FLUKE
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OptiView™
Protocol Expert

Quick Start Guide

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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. OPV-PE can also decode ATM, PoS, or WLAN captures made by other Fluke Networks' hardware.

Upgrading OPV-PE

If you have a previous version of OPV-PE, install the new version into the same directory as the previous version. Do not save older versions of the software on your system.

User-generated files such as filters (.cfd), capture files (.cap), and transmit specifications (.tsp) can be saved during the installation process when you install OPV-PE in the same directory as the previous version.

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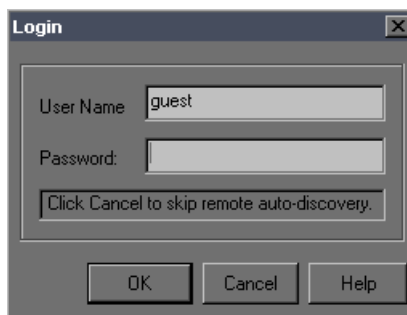
OPV-PE provides two default accounts, **guest** and **su**. The table below shows the password and privileges associated with these accounts. Choose an account, complete the dialog box, and click **OK**.

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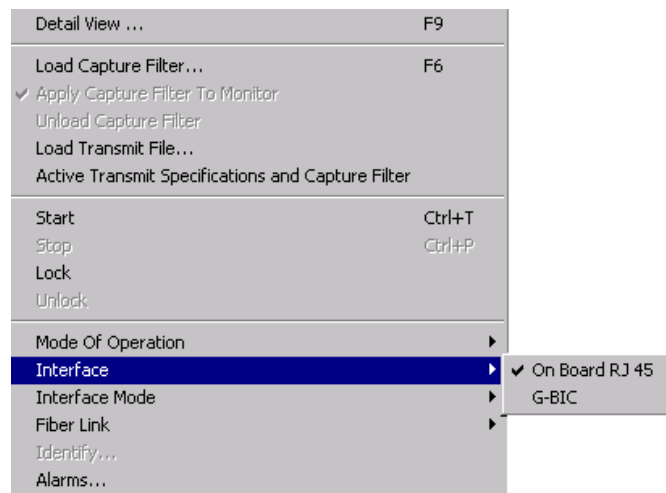
   From the Resource Browser, click on the button that corresponds to the analyzer

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.

Detail View ...	F9
Load Capture Filter...	F6
✓ Apply Capture Filter To Monitor	
Unload Capture Filter	
Load Transmit File...	
Active Transmit Specifications and Capture Filter	
Start	Ctrl+T
Stop	Ctrl+P
Lock	
Unlock	
Mode Of Operation	▶
Interface	▶
Interface Mode	▶
Fiber Link	▶
Identify...	
Alarms...	

Interface submenu:
| |
|---|
| ✓ On Board RJ 45 |
| G-BIC |

5. If you select an OPV-LA IMM for 10/100BASE-T, you may need to set the Interface Mode. From the **Module** menu, choose **Interface Mode**.
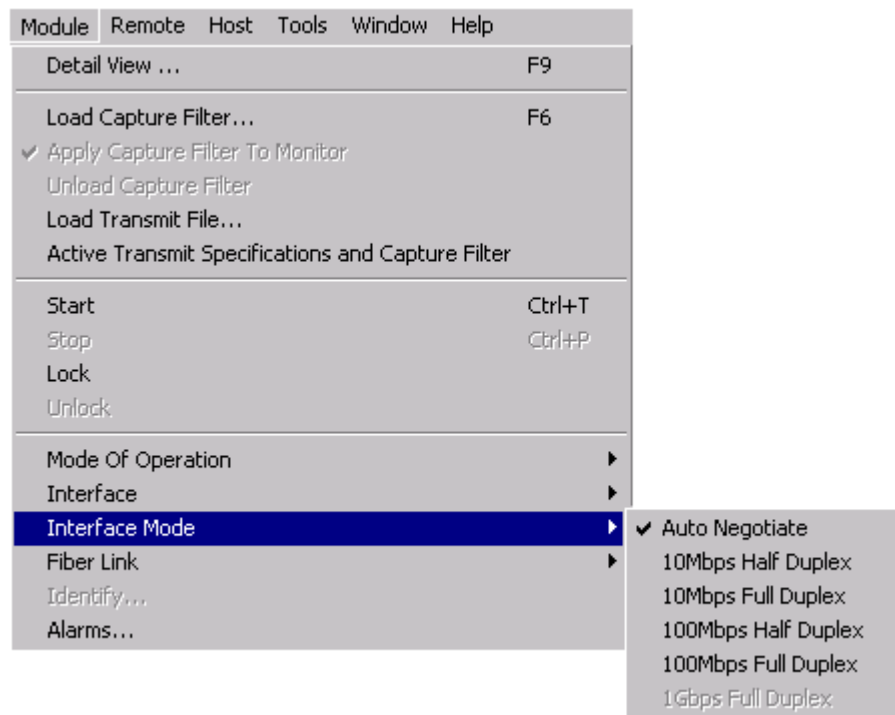
Auto Negotiate places the resource in auto-detection mode. The interface mode selection can also force the module to only one speed.

