will help you generate a Topology | |
| - Analysis Mode | |
| Cocal Network | |
| C Designated Network | |
| Topology Name | |
| Enter the Name for the Topology: | |
| Topology_1 | |
| | |
| | |
| Beak Nices | |
| < <u>B</u> ack <u>N</u> ext > | Cance |

Figure 42: Topology Generator Wizard screen

- Select either Local Network or Designated Network.
 Local Network accesses devices in the local network and Designated Network accesses devices by specifying the IP range.
- 10. Enter a name for Topology Generator analysis.
- 11. Click **Next**. The **Topology Analysis Configuration** screen displays.

| Topology Generato | Wizard (| × |
|-------------------|---|---|
| Topology Analysis | Configuration | |
| | | _ |
| Top netv | ology Generator will start to analyze local | |
| LL netv | | |
| Local IP : | 172.17.5.154 | |
| Subnet Mask : | 255.255.255.0 | |
| SNMP Community | String Setting | |
| Read Only : | public | |
| Read/Write : | private | |
| | | |
| | < <u>B</u> ack Finish Cancel | 1 |
| | | - |

Figure 43: Topology Analysis Configuration screen

- 12. The topology generator analyzes the local network for the IP address and subnet mask. The **SNMP Community String Setting** is by default defined in D-View.
- 13. Click **Finish** to generate the topology. The **Topo Export** screen displays.

| Торо Ех | port |
|----------|--|
| Торо Ехр | ort |
| Select a | Domain to export the generated topology |
| From : | C:\Program Files\D-Link\D-View\delconfig\Topology_1 <u>B</u> rowse |
| | Domain: Netmap: |
| To : | Domain_1 Test |
| | <u>Export</u> <u>C</u> ance |
| | |

Figure 44: Topo Export screen

14. Click **Export** to export the generated topology to the Netmap. D-View displays the status of the export.

After completing the startup wizard's initial process, you can manage and monitor devices as described in the following chapters.



Working with Topologies

6.1 Creating a Topology

In D-View there are two ways to create a topology. They are:

- Using Startup Wizard: The wizard guides the users to create a topology.
 Refer to <u>5.1.5 Startup Wizard</u> to create a topology.
- Create a topology manually.

To manually create a topology:

 Go to System > Domain Manager and create a new Domain to manage the topology.

Super Domain is by default a virtual domain from which the topologies of all other existing domains can be managed.

| D Domain Manager | | × |
|--|---|---|
| Domain Name: Super Domain Domain_1 | Domain Information Workstation | |
| | Domain Name : Domain_1 | |
| | Please specify a domain name to create a domain for management. To modify or delete a domain, select it from the Domain Name list and then click "Modify" or "Delete". | |
| 0 | pen Create Modify Delete Close | |

Figure 45: Domain Manager screen

2. Create a netmap. To create a netmap, right-click on the domain in the **Hierarchy Topology Workplace**, and select **Add Netmap**.

| ierarchy Topology | Workplace 🔻 🗙 |
|-------------------|-----------------------|
| 📲 Root | |
| 🖻 🌓 Domain_1 | |
| 🚊 🦨 Topolog | y_1 |
| 🖻 🦨 Net- | |
| | Net_172.17.5.241 |
| - Q - | Net_172.17.5.242 |
| | Net_172.17.5.243 |
| | Net_172.17.5.244 |
| | Net_172.17.5.245 |
| | Unknow |
| Domain_2 | |
| | <u>R</u> efresh |
| | Add Netmap |
| | Topo Export/Import |
| | Domain Manager |
| | Polling Config |
| | Event Viwer by Netmap |
| | Topology Generator |

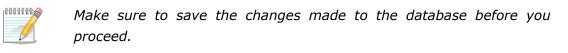
Figure 46: Hierarchy Topology Workplace screen

3. The Add Netmap screen displays.

| D Add Netmap | | × |
|-----------------|----------|---|
| Netmap Info | | |
| Name: | Topology | |
| Description: | Test | |
| Save the Topolo | ogy. | |
| ОК | Cancel | |

Figure 47: Add Netmap screen

- 4. Enter the **Name** and **Description** for the Netmap.
- 5. Click **OK**.



- 6. There are three ways to accomplish the next task. They are:
 - Go to NetTools > Device Discovery to search for and add devices into the Netmap manually. Then create links between the devices. Refer to <u>8.1.9.1 Device Discovery</u> for more information.

| Start IP: | 192 . 168 . | 11 . 10 | D |
|---|--|--|---------------|
| End IP: | 192 . 168 . | 11 . 252 | |
| Community: | public | | |
| Туре: | SNMP Devices | • | <u>C</u> lose |
| Current IP: | 192.168.11.62 | | |
| | | | |
| | | 1 | |
| Search | | Stop | |
| <u>S</u> earch | | Stop | |
| | Type | Stop | Description |
| Device Name ev-192.168.11.11 | Type 1 Cisco 2611 | IP Address 192.168.11.11 | Description |
| Device Name ev-192.168.11.11 ev-192.168.11.11 | Type 1 Cisco 2611 7 DES6500 | IP Address 192.168.11.11 192.168.11.17 | Description |
| Device Name ev-192.168.11.11 ev-192.168.11.11 ev-192.168.11.11 | Type 1 Cisco 2611 7 DES6500 5 DGS3427 | IP Address 192.168.11.11 192.168.11.17 192.168.11.15 | Description |
| Device Name ev-192.168.11.11 ev-192.168.11.17 ev-192.168.11.15 ev-192.168.11.16 | Type 1 Cisco 2611 7 DES6500 5 DGS3427 6 DES3828P | IP Address 192.168.11.11 192.168.11.17 192.168.11.15 192.168.11.16 | Description |
| Device Name ev-192.168.11.11 ev-192.168.11.11 ev-192.168.11.13 ev-192.168.11.14 ev-192.168.11.14 ev-192.168.11.14 | Type 1 Cisco 2611 7 DES6500 5 DGS3427 6 DES3828P 8 DGS3324 | IP Address 192.169.11.11 192.169.11.17 192.168.11.17 192.168.11.15 192.168.11.16 192.168.11.18 | Description |
| Device Name ev-192.168.11.11 ev-192.168.11.17 ev-192.168.11.17 ev-192.168.11.16 ev-192.168.11.16 ev-192.168.11.12 | Type 1 Cisco 2611 7 DES6500 5 DGS3427 6 DES3828P 8 DGS3324 2 DWL2700 | IP Address 192.168.11.11 192.168.11.17 192.168.11.15 192.168.11.16 192.168.11.18 192.168.11.22 | Description |
| Search | Type 1 Cisco 2611 7 DES6500 5 DGS3427 6 DES3828P 8 DGS3324 2 DWL2700 | IP Address 192.169.11.11 192.169.11.17 192.168.11.17 192.168.11.15 192.168.11.16 192.168.11.18 | Description |

Figure 48: Device Discovery screen

- From the Topo Manager Toolbar, Click Add Devices [1]. OR use the Copy/Paste function. Refer to 8.1.2 Copy/Paste for more information.
- Continue to **Export** your topology. Refer to <u>6.3 Using Topo</u> <u>Export/Import</u> for more information.

6.2 Creating Administrator-specific Topologies

D-View manages the entire topology in domain mode; administrators can create different topology maps to be managed by different administrators. Only the administrators in the Super Domain can manage the entire network.

To create multiple topologies with Domain Manager:

- 1. Login to D-View with **Super Domain** administrator access.
- Go to System > Domain Manager and then create two domains. For example: Domain_1, Domain_2.

| D Domain Manager | | < |
|--|--|---|
| Domain Name: Super Domain Domain_1 Domain_2 | Domain Information Workstation Domain Name : Domain_1 Please specify a domain name to create a domain for management. To modify or delete a domain, select it from the Domain Name list and then click "Modify" or "Delete". | |
| | pen Crea <u>te M</u> odify <u>D</u> elete <u>C</u> lose | |

Figure 49: Domain Manager screen

 Select a domain, update the Workstation information and then click Create to define the management workstation in D-View. For example: Domain_1, Station_1 and IP address.

| Domain Name: Super Domain Domain_1 Domain_2 | Domain Information Workstation Manage Station Workstation Name Workstation IP | |
|--|---|--|
| | Station_1 172.231.255.11 | |
| | Station Info Station Name: Station IP: | |
| | Open Create Modify Delete Close | |

Figure 50: Domain Manager: Workstation screen

- 4. Repeat the previous step for the other domain.
- 5. Create a topology for each domain.

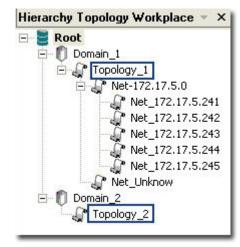


Figure 51: Hierarchy Topology Workplace

 Login to D-View by using different domain-specific administrator accounts to view different topology maps. For example: Click **Option** to login with **Domain_1** administrator account by using **Domain_1 Station:** 172.231.255.11.

| Enter your acc | ount and password: | \cap |
|----------------|----------------------|--------|
| Account | admin | |
| Password | ****** | |
| Managed IP | 172 . 231 . 255 . 11 | - |

Figure 52: Login screen

7. This administrator can view only the **Domain_1** topology.

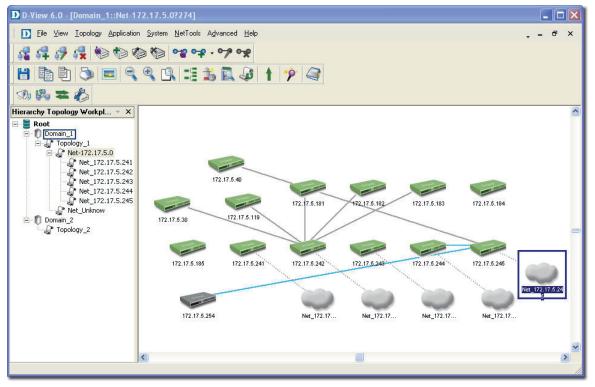


Figure 53: Domain_1 window

6.3 Using Topo Export/Import

D-View allows you to export to or import from an XML file. Use this feature to make regular backups.

- To export or import topology information:
- 1. Go to **Application > Topo Export/Import**. The **Topo Export/Import** screen displays.

| D Торо Ехрог | t/Import | | | | |
|----------------------------|------------------|----------------------|---------|------------|---------------|
| Topo Export/I | mport | | | | |
| Export | C Import | Domain: | | Netmap: | |
| | | Domain_1 | • | Topology_1 | • |
| Select the s | source or destir | nation: | | | |
| C:\Progran | n Files\D-Link\E |)-View\delconfig\lnc | lex.xml | | wse |
| | | | | | |
| | | | | Apply | Class |
| | | | _ | Apply | <u>C</u> lose |

Figure 54: Topo Export/Import screen

- 2. Select either **Export** or **Import**.
 - **Export:** Backup/save topology data to an external XML file.
 - **Import:** Restore topology data from an XML file.
- 3. Select the **Domain**.
- 4. Select the **Netmap**.
- 5. Browse to select the file to export to or import from.
- 6. Click **Apply**.

Refer to <u>8.1.8 Restoring and Backing Up D-View</u> to restore and backup D-View.

6.4 Topology Generator Principle

Using **ARP** (Address Resolution Protocol) and forwarding table information in devices, D-View creates a topology for a specific network. The following steps describe the principle behind **Topology Generator**. **Topology Generator**:

- 1. Discovers the devices by getting the ARP information in devices, and identifies the relationship among devices by their MAC or IP address.
- 2. Identifies the device type.
- 3. Retrieves the forwarding table information in switches to obtain the relationship among switch ports and MAC address of the devices.
- 4. Creates a Topology.



The generated topology can be incorrect if the switches' forwarding table information is incorrect or incomplete. The topology created by Topology Generator can be considered as a reference in completing the actual topology map.

6.5 Using Topology Generator

Use the **Topology Generator** to create the topology map. **To use the Topology Generator:**

 Go to NetTools > Topology Generator. The Topology Generator Wizard screen displays.

| Analysis Mode | | |
|---|----------|--|
| C Local Network | 15 | |
| C Designated Netw | ork | |
| Topology Name Enter the Name for the | Topology | |
| Topology_1 | | |
| | | |

Figure 55: Topology Generator Wizard screen

- 2. Select the **Analysis Mode**.
- 3. Enter the **Topology** Name.
- Click Next. The Topology Analysis Configuration screen displays. The topology generator analyzes the local network for the IP address and Subnet Mask. The SNMP Community String Setting is by default defined in D-View.

| pology Analys | is Configuration | |
|---------------|--|-------|
| | pology Generator will start to analyze work | local |
| Local IP : | 172 . 17 . 5 . 154 | |
| Subnet Mask : | 255.255.255.0 | |
| SNMP Communi | ty String Setting | |
| Read Only : | public | |
| Read/Write : | private | |

Figure 56: Topology Analysis Configuration screen

5. Click **Finish** to generate the topology. The new topology displays in the window.



For a designated network, enter the IP address and ensure that the D-View management console can access the designated subnet.

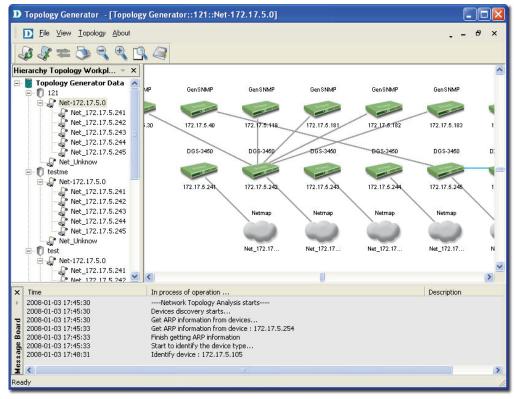


Figure 57: Generated Topology window

6. Go to **Topology** > **Topo Export** or select and right click on the netmap of the generated Topology to select **Topo Export**.

| D Topo Ex | port 🔀 |
|------------|---|
| Г Торо Ехр | ort |
| Select a | Domain to export the generated topology |
| From : | C:\Program Files\D-Link\D-View\delconfig\Topology_1 |
| | Domain: Netmap: |
| To : | Domain_1 test |
| | <u>Export</u> |

Figure 58: Topo Export screen

7. Click **Export** to export the generated topology.

6.6 Rearranging the Topology

Manually rearranging multiple devices and links in a topology is a laborious and difficult process. But with D-View, you can:

- Rearrange Totally
- Rearrange by step

6.6.1 Using Rearrange Totally

Open and select a device in the topology. Go to **Topology** > **Rearrange Totally**. The system will rearrange the linked devices in hierarchy considering the selected device as the topmost device.

6.6.2 Using Rearrange by step

Open and select a device in the topology. Go to **Topology > Rearrange by step.** The system will rearrange the linked devices in hierarchy considering the selected device as the top device.

| Before Rearranging | After Rearranging |
|--|---|
| 172.111.112.254 172.111.112.254 172.111.112.254 172.111.112.254 172.111.112.254 172.111.112.254 | 17.3 19.254 17.3 |

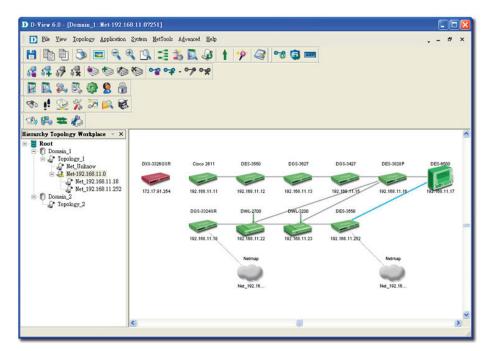
Figure 59: Topology before and after rearranging

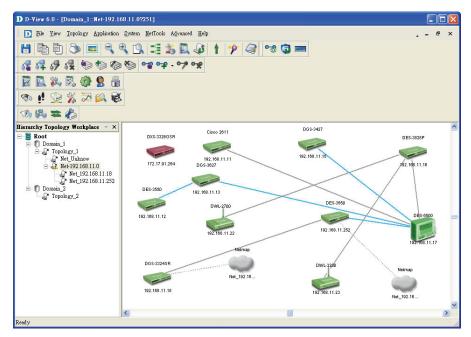
6.6.3 Rolling Back a Topology

After rearranging the topology, you can restore the saved topology that was created initially from the database.

To Rollback a Topology:

Go to **Topology** > **Topology Rollback**. The Topology reverts to the previous settings. The following screenshots displays the sequence of steps by using the Topology Rollback function.





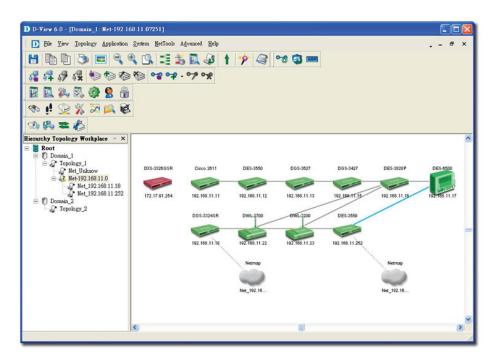


Figure 60: Sequence of steps displaying the Topology Rollback function



Managing and Monitoring Devices

7.1 Identifying Devices

To view the installed device modules, go to **Help** > **Devices Supported**. Information about all the supported devices is displayed. D-View, by default, supports all D-Link devices that have been added to D-View.



If you cannot find the device modules in the list, download and install the device management modules from the D-Link Website.

| Vender | Device Type | Device Alias |
|--------|-------------|---------------|
| D-Link | DES3526 | DES-3526 |
| D-Link | DES3550 | DES-3550 |
| D-Link | DES3828 | DES-3828 |
| D-Link | DES3828DC | DES-3828DC |
| D-Link | DES3828P | DES-3828P |
| D-Link | DES6500 | DES-6500 |
| D-Link | DG83308FG | DGS-3308FG |
| D-Link | DGS3324SR | DGS-3324SR |
| D-Link | DGS3426 | DGS-3426 |
| D-Link | DGS3427 | DGS-3427 |
| D-Link | DGS3450 | DGS-3450 |
| D-Link | DGS3612G | DGS-3612G |
| D-Link | DGS3627 | DGS-3627 |
| D-Link | DGS3627G | DGS-3627G |
| D-Link | DGS3650 | DGS-3650 |
| D-Link | DWL2100 | DWL-2100 |
| D-Link | DWL2700 | DWL-2700 |
| D-Link | DWL3200 | DWL-3200 |
| D-Link | DWL7700 | DWL-7700 |
| D-Link | DXS3326GSR | DXS-3326GSR |
| D-Link | DXS3350SR | DXS-3350SR |
| | | |
| | | |
| | | |
| | | Refresh Close |

Figure 61: Devices Supported screen

Refer to <u>7.3 Customizing Devices</u> to extend the device module list.

7.2 Multi-vendor Support

Only the following modules can be used by third-party devices:

- GenSNMPDeviceModule: D-View recognizes SNMP enabled devices irrespective of device type, vendor and model number. Refer to <u>7.8</u> <u>Retrieving OID of the device</u> for more information.
- MIB Browser/Compiler: The MIB compiler translates the MIB from its normal ASN.1 format to a format that is comprehensible by other applications. Refer to <u>7.4 How to Configure Devices not in Supported List</u> for more information.
- Telnet, Web management tools: Refer to <u>Management Methods</u> for more information.
- Monitoring performance status by ICMP/SNMP. Refer to 7.10.2 Setting the Devices to Poll for more information.
- Extension of supported device types with **Device Customization** functional module. Refer to <u>7.3 Customizing Devices</u> for more information.

7.3 Customizing Devices

D-View provides a flexible method to manage devices that can be identified and managed by configuring the interface between platform and device module.

To customize devices:

 Go to Application > Device Customization. The Device Customization screen displays.

| Vender : | D-Link • | | Apply |
|-----------------|-------------------------------------|-----------------|-----------------|
| LOGO : | C:\WINDOWS\system32\Resource | Browse | De <u>l</u> ete |
| evice Type Info | | | |
| Device Type : | DES3526 | | Apply |
| Max Ports : | 26 | | <u>D</u> elete |
| Alias : | DE8-3526 | | |
| System OID : | 1.3.6.1.4.1.171.10.64.1 | | |
| Up Icon : | C:\Program Files\D-Link\DevModule\R | B <u>r</u> owse | |
| Down Icon : | C:\Program Files\D-Link\DevModule\R | Br <u>o</u> wse | |
| Unpoll Icon : | C:\Program Files\D-Link\DevModule\R | Bro <u>w</u> se | |
| Program : | C:\Program Files\D-Link\DevModule\D | Brow <u>s</u> e | |

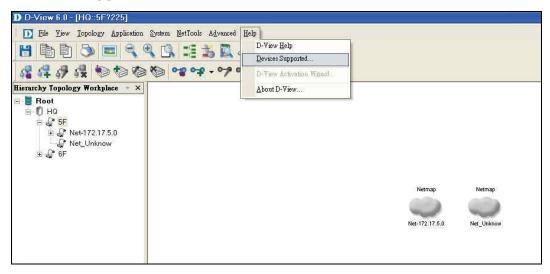
Figure 62: Device Customization screen

- 2. From the **Device Customization** screen, you can modify the device type properties in the dialog.
 - **Vendor:** Select/enter a vendor from the drop-down list.
 - **Logo:** Select a logo for the device module.
 - **Device Type:** Select/enter the device type.
 - Max Ports: Enter the maximum number of ports, depending on the device.
 - Alias: Enter an alias name for the device.
 - **System OID:** Enter the OID value of the device. Refer to <u>7.8</u> <u>Retrieving OID of the device</u> to obtain the OID of a device.
 - **Up, Down, Unpoll icons:** Browse to define and customize the device icons.

- Program: Specify the location of D-View module. Double-click on the device icon in the topology to manage multiple devices through a D-View Module (graphic interface).
- 3. Click **Apply** to save the Device Type info into the database.
- 4. Click **Refresh** to clear the fields.

7.4 How to Configure Devices not in Supported List

To verify if a switch is supported by D-View 6.0, go to **Help > Devices Supported**.



| Figure 63: Devices Supported function | Figure 63: | Devices Supported function |
|---------------------------------------|------------|----------------------------|
|---------------------------------------|------------|----------------------------|

| Devices | Supported | | 2 |
|---------|-------------|--------------|-------|
| Vender | Device Type | Device Alias | ^ |
| D-Link | DES1228 | DES-1228 | |
| D-Link | DES1252 | DES-1252 | |
| D-Link | DES3028 | DES-3028 | |
| D-Link | DES3028P | DES-3028P | |
| D-Link | DES3052 | DES-3052 | |
| D-Link | DES3052P | DES-3052P | |
| D-Link | DES3250TG | DES-3250TG | |
| D-Link | DES3526 | DES-3526 | |
| D-Link | DES3528 | DES-3528 | |
| D-Link | DES3550 | DES-3550 | |
| D-Link | DES3828 | DES-3828 | |
| D-Link | DES3828DC | DES-3828DC | |
| D-Link | DES3828P | DES-3828P | |
| D-Link | DES6500 | DES-6500 | |
| D-Link | DES7206 | DES-7206 | |
| D-Link | DES7210 | DES-7210 | |
| D-Link | DFL1600 | DFL-1600 | |
| D-Link | DFL1610 | DFL-1610 | |
| D-Link | DFL1660 | DFL-1660 | |
| D-Link | DFL210 | DFL-210 | |
| D-Link | DFL2500 | DFL-2500 | |
| D-Link | DFL2510 | DFL-2510 | |
| D-Link | DFL2510F | DFL-2510F | |
| D-Link | DFL2560 | DFL-2560 | |
| D-Link | DFL2560F | DFL-2560F | _ |
| D-Link | DFL260 | DFL-260 | ~ |
| | | Refresh | Close |

Figure 64: Devices Supported list

7.4.1 Discover Devices

In order to discover a device, follow the steps below. The DES-3028 will be used as an example for Device Discovery.

To search for the device and then add it to the topology map go to **NetTools** > **Device Discovery.**

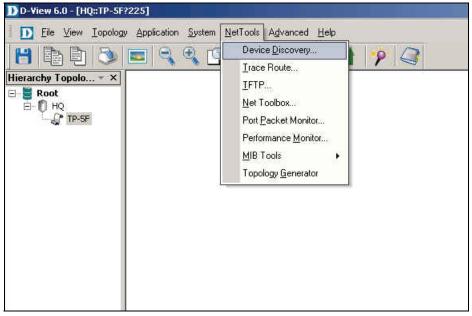


Figure 65: Device Discovery function

Enter the information related to the switch:

- IP address.
- Community name.

