

MULTICS
SOFTWARE RELEASE BULLETIN
AND
INSTALLATION INSTRUCTIONS
RELEASE MR12.5

PREPARED BY:
MULTICS SUPPORT

November 18, 1992

Copyright, (C) Bull HN, 1992

Bull



TRADEMARK ACKNOWLEDGMENTS

Megacalc is a registered trademark of The Mega Group, Inc.

Apple is a registered trademark of Apple Computer, Inc.

Tektronix is a trademark of Tektronix, Inc.

DEC and VT100 are trademarks of Digital Equipment Corporation.

VersaTerm is a trademark applied for by Lonnie R. Abelbeck.

IBM is a registered trademark of the International Business Machines Corporation.

VisiCalc is a registered trademark of Visicorp, Inc.

MS-DOS is a registered trademark of Microsoft Corporation.

Macintosh is a registered trademark of Apple Computer, Inc.

UNIX is a registered trademark of AT&T Bell Laboratories.

CONTENTS

		Page
Section 1	Introduction	1-1
	Site Support	1-1
	Document Contents	1-3
Section 2	Contents of MR12.5	2-1
	Answering Service	2-1
	Commands	2-1
	Non-Privileged Commands	2-1
	Privileged Commands	2-2
	Volume Backup and Recovery	2-3
	Online Test and Diagnostics	2-3
	Forum	2-3
	Hardcore	2-4
	System Support Software	2-4
	Languages	2-4
	FORTRAN	2-4
	PL/I	2-5
	Mail	2-5
	System Subroutines	2-5
	Online Documentation	2-5
Section 3	TRs Resolved in MR12.5	3-1
Section 4	FCO and Firmware Status	4-1
	Firmware	4-1
	Required Firmware Revision Levels	4-1
	Field Change Order List	4-2
Section 5	Installation Instructions	5-1
	Installation Overview	5-1
	Installation Support	5-2
	Installation Steps	5-3
	Step 1: Tape Reload	5-3
	Step 2: Hardcore and Executable	5-3
	Step 3: Reboot	5-4
	Step 4: LDD and Unbundled	5-4
	Step 5: Reverting Software	5-5
	Step 6: Library Cleanup	5-6
	Installation Exec_coms	5-6
Appendix A	Documentation Changes	A-1

CONTENTS (cont)

	Page
Current Multics Documentation Status	A-1
12.5 Documentation	A-1
Appendix B Module Changes for MR12.5	B-1
New or Modified Info Segments for	
MR12.5	B-2
New Segments for MR12.5	B-3
New or Modified Include Files for	
MR12.5	B-4
Deleted Segments for MR12.5	B-5
Modified Segments for MR12.5	B-6

SECTION 1

INTRODUCTION

Multics Release 12.5 (MR12.5) is a supplemental release and assumes the prior installation of either MR12.3 or MR12.4. That is, the library tapes of MR12.3, a free standing release, must be installed prior to installation of MR12.5. This release (MR12.5) may also be installed if MR12.4 has already been installed. The MR12.4 release was a supplemental system release dependent upon the prior installation of MR12.3.

This release installs all system changes included in the MR12.4 release. Descriptions of the MR12.4 release package and its corresponding installation instructions are not included in this document. The installer should refer to the MR12.4 SRB/SIB for descriptions of the system changes made in that release. The installation of MR12.5 does not require the installation instructions for any previous release.

This document includes descriptions of features included in Multics Release 12.5. Both the SRB and the SIB are combined into this document and instructions for installing MR12.5 are included in Section 5.

Additional documentation, including a list of bugs fixed in MR12.5, is provided with the release tapes as printable segments on the release tapes in the directory >doc>MR12.5.

Software Releases prior to MR12.1 are no longer supported. All sites running pre-MR12.3 software are strongly encouraged to upgrade to MR12.3 as soon as possible, then move to MR12.5. Corrections to critical problems against releases prior to MR12.3 will be considered on a case by case basis.

SITE SUPPORT

System Representatives who support Multics should apply for registration on the SiteSA project maintained in Calgary on the ACTC Multics system.

The SiteSA project was created to allow sites to communicate with Support personnel on matters of site support. Only System Representatives who support a Multics site are authorized to use the project. They are authorized to use it only for site support activities which require communication of information to support personnel.

SiteSAs should maintain their site's info segments in >udd>SiteSA>site_info (>udd>ssa>si). Information on maintaining these segments is in the info segment, >udd>ssa>si>site_info.info.

In addition to normal telephone and Multics mail communications with support personnel, SiteSAs are encouraged to use the unusual_crash_log forum meeting to report any unusual problems encountered at their site. SiteSAs not familiar with forum can type "help forum" for usage information. Forum is a subsystem somewhat like the mail system in which an electronic meeting can be held. To invoke forum, type:

```
forum >udd>ssa>sa_meeting>uclog
```

Type ? to print a list of requests allowed by forum. Other forum meetings of interest to SiteSAs are the following:

PATHNAME	SHORT NAME
>udd>ssa>sa_meeting>install_instructions	ii
>udd>ssa>sa_meeting>hardware_problems	hwp
>udd>ssa>sa_meeting>critical_fixes	fixes

We would appreciate that sites, as they complete installation of MR12.5, enter a transaction in the install_instructions (ii) forum meeting. This will allow other sites to see the amount of exposure the release is receiving and to communicate any problems encountered in the installation procedure.

Support also suggests, very strongly, that SiteSAs DO NOT attempt to reproduce site problems on ACTC which are known to crash the system at their site, cause processors to loop in ring 0, etc. Such problems should be reported via the Trouble Report system, and will be verified by support personnel using appropriate resources, so that ACTC service is not interrupted unnecessarily.

Problems encountered while installing this release, or problems of a critical nature to a customer site (for a definition of critical, type: help tr.priorities) should be reported to those listed below:

NAME	AREA	USER ID	PHONE
Dave Schroth	Site Support	Schroth	403/295-5900
	Release Prep		
Ward Anderson	Site Support	WAAnderson	403/295-5900

DOCUMENT CONTENTS

Following is a summary of the remaining of sections in this document.

Section 2
describes significant software changes

Section 3
describes trs fixed in MR12.5

Section 4
describes significant FCO and firmware status

Section 5
describes installation instructions

Appendix A
describes the associated documentation

Appendix B
lists modules changed

SECTION 2

CONTENTS OF MR12.5

ANSWERING SERVICE

- A- 1. Updated pnt_fs_util.pl1 to return the error code error_table_\$bad_file_name instead of error_table_\$badstar when the name supplied does not end in the "pnt" suffix.
- A- 2. The entry point vacate_pdir_volume had a bad argument list when it called sys_log to say "Specified argument is not supported.". The missing control code has been added to the call to sys_log.
- A- 3. Updated act_ctl so that the operator shift command correctly displays the next shift change time.
- A- 4. Corrected up_cdt to not take pointer faults when installing a new CDT that uses a new multiplexor type for the first time or that changes the line type of a login channel.

COMMANDS

Non - Privileged Commands

- B- 1. The header for the list_absentee_request now has the correct total for absentee_queue 1 if the user does not have s access to queue 0.
- B- 2. The dial_out "wait" request now supports the "-inhibit_error" and "-no_inhibit_error" control arguments.
- B- 3. The active function call [mvp 1 -tt] has been fixed so it no longer fails due to insufficient stack space on very large volume pools.

- B- 4. The delete command now works on the forum extended object type (i.e. dl foo.forum) as documented. In the previous release, entering "dl foo.forum" would produce a message stating that the operation was not allowed for a directory. Entering "dd foo.forum" informed the user that "foo.forum" was a forum meeting and that the "dl" command should have been used instead of "dd".

