

OpenTrap Introduction

OpenTrap is a 32-bit Windows 95 application that monitors file system activity on your computer. OpenTrap is not designed for and will not run under either Windows 3.1 or Windows NT (any version).

To install OpenTrap, simply place the component files OPENTRAP.EXE, OPENTRAP.HLP, and OPENTRAP.CNT in the directory of your choice. Move the FUNCTRAP.VXD file to either your Windows SYSTEM directory or any other directory that's included in your system's PATH statement. Finally, create a shortcut to OPENTRAP.EXE.

IMPORTANT NOTE: If you also have the PC Magazine Utility "BigBin" installed on your system, you should be aware that OpenTrap and BigBin both use the FUNCTRAP.VXD virtual device driver. For the two programs to work together, there must be **exactly one** copy of FUNCTRAP.VXD on your system, either in your Windows SYSTEM directory or any other directory that's on the system PATH.

OpenTrap uses the FuncTrap VxD to record a log of every file opened or closed. This log can be useful in diagnosing problems such as a program that refuses to launch because "one or more components are missing". In addition to displaying the log on your screen, it can print the log to your printer and export it as ASCII text for use by other programs (such as a database or spreadsheet).

OpenTrap can save your event logs in its own native format for later use; the default extension for log files is .OTL. Each time you launch OpenTrap, it will check your system Registry to see if the .OTL extension is registered. If not, it will automatically register the .OTL extension as the "OpenTrap Event Log" file type, allowing you to either open or print .OTL files directly from within Windows Explorer – just right-click on the file and select the desired action from the pop-up menu.

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File menu commands

The File menu offers the following commands:

<u>New</u>	Creates a new, empty log.
<u>Open</u>	Opens an existing log.
<u>Save</u>	Saves the current log using the same file name.
<u>Save As</u>	Saves the current log to a specified file name.
<u>Save As Text</u>	Writes the current log as a text file.
<u>Print</u>	Prints the current log.
<u>Print Setup</u>	Selects a printer and printer connection.
<u>Exit</u>	Exits OpenTrap.

View menu commands

OpenTrap's logs can be very large. If necessary, it subdivides the current log into logical pages containing up to 1024 records each. The actual number of records per page depends on your current font size. You may use the mouse and scrollbars or the keyboard arrows to scroll within the current page. Use the commands on this menu (or their associated toolbar buttons or accelerator keys) to move from page to page, determine how each record is displayed, and select which records are shown.

The View menu offers the following commands:

<u>Filter Options</u>	Lets you apply various filters to determine which records are shown or printed
<u>First Page</u>	
<u>Last Page</u>	
<u>Previous Page</u>	Navigate between pages in the current log.
<u>Next Page</u>	
<u>Go to page...</u>	
<u>File Toolbar</u>	Shows or hides the File toolbar.
<u>Navigation Toolbar</u>	Shows or hides the Navigation toolbar
<u>Status Bar</u>	Shows or hides the status bar.
<u>Record Numbers</u>	Display absolute record number at the beginning of each line.
<u>Custom Font</u>	Select a font other than the system default for display and printing
<u>Default Font</u>	Revert to the system default font

Logging menu commands

The Logging menu offers the following commands:

<u>Start (or Resume) Logging</u>	Begins logging file system events.
<u>Stop Logging</u>	Stops logging file system events and, if log is not empty, displays the contents of the current log.
<u>Options</u>	Presents a <u>dialog</u> used to select which events will be logged.

Help menu commands

The Help menu offers the following commands, which provide you assistance with this application:


<u>Help Topics</u>	Offers you an index to topics on which you can get help.
<u>About</u>	Displays the version number of this application.

New command (File menu)

Use this command to create a new, empty, even log. If the current log is not empty and has not been saved, you will be prompted to do so before it is discarded.

You can open an existing log with the Open command.

Shortcuts

Toolbar: 
Keys: CTRL+N

Open command (File menu)

Use this command to open an existing log. If the current log is not empty and has not been saved, OpenTrap will prompt you to save it.

You can discard the current log with the New command.

Shortcuts

Toolbar:



Keys: CTRL+O

File Open dialog box

The following options allow you to specify which file to open:

File Name

Type or select the filename you want to open. This box lists files with the extension you select in the List Files of Type box. The default extension for OpenTrap's log files is .OTL.

List Files of Type

Select the type of file you want to open. OpenTrap will only open files that have the .OTL extension.

Drives

Select the drive in which OpenTrap stores the file that you want to open.

