8

System

ENlighten/DSM gives you the tools to manage TTY ports and view CPU summaries for any given TTY port, monitor and manipulate swap space processes, shut down or reboot your system, manage crontab entries, change a host's clock settings, and maintain and update mail aliases. The actual options are:

- TTY Configure
- CPU Summary by TTY
- Swap Space
- Shutdown/Reboot
- Cron Management
- Clock Management
- Mail Aliases

TTY Configure

You can use this program to display a list of all configured ports on the local UI machine (Figure 8-1). You can add new ports and modify, enable, or disable existing ports. You can also access port information by port number or TTY name.
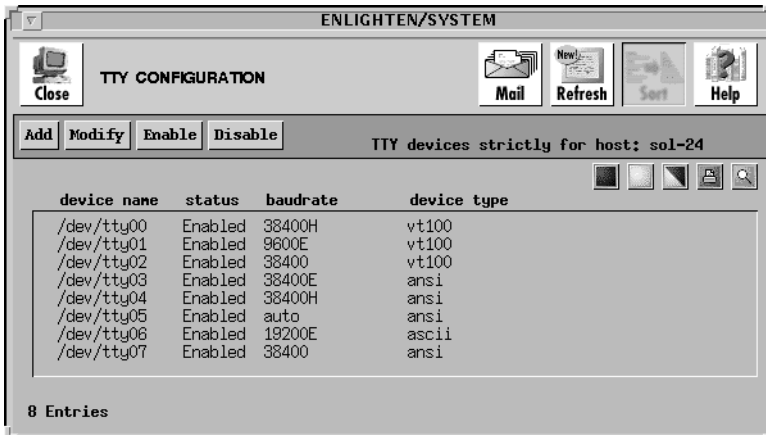

Figure 8-1 TTY Configuration window

From here, you have the option to:

- Add   Add a new device to the system

- Modify   Modify an existing TTY port

- Enable   Enable an existing TTY port

- Disable   Disable an existing TTY port

Add

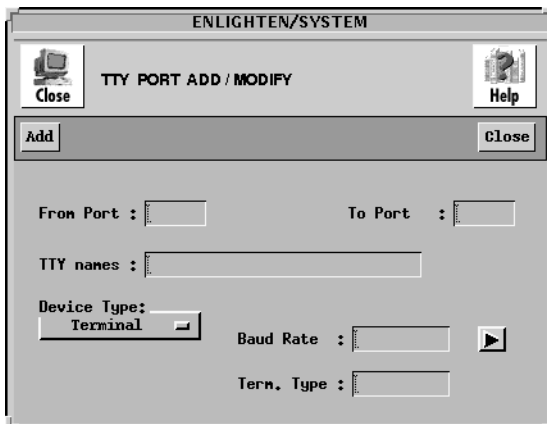Click the Add button to quickly and easily add a TTY port.
See Figure 8-2.

Figure 8-2 Adding a TTY Port

Fields

This window contains the following fields:

From Port

Use this field to specify the first port number to be configured when
you're defining new TTYs. If the TTY is already defined, you can leave
this field blank and enter the TTY name field instead. The sequence for
port numbering always starts at 0 (zero), not 1 (one). For example, if
there are 16 ports on the machine, the port numbers will be 0 to 15.

Check with your hardware vendor for more information on the
number of ports and their setup.

To Port

Use this field to specify the last port number to be configured when
you're defining new TTYs. If you are configuring only one TTY, you
can leave this field blank.

TTY names

You can use this field to specify the exact TTY name of a port. Every port on a system has a port number and a corresponding TTY name. If you're configuring new TTYs, leave this field blank and the system will assign the TTY name to each port as it is defined.

If the previous two fields (From Port and To Port) are blank, you must specify the TTY name(s) in this field. Leave a blank space between each TTY name for multiple entries.

Device Type

Use this field to choose the type of device that will be added. Click the left mouse button and a list of available device types will appear. You can choose one of the four standard device types:

- Terminal (the default)
- Serial Printer
- Dialin Modem
- Dialout Modem

☞ Because each device type has unique characteristics, it is important that you select the correct device type. If the wrong device type is chosen, the port may not react as expected.

Baud Rate

The baud rate is the speed at which the port will send and receive signals. The most common speeds for dialin modems are 1200, 2400, 4800, or 9600 baud. For terminals the most common speeds are 4800, 9600, or 19200 baud. Click the arrow button on the right to display a pick list of the baud rates and select one of them. ENlighten/DSM will insert your selection into this field.

Term. Type

When a user accesses the system from this port, the system will set the terminal type to whatever you specify here. Each terminal has its own set of characteristics, for example, an IBM 3151 terminal emulation is not the same as a VT100 emulation. If the terminal type is unknown, specify the vt100 type.

It is important that you select the correct terminal type. If the wrong emulation is chosen, the screen display will not work properly.

Buttons

This window contains the following buttons:

Add

Click the Add button to add your TTY selection(s).

Close

Click this button to discard any changes and close the window.

