10 SYSTEM CLEAR UTILITY

This section describes the following software programs that run on the MWS-E and CRAY Y-MP systems with an IOS model E; all are used to clear residual or stored data from different areas of the CRI computer system.

- System clear utility (include in ME diagnostic release)
- System clean program for DD-60s (order from Logistics)
- SecureM release (must be ordered from Logistics)

System Clear Utility

The system clear utility is used to clear the CRAY Y-MP mainframe, IOS-E, and SSD-E of any residual or stored data. The `sysclr` command clears data by writing over it with 0's or a pattern entered by the user.

NOTE: The `sysclr` command does not clear data from disk drives; the `syscln` command is used to clear disk drives. Both the `sysclr` and `syscln` commands use the "System Clear" menu with slight differences. The `syscln` command adds the `Clear Disks` and `Configure Disks` lines to the menu.

System clear files are listed and described in Table 10-1. All four programs in the `/cri/mws/sysclr` directory must remain in the directory to enable you to use the `sysclr` program. These programs clear different portions of the Cray Research system and are written in different languages (C, ampl, and CAL).

Table 10-1. System Clear Utility Programs and Files

Program	Description
/cri/mws/sysclr	This is the system clear utility directory.
/cri/mws/sysclr/iosclr	This program is used to clear data from the IOS.
/cri/mws/sysclr/syscln	This program is used to clear data from DD-60 disk drives. This command displays the "System Clear Utility" menu and provides a user interface to the `dskclr` program in addition to the same programs the `sysclr` command calls. The `syscln` program is not available with the ME diagnostic release; you must order it from Logistics.
/cri/mws/sysclr/dskclr	This program is provided with the System Clean (`syscln`) package for clear data from DD-60 drives.
/cri/mws/sysclr/sysclr	This command displays the "System Clear Utility" menu and provides a user interface to the other programs.
/cri/mws/sysclr/sysclr.conf	This configuration file is created when you select `YES` for the `Save Configuration` parameter and run the `sysclr` or `syscln` program. The system clear utility uses this file to load configuration data.
/cri/mws/sysclr/ympclr	This program clears data from the following areas: • V, B, and T registers • Performance register for 1, 2, 3, 4, or 8 CPUs • SSD through a VHISP channel • Semaphore registers • Instruction registers • CPU memory

System Clear Procedure

The following procedure describes how to use the system clear utility.

1. Enter the following to start the system clear utility:

```
sysclr
```

The following system clear utility main screen is displayed:

```
System Clear Utility

IOSE Processor Select  :  0.01234 1.01234 2.QtrCl 3.QtrCl
                          4.XXXXX 5.XXXXX 6.XXXXX 7.XXXXX

SSD Size                          :  16 MW
Main Memory Size                  :  4 MW
Number of CPUs in YMP             :  8

Data Pattern                      :  000000
Verify Clear Operation            :  YES
Repeat Count                      :  1
Losp Device Name                  :  chn0i
Save Configuration                :  YES

Commands:   n -> Next,  p -> Previous, space bar -> change value
            x -> eXecute, q -> Quit
```

2. Press the **n** and **p** keys to move between different configuration lines. Press the space bar to change the value of the selected configuration parameter until it matches your site configuration data.

   Set the `Save Configuration` parameter to `YES` to save the parameters you've entered. These parameters are saved into the `sysclr.conf` file and are reloaded the next time you run `sysclr`.

   NOTE: You can also use the `R8`, `R10`, `R12`, and `R14` (arrow) keys to move between configuration parameters and fields.

3. After you have entered all configuration data, enter `x` to run the system clear utility. A screen similar to the one below is displayed as the data in various components is cleared.

```
System Clear Utility                                          Status

IOSE Processor Select  :  0.01234 1.01234 2.QtrCl 3.QtrCl  Cleared/Verified
                          4.XXXXX 5.XXXXX 6.XXXXX 7.XXXXX

SSD Size                        :  16 MW                  Cleared/Verified
Main Memory Size                :  4 MW                   Cleared/Verified
Number of CPUs in YMP           :  8                      Cleared/Verified

Data Pattern                    :  000000
Verify Clear Operation          :  YES
Repeat Count                    :  1
Losp Device Name                :  chn0i
Save Configuration              :  YES

Commands:   n -> Next,  p -> Previous, space bar -> change value
            x -> eXecute, q -> Quit

SYSCLR Status:     Subsystem         Address          Status
                  Mainframe        0000xxxxxxx       Clearing/Verified
```

System Clean for Disk Drives

The system clean (`syscln`) program is used to clear data on DD-60 drives. It is not included in the secure MWS-E release but may be ordered as a separate item from Logistics. The `syscln` program may be installed on top of the ME diagnostic release for the MWS-E.