Privileged Commands

- C- 1. The list_extra_personids command will no longer abort when it is run more than once within the same process. In prior releases, when run a second time within the same process, list_extra_personids would print the following error message: "conflict with file attribute...".
- C- 2. The set_special_password command will now query the user twice for the password by default or when the -prompt control argument is given.
- C- 3. Corrected the spelling of the AS log entry generated for "Denied send_admin_command for USER in ring X" from "sc_admin_comamnd_" to "sc_admin_command_".
- C- 4. The send_daemon_command expects the channel then the User.Project after the "login" keyword (i.e. send_daemon_command login channel User.Project). If the user reverses the order of the arguments after the "login" keyword, it will now print:
send_daemon_command: Specified control argument is not accepted.
Usage: send_daemon_command login channel User.Project
- C- 5. The as_who command will now correctly indicate a ">" for those users whose grace time has expired and are therefore subject to preemption.
- C- 6. Corrected MR12.4 library segments corrupted during transfer from the ACTC system to System-M for integration. This corrects a problem with using the "send_admin_command" command with the -ntmail option.
- C- 7. reconstruct_registry will now properly traverse backwards through the journal chains when rcprm journals have been deleted by some means other than resetting.
- C- 8. edit_proj will now allow the deletion of the project alias from the SAT.
- C- 9. as_who now reports lack of access to read out of tc_data with every invocation.

C-10. Changed generate_mst to detach the output tape I/O switch unless the "-hold" control argument is given.

Volume Backup and Recovery

- D- 1. Corrected retrieve_from_volume to correctly truncate retrieved objects with embedded nulled pages by using the current segment length (vtoce.csl) and not the number of pages (vtoce.records) actually stored.
- D- 2. Corrected a problem in reload_volume that caused the reload to fail with a fatal error if a tape read error occurred while reading an object with embedded nulled pages.
- D- 3. Corrected the reload_volume command to display the correct PVIDs and PV names in the error message generated when a PVID mismatch is detected.
- D- 4. Fixed reload_volume to properly reload FIPS disk devices when the -disk_model control argument is specified. Previous releases did not compute the number of usable/unusable sectors correctly because the wrong value was being used for sectors per record.

ONLINE TEST AND DIAGNOSTICS

- E- 1. Corrected an MR12.3 software integration error in deckfile_manager that caused the program to fail.
- E- 2. The following changes were made to io_error_summary: Added the -channel (-chn) control argument to breakdown status counts by device and channel. Corrected the reporting of FIPS disk device statuses. Added the sector number to the diagnostic information provided by the -cylinders (-cyl) argument. Corrected data bit error counts for tape devices.

FORUM

- F- 1. The header on mailed, unprocessed forum transactions has been updated to reflect the date the transaction was written and the fact that it was unprocessed.
- F- 2. Forum will no longer fail after issuing "ls -reverse" for large meetings. The module forum_trans_util.pll has an area condition handler to avoid the possibility of forum raising an "area condition".

- F- 3. Forum will no longer return as the current entry a transaction that was subsequently deleted. Instead, it will return the highest numbered undeleted transaction marked as seen.
- F- 4. Forum will no longer go into an infinite loop with the use of the control arguments `-after_time`, `-before_time` and `-between_time` with a `date_time` string that is between transaction blocks.

HARDCORE

- G- 1. `force_write` will now compute the values `sst$fw_none` and `sst$force_pwrites` correctly. An uninitialized variable was being used to compute these values.

SYSTEM SUPPORT SOFTWARE

- H- 1. `segment_mover` will now include disk subvolume names in its messages to the `syserr` log.
- H- 2. The code in `mseg_segment.pl1`, responsible for message segment compaction, has been changed to allow the caller to hold the lock during compaction. Prior releases truncated the entire segment, overwriting the lock word with 0.
- H- 3. The `copy_disk_volume` command will not fail with an invalid IOCB error when attempting to copy a 451 disk volume which has no alt partition. Also, the device names for the source and the target are added to the call that prints the error summary.

LANGUAGES

FORTRAN

- I- 1. The Fortran compiler has been fixed to generate correct code for VLA references if the dimension of a VLA is equal to or greater than the maximum number that fits in a 18 bit halfword (262143).
- I- 2. The Fortran compiler has been fixed to be able to consistently diagnose errors when the VLA size is greater than the maximum value. The maximum value is 16.7 million ($2^{24} - 1$) words.

PL/I

- J- 1. Corrected a problem with the resolution of constant scoping in the PL/I compiler. The PL/I compiler will now resolve references to options (constant) values (used as label subscripts or array extents) using proper scoping rules.
- J- 2. The PL/I listing generator will no longer generate an out_of_bounds fault when the source portion of a listing goes MSF.

MAIL

- K- 1. The read_mail command has been changed so that it checks for the arrival of new mail after every request line.
- K- 2. x_mail will now honor changes to the reply-to field when replying to a message.

SYSTEM SUBROUTINES

- L- 1. The format_document_subroutine will properly handle input strings that are longer than its internal buffer length of 256 characters.

ONLINE DOCUMENTATION

- M- 1. window_editor_utils_ now has an infoseg.

SECTION 3

TRS RESOVLED IN MR12.5

This section lists those TRs that have been resolved in MR12.5. These TRs are considered closed with this release. Site requests to re-evaluate any of the TRs listed will be considered on a case by case basis.

The textual content of the area and summary fields of the TRs listed have not been changed from that contained in the TR database. Any apparent change will be as a result of the process of composing this document.

Number: phx06801 State: submitted
Date Entered: 1980-07-11 Area: read_mail
Site: System_M
Summary:
Read_mail confused over which is the last message.

Number: phx08877 State: submitted
Date Entered: 1981-01-09 Area: read_mail (rp)
Site: System_M
Summary:
Inability of the rp response within read_mail to find a message.

Number: phx10009 State: submitted
Date Entered: 1981-05-29 Area: EXL read_mail
Site: System_M
Summary:
Apply request does not take newly-arrived messages into account.

Number: phx14510 State: not_error
Date Entered: 1983-01-12 Area: pll
Site: System_M
Summary:
Pll plays funny games with the mix of fixed and asterisk bounds on parameter arrays.

Number: phx15485 State: submitted
Date Entered: 1983-06-28 Area: EXL read_mail apply request
Site: System_M
Summary:
Does not honor new mail when "apply 1" is given.

Number: phx15695 State: submitted
Date Entered: 1983-08-02 Area: PL1 compiler
Site: Bell_Toronto
Summary:
Specification of "-ot" will cause compiler to catch/generate warnings of variables that have been referenced but never set.

Number: phx15706 State: answered
Date Entered: 1983-08-03 Area: pll conditions
Site: Bell_Toronto
Summary:
It appears that MR10 is treating conditions differently than MR8 used to. Is it possible that there could be extra overhead in MR10, whhich would degrade an applications performance?

Number: phx16416 State: submitted
Date Entered: 1983-11-21 Area: as_who documentation
Site: GM
Summary:
If the user doesn't have access to tc_data the error message is printed only on the first invocation per process.

Number: phx16417 State: submitted
Date Entered: 1983-11-21 Area: as_who documentation (headers)
Site: GM
Summary:
If the user specifies long output and a name to be searched for, the column headers are not printed.

Number: phx16625 State: not_error
Date Entered: 1983-12-23 Area: documentation
Site: AFDSC
Summary:
None of the r(1 2 3 4)_io_ gate entries are documented.

Number: phx16637 State: answered
Date Entered: 1983-12-31 Area: pll, assign_
Site: System_M
Summary:
Pl1 and assign_ seem to be at odds to the reference manual for alignment.

Number: phx17399 State: submitted
Date Entered: 1984-04-27 Area: video
Site: System_M
Summary:
window_editor_utils_ needs an info seg.

Number: phx17468 State: deferred
Date Entered: 1984-05-10 Area: mail_system/reply
Site: MIT_ext
Summary:
The mail_sstem reply request can not reply to mail with a from
field of "ORCUTT%EDUCOM".

Number: phx17497 State: deferred
Date Entered: 1984-05-15 Area: read_mail reply
Site: MIT
Summary:
reply should be able to figure out a reply path by following the
path the mail took in arriving .

Number: phx18127 State: submitted
Date Entered: 1984-08-29 Area: dial_out
Site: System_M
Summary:
The dial_out command can not be used recursively with the
-profile control argument.

Number: phx18457 State: deferred
Date Entered: 1984-10-31 Area: compose device-writer
 documentation

Site: System_M
Summary:
The documentation in AZ98-02, sepcifically pages 5-58 .. 5-61,
which describe the code fragments and variables, are
insufficiently complete to design/write/implement a
device-writer.

