



OptiView™ Protocol Expert

Quick Start Guide

P/N 1008032

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OptiView™ Protocol Expert

QUICK START

OptiView™ Protocol Expert (OPV-PE) is a powerful, integrated analyzer-plus monitor application for 10/100/1000 Ethernet and 4/16 Token Ring networks. Features such as multi-layer expert analysis, real-time network statistics, 7-layer packet decode and analysis, advanced alarm setting and actions, multi-layer filtering, packet slicing, and automatic name table updating provide users with both network analysis and monitoring tools in a single package.

OPV-PE makes use of hardware analyzer devices available from Fluke Networks that perform the job of data capture/transmit at full line rate. Fluke Networks supports analyzer devices for 10/100/1000 Ethernet, such as OptiView™ Link Analyzer (OPV-LA) for 10/100/1000Mbps networks.

Name Change to OptiView Protocol Expert

Protocol Inspector has been renamed OptiView Protocol Expert. In addition, the Distributed Protocol Inspector (DPI-212) has been renamed OptiView Link Analyzer. The following chart describes the change in model names and products.

Old Models/Products	Replaced by New Models/Products
PIP-040 Protocol Inspector with Expert Option	OPV-PE/PRO OptiView Protocol Expert
PIP-100 Protocol Inspector with Remote Control, Traffic Generation and Expert options	OPV-PE/PLUS OptiView Protocol Expert Plus
PI-010 Remote Control Option and PI-020 Traffic Generation Option together	OPV-PE/EP Enhancement package that adds Remote Control and Traffic Generation options to OPV-PE/PRO
DPI-212 Distributed Protocol Inspector, 10/100/1000Mbps	OPV-LA OptiView Link Analyzer

Existing members of the Gold Support Program for Protocol Inspector software will receive the upgrade to OptiView Protocol Expert with the proper Installation Key(s)

to turn on the appropriate functions. New Gold Support Program products for OptiView Protocol Expert are available to Protocol Inspector customers during program renewal.

Upgrading OPV-PE

If you have Protocol Inspector, un-install the software before installing OPV-PE.

The format and name of the .ini file has changed. The file is now called `OPV-PE.ini` under the Windows directory. If you have customized the Protocol Inspector.ini file, you will be required to re-enter your changes to the OPV-PE.ini file once the software is installed. Other user-generated files such as filters (.cfp), capture files (.cap), and transmit specifications (.tsp) can be saved when you install OPV-PE in the same directory as the previous version.

OPV-PE 4.x has different table formats from Protocol Inspector. It is required that you upgrade all PCs and remote analyzer devices to the latest software version. Although remote communications with Protocol Inspector version 3.2 will work, you may see data that is out of order or missing in OPV-PE tables.

Installing OPV-PE

Perform the following steps to install the OPV-PE software:

1. Insert the OPV-PE CD-ROM into your CD-ROM drive.
2. The Master Install program will start and display your install choices. Make your selection and follow the on-screen instructions.

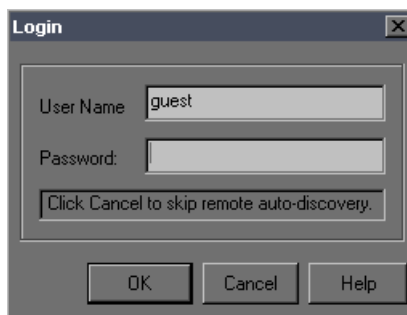
If the program does not Autorun, perform these steps:

1. Click the "Start" button on the "Task Bar" and select "Run". Then type `d:/setup` (or replace 'd' with the letter of your CD-ROM drive) and click **OK**.
2. Make your selection and follow the on-screen instructions.

Starting OPV-PE

Perform the following steps to set up your environment and launch the OPV-PE software:

1. Launch the OPV-PE program.
Double-click on the OPV-PE icon in the OPV-PE group or other group where you installed the OPV-PE application.
2. When you have the OPV-PE Remote Control software installed, you see the **Login** dialog box shown below.



OPV-PE provides two default accounts, **guest** and **su**. The table below shows the password and privileges associated with these accounts. Choose an account, complete the dialog box, and click **OK**.

Default Account Name	Password	Privileges
guest	public	full
su	manager	super-user

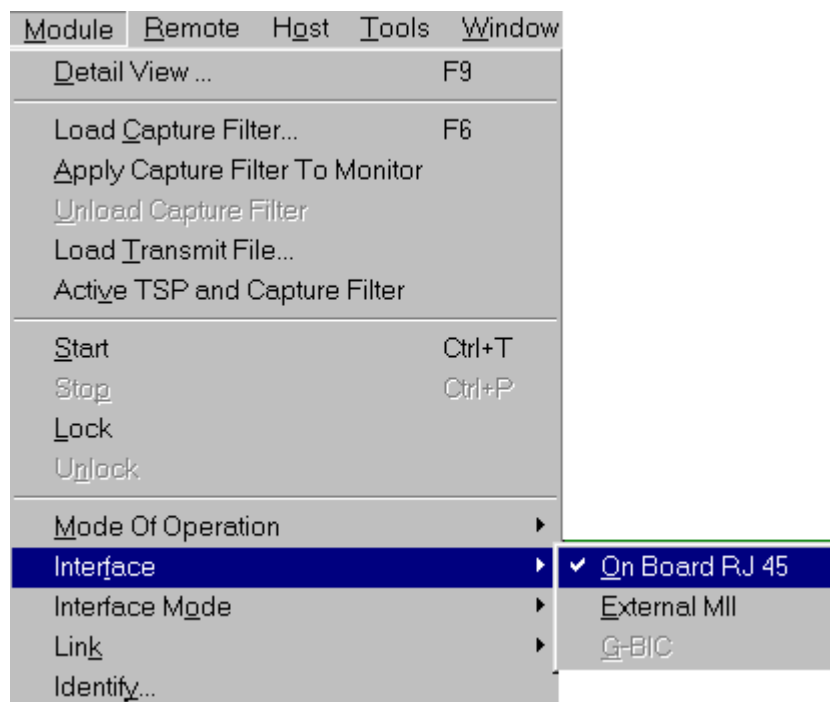
Normally, you can use either account to access all remote resources. If a remote resource will not permit access with either of these accounts, then get the user name and password from the resource owner and establish an account on that resource. To access a remote resource, you must have an account and password set up on the remote system containing the resource or use the remote system's guest account.

