D-VIEW™ 6 Standard / Professional

NETWORK MANAGEMENT SYSTEM

User Manual

VER.1.00

D-Link®
Building Networks for People

D-Link Corporation
D-View 6.0 User Manual
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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/or IT personnel who would need to work with D-View.

Prerequisites

Before using this guide, read the **D-View 6.0 Quick Installation Guide**. The Installation Guide provides installation procedures for both Standard and Professional Editions of D-View.

Document Conventions

The following conventions are used in this guide.

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
Tip 	Alerts you to supplementary information that is not essential to the completion of the task at hand.
Note 	Alerts you to supplementary information.

Style Conventions

The following style conventions are used in this guide.

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.
Italic font	Variables for which you supply a specific value. For example: *Filename.ext* can refer to any valid file name.
Courier New font	Samples of code and file paths and names.
Command	A command that is typed at the command prompt. For example, **ipconfig**.

Introducing D-View

OVERVIEW

D-Link strives to provide easy-to-use devices and software for users. Networking is a core technology for data communication. Based on abundant experience and profound understanding on end-user network management requirements, D-Link introduces D-View 6.0.

Network administrators can now efficiently manage and monitor,

- device configuration,
- fault tolerance,
- performance,
- and security

of multiple networks and management switches with D-View, a Simple Network Management Protocol (**SNMP**) Network Management System. This is a comprehensive standards-based management tool designed to centrally manage critical network characteristics such as availability, reliability and resilience in a consistent manner. D-View accommodates a wide range of devices including:

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

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.

D-View is designed for SMB, Enterprise, and Telecom administrators to efficiently manage their networks.

What's Included

D-View 6.0 comes with:

- D-View 6.0
- User Manual

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.
  DBMS: Access 2000
  Operating System: Windows XP, Windows 2000 Server or Advanced Server (English Version), Windows 2003 (English Version)
- **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.
  Operating System: Windows Server 2000 or 2003 (English Version)
  DBMS: SQL Server 2000/2005

Hardware and Software Requirements

Hardware Requirements

- CPU: 1.4GHz or above
- DRAM: 1GB or above
- Hard Drive Space: at least 200 MB
- Ethernet Adapter
- D-View supports the following:
  D-Link Switch:
  DES-3526, DES-3550, DES-3828, DES-3828DC, DES-3828P, DES-3852, DES-6500, DGS-3308FG, DGS-3324SR, DGS-3426, DGS-3427, DGS-3450, DGS-3612, DGS-3612G, DGS-3627, DGS-3627G, DGS-3650, DXS-3326GSR, DXS-3350SR, DGS-3200-10
  D-Link Wireless AP:
  DWL-2100 AP, DWL-2700AP, DWL-3200AP, DWL-3260AP, DWL- 7100AP, DWL-7700AP, DWL- 8200AP

Software Requirements

- Operating System:
  - Microsoft Windows 2000 Professional/Advanced Server (English Version) with Service Pack 4
  - Microsoft Windows Server 2003 with Service Pack 2
- Microsoft Internet Explorer 6 with Service Pack 1 or later
- Microsoft XML Parser and SDK
  For Standard Edition only:
  Microsoft Windows XP Home/Professional Service Pack 2
  For Professional Edition only:
  Database Management System (DBMS):
  - Microsoft SQL Server 2000 (English Version) with Service Pack 2
  - Microsoft SQL Server 2005 (English Version)

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

STANDARD EDITION	PROFESSIONAL EDITION
Standalone	**Client-Server**
Single User Login	**Multiple User Login**
Supports Nodes <= 1000	**Supports Nodes >= 1000**
Supports Microsoft Access Database	**Supports SQL Database**

Both editions use **COM** (Component Object Model) technology.

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

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.

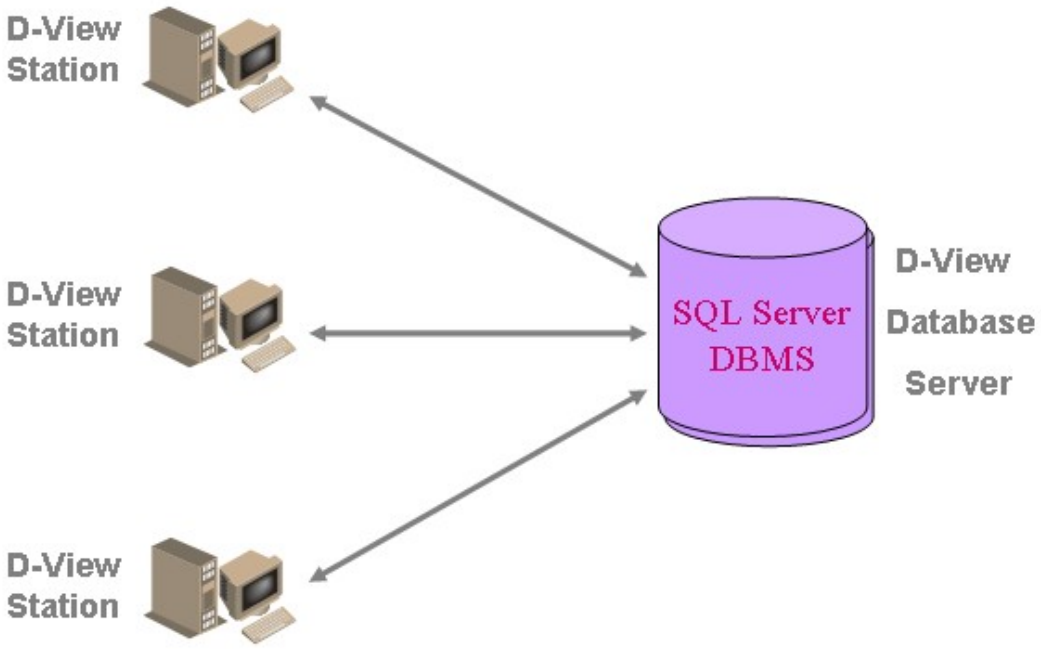


Figure 1: SQL Server Remote Access

To configure and connect to the SQL Server database, refer to Installation Steps and To Create a Database (for Professional Edition).

Upgrade

To upgrade from D-View 5.1 or earlier versions to 6.0, uninstall all the programs related to the old version and then re-install the new version.

Download the latest version of the User Manual from dview.dlink.com.tw for the added new features.

Technical Specifications

MIB Utilities • Device SNMP Configuration • MIB II Information and Statistics • IF Information Tables • Spanning Tree Information and Port Configuration • Bridge 802.1d Information and Port Configuration • RMON Statistic, History and Event Group • Transparent Bridge Forwarding and Static Filter Tables and Port • Counter • 802.1p Priority Configuration • L3 Utilities • MIB Browser • MIB Complier	**Security Management Functions** • SNMP v3 covering security functions such as packet encryption/decryption, user levels for different classes of access right, MPD (RFC 2572), TARGET (RFC 2573), USM (RFC 2574) and VACM (RFC 2575) • SNMP v3 Configuration • Device Module Access Right Control • NMS System Access Control • NMS System Function Module Access Right Control • Local and Radius Authentication Modes when Login
System Management Tools • Performance Monitor (switch should support RFC1213 Interface and RMON) • Device Panel Simulation Module • Batch Program • Link Capacity Check • Safeguard Check • Get All ARP Information • Device Type Check • Topology Generator	**Resource Management Functions** • Device Resource Manager • User Locator • Device Locator • User Statistics • Device Statistics • Device System Information Manager (RFC 1213 System) • Device Port Status Manager **Performance Management Tools** • Performance Monitor

• Topology Import / Export • Hierarchy Topology Manager • Device Type Extension • Web Configuration • Telnet Configuration • TFTP file transport • Trace Route • MAC Locator • Ping	• Port Packet Monitor
Fault Management Tools • Trap Filter • Trap Log • Ping Poll Filter • Ping Poll Log • SNMP Poll Filter • SNMP Poll Log • Event Config Manager • Event Viewer	**Supported Devices** • D-Link Devices: - SNMP capable Smart/Managed switches - OLT/ONU devices - Wireless bridges and access points - SNMP capable routers - Multi-tenant broadband CO devices • Windows Workstation, DC and Server • Device Panel Simulation

Installing D-View

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**

1. Insert the CD and navigate to **D-View Standard.exe**/**D-View Professional.exe**. If the installer does not start automatically, start the installer by double clicking the D-View Standard.exe/ D-View Professional.exe.

The **InstallShield Wizard** screen displays.

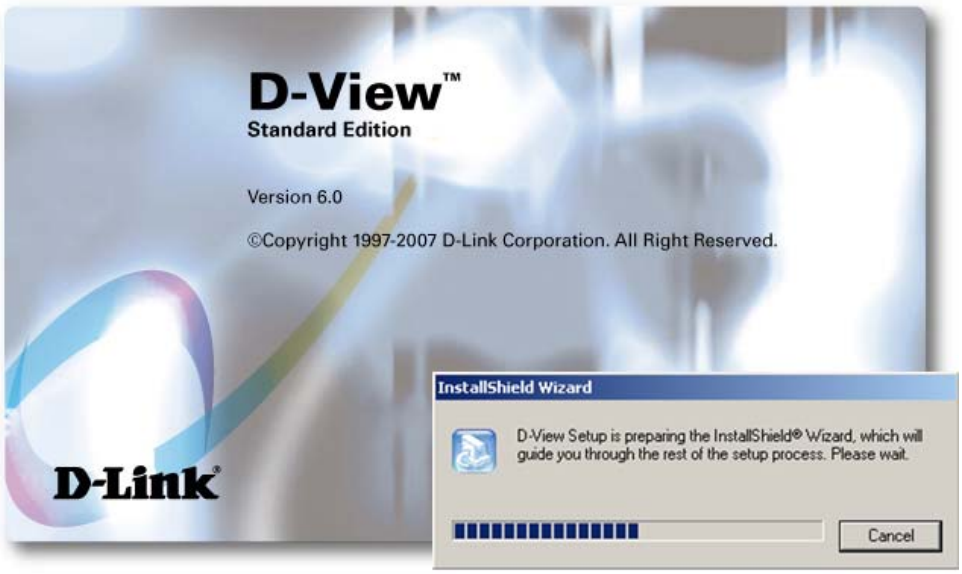


Figure 2: InstallShield Wizard screen

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

The **License Agreement** screen displays.

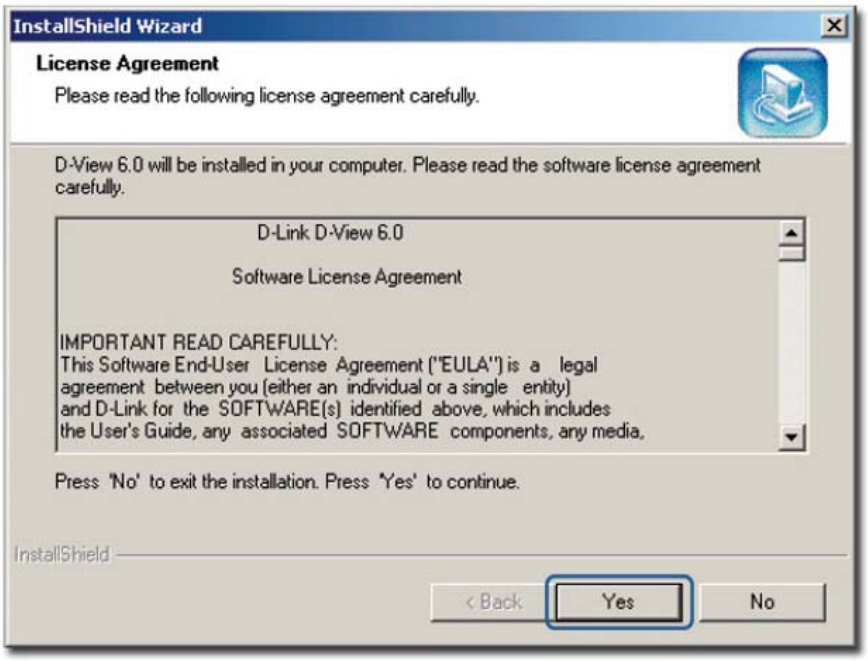


Figure 3: License Agreement screen

2. Click **Yes** to proceed.
   The **Choose Destination Location** screen displays.

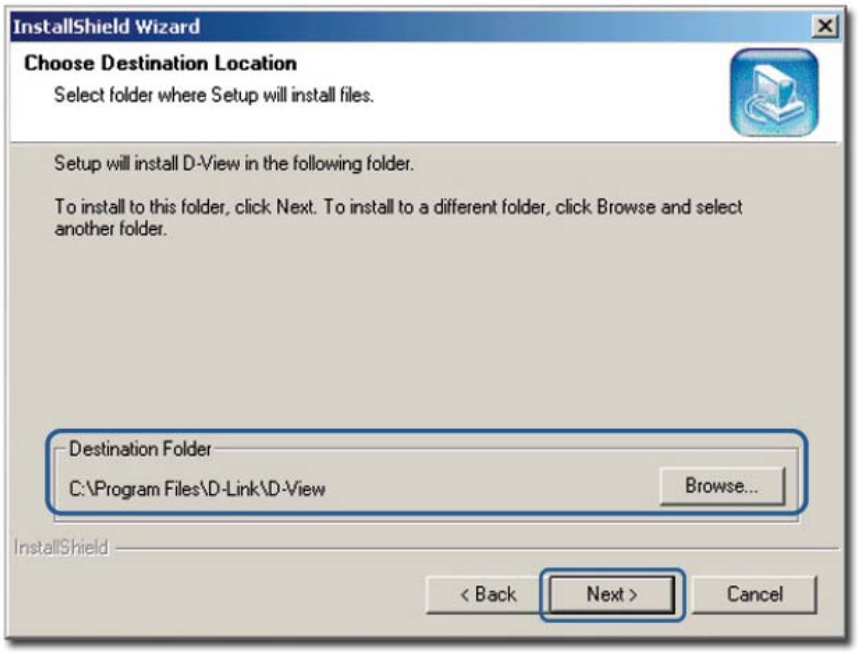


Figure 4: Choose Destination Location screen

3. 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.
   The **Select Program Folder** screen displays.

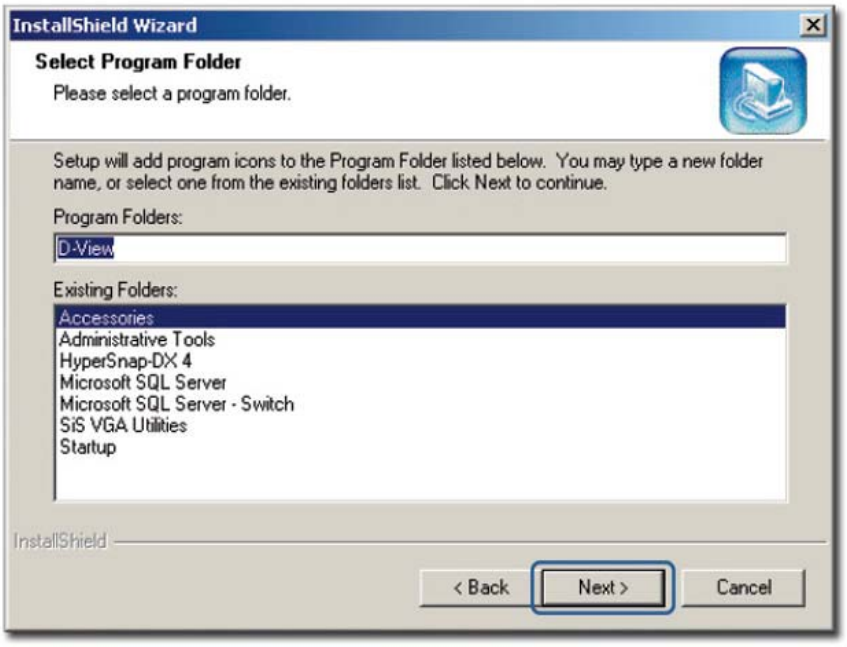


Figure 5: Select Program Folder screen

The Setup will add program icons into the Program Folder.

4. Click **Next** to continue.

The **Start Copying Files** screen displays.

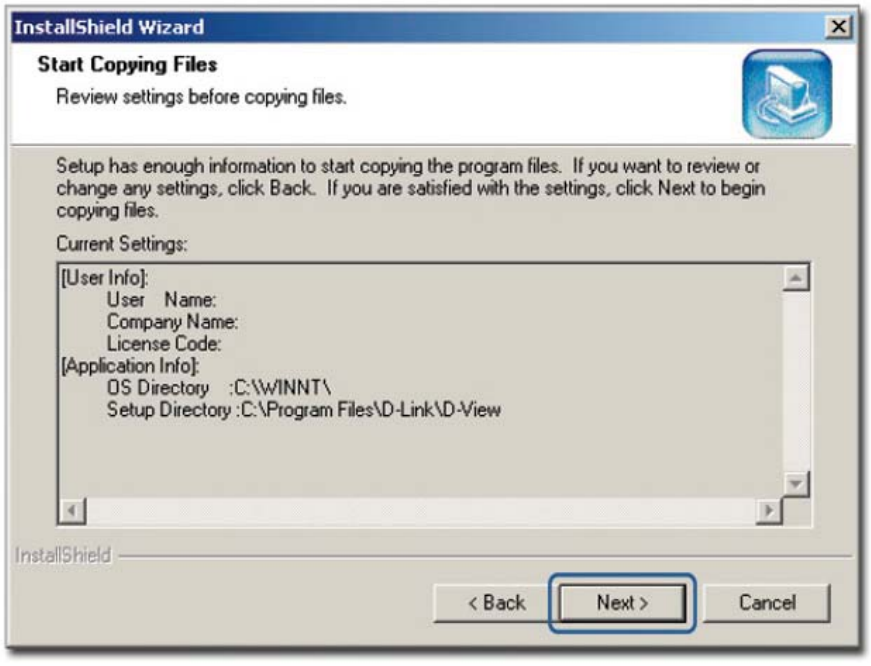


Figure 6: Start Copying Files screen

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

The **Setup Status** screen displays.

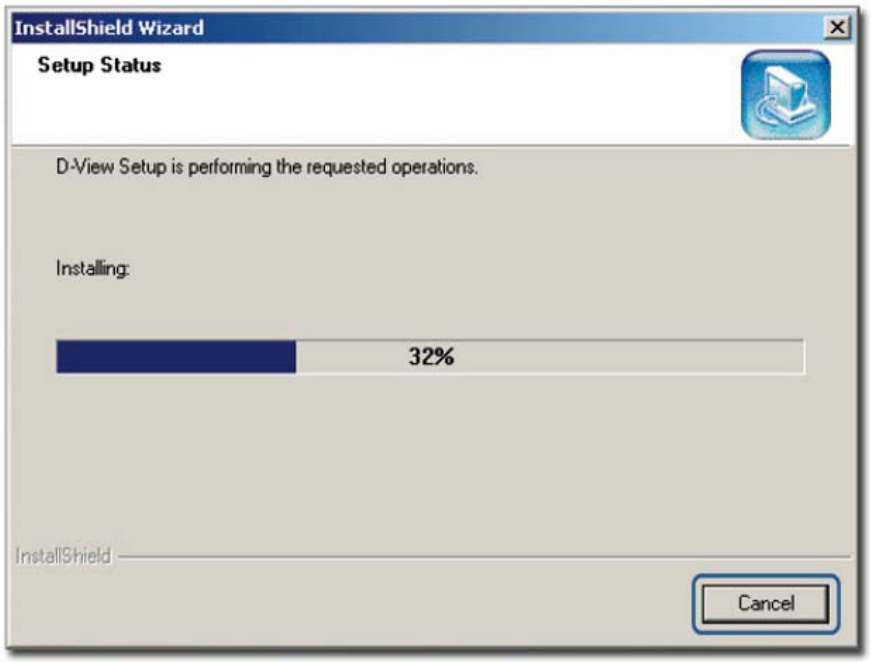


Figure 7: Setup Status screen

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

To stop the installation, click **Cancel**.

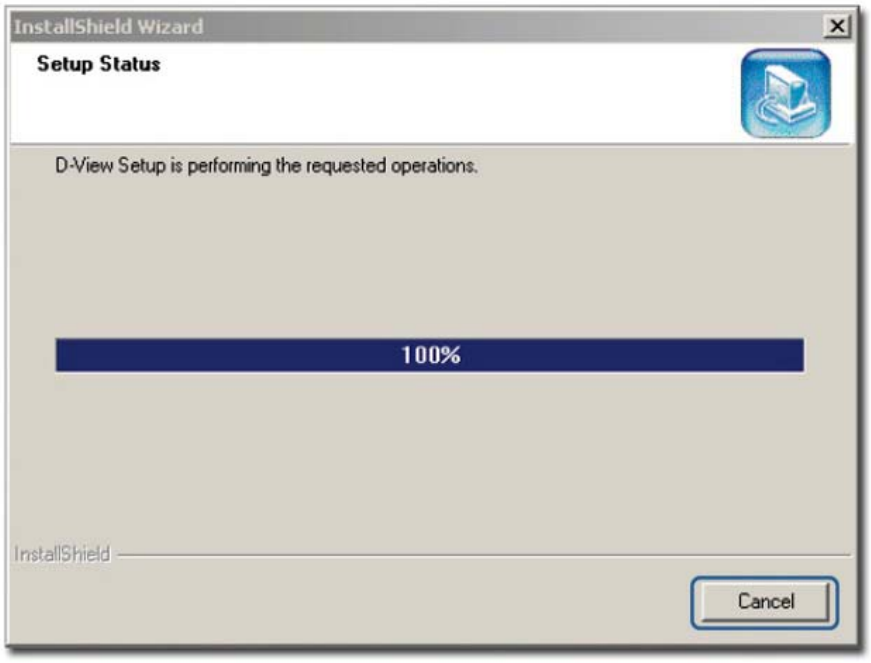


Figure 8: Setup Status screen

Once D-View installation is successfully completed the **Welcome to the Microsoft XML Parser and SDK Setup Wizard** window displays.

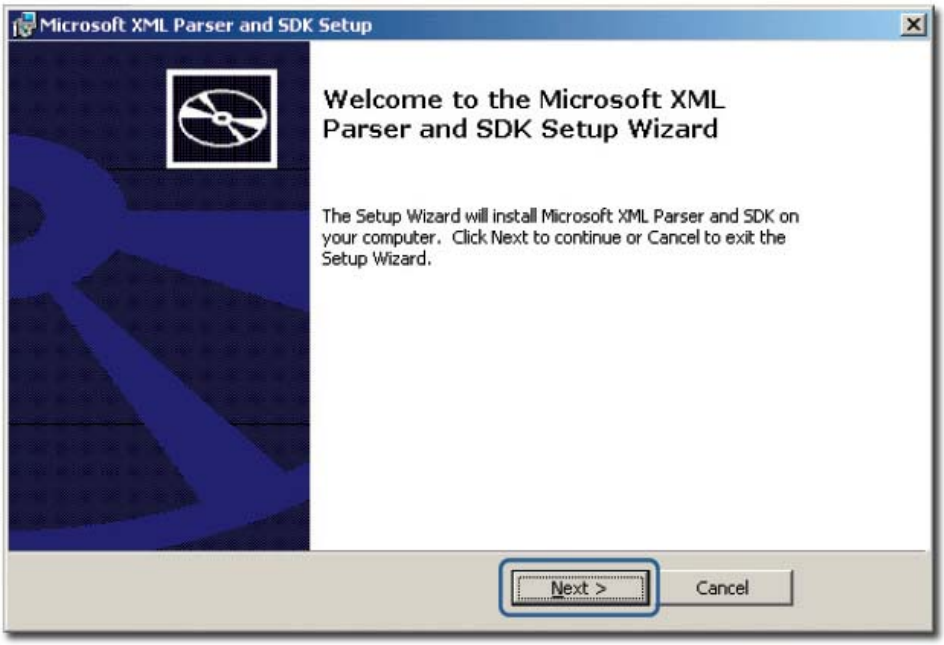


Figure 9: Welcome to the Microsoft XML Parser and SDK Setup Wizard

7. Click **Next** to continue installing Microsoft XML Parser and SDK on your server.

The **End-User License Agreement** screen displays.

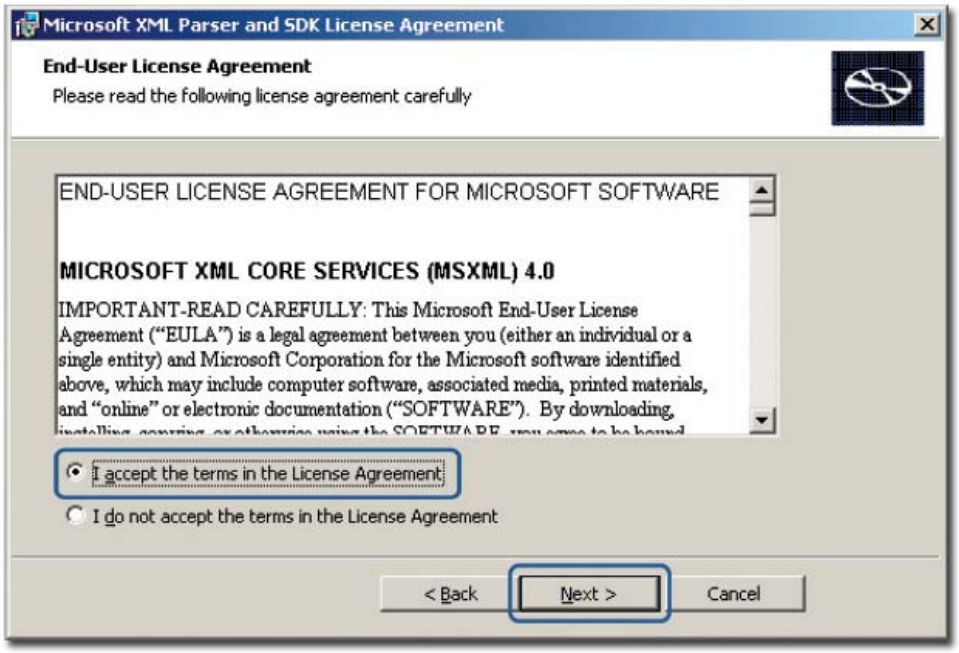


Figure 10: End-User License Agreement screen

8. Select **I accept the terms in the License Agreement** and click **Next** to continue.

The **Customer Information** screen displays.

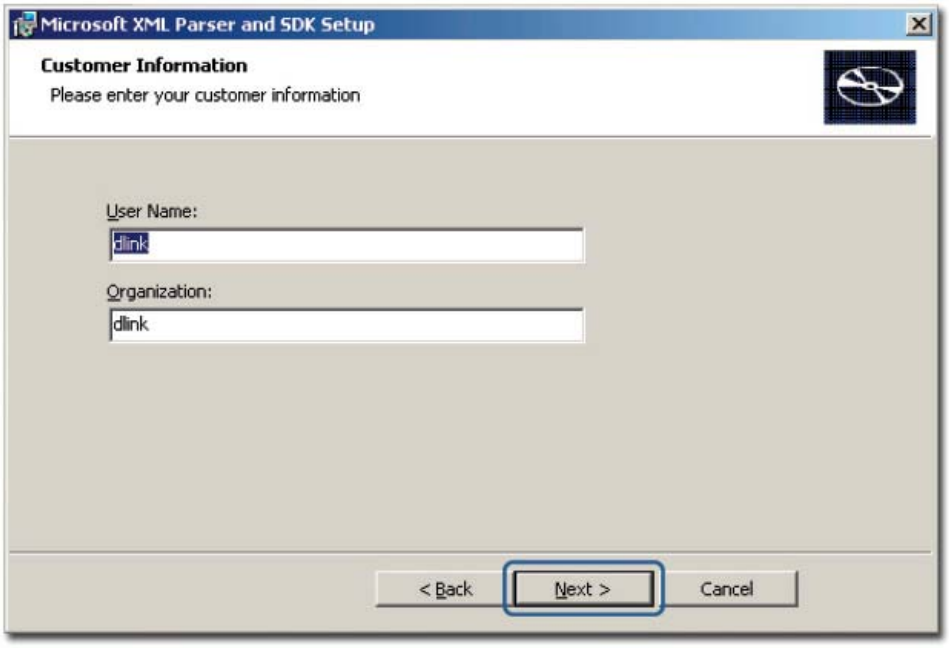


Figure 11: Customer Information screen

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

The **Choose Setup Type** screen displays.

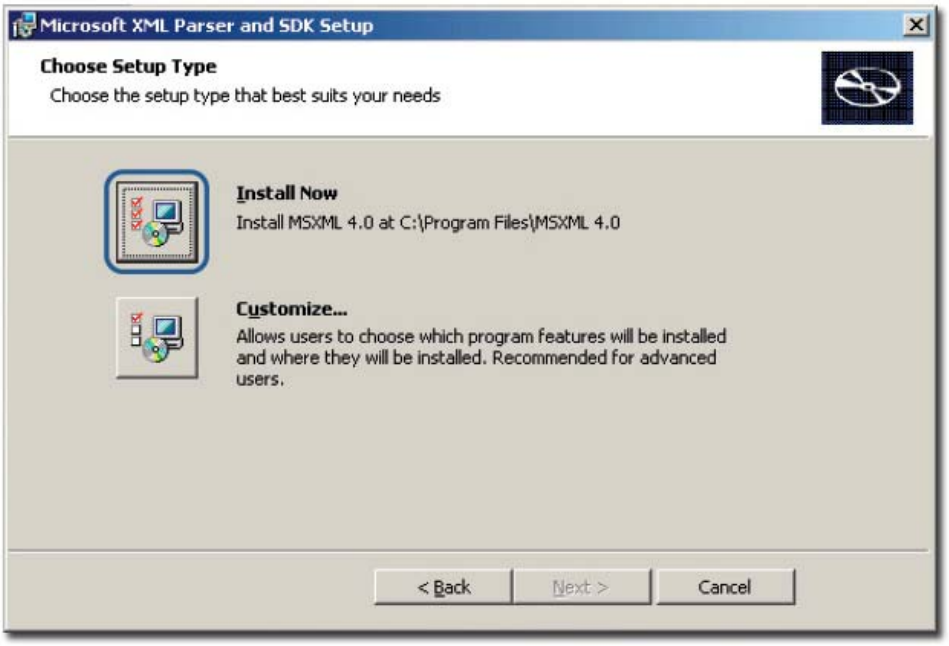


Figure 12: Choose Setup Type screen

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

The **Completing the Microsoft XML Parser and SDK Setup Wizard** screen displays.

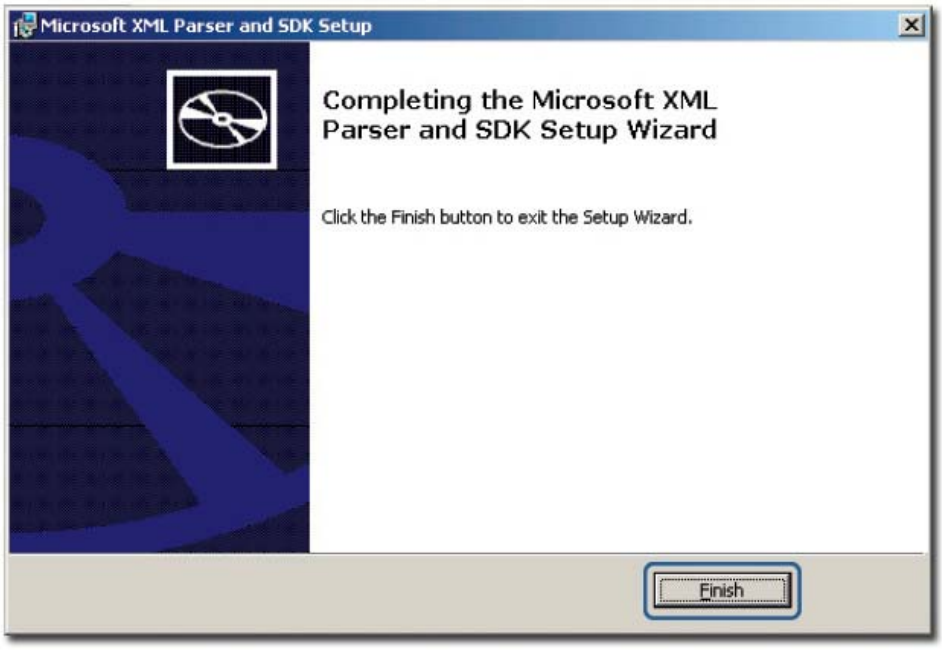


Figure 13: Completing the Microsoft XML Parser and SDK Setup Wizard screen

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

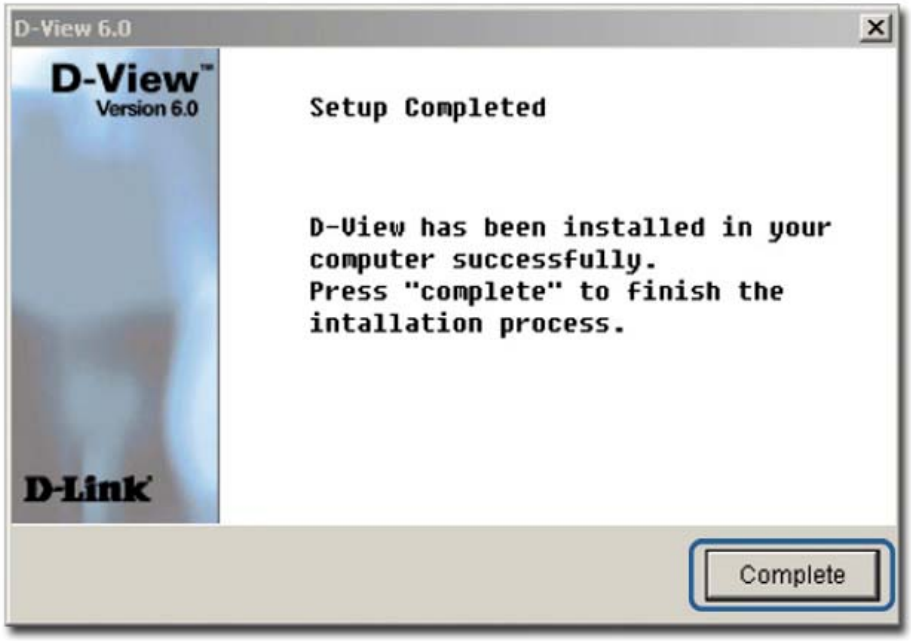


Figure 14: Setup Complete screen

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

12. Click **Complete** to close this window.
13. Restart your computer to complete the installation.
14. To start D-View, double click the  on the desktop.