Next, click **Search.** Select the discovered device and click **Add to Topo.**

| RECEIPTING CONTRACT | 10 . 90 | . 90 . 90 | D |
|---------------------|----------------------------------|-------------|-------------|
| End IP: | Contraction of the second of the | . 90 . 90 | |
| Community: | public | | Close |
| Туре: | SNMP Devices | * | |
| Current IP: | 10.90.90.90 | | |
| | | | |
| <u>S</u> earch | | Stop | |
| | | | |
| evice Name | Туре | IP Address | Description |
| v-10.90.90.90 | GenSNM | 10.90.90.90 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Figure 66: Device Discovery screen

To change the device type:

1. Double click the device icon on the topology map to launch the D-View module.

| D-Link DES-3028 Fa | nd Ethernal Switch |
|--|----------------------------------|
| DeviceInfo DeviceMana | tet for the |
| System Info Interface Info App Table Rooter Table Eowarding Table RMCN Sganning tree | |
| | Figure 67: GenSNMP D-View module |

2. Check device's OID information, go to **DeviceInfo > System Info.**

| Name: . | | - Description D-Link DES-3028 Fast Ethernet Switch |
|---------------------------------|-----------|--|
| Location: | | |
| Run Time: 2 Hours | 9 Minutes | |
| System OID: | | |
| 1.3.6.1.4.1.171.10.6 | 33.6 | 2 |
| 1.3.6.1.4.1.171.10.6 Service | | |
| 1.3.6.1.4.1.171.10.6 Service | | Transport T Application |

Figure 68: System Information screen

 Launch the Device Customization tool and add the OID information to D-View's database, go to Application > Device Customization.

| D-View 6.0 - [HQ::TP-5F? | 225] |
|---|---|
| Eile View Iopology | Application System NetTools Advanced Help Batch Config Topo Export/Import |
| Hierarchy Topolo • × Protection Root Protection HQ Protection HQ Protection HQ Protection HQ | Device Customization |
| | Gen S NMP Constant f0 e0.e0 e0 |
| | |

Figure 69: Device Customization function

- 4. Enter the vendor's information.
 - Vendor: Enter vendor's name.
 - Logo: Upload a logo for the vendor.

- 5. Enter the device type.
 - Device Type: Enter the model name.
- 6. Enter the alias name & OID.
 - Alias: The name entered is displayed on the topology map.
 - System OID: Device's OID number.
- 7. Click **Apply**.

| D Device Customi | zation | | |
|-------------------|--------|---------|--------|
| Vender Informatio | on | | |
| Vender: | • | | Apply |
| LOGO : | | Browse | Delete |
| Device Type Info | |) | |
| Device Type : | • | | Apply |
| Max Ports : | 0 | | Delete |
| Alias : | | | |
| System OID : | | | |
| Up Icon : | | Browse | |
| Down Icon : | | Browse | |
| Unpoll Icon : | | Browse | |
| Program : | | Browse | |
| | | | |
| | | Refresh | Close |

Figure 70: Device Customization screen

There are two **Apply** buttons in the **Device Customization** window: Vendor Information:

- If the vendor's name is not seen in the list, you can create a new one.
- Enter the vendor's name and click **Browse** to upload a logo, then click **Apply.**

Device Type Info:

To add a new device module into D-View's database, enter the vendor's information.

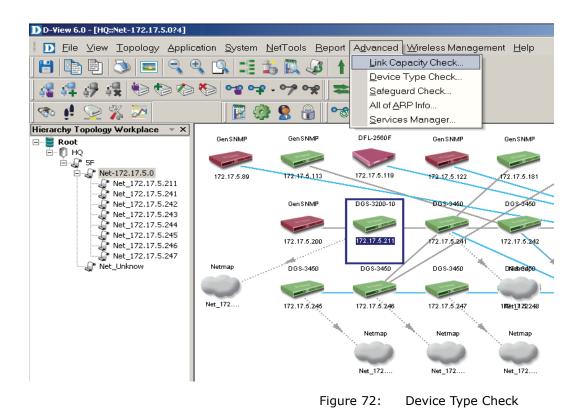
If the model name did not change, be sure to execute **Device Type Check** to update the database. Save the changes.

| Vender: | D-Link • | Apply |
|---------------------------------|---------------------------------|--------|
| LOGO : | C:\WINDOWS\system32\panelbmp\D- | Delete |
| evice Type Info | | 1 |
| and a second stream of the | DES-3028 • | Apply |
| evice Type Info evice Type : | | Apply |

Figure 71: Device Customization

The purpose of Device Type Check is to update the customized information to the database.

 Launch the Device Type Check function, go to Advanced > Device Type Check.



- 2. Click **Check** to load the data from the database.
- 3. Click **Update** to update the database with the correct model name.

| Device Name | IP | Туре | Checked Type | Read Commu | Write Commu | |
|-------------|-------------|---------------|--------------|------------|-------------|------------|
| 10.90.90.90 | 10.90.90.90 | GenSNMPDevice | DES-3028 | public | private | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | Check | D Update | <u>C</u> I |

Figure 73: Device Type Check

In this case, the model name changes from GenSNMP to DES-3028. Click **Save** to save the changes.

| D-View 6.0 - [HQ::TP-5F | ?225] | |
|--|--|--|
| Eile ⊻iew Iopolog | y <u>Application</u> <u>System</u> <u>NetTools</u> Advanced <u>H</u> elp | |
| 💾 🖻 🖻 🌖 | 📼 🔍 🔍 🕮 🛣 🖾 🥔 🕇 🦻 🥥 | |
| Hierarchy Topolo • × E Boot E Noot | | |
| TP-SF | | |
| | | |
| | DES-3028 | |
| | 10.90.90.90 | |
| | | |
| | | |
| | | |

Figure 74: DES-3028 identified in the topology

In order to configure the Batch Config support for DES-3028's firmware update, the associated function OID for the device has to appear in the list.

| | | Config File Manager | Port Status |
|--|---|--|---|
| Save Re | noot RMON | Safeguard Engine | Spanning Tree Firmware Update |
| Device Name Dev-172.17.5.89 Dev-172.17.5.113 Dev-172.17.5.113 Dev-172.17.5.113 Dev-172.17.5.122 Dev-172.17.5.181 Dev-172.17.5.182 Dev-172.17.5.181 Dev-172.17.5.200 Dev-172.17.5.211 Dev-172.17.5.241 Dev-172.17.5.243 Dev-172.17.5.243 Dev-172.17.5.244 Dev-172.17.5.245 Dev-172.17.5.246 Dev-172.17.5.248 Dev-172.17.5.248 Dev-172.17.5.248 Dev-172.17.5.248 Dev-172.17.5.248 Dev-172.17.5.248 | GenSNMPDevice DFL2560F GenSNMPDevice GenSNMPDevice GenSNMPDevice DGS3200-10 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 | IP Status 172.17.5.89 172.17.5.113 172.17.5.119 172.17.5.121 172.17.5.181 172.17.5.182 172.17.5.182 172.17.5.200 172.17.5.201 172.17.5.241 172.17.5.241 172.17.5.241 172.17.5.243 172.17.5.243 172.17.5.244 172.17.5.245 172.17.5.247 172.17.5.247 172.17.5.248 172.17.5.248 172.17.5.254 172.17.5.254 | Config By Device Type DXS3328555F DGS33125R DGS3200-10 DGS3200-16 DGS3200-24 DES33505R DES3852P DES3852P DES3828P DES3828P DES3828C DES3828C DES3828C DES3828 DES3550 DES3550 DES3526 TimeOut(ms): 3000 Indication Note: Before performing Firmware Update, please ensure TFTP Server has been running on the designated workstation, and the server is reachab for the devices. The status information shown on the panel only indicates a SNMP operation has been sent to the devices successfully. |

Figure 75: DES-3028 not in the list

To customize DES-3028's associated OID functions, add DES-3028 to the firmware update supported device list.

 Open Advanced Option to customize the OID function, go to Application > Batch Config > Advanced Option.

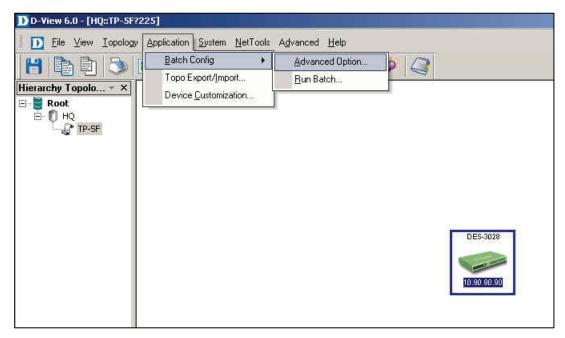


Figure 76: Advanced Option function

- 2. Select FIRM in the functions list and then click **Next**.
- 3. Search for DES-3028 in the **Device Types supported by...** list.
- 4. Click Add to add to the **Configured Devices Types** list.

| Function Name | Function Des | cription | |
|--|--|----------|--|
| FIRM CONFIGURE RESOURCE PORTSTATUS SAVE SPANNING RMON SAFEGUARD REBOOT | Firmware update Config update Resource Manager Port status Save config Spanning tree config RMON config Safeguard Engine config Reboot devices | | |
| Function Info | | | |
| Name: FIR | M | | |
| Description: Firm | iware update | | |
| | | | |
| | | | |

Figure 77: Firmware Update function

| Device Types supported by DFL2560F DWL3200 DWL2100 DGS3627G DGS3324SR DFL1660 DES3528 DES3028 DWL7700 GenSNMPDevice DGS3450 DFL250 DFL2510 DES3828 DGS3612G NFL2500 | Configured Device Types DGS3426 DGS3324SR DGS3324SR DGS3312SR DES3852P DES3852P DES3828P DES3828DC DES3828B DES3226S DES3550 DES3550 DES3556 DHS3626 DHS3226 | Add or Delete devices to support "Batch" configuration. The device list on the left shows all device types currently managed by D-View. The device list on the right shows all the device list on the right shows all the device types that support batch configuration. Note: The non-configured devices are displayed in grey, when you perform the batch configuration. |
|---|--|---|
| Add | Delete Property | |

Figure 78: Adding DES-3028 to the support list

5. Select DES-3028 and then click **Property** to configure the OID function.

| Device Types supported by DFL2560F DWL3200 DGS3627G DGS3324SR DFL1660 DES3528 DES-3028 DWL7700 GenSNMPDevice DGS3450 DFL260 DFL2510 DES2510 DES3028 DGS3612G DFL2500 | | Configured Device Types ▲ DES3828P DES3828DC DES3828DC DES3828 DES3826S DES3550 DES3526 DHS3626 DHS3226 DHS3226 DHS3218 DHS3210 DHS2226S DHS3210 DHS2228S DHS2218S DHS2210S DHS3828 DES3828 ▼ | Add or Delete devices to support "Batch" configuration. The device list on the left shows all device types currently managed by D-View. The device list on the right shows all the device types that support batch configuration. Note: The non-configured devices are displayed in grey, when you perform the batch configuration. |
|--|---|---|---|
| Ād | d | <u>D</u> elete <u>Property</u> | |

Figure 79: Device Type Config

| | OID Name | Type | Description | Read/Write | |
|--------------|----------|--------|---------------------------------------|------------|------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| DID Config | | | OID Value Co | nfig | |
| DID: T | | | Name | Value | |
| Гуре: | • | | | | |
| | | | | | |
| Description: | | | | | |
| Read/Write | | | Name: | | |
| | | | Value: | | |
| | | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | |
| | Add | Delete | 11 | | - 10 |

Figure 80: OID Config screen

Follow these steps to retrieve the OID information:

- 1. Open the MIB compiler to query the OID information.
 - Go to NetTools > MIB Tools > MIB Compiler.

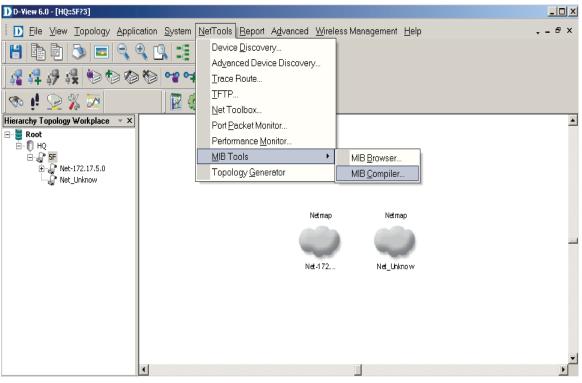


Figure 81: MIB Compiler

- 2. Click **Compile** to open the dialog window.
- 3. Browse **and** open the Genmgmt.mib file for compilation.
- 4. Enter the MIB file's location.

| Module DUNK-ID-REC-MIB | | · · · · · · | | e Path | |
|---------------------------|--|-------------|----------------|--------|---|
| Imported MIB Module Path | | Iodule 🛛 | INK-ID-REC-MIB | | 1 |
| THEOLIEG MITE MODULE LYIN | | | | N. | |
| | NDE3-30201010 NDE330XXP-MID8-010140-070122_D | A bound in | TD M. data Dat | 14 | |

Figure 82: MIB Compiler

| D-Link M18 Compiler Ele Edit View Window Help D D E E E E E E E E E E E E E E E E E E | | |
|--|---|---|
| MIB Sr AGENT-GENERAL-MIB Sr BRIDGE-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB TriANAIfType-MIB | Open Look in: DES30xxp-MIBs-for-lab-070122_b23 • • <t< td=""><td>? × IAA ie8(INE Lag MS⁻ Pkt: Dpen Cancel</td></t<> | ? × IAA ie8(INE Lag MS ⁻ Pkt: Dpen Cancel |

Figure 83: MIB Compiler

- 5. Select **agentBscSwFileLoadType** from the MIB Tree, the OID is displayed in the right window. This allows you to view information about uploaded and downloaded firmware.
 - The number in the Value List will control the upload or download action.

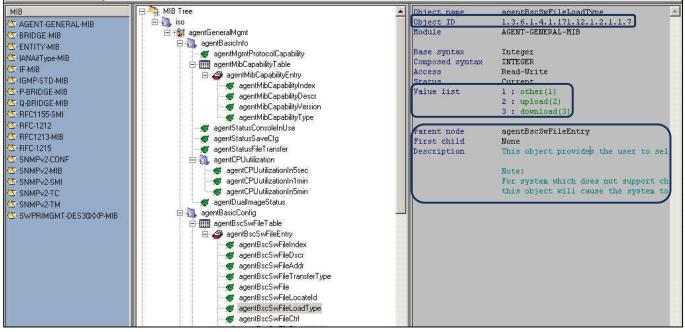


Figure 84:

This slide refers to the DGS-3450 model's configuration; please configure the same for the DES-3028.

OID 1.3.6.1.4.1.171.12.1.2.1.1.7 refers to the file name.

1.3.6.1.4.1.171.12.1.2.1.1.7.1, here 1 refers to the index.

Value list defines the types of actions:

- 2: Upload (backup firmware).
- 3: Download (update firmware).

| Object name | agentBscSwFileLoadType |
|-----------------|--|
| Object ID | 1.3.6.1.4.1.171.12.1.2.1.1.7 |
| Module | AGENT-GENERAL-MIB |
| Base syntax | Integer |
| Composed syntax | INTEGER |
| Access | Read-Write |
| Status | Current |
| Value list | 1 : other(1) 2 : upload(2) 3 : download(3) |
| Parent node | agentBscSwFileEntry |
| First child | None |
| Description | This object provides the user to sel |

Figure 85: MIB Value description screen

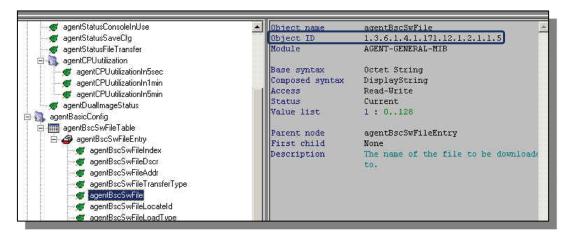
| OID Name | Type Descriptio | n Read/Write |
|--|--|--|
| 1.3.6.1.4.1.171.12.1.2.1.1.5.1 1.3.6.1.4.1.171.12.1.2.1.1.3.1 1.3.6.1.4.1.171.12.1.2.1.1.7.1 | STRING File Name IPADDR Server IP INTEGER Operation Typ INTEGER Procedure | READ WRITE READ WRITE READ WRITE READ WRITE |
| | INTEGER Image | READIWRITE |
| I.3.6.1.4.1.171.12.1.2.1.1.8.1 I.3.6.1.4.1.171.12.1.2.1.1.10.1 ID Config | | READIWRITE |

Figure 86: OID Parameter screen

6. Check the File Name's OID number and update the fields in **OID Config**, as seen in the screen below. Use the MIB-Compiler to enter the parameters.

| D Config | | | | |
|--|----------------------------|---|--------|---|
| OID List | | | [n | dication: |
| OID Name 1.3.6.1.4.1.171.12.1.2.1.1.5.1 | Type Des STRING File Na | scription Read/Write | | Configure the OID properties of the device y entering the Name, Type and Decription. |
| OID Config OID: 1.3.6.1.4.1.171.12.1.2.1.1.5.1 Type: STRING Description: File Name | | D Value Config Name Value LENAME NULL | | |
| Read/Write READ/WRITE | | ame: FILENAME alue: NULL Add | Delete | |
| | | | Close | |

Figure 87: OID Config screen





- 7. Select **FileName** and enter the values of the OID Value Config information.
 - Name: Enter file name.
 - Value: Defines the input format and the space to store data.

| D Config | | | |
|--|------------------|---|---|
| OID List | | | Indication: |
| OID Name 1.3.6.1.4.1.171.12.1.2.1.1.5 | Type 1 STRING | Description Read/Write File Name READ/WRITE | Configure the OID properties of the device by entering the Name,Type and Decription. |
| I OID Config OID: 1.3.6.1.4.1.171.12.1 Type: STRING Description: File Name | | OID Value Config Name Value FILENAME NULL | |
| Read/Write READ/WF | ITE • | Name: FILENAME Value: NULL Add Delet | ie |
| | | | |

Figure 89: OID Value Configuration

- 8. Add Server **IP** to the OID list.
 - Follow the on-screen icons.
 - There is no "value" description in MIB file, please enter 1.

| DID Config | × |
|--|--|
| OID List OID Name Type Description Read/Write 1.3.6.1.4.1.171.12.1.2.1.1.5.1 STRING File Name READ/WRITE 1.3.6.1.4.1.171.12.1.2.1.1.3.1 IPADDR Server IP READ/WRITE | Indication: Configure the OID properties of the device by entering the Name,Type and Decription. |
| OID Config OID: 1.3.6.1.4.1.171.12.1.2.1.1.3.1 Type: IPADDR • Description: Server IP | |
| Read/Write READ/WRITE Name: IP Value: 10.90.90.90 Add Dejete Add Delete Qlose | |

Figure 90: Server IP Parameter Configuration

| 🖉 agentDualImageStatus | Object name | agentBscSwFileAddr |
|---|---|--|
| agentBasicConfig | Object ID | 1.3.6.1.4.1.171.12.1.2.1.1.3 |
| 🖻 🏢 agentBscSwFileTable | Module | AGENT-GENERAL-MIB |
| 😑 🖾 agentBscSwFileEntry | | |
| g agentBscSwFileIndex | Base syntax | IP Address |
| agentBscSwFileDscr | Composed syntax | IpAddress |
| agentBscSwFileAddr | Access | Read-Write |
| agentBscSwFileTransferType | Status | Current |
| gentBscSwFile gentBscSwFileLocateId gentBscSwFileLoaType gentBscSwFileLoaType gentBscSwFileEIncrement gentBscSwFileBIncrement | Parent node First child Description | agentBscSwFileEntry None The IP address where the File where the file will be uploade |

Figure 91: OID Information Query in MIB Compiler

- 9. Add **Operation** Type to the OID list.
 - Repeat the previous procedure.
 - Enter the values: 2 for backup and 3 for update.

| OID Config | × |
|---|---|
| OID List | Indication: |
| OID Name Type Description Read/Write 1.3.6.1.4.1.171.12.1.2.1.1.5.1 STRING File Name READ WRITE 1.3.6.1.4.1.171.12.1.2.1.1.3.1 IPADDR Server IP READ WRITE 1.3.6.1.4.1.171.12.1.2.1.1.7.1 INTEGER Operation Type READ WRITE | Configure the OID properties of the device by entering the Name,Type and Decription. |
| OID Config OID Value Config OID: 1.3.6.1.4.1.171.12.1.2.1.1.7.1 Type: INTEGER Description: Operation Type | |
| Read/Write READ/WRITE Name: Add Delete Add Add Delete Qlose | |

Figure 92: Operation Type Parameter Configuration

| 😑 💣 agentBscSwFileEntry | Object name | agentBscSwFileLoadType |
|--------------------------------|-----------------|------------------------------|
| 🚽 🛒 agentBscSwFileIndex | Object ID | 1.3.6.1.4.1.171.12.1.2.1.1.7 |
| - 🛒 agentBscSwFileDscr | Module | AGENT-GENERAL-MIB |
| 🚽 🛒 agentBscSwFileAddr | | |
| 🥣 🥑 agentBscSwFileTransferType | Base syntax | Integer |
| agentBscSwFile | Composed syntax | INTEGER |
| gentBscSwFileLocateId | Access | Read-Write |
| agentBscSwFileLoadType | Status | Current |
| agentBscSwFileCtrl | Value list | 1 : other(1) |
| agentBscSwFileBIncrement | | 2 : upload(2) |
| | | 3 : download(3) |
| 🥌 🚿 agentMultiImageCtrlID | | |

Figure 93: OID Information Query in MIB Compiler

| DID List | | | | 1 | Indication: |
|-------------------------------------|--|---------------------------------|--|---|---|
| 1.3.6.1.4.1.1 1.3.6.1.4.1.1 | OID Name 71.12.1.2.1.1.5.1 71.12.1.2.1.1.3.1 71.12.1.2.1.1.7.1 71.12.1.2.1.1.8.1 | STRING File Na IPADDR Server | IP READ/WRITE | | Configure the OID properties of the devic by entering the Name,Type and Decription |
| ID Config ID: 1.3.6 ype: INTE | | | D Value Config Name Value IACTIVE 2 CTIVE 3 | | |
| | Procedure | | | | |

- 10. Add Procedure to the OID list.
 - Repeat the previous procedure

Figure 94: Procedure Parameter Configuration

| 🖻 🚭 agentBscSwFileEntry | Object name | agentBscSwFileCtrl |
|--|--|---|
| 🛷 agentBscSwFileIndex | Object ID | 1.3.6.1.4.1.171.12.1.2.1.1.8 |
| ──────────────────────────────────── | Module | AGENT-GENERAL-MIB |
| agentBscSwFileAddr agentBscSwFileTransferType agentBscSwFileLocateId agentBscSwFileLocateId agentBscSwFileLocatIype agentBscSwFileBIncrement agentMultiImageCtrIID agentSystemReset agentRs232PortConfig | Base syntax Composed syntax Access Status Value list | Integer INTEGER Read-Write Current 1 : other(1) 2 : inactive(2) 3 : start(3) 4 : delete(4) 5 : config-as-bootup-fw(5) |



- 11. Add **Image** to the OID list.
 - Repeat the previous procedure.
 - Enter the values: 1 for Image1 and 2 for Image2.

| | Server IP F | Read/Write READ/WRITE READ/WRITE | | he OID properties of the device he Name,Type and Decription. |
|--------------------------------|---|---|--|---|
| .1.3.1 IPADDR .1.7.1 INTEGE | Server IP F | | 10 NA 5355 | |
| .1.7.1 INTEGE | Carolina Car | | | |
| | R Operation Type F | | | |
| | | READIWRITE | | |
| .1.10.1 INTEGE | R Image - F | READ/WRITE | | |
| | Name IMAGE1 IMAGE2 | Value 1 | | |
| | | | | |
| | | | | |
| WRITE • | Name: | | | |
| | Value: | | | |
| 20 V | | | | |
| Add Delete | 1.1 | 1 | | |
| | 12.1.2.1,1.10.1 | 12.1.2.1.1.10.1 MAGE1 IMAGE2 B | 12.1.2.1.1.10.1 Mame Value IMAGE1 1 IMAGE2 2 Name: | 12.1.2.1.1.10.1 IMAGE1 1 IMAGE2 2 IWRITE IMAGE2 2 |

Figure 96: Image Parameter Configuration

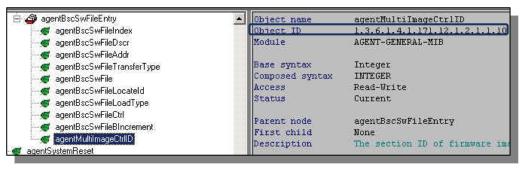


Figure 97: OID Information Query in MIB Compiler

12. Launch the **Run Batch** function. Go to Application > Batch Config > Run Batch. Be sure to enter the parameters correctly to avoid error messages.