Directories

Select the directory in which OpenTrap stores the file that you want to open.

Network...

Choose this button to connect to a network location, assigning it a new drive letter.

Save command (File menu)

Use this command to save the current log to its current name and directory. When you save a log for the first time, OpenTrap displays the Save As dialog box so you can name your log. If you want to change the name and directory of an existing log before you save it, choose the Save As command.

If the current log is empty, this command will be disabled – OpenTrap will not save an empty log.

Shortcuts

Toolbar:



Keys: CTRL+S

Save As command (File menu)

Use this command to save and name the active log. OpenTrap displays the Save As dialog box so you can name your log.

If the current log is empty, this command will be disabled – OpenTrap will not save an empty log.

To save a log with its existing name and directory, use the Save command.

Save As Text command (File menu)

Use this command to save the current log in text format. This is useful if you wish to process OpenTrap's information using another program.

If the current log is empty, this command will be disabled – OpenTrap will not save an empty log.

This command first presents the Export Options dialog, in which you determine the format of the file. After you OK the Export Options dialog, OpenTrap presents a Save As dialog in which you enter or select the name of the file that OpenTrap will write. The default filename will be the same as the current log (as displayed in the main window's title bar) but with the extension “.txt”. Unlike the Save or Save As commands, specifying a different filename here does not change the name of the log.

Shortcuts

Toolbar:



Keys: CTRL+T

File Save As dialog box

The following options allow you to specify the name and location of the file you're about to save: Note that when the Save As Text command presents this dialog, entering a different filename does not change the name of the current log.

File Name

Type a new filename to save a log or export a text file with a different name. OpenTrap adds the extension you specify in the Save File As Type box. By default, OpenTrap's logs use the extension .OTL

Drives

Select the drive in which you want to store the log.

Directories

Select the directory in which you want to store the log.

Network...

Choose this button to connect to a network location, assigning it a new drive letter.

Export Options dialog box

This dialog appears when you select the Save As Text command. Files created this way will always contain plain ASCII text, one record per line. The settings in this dialog let you control which records will be written as well as the format of each line.

The **Filtered Records Only** checkbox determines which records will be written to the file. If there are no view filters in effect, this checkbox will be disabled. Otherwise, checking the box means that OpenTrap will only write the same records that you see displayed in the main window. Leaving the box unchecked tells OpenTrap to write every record in the current log.

The **Include Record Numbers** check box means just what it says. When checked, OpenTrap will precede each record with its absolute record number. This setting is independent of the View menu's Record Numbers command. Note that if output is filtered, the record numbers may not be in direct sequence because they represent each record's physical location in the log. However, records will always be written in ascending order.

The radio buttons in the **Output Format** box determine the way the records are written. The **Plain Text** option means that they will be written in exactly the same form that you see in the main window. The **Comma-delimited** option produces output that is more suitable for use by another program (such as a database or spreadsheet). In this format, each record is written as a series of fields separated by commas. Except for the record numbers, each field will be a single string enclosed in quotes, in the following order and format:

Field	Format
Record Number	A six-digit ASCII number padded with leading zeroes.
Module Name	ASCII text, which will never be more than 11 characters long.
Event	A two-character string. The first character will always be either O for Open or a C for Close. The second character will be either a space (event succeeded) or an asterisk (event failed).
File Name	The name of the file, just as you see it in the main window. This string may be up to 260 characters long. Note that for Close events, this field may contain a string of the form "A file on drive d:" instead of an actual filename. This means that OpenTrap was not able to determine the name of the file that was closed, only the drive on which it resided.
Time	The system time when the event occurred. This will always be a twelve character string of the form hh:mm:ss.ddd . Note that the times for events that occur in direct succession may be identical. This is because the events occurred within an interval smaller than that used by the system clock, which is approximately 1/18th of a second.

1, 2, 3, 4 command (File menu)

Use the numbers and filenames listed at the bottom of the File menu to open the last four logs you closed. Choose the number that corresponds with the log you want to open. If OpenTrap is logging, these commands will be disabled – you must stop logging before you can load a log file.

Exit command (File menu)

Use this command to end your OpenTrap session. You can also use the Close command on the application Control menu. If OpenTrap is logging when you issue this command, it will ask you if you want to stop logging. If you answer "NO" and the Hide main window while logging option is active, OpenTrap will hide the main window and return to its system tray icon.

When OpenTrap does shut down, it will prompt you to save the current log if necessary.

Shortcuts

Mouse: Double-click the application's Control menu button  or single-click the close button.



