A

ENlighten/DSM Basics

ENlighten/DSM contains menus, buttons, icons and other tools that are common throughout the program and allow you to easily perform tasks and procedures, without resorting to shell scripts. This appendix describes the following basics for using ENlighten/DSM:

- Global functions

- List function buttons

- Performing actions on list items

- Creating defaults

- Network pools

- Performance expectation

- Data requests and sorts

Global Program Functions

ENlighten/DSM provides you with tools that allow you to easily manipulate data. For example, you can search for a user from a long list of names, sort information for better clarity, or mail information to users or managers.

These global tools perform beyond the normal shell scripts and allow you to find and sort needed information, then perform an action. Taking action may also include printing reports or mailing forms to other users.

There are two sets of global function buttons that are located in the top right corner of each report window ().
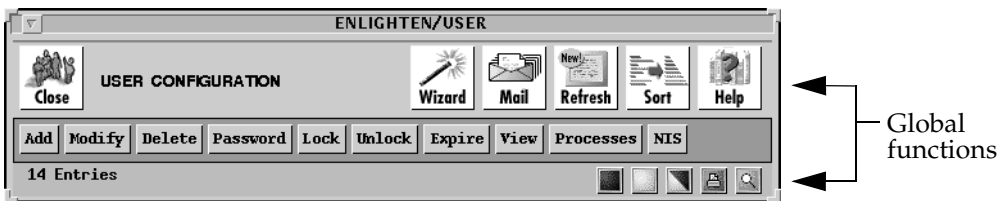

Figure A-1 Global function buttons

Close Icon

The Close icon is available in all windows and is located in the upper left-hand corner. You can use this button to close the window without further modifying any data. Most ENlighten/DSM windows also have a Close or Cancel button that accomplishes the same thing.

Wizard Icon

The Wizard icon is available in the User Configuration, Configured Printers, Host Configuration, and Disk Usage Information By Filesystem windows. This feature helps analyze your system from a security and consistency perspective. Refer to Appendix A, "Wizard," in the *ENlighten/DSM Reference Manual* for information about the Wizard features.

Mail Icon

You can use the ENlighten/DSM Mail System to send customized forms to the highlighted user(s). Click on the Mail icon and a pop-up window appears for you to fill-in (Figure A-2).
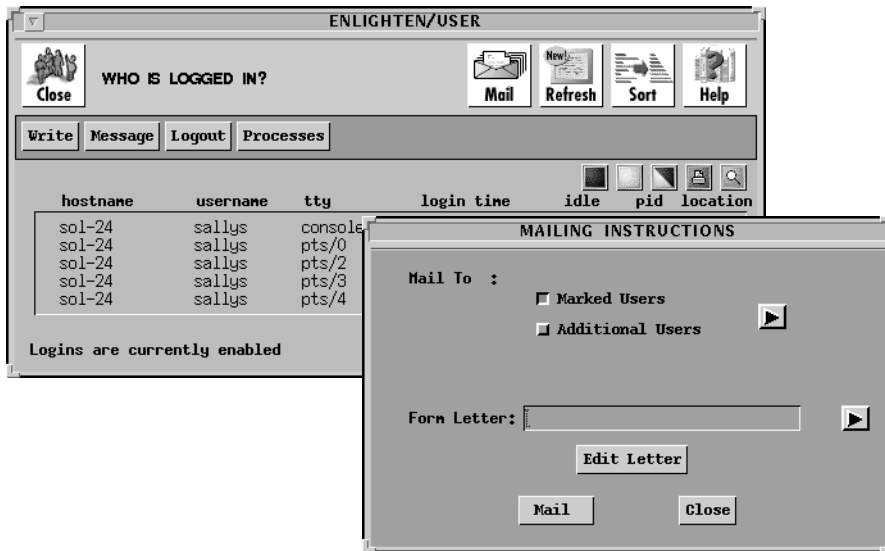

Figure A-2 Mail windows

Mail To field

Use this field to send mail to the highlighted user(s) and/or any additional users who may not be on the current list. Or, click the arrow button to the right to make your selection(s) from the pop-up list of additional users.