Modify

Click this button to modify a TTY port. The TTY Port Add/Modify window appears, as shown in Figure 8-2. The first three fields in this window are not available, though; the only fields available for modification are the Device Type, Baud Rate, and Term. Type fields. Once you've made all your changes, click the Modify button to change the TTY port settings.

Enable

When you enable a port, you are telling the operating system this port will be used to log in to the system. Since this will allow users to log in the system via the named port, make sure you do not enable a printer or dialout port.

Highlight the desired device names you wish to enable and click the Enable button. A pop-up window will appear asking for confirmation. Click the appropriate button.

☞ Do not enable a port that has been designated as a serial printer port. The system will try to send the login sequence to the printer and all sorts of strange things will happen.

Disable

If a port is disabled, the operating system will not offer users the ability to log in via that port. Printer and dialout ports are already disabled when configured. You can selectively disable other ports to manage which ports provide access to the system.

Highlight the desired device names you wish to disable and click the Disable button. A pop-up window will appear asking for confirmation. Click the appropriate button.

☞ Disabling a port where a user is currently logged in will *not* log out the user. The user will be able to continue working until he or she does log out. After all users are logged out of the port, it is then disabled from further logins.

CPU Summary by TTY

You can use this program to view a summary of all process activity by TTY (Figure 8-3).

Figure 8-3 Summary of Processes by TTY window

The information shown is the TTY number, the login user, the number of processes running on the TTY, and the CPU time used. You can further investigate one or more of the TTYs listed by using the Processes button. The rest of this section describes how to use the buttons in the window.

Processes

To view the processes, highlight the TTYs you wish to view and click the Processes button. A window will appear displaying all processes for the highlighted TTYs. To further manipulate this information, see "Process Status" on page 4-31.

Graph

To graph the processes, highlight the information you wish to view and then click the Graph button. A window will appear displaying the amount of CPU utilization on each highlighted TTY in a stacked bar graph format. The left axis shows the amount of processes.

Swap Space

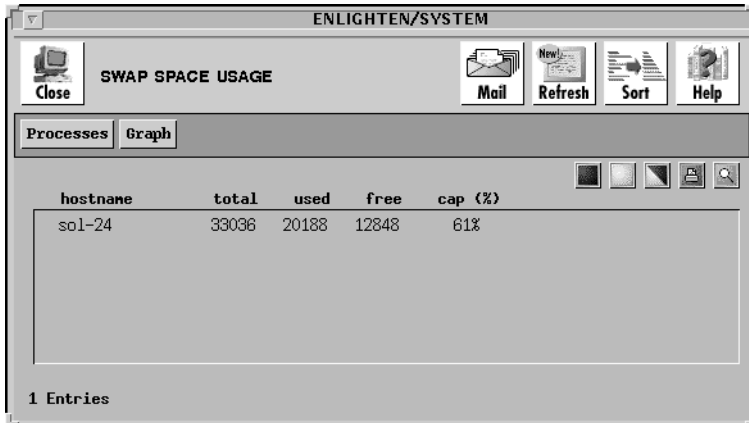You can use this program to check the swap space usage (Figure 8-4).

Figure 8-4 Swap Space Usage window

The information shown is the total amount of swap space in KB, the amount used, the amount available, and the amount used as a percentage. The rest of this section describes how to use the buttons in this window.

Processes

To view the processes, highlight the hosts you wish to view and click the Processes button. A window will appear displaying all processes for the highlighted hosts. To further manipulate this information, see "Process Status" on page 4-31.

Graph

To graph the swap space usage, highlight the information you wish to view and then click the Graph button. A window will appear displaying the amount of free and used swap space for each highlighted host in a stacked bar graph format. The left axis shows the number of KB of swap space.

Shutdown/Reboot

You can use this program to either shut down or reboot all hosts in the current pool (Figure 8-5).
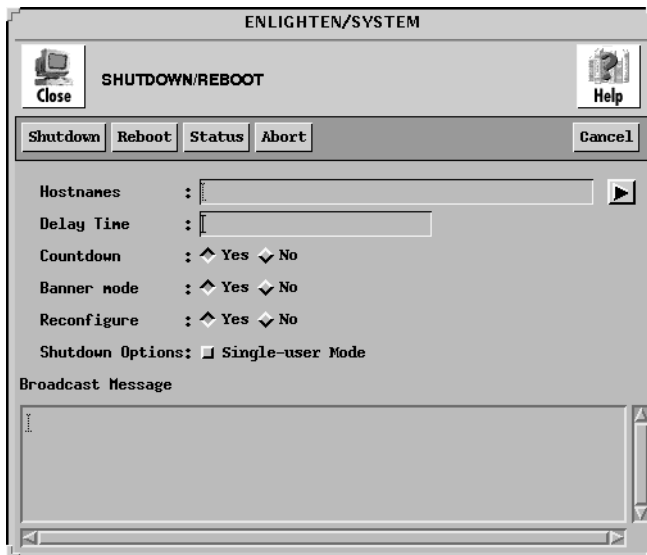

Figure 8-5 Shutting Down and Rebooting Hosts

The rest of this section details how to use this window's functionality.