Number: phx18497 State: submitted
Date Entered: 1984-11-09 Area: help command
Site: System_M
Summary:
The help command produces garbage output when encountering a link
to a non-existent info segment.

Number: phx18509 State: deferred
Date Entered: 1984-11-13 Area: Mail system
Site: System_M
Summary:
-log is always added as a bcc field.

Number: phx18528 State: needs_info
Date Entered: 1984-11-17 Area: mail table/PNT
Site: MIT_ext
Summary:
The mail table software does not recognize when two entries are
actually the same.

Number: phx18654 State: submitted
Date Entered: 1984-12-11 Area: RCPRM
Site: AFDSC
Summary:
reconstruct_registry only works if the rcprm journals begin after
the last update to the registry being reconstructed. It should
be able to ignore journal entries older than the registry to be
reconstructed.

Number: phx19236 State: deferred
Date Entered: 1985-03-28 Area: DOC: forum_.info
Site: System_M
Summary:
missing certain items/incorrect data

Number: phx19296 State: submitted
Date Entered: 1985-04-15 Area: decode_definition_ info
 segment

Site: System_M
Summary:
The endpoint decode_definition_\$full is missing from the info,
even though it is referred to in the text

Number: phx19307 State: deferred
Date Entered: 1985-04-17 Area: read_mail: reply
Site: MIT
Summary:
Read_mail unable to reply to valid message header.

Number: phx19355 State: deferred
Date Entered: 1985-05-02 Area: read_mail "reply"
Site: MIT
Summary:
mail system could not reply to FROM field.

Number: phx19423 State: deferred
Date Entered: 1985-05-22 Area: RCPRM
Site: System_M
Summary:
Unable to reproduce this problem.

Number: phx19470 State: deferred
Date Entered: 1985-06-05 Area: rdm 'reply'
Site: MIT
Summary:
Why can't (or shouldn't) 'reply' construct a reply address from
the 'Route:' field or from 'Delivery-xx:' if 'Route:' is not
present?

Number: phx19487 State: submitted
Date Entered: 1985-06-10 Area: io_error_summary
Site: System_M
Summary:
io_error_summary gets the channel and MPC wrong.

Number: phx19640 State: submitted
Date Entered: 1985-08-02 Area: dial_out -8bit
Site: System_M
Summary:
The dial_out command does not use the 'force' mode when it attempts to set '8bit' mode.

Number: phx19654 State: deferred
Date Entered: 1985-08-09 Area: rcprm
Site: AFDSC
Summary:
In MR11.0, given a tape_vol with potential access class of system_low:system_high, users logged on at an authorization above system_low cannot acquire it with the command: "aqr tape_vol -nb 1"

Number: phx19734 State: submitted
Date Entered: 1985-09-03 Area: format_document_
Site: Site_N
Summary:
The format_document_ subroutine mishandles input strings which contain lines that are longer than the internal buffer length (256 characters).

Number: phx19749 State: submitted
Date Entered: 1985-09-10 Area: Tools
Site: System_M
Summary:
Minor improvement to io_error_summary

Number: phx19791 State: submitted
Date Entered: 1985-09-24 Area: send_daemon_command
Site: System_M
Summary:
Confusing error message.

Number: phx19799 State: limitation
Date Entered: 1985-09-26 Area: RCP and Answering Service
Site: AFDSC
Summary:
Many absentees entered with -resource can cause Initializer to be so busy checking on resources that little else gets done.

Number: phx19821 State: submitted
Date Entered: 1985-10-06 Area: io_error_summary.pl1
Site: Site_N
Summary:
The io_error_summary program bungles the reporting of the tracks
where data bit errors occurred.

Number: phx19867 State: submitted
Date Entered: 1985-10-24 Area: install
Site: System_M
Summary:
up_cdt_fails with null pointer fault when a new multiplexer is
added to the cdt

Number: phx19913 State: not_error
Date Entered: 1985-11-14 Area: forum
Site: System_M
Summary:
allowed set of chairman to Person.*, then refused to cooperate
later

Number: phx20018 State: deferred
Date Entered: 1986-01-02 Area: rcp_tape_survey_
Site: System_M
Summary:
Creates IO to tape handler which will cause Initalizer to go
blocked if tape controller has been suspended.

Number: phx20023 State: deferred
Date Entered: 1986-01-03 Area: video
Site: UC
Summary:
Can leave ips signals masked.

Number: phx20047 State: submitted
Date Entered: 1986-01-15 Area: sc_admin_command_
Site: System_M
Summary:
The AS log entry generated for "Denied send_admin_command for
USER in ring X" misidentifies itself as "sc_admin_command_".

Number: phx20277 State: submitted
Date Entered: 1986-04-11 Area: CMF Access Checking Default
Site: UC
Summary:
Default for Check_acs is not "priv_attach,dial_out" as stated on
in CC75.

Number: phx20350 State: submitted
Date Entered: 1986-05-19 Area: answering service - general
Site: RAE
Summary:
as_who incorrectly interprets preemption .

Number: phx20626 State: submitted
Date Entered: 1986-10-21 Area: PNT extended object type
Site: System_M
Summary:
If a name which does not end in the ".pnt" suffix is supplied as
an argument, the error code error_table_\$badstar is returned
rather than a more informative code.

Number: phx20665 State: submitted
Date Entered: 1986-11-12 Area: documentation
Site: System_M
Summary:
In AM83, the pl1 reference guide, page 15-9, "string value"
should be "stringvalue" (no space) in FILE DESCRIPTIONS diagram.

Number: phx20681 State: deferred
Date Entered: 1986-11-20 Area: Emacs manual
Site: System_M
Summary:
The index is missing many important entries.

Number: phx20713 State: submitted
Date Entered: 1986-12-08 Area: system administration tools
Site: DND-H
Summary:
set_special_password does not query the user twice for the
password either by default or when the control argument -prompt
is given.

Number: phx20785 State: submitted
Date Entered: 1987-02-20 Area: dcdsm
Site: System_M
Summary:
No help info segment for dcdsm.

Number: phx20787 State: submitted
Date Entered: 1987-02-24 Area: Answering Service
Site: RADC
Summary:
During a shift change or a "maxu auto" the system will log
messages to the effect that the MGT is damaged when it is really
not.

Number: phx20788 State: deferred
Date Entered: 1987-02-24 Area: .
Site: System_M
Summary:
The Multics Communications Administration manual CC75-02 MR11.0
dated February 1985.

Number: phx20810 State: submitted
Date Entered: 1987-03-11 Area: forum
Site: Ford
Summary:
list active request does not honor -inhibit_error

Number: phx20812 State: submitted
Date Entered: 1987-03-19 Area: documentation for "psl"
Site: System_M
Summary:
"psl.info" refers to "-single" control argument, which is not implemented.

Number: phx20814 State: submitted
Date Entered: 1987-03-20 Area: run
Site: RAE
Summary:
When a run -ec xx terminates due to a fortran end statement, due to the mode of signalling the end_run the user environment can be disrupted or destroyed.

Number: phx20828 State: submitted
Date Entered: 1987-03-27 Area: enter_output_request
Site: System_M
Summary:
IN THE VERSION CURRENTLY ON BCO (BILLERICA), the default info promised in the help segment does not appear.

Number: phx20865 State: submitted
Date Entered: 1987-05-05 Area: info segs
Site: System_M
Summary:
forum.info does not document -auto_write.

Number: phx20878 State: submitted
Date Entered: 1987-05-29 Area: Forum User's Guide (CY74-02)
Site: System_M
Summary:
The description of the "reply" request doesn't give a complete explanation of replying in another meeting (i.e. with the use of the "-meeting" control argument).

Number: phx20886 State: submitted
Date Entered: 1987-06-05 Area: list_extra_personids
Site: Bell_Montreal
Summary:
When this command is run more than once within the same logon, list_extra_personids aborts with the message: conflict with file attribute....