Form Letter field

After entering mail recipients in the Mail To field, use this field to send them a form letter. Or, click the arrow button to the right to make your selection from the pop-up list of the form letters.

You can create a new form letter by specifying a new filename in the Form Letter field and then clicking the Edit Letter button. A window running a vi session appears. Modify this as necessary and save the "new" letter.

You can also modify a new form letter by typing in the filename of an existing form letter. Click the Edit Letter button and the form letter will appear in a window running a vi session. Then make any modifications you need and save the letter as a different filename, and then quit the original letter.

☞ You must quit/close the form letter window before attempting to access other ENlighten/DSM features.

Once you have made all your changes to the letter, you can send it by clicking the Mail button. ENlighten/DSM will prompt you to confirm your action.

Form Letters

ENlighten/DSM is installed with three pre-defined form letters, which can be modified:

- Disk   Disk usage letter

- Obvious   Security letter regarding an obvious password

- System   System performance letter

These letters are stored in the file $ENLIGHTEN/config/formlet. You can also use macros within the body of a form letter. For more details, see Appendix J, "Macros," in the *ENlighten/DSM Reference Manual*.

Refresh Icon

To update the screen with the most current information, click the Refresh icon. ENlighten/DSM automatically regenerates the current screen as if you had reselected the window. This is particularly useful when killing a process. Once ENlighten/DSM has sent the desired signal to the process, the report can be regenerated and you can quickly determine if the process still exists.

You can also change how the Refresh option works in the Configure
—> Session Preferences window. See Chapter 2, "Configure," in the
ENlighten/DSM Reference Manual for more details.

Previous Selections

Some reports are generated based on the selections made from a
parent window. For example, a list of processes may have been
generated based on the selected users from the Process Summary
report. In such cases, the parent window is first regenerated and the
same items are reselected.

The criteria for reselection is based solely on position. If the first and
third entries are highlighted, then the first and third entries will also be
selected in the newly generated report. This is independent of the fact
that in the first report, for example, the first entry referred to user `root`
and the third entry to user `bin`.

Sort Order

Click the Refresh icon and the report is regenerated, and the sort order
previously selected for the report (via the Sort icon) will be preserved.
When a report is generated from the main menu, the sort order is reset
to No Sort. Also, selected items remain selected based solely on
position (as described in "Previous Selections").

☞ Disk-related windows (except NFS) do not have any
    refresh capabilities since they are based on previously
    generated disk snapshots. Disk snapshots are used since
    scanning disk partitions in real time would be extremely
    intensive from a performance and resource perspective.

Sort Icon

Click the Sort icon to view the information on the screen in different formats. Information can be sorted using ascending or descending order on the highlighted fields (Figure A-3).
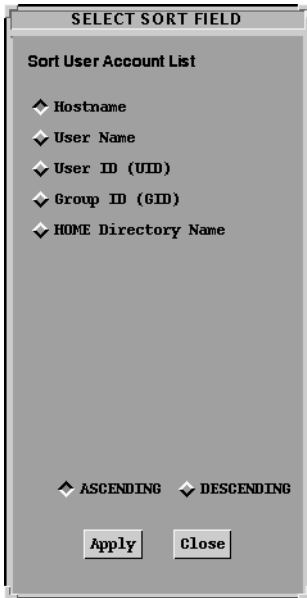

Figure A-3 Sort window

Select the sort criteria you want and then click the Apply button to perform the sort. Remember that the longer the list, the longer the sort will take. Click the Close button to abort the sort. Most reports are sortable; each has its own set of sort criteria.