3. OPV-PE starts (arms) your local devices automatically the first time you start the software. For subsequent launches of OPV-PE or to start a remote resource, you must select an analyzer card or adapter to start monitor, capture, or transmit functions.

From the Resource Browser, click on the button that corresponds to the analyzer

card or adapter that you want to control with the OPV-PE software. A monitor window appears for the analyzer card or adapter you select.

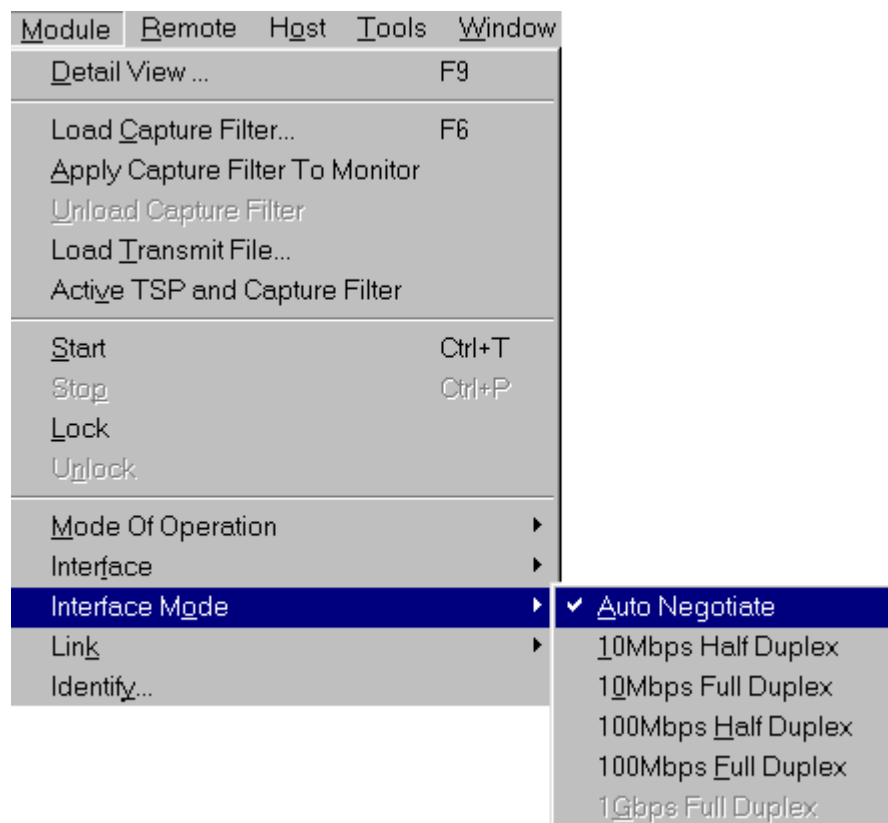
4. OPV-LA IMM analyzer cards have two interfaces, RJ45 for 10/100 copper wire and a G-BIC for 1000 Mbps fiber optic. If you selected an OPV-LA IMM, you may need to change the interface. From the Module menu, choose **Interface**. On Board RJ45 selects the bidirectional 10/100BASE-T port. The default is **G-BIC** which selects the G-BIC send/receive port pair.
5. DPI-1XX PMM analyzer cards have two interfaces, RJ45 and MII, which correspond to two physical ports on the card. If you selected a DPI-1XX PMM, you may need to change the interface. From the **Module** menu, choose **Interface**. **On Board RJ45** (default) selects the 10/100BASE-T port.



The External MII interface requires a 3rd party transceiver to connect to other Ethernet media types such as fiber, coaxial, and twisted-pair cable.

For GPI-1XX GMMs, the interface is always G-BIC.