Number: phx20898 State: submitted
Date Entered: 1987-06-20 Area: forum
Site: System_M

Summary:

I got the error message "The specified transaction index does not exist. Transaction not entered." when (I feel) no user error had been made.

Number: phx20899 State: submitted
Date Entered: 1987-06-20 Area: forum
Site: System_M

Summary:

All the transactions that I entered into meeting ONE from meeting TWO (i.e. with the forum request "reply <trans> -mtg ONE", while I was attending meeting TWO) got chained together - even though the transactions to which I was replying (in meeting TWO) were not in the same chain.

Number: phx20943 State: submitted
Date Entered: 1987-08-06 Area: Documentation:
 processor manual

Site: System_M

Summary:

Typos in the Multics processor manual.

Number: phx20946 State: submitted
Date Entered: 1987-08-08 Area: forum
Site: System_M

Summary:

Bad header on mailed, unprocessed transactions.

Number: phx20978 State: submitted
Date Entered: 1987-09-08 Area: deckfile_manager
Site: System_M

Summary:

Attempting to merge tandd_deck_files after deleting firmware modules results in errors attempting to find the deleted firmware.

Number: phx21021 State: submitted
Date Entered: 1987-11-27 Area: process creation, nothing/tty_
Site: SJU

Summary:

Creating a file in the home directory called "nothing" prevents further login's because tty_ uses the "nothing" command as a subroutine.

Number: phx21031 State: submitted
Date Entered: 1987-12-04 Area: documentation AMOC password
 locking

Site: SJU

Summary:

Turning pnte flag "lock" on causes immediate bumping of user;
this is change made sometime after MR10.2, and is not documented
in GB64.

Number: phx21039 State: submitted
Date Entered: 1987-12-15 Area: video

Site: RAE

Summary:

wdc guch/ wdc gech are inconsistent with each other

Number: phx21045 State: submitted
Date Entered: 1987-12-21 Area: run units

Site: RAE

Summary:

1. run units execute inconsistenly if they contain a fortran
program. 2. the documentation covering run units with Fortran
programs is inadequate .

Number: phx21050 State: submitted
Date Entered: 1988-01-05 Area: documentation of user command

Site: SJU

Summary:

The "cutoff_date" argument to the "user" command is not
documented in the info file or in C&AF.

Number: phx21172 State: submitted
Date Entered: 1988-06-09 Area: date_time_.info

Site: System_M

Summary:

Documentation for date_time_\$from_clock_interval refers to the
nonexistent include file time_offsets.incl.pll.

Number: phx21202 State: submitted
Date Entered: 1988-08-28 Area: add_name

Site: System_M

Summary:

Says "This operation not allowed for a segment" when adding a
name to a forum meeting which is the only remaining name of
another forum in the same directory (i.e., when the other forum
should be deleted).

Number: phx21246 State: submitted
Date Entered: 1989-01-10 Area: force_write

Site: Site_N

Summary:

forced_page_writes is not adding correctly.

Number: phx21253 State: deferred
Date Entered: 1989-01-26 Area: probe - C
Site: System_M
Summary:
Probe ignores subscript referencing for arrays which are
enumerated types.

Number: phx21254 State: not_error
Date Entered: 1989-01-27 Area: toltS
Site: System_M
Summary:
The template for the test mdcicddoooo test command is wrong in
MR12.1, was ok in mr11. The new module thinks it is a test
mdciccoooo format.

Number: phx21264 State: deferred
Date Entered: 1989-02-08 Area: C language
Site: System_M
Summary:
Inconsistent rightshift. Unsigned types of char, short, and int
use logical rightshift, which makes sense, while unsigned long
uses arithmetic, which does not.

Number: phx21270 State: submitted
Date Entered: 1989-03-02 Area: rldr_label_
Site: INRA
Summary:
rldr_label_ output erroneous value in error message

Number: phx21275 State: submitted
Date Entered: 1989-03-21 Area: forum
Site: System_M
Summary:
When in forum in a meeting with "lots" of transactions, doing a
ls with the -reverse control argument will cause a blow up.

Number: phx21276 State: submitted
Date Entered: 1989-03-23 Area: documentation
Site: System_M
Summary:
errata.cj52.info contains compose controls.

Number: phx21281 State: submitted
Date Entered: 1989-04-17 Area: generate_mst
Site: IN
Summary:
The generate_mst command does not detach and unload tapes.

Number: phx21284 State: submitted
Date Entered: 1989-04-20 Area: pl/1 compiler
Site: NWGS
Summary:
out_of_bounds on listing

Number: phx21291 State: submitted
 Date Entered: 1989-05-10 Area: deckfile_manager (dfm)
 Site: IN
 Summary:
 Several bugs in dfm.

Number: phx21295 State: submitted
 Date Entered: 1989-05-18 Area: AG92 Documentation
 Site: System_M
 Summary:
 Description of status command control arguments -author and
 -bit_count_author essentially duplicate each other.

Number: phx21296 State: not_error
 Date Entered: 1989-05-23 Area: MRDS
 Site: DAC
 Summary:
 Selection expressions do not always select the correct data.

Number: phx21301 State: deferred
 Date Entered: 1989-06-15 Area: any_to_any_
 Site: System_M
 Summary:
 Conversion of a character string to floating point binary fails
 when the character string represents a negative binary floating
 point value such as "-1.1e+0b".

Number: phx21303 State: submitted
 Date Entered: 1989-06-16 Area: segment_mover.pl1
 Site: Ford
 Summary:
 segment_mover should specify subvolumes (when applicable) in its
 syserr messages.

Number: phx21304 State: submitted
 Date Entered: 1989-06-21 Area: edit_proj
 Site: Ford
 Summary:
 Project aliases cannot be removed once added.

Number: phx21306 State: deferred
 Date Entered: 1989-07-19 Area: pl1 compiler
 Site: System_M
 Summary:
 The "atan" builtin doesn't work when passed a complex value as an
 argument.

Number: phx21308 State: deferred
 Date Entered: 1989-08-03 Area: pl1 compiler
 Site: System_M
 Summary:
 Comparison of constant label array elements doesn't work.

Number: phx21310 State: deferred
 Date Entered: 1989-08-14 Area: pl1 compiler
 Site: System_M
 Summary:
 There are lots of problems with complex fixed, decimal and
 picture data types.

Number: phx21315 State: deferred
 Date Entered: 1989-10-12 Area: C compiler
 Site: System_M
 Summary:
 'Translation failed' message while compiling

Number: phx21317 State: not_error
 Date Entered: 1989-11-03 Area: azm
 Site: System_M
 Summary:
 azm does not default to pds on am, but does on hregs, creating
 confusion. defaults on all commands should be consistent.

Number: phx21318 State: not_error
 Date Entered: 1989-11-03 Area: azm
 Site: ENWGS_SDF
 Summary:
 azm display does not work properly for hardcore not in dump/ not
 online.

Number: phx21319 State: not_error
 Date Entered: 1989-11-06 Area: azm
 Site: System_M
 Summary:
 hregs command reuses au data invalidly in threading process and
 does not give all the available cu and ou data.

Number: phx21324 State: submitted
 Date Entered: 1989-12-11 Area: manage_volume_pool
 Site: RAE
 Summary:
 manage_volume_pool mvp can run out of stack space when used as an
 active function to get the total of a large pool. string [mvp l
 -tt]

Number: phx21325 State: submitted
 Date Entered: 1989-12-14 Area: deckfile_manager (dfm)
 Site: RAE
 Summary:
 Bad code causes faulty attach description in dfm_ (get_files)
 line 1425. Causes reel_name and -write to be concatenated for
 copy attach.

Number: phx21326 State: deferred
Date Entered: 1989-12-15 Area: DSA Network Itself or
 Multics DSA

Site: System_M

Summary:

Asynchronous messages, e.g., from the printer daemon, seem to confuse DSA so that it ignores my terminal input. It appears that DSA is waiting for something from Multics before it will (logically) turn my line around.

Number: phx21327 State: submitted
Date Entered: 1989-12-18 Area: copy command
Site: Cardiff

Summary:

copy command gets bogus quota fault copying a MSF which contains nulled pages.