Fields

This window has the following fields:

Hostnames

Use this field if you want to perform the shutdown/reboot operation only on a subset of the currently managed hosts. You can also click the arrow button to the right to bring up a pick list of all currently managed hosts and make your selections. Leave a blank space between each hostname if you are specifying multiple entries.

If you leave this field blank, all hosts in the current pool will be shutdown/reboot.

Delay Time

You can use this field to specify a delay before the shutdown/reboot occurs. The delay time should give users enough time to prepare for the system shutdown/reboot.The default is 60 seconds.

This field will accept both relative and absolute time formats. See Appendix C, "Time Formats," for more details.

Countdown

Use this toggle to choose whether a countdown should occur prior to starting the shutdown or reboot. A countdown will display warning messages at regular intervals to the terminals of all hosts being taken down or rebooted. The default is Yes.

Banner mode

Use this toggle to choose whether the (user-definable) broadcast message should be displayed in extremely large text. This message should be relatively brief. The default is Yes.

Reconfigure

Use this toggle to choose whether the hosts should be reconfigured when they are rebooted. The default is Yes.

Shutdown Options

Use this toggle to choose whether the hosts should be put in an initialized state of a single-user mode when they are shut down. The default is Off. This choice only matters if you then use the Shutdown button.

Some systems, like Solaris 2.x, will cut power to the CPU during a shutdown.

Broadcast Message

You can use this text field to type in the message to be broadcast to all hosts prior to shutdown. Otherwise, the default message "System Going Down in n Minutes" will be used.

Buttons

This window has the following buttons:

Shutdown

Click this button to selectively begin to shut down the host specified in the Hostnames field. If you leave the Hostnames field blank, all hosts in the current pool will be shut down.

Reboot

Click this button to selectively begin to reboot the host specified in the Hostnames field. If you leave the Hostnames field blank, all hosts in the current pool will be shut down.

Status

Click this button to display the status of all pending shutdowns and/or reboots. The following window will appear (Figure 8-6).
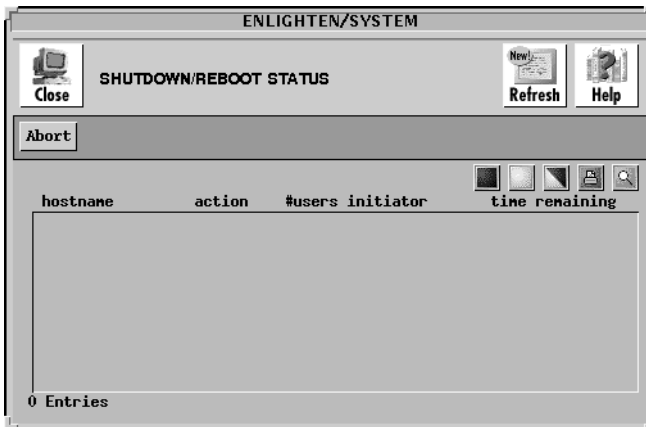

Figure 8-6 Status of Pending Shutdowns or Reboots

You can then highlight any pending shutdowns and/or reboots and click the Abort button. ENlighten/DSM will abort the pending shutdowns and/or reboots you selected.

Abort

Click this button to abort all pending shutdowns and/or reboots immediately. You will be prompted for confirmation of this action. ENlighten/DSM will then abort all pending shutdowns and/or reboots on hosts in the current pool.

Cancel

Click this button to close the window without making any changes.

Cron Management

You can use this module to manage crontab entries on multiple heterogeneous hosts. You can add, change, delete, or copy cron jobs; perform a query on all cron jobs; or manage user access to crontab. The actual options are:

- Configure
- Query
- Cron Users

The rest of this section details how to use each of these options.