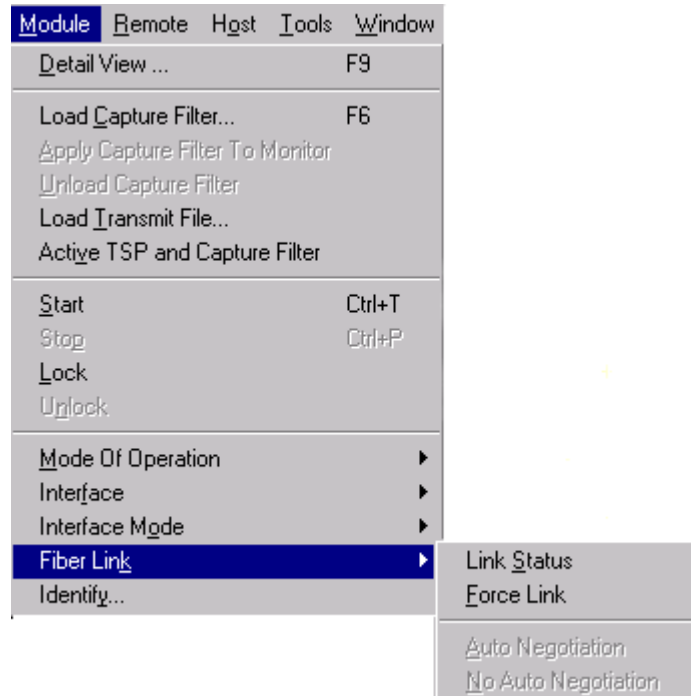
6. If you selected a DPI-1XX PMM or an OPV-LA IMM for 10/100BASE-T, you may need to set the Interface Mode. From the **Module** menu, choose **Interface Mode**.



Auto Negotiate places the resource in auto-detection mode. The interface mode selection can also force the module to only one speed. For DPI-1XX PMMs, the mode can also be set to Full Duplex. For OPV-LA IMM, the mode can be set to **1Gbps Full Duplex**.

For GPI-1XX GMMs, the interface mode is always **1Gbps Full Duplex**.

7. If you selected a GPI-1XX GMM device, you may need to force the link. **You must force the link if you are connected through a tap device.** From the **Module** menu, choose **Fiber Link** → **Force Link**. See page 3-19 of the *OPV-PE Users Manual* for more information on forcing links with GPI-1XX GMM resources.



8. If you selected a OPV-LA IMM for Gigabit Ethernet, you may need to disable auto negotiation if you cannot establish a link. From the **Module** menu, choose **Fiber Link** and select the **No Auto-Negotiation** menu item. For more information on auto negotiation, see “Establishing Links for GPI-1XX GMM and OPV-LA IMM” on page 19 of the *OPV-PE Users Manual*.

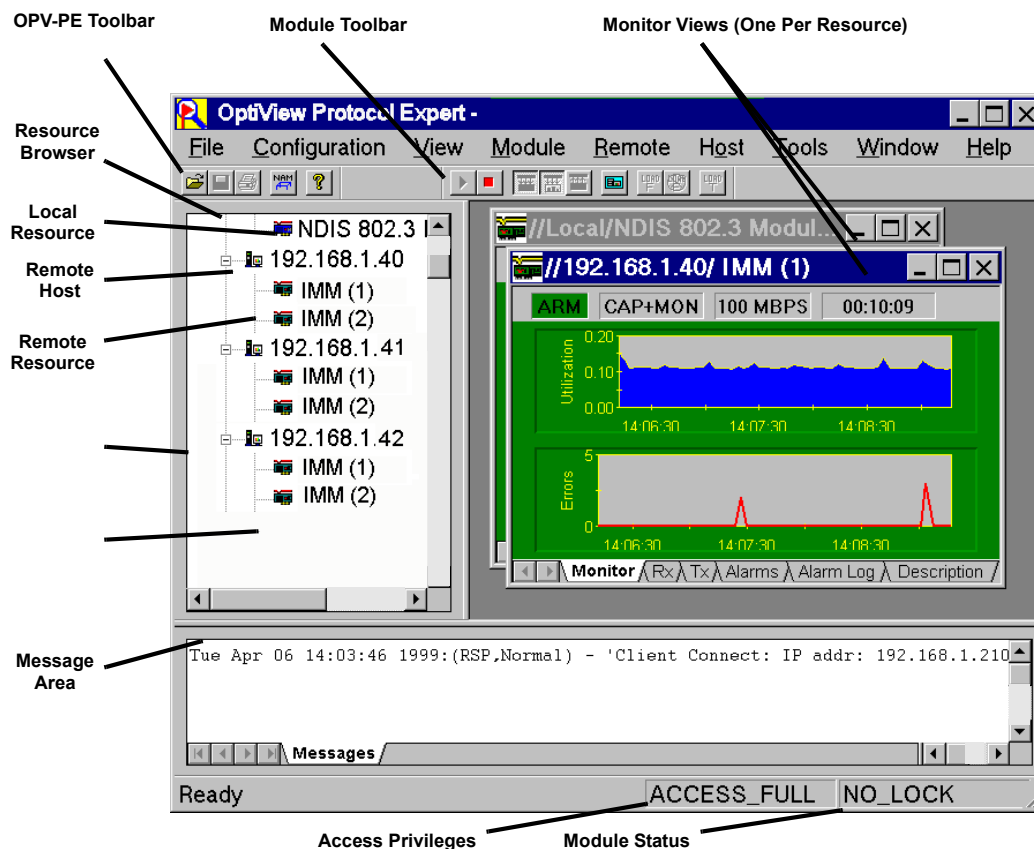
Views

The following sections describe the main views available from the OPV-PE graphical user interface. The main views include:


- Summary View
- Detail View
- Capture View of Capture Buffers
- Capture View of Capture Files