Keys: ALT+F4

Filters command (View menu)

This command presents a dialog that lets you filter the current log display based on several criteria. Note that this filter only affects what information is displayed, not the contents of the log itself. If you wish to limit the amount of information captured during a session, use the Logging Options command.

When the view is filtered, OpenTrap displays "FILT" indicator in the status bar. If the view is filtered when you use the Save As Text command, the Export Options dialog will let you choose whether or not to use the filter when writing the file.

These options do *not* affect the contents of an .OTL file saved with the usual Save or Save As commands.

Shortcuts

Toolbar:



Filter Options dialog

The settings in this dialog determine which records OpenTrap will display in the main window. This does not affect the contents of the log, only what portion of it is displayed or printed. If you specify more than one filter option, each record must match all of the filters for OpenTrap to display it.

The **Reset** button removes all filters. If the **Save Settings** box is checked when you OK the dialog, OpenTrap will save your filter settings and use them automatically the next time you launch the program. Clicking the Cancel button, the close box, or pressing {Esc} closes the dialog without changing your filter settings.

To use the **Base Name**, **Extension**, or **Module Name** filters, check the appropriate box. OpenTrap will enable the corresponding edit box and shift the focus there so you can either enter or edit your filter string. If you clear one of these check boxes, the filter is disabled but OpenTrap remembers your filter string in case you want to use it again later without having to re-type it.

If you choose to use either the **Base name** or **Extension** filters, keep the following in mind:

- Filenames are not case-sensitive.
- The **Base Name** begins with the first character after the last backslash in the fully-qualified name and ends with the last character before the last "." (if there is one) that marks the beginning of the file extension.
- The **Extension** begins with the first character after the last "." in the filename, if there is one. To filter out filenames that have no extension, check the **Extension** checkbox but delete all characters from the edit field so it is empty.
- You may use the standard wildcard characters * and ?. The ? wildcard will match any character in the corresponding position. The * wildcard is allowed only at the end of a filter string. If used, it matches all remaining characters in that portion of the filename.

The **Module name** field is not case-sensitive and can be no more than 8 characters long. To filter for events generated by <unknown> modules, check the Module Name box but delete all characters from the edit box. This field does not accept wildcards.

First Page command (View menu)

Displays the top of the first page of the current log.

Shortcuts

Toolbar:



Keys: CTRL+Home

Last Page command (View menu)

Displays the end of the last page of the current log.

Shortcuts

Toolbar:



Keys: CTRL+End

Previous Page command (View menu)

Displays the end of the previous page of the current log.

Shortcuts

Toolbar:



Keys: CTRL+PgUp

Next Page command (View menu)

Displays the start of the next page of the current log.

Shortcuts

Toolbar:



Keys: CTRL+PgDn

Go to Page command (View menu)

Lets you enter the page number to be displayed.

Shortcuts

Toolbar:



Keys: CTRL+G

File Toolbar command (View menu)

Use this command to display or hide the File Toolbar, which includes buttons for some of the most common commands in OpenTrap, such as File Open. A check mark appears next to the menu item when the File Toolbar is displayed.

File Toolbar



The toolbar is displayed on the left side of the application window. The toolbar provides quick mouse access to file-related commands in OpenTrap,

To hide or display the File Toolbar, choose File Toolbar from the View menu (ALT, V, T).

Click To



Open a new log.



Open an existing log. OpenTrap displays the Open dialog box, in which you can locate and open the desired file.



Save the active log or template with its current name. If you have not named the log, OpenTrap displays the Save As dialog box.



Export the active log as a text file.



Print the active log.



Start or resume logging file system events.



Stop logging file system events and display the current log.



Set logging options.

Toolbar Docking

You can dock OpenTrap's toolbars to any side of the main window or have them floating freely around the screen. Just click on an open area of the toolbar with the left mouse button, drag its outline (which will change its size and shape appropriately) to the desired position, and release the left mouse button. OpenTrap automatically saves the toolbar's docking position when you exit the program.

Navigation Toolbar command (View menu)

Use this command to display or hide the Navigation Toolbar, which includes buttons used to control the appearance of the display and to move from one display page to another. A check mark appears next to the menu item when the Navigation Toolbar is displayed.

Navigation Toolbar



This toolbar is displayed on the right side of the application window. The toolbar provides quick mouse access to view-related commands in OpenTrap,

To hide or display the Navigation Toolbar, choose Navigation Toolbar from the View menu (ALT, V, V).