Number: phx21332 State: deferred
Date Entered: 1989-12-18 Area: C Compiler
Site: Site_N

Summary:

The C compiler spits out bogus program name when displaying warnings.

Number: phx21334 State: not_error
Date Entered: 1990-01-04 Area: STTY Command
Site: System_M

Summary:

The -TTP control arg is BROKEN

Number: phx21335 State: submitted
Date Entered: 1990-01-11 Area: xmail
Site: RAE

Summary:

implementation of SCP6385 does not set the reply-to field on a reply .

Number: phx21336 State: submitted
Date Entered: 1990-01-16 Area: deckfile_manager
Site: Site_N

Summary:

The variable att_desc is not large enough.

Number: phx21341 State: submitted
Date Entered: 1990-03-29 Area: PL/1 compiler
Site: System_M

Summary:

The PL/1 compiler flags a syntax error when it encounters a reference to what should be a valid internal options(constant) value.

Number: phx21342 State: deferred
Date Entered: 1990-03-29 Area: communications
Site: System_M
Summary:
Messages from as_error_table_, i. e., This is your second login do not comply with the FTP protocol in TCP/IP.

Number: phx21344 State: submitted
Date Entered: 1990-05-28 Area: answering service
Site: System_M
Summary:
The shift operator command doesn't always display the correct next shift change time.

Number: phx21361 State: deferred
Date Entered: 1990-10-23 Area: Communications and telnet
Site: System_M
Summary:
logging in via telnet and attempting to change password via -cpw generated some unfavorable interactions with attempts by Multics to turn off password printing so that login attempts all failed.

Number: phx21362 State: deferred
Date Entered: 1990-10-24 Area: cobol
Site: RAE
Summary:
Compiler gets an OOB on user stack due to the use of a null pointer as a string length parameter.

Number: phx21363 State: deferred
Date Entered: 1990-11-07 Area: COBOL
Site: UC
Summary:
Compilation errors using MR12.3 version 5.4 COBOL

Number: phx21364 State: submitted
Date Entered: 1990-11-19 Area: Documentation
Site: System_M
Summary:
Incorrect documentation for ask_ subroutine.

Number: phx21365 State: submitted
Date Entered: 1990-11-19 Area: Documentation
Site: System_M
Summary:
Incorrect documentation for date_time_ subroutine.

Number: phx21366 State: submitted
Date Entered: 1990-11-19 Area: Documentation
Site: System_M
Summary:
Missing info segment for get_equal_name_ subroutine.

Number: phx21367 State: not_error
 Date Entered: 1990-11-28 Area: Documentation
 Site: System_M
 Summary:
 Inconsistent documentation for obsolete hcs_ entrypoints.

Number: phx21368 State: deferred
 Date Entered: 1990-12-02 Area: telnet
 Site: System_M
 Summary:
 Cannot change passwords when using a telnet connection.

Number: phx21369 State: not_error
 Date Entered: 1990-12-02 Area: external SMTP mail to multics
 Site: System_M
 Summary:
 mail from external SMTP agent to multics user(s) appends " at system-m" to the person id. This is very annoying (especially if large copy list of multics users). Why can't it just simply be 'person_id' ?

Number: phx21370 State: deferred
 Date Entered: 1990-12-17 Area: send_mail header requests
 Site: System_M
 Summary:
 send_mail should not allow the user to add the same address to the To or CC field multiple times.

Number: phx21371 State: deferred
 Date Entered: 1990-12-17 Area: ftp
 Site: System_M
 Summary:
 The "ls" request when the target system is a Multics system gives the user an error message; The requested action was not performed. Error listing working directory.

Number: phx21372 State: submitted
 Date Entered: 1991-01-18 Area: pdir_volume_manager_
 Site: RAE
 Summary:
 Bad arg list for call to sys_log_ causes asdumps etc.

Number: phx21373 State: deferred
 Date Entered: 1991-01-21 Area: read_mail
 Site: ACTC
 Summary:
 When parsing messages in the mailbox, the mail system will use the Message-ID of the original message for any redistributions rather than the appropriate Redistributed-Message-ID field.

Number: phx21381 State: submitted
Date Entered: 1991-07-19 Area: dial_out
Site: System_M
Summary:
dial_out_ doesn't completely initialize its variables and doesn't
limit the processing of buffers to the valid portion.

Number: phx21382 State: submitted
Date Entered: 1991-07-29 Area: Fortran Compiler
Site: System_M
Summary:
If the total size of a Fortran VLA is greater than 2**24, ER136
should be displayed consistantly during compile time.

Number: phx21383 State: submitted
Date Entered: 1991-08-15 Area: Documentation
Site: System_M
Summary:
The info segment for cv_integer_string_ &
cv_integer_string_check_ incorrectly declare the return argument
as fixed bin(71). The actual precision of the return value is
fixed bin(35).

Number: phx21384 State: submitted
Date Entered: 1991-08-20 Area: dial_out
Site: System_M
Summary:
dial_out doesn't properly reset its timers when aborted.

Number: phx21385 State: submitted
Date Entered: 1991-08-20 Area: dial_out wait request
Site: System_M
Summary:
The dial_out 'wait' request should support the '-inhibit_error'
control argument to facilitate its use as an active function when
a timeout interval was specified.

Number: phx21386 State: submitted
Date Entered: 1991-09-06 Area: Forum
Site: System_M
Summary:
Bad long summary on unprocessed transactions.

Number: phx21387 State: submitted
Date Entered: 1991-09-24 Area: MR12.4 release libraries
Site: System_M
Summary:
Segment corruption in various parts of the MR12.4 release can
cause the Initializer to enter an error asdump loop that requires
an execute fault crash to recover the system. In particular, sac
-ntmail xxx will hang the Initializer.

Number: phx21388 State: submitted
Date Entered: 1991-09-30 Area: volume retrievals
Site: GM
Summary:
There appears to be a problem with volume retrievals of one of our customers msf vfiles. Upon retrieval the vfile msf header is always left damaged.

Number: phx21389 State: submitted
Date Entered: 1991-11-13 Area: Volume Reloader
Site: System_M
Summary:
If reload_volume encounters a error in reloading an object from tape, a fatal error may occur when it attempts to deposit unused pages previously withdrawn for the object.

Number: phx21390 State: submitted
Date Entered: 1992-05-11 Area: copy_disk_volume.pl1
Site: RAE
Summary:
There is a bug in the ioa_args at line 282-284 where the error summary is printed.

Number: phx21391 State: submitted
Date Entered: 1992-05-13 Area: message_segment_
Site: DODCSC
Summary:
During message segment compaction, the message segment gets truncated to a length of 0. This action overwrites the lockword held by the calling process.

Number: phx21392 State: submitted
Date Entered: 1992-05-20 Area: extended objects
Site: System_M
Summary:
delete no longer functions for the "forum" extended object type.

Number: phx21393 State: submitted
Date Entered: 1992-06-09 Area: format_document_
Site: DODCSC
Summary:
Loss of character when input file has line greater than 512 characters.

Number: phx21394 State: submitted
Date Entered: 1992-07-02 Area: copy_disk_volume
Site: DODCSC
Summary:
When attempting to copy a 451 which has no alt partition, copy_disk_volume fails to open the source io switch correctly.

Number: phx21395 State: submitted
Date Entered: 1992-07-09 Area: Commands
Site: DODCSC
Summary:
format_document_ generates a new line when the input line has
spaces at position 257,258 and 259.

Number: phx21396 State: submitted
Date Entered: 1992-07-28 Area: forum_trans_mgr_
Site: DODCSC
Summary:
Any date_time string which is between forum transaction blocks
will cause forum_trans_mgr_ to go into an infinite loop.

Number: phx21397 State: submitted
Date Entered: 1992-08-12 Area: Forum
Site: System_M
Summary:
The value of current is not set when first attending a forum, and
not all possible commands from that point execute the code to set
it.

Number: phx21398 State: submitted
Date Entered: 1992-08-12 Area: Answering Service CDT
 installation
Site: ACTC
Summary:
Attempting to install a CDT which changes the line_type of a
channel that is not assigned to a user process causes an asdump
due to a null pointer being passed by up_cdt_.