6. 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 OPV-LA IMM" on page 3-19 of the *OPV-PE Users Manual*.
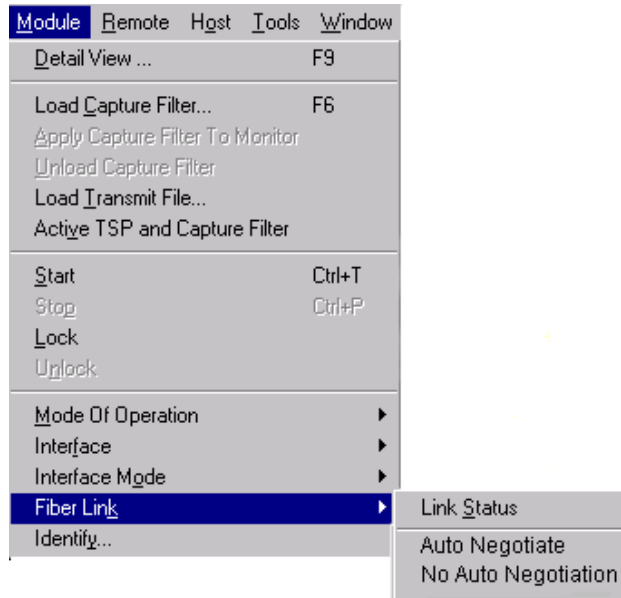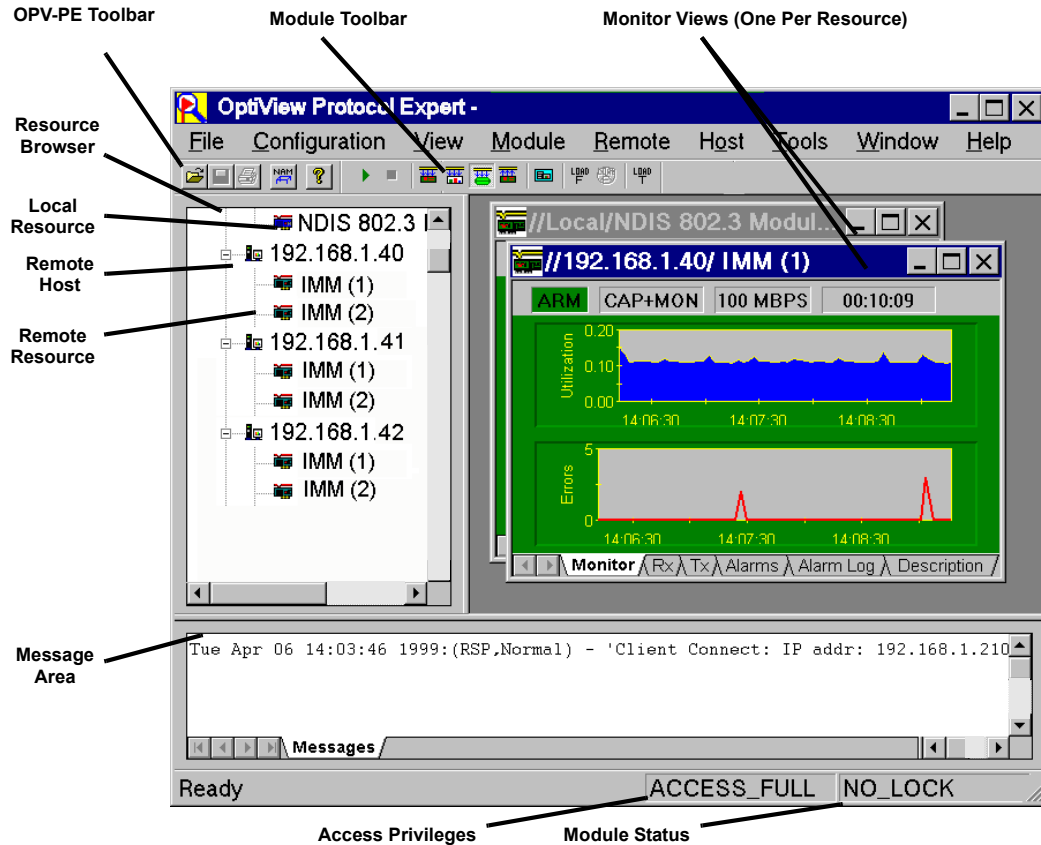

