TO: Distribution

FROM: Grace Ackerman-Lewis

DATE: March 3, 1975

SUBJECT: Installation of MSS 25.0

The hardcore system MSS 25.0 was installed on Wednesday, February 26, 1975 at 0900. This system includes the hardcore changes to support the Access Isolation Mechanism. The system libraries were updated on Thursday, February 27 at 1546.

I. System Change Log

Chng MCR   Change

1432 571,618,619,630,673,680,681,709,
        Changes were made to the hardcore system to support the Access Isolation Mechanism.

This mechanism provides system-wide administrative control over the access of processes to segments and directories, and over the propagation of access. Under the Access Isolation Mechanism, each object in the system (segments, directories, messages in message segments) will have an access class. Each process will have an access authorization, determined at login time from login options, and from maximum authorizations assigned to each person, project, user ID and terminal channel. A process may read (or execute or search) an object if the process' authorization is greater than or equal to the object's access class. A process may write (or modify or append to) an object only if the process' authorization is equal to the object's Access control lists and ring brackets will continue to operate as access class. before. The major visible change is that a process' effective access to an object will be the maximum access given by the ACL, ring brackets and access class of the object, taken all together. Within the set of objects and processes having identical access classes and authorizations, ACL's still provide access control at the individual user's

I. System Change Log (continued)

Chng MCR   Change

discretion.

II. Segment Change Log

Segment Name	Bound Segment	Change #
access_class_check.pl1	bound_priv_procs	A 1432
access_mode.pl1	bound_system_faults	R 1432
act_proc.pl1	bound_process_creation	R 1432
active_hardcore_data.alm	-	R 1432
admin_gate_.mexp	-	R 1432
alm_check_.alm	bound_sss_active_	A 1432
append.pl1	bound_file_system	R 1432
backup_load.pl1	bound_reloader_	R 1432
backup_load_dir_list.pl1	bound_reloader_	R 1432
backup_util.pl1	bound_reloader_	R 1432
bk_retrieve.pl1	bound_reloader_	R 1432
convert_alm_attributes_.pl1	bound_sss_active_	A 1432
convert_authorization_.pl1	-	A 1432
dc_pack.pl1	bound_file_system	R 1432
del_dir_tree.pl1	bound_file_system	R 1432
delentry.pl1	bound_file_system	R 1432
dir_control_error.pl1	bound_system_faults	R 1432
error_table_.et	-	R 1432
find_.pl1	bound_system_faults	R 1432
fs_get.pl1	bound_system_faults	R 1432
get_process_id_.pl1	-	R 1432
get_process_usage.pl1	bound_process_creation	R 1432
hc_ipc.pl1	bound_tty_active	R 1432
hcs_.mexp	-	R 1432
hphcs_.mexp	-	R 1432
init_hardcore_gates.pl1	bound_temp_2	R 1432
initiate.pl1	bound_system_faults	R 1432
ioi_.mexp	-	R 1432
list_inacl_all.pl1	bound_file_system	R 1432
makeknown.pl1	bound_system_faults	R 1432
makeunknown.pl1	bound_system_faults	R 1432
on_line_salvager.pl1	bound_salvager	R 1432
pds.alm	-	R 1432
pioi_.mexp	-	R 1432
proc_info.pl1	bound_file_system	R 1432
protection_audit_.pl1	bound_system_faults	A 1432
pxss.alm	-	R 1432
quota.pl1	bound_file_system	R 1432
reclassify.pl1	bound_priv_procs	A 1432
ring0_init.pl1	bound_file_system	R 1432

II. Segment Change Log (continued)

Segment Name	Bound Segment	Change #
ring1_syserr.pl1	bound_error_active	A 1432
ringbr_.pl1	bound_file_system	R 1432
salv_data.alm	-	R 1432
salv_rebuild_directory.pl1	bound_salvager	R 1432
salvage_directory.pl1	bound_salvager	R 1432
salvage_entry.pl1	bound_salvager	R 1432
seg_fault.pl1	bound_system_faults	R 1432
set.pl1	bound_file_system	R 1432
set_pds.pl1	bound_priv_procs	A 1432
set_privileges.pl1	bound_priv_procs	A 1432
star_.pl1	bound_file_system	R 1432
status.pl1	bound_file_system	D 1432
status_.pl1	bound_system_faults	R 1432
sum.pl1	bound_system_faults	R 1432
system_privilege_.mexp	-	A 1432
system_startup_.pl1	-	R 1432
truncate.pl1	bound_file_system	R 1432

Include Files

ahd.incl.pl1		R 1432
apte.incl.alm		R 1432
apte.incl.pl1		R 1432
audit_flags.incl.pl1		A 1432
backup_preamble_header.incl.pl1		R 1432
backup_record_types.incl.pl1		R 1432
create_branch_info.incl.pl1		A 1432
create_info.incl.pl1		R 1432
dir_entry.incl.pl1		R 1432
kst_entry.incl.pl1		R 1432
salv_data.incl.pl1		R 1432

Bindfiles

bound_error_active.bind		R 1432
bound_file_system.bind		R 1432
bound_priv_procs.bind		A 1432
bound_sss_active_.bind		R 1432
bound_system_faults.bind		R 1432

III. Bound Segment Change Log

Bound Segment   Change

bound_salvager   replaced: salvage_entry
                                        salvage_directory
                                        salv_rebuild_directory
                                        on_line_salvager

bound_process_creation   replaced: act_proc
                                        get_process_usage

bound_tty_active   replaced: hc_ipc

bound_temp_2   replaced: init_hardcore_gates

bound_sss_active_   added: aim_check_
                                        convert_aim_attributes_

bound_system_faults   added: protection_audit_
                            replaced: fs_get
                                        access_mode
                                        sum
                                        seg_fault
                                        makeknown
                                        find_
                                        initiate
                                        status_
                                        makeunknown
                                        dir_control_error

bound_reloader_   replaced: backup_load
                                        backup_load_dir_list
                                        backup_util
                                        bk_retrieve

bound_priv_procs   added: access_class_check
                                        reclassify
                                        set_pds
                                        set_privileges

bound_file_system   replaced: del_dir_tree
                                        delentry
                                        truncate
                                        quota
                                        append
                                        ringbr_
                                        list_inacl_all

III. Bound Segment Change Log (continued)

Bound Segment   Change

```
                                       set
                                       star_
                                       dc_pack
                                       ring0_init
                                       proc_info
                          deleted:     status

bound_error_active            added:   ring1_syserr
```

IV. Header Change Log

1432 The hardcore header was changed to add the segments bound_priv_procs, system_privilege_ and convert_authorization_; add the names: ring1_syserr to bound_error_acitve, aim_check_, read_allowed_, read_write_allowed_, write_allowed_ and convert_aim_attributes_ to bound_sss_active, protection_audit_ to bound_system_faults, and get_authorization_ to get_process_id_; and to delete the name status from bound_file_system.