The **Login D-View** screen displays. Refer to Getting Started to continue working with D-View and D-View 6.0 Licensing to receive the activation code.

To Create 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:

1. Copy the following files to a folder:
   - Make DB.exe
   - Task.SQL
   - DBCreate.SQL

   As seen in the following figure, the files are stored in:

   `E:\D-View 6.0\SQLDBScript\SQLDBScript`

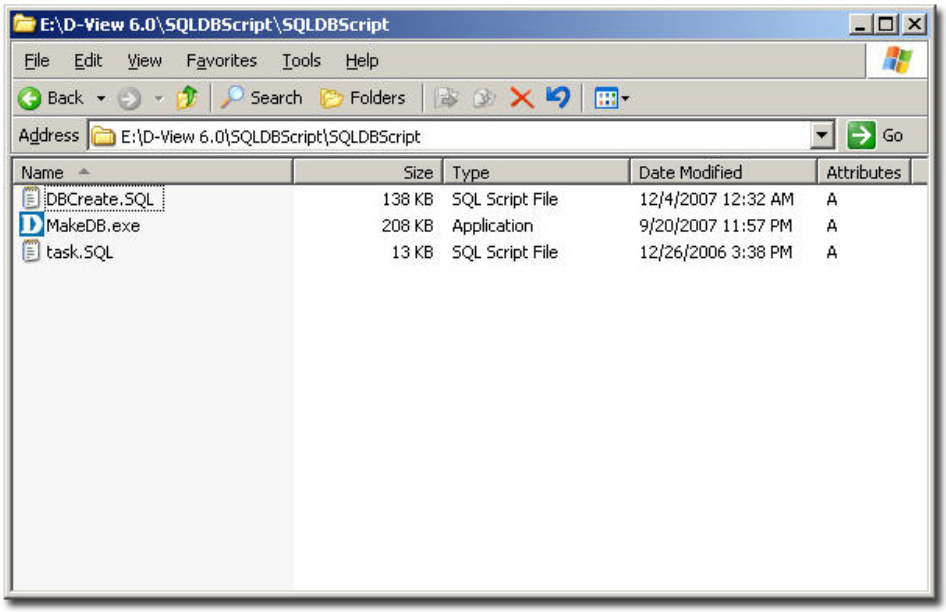


Figure 15: MakeDB screen

2. Double-click **MakeDB.exe**.

   The **D-View Database Tool** window displays.

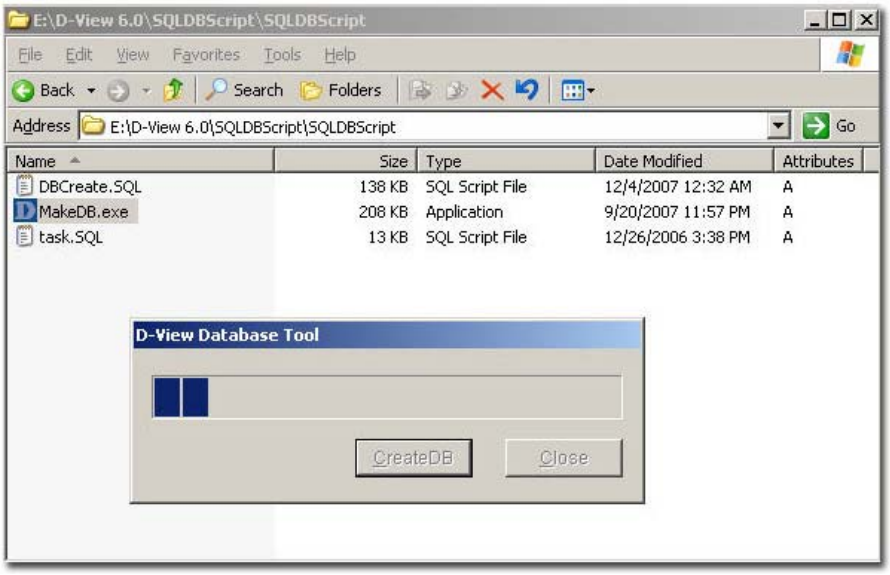


Figure 16: D-View Database Tool screen

D-View Database Tool is in the process of creating a database.

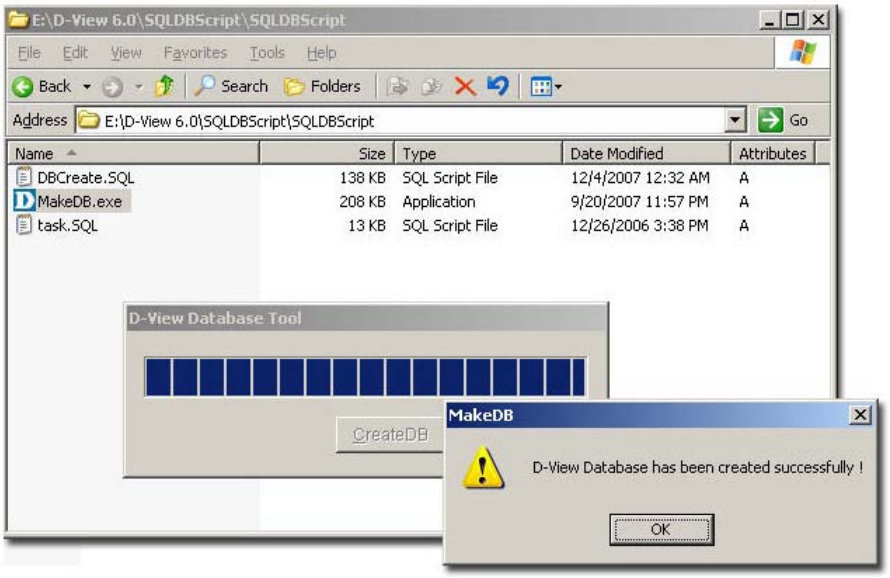


Figure 17: MakeDB screen

3. Click **OK** to close the window.
4. To edit information in the hosts file, go to:
   `C:\WINNT\system32\drivers\etc\hosts`

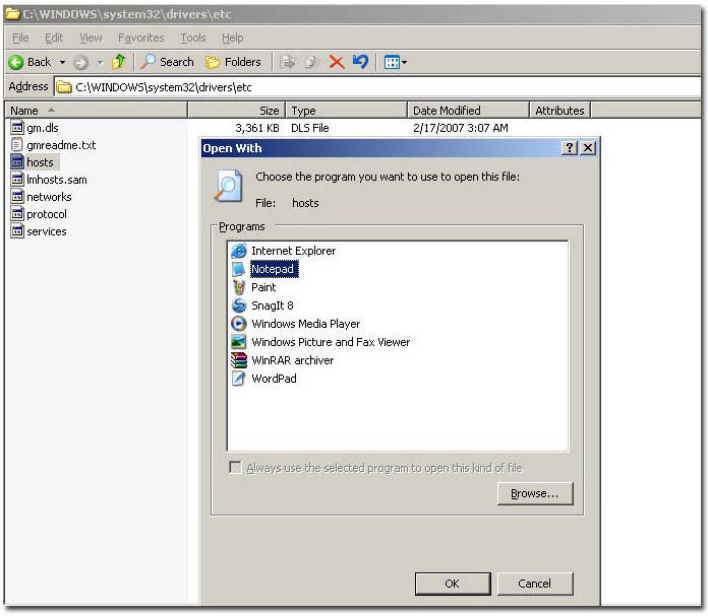


Figure 18: Etc Folder screen

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

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

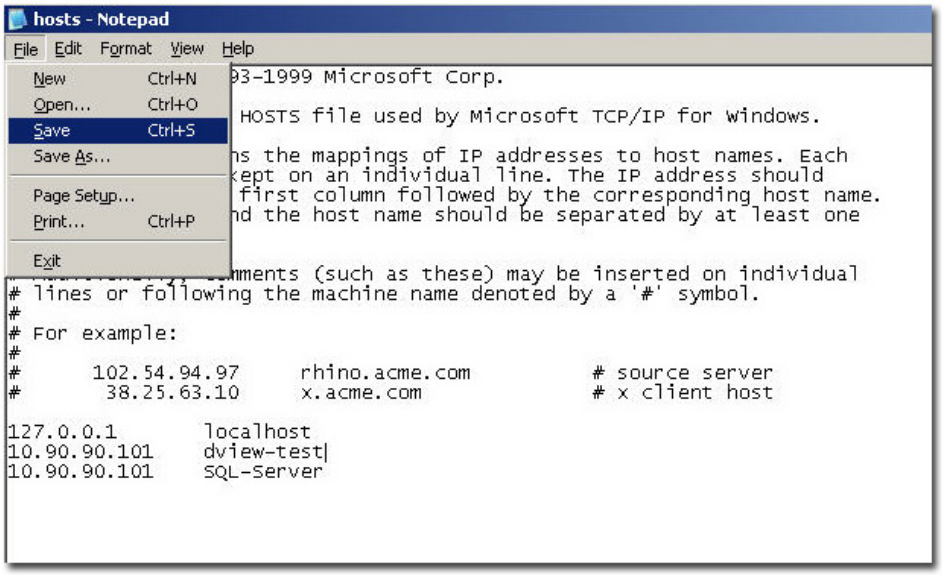


Figure 19: Hosts File screen

6. 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

To implement the client-server architecture, ensure to install D-View 6.0 professional edition in required servers to connect with the SQL database.

7. 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 to add the IP address of your server in the hosts file. Check with the system administrator for the correct IP address of your server.

8. Restart your computer to complete the installation.

   The **Login D-View** screen displays. Refer to Getting Started to continue working with D-View.

D-VIEW 6.0 LICENSING

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 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 19 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.

Obtaining the Activation Code

If you opt to buy D-View, there are three ways to request for your activation code, which are as follows:

OPTION A

To register, go to http://dview.dlink.com.tw and enter user related information such as license key and MAC address of D-View. The license key is provided with the CD.

OPTION B

1. Start **D-View**.

   The **D-View 6.0 Activation Wizard** screen displays.

Figure 20: D-View Activation Wizard screen

2. Click **Next** to continue.

The **Input Activation Key** screen displays.

Figure 21: Input Activation Key screen

3. Click **Register** to open the registration website and update the information on-line.

OPTION C

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

Understanding the Architecture

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 and plug-in modules.

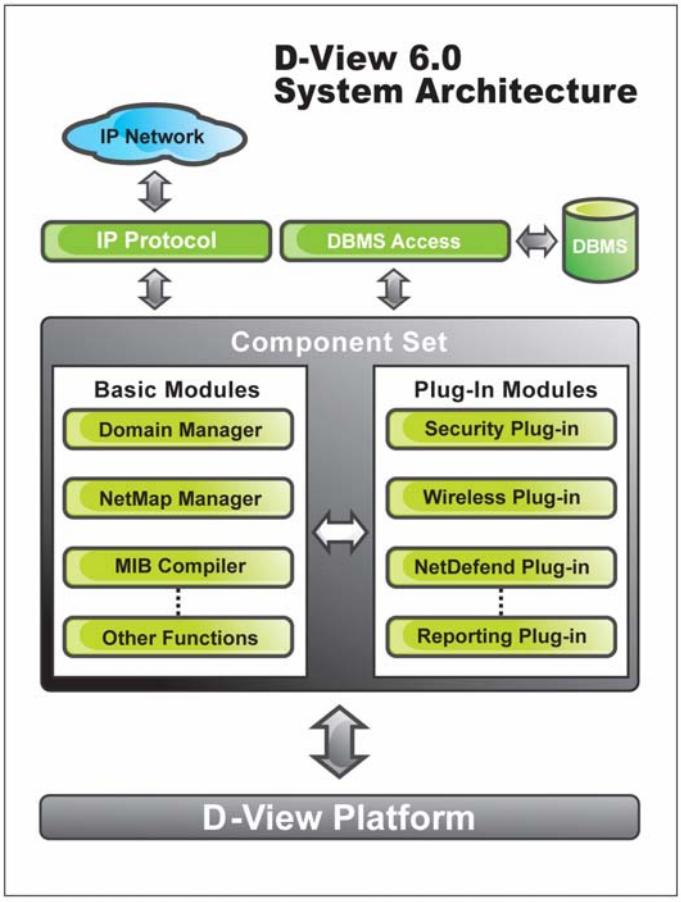


Figure 22: D-View System Architecture

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.

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**.
- 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.**
- 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 email or sound alerts.

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 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 mechanism to retrieve SNMP OID information. For example, using **Performance Monitor** function, the administrator can monitor data ratio per port.
- **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

INTRODUCTION

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

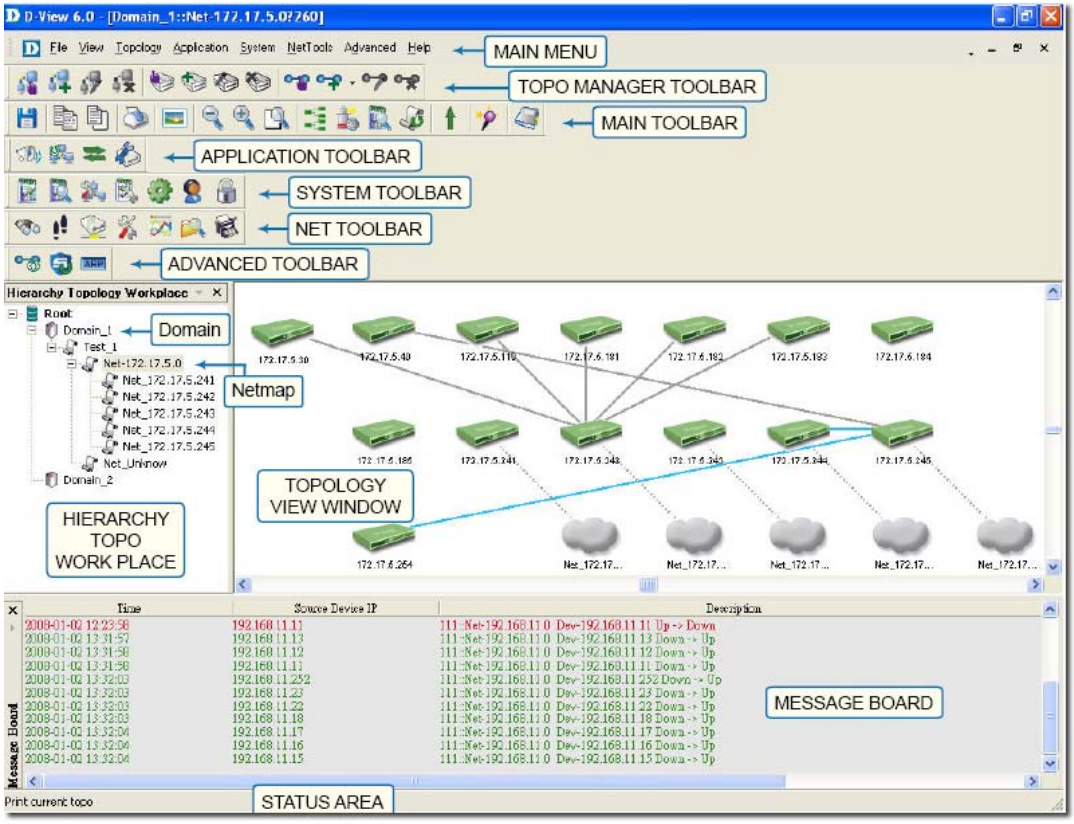


Figure 23: D-View User Interface

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 Main Menu for the different functional modules.

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

Context-sensitive Menus

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

Topology Workspace

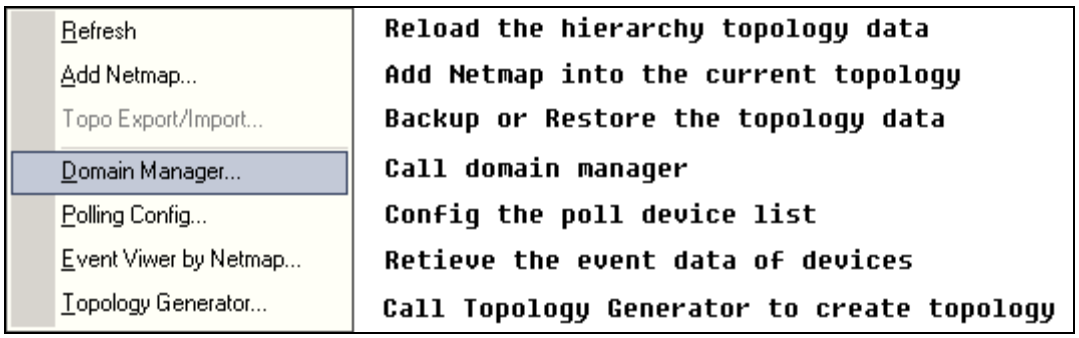


Figure 24: Context-sensitive menu accessed from the Topology Workspace

Topology View Window

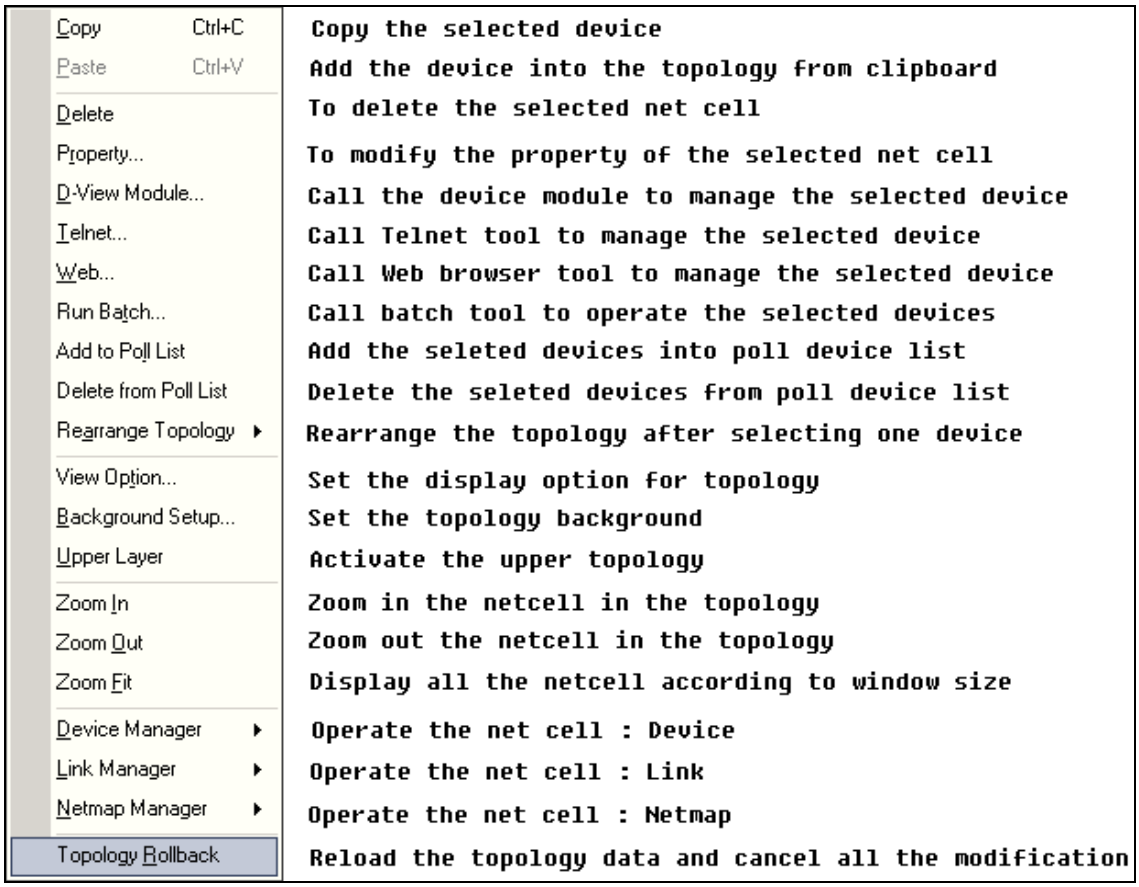


Figure 25: Context-sensitive menu accessed from the Topology View Window

Hierarchy Topology Workspace

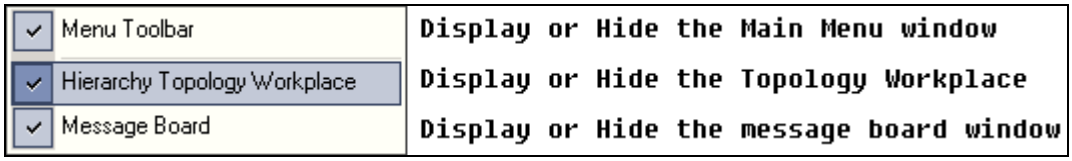


Figure 26: Context-sensitive menu accessed from the Hierarchy Topology Workspace

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.

File

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

MENU ITEM	DESCRIPTION
Save	Save the current topology.
Startup Wizard	The wizard guides you to create a topology. Refer to Startup Wizard for more information.
Close	Close the current **Topology View** window.
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.

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 and ARP info.
Net Toolbar 	Access Device Discovery, Trace route, File Transport, NET Toolbox, Performance monitor, MIB browser and MIB compiler.
System Toolbar 	Access System Log, Event Viewer by IP, Device Group Manager, Device Event Configure, System Config, Administrator Management, and Change Password.
Application Toolbar 	Access Batch config, Run Batch Program, Topo Export Import, Device Customization.
Topo Manager Toolbar  	Access Select netmap, Add netmap, Edit netmap, Delete netmap, Select device, Add device, Edit device, Delete device, Select link, Add link, Edit link, Delete link.
Main toolbar  	Access Save, Copy, Paste, 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
Hierarchy Topology workspace	Access Main Menu, Topology, and Message Board
Message Board	Access Message Board
Cascade	Cascades the different topologies one behind the others
Tile Vertically	Arranges the different topologies one below the other

Application

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

MENU ITEM	DESCRIPTION
Batch Config: • **Advanced Option** • **Run Batch**	Execute a sequence of operations in D-View. For example, Save Configuration, Retrieve Port Status, and so on. Refer to Batch Configuration for more information.
Topo Export Import	Restore and backup D-View. Refer to Using Topo Export/Import for more information.
Device Customization	Add, modify and delete devices. Refer to Customizing Devices for more information.

System

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

MENU ITEM	DESCRIPTION
System Log	Store logged events. Refer to System Log for more information.
Domain Manager	Manage domain information. Refer to Domain Manager for more information.
Event Manager • **Event Viewer by**	Monitor and manage events. Refer to Managing Events for more

Netmap • **Event Viewer by IP** • **Device Group Manager** • **Polling Config** • **Device Event Config** • **Trap Editor**	information.
Resource Manager • **MAC Locator** • **Device Locator** • **User Locator** • **Device Collector** • **User Statistic** • **Device Statistic**	Locate devices using IP or MAC address.
System Config	Configure the root domain name, management station and authentication information. Refer to Login D-View for more information.
Administrative Manager	Create user groups and provide access rights for certain functional modules to an administrator. Refer to Administrator Manager for more information.
Change Password	Change password after login. Refer to Changing Password for more information.

NetTools

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

MENU ITEM	DESCRIPTION
Device Discovery	Search devices using IP address. Refer to 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 Trace Route for more information.
TFTP (Trivial File Transfer Protocol)	Upload/Download/Update configuration files to and from devices. Refer to TFTP for more information.
NetToolbox	Manage devices through Telnet, Web and Ping using the IP address. Refer to Net Toolbox for more information.

Port Packet Monitor	Monitor the port packet performance. Refer to Port Packet Monitor for more information.
Performance Monitor	Monitor the RMON performance of a device. Refer to Performance Monitor for more information.
MIB Tools • **MIB Compiler** • **MIB Browser**	Manage and configure non D-Link devices. Refer to Managing Devices with MIB Compiler for more information.
Topology Generator	Tool to generate a Topology. Refer to Using Topology Generator for more information.

Advanced

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

MENU ITEM	DESCRIPTION
Link Capacity Check	Monitor and modify the link status. Refer to Monitoring the Link Status for more information.
Device type Check	Check the network for new and updated devices. Refer to Using Device Type Check for more information.
Safeguard Check	Check the safeguard status of devices. Refer to Using Safeguard Check for more information.
All of ARP info	Retrieve ARP information from devices in the topology. Refer to Retrieving ARP information for more details.

Help

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

MENU ITEM	DESCRIPTION
D-View Help	Opens D-View online help.
Module supported	Displays a list of devices supported by D-Link.
D-View Activation Wizard	Helps you obtain the activation code.
About D-View	Displays the About D-View window.

Using D-View

GETTING STARTED

Before proceeding with this section, D-Link recommends you to get familiar with the User Interface. Refer to Introduction section.

Login 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`.

Figure 27: D-View Login screen

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

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**.

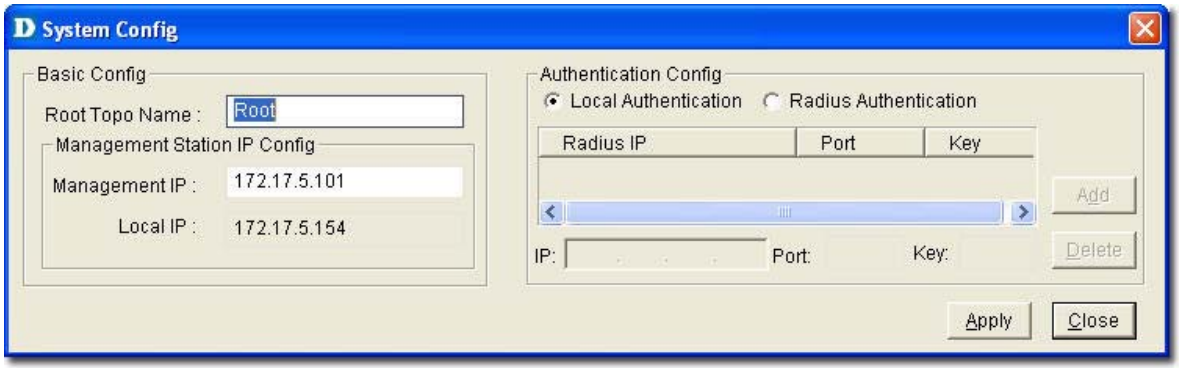


Figure 28: System Config screen

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.

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, by default, creates a Super Domain and the IP address of the workstation. A super domain is a virtual domain which manages the topologies of all the domains. Refer to Creating a Topology to manually create a topology using Domain Manager.

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 29: Startup Wizard screen

2. Click **Next**. The **Domain Manager** screen displays.

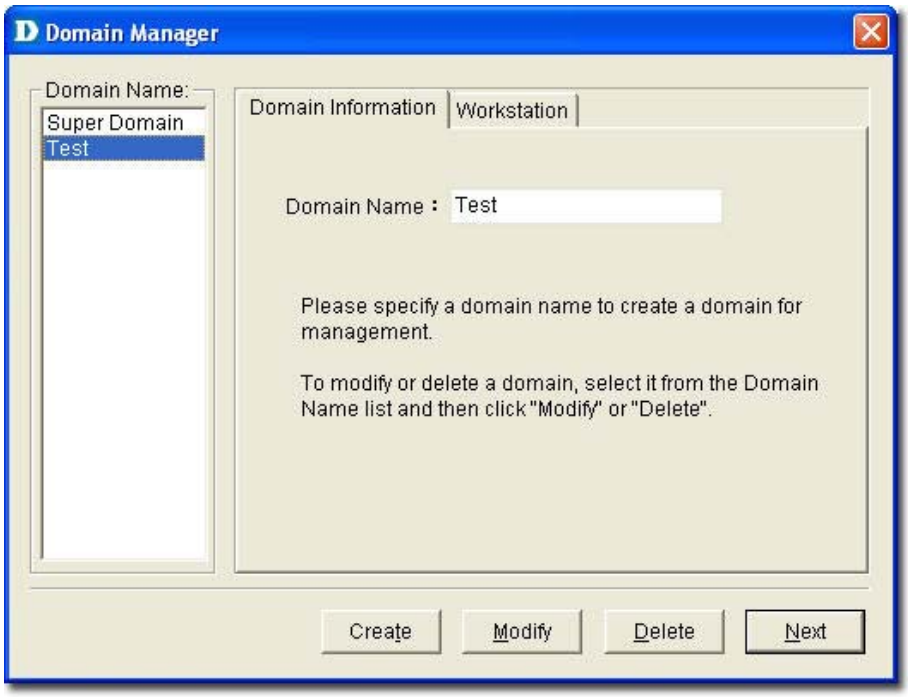


Figure 30: Domain Manager screen

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

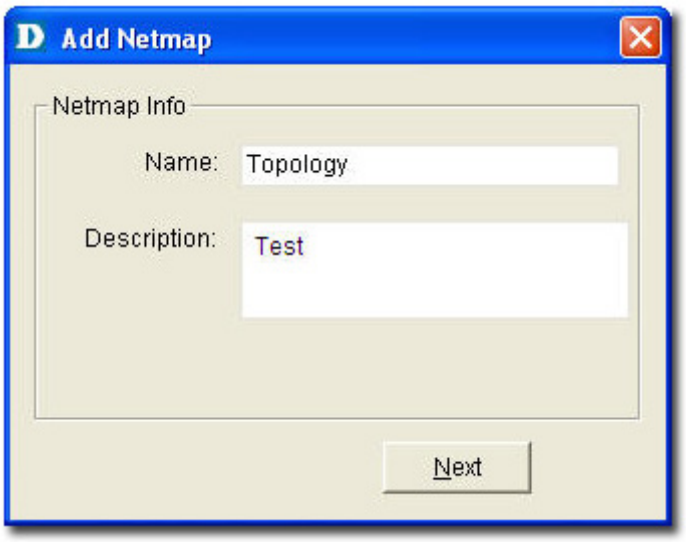


Figure 31: Add Netmap screen

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

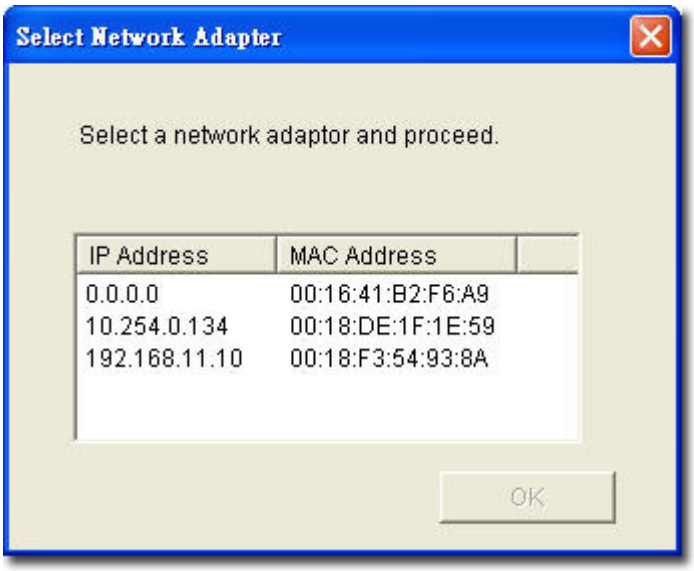


Figure 32: Select Network Adapter screen

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

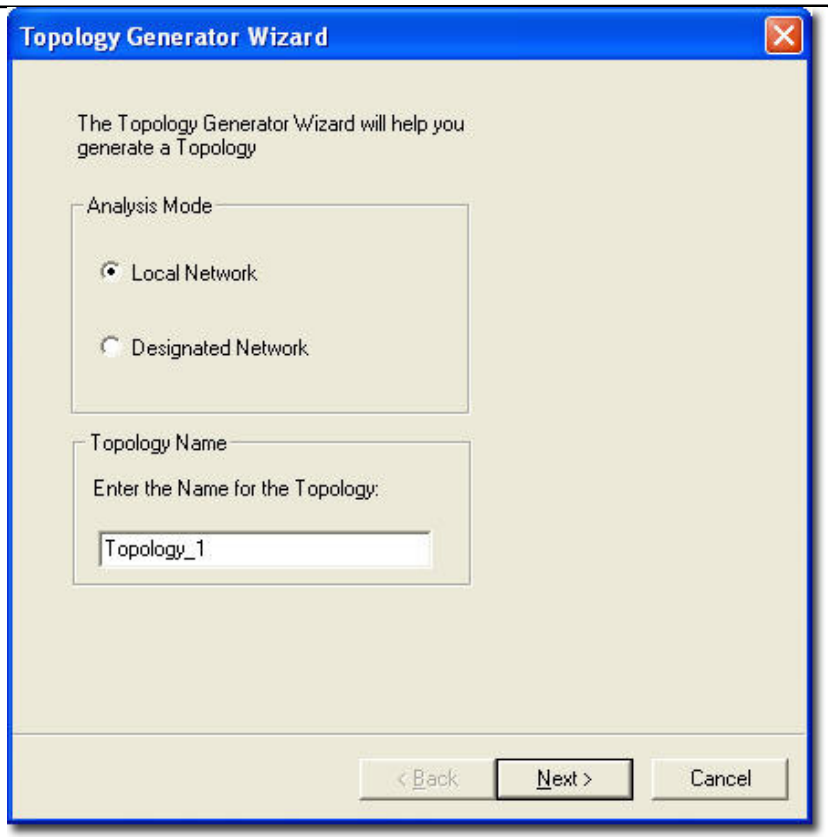


Figure 33: Topology Generator Wizard screen

9. 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.

Figure 34: 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.