Configure

You can use this program to view all crontab jobs for all hosts in the current pool. The Crontab Configuration window will appear ([Figure 8-7](#)).The list box will show the current cron jobs for all users on all hosts in the current pool.
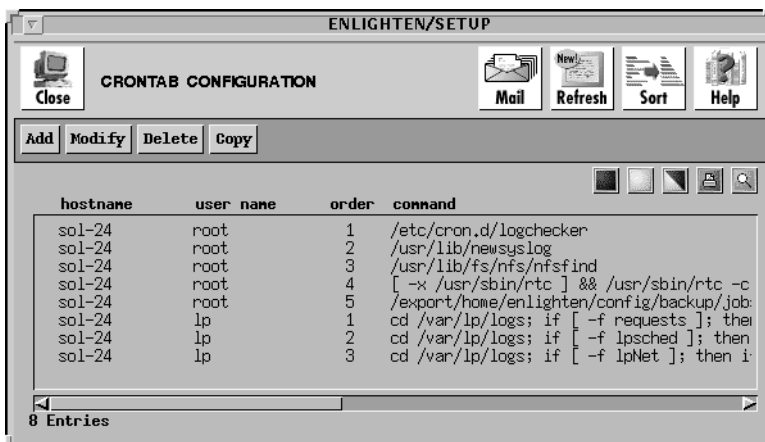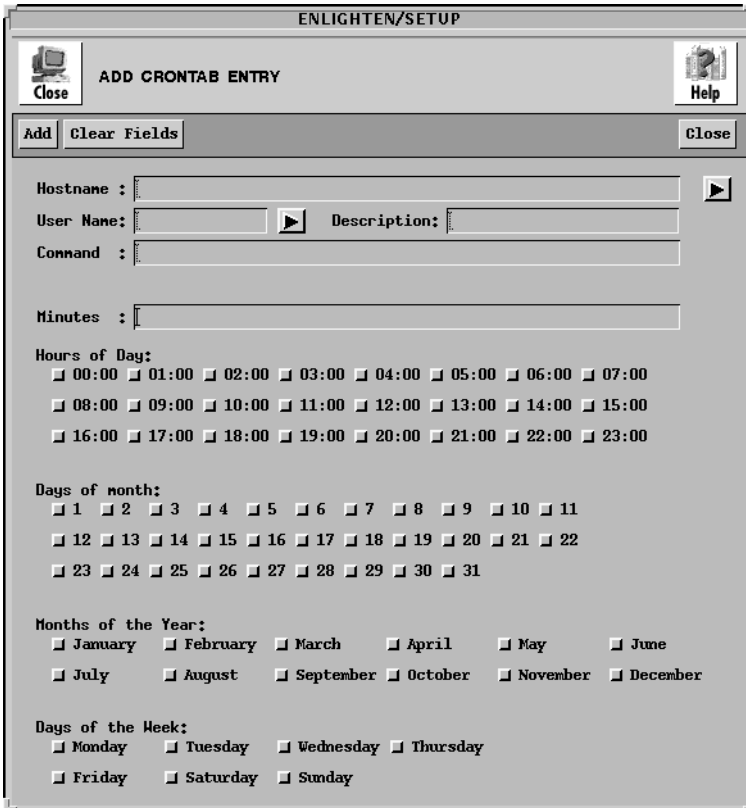

Figure 8-7 Crontab Configuration window

From here, you have the option to:

- Add   Create a new crontab job
- Modify   Modify an existing crontab entry
- Delete   Selectively delete all marked crontab jobs
- Copy   Create another cron job using the settings of the first selected cron job

---

Add

Click this button to create a new crontab job. The Add Crontab Entry window will appear (Figure 8-8).

Figure 8-8 Add Crontab Entry window

A crontab entry consists of six fields. Any combination of the five time fields (minutes, hours, days, months, and/or days) defines when the command (sixth field) will execute. By default, the job will run every hour if all the time fields are left blank.

This feature is system dependent; you may not be able to use all combinations of time settings on your system. Check your local cron for its precise workings.

Add Fields

The Add Crontab Entry window has the following fields:

Hostname

If you want to limit this job to specific hostnames within a pool, enter those hostnames in this field. If you are using multiple entries, leave a blank between each entry. You can also use the arrow button to the right to select the available hosts from the current pool.

User Name

You can use this field to specify which user will run this job. You can also click the arrow button on the right to display a list of users and select one.

Description

You can use this field to briefly describe this job's purpose.

Command

Use this field to specify the cron command (and arguments) to be run at the time established by the remaining five fields. You can use a maximum of 256 characters to specify this command.

Minutes

Use this field to specify what point in the specified hour(s) the job will run. Enter a whole number between 0 and 59. Or you can specify a range by using a dash (-), for example, `0–20`. If you are using multiple entries, leave a blank between each entry.

Hours of Day
Days of month
Months of the Year
Days of the Week

Click on the appropriate boxes in these fields to further define when this job will run. You may select multiple values per field.

Add Buttons

This window has the following buttons:

Add

Once you've made all the selections for the new job, click this button to selectively create the crontab job.

Clear Fields

Click this button to clear the existing choices in all fields.

Close

Click this button to discard any changes and close the window.

Modify

Click this button to modify a selected crontab entry. A pop-up window similar to the Add Crontab Entry window will appear, except the User Name field is view-only.

There are also two button differences in the Modify window:

- You can use the Modify button (rather than the Add button) after you've made all your changes, and

- You can use the Next button to modify additional jobs if you've selected more than one job to modify from the Crontab Configuration list.

For a description of the rest of the buttons and fields in this window, see .

Delete

Click this button to delete a job from the Crontab Configuration list. ENlighten/DSM will prompt you to confirm your action.

Copy

Click this button to copy the settings in a cron job. The Add Crontab Entry window will appear showing the highlighted job's settings in each field. You can edit this window as needed and then click the Add button to complete the copy.

See "Add" on page 8-14 for a description of how to use this window's fields and buttons.

Query

You can use this program to find specific cron jobs. You can search for hostnames, user names, the command itself, the time settings, and so on. Once your query is successful, you can then modify, delete, or copy the cron job.