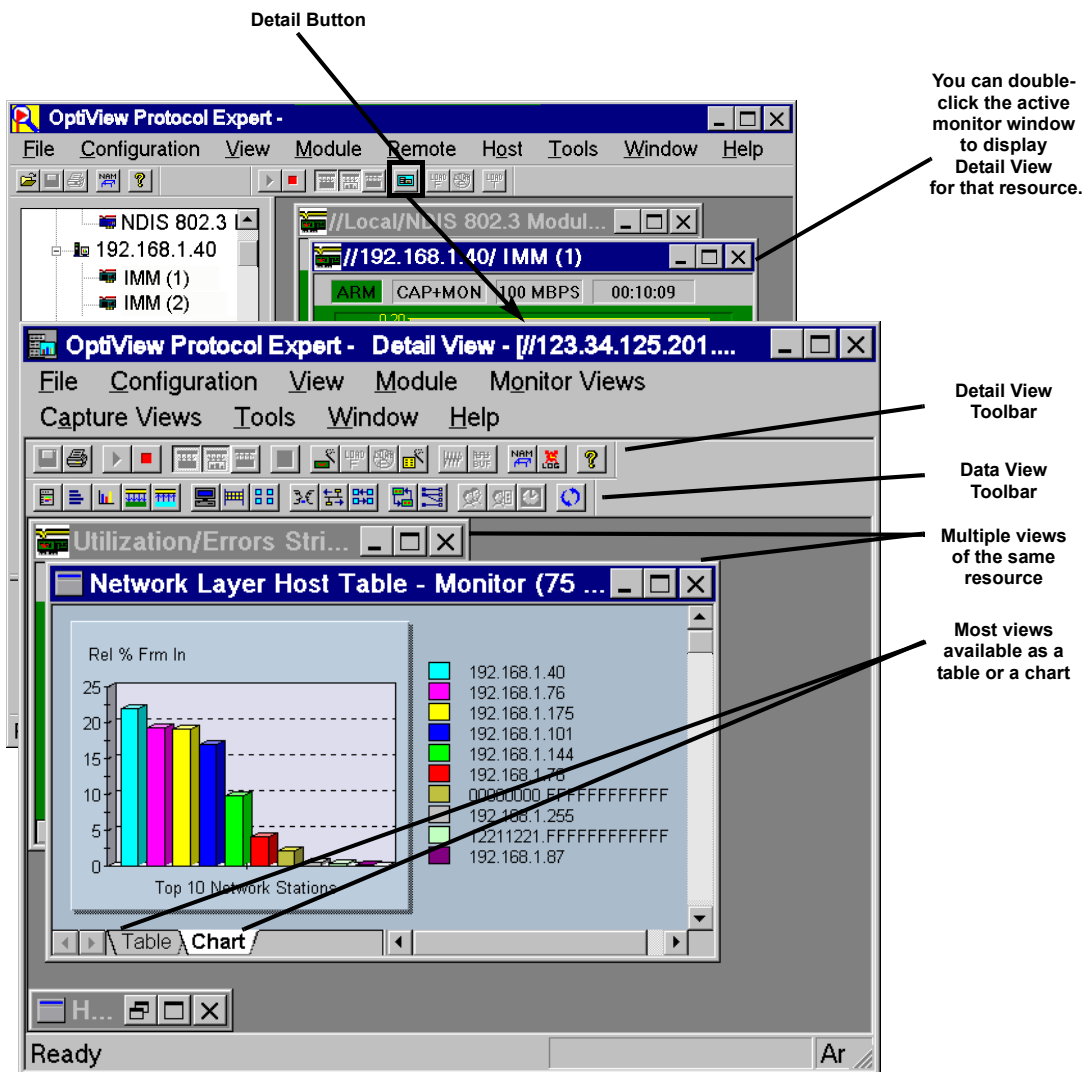
Summary View

Summary View is used primarily for monitoring. It shows a single view of many different resources. Summary View also contains the docking windows for selecting resources (Resource Browser) and viewing system messages (Message Window).



Detail View

Detail View is used to “drill-down” to a single resource. You can look at the data from Detail View in many different ways. To display a resource in Detail View click on (highlight) the resource icon in the Resource Browser and press the  button.



The screenshot displays the OptiView Protocol Expert interface. The main window shows the Resource Browser on the left with a tree view containing 'NDIS 802.3' and its sub-items '192.168.1.40', 'IMM (1)', and 'IMM (2)'. The central pane shows the selected resource '192.168.1.40/ IMM (1)' with a status bar indicating 'ARM CAP+MON 100 MBPS 00:10:09'. A 'Detail Button' (represented by a small icon) is highlighted in the toolbar. A secondary window titled 'OptiView Protocol Expert - Detail View - [123.34.125.201....]' is open, showing a 'Detail View Toolbar' and a 'Data View Toolbar'. The 'Data View Toolbar' includes a 'Utilization/Errors Str...' button. The main content area of the Detail View window shows a 'Network Layer Host Table - Monitor (75 ...)' with a bar chart titled 'Top 10 Network Stations' and a table of data. The bar chart shows relative frame in for various IP addresses. The table lists IP addresses and their corresponding data values.

Detail Button

You can double-click the active monitor window to display Detail View for that resource.