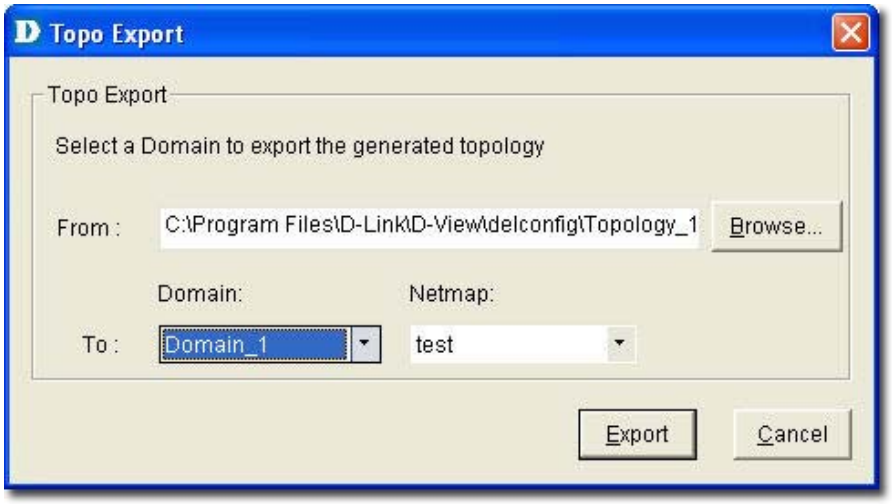


Figure 35: Topo Export screen

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

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 Startup Wizard create a topology.
- Create a topology manually

To manually create a topology:

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

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

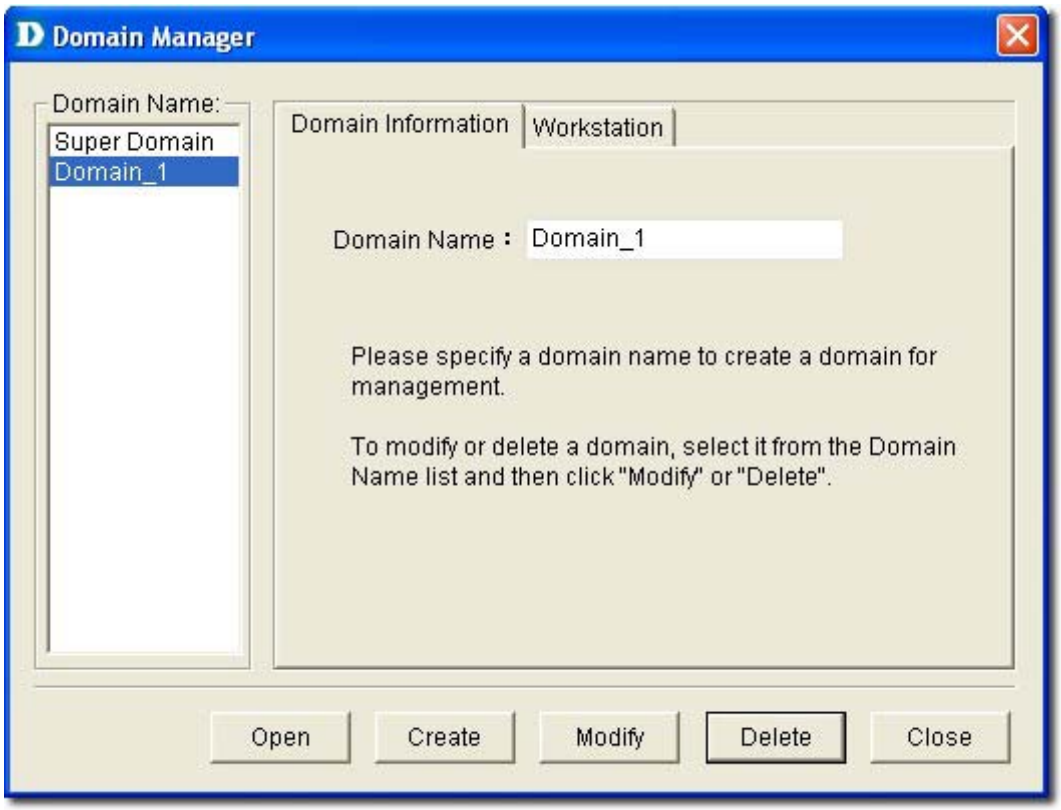


Figure 36: Domain Manager screen

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

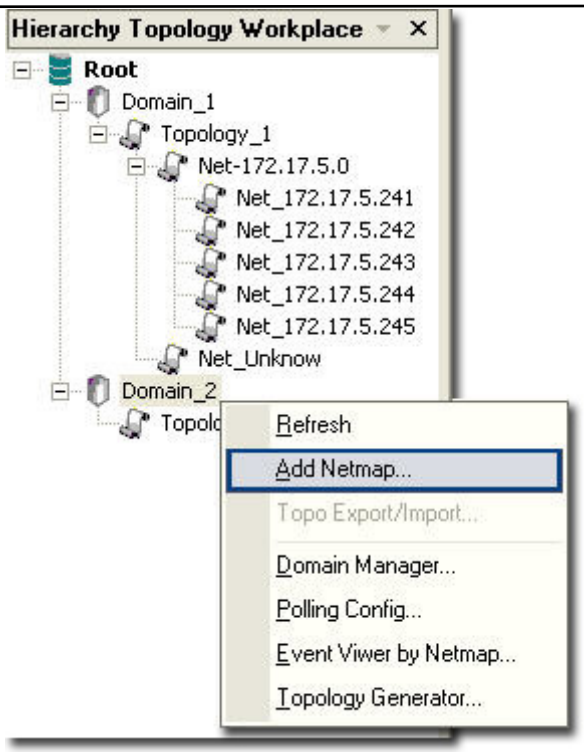


Figure 37: Hierarchy Topology Workplace screen

3. The **Add Netmap** screen displays.

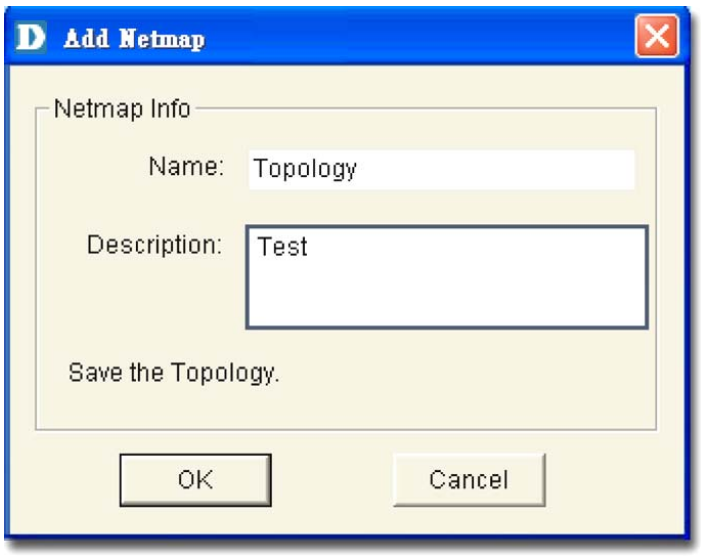


Figure 38: Add Netmap screen

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

Make sure to save the changes made to the database before you proceed.

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 Device Discovery for more information.

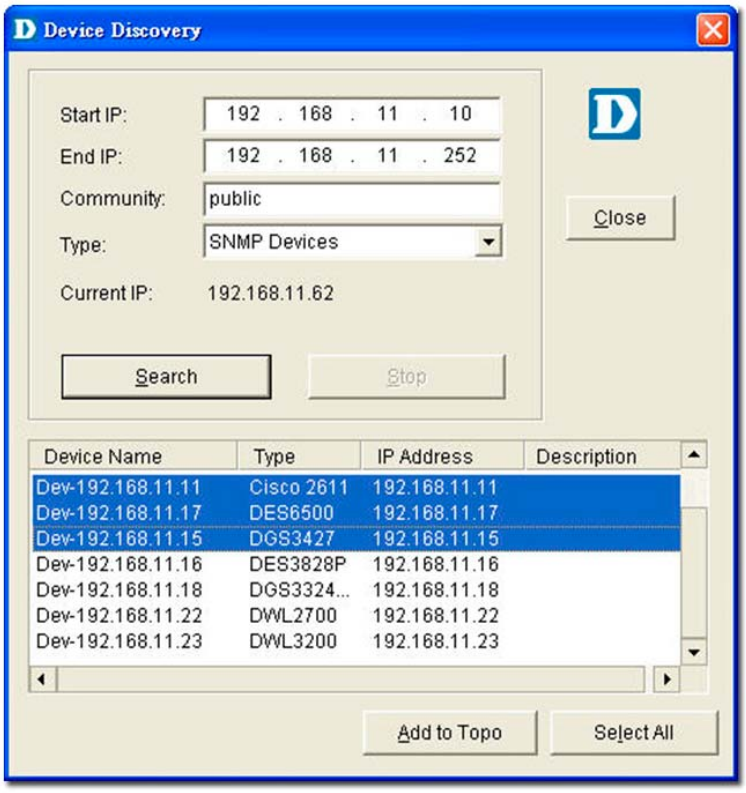


Figure 39: Device Discovery screen

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

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.
2. Go to **System > Domain Manager** and then create two domains. For example: Domain_1, Domain_2.

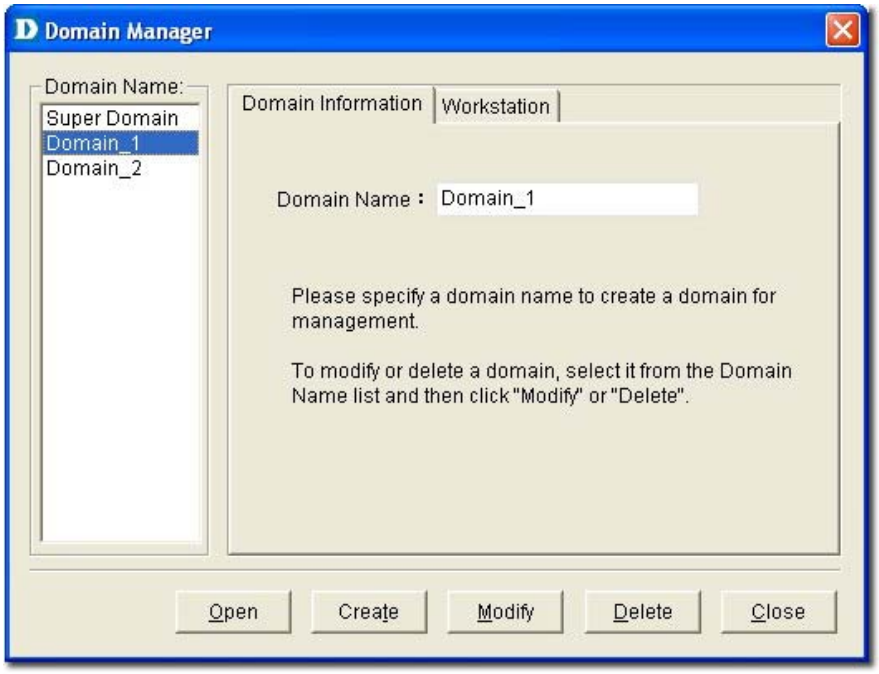


Figure 40: Domain Manager screen

3. 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.

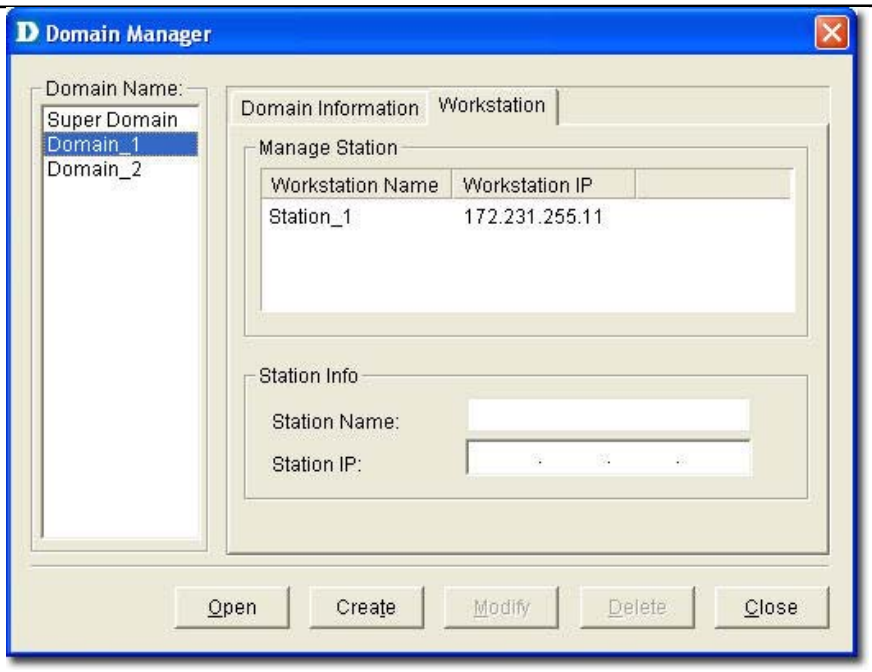


Figure 41: Domain Manager: Workstation screen

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

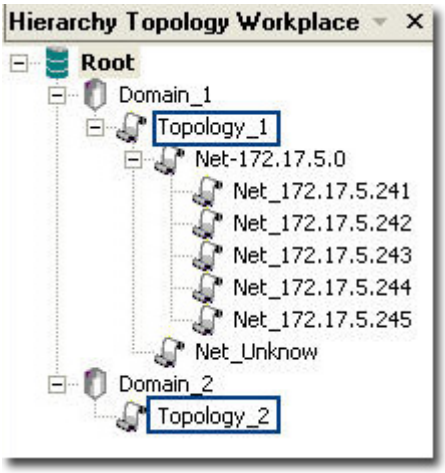


Figure 42: Hierarchy Topology Workplace

6. 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.

Figure 43: Login screen

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

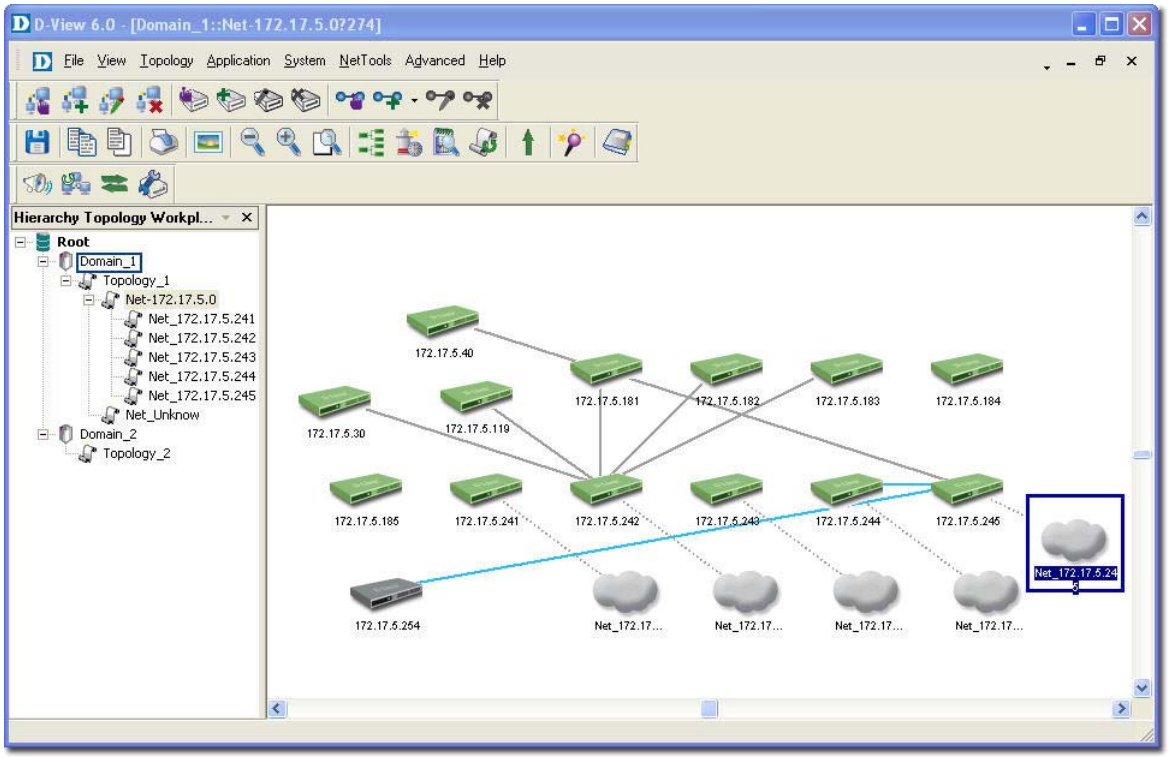


Figure 44: Domain_1 window

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.

Figure 45: 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 Restoring and Backing Up D-View to restore and backup D-View.

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 the **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.

USING TOPOLOGY GENERATOR

Use the **Topology Generator** to create the topology map.

To use the Topology Generator:

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

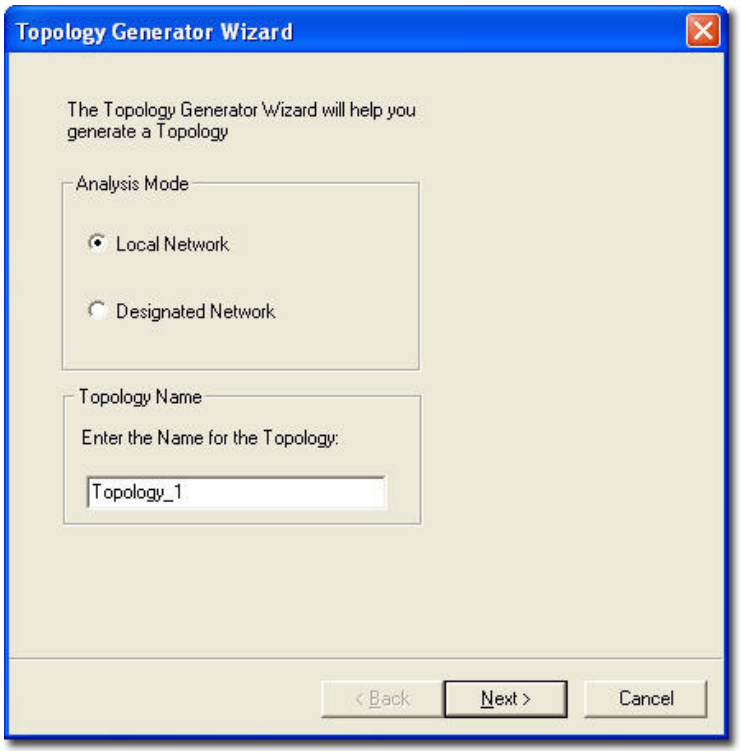


Figure 46: Topology Generator Wizard screen

2. Select the **Analysis Mode**.
3. Enter the **Topology** Name.
4. 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.

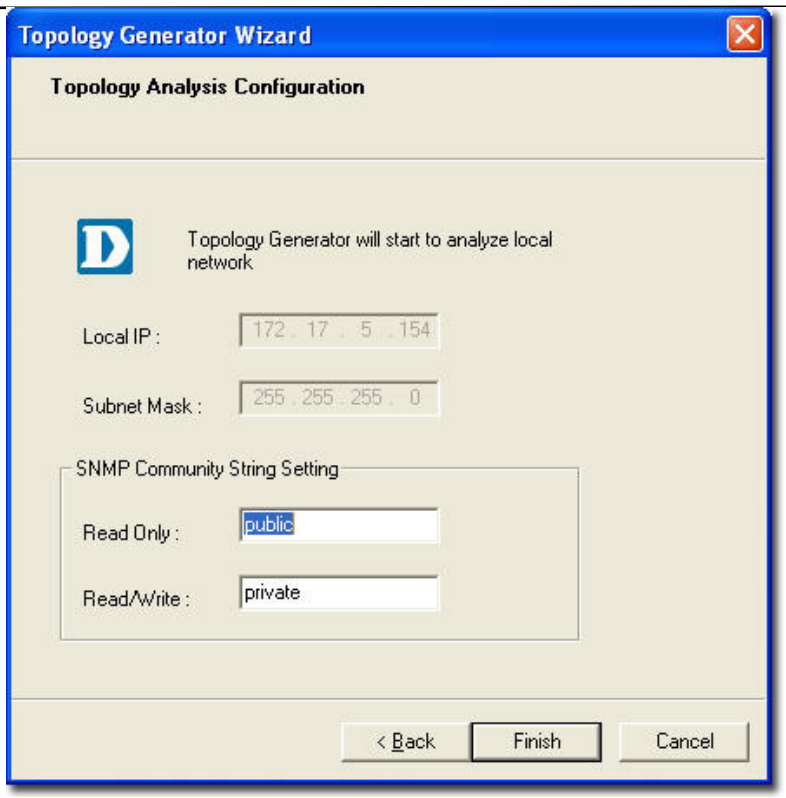


Figure 47: Topology Analysis Configuration screen

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.

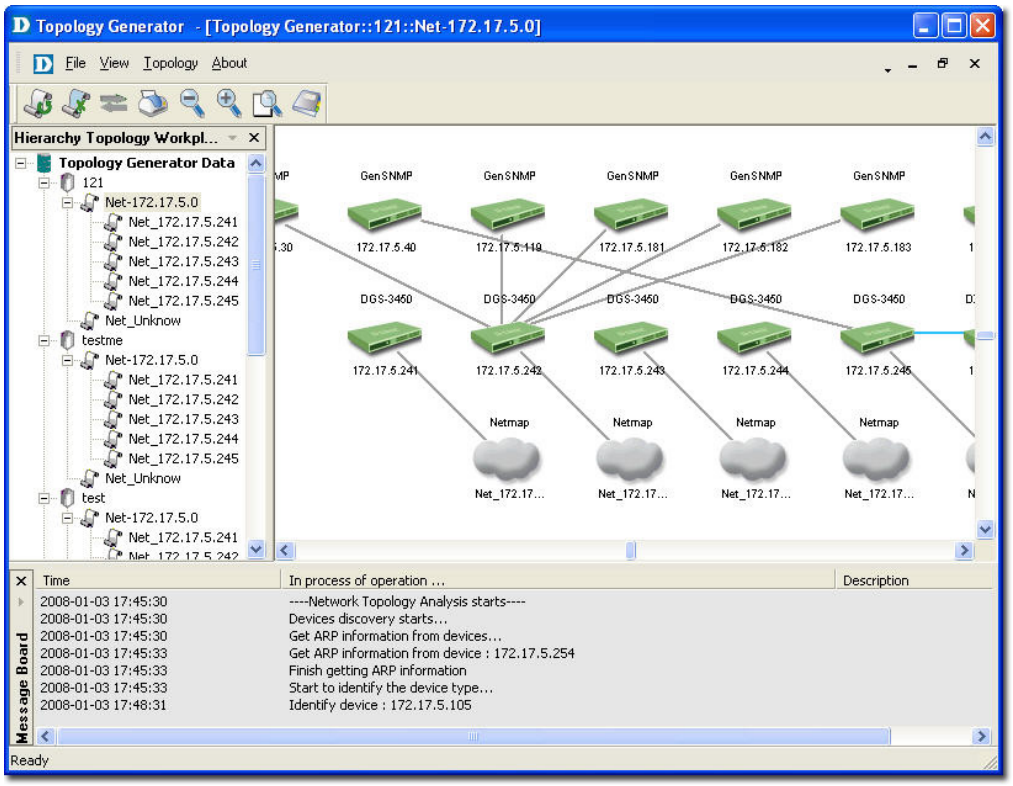


Figure 48: Generated Topology window

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

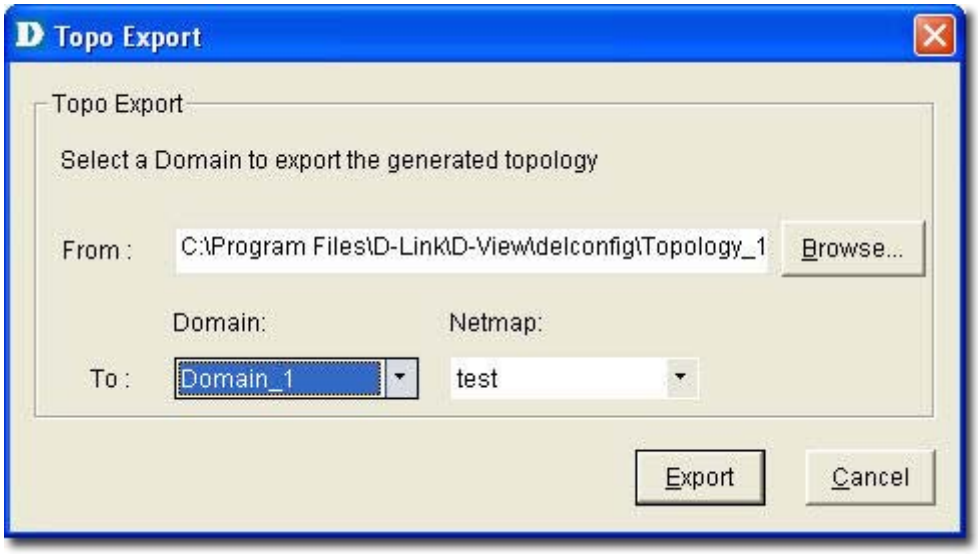


Figure 49: Topo Export screen

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

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**

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.

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.

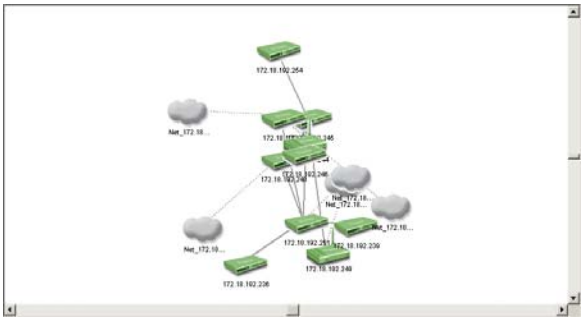
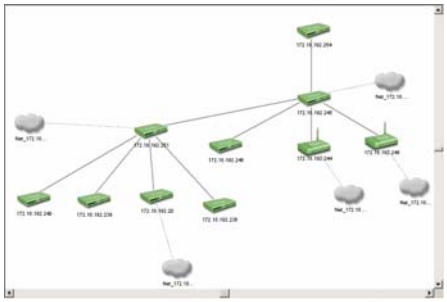
Before Rearranging	After Rearranging
	

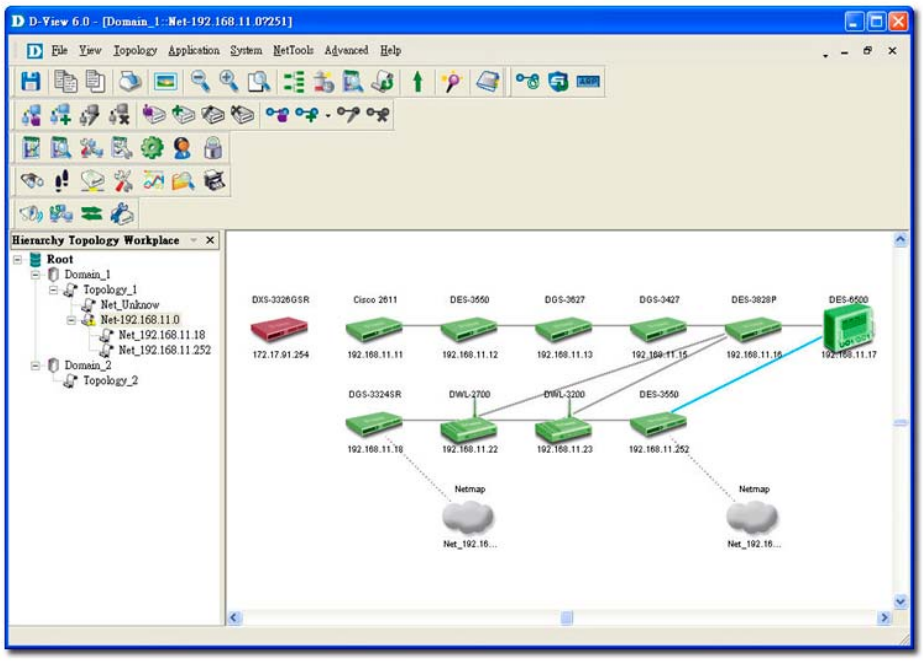
Figure 50: Topology before and after rearranging

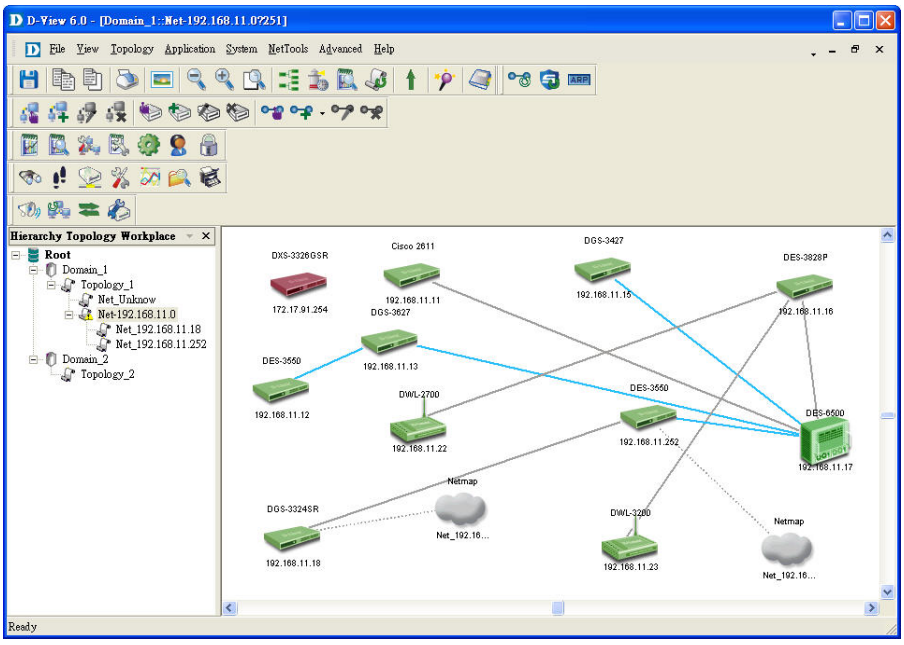
Rolling Back a Topology

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.





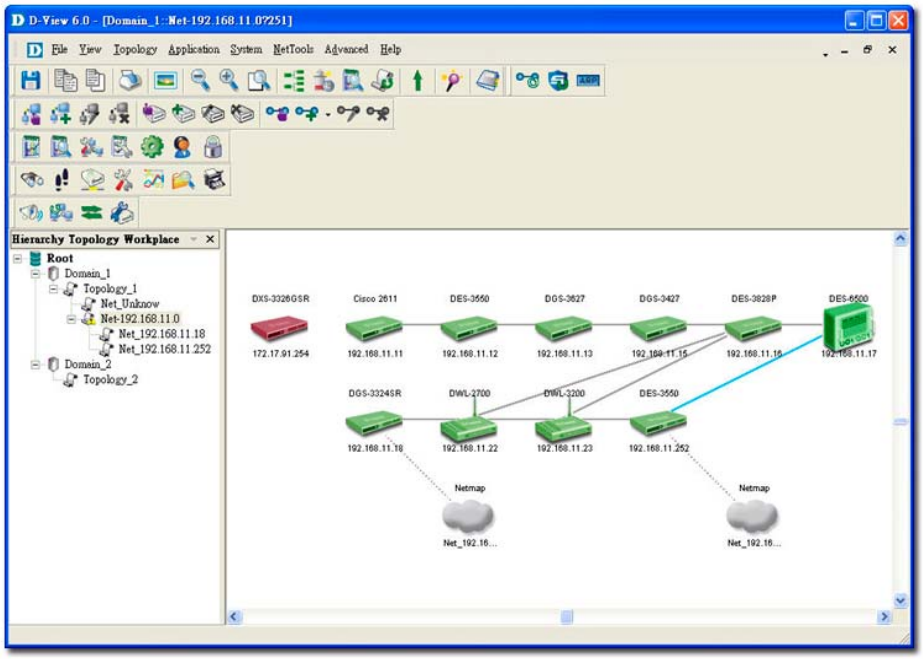


Figure 51: Sequence of steps displaying the Topology Rollback function

Managing and Monitoring Devices

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.

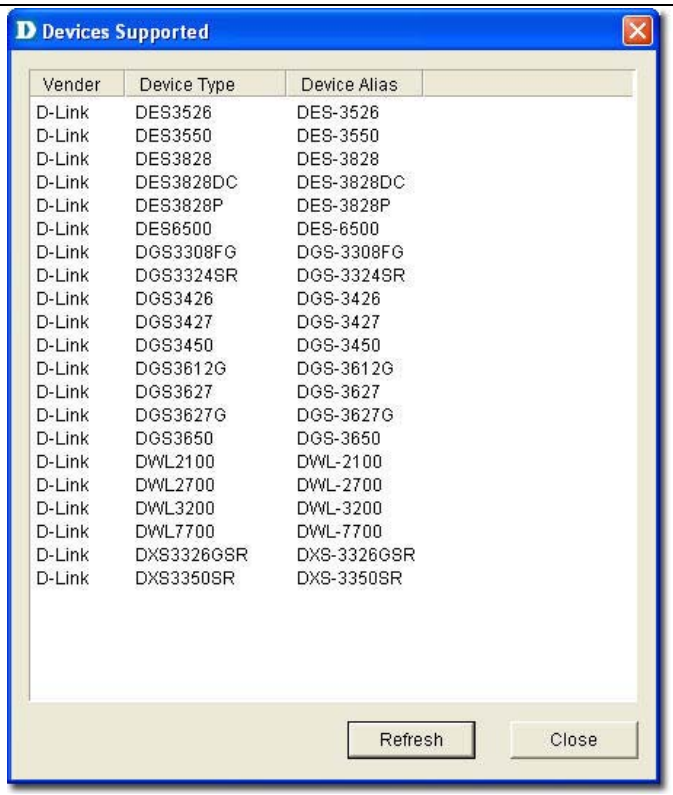


Figure 52: Devices Supported screen

Refer to Customizing Devices to extend the device module list.

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 Retrieving OID of the device 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 Managing Devices with MIB Compiler for more information.
- **Telnet, Web management tools:** Refer to Management Methods for more information.
- Monitoring performance status by **ICMP**/**SNMP**. Refer to Setting the Devices to Poll for more information.
- Extension of supported device types with **Device Customization** functional module. Refer to Customizing Devices for more information.

