AD-A282 856

ADST
Cold Start Procedures Manual
for the
BDS-D MCC / Masscomp Host
Configuration 1.0.0

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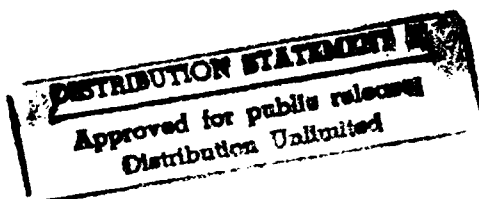San Jose, California 95161-9041

21 May 1993

94-24956

Prepared for:

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Orlando, FL 328266-3275

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REPORT DOCUMENTATION PAGE

Form approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	5/21/93	Cold Start Procedures Manual

4. TITLE AND SUBTITLE
ADST, Cold Start Procedures Manual for the BDS-D MCC/Masscomp Host Configuration 1.0.0

5. FUNDING NUMBERS
C N61339-91-D-0001
CDRL A00B

6. AUTHOR(S)
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
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8. PERFORMING ORGANIZATION REPORT NUMBER
ADST/WDL/TR--92-003043

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Simulator Training and Instrumentation Command (STRICOM)
Naval Training Systems Center
12350 Research Parkway
Orlando, FL 32826-3275

10. SPONSORING ORGANIZATION REPORT
ADST/WDL/TR--92-003043

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

12b. DISTRIBUTION CODE

A

13. ABSTRACT (Maximum 200 words)

This Cold Start Procedures Manual outlines the components included for the initial software release of the BDS-D MCC/Masscomp Host Configuration 1.0.0

14. SUBJECT TERMS

15. NUMBER OF PAGES
10

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	17. SECURITY CLASSIFICATION OF THIS PAGE	17. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std Z39-18
298-102

Table of Contents

1.0   Scope

Per DI-MISC-80711, this manual details the Management Command & Control (MCC) Cold Start Procedures. Distribution instructions, interaction with other simulators, and hardware compatibility notes (as applicable), build instructions as well as a detailed overview of the software release are included in the ADST Version Description Document for the BDS-D MCC / Masscomp Host 1.0.0; document number ADST/WDL/TR--93-003042.

"I Pete Peterson on this date 5/21/93, hereby certify that the software release BDS-D MCC / Masscomp Host 1.0.0 has been built from limited access, controlled baseline. This software is, to the best of my knowledge, free of malicious code intended to subvert its operation."

2.0   Cold Start Methodology

The Cold Start procedure for the MCC describes the user's ability to regenerate a Masscomp 5600 operating system and load the MCC application software. This procedure consists of installing and bringing on-line the operating system, application, source files, data files, boot files, configuration files and databases. Verification of a build load is demonstrated through a series of checklists. This procedure also provides a detailed list of instructions that allow the user to startup and shutdown the MCC.

2.1   Required Resources

The following sections outline the required hardware and software resources needed to install and bring on-line the Masscomp based MCC.

2.1.1 Hardware Resources

The Masscomp based MCC requires the following hardware configuration resources to run:

Hardware Item	Description
Masscomp 5600	Masscomp 5600 computer running RTU 4.0A operating system.
150 MB tape drive	A 150 MegaByte tape drive must be installed in the Masscomp 5600 computer for application, source, and operating system installations.

2.1.2 Software Resources

The magnetic media (disks and tapes) prepared and supplied as part of the BDS-D MCC 1.0.0 are identified below:

Media Type	Label	Description
DC 6150 Tape	BDS-D MCC / Masscomp Host 1.0.0	MCC / Masscomp Host 1.0.0 application tape
DC 6150 Tape	BDS-D MCC / Masscomp Host 1.0.0	MCC / Masscomp Host 1.0.0 source tape
5 1/4" Floppy disk	Boot Disks	Stand alone boot disks (#1 & #2)
DC 6150 Tape	RTU4.0A system tape	RTU4.0A system dump tape

2.1.3 Other Required Resources

There are no other required resources.

2.2   Cold Start Procedures

The following section outlines the procedure for performing a cold-start on the Masscomp 5600 system.

2.2.1 System Preparation

This section describes formatting the disks on the Masscomp 5600 and installing the RTU 4.0A operating system. These instructions demonstrate how to format the system disk, install the operating system, and perform system checks verifying that the operating system is running correctly. (Warning!!! - This section should only be performed by trained system personnel, due to hardware differences between systems.)