Click	To
	Set filtering options.
	Display or hide individual record numbers.
	Move to the first page in the log.
	Move to the previous page in the log.
	Move to a specific page in the log.
	Move to the next page in the log.
	Move to the last page in the log.
	Select a custom font.
	Restore system default font.



Status Bar command (View menu)

Use this command to display and hide the Status Bar, which describes the action to be executed by the selected menu item or depressed toolbar button and other program information. A check mark appears next to the menu item when the Status Bar is displayed.

Status Bar



The status bar is displayed at the bottom of the OpenTrap window. To display or hide the status bar, use the Status Bar command in the View menu.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you wish not to execute the command, then release the mouse button while the pointer is off the toolbar button.

The right areas of the status bar indicate one or more of the following conditions:

Indicator	Description
LOGGING	OpenTrap is logging system events
IDLE	OpenTrap is not logging file system events.
Log Is Full	OpenTrap is idle and the log buffer is full.
FILT	Your view of the current log is <u>filtered</u> .

The rightmost panel in the status bar indicates the status of the current log. When OpenTrap is idle, it indicates which logical page you are currently viewing. When OpenTrap is logging, it displays the approximate number of records in the log.

To minimize its impact on your system's performance while logging, OpenTrap does not update the record count dynamically. Instead, it only updates the status bar when the main Window enters the idle state (that is, it has no input to process). You can force the record count to update by simply passing the mouse pointer over the main window. This causes the window to "wake up" to handle the mouse movement events. When the mouse pointer either stops moving or moves outside the window's borders, the window re-enters the idle state and OpenTrap updates the status bar.

Record Numbers command (View menu)

Shows or hides the record number at the beginning of each line, both in the screen display and in printouts. However, this setting is independent of the option presented when exporting a log as a text file.

Shortcuts

Toolbar:



Custom Font command (View menu)

Presents a Font dialog so you can select a font other than the system default for the screen display and printed output. OpenTrap remembers the font setting that was in use when you end the program.

Shortcuts

Toolbar:



Default Font command (View menu)

Cancels your custom font selection and reverts to the system default font. OpenTrap remembers the font setting that was in use when you end the program.

Shortcuts

Toolbar:



Choose Font dialog box


This dialog appears when you select the Custom font command. Use it to choose an alternate typeface, size, and style to be used both for displaying and printing your logs. OpenTrap automatically remembers the font that was in use when you exit the program.

Start Logging command (Logging menu)

This command tells OpenTrap to begin logging file system events. If the current log is not empty, logged events will be appended to it. Logging continues until either:

- You issue the Stop LoggingHID_LOGGING_STOP command.
- OpenTrap's buffer fills.
- You end the current Windows session, in which case OpenTrap will prompt you to save the current log if necessary. Canceling the save request will prevent Windows from shutting down.

Shortcuts

Toolbar: 

Stop command (Logging menu)

Stops logging file system events and displays the contents of the current log. OpenTrap will stop logging automatically when its buffer fills or you end the current Windows session.

Shortcuts

Toolbar:



Options command (Logging Menu)

Presents a dialog letting you control which file system events are logged, the size of the log buffer, and whether or not OpenTrap will hide its main window and run from a system tray icon while logging.

Shortcuts

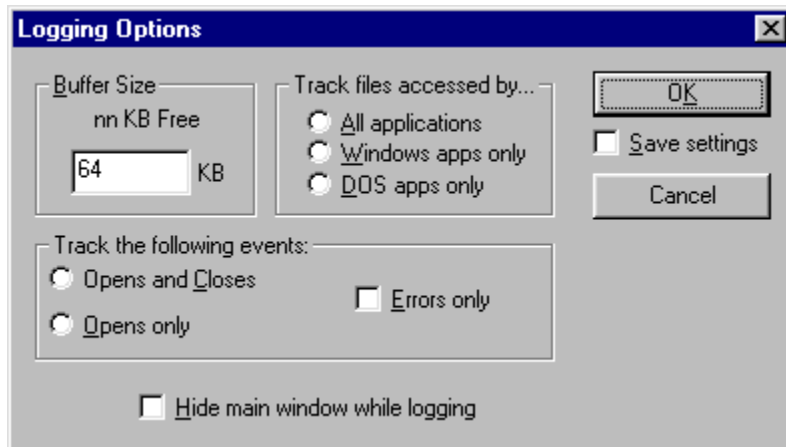
Toolbar:



Logging Options dialog

This dialog lets you control the size of OpenTrap's log buffer and limit what information it will record. For more information about individual settings, click on a control in the image below. You can also get help in the dialog itself by right-clicking a control and selecting "What's this?" from the pop-up menu.

