TO: Distribution

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SUBJECT: Installation of MSS 29.0

I.   SYSTEM CHANGE LOG

MCR   MODIFICATIONS FOR MSS 29.0

1348 Change virtual CPU time calculation to eliminate double
     metering and include segment fault processing time.

1741 New limited implementation of hardcore processes (HPROCs)
     which always run in Ring 0. Used in 29.0 for syserr Logging
     HPROC.

1745 Change hardcore databases (oc_data, pds, prds, scs,
     syserr_data, sys_info, tc_data) from ALM to CDS segments.

1746 New facility called get_main, which obtains contiguous main
     storage during system initialization for fabrication of
     database segments whose length is computed according to
     table sizes.

1779 New config card PARM, which replaces WTBL and DEBG cards.
     New procedure find_parm which reads PARM cards.

1786 Change generate_mst to put entry definitions for given
     object segment on the MST into separate definitions segment
     on the MST. Change system initialization to pre-link
     hardcore using these definitions, and to store these
     definitions in hardcore segment, available via
     ring0_get_$definition.

2027 New reconfiguration software featuring: interrupts no
     longer directed to specific processor; process interrupt
     mechanism replaced by connect faults; switchless
     reconfiguration with greatly reduced operator intervention.

2028 New support for use of 32 additional payload channels on NSA
     IOM.

II. SEGMENT CHANGE LOG

SEGMENT NAME		BOUND SEGMENT
act_proc.pl1	R	bound_process_creation
add_memory.pl1	D	bound_process_creation
add_scu.pl1	A	bound_hc_reconfig
bootstrap1.alm	R	-
boundfault.pl1	R	bound_system_faults
build_template_pds.alm	D	bound_init_2
clock_init.pl1	D	bound_temp_1
collect_free_core.pl1	R	bound_temp_1
config.pl1	R	bound_active_1
create_hproc.pl1	A	bound_process_creation
debug_check.pl1	R	bound_error_wired
delete_pd_records.pl1	A	bound_hc_reconfig
delete_pd_records.pl1	D	bound_process_creation
disk_control.pl1	R	bound_page_control
emergency_shutdown.alm	R	-
fim.alm	A	bound_interceptors
fim.mexp	D	-
fim_table.mexp	A	bound_interceptors
free_unused_pages.pl1	D	bound_init_1
freecore.pl1	R	bound_active_1
fv_iv_template.mexp	A	bound_hc_reconfig
get_disk_segs.pl1	A	bound_temp_1
get_main.pl1	A	bound_active_1
get_proc_id.alm	D	bound_file_system
get_ptrs_.alm	R	bound_page_control
getuid.alm	A	bound_file_system
hardcore.header	R	-
hardware_fault.pl1	A	bound_error_active
hphcs_.mexp	R	-
il.alm	A	bound_interceptors
illegal_procedure.pl1	R	bound_error_wired
imp_dcm_init.pl1	R	bound_imp_dim_
imp_status.pl1	R	bound_imp_status
init_branches.pl1	R	bound_init_2
init_collections.pl1	D	bound_init_1
init_processor.alm	R	-
init_scu.pl1	A	bound_active_1
init_sst.pl1	R	bound_temp_1
init_sys_var.pl1	R	bound_temp_2
init_vtoc_man.pl1	R	bound_temp_2
initialize_faults.pl1	R	bound_init_1
initializer.pl1	A	bound_active_1
io_init.pl1	D	bound_io_init
iom_data_init.pl1	R	bound_temp_1
iom_manager.alm	A	bound_iom_wired
iom_manager.alm	D	bound_priv_1
load_system.pl1	R	bound_init_2
logical_volume_manager.pl1	R	bound_disk_util
make_segs_paged.pl1	R	bound_temp_1