Number: phx21399 State: submitted
Date Entered: 1992-09-04 Area: io_error_summary
Site: System_M
Summary:
io_error_summary displays an incorrect message for the
usage/error stat overflow status for FIPS devices.

Number: phx21400 State: submitted
Date Entered: 1992-09-14 Area: backup systems
 (volume reloader)
Site: Ford
Summary:
When reloading a volume on a FIPS device, the number of usable
sectors is not calculated correctly if -disk model is specified.
This miscalculation causes the volume to be loaded incorrectly.

Number: phx21401 State: submitted
Date Entered: 1992-09-21 Area: deckfile_manager TandD
Site: ACTC

Summary:
The MR12.3 and MR12.4 versions of deckfile_manager fail during initialization due an software intergration error. As a result, deckfile_manager is unusable as released.

Number: phx21402 State: submitted
Date Entered: 1992-09-29 Area: forum
Site: System_M

Summary:
The installation of forum 2.15 on 92-September-28 lists forum meetings without new tranactions when the forum_check_meetings -ls command is issued.

SECTION 4

FCO AND FIRMWARE STATUS

FIRMWARE

The firmware identification for MR12.5 is "IFAD D.6". There are no changes to the firmware relative to MR12.4. The IFAD tape was shipped with the MR12.4 release and will not be shipped with MR12.5.

T&D (Test and Diagnostic) tapes are distributed to all sites with valid Field Engineering Hardware Maintenance contracts. The T&D tape is distributed as FCO PHAFGA888, rev. B.2.

This version of IFAD, firmware and T&D modules have been tested and exposed on System M in Phoenix. The modules are supplied as part of the MR12.5 release and can be found in >ldd>firmware as part of the LDD_STANDARD tape set. When subsequent IFAD tapes become available, it is recommended that the site use the `deckfile_manager, dfm` command to load the released IFAD tape into >system_library_tandd. The firmware modules should then be moved to >ldd>firmware and a new MST tape should be generated using `generate_mst`.

Required Firmware Revision Levels

The MR12.5 release requires the following firmware revision levels.

```
Disc: DSC191 -- V1
      DSC500 -- Y1
      MSP800 -- L1

Tape: MTC0500 -- V1
      MTP0601 -- T1
      MTP0610 -- C2
```

Unit Record: Common -- A2
Reader/Punch -- B2
PRU1200/1600 -- M1

FIELD CHANGE ORDER LIST

The following list of FCOs should be thought of as a continuation of the similar list for MR12.3. This list is unchanged from MR12.4. Sites that are upgrading from MR12.3 will need to verify that FCOs for that release have been installed. Sites upgrading from MR12.4 should have already installed the FCOs listed. However, such sites should verify that these changes have been installed.

As FCOs are completed in Phoenix, they are sent out to the field sites. Some of the FCOs affect only site documentation while others may change the hardware to improve system reliability or maintainability. An example might be a change to improve the supply of cooling air to some boards so that the boards run cooler and are therefore less likely to fail. These types of FCOs are important to the long-term success of system operation. However, because these FCOs are not required to correct the results of any computer program, they are not listed in this SRB.

The purpose of this section is to identify those FCOs that are of utmost importance in the short term. This list includes only those FCOs needed to correct a program malfunction.

For those FCOs already sent to the field, the "FCO Kit Ship Date" column contains the approximate date when shipment of the FCO kits began.

One of the column headings in the tables on the following pages is "Round Robin". The implications of a "Yes" in this column for a particular FCO are as follows:

1. The FCO kit includes at least one board. The new board(s) is to replace the board(s) now in the equipment.
2. Enough FCO kits are put together for about 20% of the sites that are to take part in the Round Robin. Some FCOs result in a Round Robin for all sites. Other FCOs involve a Round Robin for some sites but not for other sites. For example, two of the factors that determine whether or not a particular site takes part in a Round Robin FCO are:
 - a. The date codes of certain integrated circuit chips on a board.
 - b. The board construction method -- wirewrap vs. multilayer.

3. The set of FCO kits are sent to the first set of sites. (For the remainder of this discussion, we will follow one kit as it makes its Round Robin journey.)
4. The site installs the FCO. When the site is satisfied that the FCO is satisfactory, the site returns the old board(s) to Phoenix.
5. If there is still equipment at other sites that have not had the FCO installed, the returned board(s) is reworked, tested, and another FCO kit is assembled in Phoenix and sent to the next site.
6. Since the length of time it takes a site to install an FCO (and become satisfied that it is working correctly) cannot be known in advance, there is no way to predict with accuracy how long it will be until the FCO has been installed at all sites.

The FCOs have been classified into the following categories:

CATEGORY 1 - The new software for this release will not run properly unless these FCOs are installed.

CATEGORY 2 - The new software for this release may or may not run properly if these FCOs are not installed. It is strongly recommended to have these FCOs installed to improve reliability of the system.

CATEGORY 3 - FCOs whose effects are program-visible, but do not fall into categories 1 or 2. Category 3 FCOs correct problems that are not uniquely related to this release.

CATEGORY 1 FIELD CHANGE ORDERS

FIELD CHANGE ORDERS VITAL TO THIS SOFTWARE RELEASE

FCO Number	Board	FCO Kit Ship Date	Round Robin	Est. Hours To Instl	FCO for Multics Release
-----	-----	-----	-----	-----	-----

No category 1 changes are required for MR12.5.

CATEGORY 2 FIELD CHANGE ORDERS

FIELD CHANGE ORDERS POSSIBLY NEEDED FOR THIS RELEASE

FCO Number	Board	FCO Kit Ship Date	Round Robin	Est. Hours To Instl	FCO for Multics Release
-----	-----	-----	-----	-----	-----

No category 2 changes are required for MR12.5.

CATEGORY 3 FIELD CHANGE ORDERS

FIELD CHANGE ORDERS INDEPENDENT OF A PARTICULAR RELEASE

FCO Number	Board	FCO Kit Ship Date	Round Robin	Est. Hours To Instl	FCO for Multics Release
-----DPSM CENTRAL PROCESSOR (Models 52M & 62M)-----					
PHAFPS388	ETDAK	90 Jun	No	.5	MR12.4
-----DPSM CENTRAL PROCESSOR (Model 70M)-----					
PHAFPE517	ETCAK	90 Jun	No	.5	MR12.4
-----INTEGRATED MULTIPLEXER UNIT (IMU)-----					
PHAFXS868	WXGSC	90 Apr	No	.5	MR12.4
PHAFXS873	WXGJD	90 Nov	No	.1	MR12.4
-----FIPS DISK MSU 3380/3382, MSP 3880/1/4/5-----					
PHAFFP565	01A-B3/4	90 Mar	No	.5	MR12.4
-----T&D RELEASE REV. B.2-----					
PHAFGA888	Tape	87 Mar	No	2.0	MR12.1
-----MHAT MR12.0-----					
PHAFPD998	Tape	87 May	No	2.0	MR12.0

SECTION 5

INSTALLATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS

The installation of MR12.5 has been made as automatic as possible through the use of the master installation exec_coms called 12.5.install_part1.ec and 12.5.install_part2.ec. These exec_coms assume privileged access and the availability of sufficient quota. It is the installer's responsibility to ensure that access and quota are available. See "Installation Exec_coms" later in this section for a list of the exec_coms used in the installation process.

Part 1 of the installation installs the changes to the hardcore and online executable libraries for MR12.5. Part 1 must be run from an existing MR12.3 or MR12.4 system and should be performed just prior to shutdown after all users and IO daemons have been logged out. At the completion of Part 1 the system should be shutdown and rebooted with the supplied MR12.5 System Tape (or a new site specific system tape).

Part 2 of the installation is designed to be executed while running normal service. It installs the LDD source and object libraries and the executable, source and object changes to PSP (unbundled) software. Part 2 should not be run while the system is heavily loaded because of the additional load that will be placed in the system.

To ensure proper access, it is recommended that the installation be done by a SysDaemon or SysMaint process. These projects, by default, have access to the appropriate gates and directories to complete these installations. Sites that have changed default accesses must ensure these exec_coms are run from a process with sufficient access.