Detail View Toolbar



Data View Toolbar

Multiple views of the same resource

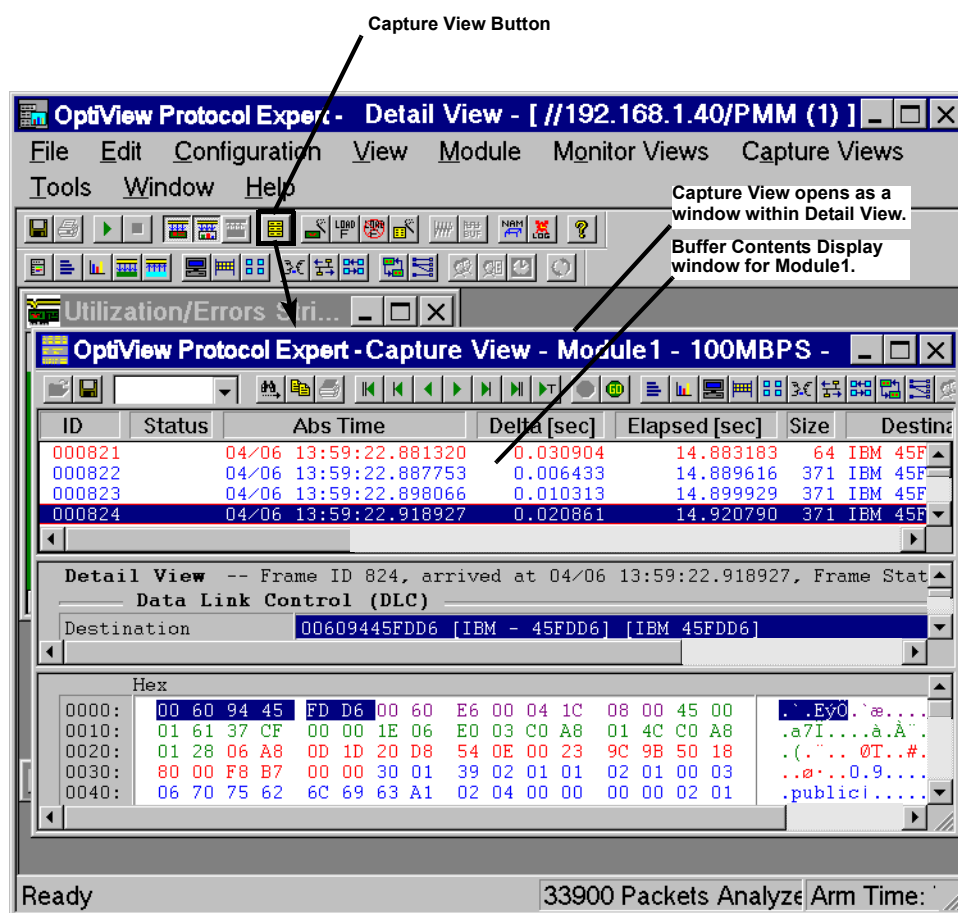
Most views available as a table or a chart

Rel % Frm In	IP Address
25	192.168.1.40
20	192.168.1.76
18	192.168.1.175
15	192.168.1.101
10	192.168.1.144
5	192.168.1.76
0	00000000.FFFFFFFFFF
0	192.168.1.255
0	12211221.FFFFFFFFFF
0	192.168.1.87

Capture View of Capture Buffer

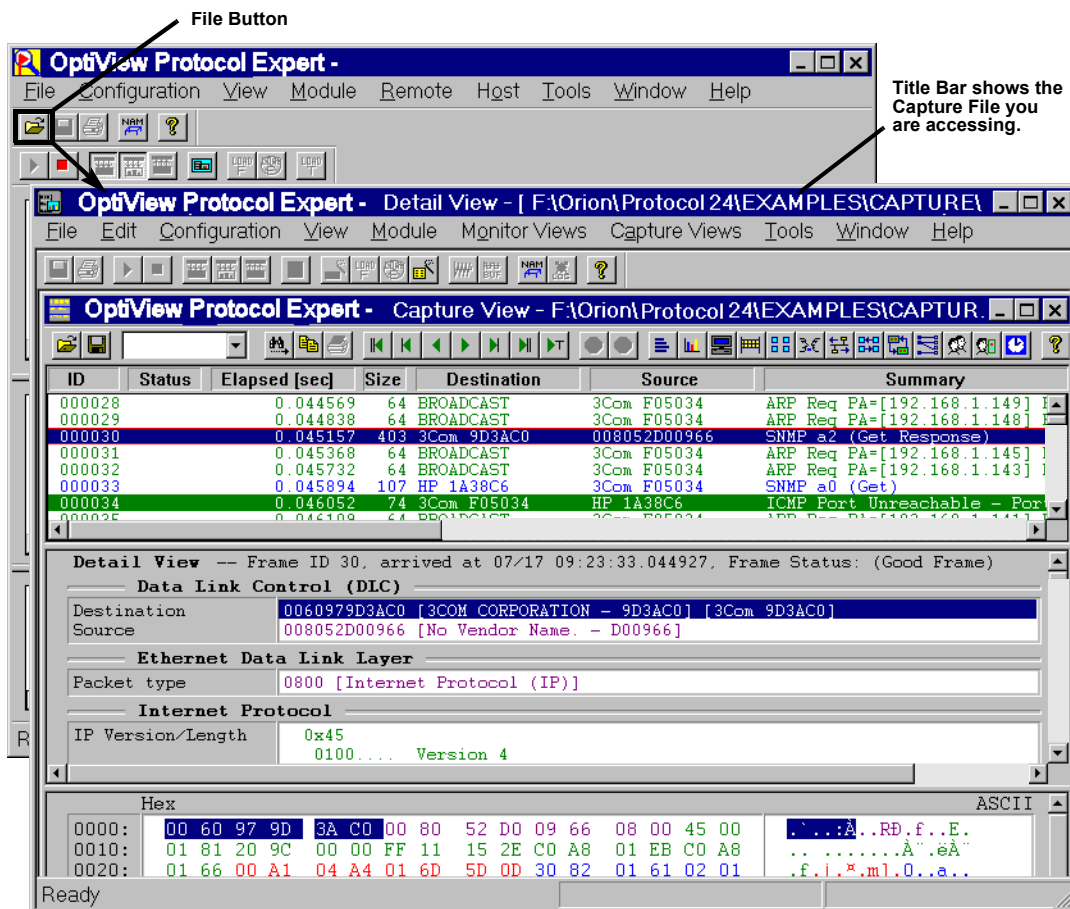
Once you have captured data, press  from Detail View or press  from Summary View to bring up Capture View. Capture View provides a full seven-layer decode of data in a capture buffer or a capture file for analysis. Capture View opens as a window within Detail View.

