Menu System Overview [A]

This appendix includes information about the following topics:

- Accessing and initiating the UNICOS menu system
- Selecting software components to maintain through the menu system
- Using menu prompts
- Using menu keys
- Using menu definition files
- Sample process of using a menu
- Restoring a configuration
- Viewing the `/etc/install/install.log` log file

This appendix provides a brief description of the UNICOS Installation and Configuration Menu System (hereafter referred to as the *menu system*), which, with system start-up scripts, provides a uniform way to configure and start the various system and network utilities.

If you are upgrading your Cray Research products' software and you want to run the menu system but have never run it before at your site, you must import and activate all parameters. To perform these functions, see the `Utilities` submenu of the main menu. This allows you to maintain your existing configuration files instead of using default configuration files included with a Cray Research product release.

A.1 Accessing and initiating the menu system

The files and scripts that compose the menu system are grouped in the `/etc/install` directory. To access and initiate the menu system, enter the following command lines:

```
cd /etc/install
./install
```

To execute the `./install` script, you must have super-user permission.

To eliminate the need to change (`cd`) to the `/etc/install` directory to enter the menu system, you can include `/etc/install` in your `PATH` statement in your `.profile` or `.cshrc` file.

Note: CRAY J90se systems use a different installation menu system than other Cray Research systems. To use the UNICOS installation menu system's configuration window, CRAY J90se users should first quit the CRAY J90se installation window and then enter the previous commands.

In the X Window System version, the installation tool automatically opens the X Window System version if your workstation or terminal has an X Window System display capability.

A.2 Selecting components to maintain by using the menu system

You can use the menu system to maintain all or selected portions of your system configuration files. Select the following menu and set the components you want to maintain by using the menu system to `YES` (the menu system will access the configuration files for these components):

```
UNICOS Installation / Configuration Menu
    ->SystemConfigure System
        ->Configurator Automation Options
```

If you elect to maintain a component manually, set that component to `NO`. All related menus for that component will be disabled; files cannot be imported into or activated from the menu system.

If you change any settings in the following file, you must rebuild your kernel:

```
UNICOS Installation / Configuration Menu System
    ->Configure System
        ->Major Software Configuration
```

You also should verify that the components you have set to `YES` in the `Configurator Automation Options` menu also are set to `on` in the following menu:

```
UNICOS Installation / Configuration Menu System
    ->Configure System
        ->Major Software Configuration
```

Note: You should **always** import, modify, and/or activate a configuration from the same menu. Although a component's menus may be disabled, if you execute the `Import ...` and `Activate...` lines of the `Configure System` menu, you will import and activate that component's default configuration along with all other default configurations of components that are set to `on` in the `Major Software Configuration` menu.

To import an existing configuration file into the menu system, execute the `Import ...` line of a menu. After you have imported a file, you can modify the configuration within the menu system. When you have the configuration you want, execute the `Activate...` line of the menu. The activation process writes the configuration into the menu system's internal database files to the new `root` (`/`).

A.3 Menu support for full system build

If you wish, you may perform a full system build from within the install tool. The main build menu selection `Release Type` allows you to determine which system components are installed in `/usr/src` and which components will be built:

```
Build / Install System
    ->Release type
```

The default release type for CRAY J90 systems, `Executable`, builds the `uts` component of the system. This installs only the executable installation package onto the system. Otherwise, the selections `Relocatable` and `Source` build all standards components of `/usr/src`.

A.4 Menu prompts

On the left side of a menu display you will be prompted with the following character strings:

String	Description
`M ->`	Means pressing `RETURN` displays a submenu. Each menu display corresponds to a `/etc/install/` *xxx*`.mnu` file written in menu specification language (MSL). Over 30 menu displays exist.
`E ->`	Means pressing `RETURN` takes the horizontal fields to the right of the prompt and displays them vertically as a selection list. These

values are stored in a `.cfg` file in the `/etc/install/cfdb` directory.

`S ->` Means pressing `RETURN` moves the prompt to the far right column, letting the user edit the value or tab through a list of valid selections. These values are stored in `.sav` files in the `/etc/install` directory.

`A ->` Means pressing `RETURN` invokes the action described, such as loading a tape or invoking a build.

`N/A` The current selection is not applicable because of previous selections.

A.5 Menu keys

To access information regarding a specific menu, use the keys provided at the bottom of each menu system screen.