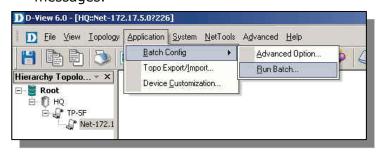


Figure 98: Run Batch function

| Device Name | Device Type | IP | Status | Config By Device Type |
|-------------------|-------------|----|------------------------|-----------------------|
| ₩ Dev-10.90.90.90 | DES3028 | | guration is inval 定 | DES3028 |

Figure 99: Error message during first process initiation

- DES-3028 is now in the list.
- The parameters you configured are in the list now. Select the appropriate information to proceed with the firmware procedure.
- Select **Run Local TFTP** to implement the firmware procedure.

| Nam Oper | | | IP Address Action Session | 10.90.90.1 | 00 | 2 |
|-------------|--|------------|------------------------------|------------|--------|---------|
| Index | Action IP | Type | Tftp File Name | - uters | Status | . Total |
| 1 2 | 10.90.90.90 | Get Get | R102B10.had R102B10.had | | | |
| | | | | | | Clear |
| | | | | | | Close |
| | | | | | | |
| 4 | | | | | 1 | |
| | PM : Start transferr PM : Transfer OK | ing | | | | |

Figure 100: TFTP Server

| | Resource | | | Config Fil | e Manager | P. | Po | irt Status |
|-----------|-------------------------|----------|------|------------|--------------|--|--|---|
| Save | Rebo | iot | RMON | Safe | guard Engine | Spanning T | ree | Firmware Updat |
| Dev | ice Name | Device T | une | IP | Status | - Config By Device " | Гуре | |
| Dev-10.90 | A REPORT OF A REPORT OF | DES-3028 | | 0.90.90 | Success | DES-3028 | • 🔽 s | |
| | | | | | | 0000 | la la | eiece |
| | | | | | | Config Name | | Setting |
| | | | | | | File Name Server IP | R102B 10.90.9 | |
| | | | | | | Operation Type | UPDAT | |
| | | | | | | Procedure | ACTIVE | |
| | | | | | | Image | IMAGE. | 2 |
| | | | | | | C | | |
| | | | | | | Option: U | PDATE | |
| | | | | | | | | |
| | | | | | | | | tíms): 3000 |
| | | | | | | Run Local TFTP | Timeou | ((ms): 3000 |
| | | | | | | Indication | 76 - 90 - 9200 | |
| | | | | | | Note: Before pe please ensure TF | | |
| | | | | | | | | orkstation, and |
| | | | | | | running on the ut | | |
| | | | | | | the server is read | | |
| | | | | | | the server is reac | hable for th | e devices. |
| | | | | | | the server is reac | hable for th mation show | e devices. wn on the panel |
| | | | | | | the server is reac | hable for th mation show MMP oper- | e devices. wn on the panel ation has been |
| | | | | | | the server is reac The status infor only indicates a S | hable for th mation show MMP oper- | e devices. wn on the panel ation has been |
| | | | | | | the server is reac The status infor only indicates a S | hable for th mation show MMP oper- | e devices. wn on the panel ation has been |
| | | | | | | the server is reac The status infor only indicates a S | hable for th mation show MMP oper- | e devices. wn on the panel ation has been |

Figure 101: Configured Parameters in Run Batch screen

In order to Batch Config the reboot function for the DES-3028, follow the steps below:

As seen in the screen below, DES-3028 is greyed-out which means that the reboot function does not support DES-3028 model.

| Resource | And a start of the second s | File Manager | | | rt Status |
|--------------------------|---|---|--|---|--|
| Save Reboot | RMON Sa | feguard Engine | Spanning Tre | e | Firmware Updat |
| Device Name Device | Type IP | Status | onlig By Device Ty | pe | |
| Dev-10.90.90.90 DES-3028 | 10.90.90.90 | | GS3612G | • □ | Select |
| | | | Config Name | 1 | Setting |
| | | R | eboot | NULL | |
| | | I | Option | | |
| | | B op Di Di Di Di Di Di | dication Note: Please select ti perations according to then press "Apply" to rvices. The status in anel only indicates a mit to the devices suu Press "Schedule" to inction. | to device by outton to reb formation sh SNMP oper ccessfully. | pe. boot the selected hown on the lation has been |
| | | | monadina) . | | Tousonse |
| | | | | 0 | ose Apr |

Figure 102: DES-3028 not in supported list

- 1. Open Advanced Option and select Reboot.
 - Please refer to previous session on how to launch the Advanced Option.
- 2. Select DES-3028 and add it to the Configured Device Types list.
 - Click **Property** to edit OID.

| Function Name | Function Description | |
|--|--|--|
| FIRM CONFIGURE RESOURCE PORTSTATUS SAVE SPANNING RMON SAFEGUARD REBOOT | Firmware update Config update Resource Manager Port status Save config Spanning tree config RMON config Safeguard Engine config Reboot devices | |
| 5 | | |
| Function Info | 300T | |
| Name: HEE | | |
| 1.20000020 (DAVE | oot devices | |
| 1.257067E2. (1.273 | oot devices | |
| 1.20000020 (DAVE | loot devices | |
| 1.20000020 (DAVE | ioot devices | |

Figure 103: Reboot function

| Device Types supported by DFL2560F DWL2200 DWL2100 DGS3627G DGS3224SR DFL1660 DES3528 DES3528 DES3528 DWL7700 GenSNMPDevice DGS3450 DFL2510 DFL2510 DES3828 DGS3612G DES3612G DFL2500 | ▲ Configured Device Types DG\$3612G DG\$3627G DG\$3627 DG\$3650 DG\$3450 DG\$3427 DG\$3426 DE\$3828DC DE\$38280 DE\$3828 DE\$3526 DE\$3526 DE\$-3028 | Add or Delete devices to support "Batch" configuration. The device its on the left shows all device types currently managed by D-View. The device list on the right shows all the device types that support batch configuration. Note: The non-configured devices are displayed in grey, when you perform the batch configuration. |
|---|---|--|
| Add | Delete Property | |

Figure 104: Adding of DES-3028 to list

- 3. Update the fields in the OID Config as seen in the screen below.
 - DES-3028 can now be seen in the list.
 - Click **Apply** to reboot the switch.

| OID Config | × |
|---|--|
| OID List OID Name Type Description Read/Write 1.3.6.1.4.1.171.12.1.2.3.0 INTEGER Reboot READ/WRITE | Indication: Configure the OID properties of the device by entering the Name,Type and Decription. |
| | |
| OID Config | Ň |
| OID: 1.3.6.1.4.1.171.12.1.2.3.0 Name Value Type: INTEGER • warm-start 3 | |
| no-reset 4 | |
| Description: Reboot | |
| Read/Write READ/WRITE Name: | |
| Value: | / |
| Add Dejete Add Delete | |
| Qlose | |

Figure 105: Reboot Parameter Configuration

| Resource Save Reboot | RMON | Config File Manager Safeguard Engine | Spanning Tre | Port Status e Firmware Update |
|----------------------------------|---------------------------|---|--|---|
| Device Name Dev-10.90.90.90 D | Device Type ES-3028 10 | IP Status 190.90.90 | - Config By Device Ty DES-3028 Config Name Reboot | Pe ▼ Select Setting warm-start |
| | | | Option: Indication Note: Please select th operations according to | warm-start |
| | | | devices. The status inf panel only indicates a t sent to the devices sur | ution to reboot the selected ormation shown on the SNMP operation has been ccessfully. use the schedule batch |
| | | | TimeOut(ms); 30 | 100 <u>S</u> chedule |

Figure 106: Reboot Function execute

7.5 Third Party Devices: Cisco Catalyst 2960

For Cisco's Catalyst 2960 follow the steps below:

 Double-click the icon to launch GenSNMP D-View module. Confirm the Catalyst 2960's system OID information, go to *DeviceInfo > System Info.*

| D System Information GenS Name: Switch | NMPDeviceModule | Description Cisco IOS Software, |
|---|-----------------|---|
| Contactor: | | C2960 Software (C2960-LANBASE-M), Version 12.2(35)SE5, RELEASE SOFTWARE |
| Run Time: 0 Hours 24 System OID: | Minutes | (fc1) Copyright (c) 1986-2007 by Cisco Systems, Inc. Compiled Thu 19-Jul-07 20:06 by nachen |
| 1.3.6.1.4.1.9.1.694 | | |
| | □ Network □ | Transport 🗖 Application |
| <u>R</u> efresh | Apply | Close |

Figure 107: System OID Query

| D-View 6.0 - [H0::Net-172.17.5.0?226] | _ 8 × |
|---|-------|
| Eile View Iopology Application System NetTools Advanced Help | - б× |
| 💾 🖹 🕑 📼 🔍 🎕 🖳 🍱 🏂 🖾 🥔 🚹 🦻 🥥 | |
| Hierarchu Tonolo X | |
| 📴 D Cisco IOS Software, C2960 Software (C2960-LANBASE-M), Version 12.2(35)SE5, RELEASE SOFTWARE (fc1)Copyright (c) 1986-2007 by Cisco Systems, In | |
| DeviceInfo DeviceManage Iool Help | |
| System Info Interface Info ARP Table Bouter Table Bouter Table Eorwarding Table RMON Spanning tree Interface Info Interface Info Interface Info Interface Info Bouter Table Eorwarding Table Bouter Table Interface Info Interface Info Interface Info Bouter Table Eorwarding Table Interface Info Interface Info Interface Info Interface Info Bouter Table Eorwarding Table Interface Info Interface Info Interface Info Interface Info Bouter Table Eorwarding Table Interface Info Interface Info In | |
| | |

Figure 108: GenSNMP D-View module

- 2. Open Device **Customization** to configure the Catalyst 2960.
- Update the necessary fields.
- The updated content will be displayed in the topology map.

| Vender: | Cisco 🔹 | | Apply |
|-----------------|----------------------------------|-----------------|--------|
| LOGO : | C:\WINDOWS\system32\panelbmp\cis | <u>B</u> rowse | Delete |
| evice Type Info | | | |
| Device Type : | Catalyst 2960 | | Apply |
| Max Ports : | 0 | | Delete |
| Alias : | Cayalyst 2960 | | |
| System OID : | 1.3.6.1.4.1.9.1.694 | | |
| Up Icon : | | Browse | |
| Down Icon : | | Br <u>o</u> wse | |
| Unpoll Icon : | | Bro <u>w</u> se | |
| Program : | | Brow <u>s</u> e | |

Figure 109: Parameter Configuration

| D-View 6.0 - [HQ::Net-172 | .17.5.0?227] |
|---|---|
| The second se | Application System NetTools Advanced Help Batch Config Topo Export/Import Device Customization |
| | Gen SNMP 1 3 172.17.5.232 Gen SNMP 172.17.5.231 |

Figure 110: Device Customization

To perform the Device Type Check:

Open Device Type Check... to update the database, go to Advanced
 > Device Type Check.

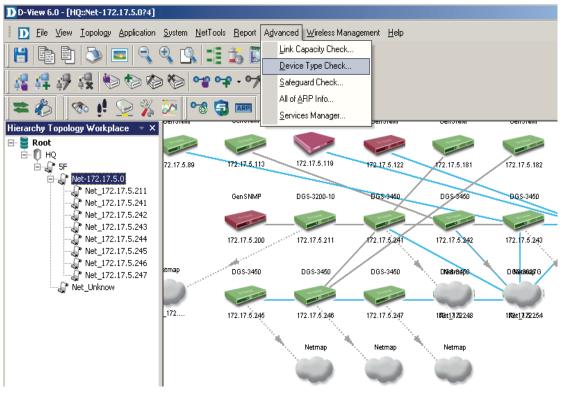


Figure 111: Device Type Check

- 2. Click **Check** and then press **Update** to update the database.
- Save the changes.

| Device Name | IP | Туре | Checked Type | Read Commu | Write Commu | |
|--------------------------------------|------------------------------|--------------------------------|--------------------------------|------------|--------------------|--|
| Dev-172.17.5.231 Dev-172.17.5.232 | 172.17.5.231 172.17.5.232 | GenSNMPDevice GenSNMPDevice | GenSNMPDevice Catalyst 2960 | | private private | |
| | | | | | | |

Figure 112: Device Type Check screen

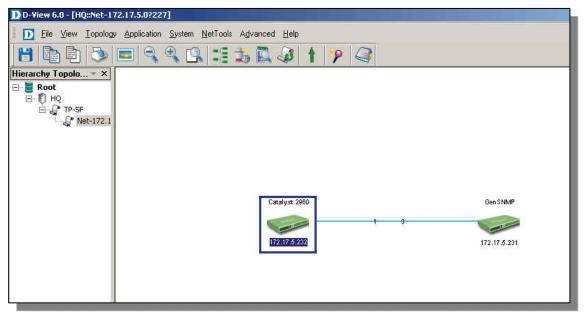


Figure 113: Saving changes

To set up Batch Config to support Catalyst 2960:

- 1. Open Advanced Option... to configure 2960.
- If the device type is not activated it means the device is not supported by D-View.

| D-View 6.0 - [HQ::Net-172 | .17.5.0?226] | | |
|---------------------------|--|--------------------------------|---------------|
| Eile ⊻iew Iopology | Application System NetTools | A <u>d</u> vanced <u>H</u> elp | |
| 🎦 🖻 🖻 🍮 i | Batch Config + | Advanced Option | |
| Hierarchy Topolo × | Topo Export/Import Device <u>C</u> ustomization | <u>R</u> un Batch | |
| E-B Root | | | |
| 🚊 🎧 TP-SF | | | |
| . Net-172.1 | | | |
| | | | |
| | | | |
| | | | |
| | | GenSNMP | Catalyst 2960 |
| | | | |
| | | 172.17.5.231 | 172 17 5 232 |
| | | | |
| | | | |
| | | | |

Figure 114: Advanced Option Function

| Res Save | ource Reboot | RMON | | File Manager eguard Engine | Spanning Tree | Port Status e Firmware Update |
|--|-----------------|----------|--------------------------------|-------------------------------|---|--|
| Device N Dev:172.17.5.2 Dev:172.17.5.2 | 31 GenSNK | | IP 2 17 5 231 2.17 5,232 | Status | - Config By Device Typ DFN3012E Config Name Reboot | e ▼ |
| | | | | | Option: | |
| | | | | | Note: Please sele- performing operatio type. Then press "Apply selected devices. T shown on the pane | ot the devices for ns according to device "button to reboot the he status information Lonly indicates a SNMP" sent to the devices |
| | | | | | TimeOut(ms): 30 | 00 |

Figure 115: Cisco 2960 not in the supported list as shown in Run Batch

- 2. Select Firmware and then click **Next**.
- 3. Add Catalyst 2960 into the list and click **Property** to configure the OID information.

| Function | Name | Function De | scription | i. | |
|---|------|--|-----------|----|--|
| FIRM CONFIGURE RESOURCE PORTSTATL SAVE SPANNING RMON SAFEGUARD REBOOT | IS | Firmware update Config update Resource Manager Port status Save config Spanning tree config RMDN config Safeguard Engine config Reboot devices | | | |
| Function Info Name: | FIRM | | | | |
| | | are update | | | |
| | | | | | |

Figure 116: Firmare Update Function

| Device Types supported by DXS33266SR DWL3260 DPF500 DGS3612 | | Configured Device Types DES3828 DES32265 DES3550 DES3526 | Add or Delete devices to support "Batch" configuration. The device list on the left shows all device types currently managed by D-View. The device list on the right shows |
|--|----|--|---|
| DFL2510F DWL8200 DWL7100 DGS3426 Catalyst 2960 DGS3427 DGS3828DC DGS3627 DGS3220-10 DFL800 DFL2560 DFL2560 DFC3526 | | DHS3626 DHS3226 DHS3218 DHS2210 DHS2226S DHS2210S DHS2210S DHS2210S DHS2210S DHS3828 DES-3028 Catalyst 2960 | all the device types that support batch configuration. Note: The non-configured devices are displayed in grey, when you perform the batch configuration. |
| A | hd | Delete Property | |

Figure 117: Adding Cisco 2960 to list

- 4. Update the related OID information as follows:
- Configure the Protocol Type.
- Configure the Source File Type.

|)ID Config | | × |
|--|---|---|
| OID List | | Indication: |
| 1.3.6.1.4.1.9.9.96.1.1.1.1.2.100 INT 1.3.6.1.4.1.9.9.96.1.1.1.1.3.100 INT 1.3.6.1.4.1.9.9.96.1.1.1.1.4.100 INT 1.3.6.1.4.1.9.9.96.1.1.1.1.4.100 INT 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INT | ype Description Read/Write EGER Protocol READ WRITE EGER SourceFileType READ WRITE EGER DestFileType READ WRITE DDR ServerIP READ WRITE UNG FileName READ WRITE EGER Operation READ WRITE | Configure the OID properties of the device by entering the Name,Type and Decription. |
| OID: 1.3.6.1,4.1.9.9.96.1.1.1.1.3.100 | OID Value Config | |
| Type: INTEGER • Description: SourceFileType | StartConfig 3 RunningConfi <u>¢</u> 4 IOSFile 2 | |
| Read/Write READ/WRITE • | e Add Delete | |
| L | Close | 1 // |

Figure 118: Parameter Configuration

- Configure the Destination File Type.
- Configure the TFTP server IP address.

| D Config | | | | | | |
|---|--|-----------------------------|--|--|-----------|--|
| 1.3.6.1.4.1.9.9.9 1.3.6.1.4.1.9.9.9 1.3.6.1.4.1.9.9.9 1.3.6.1.4.1.9.9.9 1.3.6.1.4.1.9.9.9 | OID Name 96.1.1.1.2.100 96.1.1.1.1.3.100 96.1.1.1.1.4.100 96.1.1.1.1.5.100 96.1.1.1.1.6.100 | INTEGER IPADDR STRING | SourceFileType DestFileType ServerIP FileName | READ WRITE READ WRITE READ WRITE | | Indication: Configure the OID properties of the device by entering the Name, Type and Decription. |
| - OID Config | 96.1.1.1.1.14.100 4.1.9.9.96.1.1.1.1.5.10 | | Operation OID Value C Name | READ WRITE | | |
| Type: IPADDR Description: Read/Write | ServerIP READ WRITE | • | Name: Value: | | | |
| | Add | Delete | <u>tr</u> | Add | Close | , |

Figure 119: Parameter Configuration

| ID List | | | | Indication: |
|--|---------|------------------------------|-----------------|--|
| OID Name | Туре | Description | Read/Write | Configure the OID properties of the device |
| .3.6.1.4.1.9.9.96.1.1.1.1.2.100 | INTEGER | Protocol | READ/WRITE | by entering the Name, Type and Decription. |
| .3.6.1.4.1.9.9.96.1.1.1.1.3.100 | | SourceFileType | | |
| .3.6.1.4.1.9.9.96.1.1.1.1.4.100 | | DestFileType | READ/WRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.5.100 | IPADDR | | READ/WRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.6.100 | | FileName | READ/WRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.14.100 | INTEGER | Operation | READ/WRITE | |
| | | | | |
| | | | | |
| | | | | |
| ID Config | | OID Value Ci | onfig | |
| | 0 | Name | onfig Value | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 | 0 | Name TFTP | Value 1 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 | 0 | Name | | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 ype: INTEGER | 0 | Name TFTP | Value 1 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 ype: INTEGER | | Name TFTP | Value 1 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 ype: INTEGER • escription: Protocol | 0 | Name TFTP | Value 1 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 ype: INTEGER • escription: Protocol | | Name TFTP RCP Name: | Value 1 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 ype: INTEGER • escription: Protocol | | Name TFTP RCP | Value 1 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 where: INTEGER • escription: Protocol | | Name TFTP RCP Name: | Value 1 3 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.2.10 ype: INTEGER escription: Protocol ead/Write READ /WRITE | | Name TFTP RCP Name: | Value 1 3 | relete |

Figure 120: Parameter Configuration

| ID List | | | Indication: |
|---|---------------------------|--|--|
| OID Name | Туре | Description ReadAVrite | Configure the OID properties of the device by entering the Name, Type and Decription. |
| .3.6.1.4.1.9.9.96.1.1.1.1.2.100 | INTEGER | | by entering the Name, type and Decliption. |
| .3.6.1.4.1.9.9.96.1.1.1.1.3.100 | | SourceFileType READ/WRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.4.100 | | DestFileType READ/WRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.5.100 | and a second state of the | ServerIP READ/WRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.6.100 .3.6.1.4.1.9.9.96.1.1.1.1.14.100 | | FileName READ/WRITE | |
| ID Confia | | ⊤ OID Value Config | |
| ID Config ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.4.10 |) | OID Value Config | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.4.10 |) | Name Value NetFile 1 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.4.10 | 0 | Name Value Value | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.4.10 | 1 | Name Value NetFile 1 StartConfig 3 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.4.10 where: INTEGER • escription: DestFileType | | Name Value NetFile 1 StartConfig 3 RunningConfiç4 | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.4.10 vpe: INTEGER • escription: DestFileType | | Name Value NetFile 1 StartConfig 3 RunningConfig4 IOSFile 2 Name: | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.4.10 vpe: INTEGER • escription: DestFileType | | Name Value NetFile 1 StartConfig 3 RunningConfi¢4 IOSFile 2 | |

Figure 121: Parameter Configuration

- Configure the File Name.
- Configure the Operation, Create, or Delete.

| OID Name | Туре | Description | Read/Write | Configure the OID properties of the device |
|--|---|----------------------|--------------------------|--|
| .3.6.1.4.1.9.9.96.1.1.1.1.2.100 | INTEGER | Protocol | READIWRITE | by entering the Name, Type and Decription. |
| .3.6.1.4.1.9.9.96.1.1.1.1.3.100 | INTEGER | SourceFileType | READIWRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.4.100 | INTEGER | DestFileType | READ/WRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.5.100 | The second se | | READ/WRITE | |
| .3.6.1.4.1.9.9.96.1.1.1.1.6.100 .3.6.1.4.1.9.9.96.1.1.1.1.1.4.100 | STRING INTEGER | FileName | READ WRITE READ WRITE | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| D Config | | OID Value Co | onfig | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.14.1 | 00 | Name | Value | |
| | | | | |
| | | CreateAndG | | |
| pe: INTEGER • | | CreateAndG Delete | io 4 6 | |
| pe: INTEGER 🔹 | | | | |
| pe: INTEGER • | 1 | Delete | | |
| pe: INTEGER • | • | | | |
| rpe: INTEGER • | | Delete | | |
| pe: INTEGER scription: Operation ad/Write READ[WRITE | | Delete Name: | | |
| rpe: INTEGER • | ► De <u>l</u> ete | Delete Name: | 6 | iete |

Figure 122: Parameter Configuration

| ND List Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Indication: Indication: Configure the OID properties of the device by entering the Name, Type and Decription. Indication: Indicati | Config | | | | | | |
|--|------------------|------------------------|---------|-------------|-------------------|--------|--|
| OID Name Type Description 1.3.6.1.4.1.9.9.96.1.1.1.2.100 INTEGER Protocol READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.2.100 INTEGER SourceFileType READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.4.100 INTEGER DestFileType READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.5.100 IPADDR ServerIP READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 STRING FileName READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.1.6.100 INTEGER Operation READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.1.6.100 INTEGER Operation READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Name Value FileName Null FileName NULL Vpc STRING Integer Name Value FileName Null Value Value Integer Add Dejete Add Delete Add | OID List | | | | | | Indication: |
| 1.3.6.1.4.1.9.9.96.1.1.1.2.100 INTEGER Protocol READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.3.100 INTEGER SourceFileType READ/WRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.5.100 IPADDR Server/P I.3.6.1.4.1.9.9.96.1.1.1.1.5.100 IPADDR Server/P I.3.6.1.4.1.9.9.96.1.1.1.1.6.100 STRING FileName I.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Operation READ/WRITE I.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Operation READ/WRITE I.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Operation READ/WRITE NID: 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER NULL ype: STRING Value FileName Vescription: FileName NULL Value Value: Value: Value: Value: Add Dejete Add Delete | | OID Name | Туре | Description | Read/Write | | |
| 1.3.6.1.4.1.9.9.96.1.1.1.1.4.100 INTEGER DestFileType READJWRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.5.100 IPADDR ServerIP READJWRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 STRING FileName READJWRITE NID 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Operation READJWRITE NID 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Operation READJWRITE NID 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Value FileName Value Value Name Value FileName Name Null Value Value Value Value Value Add Dejete Add Delete | 1.3.6.1.4.1.9.9. | .96.1.1.1.1.2.100 | | | | | by entering the Name, Type and Decription. |
| 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 IPADDR ServerIP READJWRITE 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Operation READJWRITE NID Config OID Value Config NID: 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 INTEGER Value YPE: STRING INTEGER Name Value YPE: STRING INTEGER Name Value FileName Null INTEGER Null Value Vipe: STRING Value Value Value Vipe: STRING Value Value Value Add Dejete Add Delete Add | | | | | | | |
| 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 STRING READJWRITE ND Config OID Value Config ND: 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 ype: STRING vescription: FileName Read/Write READJWRITE Add Dejete | | | | | | | |
| 1.3.6.1.4.1.9.9.96.1.1.1.1.4.100 INTEGER Operation READ/WRITE NID Config OID Value Config NID: 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 ype: STRING vescription: FileName Read/Write READ/WRITE Add Delete | | | | | | | |
| DID Config DID: 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 ype: STRING bescription: FileName Read/Write READ/WRITE • Name: Add Dejete | | | | | | | |
| Name Value Value FileName Read/Write READ/WRITE Add Delete | 1.5.0.1.4.1.9.9. | SOUTH THE PERMIT OUT | INTEVER | operation | TREAD WATE | | |
| Name Value Value FileName Read/Write READ/WRITE Add Delete | | | | | | | |
| Name Value Value FileName Read/Write READ/WRITE Add Delete | | | | | | | |
| ID: 1.3.6.1.4.1.9.9.96.1.1.1.1.6.100 ype: STRING escription: FileName teadWvrite READIWRITE Name: Add Dejete Add Delete | | | | | | | |
| ID: 1.3.6.1.4.1.9.9.96.1,1.1.1.6.100 ype: STRING escription: FileName eadWyrite READIWRITE Name: Add Dejete Add Delete | | | | | | 1 | |
| Instruction FileName Itead/Write READ/WRITE Add Delete | ID Config | | | OID Value C | onfig | | |
| ype: STRING | DD: 1.3.6.1. | 4.1.9.9.96.1,1.1.1.6.1 | 00 | Name | - 11 (2012) Total | | |
| escription: FileName READIWRITE • Name: Add Dejete Add Delete | | | | FileName | NULL | | |
| ead/Write READ/WRITE Name: Value: Add Delete | ype: STRING | Э 🔹 | | | | | |
| tead/Write READ/WRITE Name: Value: Add Dejete Add Dejete | occription. | FileName | | | | | |
| Add Delete Add Delete | escription. | Thervame | | | | | |
| Add Delete | ead/Write | READ/WRITE | * | Name: | | | |
| Add Delete | | | | | | | |
| Add Delete | | | | Value: | | | |
| Add Delete | | Add | Delete | | 4 | - | |
| <u>C</u> lose | | | | | Add | Delete | |
| <u>C</u> lose | | | | 1. | 28 - 18 - | | |
| | | | | | | | |

Figure 123: Parameter Configuration

To back up Catalyst 2960's configuration file:

Because of the difference in the MIB design between D-Link and Cisco, you have to implement the backup via the Firmware Update function. There are a few limitations in the current design, such as:

- There are no problems with one to one relationship (backup one config to a tftp server).
- One to many is the appropriate way to run this function (one config file to many switches). Use the config file for multiple switches, the IP address for each device needs to be modified.
- Many to one relationship is not recommended (many switches to a tftp server). The configuration file will be overwritten on that single config file.