Help Icon

The Help icon is available on all report and configuration screens. If you are having a problem understanding a screen or do not know how to proceed, click the Help icon for more information. A Help window appears explaining the contents of the screen and the possible actions from this screen (Figure A-4).
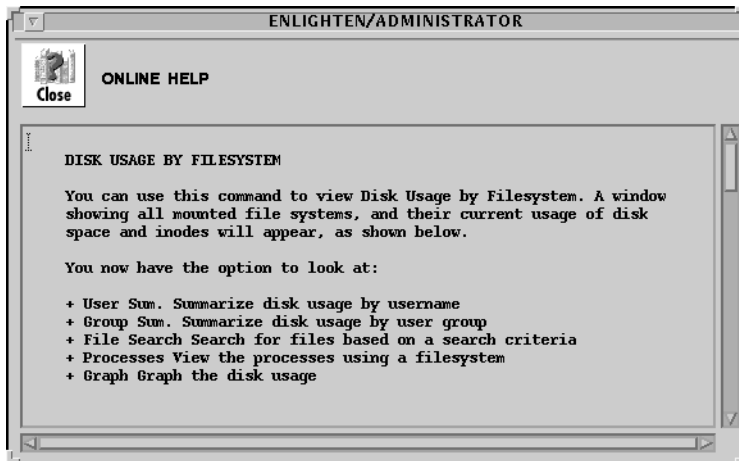

Figure A-4 Help window

List Function Buttons

The list function buttons, located on the right side of a window (Figure A-5), allow you to manipulate as a block the selection of items within the list box.

List function buttons

Figure A-5 List function buttons

Click the corresponding button to:

 Select all items in the list

 Deselect all items in the list

 Invert selections

 Print the report

 Search the list for a given text string

Selection Options

Click the Select button to highlight the full list box regardless of current selection status. For long lists this may take some time. Click the Deselect button and all of the highlighted selections become unhighlighted (deselected).

Click the Invert button to highlight all list entries not currently selected, while unhighlighting those currently selected. This is especially useful when you want to select most, but not all, of a list; first select the few exceptions, then click the Invert button.

Printing

Click the Print button to print a copy of the currently displayed information. The report will be sent to the print-path declared in the Execute command for Print Icon field under Configure —> Session Preferences. For more information on setting up the Print command, refer to Chapter 2, "Configure," in the *ENlighten/DSM Reference Manual*.

Searching

To enter your search pattern, set the scope for the search and specify how ENlighten/DSM should visually reflect the search results in the list you're viewing, then click the Search List button. The Search List window appears (Figure A-6).
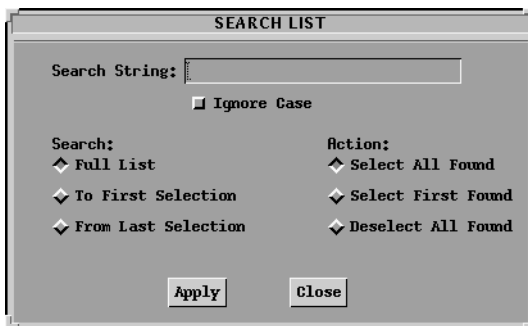
```
┌─────────────────────────────────────────┐
│              SEARCH LIST                 │
│                                          │
│  Search String: │                      │ │
│                                          │
│            ☐ Ignore Case                 │
│                                          │
│  Search:              Action:            │
│  ◆ Full List          ◆ Select All Found │
│                                          │
│  ◆ To First Selection ◆ Select First Found│
│                                          │
│  ◆ From Last Selection ◆ Deselect All Found│
│                                          │
│         Apply      Close                 │
└─────────────────────────────────────────┘
```

Figure A-6 Search List window

Pattern

Enter a simple text string in the Search String field. You can't use regular expressions or wildcard characters here; the text is searched as input, including any leading or trailing spaces. You can also use the Ignore Case toggle to choose whether all text is considered as one case (no difference between upper- and lowercase text) or not (the default). A successful match occurs whenever the pattern is found anywhere in the list entry.

Scope

You must then decide the scope of the search. By default, the search for the text is made on the Full List, beginning with the first item and proceeding through the full list to the last item. Alternatively, you may specify the search to be limited to the "top" or "bottom" of the list.

The "top" of the list (To First Selection) is defined as beginning with the first item in the list and proceeding until a currently selected entry is reached. Thus, if the first entry in the list is currently selected, no search is performed.

The "bottom" of the list (From Last Selection) begins with the entry after the currently last selected entry and proceeds to the bottom of the list. Thus, if the last entry in the list is currently selected, no search is performed.

Highlighting the Results

Finally, you need to specify the action taken after a successful match. By default, all entries successfully matched will be highlighted (Select All Found). You can also choose to have all matches unhighlighted (Deselect All Found). Or, you can have the search stop after the first successful match (Select First Found), which is then highlighted if it was not already so.