SYSTEM PREPARATION

CONTROL ACTION	EXPECTED RESULTS
1. Log in to the Masscomp as **root**	The console terminal will display the system prompt. (i.e SIMLAB13#)
2. Reboot the computer to single-user mode: Enter: **reboot -h** (or) **sync;sync;halt**	The console terminal will display the single-user prompt: >>>
3. Insert stand-alone floppy #1 into floppy drive.	None
4. Enter: **b/f:1 flp**	The Masscomp will read from the floppy and, when finished, the console terminal will display the $$ prompt.
5. Insert stand-alone floppy #2 into floppy drive.	None
6. To format the internal hard disk drive, enter: **/stand/xmcformat /dev/ca0**	The console terminal will display: Warning!!! This program is about to wipe out all contents of your disk. Are you sure (ok)?
7. Enter: **ok**	The console terminal will display: Choose one of the following: (0) Custom Geometry - manual entry (1) Micropolis 85 mb (Has a rectangular LED ...) (2) Fujitsu 85 mb (Has a round LED on the disk...) (3) Micropolis 170 mb ESDI (4) Micropolis 382 mb ESDI Which menu selection (0-4)?:
8. Enter: **3**	The console terminal will display: Format the drive (yes or no)?
9. Enter : **yes**	The console terminal will display: Do you want to enter the media defect list (yes or no)?
10. Enter: **yes**	The console terminal will wait for your entry.
11. Install the media defect floppy into the floppy disk drive, and enter the name of the defect list file which appears on the floppy label: example: **707809.list**	The console terminal will display the following: Geometry block present on disk Use existing bad block list (yes or no)?

12. Enter: no	The message "formatting..." will appear and the disk drive LED will light up. Note: During the format operation, several format related messages will appear. Error messages are self-explanatory. The final message to appear should be: "wrote bad sector list for drive serial # 707809" and the $$ prompt will appear.
13. Insert stand-alone floppy # 1 into floppy drive.	None
14. Create an empty file system; enter: /stand/mkfs /dev/ca0	An empty file system /dev/ca0 is created, the sizes are displayed.
15. Check the file system integrity; enter:/stand/fsck /dev/ca0	Phases 0 to 5 of the file system check are displayed.
16. Insert stand-alone floppy #2 into floppy drive and enter: /stand/writeboot /dev/ca0	A boot block will be written to the hard drive.
17. At the $$ prompt, insert the tape marked "RTU4.0A system tape" into the cartridge tape drive and enter: /stand/restor	The prompt: tape? will appear on the console terminal
18. Enter /dev/ctp	The prompt: disk? will appear on the console terminal
19. Enter: /dev/ca0	The prompt: Last chance before scribbling on disk.
20. Enter N/L (note: upper case)	The tape will start to move, files will be restored to the disk. When the restore is complete, a $$ prompt will appear on the console terminal.
21. Enter: /stand/fsck /dev/ca0	The file system will be checked (phases 0 - 5)
22. Enter: console	The console prompt >>> will appear on the console terminal.
23. Enter: b ca0/unix	The system will boot up into multi-user mode, the prompt "To use current time, enter RETURN" will appear.
24. Enter the current date and time in the following format: 07-Apr-93 16:00	The console terminal will display messages, the prompt system prompt (i.e SIMLAB13 #) will appear, then the multi-user login prompt (login:) will appear.
25. Enter: root	The prompt TERM = (vt100) will appear.
26. Enter a carriage return	The screen will clear, date and time will appear, then the system prompt (i.e. SIMLAB13 #).
27. Remove floppy and tape and proceed to installation of release.	None

2.2.2 Installation of Release

This section describes the installation of the BDS-D MCC / Masscomp Host 1.0.0 release tape on to the Masscomp 5600 computer system. A list of executable files, data files, configuration files, startup and shutdown files and their respective location in the directory tree is shown in Table 2-1. Table 2-1 allows the user to verify that what was copied off the BDS-D MCC / Masscomp Host 1.0.0 release tape on to the target machine to run in an operational environment is a complete list of application files and their location in the directory tree.