The terminology definition:

- NetFile: refers to TFTP, please select this option if the destination is TFTP server.
- Operation: please select **Create and Go** to process the task.
- According to Cisco's MIB document, the IOS update via SNMP is not supported.

Follow these steps to backup 2960's configuration file:

- 1. Open Run Batch.
- 2. Select the **Firmware Update** tab to back up the configuration.
- 3. Select the appropriate action and enter the information.

| D-View 6.0 - [HQ::Net-172 | 2.17.5.0?226] | | |
|--|---|--|---------------|
| and the second second second second second | Application System NetTools / Batch Config Topo Export/Import Device Customization | Advanced Option Bun Batch Gen SNMP | Cayalyst 2960 |
| | | 172.17.5.231 | 172.17.5.232 |

Figure 124: Run Batch function

| Resource Save Reb | poot RMON | Config File Mana Safeguard E | - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 | ee Firmware Update |
|---|-------------|--|--|--|
| Device Name Dev-172.17.5.231 Øev-172.17.5.232 | | IP St. 72.17.5.231 72.17.5.232 Faile | Config Name Protocol SourceFileType DestFileType ServerIP FileName Dperation Option: 2 Run Local TFTP Indication Note: Before pe please ensure TF running on the de the server is reac The status inforr | Select Setting TFTP StartConfig NetFile 172.17.5.59 C2960Backup0509 CreateAndGo CeateAndGo CeateAndGo TimeOut(ms): 3000 TimeOut(ms): 3000 forming Firmware Update, TP Server has been signated workstation, and hable for the devices. mation shown on the panel NMP operation has been |

Figure 125: Firmware Update Selection screen

- 4. After all the parameters are set, click **Apply.**
- The status is displayed in the TFTP's directory

| <u>ile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ool | s <u>H</u> elp | | | | 2 |
|---|-----------------------------------|----------|-----------------------|--------------------|-----|
| 🕽 Back 👻 🕥 👻 🎾 🔎 Search | 📴 Folders 🛛 😂 🌶 🗙 🍤 🛛 🖽 🗸 | | | | |
| ddress 🗀 C:\Program Files\D-Link\D | -View | | | ★ → | Go |
| olders × | Name 🔺 | Size | Туре | Date Modified | 4 |
| 🖽 🚞 cisco2960 🛛 🔺 | BmpResource | | File Folder | 5/5/2008 5:12 PM | |
| 🗖 DGS-3200-10 | 📔 🛅 delconfig | | File Folder | 5/5/2008 5:22 PM | |
| 🗄 🧕 My Computer | 🚞 devmodule | | File Folder | 4/29/2008 2:58 PM | |
| 31/2 Floppy (A:) | Mibsolution | | File Folder | 5/8/2008 5:01 PM | |
| E School Disk (C:) | 📄 🚞 panelbmp | | File Folder | 5/5/2008 5:12 PM | |
| Documents and Setti | i perconfig | | File Folder | 5/8/2008 5:18 PM | |
| E C Program Files | i impconfig | | File Folder | 5/8/2008 5:30 PM | |
| | 📄 xmlinstall | | File Folder | 5/5/2008 5:13 PM | |
| E 🛅 cmak | 🔄 🛅 2960backup | 2 KB | File | 5/8/2008 4:42 PM | i f |
| E Common Files | 🚺 🛐 AdvancedApp.dll | 152 KB | Application Extension | 3/12/2008 1:12 PM | + |
| ComPlus Applicat | Nuthentication.dll | 1,048 KB | Application Extension | 3/12/2008 1:12 PM | F |
| E Connas Applicac | 🛐 AutoDiscover.dll | 72 KB | Application Extension | 3/12/2008 1:12 PM | f |
| E DevModule | AutoDiscover.xml | 1 KB | XML Document | 4/29/2008 4:42 PM | f |
| D-Link SNMP | AutoTopor.exe | 584 KB | Application | 3/12/2008 1:13 PM | + |
| E D-View | AutoToporCom.dll | 40 KB | Application Extension | 3/12/2008 1:13 PM | 1 |
| | BatchCom.dll | 44 KB | Application Extension | 3/12/2008 1:13 PM | 4 |
| 🛅 delconfia | BatchCustomCfg.exe | 92 KB | Application | 3/12/2008 1:13 PM | 4 |
| 🛅 devmodu | BatchGroup eve | 280 KB | Application | 3/12/2008 1:13 PM | 1 |
| E 🛅 Mibsoluti | C2960Backup0509 | 2 KB | File | 5/9/2008 9:26 AM | 1 |
| | a c2960-lanbase-mz.122-35.5E5.bin | 5,101 KB | BIN File | 5/8/2008 5:30 PM | + |
| Derconfic | Common.dll | 43 KB | Application Extension | 7/6/1998 11:06 PM | + |
| 🛅 tmpconfi | DBrowser.exe | 1,671 KB | Application | 4/25/2005 11:43 PM | |
| 🛅 xmlinstall | DBStore1.exe | 44 KB | Application | 7/12/2007 9:54 AM | 1 |
| 🔟 xmiinstaii 🗉 🛅 Module | DBStore.exe | 48 KB | Application | 3/12/2008 1:13 PM | |
| 🗄 🛄 Module 🗄 🫅 Gigabyte | DCompiler, exe | 2,419 KB | Application | 4/25/2005 11:43 PM | |
| | DevResMa.dll | 168 KB | Application Extension | 3/12/2008 1:13 PM | 4 |
| 🗀 HyperSnap-DX 4 🕀 🗀 InstallShield Inst. 💌 | DevTypeCfg.exe | 40 KB | Application | 3/12/2008 1:13 PM | 1 |

Figure 126: File Backup Configuration

| Devic Dev-172.17 Dev-172.17 | 5.231 GenSt | vice Type IMPDevice st 2960 | • 172 17 5 231 | atus Config | Spanning Tree 3 By Device Typ yst 2960 👻 | 96 |
|-----------------------------------|--|-----------------------------------|--|----------------------|--|--|
| ev-172.17 | .u.zuz Cataly | \$1 2360 | 172.17.5.232 300 | | Config Name | Setting |
| About Nan Ope | The second second | ager | IP Address 172.17.1 Action Session 0 | 5.59 | 2 | 72.17.5.59 72960Backup0509 CreateAndGo |
| Index 1 2 | Action IP 172 17 5 232 172.17.5.232 | Put Put Put | Titp File Name c2960-lanbase-mz 122-35 C2960Backup0509 | Status 5 OK OK | _ Total _ Clear | Backup0509 |
| | | | | | Close | ing Firmware Update, Server has been ated workstation, and e for the devices. |
| 9:26:34 | PM : Transfer OK AM : Start transferrin AM : Transfer OK | g | | | 1 | in shown on the panel P operation has been accessfully. |

Figure 127: Apply to back up

To configure Batch Config to support the reboot function for Catalyst 2960:

 Open Advanced Option and select Reboot to add 2960 into the list. Click Next to continue. Go to Application > Batch Config > Advanced Option.

| Function Name FIBM | Function Description | - |
|------------------------|-------------------------------------|---|
| CONFIGURE | Firmware update Config update | |
| RESOURCE PORTSTATUS | Resource Manager Port status | |
| SAVE | Save config | |
| SPANNING RMON | Spanning tree config RMON config | |
| SAFEGUARD | Safeguard Engine config | |
| REBOOT | Reboot devices | |
| Function Info | | |
| Name: REBO | тот | |
| Description: Rebo | ot devices | |
| | | |
| | | |
| | | |

Figure 128: Reboot function selection

- 2. Add Catalyst 2960 to the list and click **Property** to configure the OID information.
- Follow the on-screen icons to add the 2960.

| Device Types supported by | Configured Device Types | Add or Delete devices to support "Batch" configuration. |
|---|--|--|
| DWL3260 DPF500 DGS3612 DFL2510F DWL8200 DWL7100 DGS3426 Catalyst 2960 DGS3427 DGS3828DC DGS3627 DGS3200-10 DFL800 DFL2560 DES3526 | DPN3012E DGS3612G DGS3627G DGS3650 DGS3650 DGS3450 DGS3427 DGS3426 DGS3200-10 DES3828DC DES3828P DES3828P DES3828 DES3550 DES3550 DES3550 DES3526 Catalyst 2960 | The device list on the left shows all device types currently managed by D-View. The device list on the right shows all the device types that support batch configuration. Note: The non-configured device are displayed in grey, when you perform the batch configuration. |
| Ad | <u>D</u> elete <u>P</u> rop | perty |

Figure 129: Device Type Config

- 3. Enter the OID information and click **Add.**
- 4. Select the added OID information.

| DID Config | < |
|--|---|
| OID List Indication: OID Name Type 1.3.6.1.4.1.9.2.9.9.0 INTEGER Reboot READ/WRITE Indication: | |
| OID Config OID 1.3.6.1.4.1.9.2.9.9.0 OID Value Config Name Value | |
| Name: Reboot | |
| Add Dejete Add Delete | 8 |

5. Add the OID value as seen in the screen below.

Figure 130: Reboot Parameter Configuration

- 6. Select the Reboot tab to reboot the switch.
- Follow the on-screen icons to reboot the switch.

| Resour | ALCONDUCTOR AND A DECIMAL AND A | a second s |) File Manager afeguard Engine | Spanning Tree | Port Status Firmware Update |
|-----------------------------------|---|---|-----------------------------------|---|--|
| Device Nam | e Device Ty | pe IP | Status | Config By Device Type | |
| Dev-172.17.5.231 Dev-172.17.5.232 | | vice 172.17.5.231 172.17.5.232 | | Catalyst 2960 | • I⊽ Select |
| | | | | Config Name | Setting |
| | | | | Reboot F | Reboot |
| | | | | 10 P | eboot |
| | | | 10 | Indication | eboot |
| | | | | Note: Please select performing operations type. | |
| | | | | Then press "Apply" I selected devices. The shown on the panel o operation has been se successfully. | e status information nly indicates a SNMP |
| | | | | TimeOut(ms): 3000 | 1 |

Figure 131: Reboot function execute

7.6 Managing Devices with Device Panel Simulation

Double-click on a switch icon in the topology window of D-View 6.0 to open a new window. This window graphically represents the front panel of the switch. Different management tasks can be started via context menus that appear in the Device Panel Simulation.

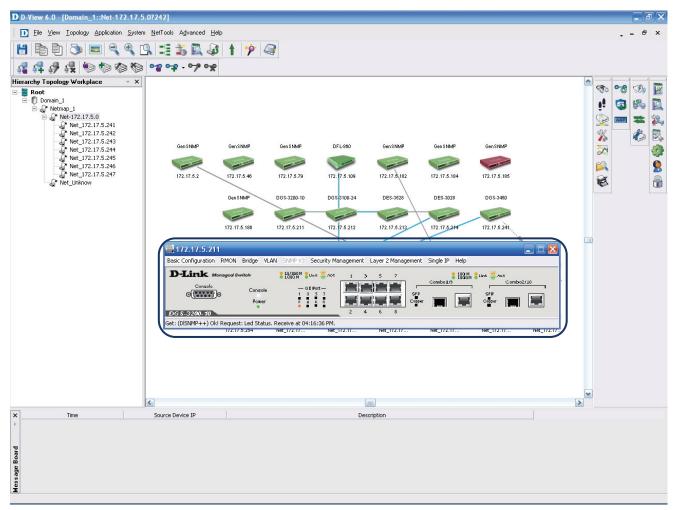


Figure 132: Opening the Device Panel Simulation

The Device Panel Simulation also displays LEDs situated on the physical switch. The following image shows the Device Panel for the DGS-3100. The context menus can be seen on the upper part of the window, and ports and LEDs are shown in the graphical representation of the switch. The LEDs show status information about Power, Console, RPS, Fan Errors, and individual ports.



Figure 133: Panel Simulation for the DGS-3100 switch

Point the cursor to the context menu to start management tasks for the corresponding switch.

| Device Parameter Co | nfigurati | on | | | | | |
|---------------------|-----------|----|----|---|---|------|----|
| SNMP Parameter | | | | | | | |
| Device IP: | 172 | | 17 | | 5 | 212 | |
| Timeout: | 3000 | | | | | | |
| | Apply | | | 0 | К | Clos | se |

Figure 134: Device Parameter Configuration

Point the cursor to a port and click on it to open the Port Configuraton Window.

| D | Port Co | nfiguration | | | |
|---|------------|-----------------|------------------|------------------|----------------|
| Г | Port Infor | mation | | | |
| | Index | DuplexAdminMode | DuplexOperMode | BackPressureMode | e TaggedMode |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | • | | | | F |
| | | | | | |
| | | figuration | _ | | _ |
| | Port ID: | I | BackPressureMod | e: 🗖 TaggedMode | e: 🗖 |
| | FlowCont | trolMode: | LockAdminStatus: | DuplexAutoN | Vegotiation: 🗖 |
| 3 | | | | | |
| | | | Refres | sh Apply | Close |
| | | | | | |

Figure 135: Port Configuration window

Several switches can be managed and monitored at the same time using the Device Panel Simulation.

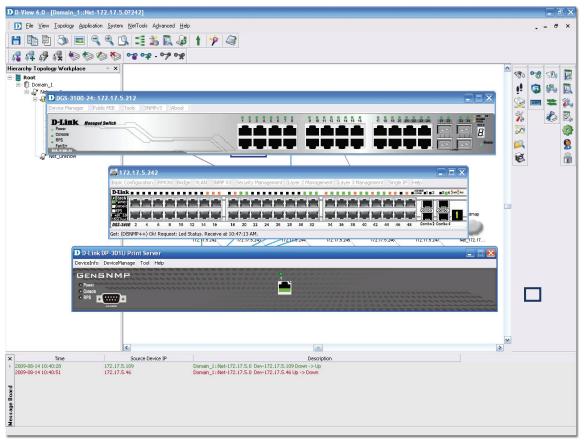


Figure 136: Device Panel modules

7.7 Managing Devices with MIB Compiler

The **MIB Compiler** is used for configuring non-D-Link devices, through a MIB file. The MIB compiler translates the MIB from its normal ASN.1 format to a format that is comprehensible by other applications. The benefits of using the MIB compiler are that you can query data and configure the settings for a third party device with the help of D-View.

To manage devices with MIB Compiler:

 Go to NetTools > MIB Tools and then select MIB Compiler. The D-Link MIB Compiler screen will display.

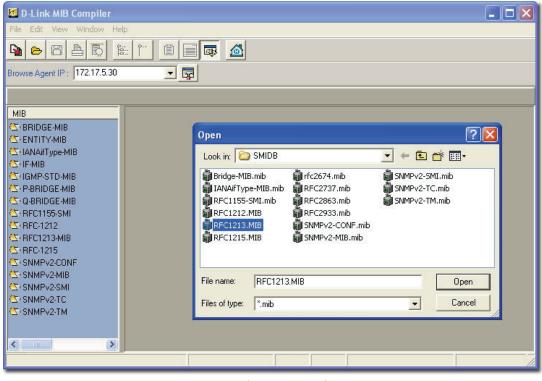
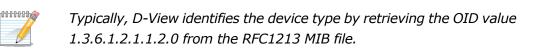


Figure 137: D-Link MIB Compiler screen

2. Open the rfc1213 file for modification. D-View will load the compiled MIB file.



| 📴 D-Link MIB Compiler | |
|--|-----|
| File Edit View Window Help | |
| | |
| Browse Agent IP : 172.17.5.30 | |
| МІВ | |
| (S) BRIDGE-MIB | |
| C ENTITY-MIB | |
| C IANAIT | |
| CriF-MIB Loading compiled MIB module [RFC1213-MIB] | |
| Crigmes | |
| 12 PBRIDLE mp | |
| S Q-BRIDGE-MIB | |
| S RFC1155-SMI | |
| C: RFC-1212 | |
| C RFC-1215 | |
| SISNMPV2-CONF | |
| C SNMP v2-MIB | |
| CS/SNMPv2-SMI | |
| SISNMPV2.TC | |
| SNMPv2-TM | |
| | |
| | |
| | 11. |

Figure 138: Loading compiled MIB Module screen

3. For example, right-click on sysLocation and select Info in the MIB tree.

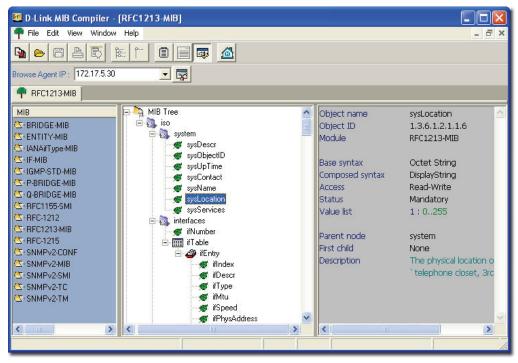


Figure 139: MIB Tree screen

The Browse Result Node: sysLocation screen will appear.

- 4. Click **Query** to get the value of the device.
- 5. Click Set to apply the change of the value for sysLocation.
- 6. Make a note of the **OID** value of the device.

| | | 🙀 Set Value | | |
|------------------------------------|---------------|--|-----------------------------------|---------------|
| Agent IP : 192.168.1 | 100 | Remote IP 192.168.11.15 | | Poll every 30 |
| Name OID Syn sysLocation 1 Disp | itax Access V | Object Name sysLocation Object ID 1.3.6.1.2.1.1.6.0 Syntax Display String Read Community String public Value to Set O-Link HD | Write Community String private | |
| Count : 1 | Access Mode : | Set | Cancel | Close |

| Use MIB Browser to | browse MIB files | after compliation. |
|--------------------|------------------|--------------------|
| | | |

.. .

Setting Up SNMP Configuration to Retrieve Device Information

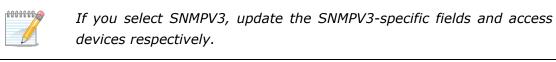
1. Click SNMP Configuration 🙀 from the MIB Complier screen. The

SNMP Configuration screen displays.

| IMP Configurati | ion | | | | | X |
|------------------------|----------------------------|-------------|-----------------------|--------------------|---|-------------|
| SNMP Protocol Ver | sion C SNMPv <u>2</u> c | C SNMPv3 | | | | |
| General | | | 2 | | | |
| <u>R</u> ead Community | String: public | • | Time-out: 2 | <u>R</u> etries: 1 | | |
| Write Community | String: private | <u> </u> | P <u>o</u> rt: 161 | | | |
| SNMPV3 | | | | | | |
| <u>U</u> ser Name: | | 🚽 Se | curity <u>L</u> evel: | NoAuthNoPriv | | Delete User |
| <u>A</u> uth Password: | | <u>P</u> ri | v Password: | | | |
| Aut <u>h</u> Protocol: | NONE | Pri | ⊻ Protocol: [| NONE | ~ | <u>0</u> K |
| Context Engine ID: | | <u>C</u> o | intext Name: | | Ŧ | Cancel |

Figure 141: SNMP Configuration screen

- 2. Select the **SNMP Protocol Version**.
- 3. Enter the community string to access devices through SNMP.



4. Click OK and manage the selected device using MIB Compiler.

7.8 Retrieving OID of the device

To identify non D-Link devices, the administrators must first retrieve the OID of the device and then customize them to add to D-View.



Ensure the device is online to retrieve the OID of the device.

To retrieve the OID of the device:

1. Go to **NetTools** > **MIB Tools** > **MIB Compiler**. The **MIB Compiler** screen will appear.

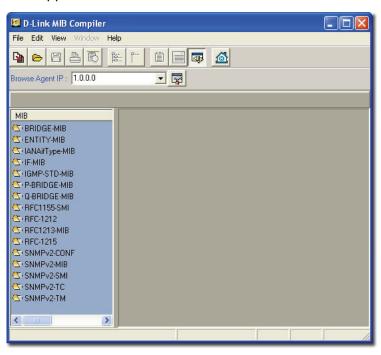


Figure 142: MIB Compiler screen

- 2. Enter the device IP address.
- 3. Set the **SNMP Configuration**. Refer to <u>Setting Up SNMP Configuration</u> to <u>Retrieve Device Information</u> from devices.
- 4. Compile the $\tt RFC1213$ MIB File and select $\tt sysObjectID$ from the MIB tree.
- 5. Right-click sysObjectID and select Info. The Browser Result screen will appear.
- 6. Make a note of the OID value of the device.

OR

- For a non-designated device module, D-View will identify the device as GenSNMPDevice type.
- 2. Double-click on the device. The graphical interface of the device will appear.

3. Go to **Device Info** and then select **System Info**. The **System InfoGenSNMPDevice Module** screen will appear.

| D System Information GenSNMPDeviceModule | |
|--|--|
| Name: Print Server PS-10B37B Contactor: | Description D-Link DP-301P+ Print Server |
| Location: RD1 | |
| Run Time: 462 Hours 13 Minutes System OID: 1.3.6.1.4.1.171.11.10.1 | |
| Service Physical Link Network | Transport 🔽 Application |
| Refresh Apply | Close |

Figure 143: System InfoGenSNMPDeviceModule screen

- 4. From the **System InfoGenSNMPDeviceModule** screen, modify the device type properties in the dialog.
 - **Name:** Enter the name of the device.
 - Contactor: Enter the name of the user responsible for managing the device.
 - **Location:** Enter the location of the device.
 - **Run Time:** Displays the run time of the device.
 - **Service:** Displays the OSI layers the device supports.
- 5. Click **Apply** to save the changes.
- 6. Click **Refresh** to view the updated information.

7.9 Batch Configuration

The **Batch Configuration** tool allows you to execute a sequence of operations in D-View, for example: Save Configuration and Retrieve Port Status. With Batch Configuration you can configure multiple devices simultaneously. Since all the configurations are similar, only one has been described below.



Remember to configure the OID information before using the Run Batch tool.

To configure the OID information of SafeGuard Engine:

 Go to Application > Batch Config> Advanced Option. The Advanced Option screen will display.

| | e Function Description | |
|---------------------|---|--|
| FIRM CONFIGURE | Firmware update | |
| RESOURCE | Config update Resource Manager | |
| PORTSTATUS | Port status | |
| SAVE | Save config | |
| SPANNING | Spanning tree config | |
| RMON | RMON config | |
| SAFEGUARD REBOOT | Safeguard Engine config Reboot devices | |
| NEBUUI | Nebool devices | |
| | | |
| Function Info | | |
| | FEGUARD | |
| Name: SAF | | |
| | | |
| | feguard Engine config | |
| | | |
| | | |
| | | |

Figure 144: Advanced Option screen

- 2. D-View supports a list of batch function templates. They are:
 - **FIRM:** Download firmware from the switch to the TFTP server or upload firmware to the device.
 - **CONFIGURE:** Download/Upload config information in the device.
 - RESOURCE: Retrieve/Set the information about name, location, contact of the device.
 - **PORTSTATUS:** Retrieve/Set the **Port Enable** status.

- **SAVE:** Save the configuration changes in a device.
- **SPANNING:** Enable/Disable the **STP** status in device.
- **RMON:** Enable/Disable the **RMON** status in device.
- **SAFEGUARD:** Enable/Disable the **SAFEGUARD** status in device.
- **REBOOT:** Reboot devices.
- 3. Select **SAFEGUARD** and then click **Next** to continue. The **Device Type Config** screen will display.

| Device Types supported by DWL3200 DWL2100 DGS3627G DGS3324SR DWL7700 GenSNMPDevice DGS3450 DES3828 DGS3612G DES3828P DGS3650 DWL2700 DES3550 DGS3308FG DES6500 DXS33505R | ▲ Configured Device Types DGS3612G DGS3627G DGS3650 DGS3450 DGS3427 DGS3426 DES3828DC DES3828P DES3828 DES3850 DES3526 | Add or Delete devices to support "Batch" configuration. The device list on the left shows all device types currently managed by D-View. The device list on the right shows all the device types that support batch configuration. Note: The non-configured devices are displayed in grey, when you perform the batch configuration. |
|--|---|---|
| Add | Delete Property | |

Figure 145: Device Type Config screen

- 4. The devices can be added or deleted to support batch configuration.
- Click Property to configure the OID properties of a device type. The OID Config screen will display.
- 6. Enter the values of the **OID Config** information.

| OID Name | Type Description Read/Write | Configure the OID properties of the device |
|--|------------------------------|--|
| 1.3.6.1.4.1.171.12.19.1.1.0 | INTEGER Safeguard READ/WRITE | by entering the Name, Type and Decription. |
| ID Config ID: 1.3.6.1.4.1.171.12.19.1.1.0 | OID Value Config | |
| | OTHER 1 | |
| Type: INTEGER • | DISABLE 2 ENABLE 3 | |
| | | |

Figure 146: OID Config screen

- 7. Enter the values of the **OID Value Config** for each OID.
 - 1 Other
 - 2 Disable
 - 3 Enable
- 8. Click **Add** to configure the OID value of **Safeguard Engine**.