CUSTOMIZING DEVICES

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

To customize devices:

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

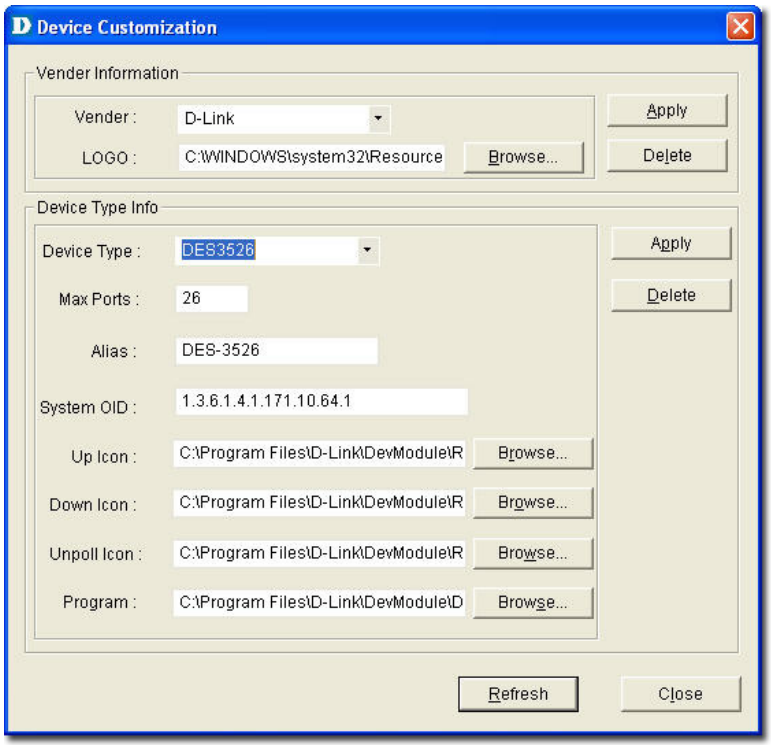


Figure 53: Device Customization screen

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 Retrieving OID of the device 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.

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:

1. Go to **NetTools** > **MIB Tools** and then select **MIB Complier**. The **D-Link MIB Compiler** screen displays.

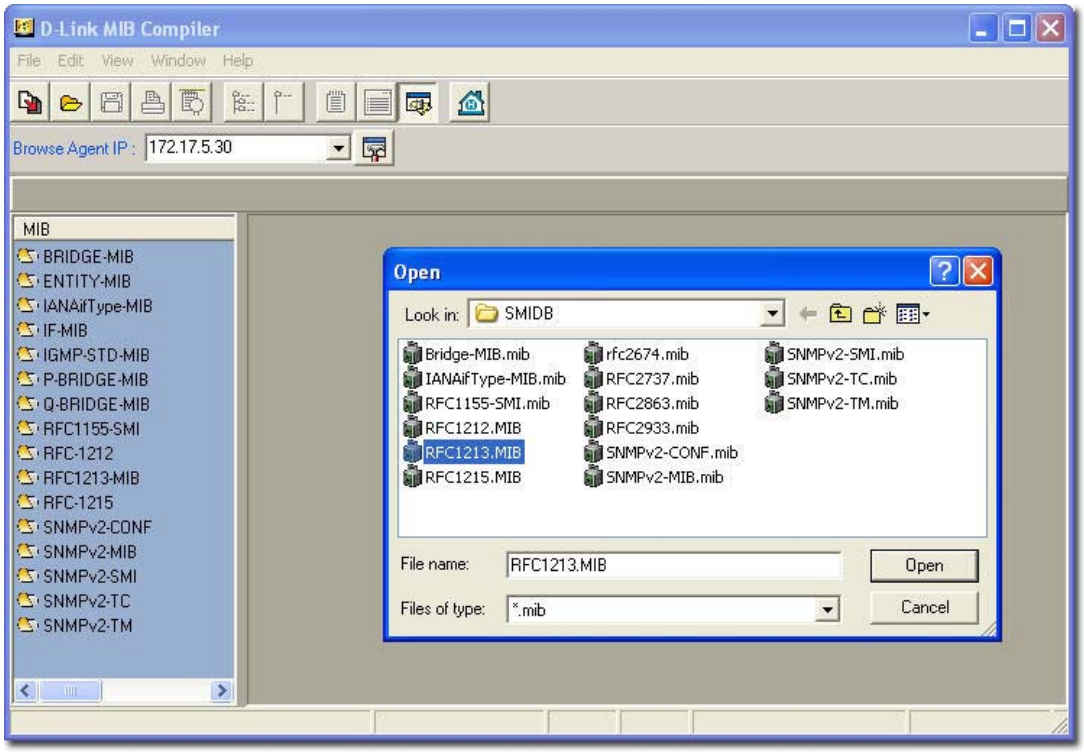


Figure 54: D-Link MIB Compiler screen

2. Open the `rfc1213` file for modification. D-View loads the compiled MIB file.

Typically, D-View identifies the device type by retrieving the OID value 1.3.6.1.2.1.1.2.0 from the RFC1213 MIB file.

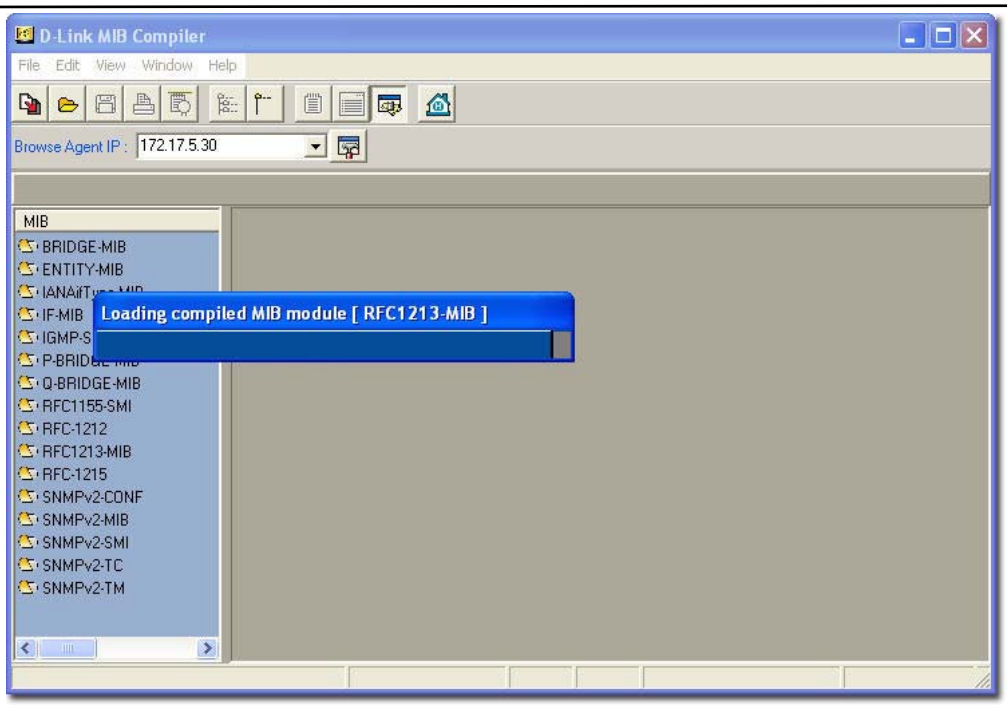


Figure 55: Loading compiled MIB Module screen

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

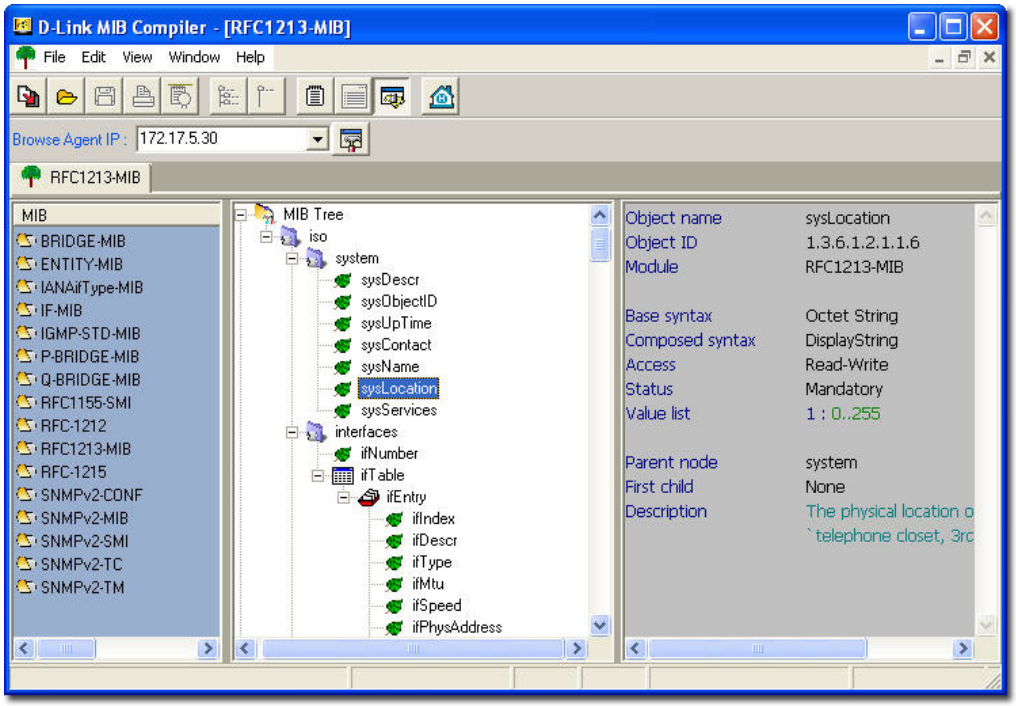


Figure 56: MIB Tree screen

The **Browse Result Node: sysLocation** screen displays.

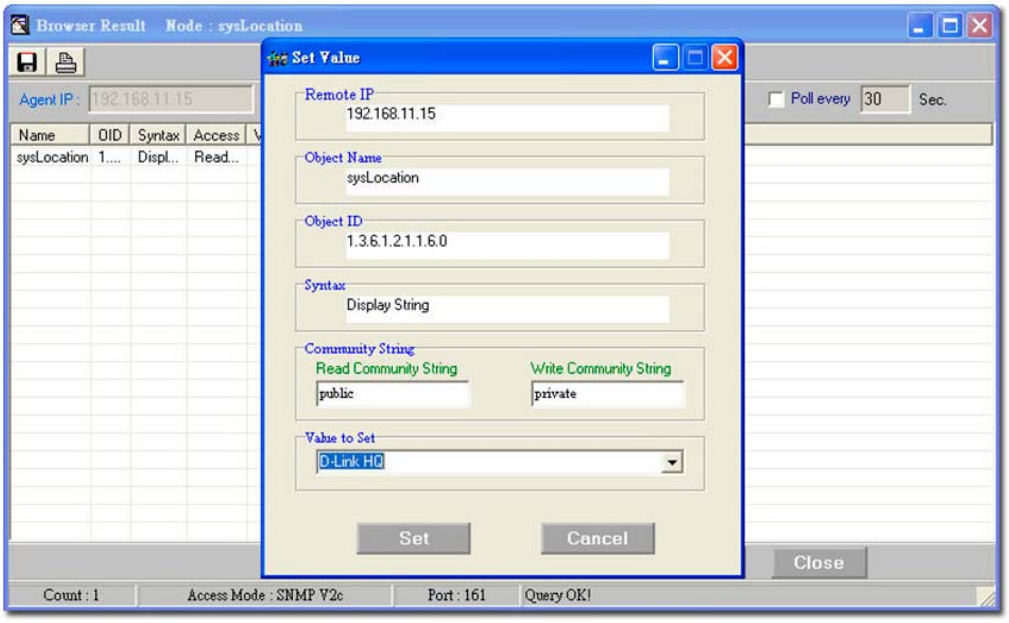


Figure 57: Set Value screen

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

Use MIB Browser to browse MIB files after compilation.

Setting Up SNMP Configuration to Retrieve Device Information

1. Click **SNMP Configuration** from the **MIB Complier** screen. **The SNMP Configuration** screen displays.

Figure 58: SNMP Configuration screen

2. Select the **SNMP Protocol Version**.

3. Enter the community string to access devices through SNMP.

If you select SNMPV3, update the SNMPV3-specific fields and access devices respectively.

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

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 displays.

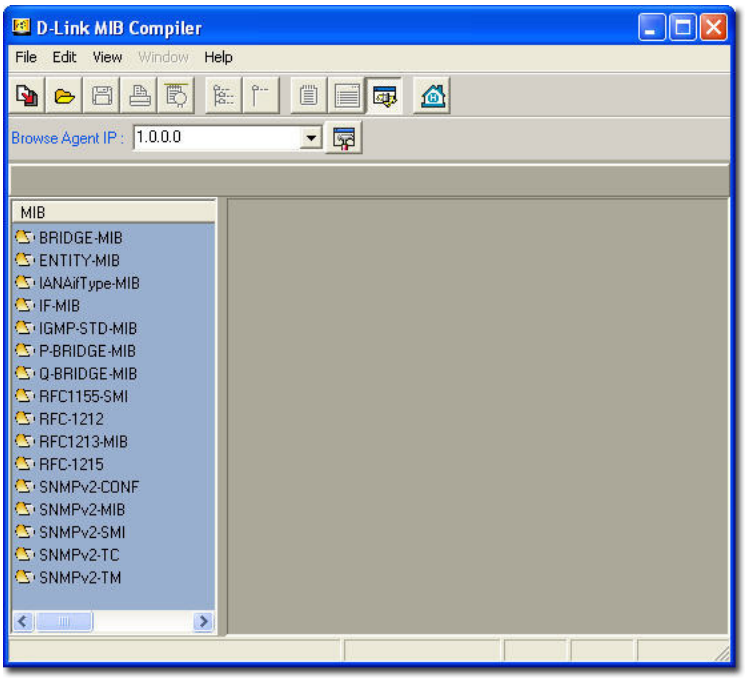


Figure 59: MIB Compiler screen

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

OR

1. 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 displays.
3. Go to **Device Info** and then select **System Info**. The **System InfoGenSNMPDevice Module** screen displays.

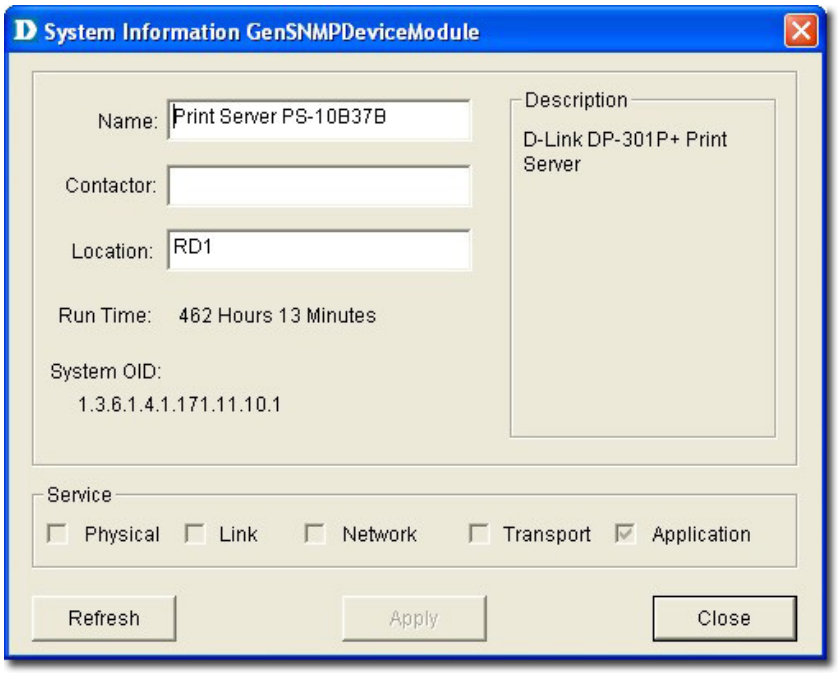


Figure 60: System InfoGenSNMPDeviceModule screen

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.

BATCH CONFIGURATION

The **Batch Configuration** tool allows you to execute a sequence of operations in D-View. For example, Save Configuration, Retrieve Port Status, and so on. 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:

1. Go to **Application** > **Batch Config**> **Advanced Option**. The **Advanced Option** screen displays.

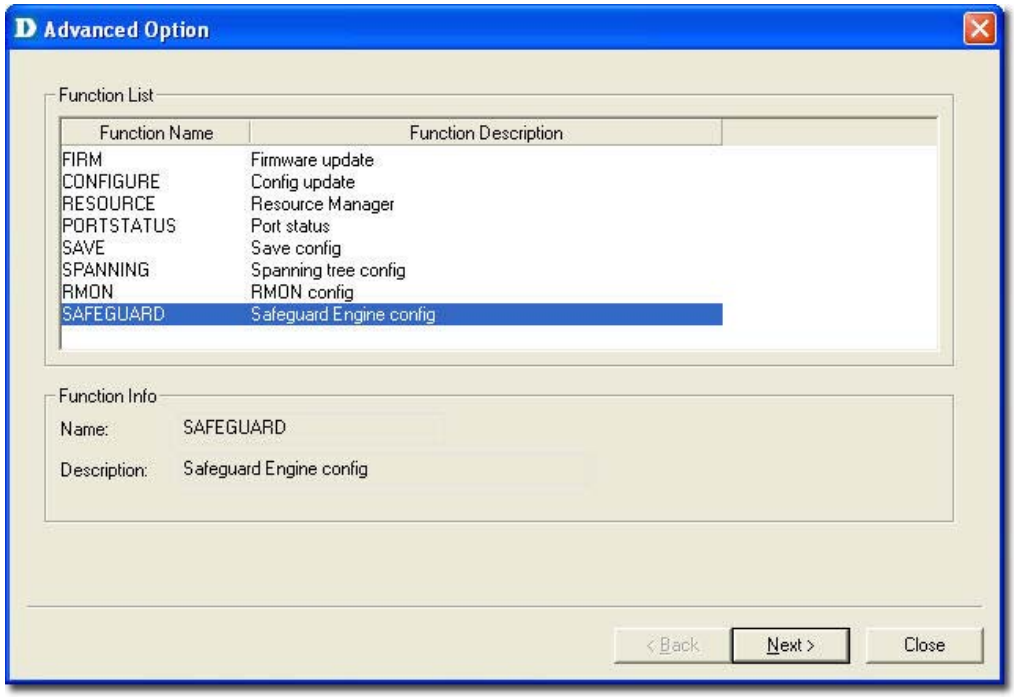


Figure 61: Advanced Option screen

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.
3. Select **SAFEGUARD** and then click **Next** to continue. The **Device Type Config** screen displays.

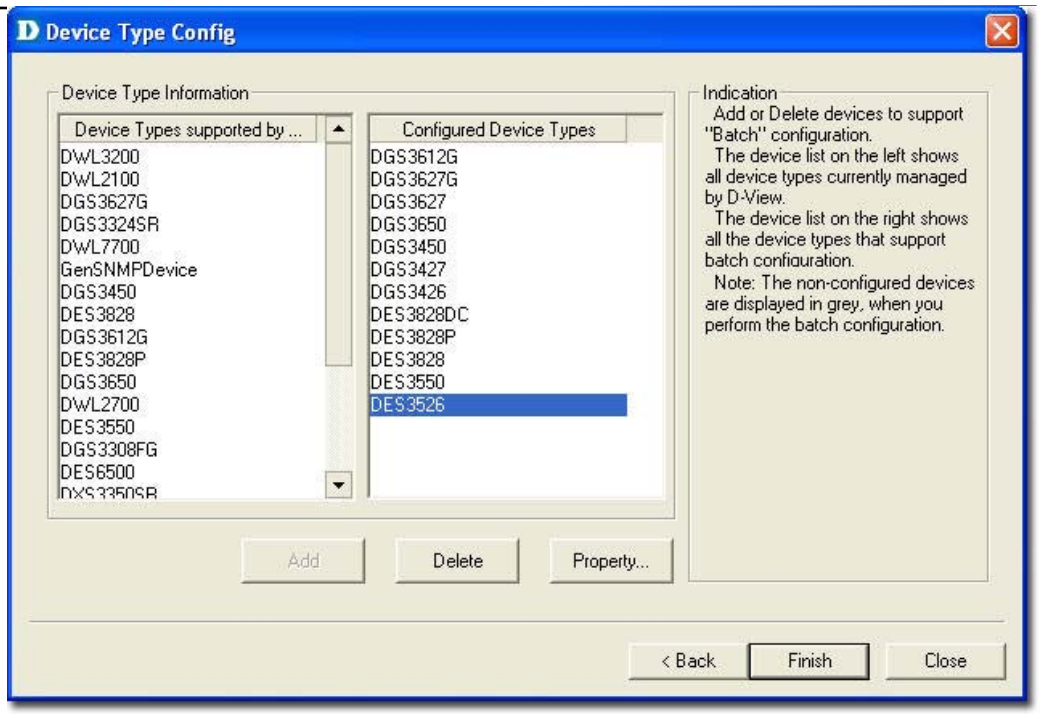


Figure 62: Device Type Config screen

4. The devices can be added or deleted to support batch configuration.
5. Click **Property** to configure the OID properties of a device type. The **OID Config** screen displays.

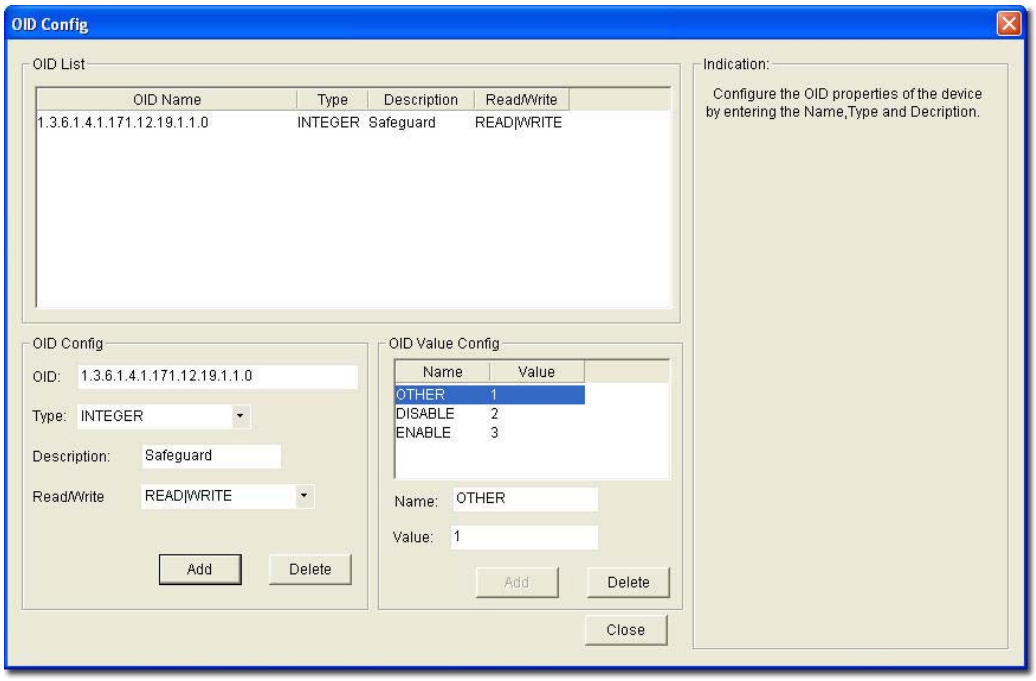


Figure 63: OID Config screen

6. Enter the values of the **OID Config** information.
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**.

Backup and Update the Devices' Configuration

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

1. 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 displays.

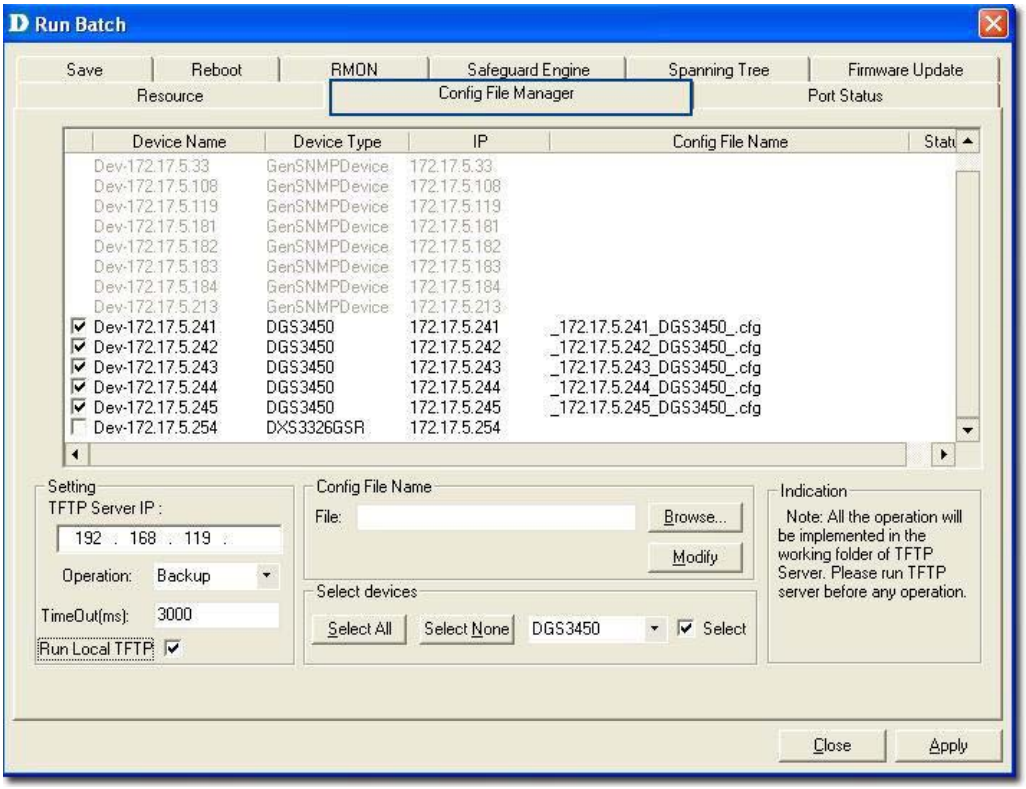


Figure 64: Run Batch screen

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 Using Safeguard Check 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.

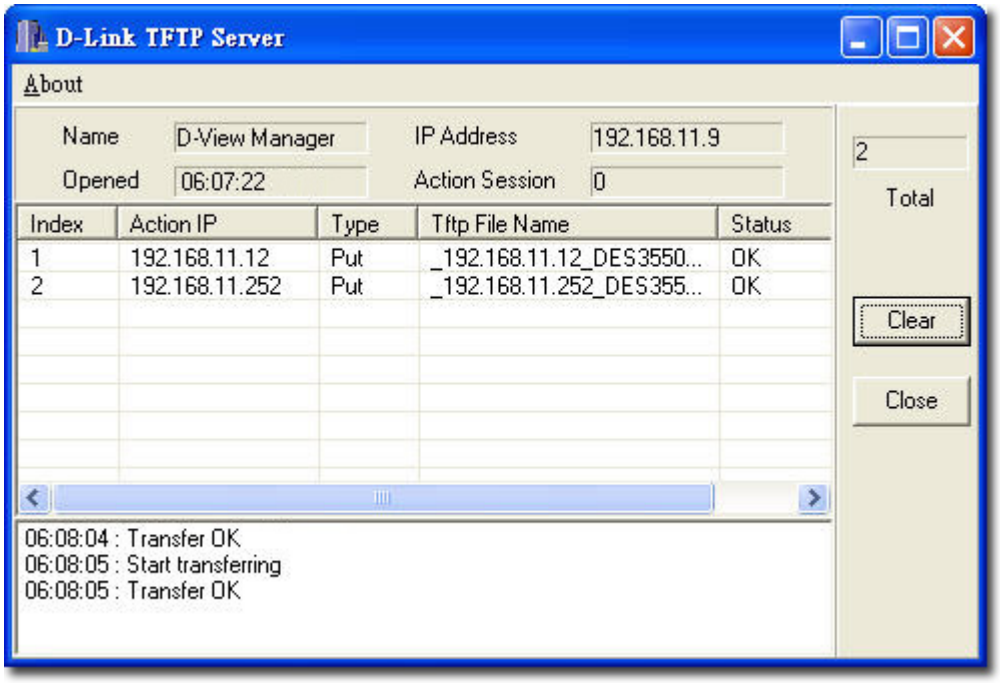


Figure 65: D-Link TFTP Server screen

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 TFTP for more information.

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.

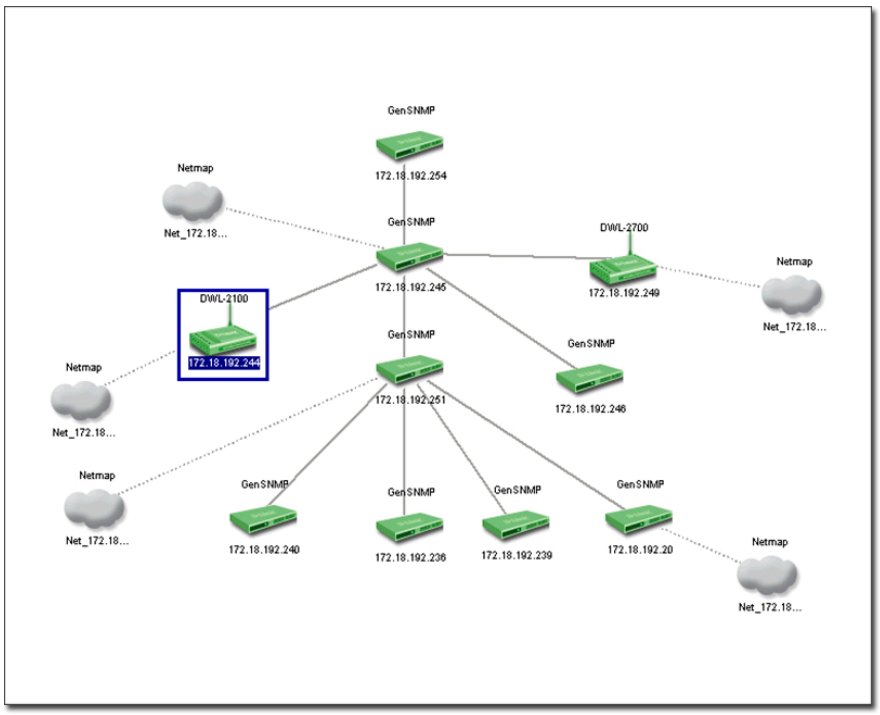


Figure 66: Generated Topology window

2. Go to **Advanced** > **Device Type Check**. D-View scans the devices in the open topology.

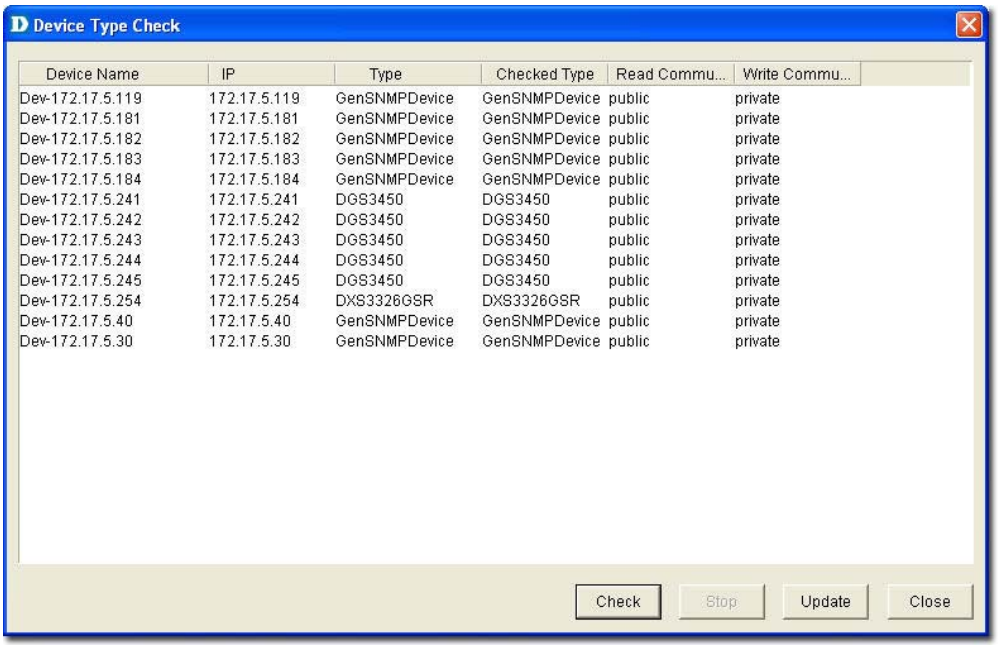


Figure 67: Device Type Check screen

3. Click **Check** to manually scan the device.
4. Select one or more devices and click **Update**. D-View refreshes the information of the selected devices.

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:

1. 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 displays. You can now enable or disable the devices' Safeguard Engine.

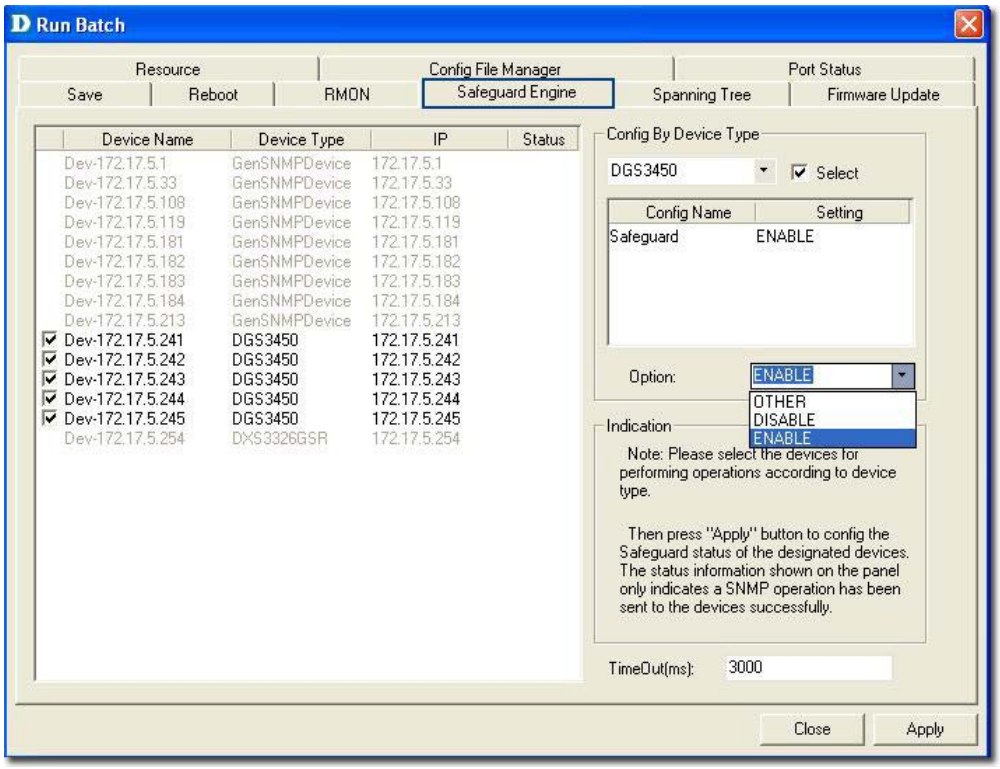


Figure 68: Run Batch: Safeguard Engine screen

2. 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.
4. Go to **Advanced** > **Safeguard Check** for the updated enable status of the selected devices. The **Safeguard Check** screen displays.