INSTALLATION

1. Load the installation tape into the tape drive.	None
2. Log on to the Masscomp 5600 as root.	The console terminal will display the system prompt: (i.e. SIMLAB13 #)
3. Set to the correct default directory cd /directory_name	The console terminal will display the system prompt: (i.e. SIMLAB13 #)
4. Read in the installation tape. Enter: tar xvf /dev/rctp	The tape will move, filenames will scroll by on the console terminal.
5. When the tape is fully rewound and the SIMLAB13 # prompt appears, remove the installation tape.	None

Table 2-1

/MCC_1.0.0	Description
-------------------------	-------------------------
bin/MCC	Shell script that starts the MCC application
bin/MCC-Mother	Executable that provides a wide variety of functions. Initializes MCC host software, does computer simulation of vehicles, records statistics collected from exercise, sends and receives packets from the SIMNET network.
bin/MCC-ATSend	Formats messages going from the host to the AppleTalk network.
bin/MCC-ATRecv	Unformats messages coming to the host to the AppleTalk network.
bin/MCC-SCC	Process in communication with SCC console. Keeps track of activation state of manned vehicles, placement of gunnery targets, command posts...
bin/MCC-Place	Process in communication with Place console. Forwards activation information to SCC process.
bin/MCC-FSE	Process in communication with FSE console. Keeps state table of howitzers and mortars.
bin/MCC-CAS	Process in communication with CAS console. Keeps state of bombing runs.

	bin/MCC-CEC	Process in communication with CEC console. Keeps state of combat engineer missions.
	bin/MCC-Maint	Process in communication with Maint console. Keeps state of recoveries and repairs.
	bin/MCC-Admin	Process in communication with Admin log console. Keeps state of combat service support vehicles.
	simnet/terrain/data/knox-0311	Terrain database provides information about the simulated terrain.
*	simnet/data/network.def	Defines the configuration of the CMC Ethernet card and host interface.
*	simnet/data/assoc.def	Defines the unique site and host ID of the MCC host computer.
*	simnet/data/MCC-params	Provides information about which consoles are active, at which serial port to find the MCC bridge, which exercise ID to use, etc.
*	simnet/data/MCC-pars.alt	Provides alternate parameter information such as ammo mappings, vehicles mappings, and parameters used to define minefields.
*	simnet/data/simnet.mac	Defines macro mappings of names and their hexidecimal equivalents.

* These files are site/host specific and are not included in the release tape.

2.3   Warm Start and Shutdown Procedures

The following section outlines the procedure for performing a warm-start and shutdown of the Masscomp 5600 system.

2.3.1 Startup Procedures

This section describes in detail how to startup the MCC.

STARTUP PROCEDURES

CONTROL ACTION	EXPECTED RESULTS
1. Locate the MCC and the Masscomp 5600 computer that the installation will be performed on.	None
2. Power up the Masscomp 5600 by turning the keyswitch (located on the front panel) to the "1" position.	The console terminal will display: login:
3. Log in as **root**	The console terminal will display a system prompt.(i.e. SIMLAB13 #)
4. Change to the binary executable directory. Enter: **cd /simnet/bin**	The console terminal will display a system prompt.(i.e. SIMLAB13 #)

5. Start up the network and CIG communications:
    Enter: **netstart**
	The console terminal will display:
	    Killing running ringstart...
	    Resetting /dev/enp0...
	    Loading /simnet/bin/enp.bin on /dev/enp0...
	    Starting /simnet/bin/ringstart...
	    [1] 82
	    Done
	    SIMLAB13 #

6. Start up the MCC. Enter: **MCC**	The MCC will respond with various status messages to keep the operator informed of the MCC startup status.

2.3.2 Shutdown Procedure

The following written set of procedures describe in detail how to shutdown the MCC.

SHUTDOWN PROCEDURES

CONTROL ACTION	EXPECTED RESULTS
1. On console terminal, quit the simulation if running. Enter: q	Simulation should exit. Console terminal will display system prompt (i.e.: SIMLAB13 #)
2. At the SIMLAB13 # prompt, enter:**shutdown** (or) At the SIMLAB13 # prompt, enter: **sync** **sync** **halt**	The message: syncing disks... will appear, then the prompt >>> will be displayed.
3. Turn the front panel key switch to the "0" position. .	The system will power off.

3.0   Release Validations

3.1   Cold Start Validation

The following written set of procedures instructs the user on how to validate the success of the cold-start.

Cold-start Validation Instructions:

The expected results detailed in the System Preparation and Release Installation Procedure sections are indicative of a successful cold-start.

3.2   Warm Start Validation

The following written set of procedures instructs the user on how to validate the load once it is operational.

Warm Start Validation Instructions:

The expected results detailed in the Startup Procedure section are indicative of a successful warm start. After completion of Startup Procedure step 6, the MCC may be activated.