The figure below shows Capture View when accessed from Detail View. The view shows the protocol decode of the contents of a capture buffer. Capture View has its own toolbar so you can view captured data in many ways, just as you can view real-time data.



Capture View of Capture Files

The figure below shows Capture View when accessed from Summary View to view the contents of a capture file. The capture file contains previously saved capture information.











Helpful Tips for Getting Started

You'll notice that many of the same functions can be performed from the different windows. This design allows you to perform all the tasks you might expect to do from any one of the major windows without having to go back to a different window.

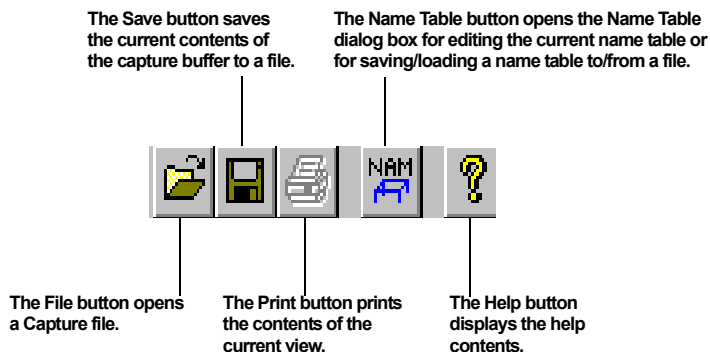
Be sure to check out the hints and tips sections in the help system. There is a hints and tips section for all major functional areas within the product.

Here are some tips to help you use the OPV-PE interface:

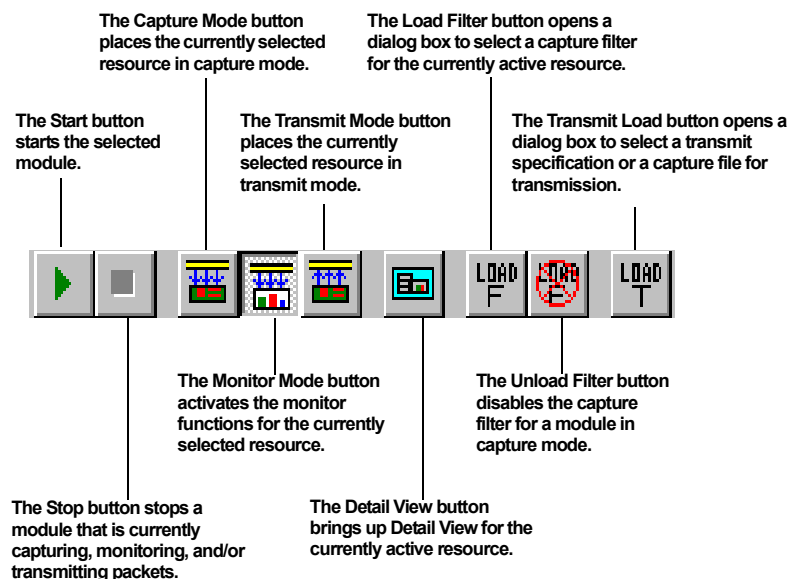
- Click on a resource in the Resource Browser to select that resource.
- Press the  button or double-click with the left mouse button on the view displayed within Summary View to bring up Detail View for a resource.
- Press the  button from Detail View to bring up the Filter Design window. Use this window to create/edit capture filters.
- Press the  button from Detail View to bring up the Filter Design window. Use this window to create/edit display filters.
- Once a resource is stopped and you have captured data, press the  button in Detail View to bring up Capture View for analyzing packets.
- Press the  button from Summary View to open a previously-saved capture file and bring up Capture View.
- Use the buttons in the Data Views toolbar to open many views of the same resource within Detail View.
- Double-click on a resource to create an alarm for that resource.
- If you have the Traffic Generator software option, use the  button in Detail View to bring up the Transmit Specification dialog box to create data streams for transmit.
- Use the Expert  button in Detail View to bring up the expert views.
- If you have the VoIP Option, use the VoIP View  button in Detail View to bring up the charts and tables for Voice over IP and Multimedia protocols.