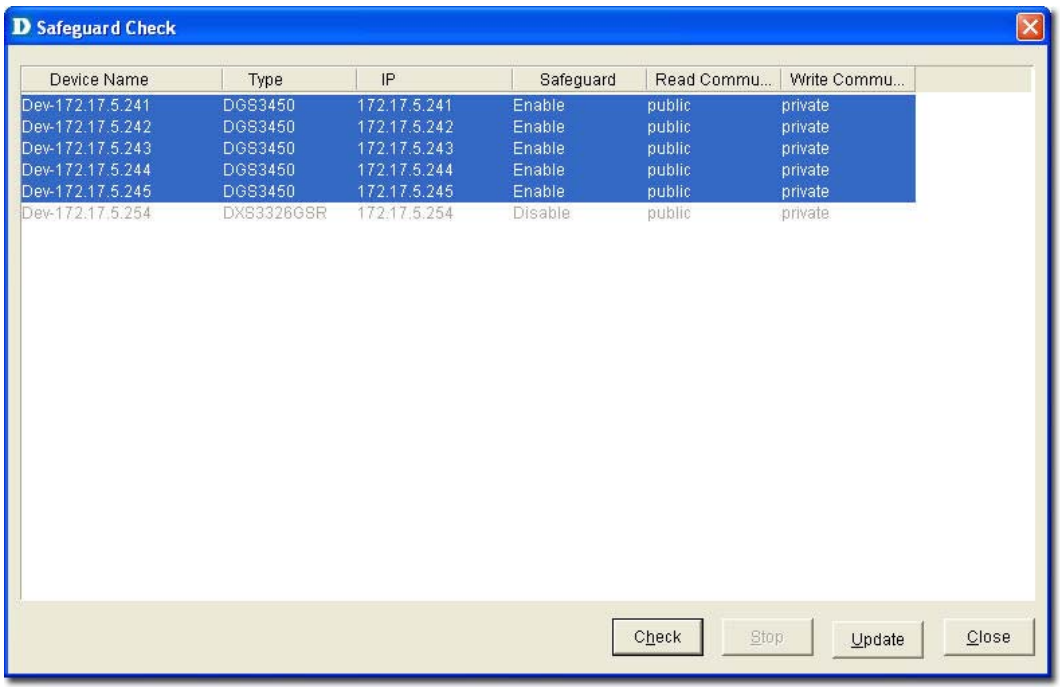


Figure 69: Safeguard Check screen

5. Click **Check** to manually scan the safeguard status of the device.
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.

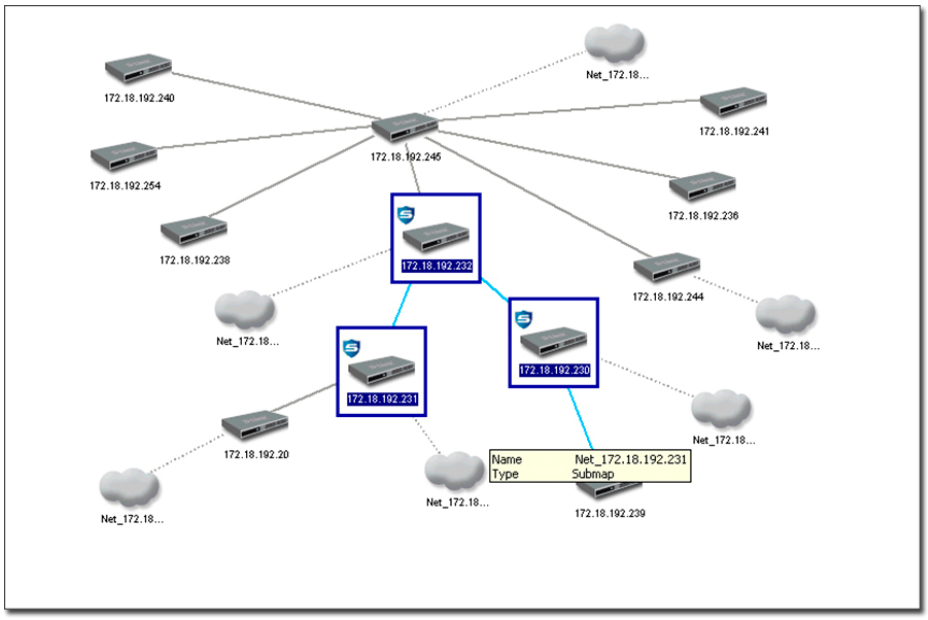


Figure 70: Topology indicating the Safeguard Engine enabled for certain switches

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

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.

Device Label

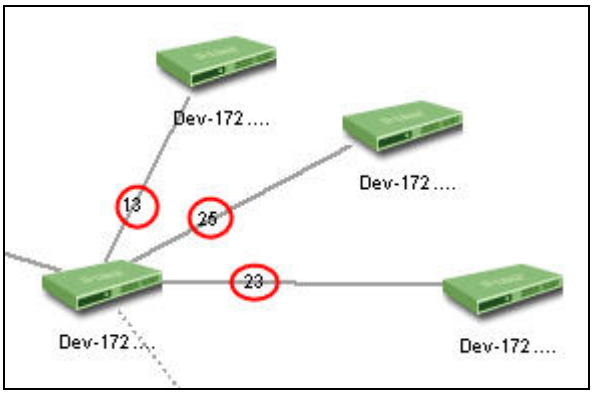
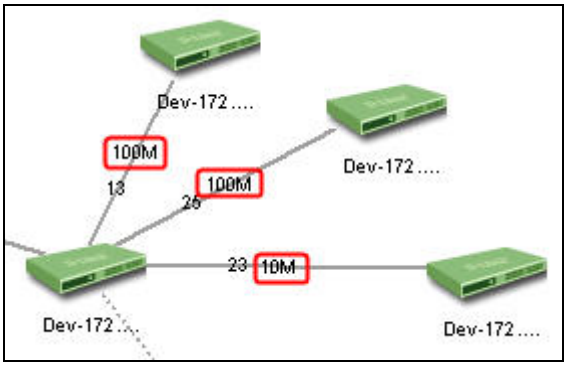
To change the **Device Label**, go to **Topology** > **Device Label** and select a type.

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.	
Device IP	The device IP address is displayed under the device icon.	
Device Type	The device type is displayed above the device icon.	
Safeguard Engine	The Safeguard status is displayed on the top left corner of the device icon. The Safeguard status can be checked and updated by calling Using Safeguard Check function module.	
Hide Info	Hides the information of the devices.	

Link Label

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

DEVICE LABEL	DESCRIPTION	EXAMPLE
Link Port	Displays the port number used to connected the two devices.	
Link Speed	Displays the maximum connection speed between the two devices.	

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:

1. Select the device from an open topology and then go to **Topology** > **Device Manager** > **Edit Device**. The **Edit device** screen displays.
   OR
   Right-click on the device and select **Property** to edit the properties of the device. The **Edit Device** screen displays.

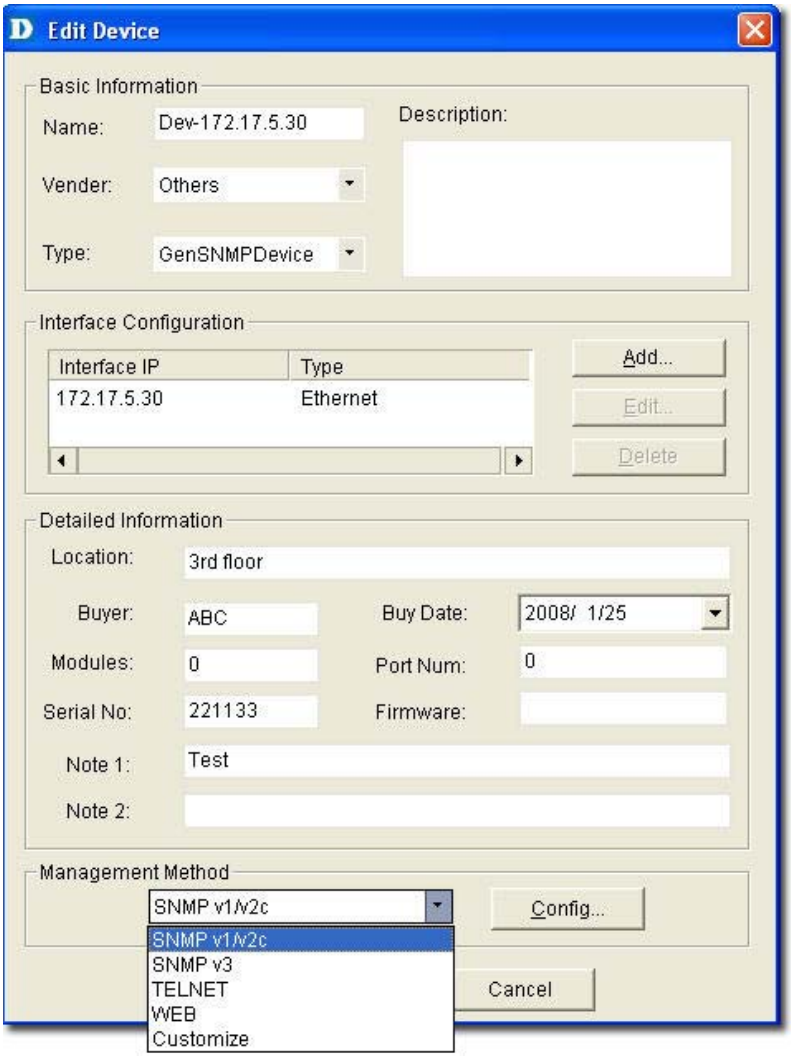


Figure 71: Edit Device screen

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.
4. 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 Management Methods 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.

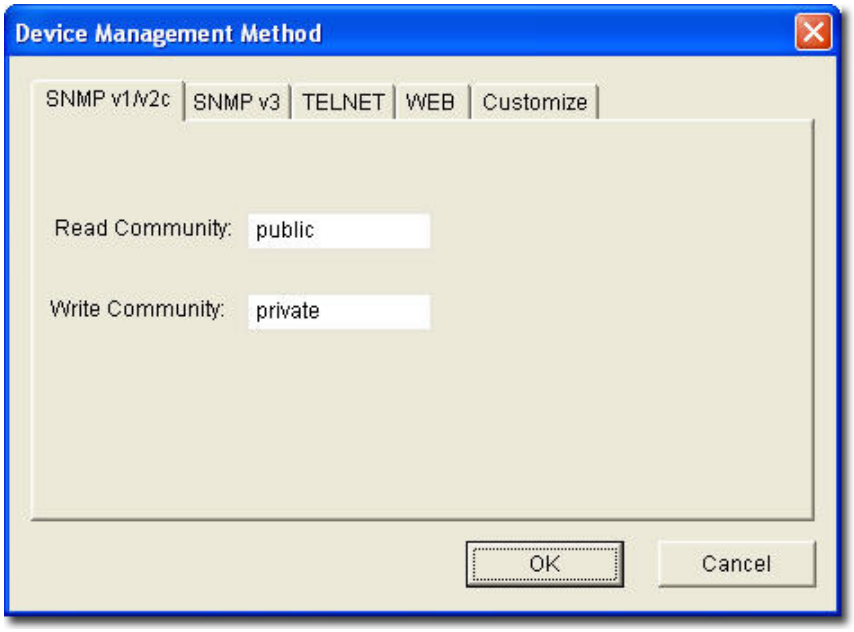


Figure 72: Device Management Method screen

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.

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.

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** > **Set Parameter** tab.

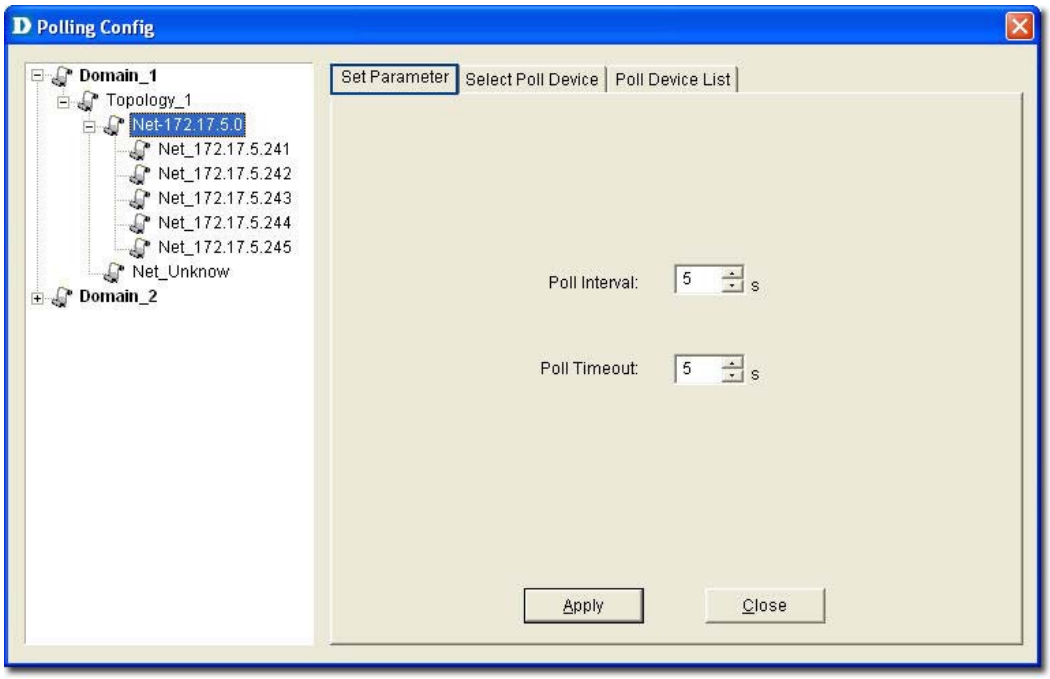


Figure 73: Set Parameter screen

2. Set the **Poll Interval** in seconds. D-View polls the devices at the set time interval.
3. Set the **Poll Timeout** in seconds. D-View stops polling the device after the timeout period.
4. Click **Apply**.

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:

1. Go to **System** > **Event Manager** > **Polling Config** > **Select Poll Device** tab.

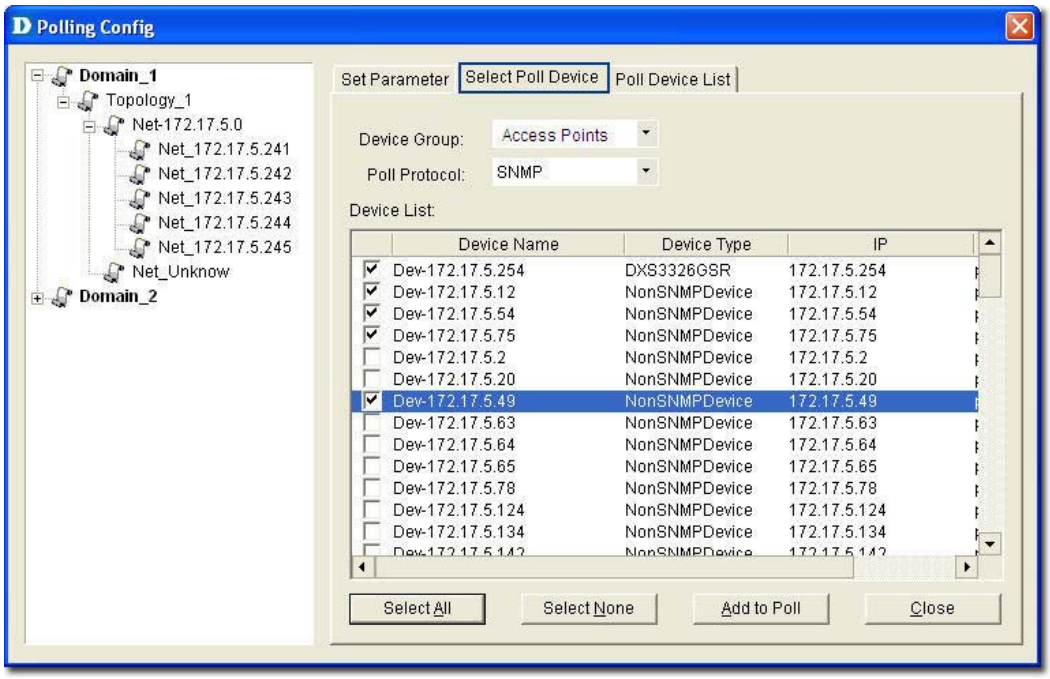


Figure 74: Select Poll Device screen

2. Select the **Device Group**. Refer to Grouping Devices using Device Manager for more information on grouping devices.
3. 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**.
4. Select devices and then 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.*

Viewing the Poll Device List

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

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

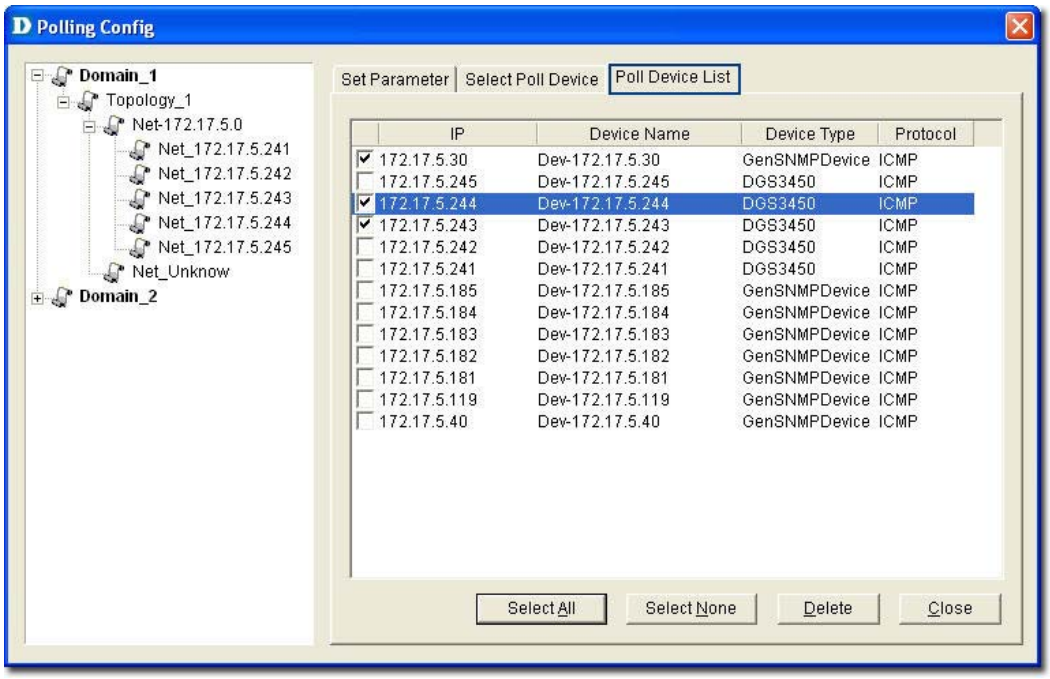


Figure 75: Poll Device List screen

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

Grouping Devices using Device Manager

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

1. Go to **System** > **Event Manager** > **Device Group Manager**. The **Device Group Manager** screen displays.

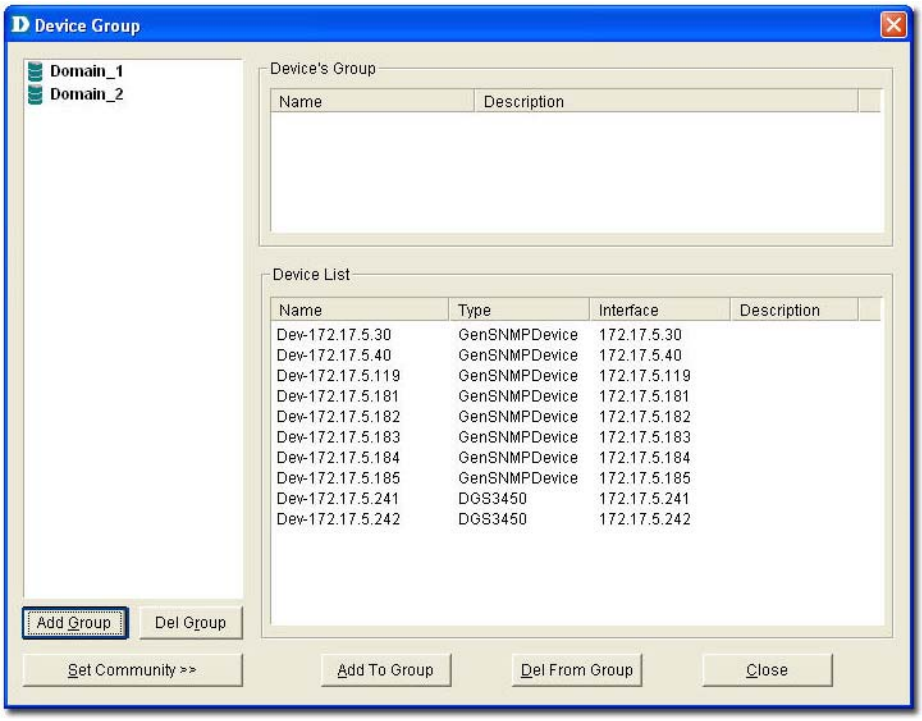


Figure 76: Device Group screen

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

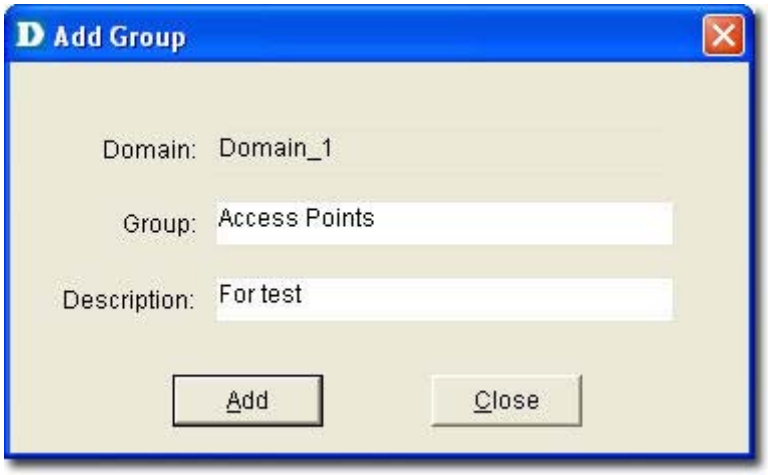


Figure 77: Add Group screen

3. Enter the name of the Group.
4. Enter a brief **Description** of the group.
5. Click **Add.** The group is created.
6. 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 displays.

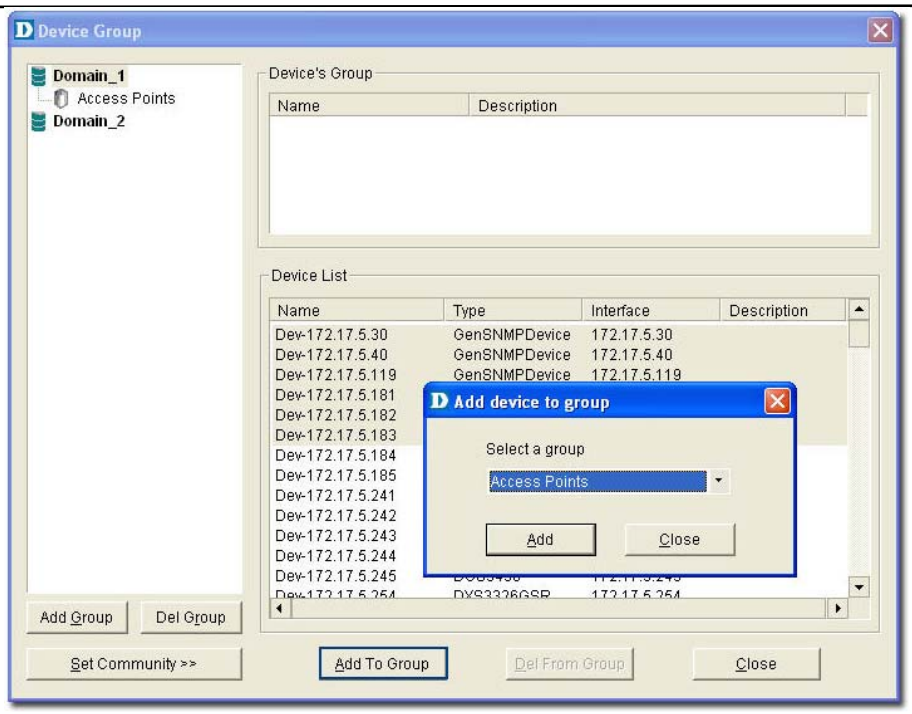


Figure 78: Add device to group screen

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

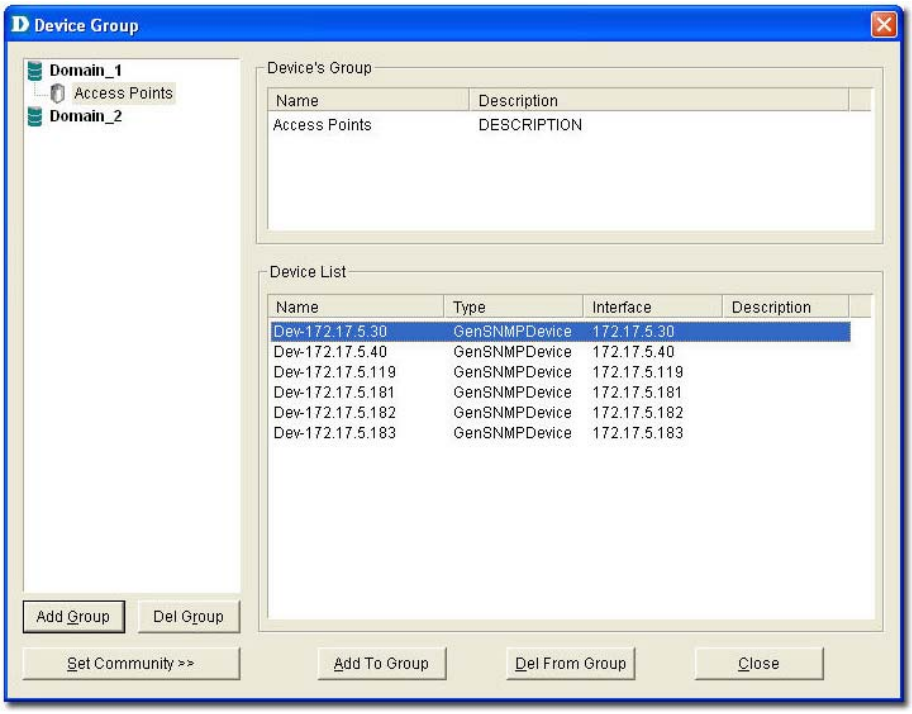


Figure 79: Device Group screen

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

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 displays.

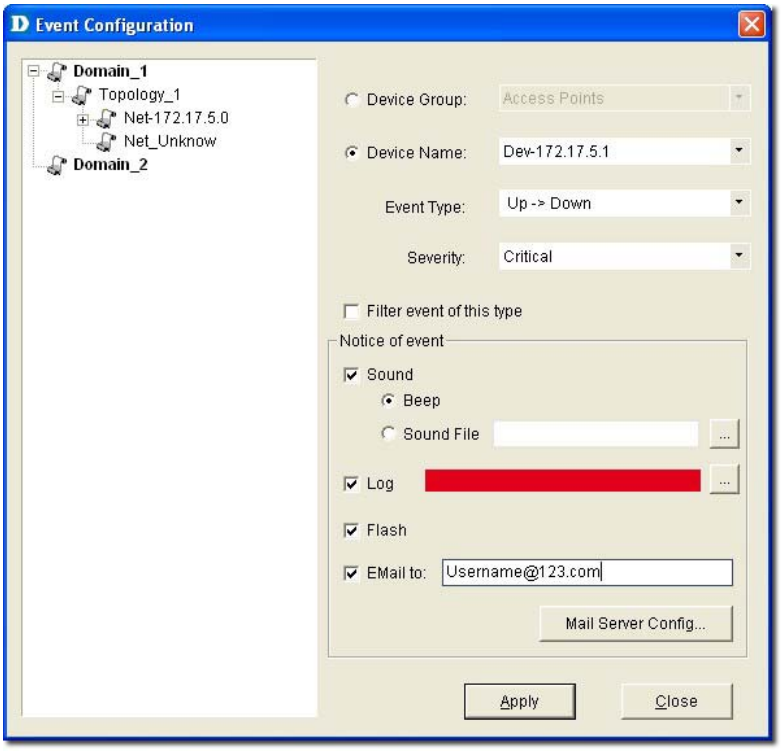


Figure 80: Event Configuration screen

2. Select a **Device Group** or a **Device Name**.
3. Select the **Type** of event. The different events are:

TRAP	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.
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 Authentication Fail	Device sends **Authentication Fail** trap when the agent received a request from an unauthorized manager.
EGP Fail	In routers running the **Exterior Gateway Protocol** (EGP), an EGP Neighbor has changed to a down state.

Self-Defined Trap	Device sends the private trap defined by the users.
Threshold 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 generated.

4. Enable **Filter this type event** if you do not want to notify users of this event.
5. 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 e-mail.
- **Mail Server Config:** Click to configure the mail.

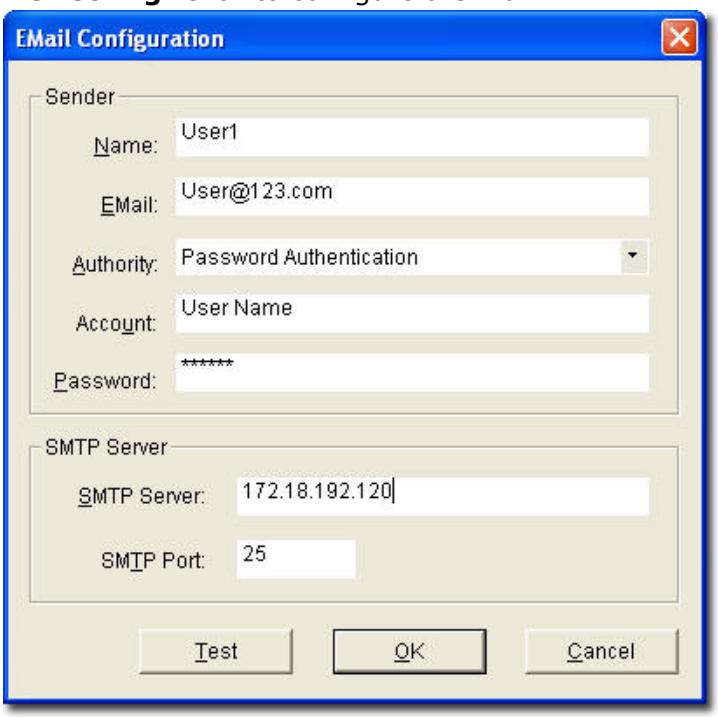


Figure 81: Email Configuration screen

- **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.

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.

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

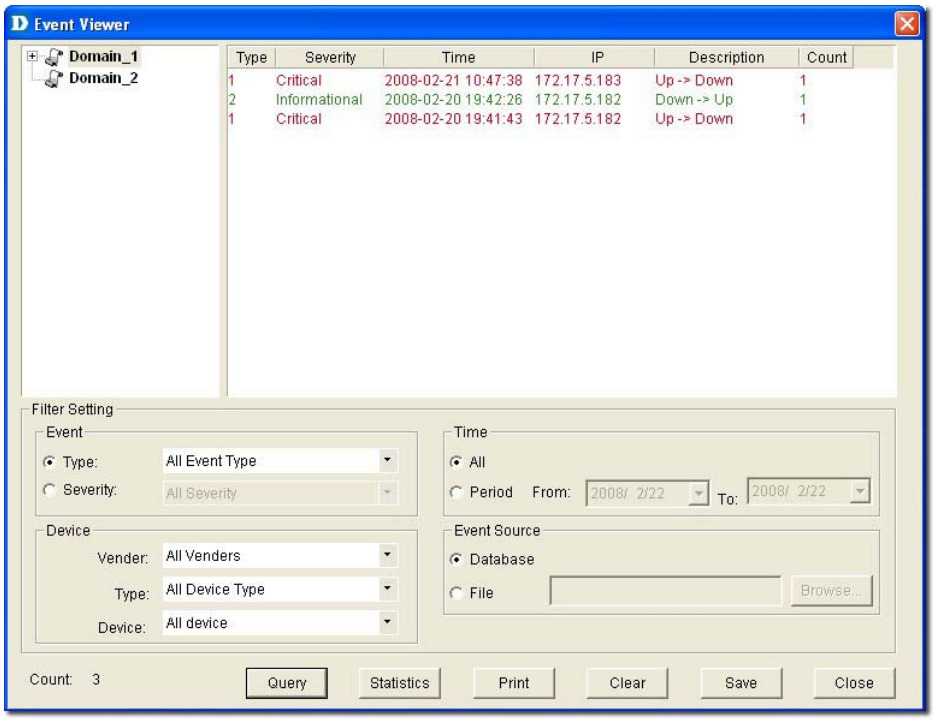


Figure 82: Event Viewer by Netmap screen

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

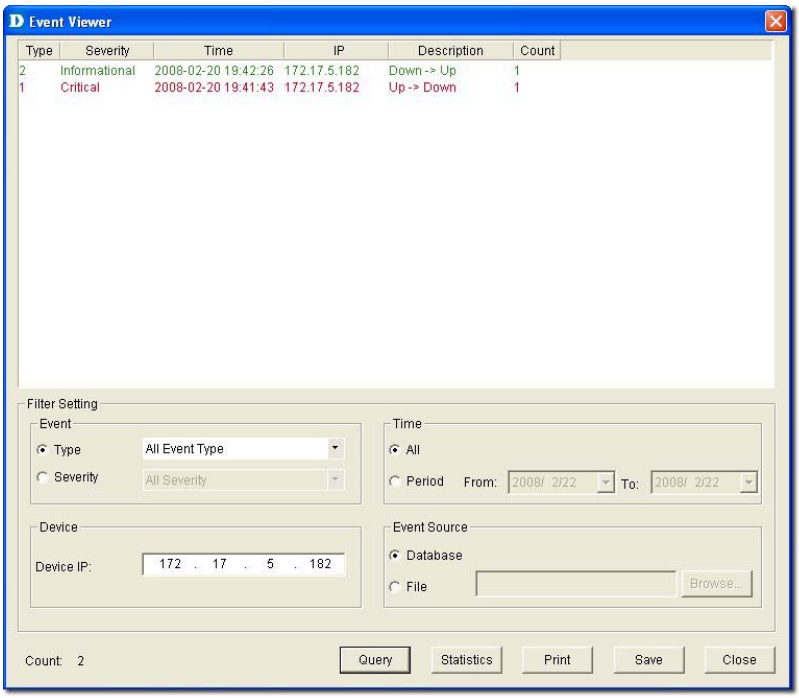


Figure 83: Event Viewer by IP address screen

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 **Statistic** to view event statistics by event type, manufacturer, severity and device type.