Views

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
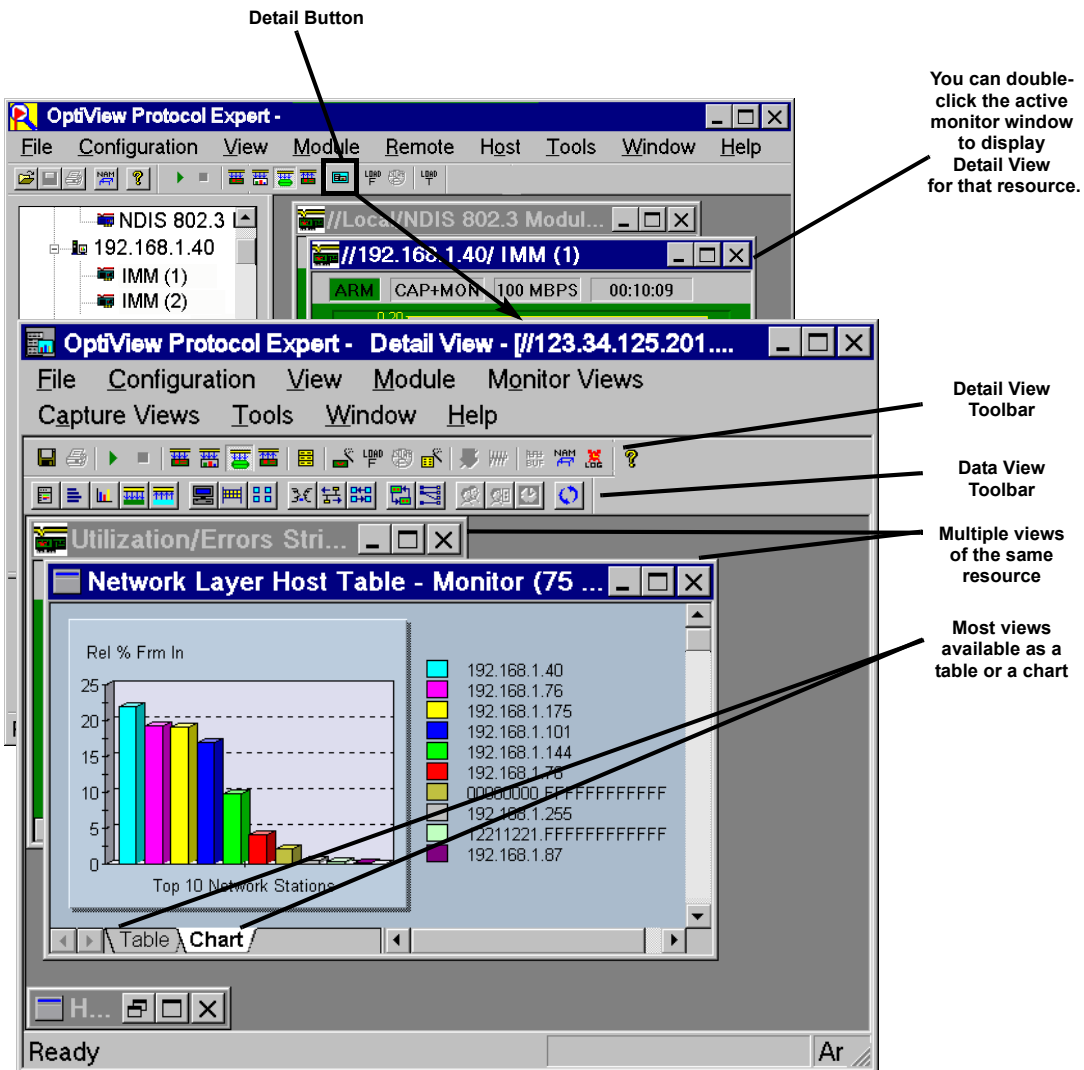- Capture View of Capture Files

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).