NOTE: When the **Hide main window while logging** box is checked and OpenTrap is logging, closing the main window does not exit the program—it just hides the window again. If you wish to exit the program, you must stop logging first.



Index command (Help menu)

Use this command to display the opening screen of Help. From the opening screen, you can click either the Contents, Index, or Find tabs to locate specific help topics.

Once you open Help, you can click the Contents button whenever you want to return to the opening screen.

Using Help command (Help menu)

Use this command for instructions about using Help.

About command (Help menu)

Use this command to display the copyright notice and version number of your copy of OpenTrap.

Context Help command



Use the Context Help command to obtain help on some portion of OpenTrap. When you choose the Toolbar's Context Help button, the mouse pointer will change to an arrow and question mark. Then click somewhere in the OpenTrap window, such as another Toolbar button. The Help topic will be shown for the item you clicked.

Shortcut

Keys: SHIFT+F1

Title Bar

The title bar is located along the top of a window. It contains the name of the application and log.

To move the window, drag the title bar. Note: You can also move dialog boxes by dragging their title bars.

A title bar may contain the following elements:



Application Control-menu button



Maximize button



Minimize button



Restore button



Close button



Name of the log

Scroll bars

Displayed at the right and bottom edges of the main window. The scroll boxes (or “thumbs”) inside the scroll bars indicate your vertical and horizontal location in the log, and the relative size of the thumb compared to the size of the entire scroll bar corresponds to the size of the window compared to the size of the entire log. You can use the mouse to scroll to other parts of the log.

Clicking the arrows at the top or bottom of the vertical scroll bar will scroll the display one line at a time. Clicking in the area between the thumb and an arrow scrolls one page in that direction.

On the horizontal scroll bar, clicking between the thumb and an arrow scrolls by the width of the window. Clicking on the arrows at either end scroll 1/10th of that distance.

Size command (System menu)

Use this command to display a four-headed arrow so you can size the active window with the arrow keys.



After the pointer changes to the four-headed arrow:

1. Press one of the DIRECTION keys (left, right, up, or down arrow key) to move the pointer to the border you want to move.
2. Press a DIRECTION key to move the border.
3. Press ENTER when the window is the size you want.

Note: This command is unavailable if you maximize the window.

Shortcut

Mouse: Drag the size bars at the corners or edges of the window.

Move command (Control menu)

Use this command to display a four-headed arrow so you can move the active window or dialog box with the arrow keys.



Note: This command is unavailable if you maximize the window.


Shortcut

Mouse: Drag the window's title bar.

Minimize command (application Control menu)

Use this command to reduce the OpenTrap window to an icon.

Shortcut

Mouse: Click the minimize icon  on the title bar.

Maximize command (System menu)

Use this command to enlarge the active window to fill the available space.

Shortcut


Mouse: Click the maximize icon  on the title bar; or double-click the title bar.

Close command (Control menus)

Use this command to close the active window or dialog box. Closing OpenTrap's main window ends the program, prompting you to save the current log if necessary.

Double-clicking a Control-menu box is the same as choosing the Close command.

Shortcuts

Mouse: Click the close icon  in the title bar.

Keys: ALT+F4 closes the OpenTrap window or dialog box

Restore command (Control menu)

Use this command to return the active window to its size and position before you chose the Maximize or Minimize command.

Shortcuts

Mouse: Click the restore icon  in the title bar.

Modifying the Log

The only way to modify an OpenTrap log is to append records to it using the [Start Logging](#) command. OpenTrap does not allow deleting, inserting, copying, or editing records because the meanings of some records depend on others (see [How OpenTrap logs events](#) for more information). Arbitrarily editing or deleting records could make it impossible for OpenTrap to display the log in a meaningful way.

No Help Available

No help is available for this area of the window.

No Help Available

No help is available for this message box.

How OpenTrap logs events

The actual “grunt work” of logging events is performed by the FUNCTRAP.VXD virtual device driver. OpenTrap loads the device driver into memory, then launches a worker thread to monitor the device driver’s activity. When this thread starts, it sends the device driver either one or two condition records that tell the driver which events to capture. When a matching event occurs, the device driver calls a function in OpenTrap, passing it information about the event. This *callback function* is responsible for processing this information and, if necessary, appending it to the log in memory.