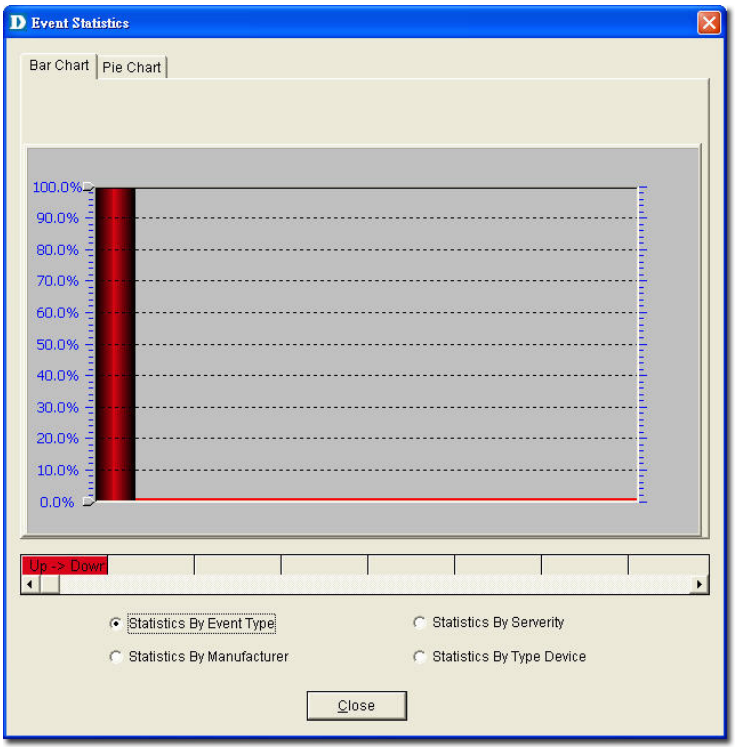


Figure 84: Event Statistics: Bar Chart screen

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

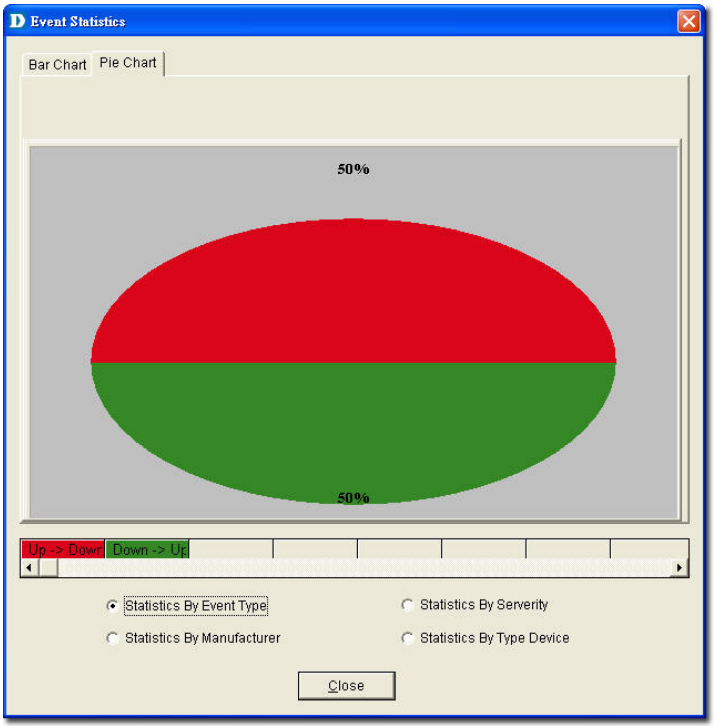


Figure 85: Event Statistics: Pie Chart screen

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

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

To define trap information:

1. Go to **System** > **Event Manager** > **Trap Editor**. The **Trap Editor** screen displays.

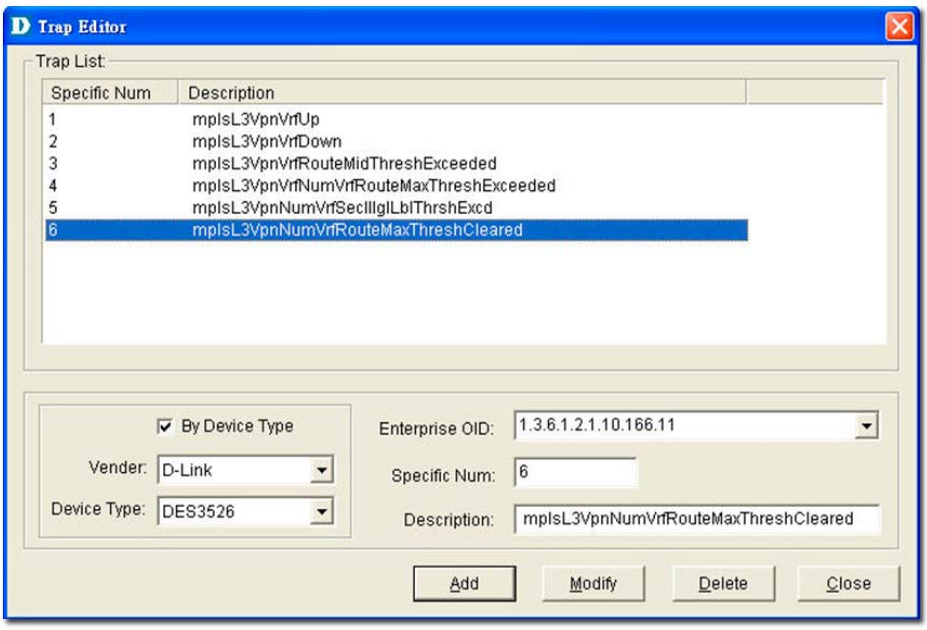


Figure 86: Trap Editor screen

2. Check **By Device Type** to select the **Vendor** name and **Device Type** from the drop-down list.
3. Enter the **Enterprise OID**. Contact D-Link support to obtain the trap OID.
4. 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.
5. 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.

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. Therefore it 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 displays.

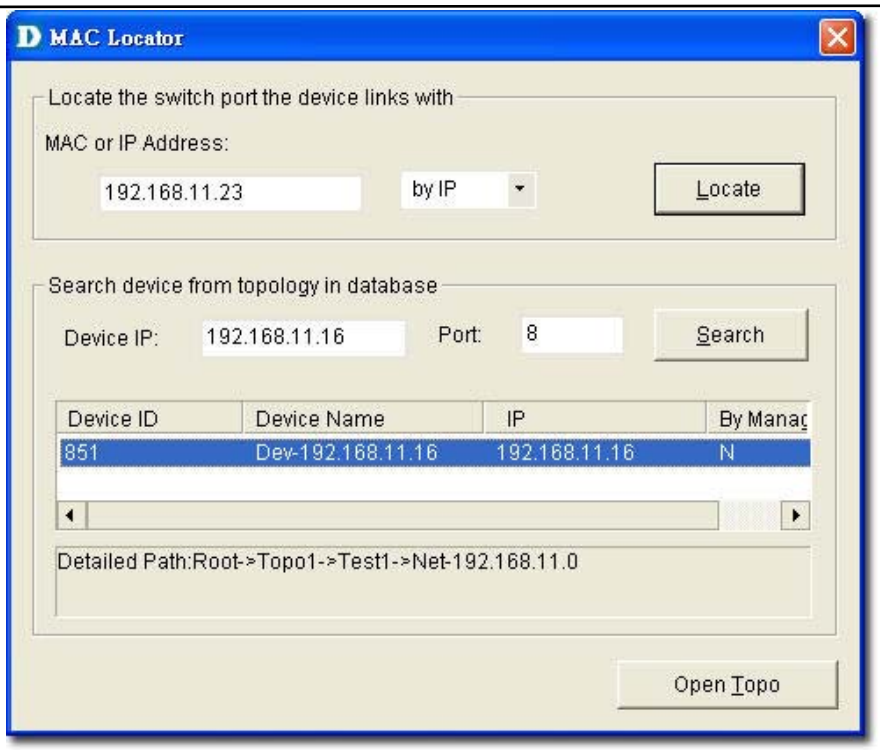


Figure 87: MAC Locator screen

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

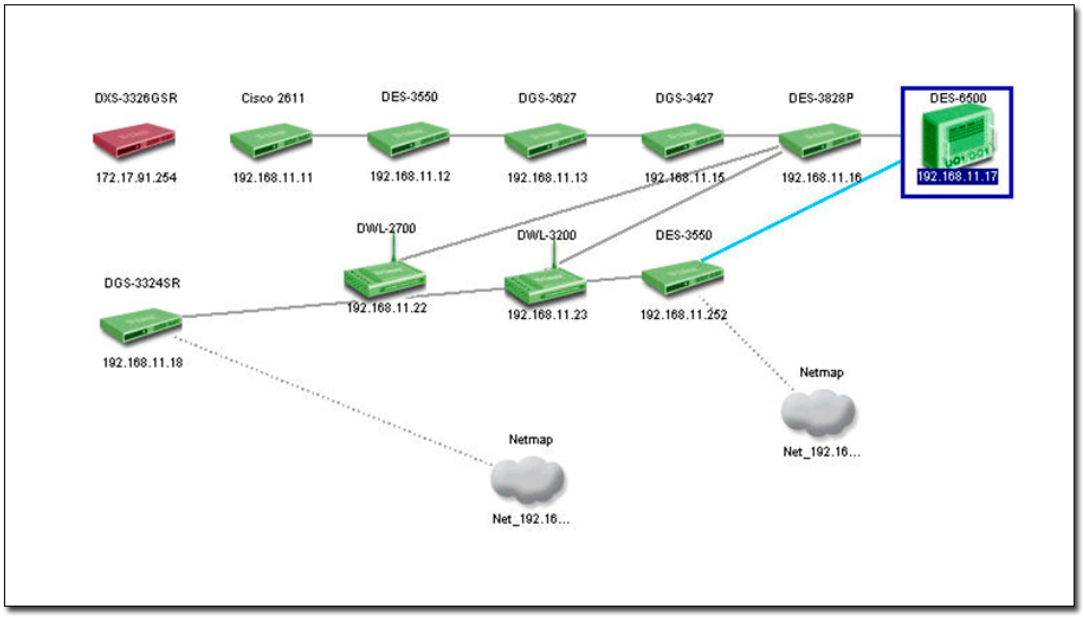


Figure 88: Specified device located in the Topology using MAC Locator

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.
2. Go to **Topology** > **Link Label** and then select **Link Speed.** The status of the links is displayed.

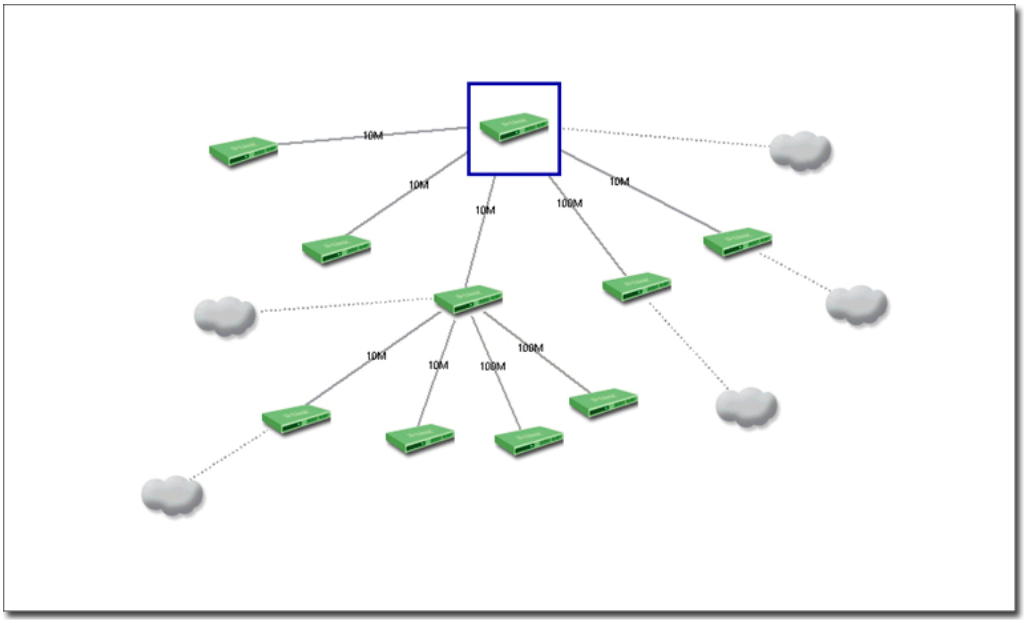


Figure 89: The Topology displays the Link status of the devices

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

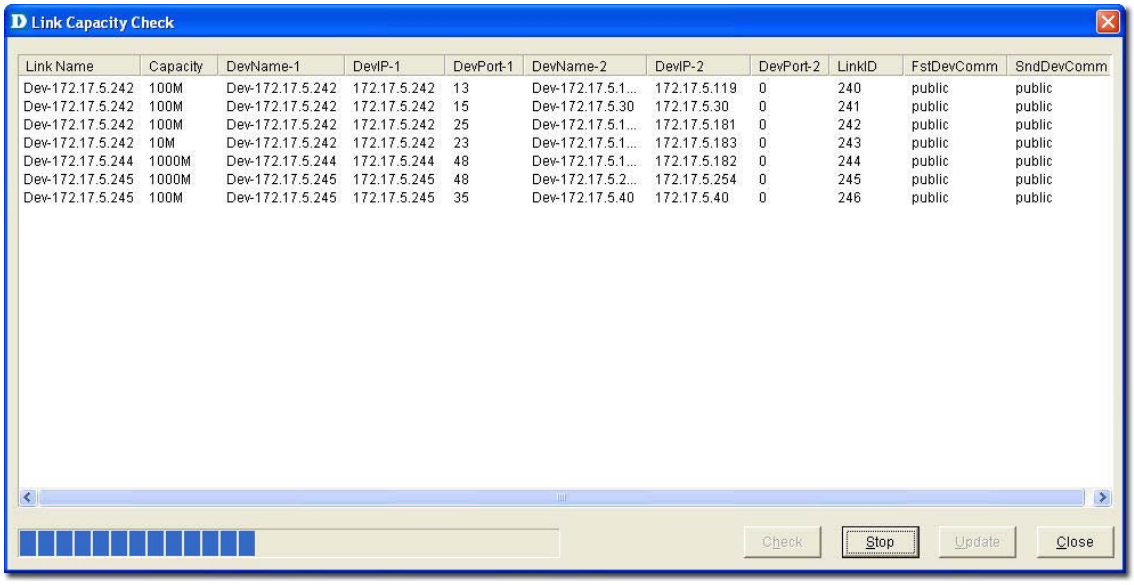


Figure 90: Link Capacity Check screen

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 figure below.

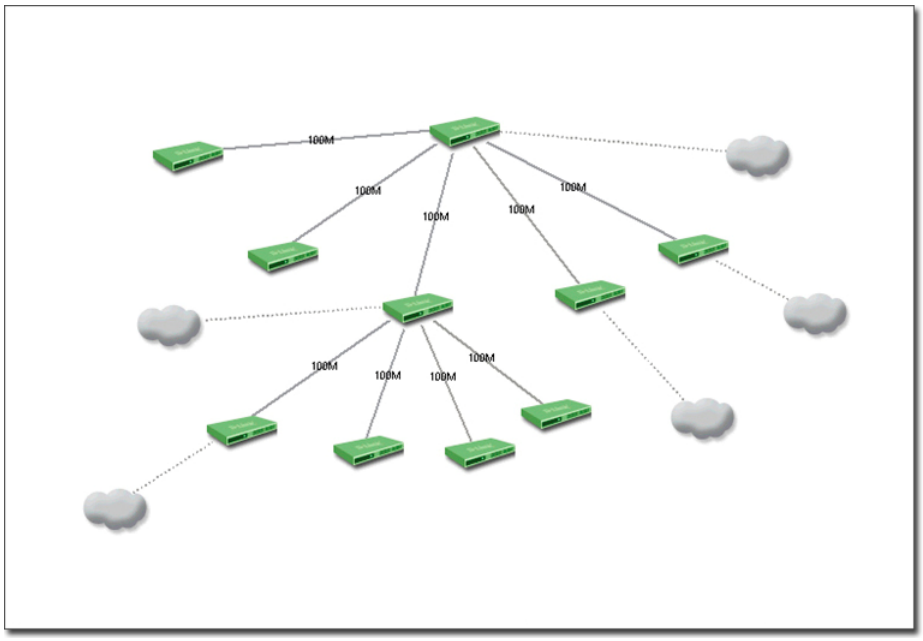


Figure 91: The Topology displays the link status after the Link Capacity check

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

To modify the Capacity Value:

1. Go to **Topology** > **Link Manager** > **Edit Link**. The **Edit Link** screen displays.
   OR
   In a topology, right-click on a link and then select **Property**. The **Edit Link** screen displays.

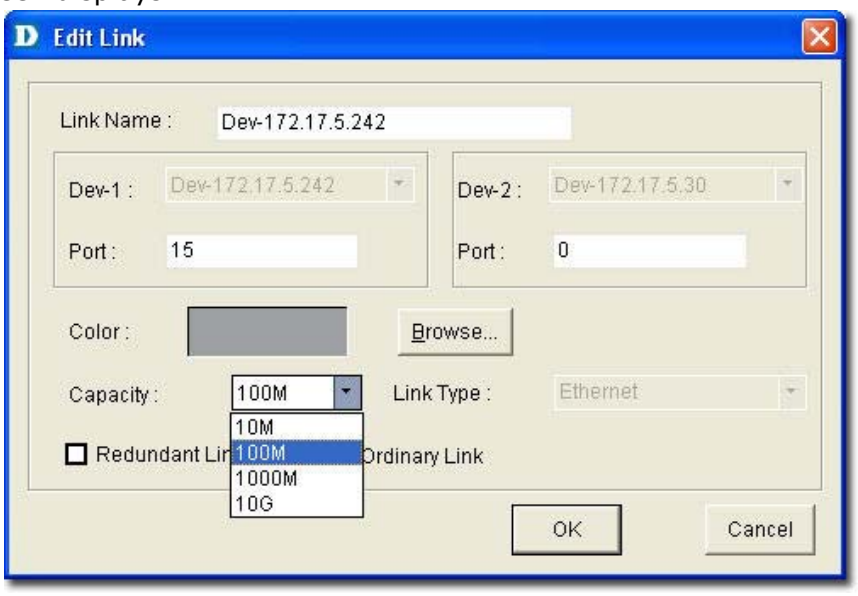


Figure 92: Edit Link screen

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.

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 displays.

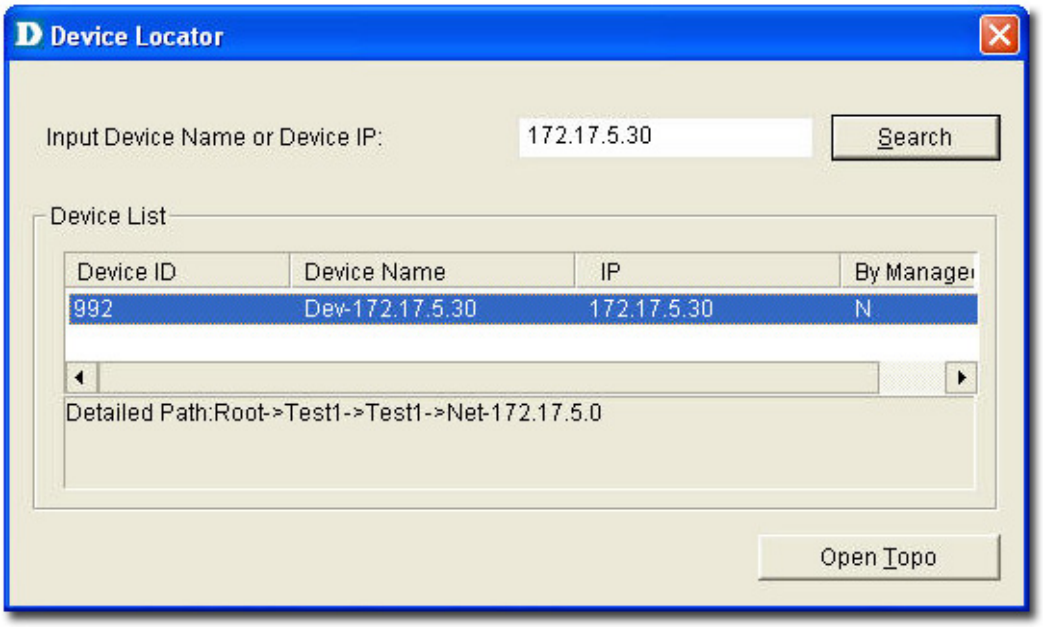


Figure 93: Device Locator screen

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.

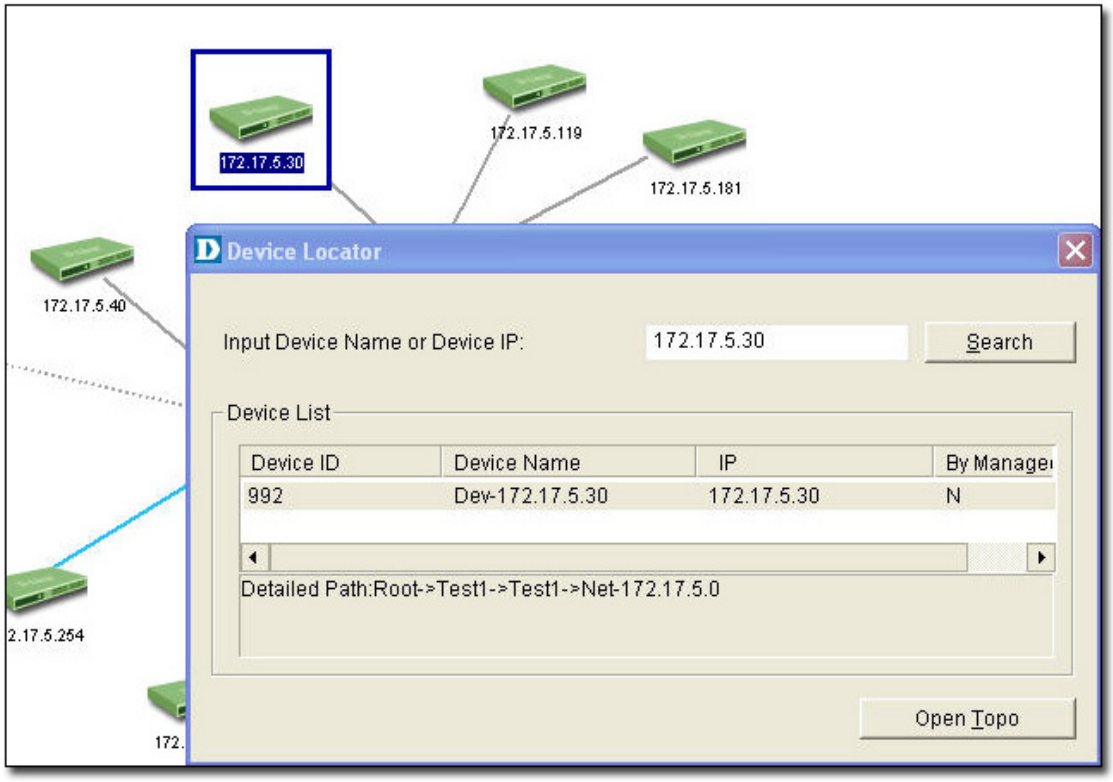


Figure 94: The Topology indicates the device located after using Device Locator tool

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 displays.
2. Use filter options to select the vendor's name and device type. A list of devices is displayed.

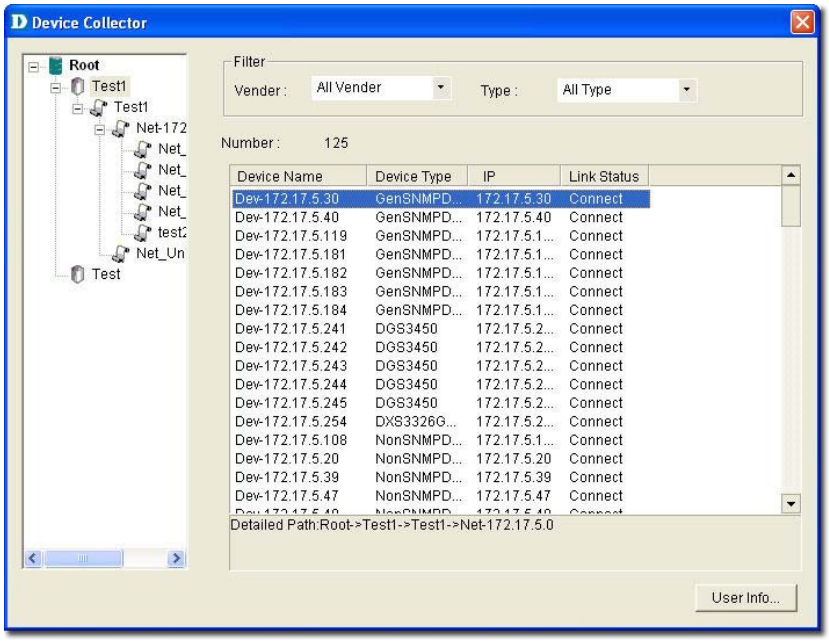


Figure 95: Device Collector screen

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

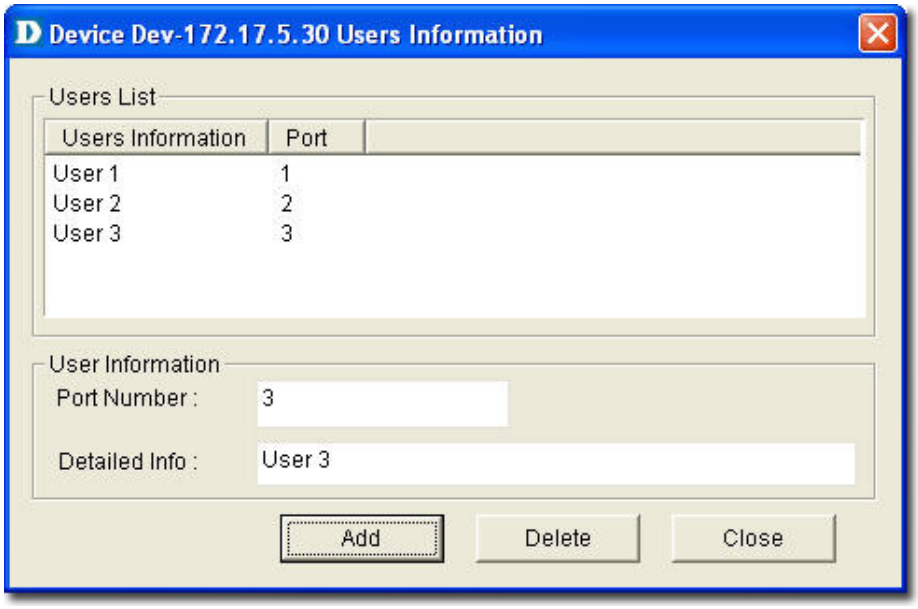


Figure 96: User Information screen

4. **Add**/**Edit**/**Delete** user information of the selected device.

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 displays.

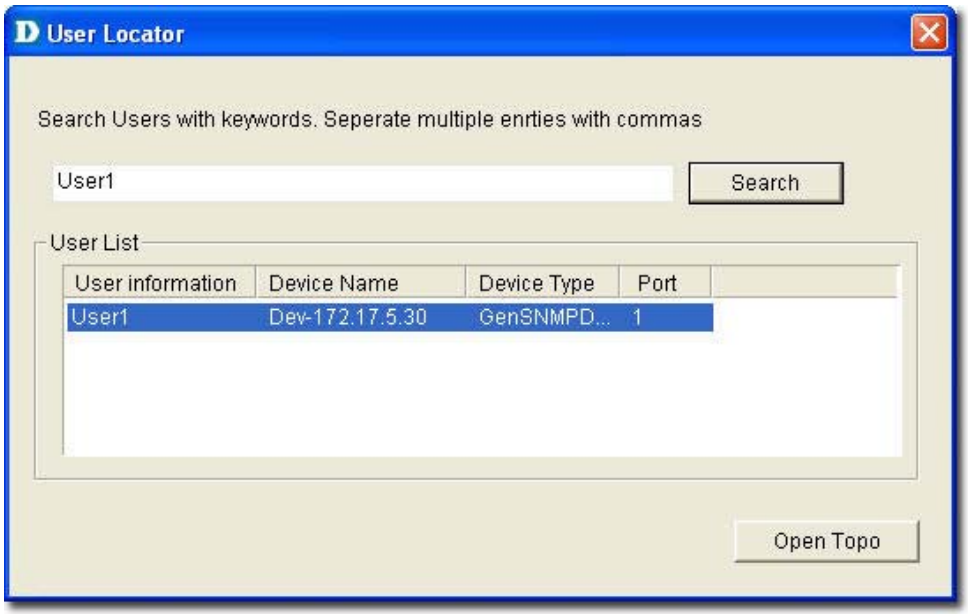


Figure 97: User Locator screen

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

User Statistics

User Statistics displays the users connected to particular devices.

To view User Statistics:

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

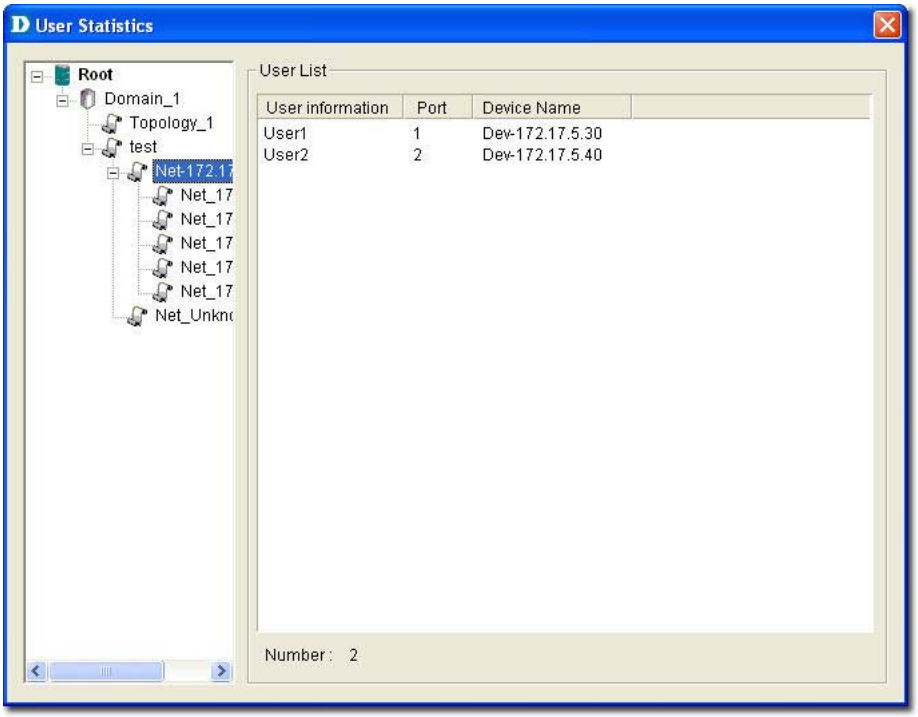


Figure 98: User Statistics screen

2. The users are displayed.

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:

1. Go to **System** > **Resource Manager** > **Device Statistic**. The **Device Statistic** window displays.

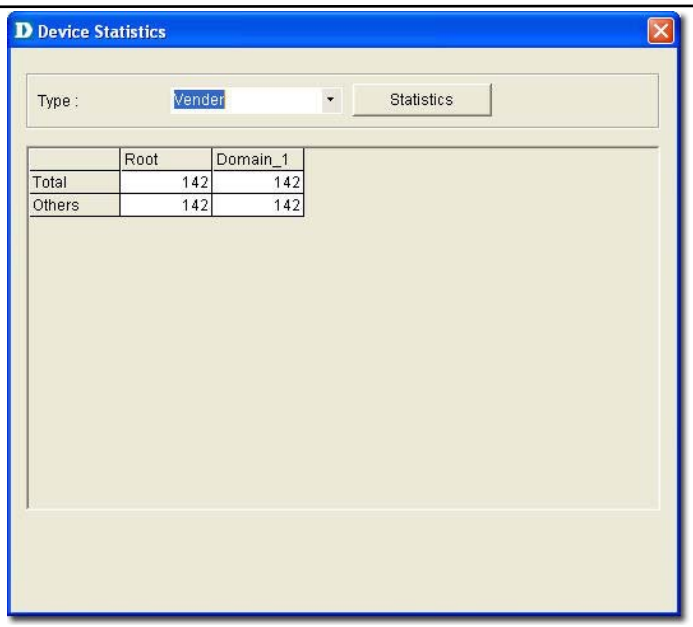


Figure 99: Device Statistic screen

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

Basic Operations

View Options

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

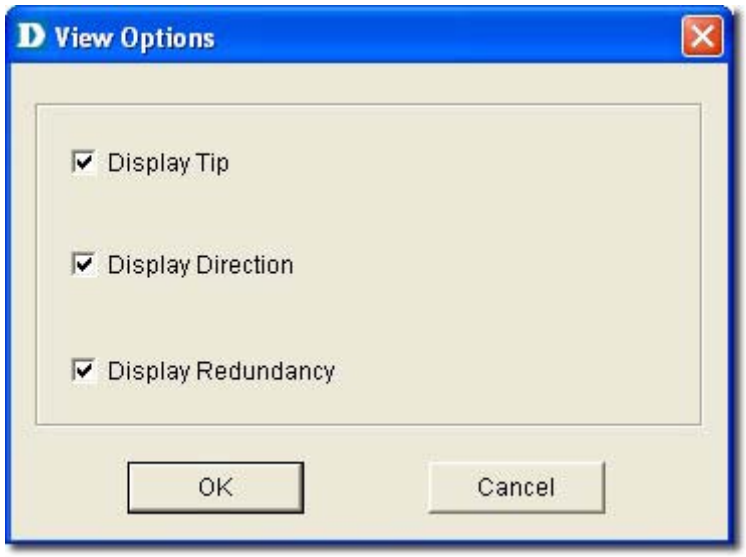


Figure 100: View Options screen

- **Display Tip:** Mouse over to view the net cell information in the topology.
- **Display Direction:** Displays the direction of link in the topology.
- **Display Redundancy:** Display the redundant link in the topology map.