These instructions assume that the installer is familiar with the procedures used with the reload command and that the installer has a fundamental understanding of the system library structure and Multics library installation procedures. For more information on these topics, please refer to "Operator's Guide to

Multics" (GB61) and "Multics Administration, Maintenance, and Operations Commands" (GB64).

The total size of the MR12.5 release directories is up to 18000 records, depending upon PSP software purchased by a site. Not all PSPs are changed for MR12.5. In order to install all changed standard and changed PSP products into the online libraries (step 4), a total of 36000 free records could be needed under >ldd. This additional storage is temporary and may be deleted when the site is satisfied that reversion to the prior release is not necessary. Each exec_com can be run in parts to reduce overall storage requirements.

Based on testing at ACTC, the time required to install MR12.5 is approximately two hours.

The individual parts of this release are contained in separate directories subordinate to >ldd>MR12.5:

12.5.C_COMPILER	12.5.HARDCORE
12.5.COBOL	12.5.LDD
12.5.EXECUTABLE	12.5.LINUS
12.5.EXECUTIVE_MAIL	12.5.LISTER
12.5.EXTENDED_MAIL	12.5.MOWSE
12.5.FORTRAN	12.5.PASCAL
12.5.FORUM	12.5.RJE

Several of these directories contain changes to PSP products. Such PSP directories will not exist if the site has not ordered the corresponding PSP product. Only those directories found to exist are installed. The directories 12.5.EXECUTABLE and 12.5.HARDCORE will be installed in Part 1. The remaining directories will be installed in Part 2.

INSTALLATION SUPPORT

The installation instructions have been tested and verified at ACTC in Calgary. If problems occur with these installation procedures contact:

Dave Schroth	(403) 295-5900 or
Ward Anderson	(403) 295-5900

Electronic mail and the "ii" forum meeting on the ACTC Multics system may also be used to obtain assistance and convey comments on the release.

INSTALLATION STEPS

Step 1: Tape Reload

While running under the current (MR12.3 or MR12.4) system in normal service, login a Retriever.SysDaemon daemon process from the console (using source virtual console rt):

```
login Retriever.SysDaemon rt
```

and begin reloading the release by issuing the command:

```
r rt reload -nosetlvid -noquota
```

When the reload program prompts "Input tape label:", reply with the names of the MR12.5 release tapes as supplied (in the order listed):

```
12.5.exec  
12.5.ldd_standard_1  
12.5.ldd_standard_2 (possibly)  
12.5.unbundled  
12.5.misc
```

The 12.5.misc tape must be the last tape loaded. This will cause the MR12.5 tapes to be loaded into the directories:

```
>library_dir_dir>MR12.5  
>library_dir_dir>system_library_1>info  
>library_dir_dir>crossref  
>documentation>MR12.5
```

The ldd_standard tape set may contain either one tape labelled ldd_standard_1 or two tapes labelled ldd_standard_1 and ldd_standard_2. The number of tapes received will depend upon the exact length of the ldd_standard_1 tape reel.

Step 2: Hardcore and Executable

This step starts Part 1 of the installation.

The Part 1 exec_com installs the changed MR12.5 hardcore and online executable software.

Enter Special Session, ensuring all users and SysDaemons are logged out. Login as Repair.SysDaemon and type:

```
dsr working_dir
cwd >ldd>MR12.5
ec 12.5.install_part1
```

Respond to queries as appropriate. The `exec_com` is interactive allowing Part 1 to be installed all at once or partially. There are no dependencies within sections in Part 1, but it is recommended that it be run in one pass.

If any site local modifications or additions to the Multics System Tape (MST) have been made, a new MST should be generated to include the MR12.5 hardcore changes.

Step 3: Reboot

This step will complete Part 1 of the MR12.5 installation.

Shut down the system and reboot using the supplied MR12.5 System Tape (or the new MST created at the end of the preceding step).

Although MR12.5 source and object changes and unbundled software changes have not yet been installed, normal service can be resumed at this time.

In the event it becomes necessary to revert the hardcore installation, reboot the system with the previous system tape.

Step 4: LDD and Unbundled

This step starts Part 2 of the installation and installs changes to the online source and object libraries and the unbundled libraries.

Login as `Repair.SysDaemon` and type:

```
dsr working_dir
cwd >ldd>MR12.5
ec 12.5.install_part2
```

This release is packaged in such a way that no part installed in this step is dependent on any other. If quota is a problem, repeated partial installations of this portion of the release may be performed. The `12.5.install_part2.ec` may be repeated as many times as needed.

For example, it is not necessary to install `12.5.LDD` in order to run `MR12.5`. If quota is a problem, `12.5.LDD` may be installed after all other parts have been installed and library cleanup (Step 6) completed.

Answer "yes" to install any part of the release that would not cause quota problems. Answer "no" to postpone the installation.

This step completes installation of all software changes for MR12.5.

Step 5: Reverting Software

In the event it becomes necessary to revert back to the previous release, or part of the previous release, the instructions below are recommended.

Note that these instructions are not valid if Step 6 below has been processed.

SOFTWARE INSTALLED IN PART 1.

Enter Special Session, ensure all users and SysDaemons are logged out. Login as Repair.SysDaemon and type:

```
cwd >_ldd>MR12.5>12.5.EXECUTABLE
us de_install install_executable
cwd >_ldd>MR12.5>12.5.HARDCORE
us de_install install_hard
```

Shutdown system and reboot with the system tape for the previous release.

SOFTWARE INSTALLED IN PART 2.

Software installed in this part may be de-installed in whole or in part at the site's option. Without shutting the system down, login as Repair.SysDaemon. For that portion of MR12.5 to be backed out, type:

```
cwd >_ldd>MR12.5><dir_name>
us de_install <io_name>
```

where <dir_name> is one of the directories:

12.5.C_COMPILER	12.5.LDD
12.5.COBOL	12.5.LINUS
12.5.EXECUTIVE_MAIL	12.5.LISTER
12.5.EXTENDED_MAIL	12.5.MOWSE
12.5.FORTRAN	12.5.PASCAL
12.5.FORUM	12.5.RJE

and <io_name> specifies the io segment of the installation to be removed:

install_ccompiler	install_ldd
install_cobol	install_linus
install_executive_mail	install_lister
install_extended_mail	install_mowse
install_fortran	install_pascal
install_forum	install_rje

Repeat this command for each portion of MR12.5 to be reverted.

Step 6: Library Cleanup

The following instructions should be executed when you are satisfied that the installed software is stable. Old release software replaced by the execution of the above instructions has been renamed according the convention used by the update_seg command. The segments have not yet been deleted from the storage system.

If any part of the installation of MR12.5 was performed in the current system bootload with active user or daemon processes, this step should be deferred until the next system bootload. This will avoid possible segment fault errors in user processes as a result of old library executable segments being deleted during this step.

Login as Repair.SysDaemon and type:

```
cwd >ldd>MR12.5
ec 12.5.cleanup_library
cwd >ldd
dd MR12.5
```

to delete the old library segments and the installation libraries. At this time you will have recovered all quota used by the installation of MR12.5.

INSTALLATION EXEC_COMS

As mentioned above, the installation of MR12.5 is driven by a set of exec_coms. Following the completion of Step 1 above, these exec_coms may be examined as needed.

There are four top level exec_coms used to install this release. These are:

```
>ldd>MR12.5>12.5.install_part1.ec  
>ldd>MR12.5>12.5.install_part2.ec  
>ldd>MR12.5>12.5.cleanup_library.ec  
>ldd>MR12.5>update.ec (update_.ec)
```

In addition to the above, there will be an installing exec com in each directory reloaded under >ldd>MR12.5. For a list of these directories, refer to the "Installation Overview" portion of this section of the SRB. These ecs are responsible for the installation of the contents of the containing directory. As a minimum, the following installing ecs will exist:

```
>ldd>MR12.5>12.5.HARDCORE>install_hard.ec  
>ldd>MR12.5>12.5.EXECUTABLE>install_executable.ec  
>ldd>MR12.5>12.5.LDD>install_ldd.ec
```

In addition, for each PSP package product that a site has ordered, there will be a corresponding directory and an installing ec. The installing ec will be named install_<pspname>.ec.