Example:

```
                        Disk Configuration

M-> Physical devices ==>
  Physical device slices ==>
  Logical devices (/dev/dsk entries) ==>
  Mirrored devices (/dev/mdd entries) ==>
  Striped devices (/dev/sdd entries) ==>
  Logical device cache ==>
  Special system device definitions ==>
  Verify the disk configuration ...
  Review the disk configuration verification ..
  Dry run the disk configuration ...
  Review the disk configuration dry run ...
  Update disk device nodes upon activation?    YES
  Import the disk configuration ...
  Activate the disk configuration ...


 Keys: ^? Commands  H Help  Q Quit   V ViewDoc   W WhereAmI
```

Key	Description
`^?  Commands`	Displays a list of currently active command keys that you can enter from the tool.
`H Help`	Accesses the help screen for this particular menu. Provides explanations for each line.
`Q Quit`	Allows you to get out of the menu system from this screen.
`V ViewDoc`	Allows you to get information from a man page from within the menu system.
`W WhereAmI`	Displays the list of menus that you have traversed.

For information about the menu prompts, maneuvering keys, and function keys, see the *UNICOS Installation Menu System Reference Card*, Cray Research publication SQ–2411. To change the value of a `selection` item in a menu, use one of the input keys. Input keys are set to emulate the functions of one of the text editors, which you choose in the `Preferences` menu.

For detailed information about the menu system, see the *UNICOS Installation and Configuration Tool Reference Manual*, Cray Research publication SR–3090.

A.6 Menu definition files

Menu definition files use the menu specification language (MSL) to define the menus displayed by the menu system program (`inmenu`). Menu definition files are identified by the file-name suffix `.mnu`. The following are the basic directories, files, and scripts that the menu system uses:

Path/File	Description
`/etc/config`	Directory that contains the start-up configuration files that the menu system maintains.
`/etc/install`	Directory that contains all menu system interface scripts (`*.sh` and `*.mnu`) and some of the current menu system values (`*.sav`).

`/etc/install/listings`	Directory used by the menu to hold listings that reflect errors.
`/etc/install/cfdb`	Directory of form files (`.cfg`) that the menu system modifies and uses to replace the corresponding system files (`hosts`, `ldchlist`, and so on).
`/etc/install/editions`	`cpio` archives of menu system changes (all `.sav`, `cfg`, and `/dev` changes)

A.7 Sample process of using a menu

To use the menu system to make a change to the `/etc/fstab` file, you must traverse these menus:

```
Configure System
    ->File System (fstab) Configuration
        ->Standard File System Configuration
```

Make the changes for `/etc/fstab` on this menu. When you have completed your changes, exit this submenu. You are prompted as follows:

```
Do you want to update the form file?  y/n
```

Answering `yes` updates **only** `/etc/install/cfdb/fsmf.cfg`; answering `no` eliminates any changes you made on this menu.

If you want the change dispersed into the real system source, you must execute the following action entry:

```
Activate the configuration
```

Activating the configuration overwrites `/etc/fstab` with the contents of the form file `/etc/install/cfdb/fsmf.cfg`. The menu system displays which files it will update (in this case `/etc/fstab`) and prompts you with the following:

```
continue? y/n
```

This question means that you must give permission for copying the `fsmf.cfg` file to `fstab`. If you answer `yes`, it will copy the file; if you answer `no`, it will not copy the file. This is your last chance to back out.

A `cpio` archive file also is created each time you activate a configuration and a file is actually updated. The `cpio` archive file is a snapshot of all menu system settings; therefore, you can use it at a later date to restore the menu system to a specific state.

The `cpio` archive file contains the `.sav` and. `cfg` files, and all special files in the `/dev` directory. The `cpio` archive is in `/etc/install/editions` and can be restored in `/tmp`, where you can examine or copy all or some files to the appropriate directory.

A.8 Restoring a configuration

Occasionally, you may have to restore a prior iteration of the menu system's configuration files. You can use the menu system for configuration management. Use the following menu sequence to do the following tasks:

- List each stored configuration edition
- Compare two configuration editions
- Extract either a complete edition or individual configuration files within an edition
- Compress the files
- Convert pre-UNICOS 8.0 editions
- Print the listing of available configuration editions
- Store a complete edition of the current system configuration (a snapshot of the system configuration files in their current state)

```
UNICOS Installation / Configuration Menu System

M
    ->U

M
    ->Configuration editions utility
```

A.9 Viewing the /etc/install/install.log log file

The menu system provides a log file, /etc/install/install.log, which you can use to monitor actions, including any errors and problems. To examine this file within the menu system, use the following menu sequence:

```
UNICOS Installation / Configuration Menu System
    ->Utilities
        ->Inspect the installation log
```

To view this file from outside the menu system, enter the following command:

```
$ more /etc/install/install.log
```