Buttons and Toolbars

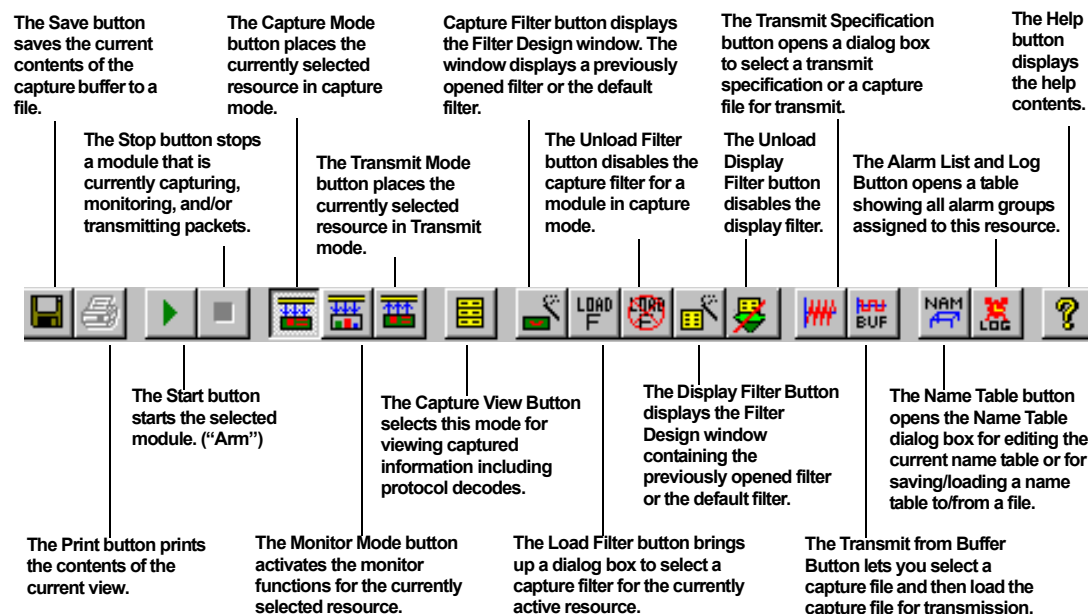
OPV-PE Toolbar



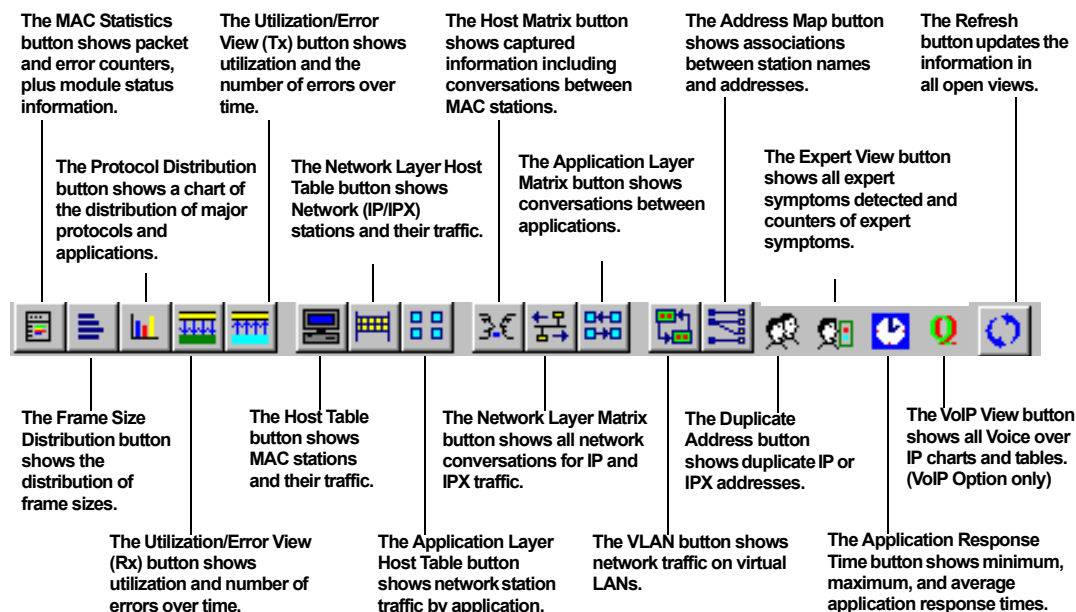
Module Toolbar (Summary View)