When logging stops, Open trap parses the log so that it can display filenames for Close events. This extra processing is necessary because FUNCTRAP.VXD cannot report the name of a file when a handle is closed, only the drive letter on which the file resided. Therefore, OpenTrap has to do some extra work to display this information for you, taking advantage of the way Windows keeps track of files. When an application or process opens a file, the file system creates a *handle*, which is essentially an arbitrary 32-bit number, that the application uses to access that file. Once created, a handle refers to the same physical file until it is released by all applications that may be using it. At that point, the handle is destroyed and the numeric value it contained is “recycled” so that it can be used again. OpenTrap stores these handles but it does not display them because they only have meaning while they are in use by an application. That is, a given handle value could be used to refer to many different files during the same logging session.

Each time logging stops, OpenTrap scans through the entire log in memory. When it encounters a Close event, it stops and looks backward in the log until it finds an Open event for the same handle value. If it does, it sets the current Close event’s filename pointer to point to the filename for the corresponding Open event. This allows OpenTrap to display the name of the file that was closed without requiring additional storage for an duplicate copy of the filename.

This mechanism also means that OpenTrap may not always be able to determine the filename for a Close event. Specifically, if a file was opened before OpenTrap began logging and then closed while logging was in progress, OpenTrap will not be able to find a matching “Open” event for that handle. When this happens, OpenTrap displays the generic “Closed a file on drive d:” message instead of a true filename.

About the log buffer

To minimize its impact on your system, OpenTrap logs events by copying them directly to a *log buffer* in memory, and it does not manage this buffer's size dynamically. Instead, the buffer is fixed in size and OpenTrap automatically stops logging if the buffer fills.

You can change the buffer size in the Logging Options dialog box. The absolute minimum is either 64K or large enough to hold the current log (whichever is larger). The absolute maximum is 2048K. This setting does not affect the size of a log file when saved to disk, only the amount of memory reserved for the buffer. When you save a log to disk, OpenTrap only writes the portion of the buffer that actually contains valid data.

When you load a log file from disk, OpenTrap first checks the current buffer size. If it is not large enough to hold the file, OpenTrap will reallocate the buffer as needed and (if possible) add an extra 16K to allow you to append records to the log.

Command Line Options

OpenTrap accepts the following *switches* and *arguments* on the command line, which is not case-sensitive.

Switches begin with either "/" or "-", consist of a string of one or more non-blank characters, and must be separated by spaces or tabs. The order of switches is not important, but they must be separated by spaces.

An argument is any string of text not beginning with either "/" or "-". If arguments contain any spaces or other special characters, they must be enclosed in quotes. The order of arguments is important. In order they represent a filename, a printer name, a printer driver name, and a port name.

filename Tells OpenTrap to open the specified log file. If the file does not exist or could not be opened, OpenTrap presents an error message and terminates.

/P filename Tells OpenTrap to print the specified file to the default printer and terminate. The filename is required. This option prints the file using the filter and view settings stored in the Registry unless you override them on the command line. If you set a custom font the last time you closed OpenTrap, that font will be used for the printout.

/PT filename printer driver port
Same as /P, but prints to the specified device.

/A Starts logging immediately after startup. Ignored if /P or /PT is used.

/U Uninstalls OpenTrap. When specified, OpenTrap asks if you wish to proceed with the uninstall process. If you do, all other command-line switches and arguments are ignored. Otherwise, the remaining switches and arguments are processed normally. See [Removing OpenTrap from your System](#) for further information.

The remaining options are used to set logging (/L), export (/E), and filtering (/F) options. If any of these switches are specified, with or without arguments, all settings within that "family" revert to their default values, regardless of the settings stored in the Registry. This ensures that operation from the command line will be consistent: you only need to specify those settings that are not defaults.

/L[options] Sets logging options. Settings specified via this switch will not be retained unless you save them manually via the [Logging Options dialog](#). This switch accepts the following options:

H Hide main window while logging. (default = don't hide)

E Errors only (default = all events)

O Open events only (default = Opens and Closes)

A All apps (default).

D DOS apps only.

W Windows apps only.

If more than one of A, D, or W is specified, OpenTrap will use the one that appears last.

/E[options] Sets Export options. Settings specified on the command line become the new defaults unless you change them manually by exporting a text file. Options are:

R Record numbers (default = no record numbers).

C Comma-delimited format (default = plain text).

F Filtered records only (default = all records).

/B[number] Sets the log buffer size. If you also specified the name of a log file to load or print, OpenTrap will override this setting if necessary. The number must range

from 64 to 2048. If the value specified is too small, 64 will be used. If it is too large, 2048 will be used. OpenTrap will not retain this setting unless you save it manually via the Logging Options dialog.