When you activate this program, the window in Figure 8-9 will appear.
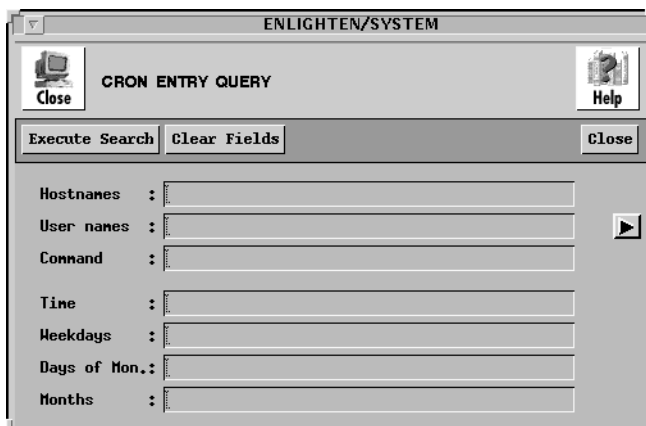

Figure 8-9 Finding Cron Jobs

The cron job must match all fields to get a successful match. The fields in this window have a logical AND relationship. Blank fields always match and you can also negate fields with the ! character (e.g., !Monday).

Fields

This window contains the following fields:

Hostnames

If you want to limit the search to specific hostnames within a pool, enter those hostnames in this field. If you are using multiple entries, leave a blank between each entry.

User names

If you want to limit the search to specific users, specify which one(s) in this field. If you are using multiple entries, leave a blank between each entry. You can also use the arrow button to the right to select from a pick list of the users.

Command

Use this field to limit the search for a specific cron command (or any of its options). You can use a maximum of 256 characters in this field, including the standard UNIX wildcards.

Time
Weekdays
Days of Mon.
Months

You can use these fields to specify times or time ranges. This limits the search to find jobs executing at/between the times entered in these field. See Appendix C, "Time Formats," for more details on using these fields.

Buttons

This window contains the following buttons:

Execute Search

Once you've selected your search criteria, click the Execute Search button. If you click this button without filling in any of the fields, all current cron jobs will be displayed. A window similar to the Crontab Configuration window appears with the results listed.

Then you can use the following options to act further on the results:

- Modify
- Delete
- Copy

See "Configure" on page 8-13 for more details.

Clear Fields

Click this button to clear the existing choices in all fields.

Close

Click this button to discard any changes and close the window.

Cron Users

cron has built-in security features allowing it to control which users are allowed to execute cron jobs. There are five possible user access states:

- Only root is allowed to execute cron jobs

- Only selected users are allowed to execute cron jobs

- All users are allowed to execute cron jobs

- All users except specified users are allowed to execute cron jobs

- No users are allowed to execute cron jobs

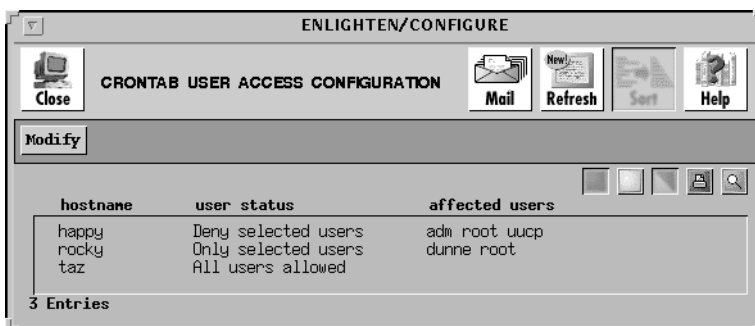You can use this program to display the cron security status of all hosts, as shown in Figure 8-10.

Figure 8-10 Cron Security Status of Hosts

From here, you can highlight which users' accessibility you want to change and click the Modify button. This action will bring up the Modify Crontab User Access window (Figure 8-11). You can then use this window to modify the cron user access for multiple hosts. The rest of this subsection details how to use the Modify Crontab User Access window.
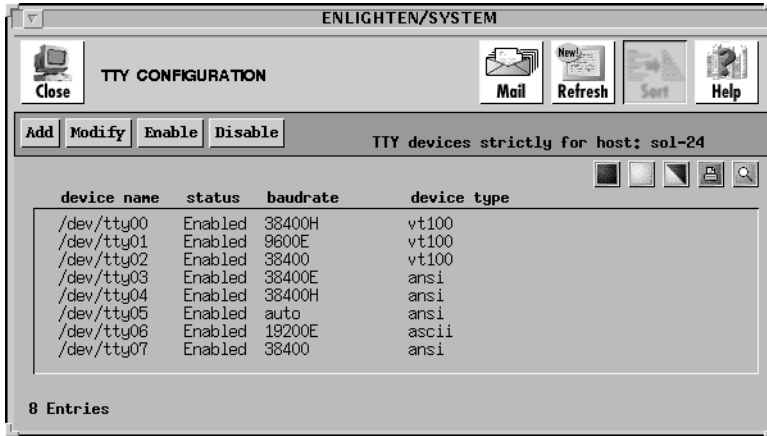

Figure 8-11 Modify Crontab User Access window

Fields

This window contains the following fields:

Hostnames

If you want to limit this modification to specific hostnames within a pool, enter those hostnames in this field. If you are using multiple entries, leave a blank between each entry. You can also use the arrow button to the right to select the available hosts from the current pool.