OPV-PE Toolbar

Module Toolbar

Monitor Views (One Per Resource)

Resource Browser

Local Resource

Remote Host

Remote Resource

Message Area

OptiView Protocol Expert -

File   Configuration   View   Module   Remote   Host   Tools   Window   Help

NDIS 802.3 I

192.168.1.40
   IMM (1)
   IMM (2)
192.168.1.41
   IMM (1)
   IMM (2)
192.168.1.42
   IMM (1)
   IMM (2)

//Local/NDIS 802.3 Modul...

//192.168.1.40/ IMM (1)

ARM   CAP+MON   100 MBPS   00:10:09

Utilization
0.20
0.10
0.00
   14:06:30   14:07:30   14:08:30

Errors
5
0
   14:06:30   14:07:30   14:08:30

Monitor / Rx / Tx / Alarms / Alarm Log / Description /

Tue Apr 06 14:03:46 1999:(RSP,Normal) - 'Client Connect: IP addr: 192.168.1.210

Messages

Ready   ACCESS_FULL   NO_LOCK

Access Privileges

Module Status

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 [icon] button.

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

Capture View of Capture Buffer

Once you have captured data, press [icon] from Detail View or press [icon] 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 Button

Capture View opens as a window within Detail View.

Buffer Contents Display window for Module1.
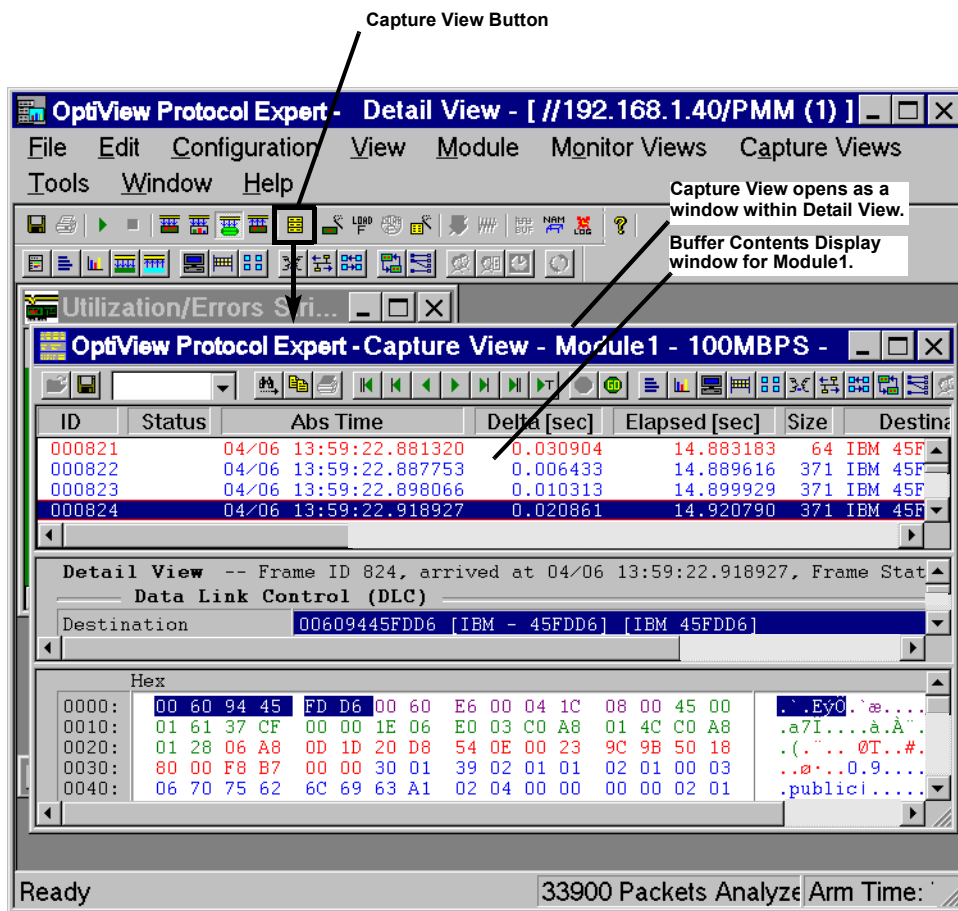
Capture View of Capture Files

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 **Q** button in Detail View to bring up the charts and tables for Voice over IP and Multimedia protocols.