Performing Actions on List Items

Once you have selected entries in a list, you can use ENlighten to perform actions against these entries. The available actions are displayed as buttons just below the global icons in a window. These actions differ for each type of report; each window's action options are detailed in the *ENlighten/DSM Reference Manual*. Figure A-7 shows the action buttons for the User Configuration window.
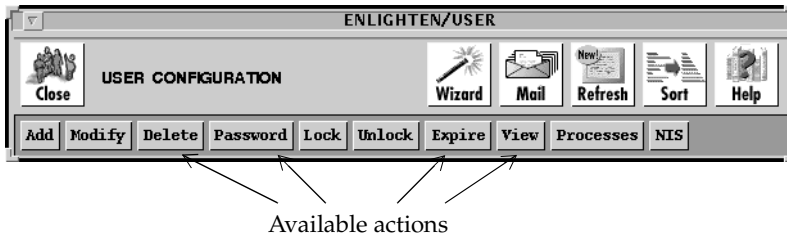

Figure A-7 Action buttons

If you click an action button without first selecting something from the displayed list, an error message, similar to the one displayed in Figure A-8, appears reminding you to first select one or more list items.
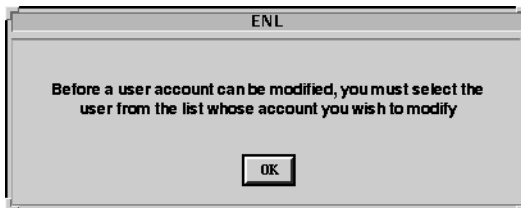

Figure A-8 Error message

Click the OK button, select the items from the original list you want to manipulate further, and reselect the relevant action button.

☞ Some actions require further information before being performed, for example, changing user ownership. In these cases, ENlighten/DSM will display the reminder notice prior to the actual action taking place.

Confirming Requests

ENlighten/DSM may also prompt you to confirm the requested action before performing that action on any selected list item (Figure A-9).
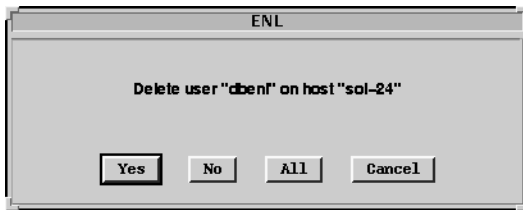
Figure A-9 Confirmation request

You can then select from the following confirmation options:

Yes	Perform the action described in the window and proceed to the next highlighted item (if any).
No	Do not perform the action on the current item and proceed to the next highlighted item (if any).
All	Perform the action on all remaining highlighted items.
Cancel	Cancel the current command. This has the same effect as clicking the No button for all remaining highlighted items.
	Clicking the Cancel button will not reverse any actions taken against previously selected items from the current list.

Graphs

You can display report data from several windows in a graph.
For example, you can graph Swap Space Usage ([Figure A-10](#)).
ENlighten/DSM will determine the appropriate graph type for
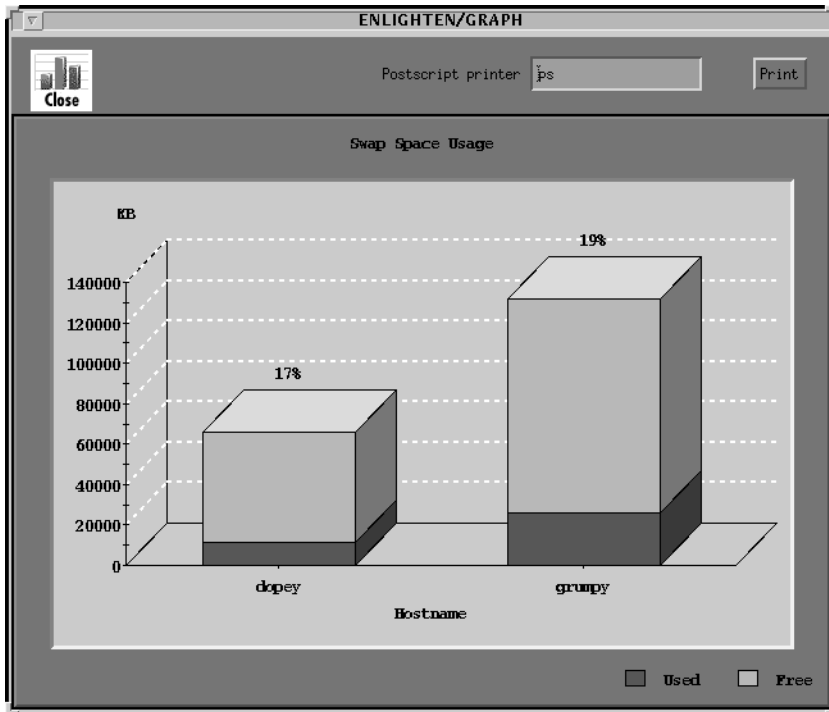displaying the data for each type of report.