II. SEGMENT CHANGE LOG (continued)

SEGMENT NAME		BOUND SEGMENT
mask_instruction.alm	A	bound_active_1
mos_memory_check.pl1	R	bound_error_wired
oc_data.alm	D	-
oc_data.cds	A	-
oc_data_init.pl1	R	bound_temp_1
page_fault.alm	R	bound_page_control
parity_fault.pl1	D	bound_error_active
pc.pl1	R	bound_page_control
pc_config.pl1	R	bound_page_control
pd_util.alm	R	bound_page_control
pds.alm	D	-
pds.cds	A	-
phcs_.mexp	R	-
plm.pl1	R	bound_process_creation
prds.alm	D	-
prds.cds	A	-
prds_init.pl1	R	bound_active_1
pre_link_1.alm	R	-
pre_link_2.alm	R	-
privileged_mode_init.alm	R	-
privileged_mode_ut.alm	R	bound_priv_1
proc_int_handler.pl1	R	bound_tc_wired
pxss.alm	R	-
rcp_init.pl1	R	bound_io_init
reconfig.pl1	A	bound_hc_reconfig
reconfig.pl1	D	bound_process_creation
restart_fault.alm	R	-
ring_alarm.pl1	R	bound_tc_wired
ring_zero_meter_limits_ASCII_	R	-
rsw_util.pl1	A	bound_active_1
sc_parse_.pl1	R	bound_system_control_
scas_init.pl1	R	bound_temp_1
scr_util.pl1	A	bound_active_1
scs.alm	D	-
scs.cds	A	-
scs_and_clock_init.pl1	A	bound_temp_1
scs_init.pl1	R	bound_temp_1
sct_manager_.pl1	R	bound_sss_wired_
seg_fault.pl1	R	bound_system_faults
segment_loader.pl1	R	bound_init_1
shutdown.pl1	R	bound_file_system
shutdown_switch.alm	D	bound_priv_1
signal_.pl1	R	bound_sss_wired_
signaller.alm	R	-
slt_manager.alm	R	-
start_cpu.pl1	A	bound_hc_reconfig
start_cpu.pl1	D	bound_process_creation
stop_cpu.pl1	A	bound_hc_reconfig
stop_cpu.pl1	D	bound_process_creation

II. SEGMENT CHANGE LOG (continued)

SEGMENT NAME		BOUND SEGMENT
sys_info.alm	D	-
sys_info.cds	A	-
syserr.alm	R	bound_error_wired
syserr_copy_paged.pl1	R	bound_error_active
syserr_data.alm	D	-
syserr_data.cds	A	-
syserr_log_check.pl1	R	bound_error_active
syserr_log_init.pl1	R	bound_temp_2
syserr_logger.pl1	R	bound_error_wired
syserr_real.pl1	R	bound_error_wired
tc_data.alm	D	-
tc_data.cds	A	-
tc_init.pl1	A	bound_init_1
tc_init.pl1	D	bound_init_2
tc_shutdown.pl1	R	bound_file_system
trace.pl1	R	bound_iom_wired
trace_init.pl1	R	bound_temp_1
tty_init.pl1	R	bound_io_init
verify_lock.pl1	R	bound_file_system
wire_proc.pl1	R	bound_active_1
wire_stack.alm	R	bound_priv_1
wired_fim.alm	A	bound_interceptors
wired_shutdown.pl1	R	bound_tc_wired
xray_communications.alm	R	-

BIND SEGMENTS

bound_active_1.bind	R
bound_error_active.bind	R
bound_error_wired.bind	R
bound_file_system.bind	R
bound_hc_reconfig.bind	A
bound_init_1.bind	R
bound_init_2.bind	R
bound_interceptors.bind	A
bound_io_init.bind	R
bound_iom_wired.bind	R
bound_page_control.bind	R
bound_priv_1.bind	R
bound_process_creation.bind	R
bound_temp_1.bind	R

II. SEGMENT CHANGE LOG (continued)

INCLUDE SEGMENTS

apte.incl.alm	R
apte.incl.pl1	R
cnt.incl.pl1	R
fault_reg.incl.pl1	A
fault_vector.incl.alm	R
fault_vector.incl.pl1	R
fgbx.incl.alm	R
fgbx.incl.pl1	R
hardware_config_cards.incl.pl1	A
imp_dcm_data.incl.pl1	R
iom_data.incl.alm	R
iom_data.incl.pl1	R
iot.incl.alm	R
iot.incl.pl1	R
make_sstnt_entry.incl.pl1	R
mc.incl.alm	R
mc.incl.pl1	R
oc_data.incl.pl1	R
pvt.incl.pl1	R
rcerr.incl.alm	A
rcerr.incl.pl1	A
rci.incl.pl1	A
rsw.incl.pl1	A
scr.incl.pl1	R
scs.incl.alm	A
scs.incl.pl1	R
sdw.incl.pl1	R
slt.incl.alm	R
slt.incl.pl1	R
slt_init.incl.alm	R
slt_template.incl.alm	R
site.incl.alm	R
site.incl.pl1	R
software_config_cards.incl.pl1	R
sst.incl.pl1	R
stack_header.incl.pl1	R
static_handlers.incl.pl1	R
syserr_data.incl.pl1	R
syserr_fault_msg.incl.pl1	A
syserr_msg_parity.incl.pl1	D
system_control_commands.incl.pl1	R
tcm.incl.pl1	R
wire_proc_data.incl.pl1	A