APPENDIX A

DOCUMENTATION CHANGES

CURRENT MULTICS DOCUMENTATION STATUS

A complete list of manuals is provided in >doc>info>manuals.gi.info. This segment is included as part of the release package.

12.5 Documentation

There are no new or updated publications to support MR12.5. Updates to manuals are provided by errata info files found in >doc>info. Shown below are the errata, with add names, which have been created for MR12.5.

ag92.errata.info
 errata.ag92.info
 Commands_Active_Functions.info
ag93.errata.info
 errata.ag93.info
 Subroutines_I/O_Modules.info
ak51.errata.info
 errata.ak51.info
 Project_Admin.info
al39.errata.info
 errata.al39.info
 Processor_Manual.info
cc75.errata.info
 errata.cc75.info
 Communications_Admin.info
cy74.errata.info
 errata.cy74.info
 Forum_Manual.info
gb58.errata.info
 Common_Commands.info
 errata.gb58.info
gb64.errata.info
 errata.gb64.info
 Admin_Maint_Oper_Commands.info

For the convenience of sites, a complete list of Multics manuals, is provided below.

AG90 Introduction to Programming on Multics
AG91 Multics Programmer's Reference Manual
AG92 Multics Commands and Active Functions
AG93 Multics Subroutines and Input/Output Modules
AG94 Multics PL/I Language Specification
AK50 Multics System Administration Procedures
AK51 Multics Project Administrator's Guide
AK95 Multics APL User's Guide
AL39 Multics Processor Manual
AM81 Multics System Maintenance Procedures
AM82 Multics BASIC
AM83 Multics PL/I Reference Manual
AN05 Multics GCOS Environment Simulator
AN50 Guide to Multics Manuals
AS40 Multics Graphics System
AS43 Multics COBOL User's Guide
AS44 Multics COBOL Reference Manual
AT58 Multics FORTRAN Manual
AT59 Multics DFAST Subsystem User's Guide
AU25 Multics FAST Subsystem Reference Guide
AU77 Multics Online Test and Diagnostics Reference Manual
AW17 Multics Commands and Active Functions Quick Reference Guide
AW32 Multics SORT/MERGE
AW53 Multics Relational Data Store Reference Manual
AZ49 Multics Logical Inquiry and Update System Reference Manual
AZ98 Multics WORDPRO Reference Manual
CC69 Multics Report Program Generator Reference Manual
CC70 Multics FORTRAN User's Guide
CC75 Multics Communications Administration
CG40 Multics qedx Text Editor User's Guide
CH23 Multics Extended Mail System User's Guide
CH24 New User's Introduction to Multics--Part I
CH25 New User's Introduction to Multics--Part II
CH26 Multics Error Messages: Primer and Reference Manual
CH27 Emacs Text Editor User's Guide
CJ52 Multics Emacs Extension Writer's Guide
CJ97 Multics Page Processing System Utility Manual
CP31 Level 68 Introduction to Emacs Text Editor
CP50 Multics Text Editor (Ted) Reference Manual
CP51 Multics Menu Creation Facilities
CX20 Fundamentals of Multics Executive Mail
CX72 Executive Mail Editing Operations (Reference Card)
CY73 Inter-Multics File Transfer Facility Reference Guide
CY74 Multics Forum Interactive Meeting System User's Guide
DJ18 Guide to Multics WORDPRO for New Users
DU06 Fundamentals of Multics Forum Interactive Meeting System
DW19 Multics MegaCalc User's Guide
DX71 Fundamentals of Multics Executive Forum

GB58 Multics Common Commands
GB59 DPS 6/Multics Satellite 6M Reference Manual
GB60 Multics HASP Service and Utility Manual
GB61 Operator's Guide to Multics
GB62 Multics Pascal User's Guide
GB63 Multics Report Writer Reference Manual
GB64 Multics Administration, Maintenance, and Operations Cmds
GB65 Multics/Personal Computer File Transmission Facilities
GB66 Multics On-Line Work Station End User's Guide
GL71 Multics Simplified Computing and Filing Facility
GN08 Multics Emacs Reference Card
HH07 Multics C Compiler User's Guide

APPENDIX B

MODULE CHANGES FOR MR12.5

This appendix provides information about changes to the Multics operating system on a segment basis. The following information applies to changes made to the system for the MR12.5 release only.

This appendix is provided to help sites identify, to a segment level, changes they may have applied for emergency bug fixes or site dependent modifications to current system software.

Information is categorized as follows:

- new or modified info segments
- new segments
- new or modified include files
- deleted segments
- modified segments

NEW OR MODIFIED INFO SEGMENTS FOR MR12.5

All additions and updates are made to >doc>info unless otherwise noted.

as_who.info
ask_.info
cv_integer_string_.info
cv_integer_string_check_.info
date_time_.info
dial_out.info
forum.info
get_equal_name_.info (added to >doc>info)
io_error_summary.info (>doc>privileged)
manuals.gi.info
new_user.info (>doc>privileged)
probe.info
psl.info (>doc>privileged)
reset.info (>doc>ss>forum)
status.info
trans_specs.info (>doc>ss>forum)
user.info
wait.info (>doc>ss>dial_out)
window_editor_utils_.info (added to >doc>info)

The following errata are modified or created with this release.

ag92.errata.info
ag93.errata.info
ak51.errata.info
al39.errata.info
cc75.errata.info
cy74.errata.info
gb58.errata.info
gb64.errata.info

NEW SEGMENTS FOR MR12.5

fdisk_status_table_alm

NEW OR MODIFIED INCLUDE FILES FOR MR12.5

forum_trans_list.incl.pll
parse.incl.pll

DELETED SEGMENTS FOR MR12.5

There are no deleted modules for MR12.5.

MODIFIED SEGMENTS FOR MR12.5

act_ctl.pl1	forum_trans_util.pl1
as_who.pl1	generate_mst.pl1
attribute_parse.pl1	if_parse.pl1
canonicalize_mailbox.pl1	io_error_summary.pl1
constant_token.pl1	io_statement_parse.pl1
copy_disk_volume.pl1	lar_util.pl1
data_list_parse.pl1	lex.pl1
deckfile_manager.pl1	list_extra_personids.pl1
declare_parse.pl1	manage_volume_pool.pl1
default_parse.pl1	mllsys_transmit.pl1
delete.pl1	mseg_segment.pl1
descriptor_parse.pl1	nd_handler.pl1
dfm.pl1	om_get_opening.pl1
dfm_request_table.alm	on_parse.pl1
dfm_util.pl1	parse.pl1
dial_out.pl1	pascal_gen_string.pl1
dial_out.pl1	pdir_volume_manager.pl1
dial_out_util.pl1	pl1_print.pl1
do_parse.pl1	pl1_version.cds
do_requests.pl1	pnt_fs_util.pl1
edit_proj.pl1	procedure_parse.pl1
edit_proj.pl1	process_entry.pl1
exponent_control.pl1	rcprm_journalize.pl1
expression_parse.pl1	rdm_msg_requests.pl1
ext_code_generator.pl1	read_mail.pl1
ext_parse.pl1	reference_parse.pl1
force_write.pl1	retrieve_from_volume.pl1
format_document.pl1	rldr_arg_reader.pl1
format_list_parse.pl1	rldr_label.pl1
fort_version_info.alm	rldr_volume_map.pl1
forum_add_meeting.pl1	rldr_vtoc_header.pl1
forum_data.cds	sc_admin_command.pl1
forum_input_requests.pl1	segment_mover.pl1
forum_list_users.pl1	send_daemon_command.pl1
forum_mailer.pl1	set_special_password.pl1
forum_misc_requests.pl1	statement_parse.pl1
forum_output_requests.pl1	statement_type.pl1
forum_requests.pl1	up_cdt.pl1
forum_space_mgr.pl1	value_delete.pl1
forum_trans_mgr.pl1	x25_mpx.pl1
forum_trans_specs.pl1	xmail_reply_msg.pl1

67A2 SRB12.5