/R[option] Sets the View/Record Numbers option. This setting is saved automatically when OpenTrap terminates.

- S** Show record numbers.
- H** Hide record numbers (default).

/F[option] Sets filtering options. Options specified via this switch will not be retained unless you save them manually via the Filter Options dialog. The options for this switch cannot be "stacked". You must specify /F separately for each filter (B, E, M, and/or T) that you wish to set. String arguments for the B, E, and M options must not be separated by a space, and must be quoted if they contain spaces or other special characters.

B"string" Sets the base name filter. If "string" is omitted or empty, this option is ignored and the base name filter is turned off.

E"string" Sets the extension filter. If "string" is omitted or empty, filters for files with no extension.

M"string" Sets the module name filter. If "string" is omitted or empty, filters for the "<unknown>" module.

T[opts] Sets the event type filters. Options (which can be combined) are:

O = Opens only (default = Opens and Closes)

E = Errors only (default = All events)

For example, if you want to print the file MYLOG.OTL and show only files that were opened by <unknown> modules with the Base Name of "MY*" and the extension of "TXT", the command line would read:

```
OPENTRAP /P mylog.otl /fb"my*" /fb"txt" /fb /fto
```

Removing OpenTrap from your system

To remove OpenTrap, launch the program with the /U switch on the command line. OpenTrap will ask if you wish to proceed. Answer Yes, and OpenTrap will remove all of its settings from the system Registry. If it detects that the .OTL file extension is not registered to OpenTrap, it will ask whether or not you wish to remove that association.

Once the uninstall process is complete, you may delete OpenTrap's files from your hard disk.

IMPORTANT: If you also have the PC Magazine Utility "BigBin" installed on your system, do not delete the FUNCTRAP.VXD virtual device driver. BigBin requires that file to operate.

Records activity for all applications

Records activity for Windows applications only

Records activity for DOS applications only

Enter a value here (up to 2048) to change the buffer size. The minimum buffer size is either 64K or large enough to hold the current log, whichever is larger.

Changing the buffer size will not affect the current log's contents.

Displays the amount of space available in the buffer

Tells OpenTrap to run from an icon in the system tray while logging. Double-clicking the tray activates the main window so you can either stop logging or check the log status. If you don't stop logging first, closing the main window does not exit the program, it just hides the window.

Check this box to save your settings as the
new defaults when you OK the dialog

Records both Open and Close events

Records Open events only

Records only events that failed

Determines which application types will be monitored

Determines which event types will be recorded

These options determine which events will be displayed

Shows all events

Shows open events only

Shows close events only

Shows only events that failed

Removes all filters

These settings filter the display by filename and extension

Activates or deactivates the base name filter

Activates or deactivates the extension filter

These settings filter the display by module name

Activates or deactivates the module name filter

Edit the base name filter string. You may use the ? wildcard to match any single character and/or the * wildcard at the end of the string to match all remaining characters.

Edit the extension filter string. You may use the ? wildcard to match any single character and/or the * wildcard at the end of the string to match all remaining characters. To search for files with no extension, leave this field empty.

Edit the module name filter string. Wildcards are not allowed.
To specify the <<unknown>> module, leave this field empty.

When checked, exports only those records that match the current view filters

When checked, includes absolute record numbers.
NOTE: This setting is independent of the screen display.

These settings control the content of the exported file

Writes each record as you see it on the screen

Writes each record in comma-delimited format

Indicates the range of pages in the log

Enter the number of the page you wish to see.

Error: Could not load FUNCTRAP.VXD

This message means that OpenTrap could not load the FUNCTRAP.VXD virtual device driver. This usually indicates that FUNCTRAP.VXD is either missing, damaged, or in the wrong place.

FUNCTRAP.VXD must be located in one of three places:

1. In the same directory as OpenTrap.
2. In your \WINDOWS\SYSTEM directory.
3. In any directory that's included in your system PATH.

IMPORTANT: OpenTrap shares the FUNCTRAP.VXD device driver with the PC Magazine Utility BigBin. If you have BigBin installed, there must be exactly one copy of FUNCTRAP.VXD on your system. If you do not have both programs installed in the same directory, FUNCTRAP.VXD must be placed in a directory that's included in your system's PATH statement; ideally, in the \WINDOWS\SYSTEM directory. Otherwise, you can put it in the same directory as BIGBIN.EXE and OPENTRAP.EXE

Error: Unable to launch worker thread

This message occurs when OpenTrap is unable to launch the background process that monitors file system events. This is usually caused by either insufficient available memory or too many processes already running.