7.9.1 Backup and Update the Devices'

Configuration

Use the **Batch** tool to backup and update the devices' configuration.

 Go to Application > Batch Config > Run Batch or right-click and select Run Batch from the popup menu after selecting the devices in the opened topology. The Run Batch screen will display.

| Save Reboot Resource | RMON | Config File M | r <u>d Engine Spanning</u> Tre lanager | ee Firmware Update Port Status |
|---|--|---|--|---|
| Device Name | Device Type | IP | Config File N | ame Stati |
| Dev-172:17.5.33 Dev-172:17.5.108 Dev-172:17.5.119 Dev-172:17.5.181 Dev-172:17.5.182 Dev-172:17.5.183 Dev-172:17.5.184 Dev-172:17.5.213 ♥ Dev-172:17.5.241 ♥ Dev-172:17.5.242 ♥ Dev-172:17.5.243 ♥ Dev-172:17.5.243 ♥ Dev-172:17.5.245 Dev-172:17.5.254 | GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 DGS3450 | 172.17.5.33 172.17.5.108 172.17.5.119 172.17.5.181 172.17.5.183 172.17.5.183 172.17.5.213 172.17.5.241 172.17.5.241 172.17.5.243 172.17.5.243 172.17.5.245 172.17.5.245 172.17.5.254 | _172.17.5.241_DGS3450cfg _172.17.5.242_DGS3450cfg _172.17.5.243_DGS3450cfg _172.17.5.244_DGS3450cfg _172.17.5.245_DGS3450cfg | 1 |
| Setting | Config File N | lame | | _ Indication |
| TFTP Server IP : 192 . 168 . 119 . Operation: Backup | File: File: → Select device | ces | <u>B</u> rowse <u>M</u> odify | Note: All the operation will be implemented in the working folder of TFTP Server. Please run TFTP server before any operation |
| TimeOut(ms): 3000 Run Local TFTP | Select All | Select <u>N</u> one | DGS3450 🔹 🔽 Select | |

Figure 147: Run Batch screen

- 2. A brief description of other tabs is given below:
 - **Save:** Save device configuration.
 - RMON: Enable/Disable RMON status to monitor device performance.
 - **Safeguard Engine:** Enable/Disable safeguard status. Refer to <u>7.9.3 Using Safeguard Check</u> for more information.
 - **Spanning Tree:** Enable/Disable the status to prevent undesirable loops in the network.
 - Firmware Update: Upload/Download firmware through TFTP server.
 - Resource: Select to update the resource information for a specific device.
 - **Config File Manager:** Update and backup configuration files from the TFTP server.
 - **Port Status:** Select to view the port status of the device.
- 3. Select the **Config File Manager** tab. The **Config File Manager** tool helps the administrators to perform the following actions.
 - **TFTP Server IP:** Enter the IP address on which the TFTP server program runs.
 - **Operation:** Select the mode of operation- Backup or Update.
 - **TimeOut:** SNMP timeout value.
 - Run Local TFTP: Select to use the TFTP server tool provided by D-View. The D-Link TFTP Server screen displays.

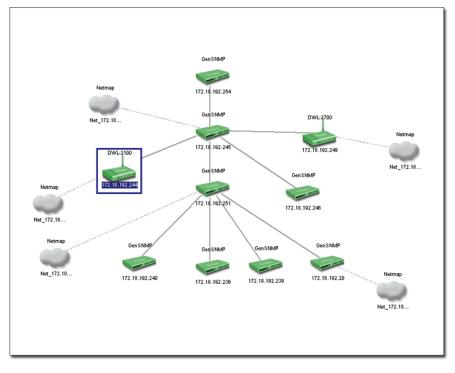
4. Click **Apply** and monitor the running status of the TFTP Server.

| Index Action IP Type Tftp File Name Status 1 192.168.11.12 Put _192.168.11.12_DES3550 OK 2 192.168.11.252 Put _192.168.11.252_DES355 OK | 2 | | 192.168.11.9 0 | IP Addre: Action Se | iger | D-View Mana 06:07:22 | | Nam Oper |
|---|----------------|--------|-------------------|------------------------|------|-------------------------|-----|-------------|
| 1 192.168.11.12 Put _192.168.11.12_DES3550 OK 2 192.168.11.252 Put _192.168.11.252_DES355 OK | Total | Status | 9 | Tftp File | Туре | tion IP | Act | ndex |
| | Clear Close | | | | | | | 12 |
| | | > | | | 101 | | | |

Figure 148: D-Link TFTP Server screen

5. The **Config File Manager** enables uploading of the configuration files to the device through TFTP server. Administrators can make the required changes to the file and then upload this file to the device. It reduces the administrators' time when a similar configuration has to be made to several similar devices. The status displays **OK**, when the transaction is successfully completed. Refer to <u>8.1.10 TFTP</u> for more information.

7.9.2 Using Device Type Check



- Use **Device Type Check** to check the network for new and updated devices.
- 1. Open the **Topology** and select the device that needs to be monitored.

Figure 149: Generated Topology window

- Go to Advanced > Device Type Check. D-View scans the devices in the open topology.
- 3. Click **Check** to manually scan the device.

| Device Name | IP | Туре | Checked Type | Read Commu | Write Commu | |
|-----------------|--------------|---------------|---------------|------------|-------------|-------|
| ev-172.17.5.119 | 172.17.5.119 | GenSNMPDevice | GenSNMPDevice | public | private | |
| ev-172.17.5.181 | 172.17.5.181 | GenSNMPDevice | GenSNMPDevice | public | private | |
| ev-172.17.5.182 | 172.17.5.182 | GenSNMPDevice | GenSNMPDevice | public | private | |
| ev-172.17.5.183 | 172.17.5.183 | GenSNMPDevice | GenSNMPDevice | public | private | |
| ev-172.17.5.184 | 172.17.5.184 | GenSNMPDevice | GenSNMPDevice | public | private | |
| ev-172.17.5.241 | 172.17.5.241 | DGS3450 | DGS3450 | public | private | |
| ev-172.17.5.242 | 172.17.5.242 | DGS3450 | DGS3450 | public | private | |
| ev-172.17.5.243 | 172.17.5.243 | DGS3450 | DGS3450 | public | private | |
| ev-172.17.5.244 | 172.17.5.244 | DGS3450 | DGS3450 | public | private | |
| ev-172.17.5.245 | 172.17.5.245 | DGS3450 | DGS3450 | public | private | |
| ev-172.17.5.254 | 172.17.5.254 | DXS3326GSR | DXS3326GSR | public | private | |
| ev-172.17.5.40 | 172.17.5.40 | GenSNMPDevice | GenSNMPDevice | public | private | |
| ev-172.17.5.30 | 172.17.5.30 | GenSNMPDevice | GenSNMPDevice | | private | |
| | | | | | | |
| | | | | heck Sto | p Update | Close |

Figure 150: Device Type Check screen

4. Select one or more devices and click **Update**. D-View refreshes the information of the selected devices.

7.9.3 Using Safeguard Check

Malicious hosts on the network could attack the Switch through various methods (for example, packet flooding). To overcome this situation, D-View uses **Safeguard Engine** to protect switches from malicious traffic flood. This minimizes the workload of the switch during the attack. The Switch, therefore, is capable of forwarding essential packets even during limited bandwidths.



By default, the safeguard status of all devices is disabled.

To configure the safeguard status:

 Go to Application > Batch Config > Run Batch Or

In the opened topology select the device and right-click and select **Run Batch**.

The **Run Batch** screen will display. You can now enable or disable the devices' Safeguard Engine.

- Check the devices and then select ENABLE from the Option drop-down list.
- 3. Click **Apply** to enable the **Safeguard Engine** status of the selected devices.

| Resource | | | le Manager | | Port Status |
|--|--|--|--------------|--|--|
| Save Reb | oot RM01 | N Safe | guard Engine | Spanning Tree | e Firmware Update |
| Device Name | Device Type | IP | Status | Config By Device Typ | 00 |
| Dev-172.17.5.1 Dev-172.17.5.33 | GenSNMPDevice GenSNMPDevice | 172.17.5.1 172.17.5.33 | | DGS3450 | ▼ V Select |
| Dev-172.17.5.108 Dev-172.17.5.119 | GenSNMPDevice GenSNMPDevice | 172.17.5.108 172.17.5.119 | | Config Name | Setting |
| Dev-172.17.5.181 Dev-172.17.5.182 Dev-172.17.5.183 Dev-172.17.5.184 Dev-172.17.5.213 Vev-172.17.5.213 | GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice DGS3450 | 172.17.5.181 172.17.5.182 172.17.5.183 172.17.5.184 172.17.5.213 172.17.5.213 172.17.5.241 | | Safeguard | ENABLE |
| ✓ Dev-172.17.5.242 ✓ Dev-172.17.5.243 ✓ Dev-172.17.5.244 ✓ Dev-172.17.5.245 Dev-172.17.5.254 | DGS3450 DGS3450 DGS3450 DGS3450 DXS3326GSR | 17217.5242 17217.5243 17217.5244 17217.5244 17217.5245 17217.5254 | | Note: Please select performing operation type. Then press "Apply Safeguard status of The status informati | ns according to device " button to config the the designated devices, on shown on the panel MP operation has been successfully. |

Figure 151: Run Batch: Safeguard Engine screen

- Go to Advanced > Safeguard Check for the updated enable status of the selected devices. The Safeguard Check screen will display.
- 5. Click **Check** to manually scan the safeguard status of the device.

| Device Name | Туре | IP | Safeguard | Read Commu | Write Commu | |
|------------------------------------|-------------------------------|------------------------------|-------------------|------------------|--------------------|--|
| ev-172.17.5.241 ev-172.17.5.242 | DG83450 DG83450 | 172.17.5.241 172.17.5.242 | Enable Enable | public public | private private | |
| ev-172.17.5.243 ev-172.17.5.244 | DGS3450 DGS3450 DGS3450 | 172.17.5.243 172.17.5.244 | Enable Enable | public public | private private | |
| ev-172.17.5.245 ev-172.17.5.254 | DGS3450 DXS3326GSR | 172.17.5.245 172.17.5.254 | Enable Disable | public public | private private | |
| | | | | | | |
| | | | | | | |

Figure 152: Safeguard Check screen

- 6. Click **Update** to refresh the updated information.
- 7. Click **Close** to exit the window.

The **Safeguard Engine** icon is displayed on the top left-hand corner of the device in the topology.

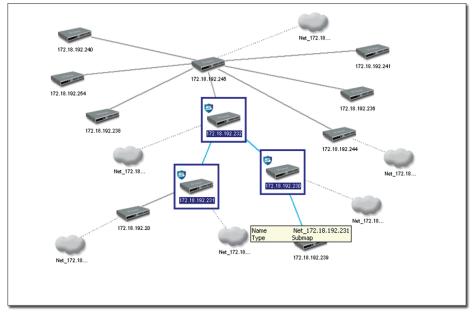


Figure 153: Topology indicating the Safeguard Engine enabled for certain switches



The Safeguard status is not saved into the database; the status value is only for the opened topology.

7.9.4 Labeling Devices

There are two types of labels in D-View:

- Device Label Used to label the device. Administrators can set what details should be displayed.
- Link Label Used to label the connectors connecting two or more devices.



By default, D-View displays the IP addresses under the device icon in a topology.

7.9.4.1 Device Label

To change the **Device Label**, go to **Topology** > **Device Label** and select a type.

The following table lists the different types of **Device Labels**.

| Device Label | Description | Example |
|-------------------|--|--------------------------|
| Device Name | The device name is displayed under the device icon. | Dev-172.17.5 |
| Device IP | The device IP address is displayed under the device icon. | 172.17.5.30 |
| Device Type | The device type is displayed above the device icon. | DGS-3450 172.17.5.244 |
| Safeguard Info | The Safeguard status is displayed on the top left corner of the device icon. The Safeguard status can be checked and updated by calling <u>7.9.3 Using Safeguard</u> <u>Check</u> function module. | 172.17.5.244 |
| Hide Info | Hides the information of the devices. | |

7.9.4.2 Link Label

| Device Label | Description | Example |
|-----------------|---|--|
| Link Port | Displays the port number used to connected the two devices. | Bev-172 18 26 Dev-172 Dev-172 Dev-172 |
| Link Speed | Displays the maximum connection speed between the two devices. | Dev-172 100M 13 23 100M Dev-172 Dev-172 Dev-172 |

To change the **Link Label**, go to **Topology** > **Link Label** and select a type. The following table lists the different types of **Link Labels**.

7.9.5 Editing Device Information

D-View can store device-related information such as name of the device, the port it uses, interface configuration details, vendor, and so on.

- To edit device information:
- Select the device from an open topology and then go to Topology > Device Manager > Edit Device. The Edit device screen will appear. OR

Right-click on the device and select **Property** to edit the properties of the device. The **Edit Device** screen will appear.

| asic Inform | ation | | | | |
|--------------|------------------------|---------|------------|------------------------|--------------|
| | Dev-172.17.5 | 5 30 | Descriptio | n: | |
| lame: | 064-172.17.5 | | | | |
| /ender: | Others | • | | | |
| уре: | GenSNMPDe | evice 🔹 | | | |
| nterface Co | nfiguration — | | | | |
| Interface II | Þ | Туре | | | <u>A</u> dd |
| 172.17.5.3 | 0 | Etherne | t | | <u>E</u> dit |
| • | | | | | Delete |
| | | | | | |
| etailed Info | rmation | | | | |
| Location: | 3rd floor | | | | |
| Buyer: | ABC | | Buy Date: | 2008/ | 1/25 💌 |
| Modules: | 0 | | Port Num: | 0 | |
| Serial No: | 221133 | | Firmware: | | |
| Note 1: | Test | | | | |
| Note 2: | | | | | |
| | | | | | |
| lanagemer | it Method | | | | - Y |
| | SNMP v1/v2c | | - | <u>C</u> onfi <u>c</u> | J |
| | SNMP v1/v2c SNMP v3 | | | | 56 |
| | OTAIWIE VO | | | Cancel | 1 |

Figure 154: Edit Device screen

- 2. Enter the **Basic Information** for the device. Basic Information comprises **Name**, **Vendor**, **Type**, and **Description** of the device.
- 3. Configure the **Interface IP**. Click **Add** to add a new Interface IP, **Edit** to update an existing Interface IP, or **Delete** to remove an existing Interface IP.
- Enter the Detailed Information for the device. Detailed Information comprises the Location, Buyer, Modules, Serial No., Buy Date, Port Num, and Firmware of the device.
- 5. Configure the **Management Method**. Refer to <u>Management Methods</u> for more information.
- 6. Click **Apply**.

Management Methods

D-View allows administrators to manage multiple device modules simultaneously, using different management methods. When administrators need to configure the device, D-View opens the designated management tool.

| Device Management | Method | | |
|-------------------|--------------------|----------------|--------|
| SNMP v1/v2c SNM | P v3 TELNET WE | EB Customize | |
| Read Community: | public | | |
| Write Community: | private | | |
| | | OK _ | Cancel |

Figure 155: Device Management Method screen

D-View includes the following methods for managing a device:

- SNMP v1/v2c: D-View will use device modules that support SNMP v1/v2c to manage the device.
- SNMP v3: D-View will use device modules that support SNMP v3 to manage the device.
- TELNET: D-View will use the telnet tool embedded in the OS to manage the device.
- WEB: D-View will use web browser (IE) tool imbedded in the OS to manage the device.
- Customize: D-View will use the designated program to manage the device.

7.10 Managing Events

Events are one of the core functions of D-View. In fact, the main function of D-View can be described as detecting changes within the network, and every change can be thought of as an event. The following sections will discuss **Events** in detail.

7.10.1 Setting Poll Parameters

Parameters for the polling include poll interval and poll timeout. **To set the Polling Parameters:**

1. Go to System > Event Manager > Polling Config > Parameters.

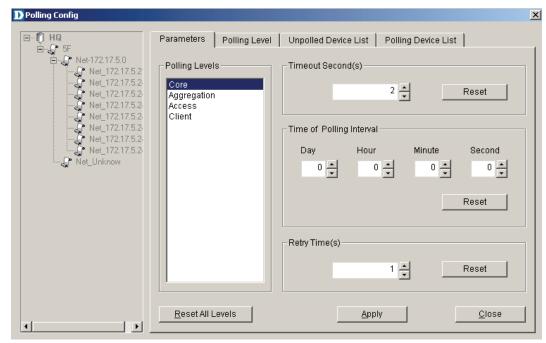


Figure 156: Set Parameter screen

- 2. Choose the appropriate polling level in **Polling Levels** from **Core**, **Aggregation**, **Access** and **Client**.
- 3. Set the **Timeout** in seconds. D-View will stop polling the device after this timeout period. Click **Reset** to reset value to default value, which is 2.
- 4. Set the **Polling Interval** in days, hours, minutes and seconds. D-View will poll the devices at the set time interval. Click **Reset** to reset value to default value, which is 0.
- Set the **Retry Time**. D-View will retry this amount of times if polling is initially unsuccessful. Click **Reset** to reset value to default value, which is 1.
- 6. Click **Apply**.

7.10.2 Setting the Devices to Poll

To monitor the status of the devices, add the devices to the poll list. You can also delete the devices if you no longer want to monitor the device status.



When the devices are added to the poll list, the device icon color changes from grey to green.

To configure the Poll List:

 Go to System > Event Manager > Polling Config > Unpolled Device List tab.

| D Polling Config | | | | | | × |
|------------------|--------------------|---------------|----------------------|----------------|----------------|------------------|
| ⊡… () HQ ⊡ | Parameters | Polling Level | Unpolled Devic | e List Polling | Device List | |
| | Device Filter- | | | Add to Poll | | |
| | Device Grou | p: All | • | Protocol: | ICMP | • |
| | Polling Leve | I: All | • | | <u>A</u> dd to | Poll |
| | Device List- | | | | | |
| | | Device Name | Device | Туре | IP | Com |
| | Dev-172. | | NonSNMPD | | | public |
| | Dev-172. | | NonSNMPD NonSNMPD | | | public public |
| | Dev-172. | | NonSNMPD | | | public |
| | Dev-172. | | NonSNMPD | | | public |
| | Dev-172. | 17.5.99 | NonSNMPD | evice 172.17 | .5.99 | public |
| | 🗌 🔲 Dev-172. | 17.5.10 | NonSNMPD | evice 172.17 | .5.10 | public |
| | Dev-172. | | NonSNMPD | | | public |
| | Dev-172. | | NonSNMPD | | | public |
| | Dev-172. | 17.5.44 | NonSNMPD | evice 172.17 | .5.44 | public 🖵 |
| | ↓ | | | | | |
| | Select <u>A</u> ll | Se | ect <u>N</u> one | Invert Selecti | on | <u>C</u> lose |

Figure 157: Select Poll Device screen

- 2. Select the **Device Group**. Refer to <u>7.10.4 Grouping Devices using</u> <u>Device Manager</u> for more information on grouping devices.
- 3. Select the **Polling Level** from **Core, Aggregation, Access, Client** or **All.**
- 4. Select devices.
- Select the **Poll Protocol**. The two options to poll the network devices periodically are **SNMP** (Simple Network Management Protocol) and **ICMP** (Internet Control Message Protocol). The default poll protocol is **ICMP**. Click **Add to Poll** to add to the poll list.



From the topology, select the device and right-click to select **Add to Poll List** or **Delete from Poll List** from the popup menu.



By default, when the topology is imported, the devices are in an **unpoll** status. The status of the device is changed to **Up** or **Down** when the device is added manually.

7.10.3 Viewing the Poll Device List

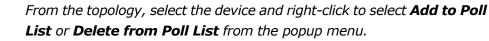
The **Poll Device List** displays the list of devices after generating the Topology.

 Go to System > Event Manager > Polling Config > Poll Device List tab.

| HQ - Gr 5F | Parameters Pollin | g Level Unpolled Devic | ce List Polling Devic | e List | |
|--------------------|-------------------|--------------------------|-----------------------|---------|------------|
| - C Net-172.17.5.0 | IP | Device Name | Device Type | Protoco | DI Polling |
| | 772.17.5.119 | Dev-172.17.5.119 | DFL2560F | ICMP | Access |
| | 172.17.5.211 | Dev-172.17.5.211 | DGS3200-10 | ICMP | Aggregatio |
| | 172.17.5.241 | Dev-172.17.5.241 | DGS3450 | ICMP | Aggregatio |
| | 172.17.5.242 | Dev-172.17.5.242 | DGS3450 | ICMP | Aggregatio |
| Net 172.17.5.2 | 172.17.5.243 | Dev-172.17.5.243 | DGS3450 | ICMP | Aggregatio |
| Net 172.17.5.2 | 172.17.5.244 | Dev-172.17.5.244 | DGS3450 | ICMP | Aggregatio |
| Net 172.17.5.2 | 172.17.5.245 | Dev-172.17.5.245 | DGS3450 | ICMP | Aggregatio |
| et_Unknow | 172.17.5.246 | Dev-172.17.5.246 | DGS3450 | ICMP | Aggregatio |
| | 172.17.5.247 | Dev-172.17.5.247 | DGS3450 | ICMP | Aggregatio |
| | 772.17.5.248 | Dev-172.17.5.248 | DGS3450 | ICMP | Aggregatio |
| | 172.17.5.254 | Dev-172.17.5.254 | DGS3627G | ICMP | Aggregatio |
| | 172.17.5.89 | Dev-172.17.5.89 | GenSNMPDevice | ICMP | Client |
| | 172.17.5.113 | Dev-172.17.5.113 | GenSNMPDevice | ICMP | Client |
| | 172.17.5.122 | Dev-172.17.5.122 | GenSNMPDevice | ICMP | Client |
| | 172.17.5.181 | Dev-172.17.5.181 | GenSNMPDevice | ICMP | Client |
| | 172.17.5.182 | Dev-172.17.5.182 | GenSNMPDevice | ICMP | Client |
| | 172.17.5.186 | Dev-172.17.5.186 | GenSNMPDevice | ICMP | Client |
| | 172.17.5.200 | Dev-172.17.5.200 | GenSNMPDevice | ICMP | Client |
| | • | | | | • |

Figure 158: Poll Device List screen

2. From here you can delete devices you've added to the list.



7.10.4 Grouping Devices using Device Manager

For monitoring similar devices, you can group devices of the same type using the **Device Group Manager**.

 Go to System > Event Manager > Device Group Manager. The Device Group Manager screen will appear.

| Domain_1 | Device's Group | Description | | |
|--|--|---|--|-------------|
| | Device List | Time | Interface | Description |
| | Name Dev-172.17.5.30 Dev-172.17.5.40 Dev-172.17.5.119 Dev-172.17.5.181 Dev-172.17.5.182 Dev-172.17.5.183 Dev-172.17.5.184 Dev-172.17.5.185 Dev-172.17.5.241 Dev-172.17.5.242 | Type GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice GenSNMPDevice DGS3450 DGS3450 | Interact 172.17.5.30 172.17.5.40 172.17.5.119 172.17.5.181 172.17.5.182 172.17.5.183 172.17.5.184 172.17.5.185 172.17.5.184 172.17.5.185 172.17.5.241 172.17.5.242 | |
| Add <u>G</u> roup Del Grou Set Community >> | p Add To Grou | p Del From | Group | Close |

Figure 159: Device Group screen

2. Click **Add Group** to create a group. The **Add Group** screen will display.

| D Add Group | | X |
|--------------|---------------------------|---|
| Domain: | Domain_1 | _ |
| Group: | Access Points | |
| Description: | Fortest | |
| | <u>A</u> dd <u>C</u> lose | |

Figure 160: Add Group screen

- 3. Enter the name of the Group.
- 4. Enter a brief **Description** of the group.
- 5. Click **Add.** The group is created.
- Next, select devices from the device list you want to add to this group and click Add To Group. The Add Device to a group screen will display.

| Domain_1 | Device's Group | | | | |
|-------------------------------|--|---|--|-------------|----------|
| 🚺 Access Points Domain_2 | Name | Description | | | |
| | Device List | | | | |
| | Name | Туре | Interface | Description | - |
| | Dev-172.17.5.30 Dev-172.17.5.40 Dev-172.17.5.119 | GenSNMPDevice GenSNMPDevice GenSNMPDevice | 172.17.5.30 172.17.5.40 172.17.5.119 | | |
| | Dev-172.17.5.181 | D Add device to gr | oup | | |
| | Dev-172.17.5.182 Dev-172.17.5.183 Dev-172.17.5.184 Dev-172.17.5.185 | Select a group | <u> </u> | - | |
| | Dev-172.17.5.241 Dev-172.17.5.242 Dev-172.17.5.243 Dev-172.17.5.244 | Add | <u>C</u> lose | | |
| | Dev-172.17.5.245 | DCCC3450 DVG3376GSP | 172.17.5.245 | | • |

Figure 161: Add device to group screen

- 7. Select the group from the list.
- 8. Click **Add**. The devices are added to the group.

| 🛢 Domain_1 | Device's Group | Device's Group | | | | |
|---------------------|--|---|--|-------------|--|--|
| C Access Points | Name | Description | | | | |
| Domain_2 | Access Points | DESCRIPTION | 1 | | | |
| | Device List | Туре | Interface | Description | | |
| | Dev-172.17.5.30 Dev-172.17.5.40 | GenSNMPDevice GenSNMPDevice | 172.17.5.30 172.17.5.40 | | | |
| | Dev-172.17.5.119 | GenSNMPDevice | 172.17.5.119 | | | |
| | Dev-172.17.5.181 Dev-172.17.5.182 Dev-172.17.5.183 | GenSNMPDevice GenSNMPDevice GenSNMPDevice | 172.17.5.181 172.17.5.182 172.17.5.183 | | | |
| Add Group Del Group | | | | | | |

Figure 162: Device Group screen

9. Click **Set Community** to change the read/write community of devices.

7.10.5 Configuring Device Events

After defining the poll list, configure the event process mechanism for a device or a group of devices when an event occurs.