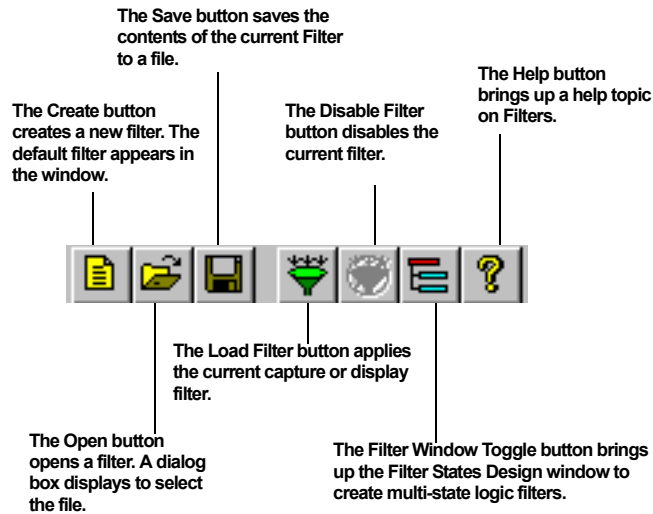
Detail View Toolbar



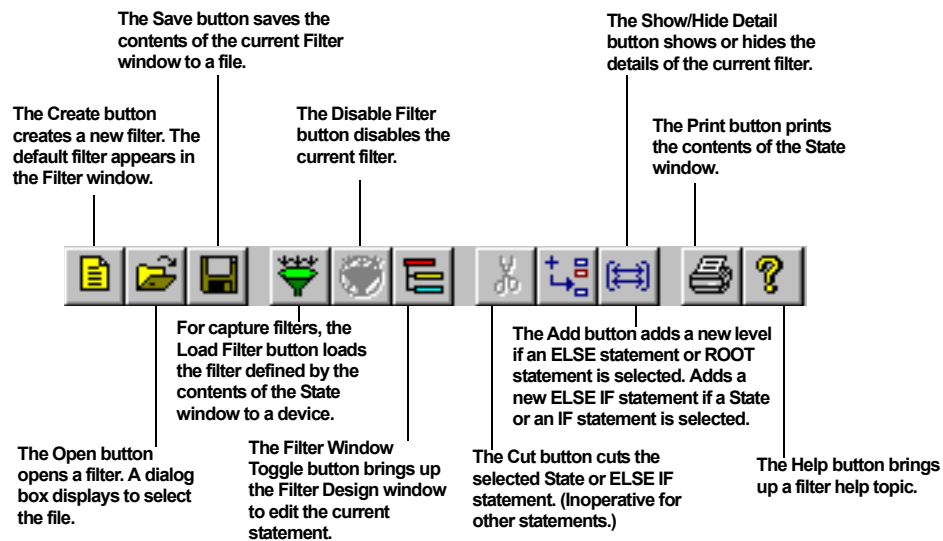
Data Views Toolbar (Note: Only some of these views are available with GPI-1XX GMM cards)



Filter Design Toolbar



Filter States Design Toolbar

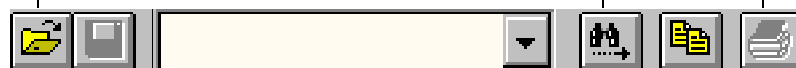


Capture View Toolbar

The Open File button opens a capture file.

The Search button starts a search of the capture file contents for the string indicated in the Search box (at left).

The Print button prints the currently selected lines in the summary pane.



The Save File button saves the current contents of this view to a file.

The Search box lets you specify a search text string. Press the Search button (at right) to start the text string search.

The Copy button displays (ASCII text) the contents of the Summary pane, then copies selected text for pasting into other documents.

The Navigation buttons let you navigate around the capture file.

The Stop Load button stops background loading of the capture file.



The Go To Trigger button moves you to the Trigger Buffer Position in the capture file or, if no Trigger Buffer Position is set, to the first captured frame.

The Resume Load button resumes the background loading of the capture file to Capture View.

The Network Layer Host Table button shows captured information by Network (IP/IPX) stations.

The Application Layer Matrix button shows captured information sorted by application conversations.

The Expert View shows all expert symptoms detected and counters of expert symptoms.

The Protocol Distribution View button shows a chart of the distribution of major protocols and applications.

The Host Matrix button shows captured information sorted by conversations between MAC stations.

The Address Map button shows associations between station names and addresses.

The VoIP View button shows all Voice over IP charts and tables. (VoIP Option only)



The Frame Size Distribution View button shows the distribution of frame sizes.

The Application Layer Host Table button shows captured information sorted by application.

The VLAN button shows network traffic on virtual LANs. Cisco's ISL protocol is the only VLAN recognized.

The Application Response Time button shows minimum, maximum, and average application response times.

The Host Table button selects shows captured information sorted by MAC station.

The Network Layer Matrix button shows captured information sorted by network conversations for IP and IPX traffic.

The Duplicate Address button shows duplicate IP or IPX addresses.

Function Keys

Function keys perform different operations within different OPV-PE views.

Function Key	Summary View	Detail View
F1	Help	Help
F2	System Settings	Capture View Display Options
F3	Module Settings	Module Settings
F4	Module Monitor View Preferences	Create Display Filter
F5	Connect to Remote	Create Capture Filter
F6	Load Capture Filter	Load Capture Filter
F7	Open Capture File	Expert Summary View
F8	Save Capture	Save Capture
F9	Go to Detail View	Capture View
F10	Start/Stop	Start/Stop

Other Keyboard Shortcuts...

Key Combination	Action
F11	From Capture View, Show/Hide Details
Alt + F4	Close Window
Ctrl + O	Open
Ctrl + S	Save
Ctrl + T	Start Module
Ctrl + P	Stop Module
Ctrl + Q	From Detail View, show VoIP View

Getting Information

ON-LINE HELP SYSTEM

Use the on-line help for complete information on using OPV-PE, including task descriptions.

USERS MANUAL

See the *OPV-PE Users Manual* PDF file for OPV-PE documentation.

README NOTES

See the README file included with OPV-PE for any late-breaking news.

FLUKE NETWORKS WEB SITE

Go to www.flukenetworks.com for information on other products, product updates, and answers to support questions.