Buttons and Toolbars

OPV-PE Toolbar

The Save button saves the current contents of the capture buffer to a file.

The Name Table button opens the Name Table dialog box for editing the current name table or for saving/loading a name table to/from a file.

The File button opens a Capture file.

The Print button prints the contents of the current view.

The Help button displays the help contents.
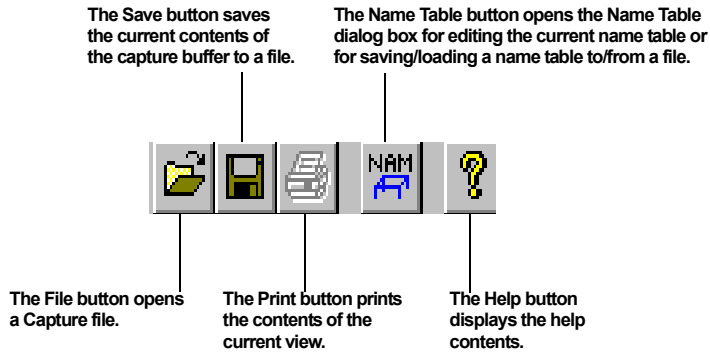
Module Toolbar (Summary View)

The Capture Mode button places the currently selected resource in capture mode.

The Load Filter button opens a dialog box to select a capture filter for the currently active resource.

The Start button starts (arms) the selected module.

The Transmit Mode button places the currently selected resource in transmit mode.

The Transmit Load button opens a dialog box to select a transmit specification or a capture file for transmission.

The Monitor Mode button activates the monitor functions for the currently selected resource.

The Cap+Disk Mode button places the currently selected resource in capture-to-disk mode.

The Unload Filter button disables the capture filter for a module in capture mode.

The Stop button stops a module that is currently capturing, monitoring, and/or transmitting packets.

The Detail View button brings up Detail View for the currently active resource.

Detail View Toolbar

The Save button saves the current contents of the capture buffer to a file.

The Capture Mode button places the currently selected resource in capture mode.

Capture Filter button displays the Filter Design window. The window displays a previously opened filter or the default filter.

The Transmit Specification button opens a dialog box to select a transmit specification or a capture file for transmit.

The Help button displays the help contents.

The Stop button stops a module that is currently capturing, monitoring, and/or transmitting packets.

The Transmit Mode button places the currently selected resource in Transmit mode.

The Unload Filter button disables the capture filter for a module in capture mode.

The Unload Display Filter button disables the display filter.

The Alarm List and Log Button opens a table showing all alarm groups assigned to this resource.

The Start button starts the selected module. ("Arm")

The Capture View Button selects this mode for viewing captured information including protocol decodes.

The Display Filter Button displays the Filter Design window containing the previously opened filter or the default filter.

The Name Table button opens the Name Table dialog box for editing the current name table or for saving/loading a name table to/from a file.

The Monitor Mode button activates the monitor functions for the currently selected resource.

The Load Filter button brings up a dialog box to select a capture filter for the currently active resource.

The Transmit from Buffer Button lets you select a capture file and then load the capture file for transmission.

The Print button prints the contents of the current view.

The Cap+Disk Mode button places the selected resource in capture-to-disk mode.

Data Views Toolbar

The MAC Statistics button shows packet and error counters, plus module status information.

The Utilization/Error View (Tx) button shows utilization and the number of errors over time.

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

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

The Refresh button updates the information in all open views.

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

The Network Layer Host Table button shows Network (IP/IPX) stations and their traffic.

The Application Layer Matrix button shows conversations between applications.

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

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

The Host Table button shows MAC stations and their traffic.

The Network Layer Matrix button shows all network conversations for IP and IPX traffic.

The Duplicate Address button shows duplicate IP or IPX addresses.