User Access

Use this set of toggles to specify what type of user cron access you want to allow.

User Names

If you want this modification to allow or exclude (deny) specific users, enter the user name(s) in this field. If you are using multiple entries, leave a blank between each entry. You can also use the arrow button to the right to select from a pick list of the users.

Buttons

This window contains the following buttons:

Modify

After making your selections, click the Modify button to make the crontab user access modifications.

Clear Fields

Click this button to clear the existing choices in all fields.

Close

Click this button to discard any changes and close the window.

Clock Management

You can use this module to synchronize or set a host's clock. The options are:

- Clock Synch
- Clock Set

The rest of this section describes how to use each of these options.

Clock Synch

You can use this program to choose when to synchronize a host's clock on the time kept by a master clock. When you activate this program, the window in <u>Figure 8-12</u> will appear.
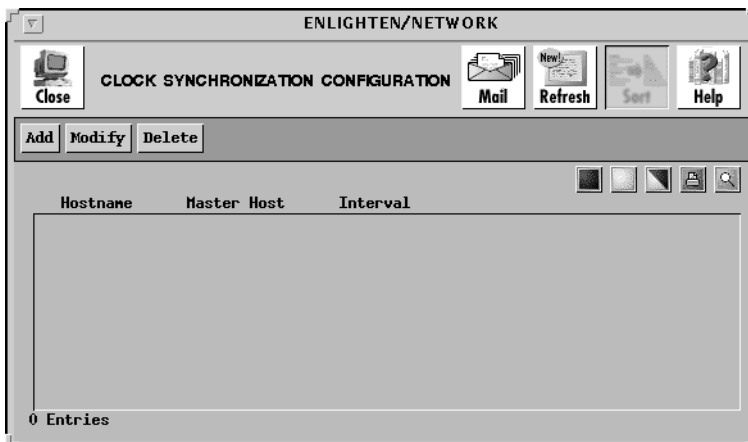

Figure 8-12 Synchronizing a Host Clock

From here, you have the option to:

- Add   Create a clock synchronization process

- Modify   Modify an existing clock synchronization

- Delete   Selectively delete all marked clock synchronization processes

The rest of this subsection details how to use this window's features.

Add

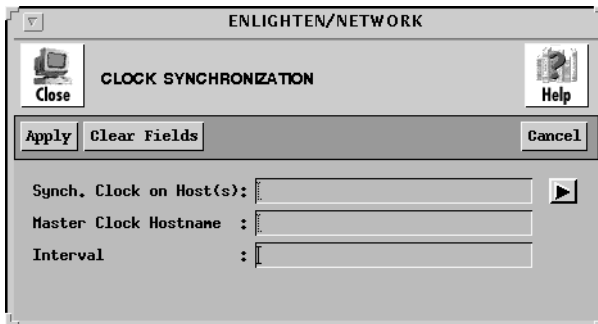Click the Add button to set up a synchronization process. The window shown in Figure 8-13 appears.

Figure 8-13 Setting Up a Synchronization Process

Add Fields

This window contains the following fields:

Synch. Clock on Host(s)

Use this field if you want to limit the clock synchronization to a subset of the currently managed hosts. If you are using multiple entries, leave a blank between each entry. You can also click the arrow button to the right to bring up a pick list of all currently managed hosts and make your selections from there.

Master Clock Hostname

Use this field to specify which host will act as the master timekeeper.

Interval

You can use this field to specify when the clock synchronizations should occur. This field will accept both relative and absolute time formats. See Appendix C, "Time Formats," for more details.

Add Buttons

This window contains the following buttons:

Apply

Once you've made your selections, click this button to establish the synchronization for all selected hosts' clocks in the current pool. You will be prompted to confirm your action.

Clear Fields

Click this button to clear the existing choices in all fields.

Cancel

Click this button to close the window without making any changes.

Modify

Click this button to modify an existing clock synchronization process. A pop-up window similar to the Clock Synchronization window will appear, except:

- You also have access to a pick list option in the Master Clock Hostname field, and

- You can use the Next button to modify additional jobs if you've selected more than one process to modify from the Clock Synchronization Configuration list.

For a description of the rest of the buttons and fields in this window, see .

Delete

Click this button to delete a process from the Clock Synchronization Configuration list. ENlighten/DSM will prompt you to confirm your action.

Clock Set

You can use this program to reset a host's clock. When you activate this program, the window shown in will appear. The rest of this subsection details how to use this window's functionality.
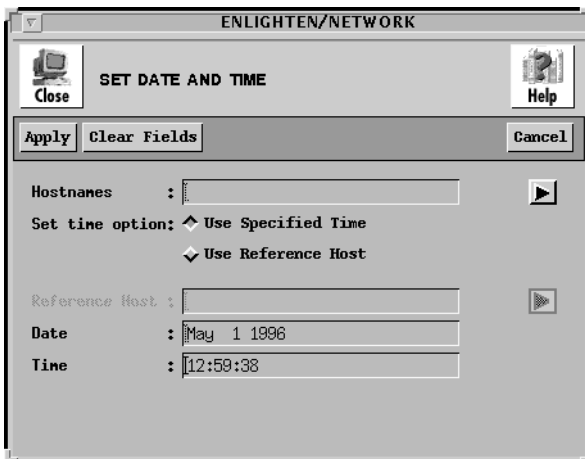

Figure 8-14 Resetting a Host Clock

Fields

This window contains the following fields:

Hostnames

Use this field to specify which hosts in the current pool will have their clocks reset. If you are using multiple entries, leave a blank between each entry. You can also click the arrow button to the right to bring up a pick list of all currently managed hosts and make your selections from there.