Copy/Paste

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

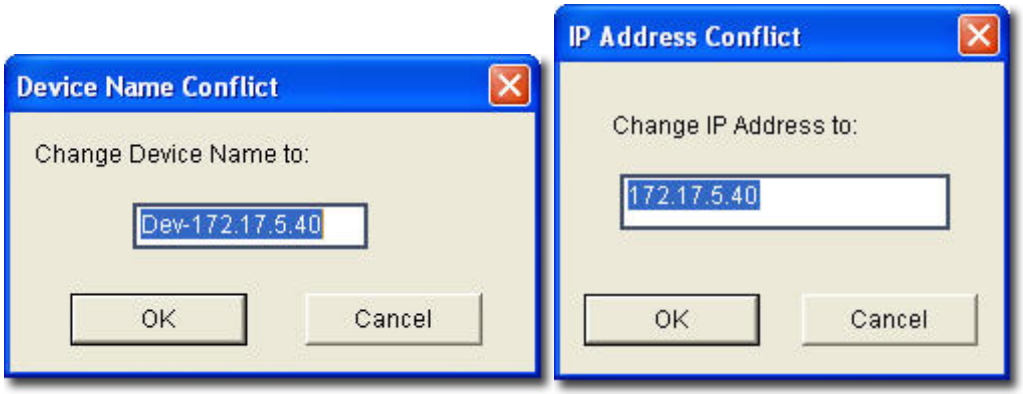


Figure 101: Device Name Conflict and IP Address Conflict

- **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.

Rename the device and IP address to paste the copied device icon in the topology.

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.

Set Background

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

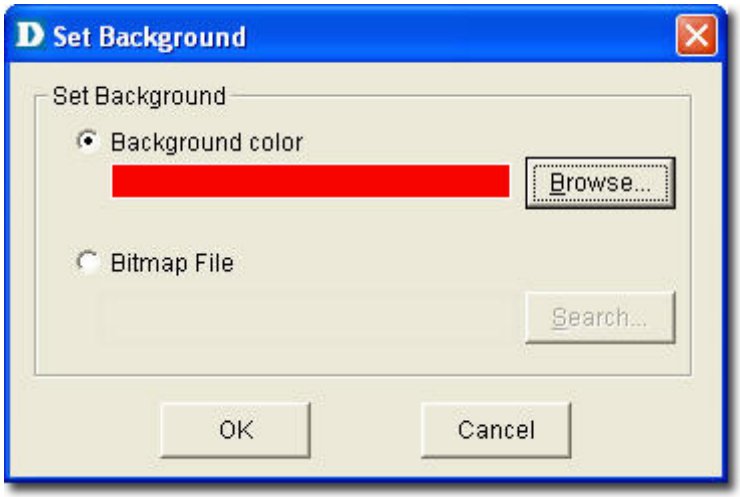


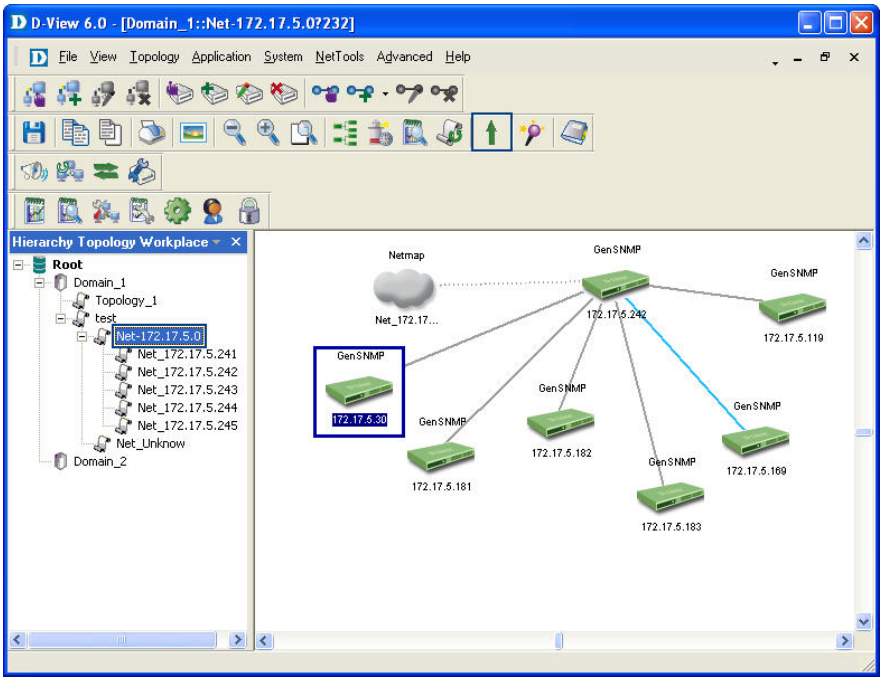
Figure 102: Set Background screen

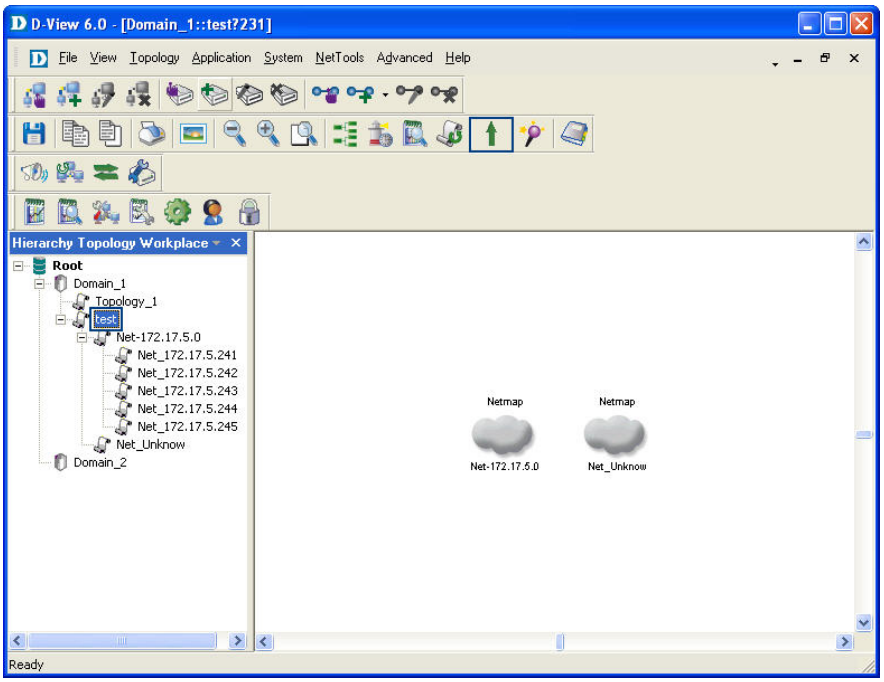
Upper Layer

Use Upper Layer to move to the parent level.

Go to **Topology** > **Upper Layer** or click  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.


D-View 6.0 - [Domain_1::Net-172.17.5.0?232]
File View Topology Application System NetTools Advanced Help
Hierarchy Topology Workplace
Root
Domain_1
Topology_1
test
Net-172.17.5.0
Net_172.17.5.241
Net_172.17.5.242
Net_172.17.5.243
Net_172.17.5.244
Net_172.17.5.245
Net_Unknow
Domain_2
Netmap
Net_172.17...
GenSNMP
172.17.5.242
172.17.5.119
172.17.5.30
172.17.5.182
172.17.5.169
172.17.5.181
172.17.5.183


D-View 6.0 - [Domain_1::test?231]
File View Topology Application System NetTools Advanced Help
Hierarchy Topology Workplace
Root
Domain_1
Topology_1
test
Net-172.17.5.0
Net_172.17.5.241
Net_172.17.5.242
Net_172.17.5.243
Net_172.17.5.244
Net_172.17.5.245
Net_Unknow
Domain_2
Netmap
Net-172.17.5.0
Netmap
Net_Unknow
Ready

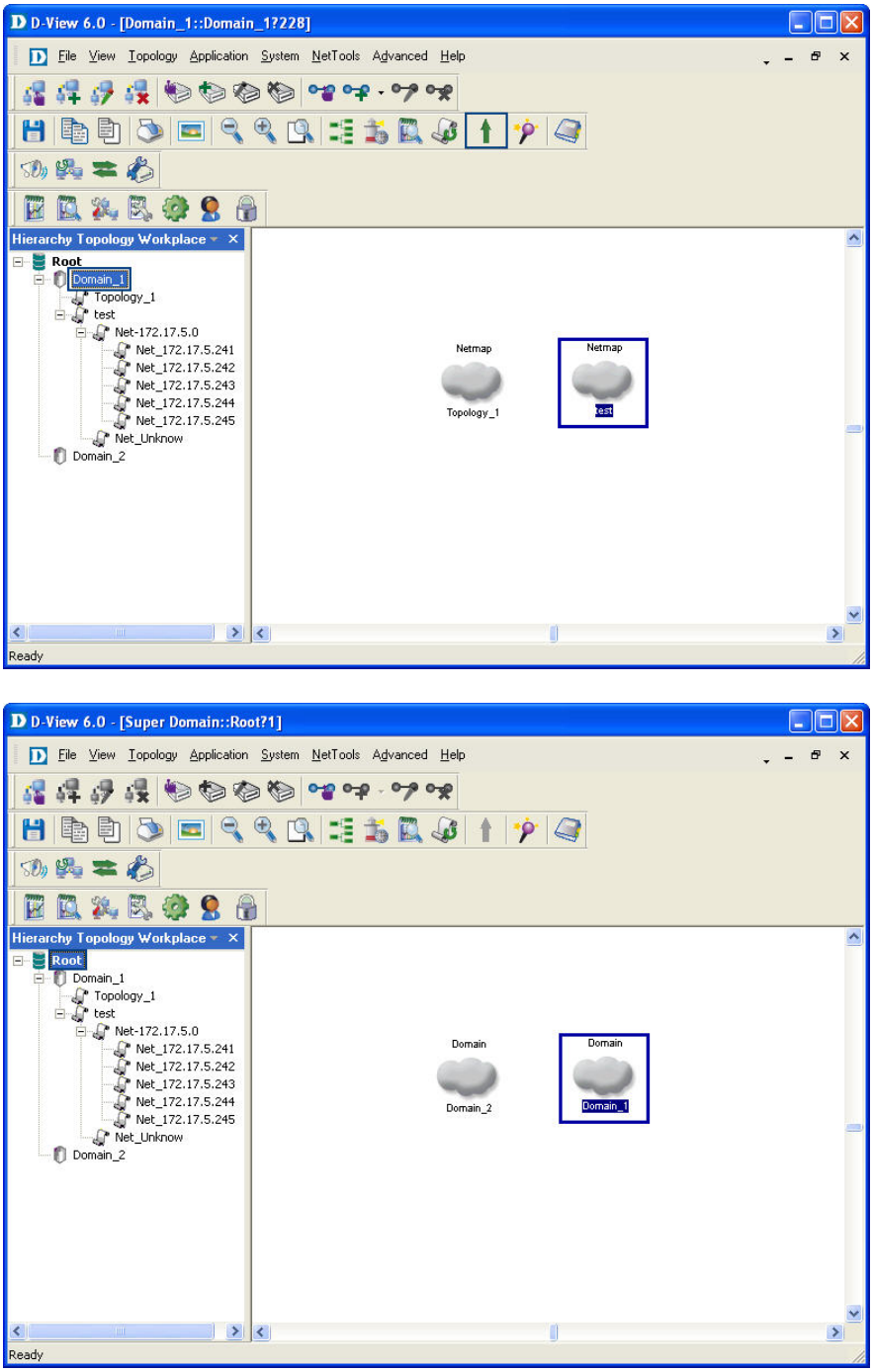


Figure 103: Sequence of steps navigating from the topology level to the domain.

System Log

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

To view logged events of the topology:

Go to **System** > **System Log**. The **System Log** screen displays.

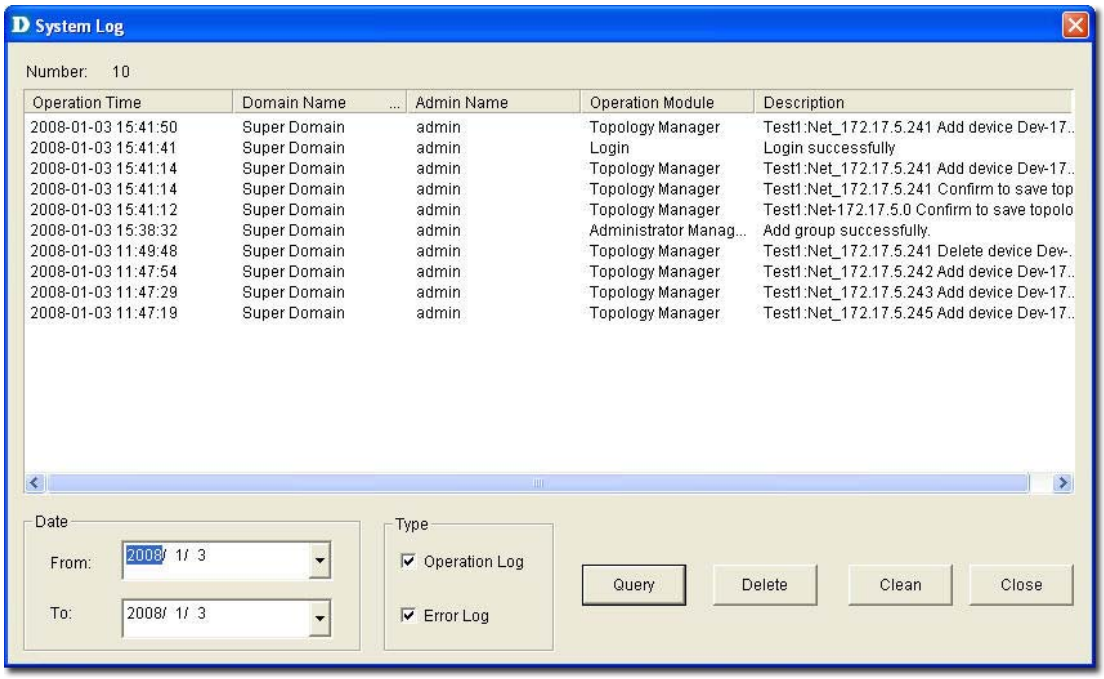


Figure 104: System Log screen

1. Select the **From** and **To** date, to view the events 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.

Administrator Manager

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

To create a User Group:

1. Go to **System > Administrator Manager.** The **Administrator Manager** screen displays.

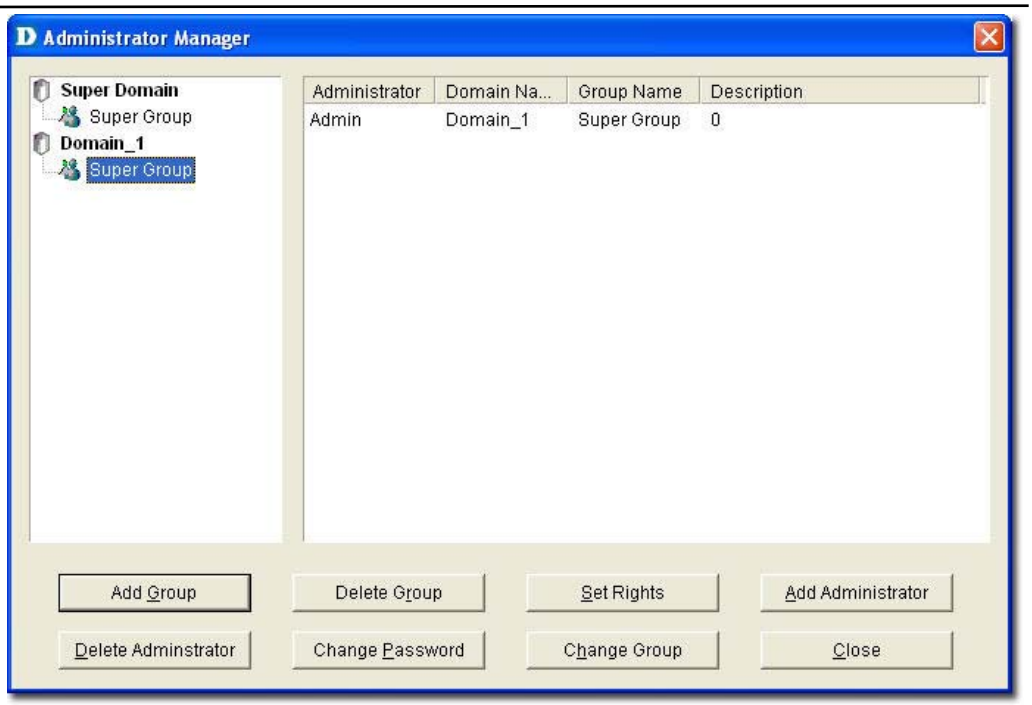


Figure 105: Administrator Manager screen

2. Select the domain for which you want to add a group.
3. Click **Add Group**. The **Add Group** screen displays.

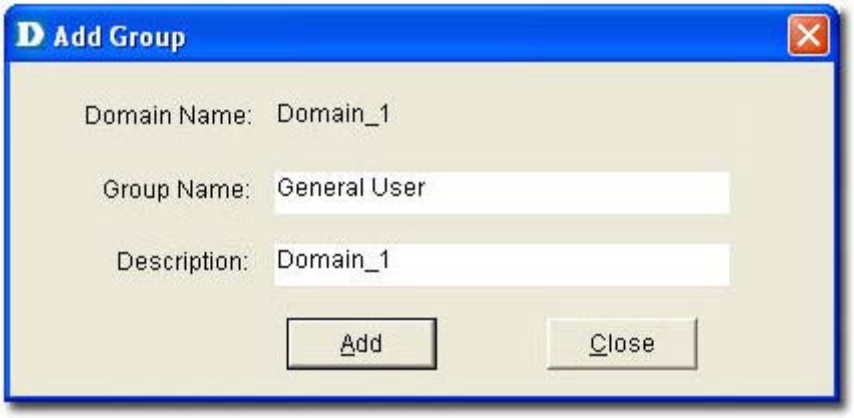


Figure 106: Add Group screen

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

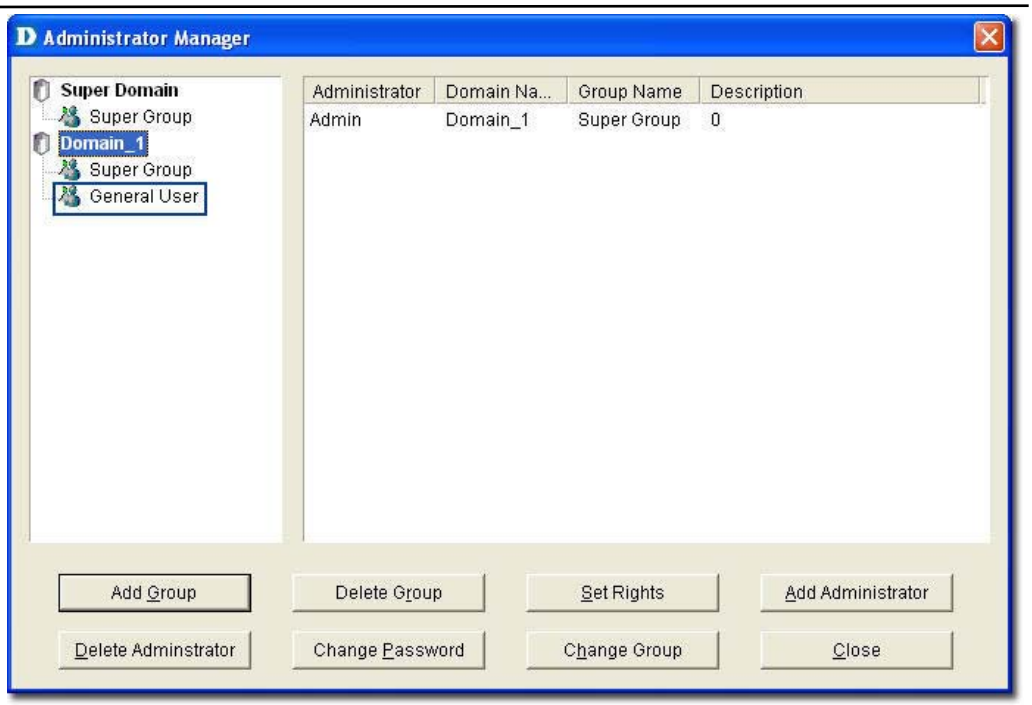


Figure 107: Administrator Manager: Add Group screen

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

Figure 108: Add Administrator screen

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

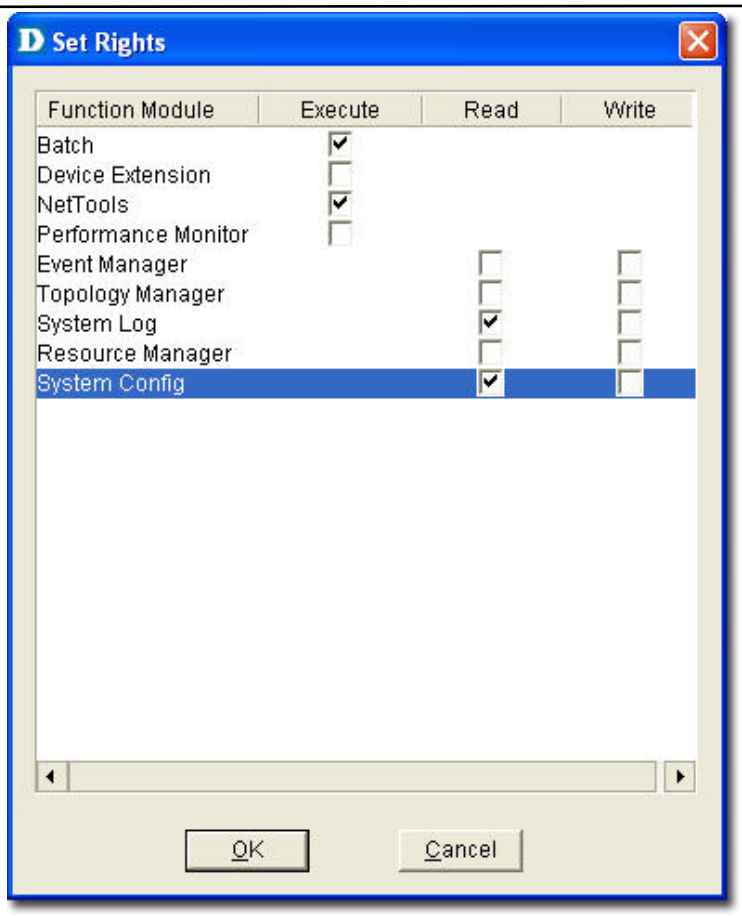


Figure 109: Set Rights screen

8. Check the specific functional modules boxes to assign rights (execute, read, write) to the user.
9. Click **OK** to apply the changes.

The changes made are reflected in the **System Log**.

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**.

Figure 110: Change Password screen

2. Enter the old password and then type your new password.

Restoring and Backing Up D-View

To restore and backup Topology data:

1. Select a topology.
2. Go to **Application** > **Topo Export/Import** to restore & backup topology data.
3. For data in D-View：
    a. **D-View 6.0 Standard Edition** - Backup **dvision3.mdb** file, in the installation folder. The file can be used to restore D-View by overwriting the current database dvision3.mdb.
    b. **D-View 6.0 Professional Edition** -
        - Backup **Dvision3.mdf** and **Dvision3_Log.ldf** files in the SQL Server 2000 installation folder. Example: `C:\Program Files\Microsoft SQL Server\MSSQL\Data.`
        - Re-install SQL Server 2000 and run **MakeDB.exe** to create D-View database.
        - Go to **Start > Program** > **Adminitrative Tool** > **Services** and then select **MSSQLSERVER** from the Services list.
        - Right-click or double click on **MSSQLSERVER** and select **Stop**.
        - Restore **Dvision3.mdf** and **Dvision3_Log.ldf** files to the SQL Server 2000 installation folder.
        - Restart **SQL Server** service.

NetTools

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:

1. Go to **NetTools** > **Device Discovery**. The **Device Discovery** screen displays.

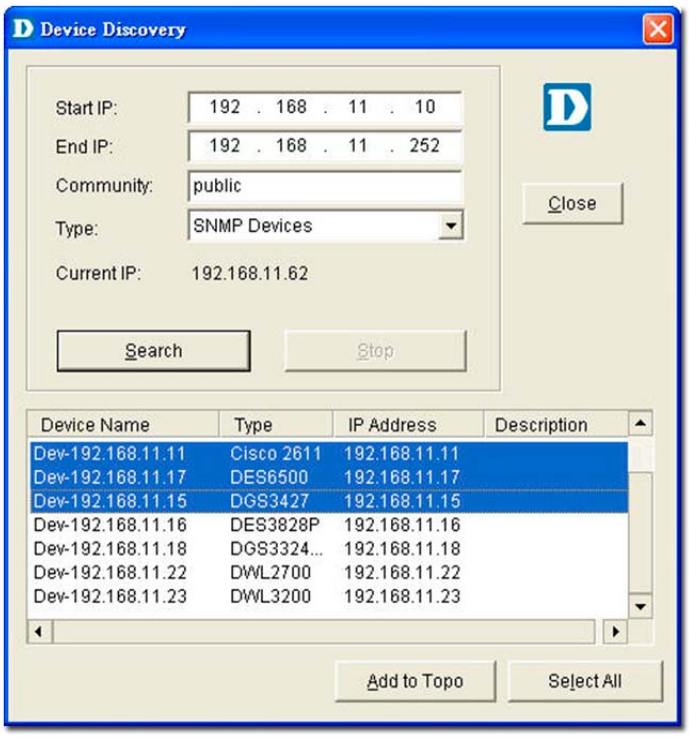


Figure 111: Device Discovery screen

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.

Trace Route

The **Trace Route** utility enables you to view a network packet that is in transit 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.

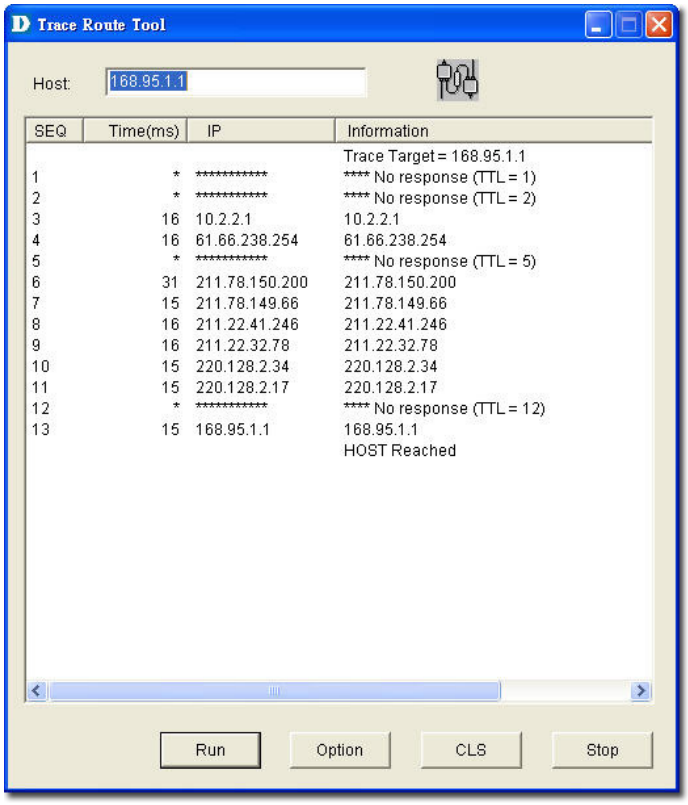


Figure 112: Trace Route Tool screen

1. Enter the host address and click **Run** to trace the routers.
2. Select **Option** to configure the ICMP parameters.

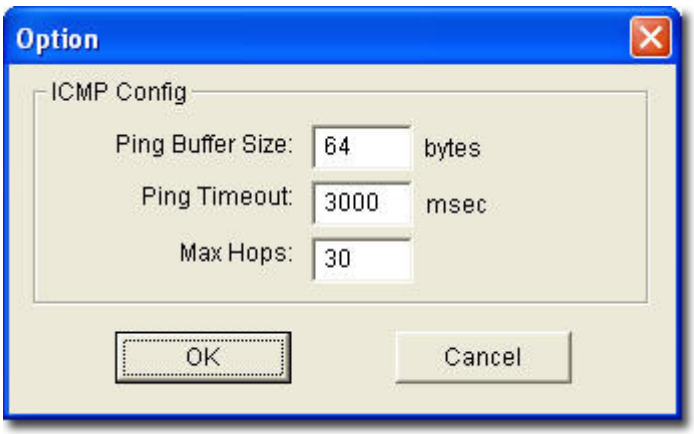


Figure 113: Option screen

3. Modify and customize the **Ping Buffer Size**, **Ping Timeout** and **Max Hops** parameters according to your requirements.
4. Click **CLS** to clear the list.
5. Click **Stop** to stop the search.

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 call the TFTP Server tool.

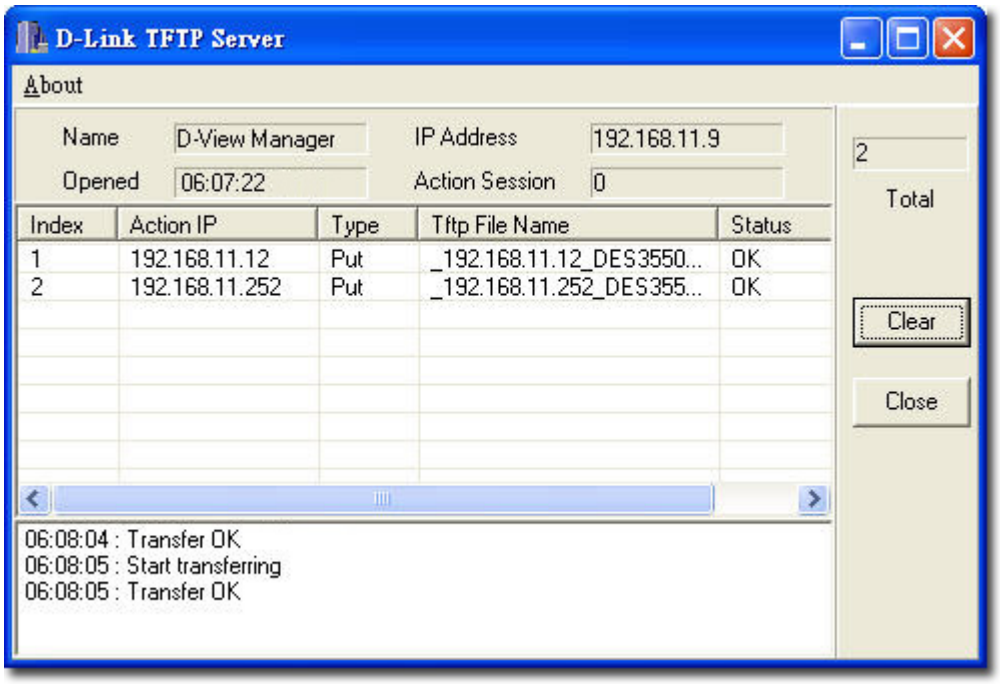


Figure 114: D-Link TFTP Server screen

- **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.