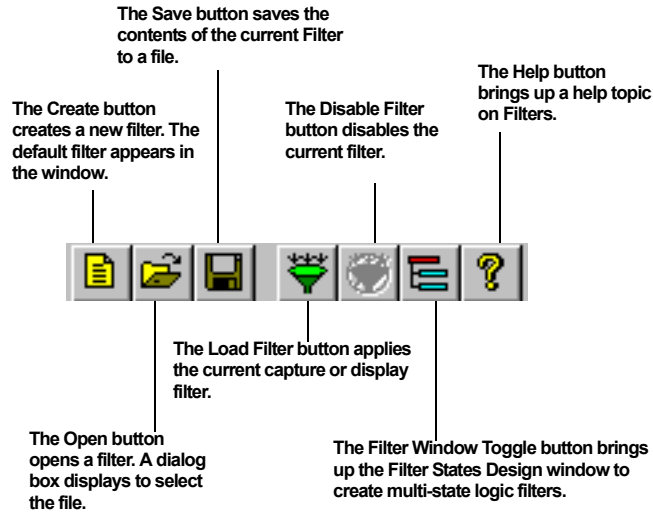The VoIP View button shows all Voice over IP charts and tables. (VoIP Option only)

The Utilization/Error View (Rx) button shows utilization and number of errors over time.

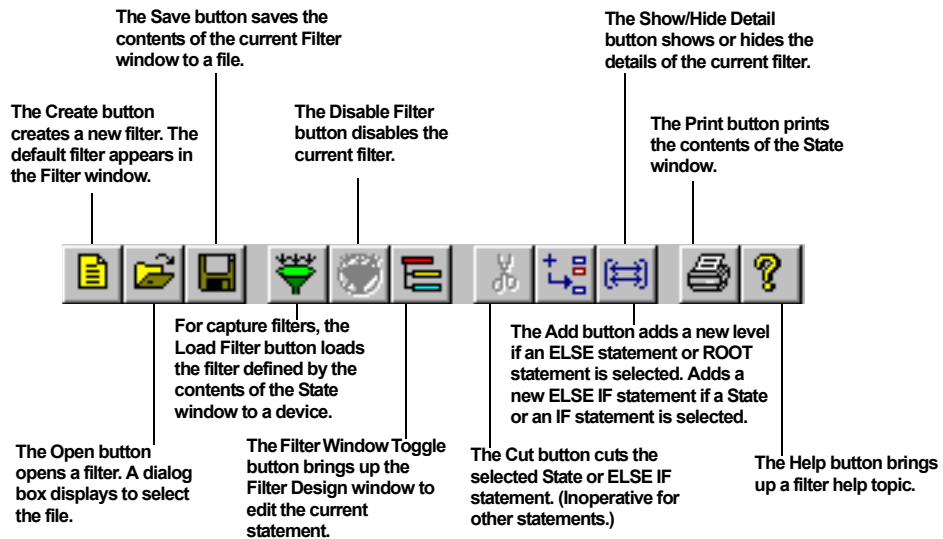The Application Layer Host Table button shows network station traffic by application.

The VLAN button shows network traffic on virtual LANs.

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

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Filter Design Toolbar

The Save button saves the contents of the current Filter to a file.

The Create button creates a new filter. The default filter appears in the window.

The Disable Filter button disables the current filter.

The Help button brings up a help topic on Filters.

The Load Filter button applies the current capture or display filter.

The Open button opens a filter. A dialog box displays to select the file.

The Filter Window Toggle button brings up the Filter States Design window to create multi-state logic filters.

Filter States Design Toolbar

The Save button saves the contents of the current Filter window to a file.

The Show/Hide Detail button shows or hides the details of the current filter.

The Create button creates a new filter. The default filter appears in the Filter window.

The Disable Filter button disables the current filter.

The Print button prints the contents of the State window.

For capture filters, the Load Filter button loads the filter defined by the contents of the State window to a device.

The Add button adds a new level if an ELSE statement or ROOT statement is selected. Adds a new ELSE IF statement if a State or an IF statement is selected.

The Open button opens a filter. A dialog box displays to select the file.

The Filter Window Toggle button brings up the Filter Design window to edit the current statement.

The Cut button cuts the selected State or ELSE IF statement. (Inoperative for other statements.)

The Help button brings up a filter help topic.

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.

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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.