Set time option

Use these toggles to choose whether the new time setting should be based on a specific time (default) or a reference host's clock setting.

Reference Host

If you set the Set Time Option toggle to Use Reference Host, use this field to specify which host's clock setting should be referenced for the correct time. You can also click the arrow button to the right to bring up a pick list of all currently managed hosts and select one of them.

This can be *any* UNIX host, but it cannot be in the current pool.

Date
Time

If you set the Set Time Option toggle to Use Specified Time, you can use these fields to specify the date and time. The default values are the current date and time. See Appendix C, "Time Formats," for more details on using these fields.

Buttons

This window contains the following buttons:

Apply

After making your selections, click this button to reset the clock for all selected hosts' clocks in the current pool. You will be prompted to confirm your action.

Clear Fields

Click this button to clear the existing choices in all fields.

Cancel

Click this button to close the window without making any changes.

Mail Aliases

You can use this module to manage mail aliases. You can add, change, delete, view, copy, or perform a query on all mail aliases. The actual options are:

- Configure
- Query

The rest of this section details how to use each of these options.

Configure

When you create user accounts, you can have a mail alias created for those accounts and/or have them included in a mail list. Use this program to set up the mail lists and mail aliases.

You can also create these when you create user accounts. See <u>"Add" on page 4-3</u> for more details.

When you activate this program, the window shown in <u>Figure 8-15</u> will appear.

Figure 8-15 Configuring Mail Aliases

This window displays a list of all mail aliases for the hosts in the current pool. If the alias is a mail list (has more than one entry), the number of users in the list is displayed; otherwise, the user name and the respective Realname are displayed.

From here, you have the option to:

- AddCreate a new mail alias
- ModifyModify an existing mail alias (on multiple hosts)

- DeleteDelete an existing mail alias from a host
- ViewView a summary of the mail alias
- CopyCopy a selected mail alias to one or more hosts
- NISPush the NIS maps on any active NIS servers

The rest of this subsection details how to use the Mail Aliases Configuration window's features.

Add

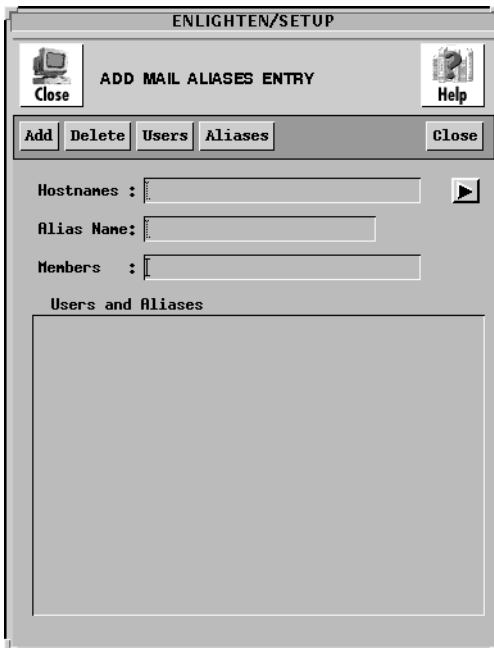Click the Add button to create a new mail alias. The window in <u>Figure 8-16</u> appears.

Figure 8-16 Creating a New Mail Alias

Add Fields

This window has the following fields:

Hostnames

You can use this field to specify which hosts will have their alias list updated. If you are using multiple entries, leave a blank between each entry. You can also click the arrow button to the right to bring up a pick list of all the available hosts and make your selections from there.

Alias Name

Use this field to specify the name of the mail list alias.

Members

Use this field to specify which users and/or other aliases are members of *this* mail list. If you are using multiple entries, leave a blank between each entry. You can also use the Users and/or Aliases buttons to make your selections.

Add Buttons

This window has the following buttons:

Add

Once you've made all the selections for the new mail alias, click this button to create it.

Delete

Click this button to delete a mail alias from the Mail Aliases Configuration list. ENlighten/DSM will prompt you to confirm your action.

Users

Click this button to pop up a pick list of all recognized users and select the one(s) you want to be members of this mail alias.

Aliases

Click this button to pop up a pick list of all currently known mail alias lists and select the one(s) you want to be included in this mail alias list.

Close

Click this button to discard any changes and close the window.

Modify

Click this button to modify an existing mail alias entry. A pop-up window similar to the Add Alias Entry window will appear, except the Alias Name field is view-only.

There are also two button differences in the Modify window:

- You can use the Modify button (rather than the Add button) after you've made all your changes, and

- You can use the Next button to modify additional jobs if you've selected more than one job to modify from the Crontab Configuration list.