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:

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

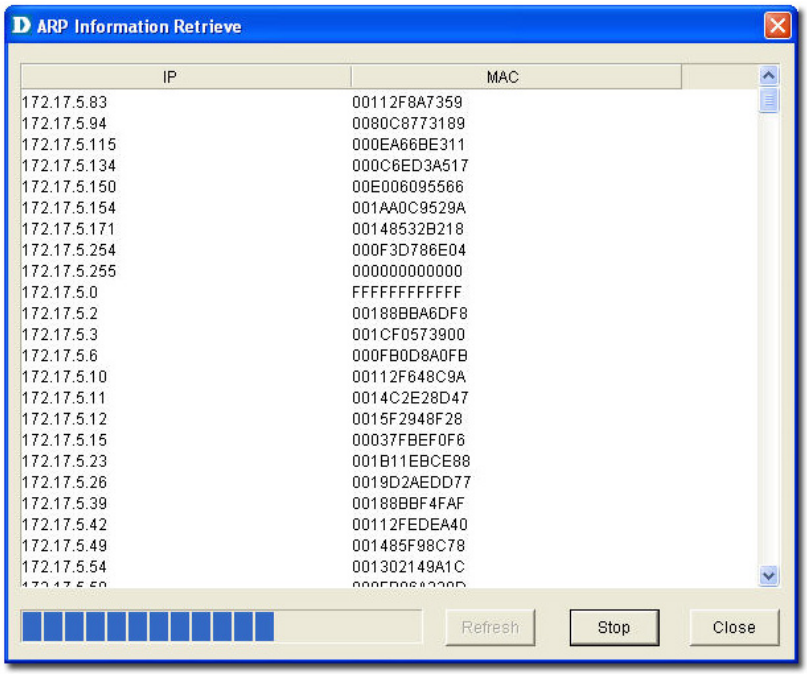


Figure 115: ARP Information Retrieve screen

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

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 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

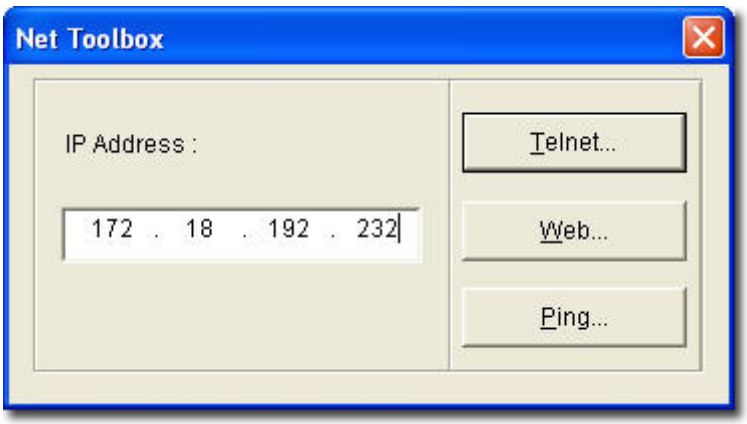


Figure 116: Net Toolbox screen

3. Enter the IP address of the device to manage.
4. Click **Telnet** or **Web.**
   You can also Ping the device from here.

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.

Ensure the devices support RFC1213 to monitor the port flow in devices.

To monitor the Port Packet flow:

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

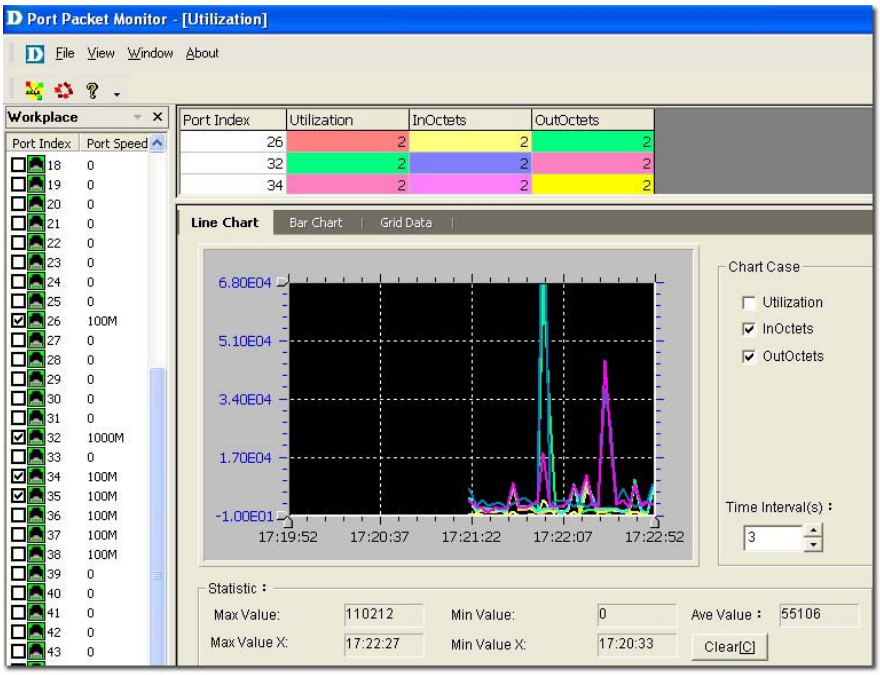


Figure 117: Port Packet Monitor: Line Chart screen

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

3. 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.

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.

Bar Chart

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

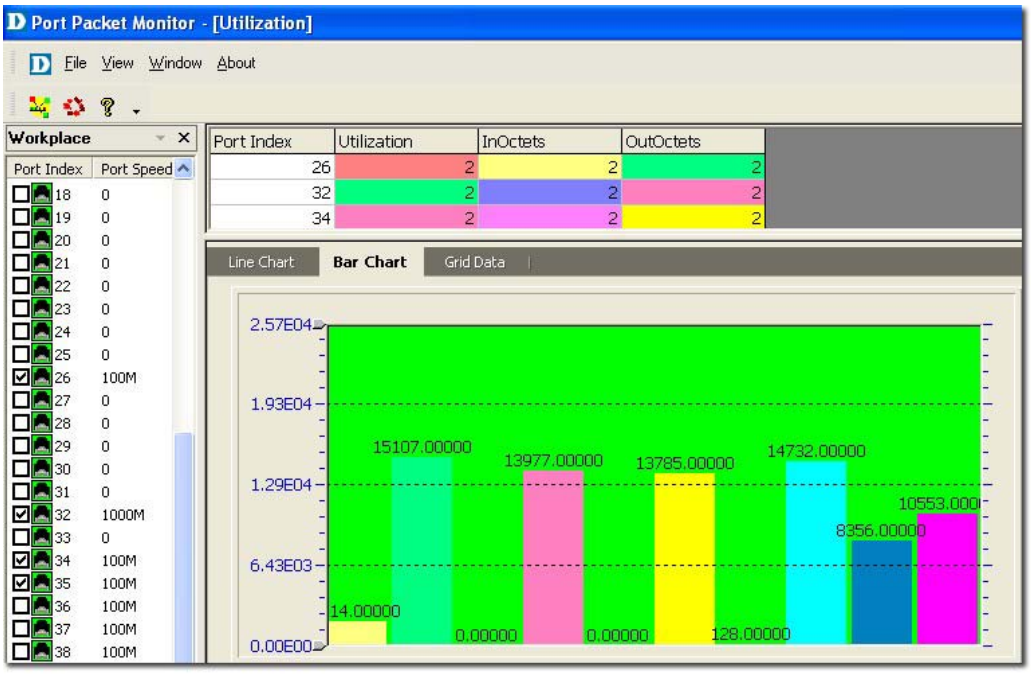


Figure 118: Port Packet Monitor: Bar Chart screen

Grid Data

The **Grid Data** shows the packet flow in a table format. Click **Packet Info**  to view the packet type options.

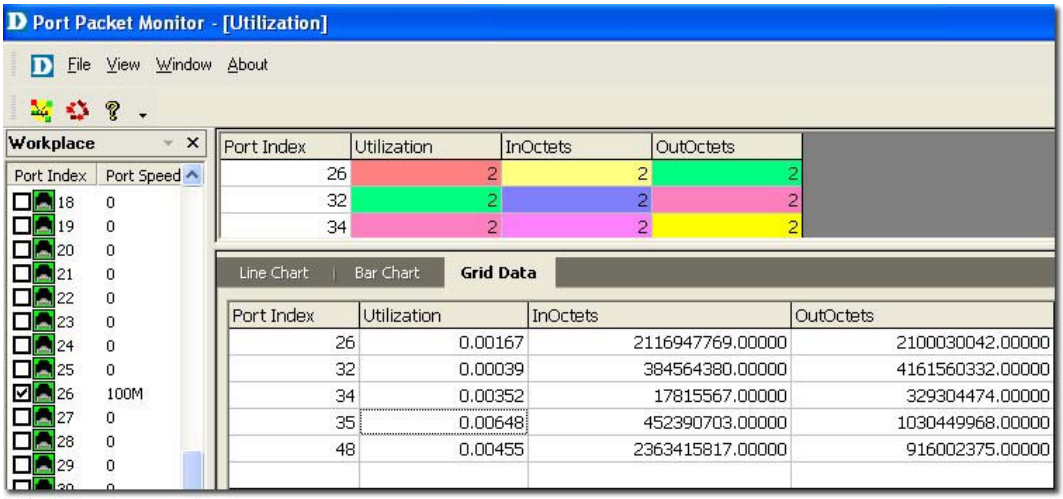


Figure 119: Port Packet Monitor: Grid Data screen

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.

Ensure the RMON status of the devices is enabled to start monitoring devices.

To monitor the performance of devices:

1. Go to **NetTools > Performance Monitor**. The **Performance Monitor** screen displays.

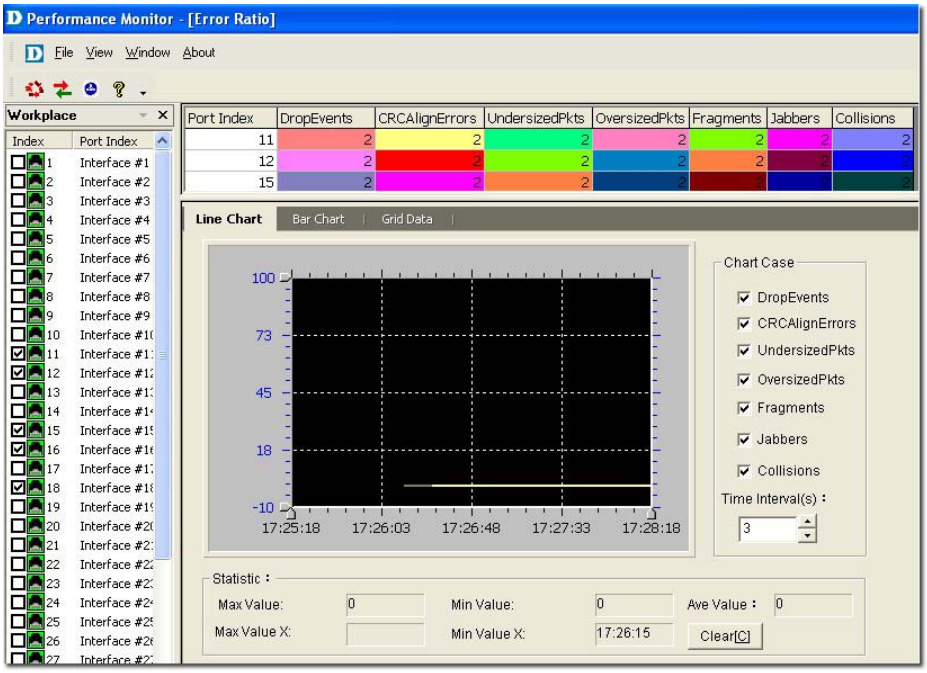


Figure 120: Performance Monitor screen

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

   The graph displays 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.
   - **Segments:** 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.

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.

Bar Chart

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

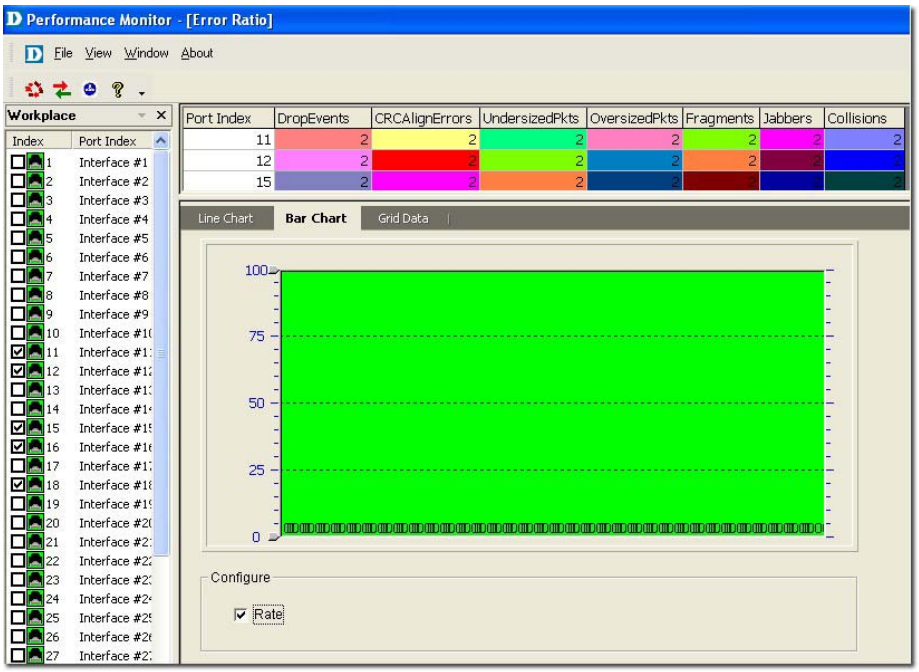


Figure 121: Performance Monitor: Bar Chart screen

Grid Data

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

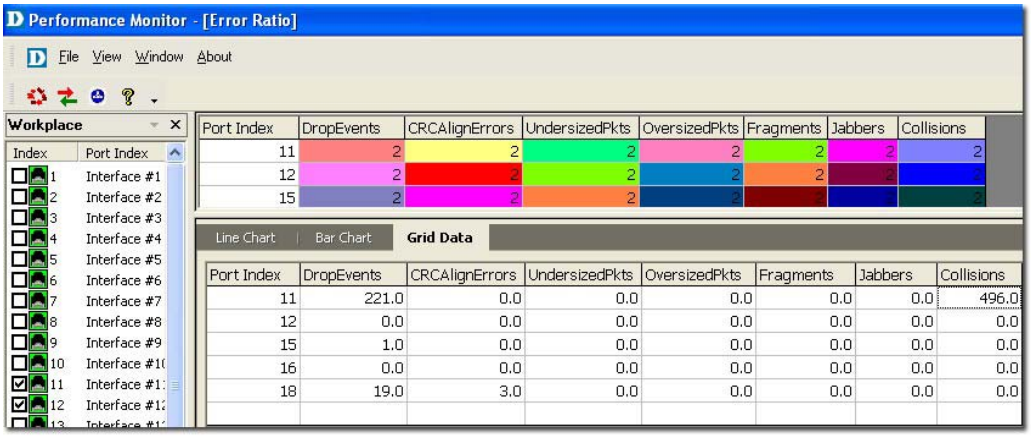


Figure 122: Performance Monitor: Grid Data screen

Data Distribution Chart

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

1. Click the **Data Distribution**  button from the toolbar. The **Data Distribution Chart** screen displays.

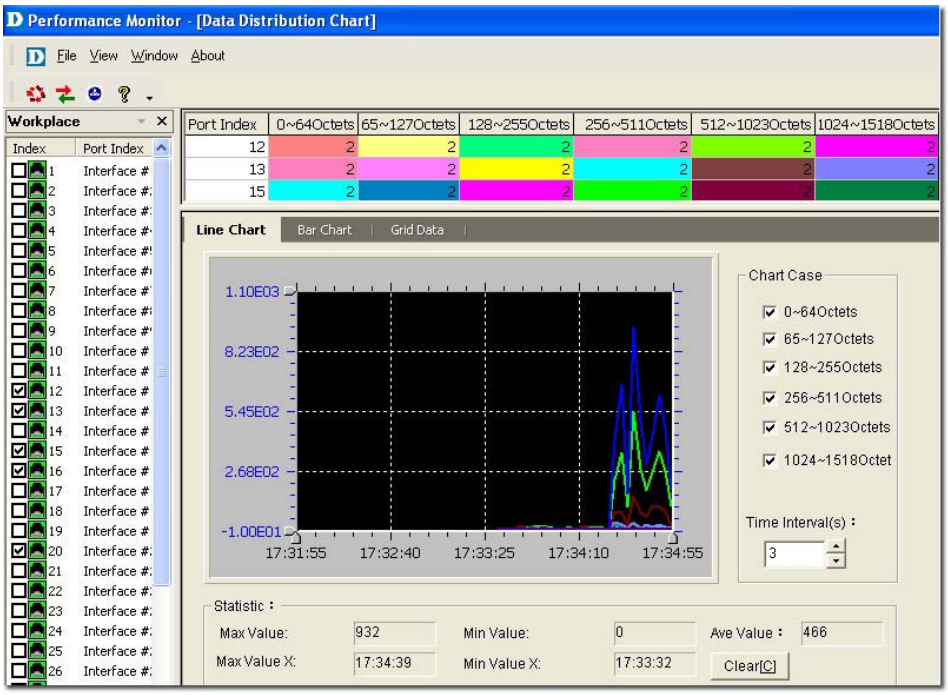


Figure 123: Performance Monitor: Data Distribution Chart screen

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.

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 displays.

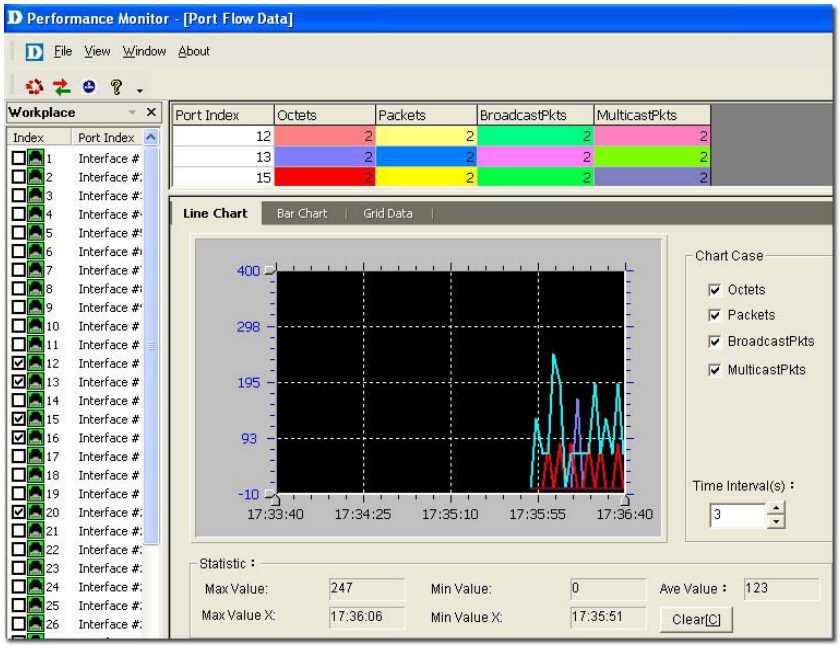


Figure 124: Performance Monitor: Port Flow Data screen

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.

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Technical Support

Technical Support

You can find software updates and user documentation on the D-Link website.

Tech Support for customers in

Australia:

Tel: 1300-766-868

Monday to Friday 8:00am to 8:00pm EST

Saturday 9:00am to 1:00pm EST

http://www.dlink.com.au

E-mail: support@dlink.com.au

India:

Tel: 1800-222-002

Monday to Friday 9:30AM to 7:00PM

http://www.dlink.co.in/support/productsupport.aspx

Indonesia, Malaysia, Singapore and Thailand:

Tel: +62-21-5731610 (Indonesia)

Tel: 1800-882-880 (Malaysia)

Tel: +65 66229355 (Singapore)

Tel: +66-2-719-8978/9 (Thailand)

Monday to Friday 9:00am to 6:00pm

http://www.dlink.com.sg/support/

E-mail: support@dlink.com.sg

Korea:

Tel: +82-2-890-5496

Monday to Friday 9:00am to 6:00pm

http://www.d-link.co.kr

E-mail: lee@d-link.co.kr

New Zealand:

Tel: 0800-900-900

Monday to Friday 8:30am to 8:30pm

Saturday 9:00am to 5:00pm

http://www.dlink.co.nz

E-mail: support@dlink.co.nz

Technical Support

You can find software updates and user documentation on the D-Link website.

Tech Support for customers in

Egypt:

Tel: +202-2919035 or +202-2919047

Sunday to Thursday 9:00am to 5:00pm

http://support.dlink-me.com

E-mail: amostafa@dlink-me.com

Iran:

Tel: +98-21-88822613

Sunday to Thursday 9:00am to 6:00pm

http://support.dlink-me.com

E-mail: support.ir@dlink-me.com

Israel:

Tel: +972-9-9715701

Sunday to Thursday 9:00am to 5:00pm

http://www.dlink.co.il/support/

E-mail: support@dlink.co.il

Pakistan:

Tel: +92-21-4548158 or +92-21-4548310

Sunday to Thursday 9:00am to 6:00pm

http://support.dlink-me.com

E-mail: support.pk@dlink-me.com

South Africa and Sub Sahara Region:

Tel: +27-12-665-2165

08600 DLINK (for South Africa only)

Monday to Friday 8:30am to 9:00pm South Africa Time

http://www.d-link.co.za

Turkey:

Tel: +90-212-2895659

Monday to Friday 9:00am to 6:00pm

http://www.dlink.com.tr

E-mail: turkiye@dlink-me.com

E-mail: support@d-link.co.za

U.A.E and North Africa:

Tel: +971-4-391-6480 (U.A.E)

Sunday to Wednesday 9:00am to 6:00pm GMT+4

Thursday 9:00am to 1:00pm GMT+4

http://support.dlink-me.com

E-mail: support@dlink-me.com

Техническая поддержка

Обновления программного обеспечения и документация доступны на Интернет-сайте D-Link.

D-Link предоставляет бесплатную поддержку для клиентов в течение гарантийного срока.

Клиенты могут обратиться в группу технической поддержки D-Link по телефону или через Интернет.

Техническая поддержка D-Link:
+495-744-00-99

Техническая поддержка через Интернет
http://www.dlink.ru
E-mail: support@dlink.ru

Asistencia Técnica

D-Link Latin América pone a disposición de sus clientes, especificaciones, documentación y software mas reciente a través de nuestro Sitio Web **www.dlinkla.com**

El servicio de soporte técnico tiene presencia en numerosos países de la Región Latino América, y presta asistencia gratuita a todos los clientes de D-Link, en forma telefónica e internet, a través de la casilla **soporte@dlinkla.com**

Soporte Técnico Help Desk Argentina:

TTeléfono: 0800-12235465 Lunes a Viernes 09:00 am a 22:00 pm

Soporte Técnico Help Desk Chile:

Teléfono: 800 8 35465 Lunes a Viernes 08:00 am a 21:00 pm

Soporte Técnico Help Desk Colombia:

Teléfono: 01800-9525465 Lunes a Viernes 07:00 am a 20:00 pm

Soporte Técnico Help Desk Ecuador:

Teléfono: 1800-035465 Lunes a Viernes 07:00 am a 20:00 pm

Soporte Técnico Help Desk El Salvador:

Teléfono: 800-6335 Lunes a Viernes 06:00 am a 19:00 pm

Soporte Técnico Help Desk Guatemala:

Teléfono: 1800-8350255 Lunes a Viernes 06:00 am a 19:00 pm

Soporte Técnico Help Desk Panamá:

Teléfono: 00800 0525465 Lunes a Viernes 07:00 am a 20:00 pm

Soporte Técnico Help Desk Costa Rica:

Teléfono: 0800 0521478 Lunes a Viernes 06:00 am a 19:00 pm

Soporte Técnico Help Desk Perú:

Teléfono: 0800-00968 Lunes a Viernes 07:00 am a 20:00 pm

Soporte Técnico Help Desk México:

Teléfono: 001 800 123-3201 Lunes a Viernes 06:00 am a 19:00

Soporte Técnico Help Desk Venezuela:

Teléfono: 0800-1005767 Lunes a Viernes 08:00 am a 21:00 pm

Suporte Técnico

Você pode encontrar atualizações de software e documentação de usuário no site da D-Link Brasil www.dlinkbrasil.com.br.

A D-Link fornece suporte técnico gratuito para clientes no Brasil durante o período de vigência da garantia deste produto.

Suporte Técnico para clientes no Brasil:

Telefone

São Paulo +11-2185-9301

Segunda à sexta

Das 8h30 às 18h30

Demais Regiões do Brasil 0800 70 24 104

E-mail:

E-mail: suporte@dlinkbrasil.com.br

D-Link 友訊科技 台灣分公司
技術支援資訊

如果您還有任何本使用手冊無法協助您解決的產品相關問題，台灣地區用戶可以透過我們的網站、電子郵件或電話等方式與D-Link台灣地區技術支援工程師聯絡。

D-Link 免付費技術諮詢專線

0800-002-615

服務時間：週一至週五，早上8:30 到 晚上9:00

(不含周六、日及國定假日)

網 站：http://www.dlink.com.tw

電子郵件：dssqa_service@dlink.com.tw

如果您是台灣地區以外的用戶，請參考D-Link網站 全球各地分公司的聯絡資訊以取得相關支援服務。

產品保固期限、台灣區維修據點查詢，請參考以下網頁說明：

http://www.dlink.com.tw

產品維修：

使用者可直接送至全省聯強直營維修站或請洽您的原購買經銷商。

Dukungan Teknis

Update perangkat lunak dan dokumentasi pengguna dapat diperoleh pada situs web D-Link.

Dukungan Teknis untuk pelanggan:

Dukungan Teknis D-Link melalui telepon:
Tel: +62-21-5731610

Dukungan Teknis D-Link melalui Internet:
Email : support@dlink.co.id
Website : http://support.dlink.co.id

Technical Support

You can find software updates and user documentation on the D-Link websites. If you require product support, we encourage you to browse our FAQ section on the Web Site before contacting the Support line. We have many FAQ's which we hope will provide you a speedy resolution for your problem.

For Customers within

The United Kingdom & Ireland:

D-Link UK & Ireland Technical Support over the Internet:

http://www.dlink.co.uk

ftp://ftp.dlink.co.uk

D-Link UK & Ireland Technical Support over the Telephone:

08456 12 0003 (United Kingdom)

+1890 886 899 (Ireland)

Lines Open

9:00 am - 06:00 pm Mon-Fri

10:00am - 02:00 pm Sat

Closed on Sun

For Customers within Canada:

D-Link Canada Technical Support over the Telephone:

1-800-361-5265 (Canada)

Mon to Fri: 7:30AM to 9:00PM EST

D-Link Canada Technical Support over the Internet:

http://support.dlink.ca

E-mail: support@dlink.ca

Technische Unterstützung

Aktualisierte Versionen von Software und Benutzerhandbuch finden Sie auf der Website von D-Link.

D-Link bietet kostenfreie technische Unterstützung für Kunden innerhalb Deutschlands, Österreichs, der Schweiz und Osteuropas.

Unsere Kunden können technische Unterstützung über unsere Website, per E-Mail oder telefonisch anfordern.

Web: http://www.dlink.de
E-Mail: support@dlink.de
Telefon: +49 (1805)2787

0, 12€/Min aus dem Festnetz der Deutschen Telekom.

Telefonische technische Unterstützung erhalten Sie Montags bis Freitags von 09.00 bis 17.30 Uhr.

Unterstützung erhalten Sie auch bei der Premiumhotline für D-Link Produkte unter der Rufnummer 09001-475767
Montag bis Freitag von 6-22 Uhr und am Wochenende von 11-18 Uhr.
1,75€/Min aus dem Festnetz der Deutschen Telekom.

Wenn Sie Kunde von D-Link außerhalb Deutschlands, Österreichs, der Schweiz und Osteuropas sind, wenden Sie sich bitte an die zuständige Niederlassung aus der Liste im Benutzerhandbuch.

Assistance technique

Vous trouverez la documentation et les logiciels les plus récents sur le site web **D-Link.**

Vous pouvez contacter le service technique de **D-Link** par notre site internet ou par téléphone.

Support technique destiné aux clients établis en France:

Assistance technique D-Link par téléphone:

0820 0803 03

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*Prix en France Métropolitaine au 3 mars 2005

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E-mail: support@dlink.fr

Support technique destiné aux clients établis au Canada:

Assistance technique D-Link par téléphone:

(800) 361-5265

Lun.-Ven. 7h30 à 21h00 HNE.

Assistance technique D-Link sur internet:

http://support.dlink.ca

E-mail: support@dlink.ca

Asistencia Técnica

Puede encontrar las últimas versiones de software así como documentación técnica en el sitio web de **D-Link**.

D-Link ofrece asistencia técnica gratuita para clientes residentes en España durante el periodo de garantía del producto.

Asistencia Técnica de D-Link por teléfono:
+34 902 30 45 45
Lunes a Viernes de 9:00 a 14:00 y de 15:00 a 18:00

Asistencia Técnica de D-Link a través de Internet:
http://www.dlink.es/support/
E-mail: soporte@dlink.es

Supporto tecnico

Gli ultimi aggiornamenti e la documentazione sono disponibili sul sito D-Link.

Supporto tecnico per i clienti residenti in Italia

D-Link Mediterraneo S.r.L.
Via N. Bonnet 6/B 20154 Milano

Supporto Tecnico dal lunedì al venerdì dalle ore 9.00 alle ore 19.00 con orario continuato
Telefono: 199 400057
URL: http://www.dlink.it/supporto.html
Email: tech@dlink.it

Technical Support

You can find software updates and user documentation on the D-Link website. D-Link provides free technical support for customers within Benelux for the duration of the warranty period on this product.

Benelux customers can contact D-Link technical support through our website, or by phone.

Tech Support for customers within the Netherlands:

D-Link Technical Support over the Telephone:

0900 501 2007

Monday to Friday 9:00 am to 10:00 pm

D-Link Technical Support over the Internet:

www.dlink.nl

Tech Support for customers within Belgium:

D-Link Technical Support over the Telephone:

070 66 06 40

Monday to Friday 9:00 am to 10:00 pm

D-Link Technical Support over the Internet:

www.dlink.be

Tech Support for customers within Luxemburg:

D-Link Technical Support over the Telephone:

+32 70 66 06 40

Monday to Friday 9:00 am to 10:00 pm

D-Link Technical Support over the Internet:

www.dlink.be

Pomoc techniczna

Najnowsze wersje oprogramowania i dokumentacji użytkownika można znaleźć w serwisie internetowym firmy D-Link.

D-Link zapewnia bezpłatną pomoc techniczną klientom w Polsce w okresie gwarancyjnym produktu.

Klienci z Polski mogą się kontaktować z działem pomocy technicznej firmy D-Link za pośrednictwem Internetu lub telefonicznie.

Telefoniczna pomoc techniczna firmy D-Link:
0 801 022 021

Pomoc techniczna firmy D-Link świadczona przez Internet:
URL: http://www.dlink.pl
E-mail: dlink@fixit.pl

Technická podpora

Aktualizované verze software a uživatelských příruček najdete na webové stránce firmy D-Link.

D-Link poskytuje svým zákazníkům bezplatnou technickou podporu

Zákazníci mohou kontaktovat oddělení technické podpory přes webové stránky, mailem nebo telefonicky

Web: http://www.dlink.cz/suppport/
E-mail: support@dlink.cz
Telefon: 224 247 503

Telefonická podpora je v provozu:
PO- PÁ od 09.00 do 17.00

Technikai Támogatás

Meghajtó programokat és frissítéseket a **D-Link** Magyarország weblapjáról tölthet le.
Telefonon technikai segítséget munkanapokon hétfőtől-csütörtökig 9.00 – 16.00 óráig és pénteken 9.00 – 14.00 óráig kérhet
a **(1) 461-3001** telefonszámon vagy a **support@dlink.hu** emailcímen.

Magyarországi technikai támogatás :

D-Link Magyarország

1074 Budapest, Alsóerdősor u. 6. – R70 Irodaház 1 em.

Tel: 06 1 461-3001
Fax: 06 1 461-3004
Email: support@dlink.hu
URL: http://www.dlink.hu

Teknisk Support

Du kan finne programvare oppdateringer og bruker dokumentasjon på D-Links web sider.

D-Link tilbyr sine kunder gratis teknisk support under produktets garantitid.

Kunder kan kontakte D-Links teknisk support via våre hjemmesider, eller på tlf.

Teknisk Support:

D-Link Teknisk telefon Support:
800 10 610
(Hverdager 08:00-20:00)

D-Link Teknisk Support over Internet:
http://www.dlink.no

Teknisk Support

Du finder software opdateringer og bruger-dokumentation på D-Link's hjemmeside.

D-Link tilbyder gratis teknisk support til kunder i Danmark i hele produktets garantiperiode.

Danske kunder kan kontakte D-Link's tekniske support via vores hjemmeside eller telefonisk.

D-Link teknisk support over telefonen:

Tlf. 7026 9040

Hverdager: kl. 08:00 – 20:00

D-Link teknisk support på Internettet:

http://www.dlink.dk

Teknistä tukea asiakkaille Suomessa:

D-Link tarjoaa teknistä tukea asiakkailleen.
Tuotteen takuun voimassaoloajan.
Tekninen tuki palvelee seuraavasti:

Arkisin klo. 9 - 21

numerosta

0800-114 677

Internetin kautta

Ajurit ja lisätietoja tuotteista.

http://www.dlink.fi

Sähköpostin kautta

voit myös tehdä kyselyitä.

Teknisk Support

På vår hemsida kan du hitta mer information om mjukvaru uppdateringar och annan användarinformation.

D-Link tillhandahåller teknisk support till kunder i Sverige under hela garantitiden för denna produkt.

Teknisk Support för kunder i Sverige:

D-Link Teknisk Support via telefon:

0770-33 00 35

Vardagar 08.00-20.00

D-Link Teknisk Support via Internet:

http://www.dlink.se

Suporte Técnico

Você pode encontrar atualizações de software e documentação de utilizador no site de D-Link Portugal http://www.dlink.pt.

A D-Link fornece suporte técnico gratuito para clientes no Portugal durante o período de vigência de garantia deste produto.

Suporte Técnico para clientes no Portugal:

Assistência Técnica:

E-mail: soporte@dlink.es

http://www.dlink.pt/support/

ftp://ftp.dlink.es

Τεχνική Υποστήριξη

Μπορείτε να βρείτε software updates και πληροφορίες για τη χρήση των προϊόντων στις ιστοσελίδες της D-Link

Η D-Link προσφέρει στους πελάτες της δωρεάν υποστήριξη στον Ελλαδικό χώρο

Μπορείτε να επικοινωνείτε με το τμήμα τεχνικής υποστήριξης μέσω της ιστοσελίδας ή μέσω τηλεφώνου

Για πελάτες εντός του Ελλαδικού χώρου:

Τηλεφωνική υποστήριξη D-Link :

Τηλ: 210 86 11 114
Φαξ: 210 86 53 172
(Δευτέρα-Παρασκευή 09:00-17:00)

E-mail: support@dlink.gr

Τεχνική υποστήριξη D-Link μέσω Internet:

http://www.dlink.gr

ftp://ftp.dlink.it