The following procedure describes how to use the `syscln` program:

1. Enter the following command to start the disk system clean process:

```
syscln
```

The following system clear utility main screen is displayed:

```
System Clear Utility

IOSE Processor Select  :  0.01234 1.XXXXX 2.XXXXX 3.XXXXX
                          4.XXXXX 5.XXXXX 6.XXXXX 7.01234

Clear Disks                      :  YES
SSD Size                         :  16 MW
Main Memory Size                 :  4 MW
Number of CPUs in YMP            :  8

Data Pattern                     :  000000
Verify Clear Operation           :  YES
Repeat Count                     :  1
Losp Device Name                 :  chn0i
Configure Disks                  :  YES
Save Configuration               :

Commands:   n -> Next,  p -> Previous, space bar -> change value
            x -> eXecute, q -> Quit
```

2. To configure or check which disk drives will be cleared, move to the `Configure Disks` line and press the spacebar to display the `YES` parameter.

   The following disk configuration screen appears:

```
                                        Page 0
Cluster  IOP  Channel Device
   1      2     32      4
   7      3     36      0
   7      3     36      1
   7      3     36      7









Commands:   n -> Next Page,  p -> Previous page, a -> Add disk
            d -> Delete disk, r -> Return to main menu
```

3. Enter `a` to add disk drives to the configuration list. The `sysclean` program prompts you to enter the Cluster, IOP, Channel, and Device numbers.

4. After you are finished configuring the disk drives, enter `r` to return to the main menu.

5. You can save all disk configuration data by setting the `Save Configuration` selection on the main screen to `YES`.

6. To clear the disks (`Clear Disks` must be set to `YES`), enter `x` from the main menu.

   The following warning message appears. This screen looks like the disk configuration menu; however, you cannot change configuration data from this warning screen.

```
                                        Page 0
 Cluster  IOP  Channel Device
    1      2     32      4
    7      3     36      0
    7      3     36      1
    7      3     36      7


These disks and disks on any subsequent pages WILL BE CLEARED

Commands:   n -> Next Page,  p -> Previous page, q -> Quit, c -> Continue
```

NOTE: Depending on the number of disk drives at your site, you may have drives configured on additional disk configuration pages. Enter the `n` command to check if more than one page is configured. Disk drives configured on all pages will be cleared.

7. Enter `c` to continue. The following screen is displayed.

```
Are you sure you wish to continue, ALL the CUSTOMER DATA on the
affected drives will be DESTROYED (y,n)
```

8. Enter `y` to clear all configured disk drives. A screen similar to the following one is displayed. The cylinder range increments as each cylinder is cleared of data.

```
                                        Page 0
Cluster   IOP   Channel Device       Cylinder
   1       2     32       4          xxxx
   7       3     36       0          xxxx
   7       3     36       1          xxxx
   7       3     36       7          xxxx




Commands:   n -> Next Page,  p -> Previous page, q -> Quit, c -> Continue
```

The `syscln` program returns to the command line prompt after it is finished clearing the disks.

Secure MWS-E Utilities Release

The secure MWS-E release was developed for customers at secure Cray Research, Inc. (CRI) sites who need to control the security of the entire system when running highly classified jobs. The secure MWS-E release is a subset of the ME maintenance diagnostic release. It enables critical hardware performance information to be collected when secure jobs are being run on the CRI computer system.

The secure MWS-E release must be installed on a separate removable hard disk drive that can be loaded and booted on the MWS-E as needed. The secure MWS-E release is intended for use by customer site analysts, not CRI employees. However, a CRI employee should install and verify the installation and configuration of the secure MWS-E release.

The secure MWS-E release provides basic MWS-E operating system functions in addition to the following CRI programs:

- Error logger (`elog`) program
- Error logger dump (`edmp`) utility
- Configuration (`cfg`) program
- System clear (`sysclr`) utility (also included in the ME release)

NOTE: The system clean (`syscln`) program is used to clear data on DD-60 drives. It is not included in the secure MWS-E release but may be ordered as a separate item from Logistics. The `syscln` program may be installed on top of the ME diagnostic release for the MWS-E.

How to Use the Secure MWS-E Release

The following processes describe how to use the secure MWS-E release:

1. When the secure MWS-E package is received at the site, it is installed on a separate removable hard disk drive by CRI maintenance personnel.
2. When the customer needs to use secure MWS-E, the MWS-E is powered down.
3. The removable drive containing secure MWS-E is swapped with the normal hard drive.
4. The MWS-E is powered up.
5. Classified jobs are then run on the CRI system.
6. The system clear (`sysclr`) utility is run to clear all residual or stored data from the system.
7. The MWS-E hard disk drive containing the ME maintenance release is reinstalled in the workstation.
8. The hard drive containing the secure MWS-E release is returned to the customer. The MWS-E is rebooted and returned to its normal operating state.