Figure A-10 Displaying report data

If you don't select (highlight) any items in the report, ENlighten/DSM
graphs all the entries in the report. Otherwise, only the entries you
selected are graphed. The items are graphed in the same order as they
appear in the report; so you can sort the report (via the Sort icon)
before graphing the data as needed.

Once the graph is displayed, you can use your middle mouse button to
rotate the picture about its axis. You can also click the Print button to
print the graph.

Creating Defaults

ENlighten/DSM provides a number of system defaults that allow the program to automatically set up session preferences. To revise any of these parameters, choose Session Preferences from the Configure menu item. For more details, see Chapter 2, "Configure," in the *ENlighten/DSM Reference Manual*.

Network Pools

In order to manage multiple hosts simultaneously, ENlighten/DSM works with "pools." A pool is a group of hosts that can be treated as a single entity. When viewing disk usage, for example, the usage of all hosts in the current pool is displayed. Similarly, any monitoring request will report activities from all hosts in the pool, so you can monitor multiple hosts simultaneously.

☞   If you leave the Hostnames field in a window empty, any actions you select from that window will be performed on *all* hosts in the current pool.

As each report is generated, each item in the report will also show the original hostname associated with it. You can then view and select specific host entries to use for performing further activities.

Performance Expectations

ENlighten/DSM is constructed from a layered, client-server approach. Each layer is responsible for providing one phase of handling and preparing the data. Therefore, your operating system environment and the actions you request can affect the rate for obtaining results. This section highlights some performance facts to help you predict the time required to perform ENlighten/DSM actions.

Large Lists

The most time-consuming part of displaying an ENlighten/DSM window is the building of window lists. In fact, the time required grows geometrically with the length of each entry and the number of entries in a list. On large lists (greater than 1000 entries), more than 80% of the wait time is spent on the X display mechanism.

Disk Snapshots

ENlighten/DSM maintains a database of file entry information for each disk partition you examine during a Search or Summary of Usage. The first time you use one of these features to examine a given partition, or when you Rebuild a request, the selected partition databases are built. This process may take up to two minutes for a partition with 10,000 files. For more details on this process, see Chapter 5, "Disk," in the *ENlighten/DSM Reference Manual*.

Data Requests and Sorts

Whenever you request some configuration or process information (disk partitions, disk files, CPU summaries, and so on), either a text database must be searched or a series of UNIX commands performed to collect the information. On a system supporting many CPU or disk requests, all processes, including ENlighten/DSM , run slowly. Furthermore, ENlighten/DSM combines multiple UNIX commands to present the results properly; so what you might think of as a simple query could require complex handling.

Although there are time-saving methods in the program to speed queries, data requests are similar to database requests—the larger the database to be searched and the broader the search criteria, the longer it takes to process the query and sort the results. When you request information across hosts, this happens more.

The first queries across a network "warm up" the connections, so these requests may take several seconds longer than usual to complete. This timing is dependent on the current usage on the network. Once connections are firmly established, however, ENlighten/DSM processes requests almost immediately.

In general, the time it takes to fulfill a request on one machine is multiplied by the number of machines. Of course, different machines also respond at different rates based on their chip speed, disk speeds, and process load. Finally, the time for completion for a request will always vary based on the amount of result data shipped back to you.