To configure Device Events:

1. Go to System > Event Manager > Device Event Config. The Event Configuration screen will appear.

| DEvent Configuration | | | | |
|------------------------------------|---------------------|-------------|------------|--------------------|
| ⊡~ () HQ ⊡~ () 5F | O Device Group: | | | * |
| 🛨 🔐 Net-172.17.5.0 | Device Name: | Dev-17 | 2.17.5.89 | • |
| Net_Unknow | Commom Event Type | Self-trap E | event Type | Syslog Event Type |
| | | | | |
| | Common Event Ty | /pe: | Up -> Dow | 'n |
| | | | | |
| | Severity: | | Critical | |
| | 🔲 Filter event of t | his type | | |
| | - Notice of event | | | |
| | | | | |
| | Sound | | | |
| | | | | |
| | O Sound | I File | | |
| | ▽ Log | | | |
| | | | | |
| | 🔽 Flash | | | |
| | EMail to: | | | |
| | Email to. | | | |
| | | | | Mail Server Config |
| | | | | |
| | Ap | ply | | <u>C</u> lose |

Figure 163: Event Configuration screen

- 2. Select a **Device Group** or a **Device Name**.
- 3. Select whether the event is a **Common Event**, **Self-trap Event** or **Syslog Event Type**.
- 4. If the event is a Common Event:
 - a. Select what kind of **Common Event** it is. The different events are:

| Тгар | Indication |
|------------|---------------------------------------|
| Up -> Down | The link between the device and the |
| | workstation (D-View) is disconnected. |
| Down -> Up | The link between device and the |
| | workstation is connected. |
| Cold Start | Device sends Cold Start trap message |
| | when the device is powered off/on. |
| Warm Start | Device sends Warm Start trap message |
| | when the device has been rebooted. |

| ГГ | |
|---------------------------------|--|
| Link Down | Device sends Link Down trap message |
| | when the status of an attached |
| | communication interface has changed |
| | from up to down. |
| Link Up | Device sends Link Up trap message when |
| | the status of an attached communication |
| | interface has changed from down to up. |
| Device | Device sends Authentication Fail trap |
| Authentication | when the agent received a request from |
| Fail | an unauthorized manager. |
| EGP Fail | In routers running the Exterior Gateway |
| | Protocol (EGP), an EGP Neighbor has |
| | changed to a down state. |
| Self-Defined | Device sends the private trap defined by |
| Trap | |
| | the users. |
| Threshold Event | the users. Device sends the trap message, when |
| Threshold Event | |
| Threshold Event | Device sends the trap message, when |
| Threshold Event | Device sends the trap message, when D-View detects a threshold event. |
| Threshold Event | Device sends the trap message, when D-View detects a threshold event. Whenever the exceeded count reaches |
| Threshold Event Syslog Event | Device sends the trap message, when D-View detects a threshold event. Whenever the exceeded count reaches the trigger value then a threshold event is |

- b. Enable **Filter event of this type** if you do not want to notify users of this event.
- c. Set the notification options as required:
- **Sound:** D-View plays the selected sound file or beeps to notify users that an event has occurred.
- Log: Saves the event into database. Set the color of the Log messages displayed in the message board.
- **Flash:** The netmap icon in the Hierarchy Topology Workplace will flicker a warning sign.
- **EMail:** D-View notifies administrators of an event through an email.
- **Mail Server Config:** Click to configure the email.

| lender | |
|--------------------|-------------------------|
| <u>N</u> ame: | User1 |
| <u>E</u> Mail: | User@123.com |
| <u>A</u> uthority: | Password Authentication |
| Acco <u>u</u> nt: | User Name |
| <u>P</u> assword: | ***** |
| MTP Server | |
| <u>S</u> MTP Se | rver: 172.18.192.120 |
| SM <u>T</u> P I | Port: 25 |

Figure 164: Email Configuration screen

- Sender: Update the Sender's information by entering the name, email, authority, account and password.
- SMTP Server: Enter the IP address of the device. SMTP is a server program that lets you send email messages directly from your computer.
- **SMTP Port:** Enter the **SMTP Port** number to connect to the server.
- Click **Test** to connect to the mail server.
 If the event is a Self-trap Event:

| Event Configuration | | | |
|---|---|----------------------------|---------------|
| | Device Group: Device Name: | Dev-172.17.5.33 | * |
| ⊡P Net-172.17.5.0 P Net_172.17.5.211 | | | |
| | Commom Event Type | Self-trap Event Type Sysic | og Event Type |
| | Private Trap Ty | pe O Publi | с Тгар Туре |
| ⊷ | Num | Event Type Description | OID |
| | | | |
| ····· · ··· ··· ··· ···· ····· ········ | | | |
| | | | |
| | | | |
| | | | |
| | • | | |
| | Severity: | Alarm | • |
| | Filter event of th | is type | |
| | _ Notice of event | | |
| | C Bee | n | |
| | | und File | |
| | 🗖 Log | | |
| | 🗖 Flash | | |
| | 🗖 EMail to: | | |
| | | Mail | Server Config |
| | A | pply <u>C</u> l | ose |
| | | | |

Figure 165: Self-trap Event Type screen

- a. Select whether it is a private or public trap type.
- b. Select the event in the table.
- c. Select the **Severity** of the event.
- d. Set the notification options as required:
- Sound: D-View plays the selected sound file or beeps to notify users that an event has occurred.
- Log: Saves the event into database. Set the color of the Log messages displayed in the message board.
- **Flash:** The netmap icon in the Hierarchy Topology Workplace will flicker a warning sign.
- **Email:** D-View notifies administrators of an event through an email.
- Mail Server Config: Click to configure the email.
- Sender: Update the Sender's information by entering the name, email, authority, account and password.

If the event is a Syslog Event:

| D Event Configuration | |
|----------------------------------|--|
| ⊡- 0 HQ ⊡- 3 5F | C Device Group: |
| Pat-172.17.5.0 Pat-172.17.5.211 | Device Name: Dev-172.17.5.33 |
| | Commom Event Type Self-trap Event Type Syslog Event Type |
| ⊷ | Add Key Delete Key |
| | Num Key |
| | |
| | |
| | |
| | |
| | |
| | Severity: Informational |
| | Filter event of this type |
| | Notice of event |
| | Sound Beep |
| | C Sound File |
| | |
| | |
| | Flash |
| | EMail to: |
| | |
| | Mail Server Config |
| | Apply Close |
| | |

Figure 166: Syslog Event Type screen

- a. Add a key.
- b. Select the **Severity** of the event.
- c. Set the notification options as required:
- Sound: D-View plays the selected sound file or beeps to notify users that an event has occurred.

- Log: Saves the event into database. Set the color of the Log messages displayed in the message board.
- **Flash:** The netmap icon in the Hierarchy Topology Workplace will flicker a warning sign.
- **Email:** D-View notifies administrators of an event through an email.
- Mail Server Config: Click to configure the email.
- Sender: Update the Sender's information by entering the name, email, authority, account and password.

7.10.6 Retrieving Device Event Logs

D-View saves all events into the database as and when they occur. Retrieve the **Device Event Log** to view event information.

 Event Viewer by Netmap: To view events that occurred for a selected Netmap, go to System > Event Manager > Event Viewer by Netmap.

| | Type | Severity | Time | IP | Description | Count |
|---------------------------------------|--------------------------------|---------------|---------------------------------|--------------|------------------------|-----------|
| Domain_2 | 1 | Critical | 2008-02-21 10:47:38 | 172.17.5.183 | Up -> Down | 1 |
| | 2 | Informational | 2008-02-20 19:42:26 | 172.17.5.182 | Down -> Up | 1 |
| | 1 | Critical | 2008-02-20 19:41:43 | 172.17.5.182 | Up -> Down | 1 |
| | | | | | | |
| Iter Setting | All Event Type | | Time | | | |
| Event | All Event Type All Severity | | ▼ | From: 2008/ | 2/22 To : 2000 | 8/ 2/22 💌 |
| Event Type: Severity: | | | • G All | | 2/22 To: 2004 | 8/ 2/22 💌 |
| _ | | | All Period | rce | 2/22 Y To: 2004 | 8/ 2/22 💌 |
| Event Type: Severity: Device | All Severity | | All Period Event Source | rce | 2/22 To: 2004 | 8/ 2/22 💌 |

Figure 167: Event Viewer by Netmap screen

 Event Viewer by IP: To view events that occurred for a selected IP address, go to System > Event Manager > Event Viewer by IP.

| D Event | t Viewer | | | | |
|----------|---------------------------|--|-------|-----------------------------------|-------------------------------|
| Type | Severity | Time | IP | Description | Count |
| | Informational Critical | 2008-02-20 19:42:26 2008-02-20 19:41:43 | | Down -> Up Up -> Down | 1 |
| Filter S | | | | Time | |
| € T | ype | All Event Type | • | All | |
| C S | everity | All Severity | - | C Period From: | 2008/ 2/22 💌 To: 2008/ 2/22 💌 |
| Devi | ice ce IP: | 172 . 17 . 5 | . 182 | Event Source Database File | Browse |
| Count | 2 | | Qu | Jery Statistics | Print Save Close |

Figure 168: Event Viewer by IP address screen

- 3. From here, you can further filter the events. Select from the following to filter the events:
 - **Filter Setting:** Administrators can set filters such as event type and level of severity.
 - Device: Select device information such as the IP address, vendor name and device type from the drop-down list.
 - **Time:** Set the time interval at which the event has occurred.
 - Event Source: Select the source of the event saved in the database or stored in a file.
- 4. Save the settings and click **Query** to query the database and a list of devices are displayed depending on the filter setting.
- 5. Click **Statistics** to view event statistics by event type, manufacturer, severity and device type.

| D Event Statistics | X |
|--|---|
| Bar Chart Pie Chart | |
| | 1 |
| | |
| | |
| 100.0%-2 | |
| 90.0% = | |
| 80.0% = | |
| 70.0% = | |
| 60,0% - | |
| 50.0% = | |
| 40.0% | |
| 30.0% - | |
| 20.0% | |
| 0.0% | |
| 0.0% | |
| Up -> Dawr | |
| | • |
| Statistics By Event Type | |
| C Statistics By Manufacturer C Statistics By Type Device | |
| | |
| Close | |
| | |

Figure 169: Event Statistics: Bar Chart screen

 Bar Chart: Illustrates the event statistics by Event Type, Manufacturer, Severity and Device Type.

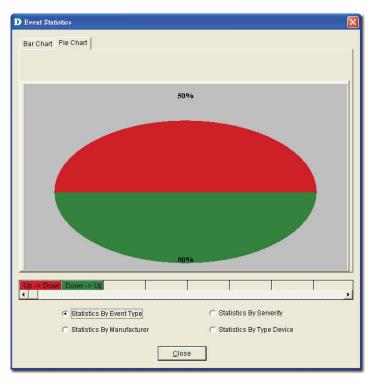


Figure 170: Event Statistics: Pie Chart screen

 Pie Chart: Illustrates the event statistics by Event Type, Manufacturer, Severity and Device Type.

7.10.7 Defining Trap Information

D-View monitors device events by polling devices by sending ICMP or SNMP packets positively and using **Trap Editor** to retrieve trap information passively.

D-View retrieves and parses trap information from devices. In order to receive and parse the private trap information from a designated device, administrators need to customize the private trap information.



To customize trap information, retrieve the definition format from the device vendor.

To define trap information:

 Go to System > Event Manager > Trap Editor. The Trap Editor screen will appear.

| Spec Descript | ion | DeviceTyp | e |
|-----------------|--------------------------------|---------------|-----|
| mplsL3 | VpnVrfUp test | | |
| mplsL3 | VpnVnDown | | |
| | VpnVrfRouteMidThreshExceeded | | |
| | VpnVrfNumVrfRouteMaxThreshExc | | |
| | VpnNumVrfSecIIIgILbIThrshExcd | | |
| mplsL3 | VpnNumVrfRouteMaxThreshCleared | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| 1 | 1.3.6.1.2.1.10.166.11 | • | Add |
| Enterprise OID: | 1.3.6.1.2.1.10.166.11 | • | Add |
| Enterprise OID: | | • | |
| Enterprise OID: | | ▼ hCleared | Add |

Figure 171: Trap Editor screen

- Enter the Enterprise OID. Contact D-Link support to obtain the trap OID.
- Enter the Specific Num. The Specific Num associates with the specific trap action. The Enterprise OID and the Specific Num define the designated type of trap.
- Type the **Description** of the message, for the designated trap.
 For example: The enterprise OID is **1.3.6.1.2.1.10.166.11**

The specific number 6 here represents mplsL3VpnNumVrfRouteMaxThreshCleared trap message.

7.10.8 Locating the Switch Port

D-View provides an easy and effective way to inspect and report which network devices are connected to each switch port. This solves the problem of having to trace cables in order to see which port a network device is connected to, making it a very valuable tool for network and IT administrators.

Locate the switch port of the end user's computer with the MAC or IP address using **MAC Locator**.

1. Go to **System**> **Resource Manager** > **MAC Locator**. The **Mac Locator** screen will appear.

| 192.168.11.23 | | by IP | - | | <u>L</u> ocate |
|---------------|----------------------|----------------|------------|------|----------------|
| | | | | | |
| | from topology in dat | abase Port: | 8 | | <u>S</u> earch |
| Device II . | 102.100.11.10 | , ou | - | - | <u>_</u> |
| Device ID | Device Name | 9 | IP | | By Manag |
| 851 | Dev-192.168 | .11.16 | 192.168.11 | 1.16 | N |
| • | | | | | • |
| Detailed Path | n:Root->Topo1->Test | 1->Net-192 | 168.11.0 | | |
| | | | | | |

Figure 172: MAC Locator screen

Enter the MAC or IP address. Click Locate.
 D-View locates the specified device, if found.

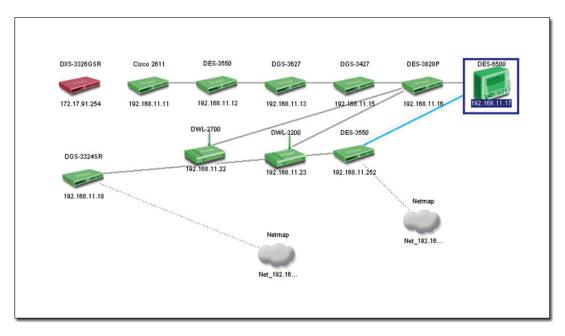


Figure 173: Specified device located in the Topology using MAC Locator

7.10.9 Monitoring the Link Status

D-view lets you monitor and modify the link status in a topology.

- To monitor the Link Status:
- 1. Open the topology.
- Go to **Topology** > **Link Label** and then select **Link Speed.** The status of the links is displayed.

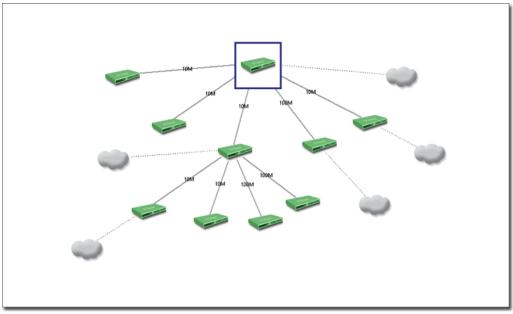


Figure 174: The Topology displays the Link status of the devices

 Go to Advanced > Link Capacity Check, to monitor the link status of all the devices in a table.

| Link Capacity C | heck | | | | | | | | | - 1 |
|------------------|----------|------------------|--------------|-----------|-----------------|--------------|-----------|--------------|------------|-----------|
| Link Name | Capacity | DevName-1 | DevIP-1 | DevPort-1 | DevName-2 | DevIP-2 | DevPort-2 | LinkID | FstDevComm | SndDevCom |
| Dev-172.17.5.242 | 100M | Dev-172.17.5.242 | 172.17.5.242 | 13 | Dev-172.17.5.1 | 172.17.5.119 | 0 | 240 | public | public |
| Dev-172.17.5.242 | 100M | Dev-172.17.5.242 | 172.17.5.242 | 15 | Dev-172.17.5.30 | 172.17.5.30 | 0 | 241 | public | public |
| ev-172.17.5.242 | 100M | Dev-172.17.5.242 | 172.17.5.242 | 25 | Dev-172.17.5.1 | 172.17.5.181 | 0 | 242 | public | public |
| ev-172.17.5.242 | 10M | Dev-172.17.5.242 | 172.17.5.242 | 23 | Dev-172.17.5.1 | 172.17.5.183 | 0 | 243 | public | public |
| ev-172.17.5.244 | 1000M | Dev-172.17.5.244 | 172.17.5.244 | 48 | Dev-172.17.5.1 | 172.17.5.182 | 0 | 244 | public | public |
| Dev-172.17.5.245 | 1000M | Dev-172.17.5.245 | 172.17.5.245 | 48 | Dev-172.17.5.2 | 172.17.5.254 | 0 | 245 | public | public |
| Dev-172.17.5.245 | 100M | Dev-172.17.5.245 | 172.17.5.245 | 35 | Dev-172.17.5.40 | 172.17.5.40 | 0 | 246 | public | public |
| | | | | | | | | | | |
| < | | | | | | | | | |) |
| | | | | | | | Check | <u>S</u> top | Update | Close |

Figure 175: Link Capacity Check screen

4. Click **Check**. D-View checks the capacity of each device link port and displays the minimum capacity value of the link as seen in the following figure.

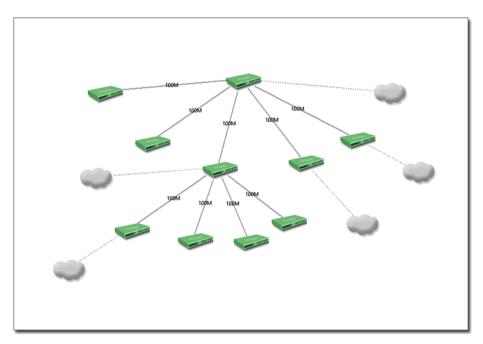


Figure 176: The topology displays the link status after the Link Capacity check

By default, when a link is created between devices the link capacity is set to 100M.

To modify the Capacity Value:

 Go to Topology > Link Manager > Edit Link. The Edit Link screen will be displayed.

OR

000000000

In a topology, right-click on a link and then select **Property**. The **Edit Link** screen will appear.

| D | Edit Link | | | | | | |
|------|------------|--------|-------------------------|---------|----------|-----------------|--------|
| | Link Name | 1: | Dev-172.17.5. | 242 | | | |
| | Dev-1 : | Dev- | 172,17.5.242 | * | Dev-2 : | Dev-172.17.5.30 | * |
| | Port : | 15 | | | Port : | 0 | |
| | Color : | | | Br | owse | | |
| | Capacity : | | 100M • | Link | : Type : | Ethernet | * |
| | 🗖 Redun | dant L | 10M ir 100M 1000M | Ordinar | y Link | | |
| -7/- | | | 10G | | | ок | Cancel |
| _ | | _ | | | | | |

Figure 177: Edit Link screen

- 2. Update the Capacity. Select from 10M, 100M, 1000M, or 10G.
- 3. Click **OK**.



In order to obtain accurate results from the link capacity, ensure the port numbers between the devices are entered correctly.

7.10.10 Managing Trap and Syslog Service

You can use the Services Manager tool to manage the Trap and Syslog Services. Go to **Advanced > Services Manager**.

Enter the Trap UDP Port and click Start Trap Service. Click Apply to enable it. If you want to configure the syslog service, enter the Syslog UDP Port and click Start Syslog Service. Click Apply to enable it.

| Trap Service Configuration Indication Trap UDP Port : 162 Trap Service can receive the trap events from devices such as | D Services Manager | × |
|--|--|---|
| TRADUDE FUN 1994 | Trap Service Configuration | Indication |
| Start Trap Service switches etc. The default UDP port is 162. | | events from devices such as switches etc. The default UDP |
| Syslog Service Configuration Indication Syslog UDP Port : 514 Syslog Service can receive the syslog events from devices such as switches etc. The default UDP port is 514. Apply Close | Syslog UDP Port : 514 Start Syslog Service | Syslog Service can receive the syslog events from devices such as switches etc. The default UDP |
| Figure 178: Services Manager screen | Eigure 178: Se | nvices Manager screen |

7.10.11 Locating Devices

In D-View, you can locate devices using the Device Locator tool. Use **Device Locator** to find devices in multiple topologies by entering the **Device Name** or **IP address**.

1. Go to **System > Resource Manager > Device Locator**. The **Device Locator** screen will display.

| put Device Nami | e or Device IP: | 172.17.5.30 | <u>S</u> earch |
|------------------|-------------------------|-------------|----------------|
| Device List | Device Name | IP | By Manage |
| 992 | Dev-172.17.5.30 | 172.17.5.30 | N |
| • | | | Þ |
| Detailed Path:Ro | oot->Test1->Test1->Net- | 172.17.5.0 | |

- Figure 179: Device Locator screen
- 2. Enter the name or IP address of the device to be located.
- 3. Click **Search** to locate the device. The results are displayed.
- 4. Click **Open Topo** to locate the device in a topology.

| | 172:17.5.30 | 172.17.5.119 | 172.17.5.181 | |
|-----------|--------------------|----------------------------|--------------|----------------|
| 2.17.5.40 | D Device Locator | / / | 172.17.5.30 | - Occurrit |
| | Input Device Name | e or Device IF. | 172.17.5.30 | <u>S</u> earch |
| | Device ID | Device Name | IP | By Manage |
| | 992 | Dev-172.17.5.30 | 172.17.5.30 | N |
| | A Detailed Bath:Br | oot->Test1->Test1->Net-17: | 24750 | |
| :54 | Detailed Fath.Rt | JUERTESTERTESTERNEETT. | 2.17.3.0 | |
| | | | | |

Figure 180: The Topology indicates the device located after using Device Locator tool

Entering User Information

In D-View, you can use the **Device Collector** tool to enter **User Information**.

To enter user information:

- 1. Go to System > Resource Manager > Device Collector. The Device Collector screen will be displayed.
- 2. Use filter options to select the vendor's name and device type. A list of devices will be displayed.

| Root | Filter | | | | |
|----------------|-------------------|---------------------|----------------|-------------|---|
| Test1 | Vender: All V | 'ender 🔹 | Type : | All Type | • |
| ☐ Net-172 | Number: 12 | 5 | | | |
| 🖉 Net | Device Name | Device Type | IP | Link Status | |
| 🚽 🔐 Net_ | Dev-172.17.5.30 | GenSNMPD | 172.17.5.30 | Connect | |
| 🔐 Net_ | Dev-172.17.5.40 | GenSNMPD | 172.17.5.40 | Connect | |
| test2 | Dev-172.17.5.11 | | 172.17.5.1 | Connect | |
| 🔐 Net Un | Dev-172.17.5.18 | GenSNMPD | 172.17.5.1 | Connect | |
| Test | Dev-172.17.5.18 | 2 GenSNMPD | 172.17.5.1 | Connect | |
| | Dev-172.17.5.18 | GenSNMPD | 172.17.5.1 | Connect | |
| | Dev-172.17.5.18 | 4 GenSNMPD | 172.17.5.1 | Connect | |
| | Dev-172.17.5.24 | 1 DGS3450 | 172.17.5.2 | Connect | |
| | Dev-172.17.5.24 | 2 DGS3450 | 172.17.5.2 | Connect | |
| | Dev-172.17.5.24 | 3 DGS3450 | 172.17.5.2 | Connect | |
| | Dev-172.17.5.24 | 4 DGS3450 | 172.17.5.2 | Connect | |
| | Dev-172.17.5.24 | 5 DGS3450 | 172.17.5.2 | Connect | |
| | Dev-172.17.5.25 | 4 DXS3326G | 172.17.5.2 | Connect | |
| | Dev-172.17.5.10 | 8 NonSNMPD | 172.17.5.1 | Connect | |
| | Dev-172.17.5.20 | NonSNMPD | 172.17.5.20 | Connect | |
| | Dev-172.17.5.39 | NonSNMPD | 172.17.5.39 | Connect | |
| | Dev-172.17.5.47 | NonSNMPD | 172.17.5.47 | Connect | |
| | Devi 470 47 5 40 | NonONIMOD | 479 47 5 40 | Connect | |
| | Detailed Path:Roi | ot->Test1->Test1->N | let-172.17.5.0 | | |
| | | | | | |
| (<u>111</u>) | | | | | |

Figure 181: Device Collector screen

3. Select a device from the list and then click **User Info**. The **User Info** screen will be displayed.

| Users Information | Port | |
|--|--------|--|
| User 1 | 1 | |
| User 2 | 2 3 | |
| User 3 | а. | |
| | | |
| In a selection of the second second second | | |
| Jser Information — | | |
| Port Number : | 3 | |

- Figure 182: User Information screen
- 4. Add/Edit/Delete user information of the selected device.

7.10.12 Locating Users

In D-View, you can locate users using the **User Locator** tool. Use **User Locator** to find users connected with a particular device.