Error: Log start failure

This message means that OpenTrap was unable to start logging. The exact cause of the failure was indicated by the preceding error message. This error does not affect the contents of the current log.

Error: Invalid file format

The file you attempted to load is either damaged or was not an OpenTrap log to begin with. (OpenTrap places a "signature" at the beginning of its log files, so it can identify its own files regardless of their names.) The operation was abandoned, and the contents of the current log remain unchanged.

Error: Memory allocation failure

This message occurs when you attempt to load a file that is too large to fit within the current buffer. OpenTrap attempted to enlarge the buffer to hold the file, but there was not enough memory available. The buffer size remains the same, and the current log contents are not affected.

You may be able to remedy this error by using the Options command from the View Menu to increase the buffer size manually, then try loading the file again. If that fails, you will have to close one or more applications to make more memory available.

Error: Invalid filename

This message indicates that either the **Base Name** or **Extension** string you entered is invalid. While you can use the standard "?" and "*" wildcards in these fields, the * wildcard can appear only once: at the end of the string. When used, it matches all remaining characters in that portion of the filename. For example, if you're setting a Base Name filter, then:

"FOO*" matches any base name at least three letters long that begins with the letters "FOO"

"B?R*" matches any base name at least three letters long whose first letter is "B" and third letter is "R".

"SNAF?" matches any base name beginning with "SNAF" that is exactly five characters long.

Note that if you're filtering for a long filename that contains blank spaces or other special characters, you do *not* have to enclose your filter string in quotes. Except for wildcards, OpenTrap interprets every character in the string literally.

Error: Invalid module name

The **Module Name** box is checked, but the filter string you entered is invalid. Specifically, the wildcard characters "?" and "*" are not allowed – OpenTrap can filter only for a specific module name. If you wish to filter the display to show only files accessed by <unknown> modules, you must delete all characters from this field.

Error: Base Name filter cannot be blank

If the **Base Name** box is checked, the filter string cannot be empty. It must contain at least one non-blank character.

Do you wish to stop Logging?

This prompt appears when you attempt to close OpenTrap's main window while logging is in progress. Answering **Yes** will stop logging and terminate the program. If the contents of the current log have changed, you will be given the opportunity to save the log to disk.


If the Hide main window while logging option is active, answering **No** to this message will hide the main window without terminating the program.

Print command (File menu)

This command prints the current log to your printer using the current font and view filters. Note that OpenTrap does not allow you to select the number of pages to print because this varies depending on the font and page size. The number of pages produced bears no relation to the number of logical pages in the display because the print function wraps lines to fit the page as needed.

When you select this command from the menu, it presents a standard Print dialog box in which you can select a printer and/or printer settings, or cancel the operation. If you use the toolbar icon, OpenTrap prints immediately using the current settings, without presenting the print dialog.

Shortcuts

Toolbar: 
Keys: CTRL+P

Print dialog box

The following options allow you to specify how the log should be printed:

Printer

This is the active printer and printer connection. Choose the Setup option to change the printer and printer connection.

Setup

Displays a Print Setup dialog box, so you can select a printer and printer connection.

Print Range

This option is disabled. OpenTrap always prints the entire log using the current view filters. The number of pages printed depends on the size of the current font and usually will not correspond with the number of logical pages available in the main window:

Copies

Specify the number of copies you want to print for the above page range.

Collate Copies

Prints copies in page number order, instead of separated multiple copies of each page.

Print Quality

Select the quality of the printing. Generally, lower quality printing takes less time to produce.

Print Progress Dialog

The Printing dialog box is shown during the time that OpenTrap is sending output to the printer. The page number indicates the progress of the printing.

Print Setup command (File menu)

Use this command to select a printer and a printer connection. This command presents a Print Setup dialog box, where you specify the printer and its connection.

Print Setup dialog box

The following options allow you to select the destination printer and its connection.

Printer

Select the printer you want to use. Choose the Default Printer; or choose the Specific Printer option and select one of the current installed printers shown in the box. You install printers and configure ports using the Windows Control Panel.

Orientation

Choose Portrait or Landscape.

Paper Size

Select the size of paper that the document is to be printed on.

Paper Source

Some printers offer multiple trays for different paper sources. Specify the tray here.

Options

Displays a dialog box where you can make additional choices about printing, specific to the type of printer you have selected.

Network...

Choose this button to connect to a network location, assigning it a new drive letter.