For a description of the rest of the buttons and fields in this window, see <u>"Add" on page 8-28</u>.

Delete

Click this button to delete a highlighted mail alias from the Mail Aliases Configuration list. ENlighten/DSM will prompt you to confirm your action.

View

Click this button to view a summary of the mail alias list. The Mail Alias View window will appear (Figure 8-17). The list box will display a list of each user and/or alias in this mail alias list.
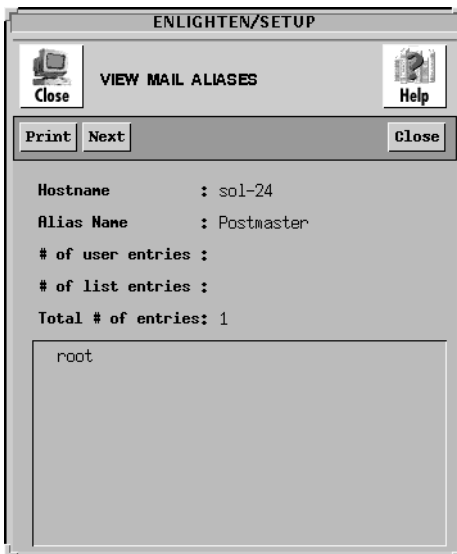

Figure 8-17 Mail Alias Summary

View Fields

This window contains the following (display-only) fields:

Hostname

The name of the host(s) that use this alias.

Alias Name

The name of the mail alias.

# of user entries

The number of direct users in the alias.

# of list entries

The number of direct mail lists in the alias.

Total # of entries

The total number of effective users in the alias.

User names

This list box shows which users are a part of this alias.

View Buttons

This window contains the following buttons:

Print

Click this button to print the mail alias information.

Next

If you selected multiple aliases in the Mail Aliases Configuration window, click this button to view the next highlighted alias.

Close

Click this button to finish viewing the mail aliases and close the View window.

Copy

Click this button to copy the settings in one mail alias list to a second list. The Mail Aliases Configuration window will appear showing the highlighted mail aliases settings in each field except the Alias Name field. You can edit this window as needed and then click the Add button to complete the copy.

See <u>"Add" on page 8-28</u> for a description of how to use this window's fields and buttons.

NIS

Click this button to push/remake the NIS maps on any active NIS servers. This updates the NIS servers and hosts on your network with any Host Entry changes you've made to the Configuration list. If there are no NIS servers to update for your choice(s), ENlighten will display a dialog box telling you so.

Query

You can use this program to find specific mail aliases. You can search for hostnames, alias names, user names, and so on. Once your query is successful, you can then modify, delete, view, or copy the mail alias.

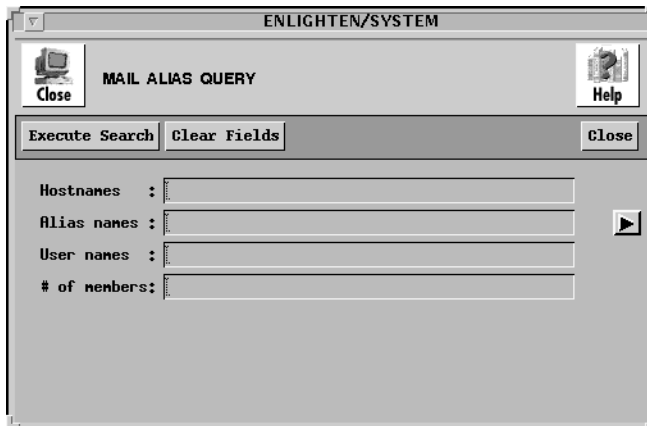When you activate this program, the window in <u>Figure 8-18</u> will appear.

Figure 8-18 Finding Mail Aliases

This search must match all fields to get a successful match. The fields in this window have a logical AND relationship. Blank fields always match. You can also negate fields with the ! character (e.g., !Joe).

Fields

This window contains the following fields:

Hostnames

To limit the search to specific hostnames within a pool, enter those hostnames in this field. If you are using multiple entries, leave a blank between each entry.

Alias names

To limit the search to specific mail aliases, enter those names in this field. If you are using multiple entries, leave a blank between each entry. You can also click the arrow button to the right to bring up a pick list of all the recognized mail aliases and make your selections from there.

User names

To limit the search to specific users, enter those user names in this field. If you are using multiple entries, leave a blank between each entry.

# of members

Use this field to specify how many members are in the alias. Enter a whole number between 1 and 100. Or you can specify a range by using a dash(-), for example, `10-20`.

Buttons

This window contains the following buttons:

Execute Search

After selecting your search criteria, click the Execute Search button. If you click this button without filling in any of the fields, all mail aliases will be displayed. A window similar to the Mail Aliases Configuration window appears with the results listed.

Then you can use the following options to act further on the results:

- Modify
- Delete
- View
- Copy
- NIS

See for more details.

Clear Fields

Click this button to clear the existing choices in all fields.

Close

Click this button to discard any changes and close the window.