To Locate Users:

1. Go to **System > Resource Manager > User Locator**. The **User Locator** screen will be displayed.

| Jser1 | | | | Search |
|------------------|-----------------|-------------|------|--------|
| ser List | | | | |
| User information | on Device Name | Device Type | Port | |
| User1 | Dev-172.17.5.30 | GenSNMPD | 1 | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Figure 183: User Locator screen

- 2. Enter the user's name. Separate multiple entries with a comma (,).
- 3. Click **Search**. The search results will appear.
- 4. Click **Open Topo** to locate the device in a topology.

7.10.12.1 User Statistics

User Statistics displays the users connected to particular devices. **To view User Statistics:**

1. Go to System > Resource Manager > User Statistics.

| D User Statistics | | | | X |
|--|------------------|------|------------------------------------|---|
| Root | User List | | | |
| 🗄 🚺 Domain_1 | User information | Port | Device Name | |
| Topology_1 test Net_172_17 Net_17 Net_17 Net_17 Net_17 Net_17 Net_17 Net_17 Net_17 Net_17 Net_17 Net_17 | User2 | 1 2 | Dev-172.17.5.30 Dev-172.17.5.40 | |
| < > | Number: 2 | | | |

Figure 184: User Statistics screen

2. The users are then displayed.

7.10.12.2 Device Statistics

Device Statistics can display information related to a vendor, buyer, or buyer date. For example, you can view all the devices sold by a particular vendor. **To view Device Statistics:**

 Go to System > Resource Manager > Device Statistic. The Device Statistic window will be displayed.

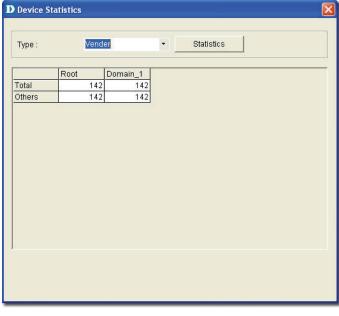


Figure 185: Device Statistic screen

 View the devices in the domain. You can sort them by Vendor, Buyer, or Buy Date.

7.11 Collector Configuration

The **Report** tool allows you to collect data and view information about your network, including packet exchange, devices, and CPU utilization.

7.11.1 Configuring a Collector

The **Report** tool allows you to use collectors to gather performance data from the network. Collectors are user-defined queries that gather network data according to user-defined parameters.

To configure a collector:

| E Root | Device Name | | | Device Type | Rea Com | d imunit |
|--|------------------|--------|----------|--|---|--|
| | Dev-172.17.5.89 | | | GenSNMPDevice | publi | с |
| • Net-172.17.5.0 • Net Unknow | Dev-172.17.5.113 | | | GenSNMPDevice | publi | с |
| Het_onknow | Dev-172.17.5.119 | | | DFL2560F | publi | с |
| | Dev-172.17.5.122 | | | GenSNMPDevice | publi | с |
| | Dev-172.17.5.181 | | | GenSNMPDevice | publi | с |
| | Dev-172.17.5.182 | | | GenSNMPDevice | publi | с |
| | Dev-172.17.5.186 | | | GenSNMPDevice | publi | с |
| | Dev-172.17.5.200 | | | GenSNMPDevice | publi | с |
| | Dev-172 17 5 211 | | | DGS3200-10 | nubli | c . |
| Device Name: Device IP: | | Object | CheckBox | Object Name | Object ID | |
| Device IP: Domain Name: | | | CheckBox | Object Name ifInOctets | Object ID 1.3.6.1.2.1.2 | 2.2.1. |
| Device IP: | | | CheckBox | | | |
| Device IP: Domain Name: | | | CheckBox | ifInOctets | 1.3.6.1.2.1.2 | 2.2.1. |
| Device IP: Domain Name: Community: | | | CheckBox | ifInOctets ifOutOctets | 1.3.6.1.2.1.2 | 2.2.1. 2.2.1. |
| Device IP: Domain Name: Community: Collector Name: Collector MgrIP: 172.17.5.111 | 5 (6) | • • | CheckBox | ifInOctets ifOutOctets ifInUcastPkts | 1.3.6.1.2.1.2 1.3.6.1.2.1.2 1.3.6.1.2.1.2 | 2.2.1. 2.2.1. 2.2.1. |
| Device IP: Domain Name: Community: Collector Name: Test1 | 5 (5) | • • | CheckBox | ifInOctets ifOutOctets ifInUcastPkts ifOutUcastPkts | 1.3.6.1.2.1.2 1.3.6.1.2.1.2 1.3.6.1.2.1.2 1.3.6.1.2.1.2 1.3.6.1.2.1.2 | 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. |
| Device IP: Domain Name: Community: Collector Name: Collector MgrIP: 172.17.5.111 | 5 (S) | • • | CheckBox | ifInOctets ifOutOctets ifInUcastPkts ifOutUcastPkts ifInNUcastPkts | 1.3.6.1.2.1.2 1.3.6.1.2.1.2 1.3.6.1.2.1.2 1.3.6.1.2.1.2 1.3.6.1.2.1.2 1.3.6.1.2.1.2 | 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. |
| Device IP: Domain Name: Community: Collector Name: Collector MgrIP: Duration: 3600 (S) Interval: | , () | • • | CheckBox | iflnOctets ifOutOctets ifInUcastPkts ifOutUcastPkts ifInNUcastPkts ifOutNUcastPkts ifInDiscards ifOutDiscards | 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 | 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. |
| Device IP: Domain Name: Community: Collector Name: Collector MgrIP: 172.17.5.111 Duration: 3600 (S) Interval: Object Filter | , () | • • | CheckBox | ifInOctets ifOutOctets ifInUcastPkts ifOutUcastPkts ifInNUcastPkts ifOutNUcastPkts ifInDiscards | 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 1.3.6.1.2.1.3 | 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. 2.2.1. |

1. Go to **Report > Configure Collector**.

Figure 186: Collector Configuration screen

- 2. On the top left, select the network that you want to monitor data from.
- 3. Select a device in the network on the table on the top right for information to be collected from.
- 4. To create a collector for the selected device, go to the lower left and type in the required data.

Collector name: Name of collector.

Collector MgrIP: IP of device.

Duration: Amount of time in seconds for how long collector will run. **Interval:** Amount of time in seconds when collector stops and then resumes.

Port or device filter: Port/s or device/s which collector will specifically monitor.

5. On the lower right, select an object type for the collector to monitor.

When you have completed all these steps, click on Apply to enable the collector.

There are two functions at the bottom of the screen.

Collector List shows all the collectors on the network and information about them including Port ID, Intervals, duration and the devices these collectors are running on. You can also delete a collector in here.

| D Coll | lectorList | | | | | | | | | _ 🗆 🗵 |
|--------|--------------------|------------|--------|---------|------|-----------------|-----|----------|---------|-------|
| Collec | ctor List | | | | | | | | | |
| | Collector Name | Device Nar | me | Port ID | 01 | D Name | Int | erval | | Dura |
| | 1 | Dev-172.17 | .5.211 | 1,3 | ifIn | Octets,ifOutO | 5 | | | 3600 |
| | 3200 | Dev-172.17 | .5.211 | | CPI | UUtilizationIn5 | 5 | | | 3600 |
| | 3200 | Dev-172.17 | .5.211 | | CPI | JUtilizationIn5 | 5 | | | 3600 |
| Þ | test12 | Dev-172.17 | .5.211 | 1,3 | ifOu | itUcastPkts,if | 5 | | | 3600 |
| • | _ | | | _ | | _ | | | | • |
| Detai | l Info | | | | | | | | | |
| | Device IP | | Device | е Туре | | Port | | Object I | Name | |
| ▶ | 172.17.5.211 | | DGS32 | 00-10 | | 1,3 | | ifOutUca | astPkts | |
| | 172.17.5.211 | | DGS32 | 00-10 | | 1,3 | | ifOutNU | castPkt | \$ |
| | | | | | | | | | | |
| | | | | | | | | | | |
| • | | | | | | | | | | Þ |
| | Setting | | | | | | | | | |
| | | · . | _ | Defect | | | | | | |
| Dom | ain Name: All Doma | ain | • | Refresh | | | | | | |
| | | | | | | | D | elete | | Close |

Figure 187: Collector List screen

Run Collectors shows a list of all collectors similar to the table in **Collector List**. You can select a collector that is not currently scheduled and schedule it. If the collector is already scheduled, you cannot reschedule it and will be asked to choose another collector.

| -101 | tupCollector | Collector Name | Device Name | Port ID | OID Name | |
|------|--------------|-------------------|------------------|---------|-------------------|---|
| | | try | Dev-172.17.5.211 | 1.3 | ifInOctets,ifOut0 | 5 |
| | | 1 | Dev-172.17.5.211 | 1,3 | ifInOctets,ifOut0 | 5 |
| | | 3200 | Dev-172.17.5.211 | | CPUUtilizationIn5 | 5 |
| | | 3200 | Dev-172.17.5.211 | | CPUUtilizationIn5 | 5 |
| | | test12 | Dev-172.17.5.211 | 1,3 | ifOutUcastPkts,if | 5 |
| | | | | | | |
| 1 | | | | | | |

Figure 188: Run Collectors screen

7.11.2 Schedule

To see the list of scheduled collectors, go to **Report** > **Schedule**. The list shows the collectors, its schedule types, and the last and next day they are scheduled to run. You can also delete a collector here.

| | Task Name | Task Type | Schedule Type | Previous Run Date | Next Date |
|-------------------------|-----------|---------------|------------------|----------------------|--------------|
| | task | CollectorTask | Day | | 4/20/2 |
| | 1 | CollectorTask | Once | 4/19/2011 10 | 4/19/2 |
| | 3200 CPV | CollectorTask | Once | 4/19/2011 10 | 4/19/3 |
| | | | | | |
| | | | | | |
| 1 | | | | | |
| Filter Setti Task Na | | Refresh | | | |

Figure 189: Schedule screen

7.11.3 Start

To schedule a collector, go into **Report > Start**, select a collector by ticking the checkbox, and click Schedule. If the collector is already scheduled for a task, then you cannot change its settings and must choose another collector.

| Star | tupCollector | | | | | _ [] |
|------|--------------|-------------------|------------------|---------|-------------------|---------|
| | | Collector Name | Device Name | Port ID | OID Name | Interva |
| | | try | Dev-172.17.5.211 | 1.3 | ifInOctets,ifOut0 | 5 |
| | | 1 | Dev-172.17.5.211 | 1,3 | ifInOctets,ifOut0 | 5 |
| | | 3200 | Dev-172.17.5.211 | | CPUUtilizationIn5 | 5 |
| | | 3200 | Dev-172.17.5.211 | | CPUUtilizationIn5 | 5 |
| | | test12 | Dev-172.17.5.211 | 1,3 | ifOutUcastPkts,if | 5 |
| | | | | | | |
| | | | | | | |

Figure 190: Start Collector screen

7.11.4 Device Inventory

Device Inventory shows a list of hardware devices that are on your network and their relevant information including IP address, Serial Numbers, and Firmware. Go to **Report > Device Inventory** to access this.

| D Inventory Report | | | | | <u> </u> |
|---------------------------------------|---------------|--------------|---------------|-------------|----------|
| TypeName | | Se | arch | | |
| | | | | | |
| · · · · · · · · · · · · · · · · · · · | f 1 🕨 🕅 🌾 🔕 🛃 | 100% 🗋 🗐 🖓 | • | Find Next | |
| Inventor | y Report | | | | |
| Type Name | Firmware | IP Address | Serial Number | Count | |
| Ð | | | | | |
| | | | | | |
| Ð | | | | | |
| DFL2560F | | 172.17.5.119 | | 1 | |
| | | | | | |
| Ð | | | | | |
| DGS3200-10 | | 172.17.5.211 | | 1 | |
| | | | | | |
| ŧ | | | | | |
| _ | | | | | |
| ⊞ | | 170 17 5 051 | | | |
| DGS3627G | | 172.17.5.254 | | 1 | _ |
| | | | | | |
| Ŧ | | | | | • |

Figure 191: Device Inventory screen

7.11.5 Report

In **Report**, you can view a report for each collector that is running on your network.

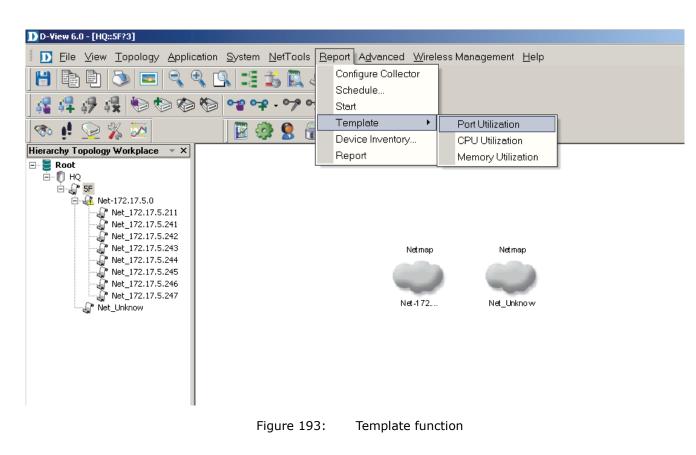
To view a report, go to **Report > Report.**

- Select your network domain and a list of all collectors will appear on the left.
- Click on each collector to see stats on the right.

| D CollectorReport | |
|---|-------------------------------------|
| Running Collectors ☐ Root ☐ HQ └ test 12 | 2.50E+008 2.00E+008 1.50E+008 |
| Collector Name: Search | 5.00E+007 |
| Collector Name Port ID Int | 5.00=+00/ |
| try 1.3 5 | 0.00E+000 |
| 1 1,3 5 3200 5 | |
| 3200 5 | |
| ► test12 1.3 5 | |
| | |
| | Figure 102: Depart screen |

Figure 192: Report screen

7.11.6 Template



To collect memory, ports or CPU utilization information, go to **Report > Template** and select from the three options.

To set up a template:

- 1. Type in the **Collector Name**, **Device IP** and the **Port**.
- 2. Type in the duration and interval in seconds.
- Click on Schedule to set the collector to run at a specific time. Click Finish which will save the collector and close the tool.

| PortUtilization |
|-------------------------------------|
| Collector Name: |
| Device IP: |
| Port: (Format:1,2,4-6,20) |
| Duration: 3600 (S) |
| Interval: 5 (S) |
| |
| |
| Schedule Finish Cancel |
| Figure 194: Port Utilization screen |



Basic Operations

8.1.1 View Options

| /iew Options | |
|----------------------|--------|
| 🔽 Display Tip | |
| Display Direction | |
| 🔽 Display Redundancy | |
| ОК | Cancel |

Go to **Topology** > **View Options** to turn on or off the view options of the topology.

Figure 195: View Options screen

- Display Tip: Roll mouse icon over objects to view the net cell information in the topology.
- **Display Direction:** Displays the direction of links in the topology map.
- Display Redundancy: Displays the redundant links in the topology map.

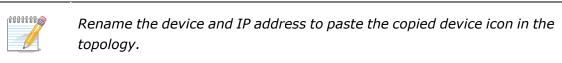
8.1.2 Copy/Paste

Use **Copy/Paste** function to add devices to the topology.

| Device Name Conflict | × |
|------------------------|---|
| Change Device Name to: | |
| Dev-172.17.5.40 | |
| | |
| OK Cancel | |
| | |
| IP Address Conflict | |
| Change IP Address to: | |
| | L |
| 172.17.5.40 | L |
| | L |
| OK Cancel | |
| | |



- Copy: Select a device and then go to Topology > Copy to copy the device icon from the topology map.
- Paste: Select a device and then go to Topology > Paste to paste the device icon into the opened topology.



8.1.3 Zoom In / Out / Fit

You can zoom in to get a close-up view of your topology or zoom out to see more.

- Go to **Topology** > **Zoom In** to zoom into the topology.
- Go to **Topology** > **Zoom Out** to zoom out of the topology.
- Go to **Topology** > **Zoom Fit** to fit the topology map in the current window.

8.1.4 Set Background

| Set Background | |
|------------------|--------|
| Background color | |
| | Browse |
| | |
| C Bitmap File | |
| | Search |
| | |
| | |
| ок | Cancel |

Go to **Topology** > **Set Background** to modify the background color of the topology.

Figure 197: Set Background screen

8.1.5 Upper Layer

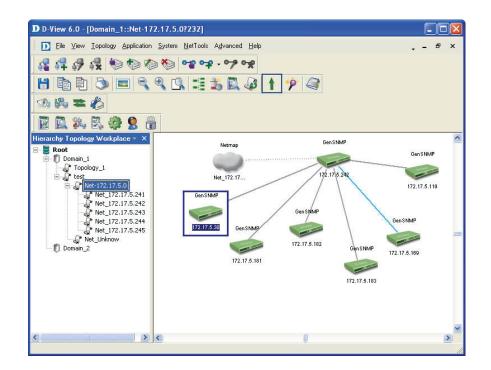
Use Upper Layer to move to the parent level.

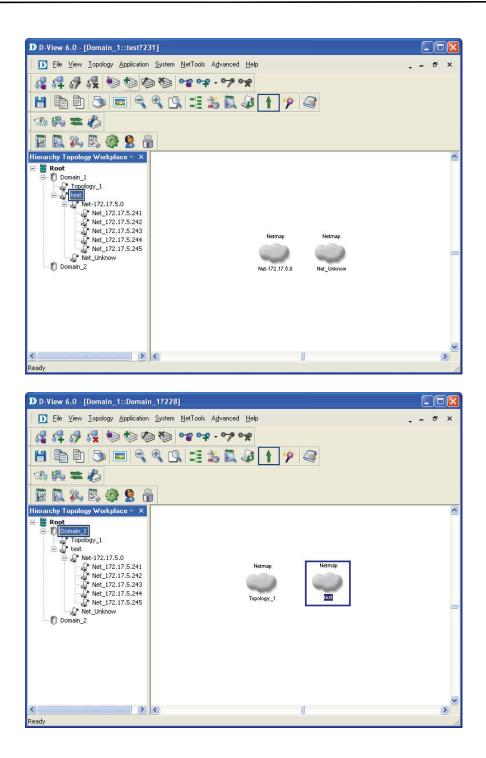
Go to **Topology** > **Upper Layer** or click **f** from th

from the **Main Toolbar** to

get back to the first layer of the topology.

For example, if you are in the topology level, and you click Upper Layer, netmap level is displayed. Eventually, you will go to the root level.





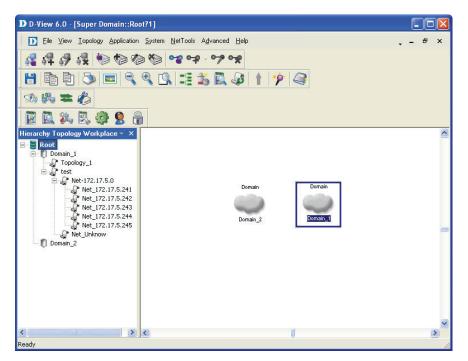


Figure 198: Sequence of steps navigating from the topology level to the domain.

8.1.6 System Log

The **System Log** stores logged events such as additions, deletions, updates, or error messages. The log helps users identify and diagnose the source of system problems.

To view logged events of the topology:

Go to **System > System Log**. The **System Log** screen will appear.

| Operation Time | Domain Name | Admin Name | Operation Module | Description |
|--|--|---|---|---|
| 2008-01-03 15:41:50 2008-01-03 15:41:41 2008-01-03 15:41:14 2008-01-03 15:41:14 2008-01-03 15:41:12 2008-01-03 15:38:32 2008-01-03 11:49:48 2008-01-03 11:47:54 2008-01-03 11:47:59 2008-01-03 11:47:19 | Super Domain Super Domain Super Domain Super Domain Super Domain Super Domain Super Domain Super Domain Super Domain | admin admin admin admin admin admin admin admin admin | Topology Manager Login Topology Manager Topology Manager Administrator Manager Administrator Manager Topology Manager Topology Manager Topology Manager | Test1:Net_172.17.5.241 Add device Dev-1 Login successfully Test1:Net_172.17.5.241 Add device Dev-1 Test1:Net_172.17.5.241 Confirm to save topo Add group successfully. Test1:Net_172.17.5.241 Delete device Dev Test1:Net_172.17.5.242 Add device Dev-1 Test1:Net_172.17.5.243 Add device Dev-1 Test1:Net_172.17.5.245 Add device Dev-1 |
| Date From: 2008/ 1/ 3 To: 2008/ 1/ 3 | • | Type Operation Log F Error Log | Query D | elete Clean Close |

Figure 199: System Log screen

- 1. Select the **From** and **To** date, to view the events that occurred in that time interval.
- 2. Select the type of log, **Operation** or **Error Log** or both.
- 3. Click **Query** to find the events that match the search criteria.
- 4. Click **Clean** to clear log messages.

8.1.7 Administrator Manager

8.1.7.1 Creating a User Group

Using **Administrator Manager**, authorized administrators can create user groups. Administrators define the access rights for each user group and then add users into the group.

To create a User Group:

 Go to System > Administrator Manager. The Administrator Manager screen will appear.

Figure 200: Administrator Manager screen

- 2. Select the domain for which you want to add a group.
- 3. Click Add Group. The Add Group screen will appear.

| dd Group | | |
|--------------|-------------------|--|
| Domain Name: | Domain_1 | |
| Group Name: | General User | |
| Description: | Domain_1 | |
| | Add <u>C</u> lose | |

Figure 201: Add Group screen

4. Type the name of the group and description to which you want to assign this right and click **Add** to continue.

| per Domain | Administrator | Domain Na | Group Name | Description |
|--|---------------|-----------|-------------|-------------|
| Super Group main_1 Super Group General User | Admin | Domain_1 | Super Group | 0 |
| | | | | |

Figure 202: Administrator Manager: Add Group screen

5. Click **Add Administrator** to provide access rights to the user. The **Add Administrator** screen will appear.

| D Add Administrator | |
|----------------------------|---------------------------|
| Group Name: | Super Group |
| Name: | User |
| Password: | ****** |
| Confirm Password: | ****** |
| Description: | Domain_1 |
| | <u>A</u> dd <u>C</u> lose |

Figure 203: Add Administrator screen

- 6. Update the fields and then click **Add** to create an administrator account.
- Click Set Rights in the Administrator Management screen. The Set Rights screen will appear.

| D Set Rights | | | |
|---|---------|----------------|-------|
| Function Module | Execute | Read | Write |
| Batch Device Extension NetTools Performance Monitor Event Manager Topology Manager System Log Resource Manager <mark>System Config</mark> | | | |
| • | | | |
| <u>0</u> K | | <u>C</u> ancel | |

Figure 204: Set Rights screen

- 8. Check the specific functional modules boxes to assign rights (execute, read, write) to the user.
- Click **OK** to apply the changes.
 The changes made will be reflected in the **System Log**.

8.1.7.2 Changing Password

D-Link recommends changing the password immediately after logging on for the first time and also on a frequent basis after that.

To change the password:

1. Go to **System > Change Password**.

| D Change Password | |
|-------------------|----------|
| Old Password: | ***** |
| New Password: | **** |
| Confirm Password: | ***** |
| | OK Close |

- Figure 205: Change Password screen
- 2. Enter the old password and then type your new password.

8.1.8 Restoring and Backing Up D-View

8.1.8.1 Backup Procedures

To backup D-View, copies must be made of the following files.

- 1. Backup the following system files
 - C:\Program Files\D-Link\D-Link SNMP Solutions\smidb.mdb
 - C:\Program Files\D-Link\Mibsolution\MIB*.*
 - C:\Program Files\D-Link\Mibsolution\SMIDB*.*
 - C:\Program Files\D-Link\Mibsolution\smidb.mdb
 - C:\Program Files\D-Link\D-View\delconfig*.*
 - C:\Program Files\D-Link\D-View\perconfig*.*
 - C:\Windows\system32\perconfig*.*
- 2. Then backup the following database files.

For Standard Edition

- C:\Program Files\D-Link\D-View\dvision3.mdb
- For Professional Edition

Use the SQL Server 2000/2005 management tool to back up **Division3.mdf** and **Division3_Log.ldf** files

- C:\Program Files\Microsoft SQL
 Server\MSSQL.1\MSSQL\Data\Dvision3.mdf
- C:\Program Files\Microsoft SQL
 Server\MSSQL.1\MSSQL\Data\Dvision3_log.LDF

8.1.8.2 Restore Procedures

To Restore System Files:

 Copy and overwrite the files to the directory from Backup System Files in Backup Procedures.

To Restore Database Files:

For Standard Edition

1. Copy and overwrite **division3.mdb** to C:\ProgramFiles\D-Link\D-View\

For Professional Edition

- Use the SQL Server 2000/2005 management tool to restore the Division3.mdf and Division3_Log.ldf files.
- 2. Restart the SQL Server service.

8.1.9 NetTools

8.1.9.1 Device Discovery

D-View identifies a SNMP supporting device as a **GenSNMPDevice** and an ICMP supporting device as a **NonGenSNMPDevice**.

Use the **Device Discovery** tool to search and identify the type of devices in the designated network.

To manually add devices into the opened topology:

 Go to NetTools > Device Discovery. The Device Discovery screen will appear.

| Start IP: | 192 . | 168 . | 11 | . 10 |) | | D | |
|---|--|---|--|--|--|-------|---------|---|
| End IP: | 192 . | 168 . | 11 | . 25 | 2 | | | |
| Community: | public | | | | _ | | Close | 1 |
| Туре: | SNMP De | evices | | | • | - | Close | |
| Current IP: | 192.168.1 | 1.62 | | | | | | |
| | | | | | | | | |
| | | | | | - 1 | | | |
| <u>S</u> earch | |) | Sto | p | | | | |
| <u>S</u> earch Device Name | Туре | | | p ddres: | | Descr | iption | |
| Device Name | Туре | 9 0 2611 | IP A | | | Desci | ription | |
| Device Name Dev-192.168.11.1 Dev-192.168.11.1 | Type Cisc DES | o 2611 6500 | IP A 192. 192. | ddres: 168.11 168.11 | .11 .17 | Descr | iption | |
| Device Name Dev-192.168.11.1 Dev-192.168.11.1 Dev-192.168.11.1 | Type Cisc DES DGS | o 2611 6500 3427 | IP A 192. 192. 192. | ddres: 168.11 168.11 | 1.11 1.17 1.15 | Desci | iption | |
| Device Name Dev-192.168.11.1 Dev-192.168.11.1 Dev-192.168.11.1 Dev-192.168.11.1 | Type Cisc DES DGS DES | o 2611 6500 3427 3828P | IP A 192. 192. 192. 192. | ddres: 168.11 168.11 168.11 168.11 | l.11 l.17 l.15 l.16 | Desci | iption | |
| Device Name Dev-192.168.11.1 Dev-192.168.11.1 Dev-192.168.11.1 Dev-192.168.11.1 Dev-192.168.11.1 | Type Cisc DES DGS DES 3 DGS | o 2611 6500 3427 3828P 3324 | IP A 192. 192. 192. 192. 192. | ddres: 168.11 168.11 168.11 168.11 168.11 | 1.11 1.17 1.15 1.16 1.18 | Descr | iption | |
| Device Name Dev-192.168.11.1 Dev-192.168.11.1 Dev-192.168.11.1 | Type Cisc DES DGS DES DGS DGS 2 DWL | o 2611 6500 3427 3828P | IP A 192. 192. 192. 192. 192. 192. 192. | ddres: 168.11 168.11 168.11 168.11 | .11 .17 .15 .16 .18 .22 | Desci | iption | |

Figure 206: Device Discovery screen

- 2. Enter the IP address range to locate devices.
- 3. Enter the **Community** name.
- 4. Select the device **Type**.
- 5. Click **Search** to locate the devices based on the search criteria.
- 6. Select and click **Add Topo** to add devices to the topology.

8.1.9.2 Advanced Device Discovery

The Advanced Device Discovery utility allows you to find devices on the network by IP address and update the network topology automatically by selecting a response from three options.

To search for devices with an IP range:

 Go to NetTools > Advanced Device Discovery. The Advanced Device Discovery screen will appear.

- 2. Enter the IP address range to locate devices.
- 3. Enter the **Community** name.
- 4. Select the device **Type**.
- 5. Choose the **Discovery Interval** by year, month, day, hour, minute, or second.
- 6. Select one of three options for the system to take action when a newly discovered device conflicts with an existing device on the network:
 - a. **Update -** Update the topology and log.
 - b. **Replace -** Update the topology and delete old log and trap messages of the existing device.
 - c. **Ignore** Ignore the result.
- 7. Select **"Enable discovering devices by schedule**" option to enable the system to discover new devices by a set schedule.

| ineni submap | : HQ | ::Net-172.17.5 | i.0 | | | | |
|---|--------------------|----------------|------------------------------|-------------------|---|---|--------|
| Start IP: | | | | End IP: | | | |
| Community | put | lic | | Type: | SNMP Device |) | • |
| Discovery Inter | val — | | | | | | |
| 0 | • | Year | 0 | ▼ Month | 0 | • | Day |
| 0 | • | Hour | 0 | ▼ Minute | 0 | • | Second |
| Update Replace | - To uj - To uj | odate the topo | llogy and lo llogy and de | elete old log and | xisted one. p messages will be trap messages of | | |

Figure 196: Advanced Device Discovery Screen

8.1.9.3 Trace Route

The **Trace Route** utility enables you to view information about a network packet that is being transmitted and determine the number of hops necessary for that packet to reach its destination.

To Trace Routers:

Go to **NetTools** > **Trace Route** to open the Trace Route function.

| | TraceR Parame | eters | | | | | × |
|----|-------------------------|-----------|--------------|-------|-------------------------------|------------------|-------|
| | Remo | ote host: | www.dlink.co | om | | S <u>e</u> tting | Font |
| F. | Output | | | | | | |
| | 1 | <1ms | <1ms | <1ms | 07.232.83.10] [172.17.5.25 | ximum of 30 h | lops: |
| | 2 | <1ms | <1ms | <1ms | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | |] | [race | <u>S</u> top | <u>C</u> lear | |
| | | | | | | | |

Figure 207: Trace Route Tool screen

- 1. Enter the host address and click **Trace** to trace the routers.
- 2. Select **Settings** to configure the parameters.

| Se | ettings | | × |
|----|--------------|--------|---|
| | Parameters | | 1 |
| | Timeout: | 1000 | |
| | Data length: | 32 | |
| | Max hops: | 30 | |
| | ОК | Cancel | |

Figure 208: Option screen

- 3. Modify and customize the **Timeout**, **Data Length** and **Max Hops** parameters according to your requirements.
- 4. Click **Clear** to clear the list.
- 5. Click **Stop** to stop the search.

8.1.10 TFTP

The TFTP server enables the client to upload or download configuration files between the server and the client.

1. Go to **NetTools** > **TFTP** to open the TFTP Server tool.

| 🚺 D-Li | nk T | FTP Server | | | | |
|----------------------------------|-------|-----------------------------|------------|--|----------|----------------|
| <u>A</u> bout | | | | | | |
| Nam Oper | | D-View Mana 06:07:22 | ger | IP Address 192.168.11. Action Session 0 | 9 | 2 Total |
| Index | Ac | tion IP | Туре | Tftp File Name | Status | i oxai |
| 1 2 | | 2.168.11.12 2.168.11.252 | Put Put | _192.168.11.12_DES3550 _192.168.11.252_DES355 | ОК ОК | Clear Close |
| < | | | | | > | |
| 06:08:04 06:08:05 06:08:05 | : Sta | rt transferring | | | | |

Figure 209: D-Link TFTP Server screen

- Index: Displays the number of connections between the devices and the TFTP server.
- Action IP: Displays the device IP address.
- Type: Get/Put action of the configuration files.
- TFTP File Name: The uploaded or downloaded files through the TFTP server.
- Status: Displays the file transfer status.
- 2. Click **Clear** to erase the actions.

8.1.11 Retrieving ARP information

D-View provides a tool to retrieve the **ARP** (Address Resolution Protocol) information from devices and then create a table for the network. The table lists the IP and MAC addresses of all the devices in the topology.

To retrieve the ARP information:

 Go to Advanced > All of ARP Info. The ARP Information Retrieve screen displays.

| IP | MAC | <u>^</u> |
|--------------|--------------|----------|
| 172.17.5.83 | 00112F8A7359 | |
| 172.17.5.94 | 0080C8773189 | |
| 172.17.5.115 | 000EA66BE311 | |
| 172.17.5.134 | 000C6ED3A517 | |
| 172.17.5.150 | 00E006095566 | |
| 172.17.5.154 | 001AA0C9529A | |
| 172.17.5.171 | 00148532B218 | |
| 172.17.5.254 | 000F3D786E04 | |
| 172.17.5.255 | 0000000000 | |
| 172.17.5.0 | FFFFFFFFFF | |
| 172.17.5.2 | 00188BBA6DF8 | |
| 172.17.5.3 | 001CF0573900 | |
| 172.17.5.6 | 000FB0D8A0FB | |
| 172.17.5.10 | 00112F648C9A | |
| 172.17.5.11 | 0014C2E28D47 | |
| 172.17.5.12 | 0015F2948F28 | |
| 172.17.5.15 | 00037FBEF0F6 | |
| 172.17.5.23 | 001B11EBCE88 | |
| 172.17.5.26 | 0019D2AEDD77 | |
| 172.17.5.39 | 00188BBF4FAF | |
| 172.17.5.42 | 00112FEDEA40 | |
| 172.17.5.49 | 001485F98C78 | |
| 172.17.5.54 | 001302149A1C | |
| 179 17 5 50 | 000500640000 | ~ |

Figure 210: ARP Information Retrieve screen

2. Click Refresh to refresh the information. Click **Stop** to stop retrieving information.

8.1.12 Net Toolbox

D-View provides two ways to manage a device in the topology – Telnet and Web. Using **Net Toolbox**, administrators can configure the method of management for each device. **Net Toolbox** also allows administrators to ping a device from the topology.

To select the management method:

- 1. Select the device you want to manage.
- 2. Go to **NetTools** > **Net Toolbox** to open the Toolbox.

| Net Toolbox | X |
|--------------------|------------------|
| | <u>T</u> elnet |
| IP Address : | Web |
| 172 . 17 . 5 . 211 | <u></u> |
| | <u>P</u> ing |
| | Device Configure |

Figure 211: Net Toolbox screen

- 3. Enter the IP address of the device to manage.
- 4. Click Telnet or **Web.**

You can also Ping the device using **Ping.**

To configure devices using a configuration file, use **Device Configure.**

8.1.13 Port Packet Monitor

D-View helps you monitor and troubleshoot Switch Ports for traffic, utilization and errors of a specific device. D-View pinpoints the port flow in real time and identifies their impact on the network.



To monitor the Port Packet flow:

 Go to NetTools > Port Packet Monitor. The Port Monitor screen displays.

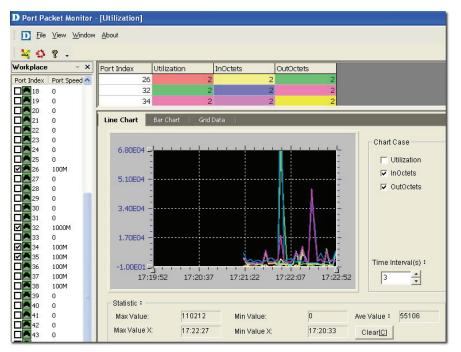


Figure 212: Port Packet Monitor: Line Chart screen

2. Select the ports and then click the **Utilization** button 4 from the

toolbar.

The formula to calculate the port percentage usage. **Utilization:** (InOctets + OutOctets)*8 / Port Speed / Time Interval

- **InOctets:** The total number of octets received, including framing characters
- **OutOctets:** The total number of octets transmitted, including framing characters.
- Set the **Port Packet** options. These values are calculated tracking the number of packets received and/or transmitted over a period of time.
 - **Port Index:** Represents the diameter of the network cable.

- **Color:** Represents the different port packet types.
- InUcastPkts: Number of subnetwork-unicast packets delivered to a higher-layer protocol.
- InNUcastPkts: Number of non-unicast packets delivered to a higher-layer protocol.
- **InDiscard:** Number of packets which are chosen to be discarded to prevent from entering the higher-layer protocol.
- **InErrors:** Number of error packets.
- InUnknown Packets: Number of unclassified/unknown packets discarded.
- OutUcastPkts: Number of out-going packets transmitted from higher-level protocols to a subnetwork-unicast address.
- OutNUcastPkts: Number of out-going packets transmitted from higher-level protocols to a non-unicast address.
- 4. Click Clear**[C]** to clear the current data on the graph.

8.1.13.1 Line Chart

The statistical graph (X-Y) shows the usage of packets of a specified device in real time.

- **Port Index:** Displays the number of ports of a specific device.
- **Port Speed:** Displays the link speed between devices.
- Max/Min Value: Displays the maximum/minimum number of packet flow in real time.
- Max/Min Value X: Displays the current time stamp of the packet flow graph.
- **Chart Case:** Filter options to monitor the packet flow.
- **Time Interval:** Enter the time period to refresh the packet flow.

8.1.13.2 Bar Chart

The **Bar Chart** displays the percentage of packet flow in real-time.

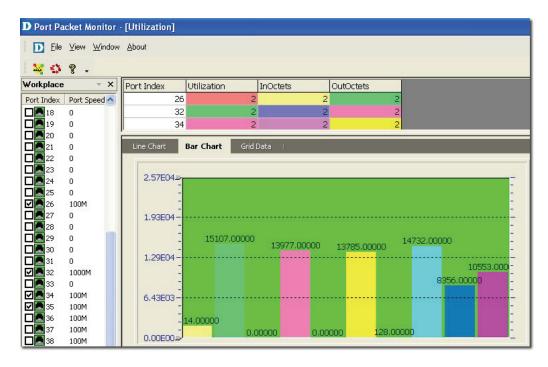


Figure 213: Port Packet Monitor: Bar Chart screen

8.1.13.3 Grid Data

The Grid Data shows the packet flow in a table format. Click Packet Info

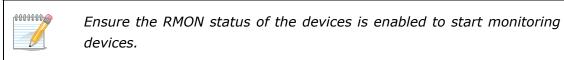
to view the packet type options.

| D Port Pac | ket Monitor | ·[Utilization] | | | | |
|------------|---------------------|----------------|------------------|----------|-----------------|-----------------|
| D Eile | ⊻iew <u>W</u> indow | About | | | | |
| 40 | ?. | | | | | |
| Workplace | - X | Port Index | Utilization | InOctets | OutOctets | |
| Port Index | Port Speed 🔨 | 26 | 2 | 2 | | 2 |
| 18 | 0 | 32 | 2 | 2 | 1.33 | 2 |
| 19 | 0 | 34 | 2 | 2 | | 2 |
| 20 | 0 | | | _ | | |
| | 0 | Line Chart | Bar Chart Grid I | Data | | |
| | 0 | Port Index | Utilization | InOctets | | OutOctets |
| | 0 | 26 | 0.001 | .67 2: | 116947769.00000 | 2100030042.0000 |
| 25 | 0 | 32 | 0.000 | 39 3 | 384564380.00000 | 4161560332.0000 |
| 26 | 100M | 34 | 0.003 | 152 | 17815567.00000 | 329304474.0000 |
| | 0 | 35 | 0.006 | 48 | 452390703.00000 | 1030449968.0000 |
| | 0 | 48 | 0.004 | 55 23 | 863415817.00000 | 916002375.0000 |
| 29 | 0 | | | | | |

Figure 214: Port Packet Monitor - Grid Data screen

8.1.14 Performance Monitor

The **Performance Monitor** tool is a comprehensive bandwidth performance management application that allows you to directly view the real-time statistics of your network. D-View's **Performance Monitor** tool will monitor and collect data from routers, switches, servers, and any other SNMP-enabled device.



To monitor the performance of devices:

 Go to NetTools > Performance Monitor. The Performance Monitor screen will appear.

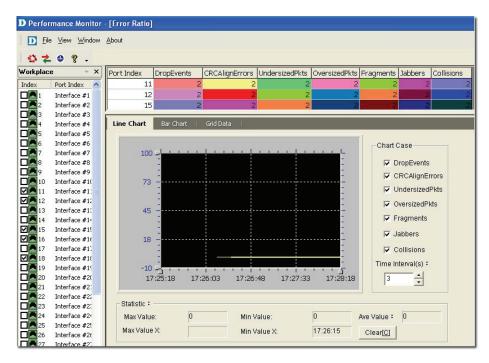


Figure 215: Performance Monitor screen

2. Select the ports and then click the **Errors Ratio** 😫 button from the

toolbar. The graph will display a list of different types of error packets.

- 3. Set the **Port Packet** options. These values are calculated tracking the number of packets received over a period of time.
- Drop Events: Represents the total number of events, when packets are dropped due to lack of resources.
- CRCAlignErrors: Represents the total number of packets received that are between 64 and 1518 octets in length. These include packets of either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
- **UndersizePkts:** Represents the total number of packets received that are less than 64 octets in length.
- **OversizePkts:** Represents the total number of packets received that are longer than 1518 octets in length.
- **Fragments:** Represents the total number of packets received that are less than 64 octets in length. These include packets of either a bad

Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).

- Jabbers: The total number of packets received that are longer than 1518 octets in length. These include packets of either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
- Collisions: An estimate of the total number of collisions on this Ethernet segment.
- 4. Click **Clear[C]** to clear the current data on the screen.

8.1.14.1 Line Chart

The Statistical graph (X-Y) shows the usage of packets of a specified device in real time.

- **Port Index:** Displays the number of ports of a specific device.
- **Port Speed:** Displays the link speed between devices.
- Max/Min Value: Displays the maximum/minimum number of packet flow in real time.
- Max/Min Value X: Displays the current time stamp of the packet flow graph.
- **Chart Case:** Filter options to monitor the packet flow.
- **Time Interval:** Enter the time period to refresh the packet flow.

8.1.14.2 Bar Chart

The **Bar Chart** displays the percentage of packet flow in real-time.

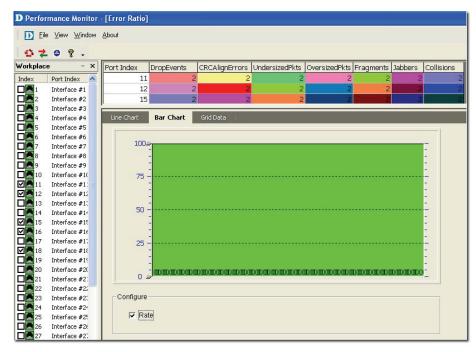


Figure 216: Performance Monitor: Bar Chart screen

8.1.14.3 Grid Data

The Grid Data shows the packet flow in a table format.

| D Perfor | rmance Monito | r - [Error Ratio | 1 | | | | | | |
|--|---|--------------------------------|--|--|--------------------------|---|-------------|--------------------------------------|----------------------------|
| D Eile | e ⊻iew <u>W</u> indow | v <u>A</u> bout | | | | | | | |
| 07 | • ? - | | | | | | | | |
| Workplac | e – X | Port Index | DropEvents | CRCAlignErrors | UndersizedPkts | OversizedPkts F | ragments Ja | abbers Collis | sions |
| Index | Port Index | 1 | 1 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1 | Interface #1 | 1 | 2 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 | Interface #2 | 1 | 5 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Interface #3 | | | | | | | | |
| | Intenace #3 | | | | | | | | |
| 4 | Interface #4 | Line Chart | Bar Chart | Grid Data | | | | | |
| 4 | Interface #4 Interface #5 | - | | | Lindowing dOlds | Our de la companya de | | Jahlann | Calliniana |
| 4 | Interface #4 | Port Index | DropEvents | CRCAlignErrors | UndersizedPkts | | Fragments | Jabbers | Collisions |
| □ ■ 4 □ ■ 5 | Interface #4 Interface #5 | - | DropEvents | CRCAlignErrors | UndersizedPkts 0.0 | OversizedPkts 0.0 | | | |
| | Interface #4 Interface #5 Interface #6 | Port Index | DropEvents | CRCAlignErrors 0.0 | | | 0. | .0 0.0 | 496.0 |
| 4 5 6 7 8 9 | Interface #4 Interface #5 Interface #6 Interface #7 | Port Index | DropEvents 1 221.0 2 0.0 | CRCAlignErrors 0.0 0.0 | 0.0 | 0.0 | 0. | .0 0.0 .0 0.0 | 496.0 0.0 |
| 4 5 6 7 8 9 10 | Interface #4 Interface #5 Interface #6 Interface #7 Interface #8 | Port Index | DropEvents 1 221.0 2 0.0 5 1.0 | CRCAlignErrors 0.0 0.0 0.0 | 0.0 0.0 | 0.0 0.0 | | .0 0.0 .0 0.0 .0 0.0 | 496.0 0.0 0.0 |
| 4 5 6 7 8 9 10 10 | Interface #4 Interface #5 Interface #6 Interface #7 Interface #8 Interface #9 | Port Index 1 1 1 1 | DropEvents 1 221.0 2 0.0 5 1.0 6 0.0 | CRCAlignErrors 0.0 0.0 0.0 0.0 | 0.0 0.0 0.0 0.0 | 0.0 0.0 0.0 0.0 | | .0 0.0 .0 0.0 .0 0.0 .0 0.0 | 496.0 0.0 0.0 0.0 |
| 4 5 6 7 8 9 10 | Interface #4 Interface #5 Interface #6 Interface #7 Interface #8 Interface #9 Interface #1(| Port Index 1 1 1 1 | DropEvents 1 221.0 2 0.0 5 1.0 6 0.0 | CRCAlignErrors 0.0 0.0 0.0 0.0 | 0.0 0.0 0.0 | 0.0 0.0 0.0 | | .0 0.0 .0 0.0 .0 0.0 .0 0.0 | 496.0 0.0 0.0 0.0 |

Figure 217: Performance Monitor: Grid Data screen

8.1.14.4 Data Distribution Chart

The **Data Distribution Chart** monitors packet types of different sizes received by their designated ports.

1. Click the **Data Distribution t** button from the toolbar. The **Data**

Distribution Chart screen will appear.

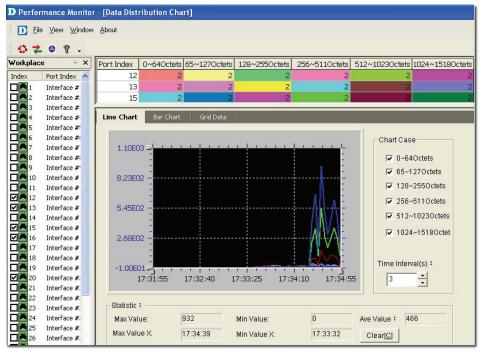


Figure 218: Performance Monitor: Data Distribution Chart screen

- 2. The packets are classified by its length:
 - 0~64Octets: Total number of packets received that are 64 octets in length.
 - 65~127Octets: Total number of packets received, between 65 and 127 octets in length.

- **128~255Octets:** Total number of packets received, between 128 and 255 octets in length.
- **256~511Octets:** Total number of packets received, between 256 and 511 octets in length.
- 512~1023Octets: Total number of packets received, between 512 and 1023 octets in length.
- **1024~1518Octets:** Total number of packets received, between 1024 and 1518 octets in length.

8.1.14.5 Port Flow Chart

The **Port Flow Chart** retrieves the statistical performance data to monitor the designated ports' performance status.

1. Click the **Port Flow** 🔮 button from the toolbar. The **Port Flow** screen

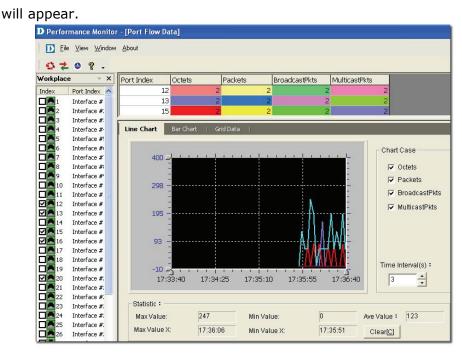


Figure 219: Performance Monitor - Port Flow Data screen

The different types of packets displayed in the graph are:

- **Octets:** Total number of octets received.
- **Packets:** Total number of packets received.
- BroadcastPkts: Total number of packets received and directed to the broadcast address.
- MulticastPkts: Total number of packets received and directed to a multicast address.



Index

| Activating | 45 |
|------------------------------|------|
| Administrator Manager | .165 |
| Advanced Option | .118 |
| ARP Information Retrieve | .173 |
| Batch Configuration 118, | 152 |
| Capacity Value | .146 |
| Cold Start | .135 |
| Config File Manager | .121 |
| Device Collector | .149 |
| Device Customization | 72 |
| Device Discovery | .170 |
| Device Event Config | .135 |
| Device Event Log | .139 |
| Device Group Manager | .132 |
| Device Label | .126 |
| Device Locator | .147 |
| Device Statistics | .151 |
| Device Type Check 123, | 156 |
| Devices Supported | 70 |
| Domain Manager | 50 |
| Edit link | .146 |
| EGP Fail | .136 |
| Enterprise OID | .142 |
| Event Viewer by IP | .139 |
| Features | 29 |
| Firmware Update | .121 |
| Functions | 30 |
| Getting Started | 45 |
| Link Down | .136 |
| Link Label | .126 |
| Link Status 145, | 155 |
| Lockup | 35 |
| Mac Locator | .143 |
| Mail Server Config 136, 138, | 139 |
| Management Method | .128 |
| MIB Compiler | .112 |
| Modular Architecture | 28 |
| Multi-vendor Support | 71 |

| Net Toolbox | 174 |
|----------------------------------|-----|
| NetTools | 170 |
| OID Config | 119 |
| Performance Monitor | 177 |
| Poll Parameters | 130 |
| Port Packet Monitor | 175 |
| Port Status | 121 |
| PORTSTATUS | 118 |
| Query | 140 |
| Radius Authentication | 49 |
| Rearranging the Topology | 66 |
| RMON | 119 |
| Run Batch | 120 |
| Safeguard Check | 124 |
| Safeguard Engine | 125 |
| SNMP v1/v2c | 129 |
| SNMP v3 | 129 |
| SPANNING | 119 |
| Spanning Tree | 121 |
| Startup Wizard | 50 |
| System Config | 49 |
| System InfoGenSNMPDeviceModule . | 117 |
| System Log | 165 |
| TELNET | 129 |
| TFTP | 173 |
| Threshold Event | 136 |
| Topo Export/Import | 61 |
| Topology Generator | 63 |
| Topology Generator Principle | 62 |
| Topology Rollback | 67 |
| Trace Route | 171 |
| Trap Editor | 142 |
| Upper Layer | 162 |
| User Locator | 150 |
| User Statistics | 150 |
| View Option | 160 |
| Warm Start | |
| | 135 |