CONVEX
C3800 System Diagnostics V2.0
Release Notice

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Release Notes

Installing CONVEX C3800 System Diagnostics V2.0

Supplemental Documentation

Release Notes

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1. Overview

This document is intended to enhance and clarify the existing permanent documentation for this product with information that is up-to-the minute, or was developed too late for inclusion in the permanent documentation. Always refer to this release notice before reporting problems with the CONVEX C3800 System Diagnostics V2.0. Fixes and work-arounds are listed here that may save you time in rediscovering known problems.

The remaining sections in this document describe the contents of this release:

- Section 2 describes the contents of this distribution.
- Section 3 contains notes and warnings about the use of the software.
- Section 4 contains enhancements to the previous functionality.
- Section 5 describes fixes for previously reported problems.
- Section 6 describes known software problems.
- Section 7 describes known hardware problems.
- Section 8 describes known documentation problems.
- Section 9 contains descriptions of the new documentation.

Appendix A contains instructions for installing this release on a C3800 Service Processor Unit.

Appendix B contains man pages that do not appear in the documentation.

2. Contents of this Distribution

The distribution package for this release of CONVEX C3800 System Diagnostics V2.0 consists of this document and distribution media for the software. The specific contents of the software and documentation distribution are described in the following tables:

Table 1: C3800 Series System Diagnostics Media

Item	Quantity	Type	Part Number	Description	Format
1.	1	DAT	760-003615-008	CONVEX C3800 System Diagnostics V2.0	Installsw

Table 2: C3800 Series System Diagnostics Documentation

Item	Quantity	Part Number	Description
1.	1	unreleased	CONVEX C3800 Processor Diagnostics Manual

3. Notes and Warnings

This is the first release that supports SOLARIS release 1.0.1 of SunOS. Before installing this tape (C3800 System Diagnostics V2.0), C3800 SPUOS version V2.0 must first be installed. C3800 System Diagnostics V2.0 is not compatible with any previous version of C3800 SPUOS.

After installation of C3800 System Diagnostics, verify the *osc_freq* setting on the NCU board. It should be set so the machine is running at the 16.7ns clock speed. This is verified by using the **xsys_config** utility after the system has been powered up via **diaginit**. If it is not correct, update the /diag/db/osc_update script file so *osc_freq* is set to the correct value (0=nominal, 1=lower, 2=upper) so the machine runs at the 16.7ns clock speed. Once this script file has been updated it must be executed so the Configuration Database is correct.

Do not use STOP-A to abort any process during the install because the file system could be corrupted. If you must abort a process please use Ctrl-C. Using STOP-A anytime is not recommended and should be avoided.

All products in the /diag directory are overwritten when C3800 System Diagnostics are installed. If any files in this directory have been customized they must first be saved on tape and then restored after completion of the install.

4. Enhancements

This is the initial release of the CONVEX C3800 System Diagnostics V2.0 and supersedes the release of CONVEX C3800 System Diagnostics V1.1.2 and all previous releases. Enhancements to the software provided by this release is broken down into two categories: utilities and test. The following subsections identify the enhancements to the two groups of software.

4.1 Utility Enhancements

4.1.1 xscreen_saver

- This utility allows the screen saver option to be turned off and on. When a hard error is reported the screen will immediately light up.

4.1.2 vmunix (SPU kernel)

- Supports SOLARIS release 1.0.1 and requires C3800 SPUOS V2.0 to be installed. This version of the kernel is not compatible with the C3800 SPUOS V1.0 release.
- Contains a fix for the "async memory parity error" panics.

4.2 Test Enhancements:

There are no test enhancements included in this release.

5. Fixes

This is the initial release of the CONVEX C3800 System Diagnostics V2.0 and supersedes the previous release of CONVEX C3800 System Diagnostics V1.1.2 and all previous releases. Problem corrections to the software provided by this release is broken down into two categories: utilities and test. The following subsections identify the problems fixed to the two groups of software.

5.1 Utility Fixes

5.1.1 hard_logger

- Modified to light up the display when a hard error occurs.
- The SP and VP board interrogators were modified to dump more information when an NVRF failure occurs.

5.1.2 modem_init

- Modified to fix problems initializing the modem.

5.1.3 nologin_create/nologin_delete

- Modified to configure the net according to whether SECURE mode is selected or not. If running SECURE the net is down otherwise the net is up.

5.1.4 ucode_rev_update

- This file in /diag/db has been updated to reflect the current versions of the microcode. The three vector microcode (UA, UL and VD) are at revision 10.0, the SR microcode is at revision 10.2 and the US microcode is at revision 10.6.
- The US microcode includes intrinsic instruction fixes and real-time operation modifications.
- The SR microcode includes real-time operation modifications.

5.1.5 /diag/db/modem_parms

- Modified to fix modem initialization problems.

5.1.6 /diag/db/set_busses

- The vttga and vtt busses on the XBAR are skewed identical to the other boards.

5.1.7 /diag/etc/etc.rc.local

- Modified so modem_init is not invoked.

5.2 Test Fixes

5.2.1 spu4000

- Modified to support SP boards at wire revision H.
- Modified to fix "clock generator busy" problem.

6. Known Software Problems

6.1 Utilities

6.1.1 bpccommd

- As long as communications between the BPC firmware and the bpccommd is correct, there is no problem with this daemon. However, if the BPC firmware and the *bpccommd* ever get out of sync, the bpccommd will never sync back up. In addition, the bpccommd is not re-startable (i.e., it assumes that the system is powered down and the BPC's are in reset.) The only course of action is to reboot the system.

6.1.2 xdiag and CPUcti

The CPUcti has several known problems

- Subtest and test cleanup has been implemented but not tested extensively. If a subtest times out, run initall before reloading the test.
- Harderror interrupts are not being enabled.
- Correct timer updates are not yet supported by CPUcti.

6.1.3 ddb

- Breakpoints are currently unsupported.

6.2 Test Programs

6.2.1 cpu4331

- Dependent on the oscillator position selected, the timer functions of cpu4331 may not pass. The have been verified at 16.67, but not at 15.5 and 18.

6.2.2 cpu4332

- Dependent on the oscillator position selected, the timer functions of cpu4332 may not pass. The have been verified at 16.67, but not at 15.5 and 18.

6.2.3 cpu4333

- Dependent on the oscillator position selected, the timer functions of cpu4333 may not pass. The have been verified at 16.67, but not at 15.5 and 18.

6.2.4 xdiag and CPUcti

- All cputests are supported by xdiag and CPUcti, but no regression or testing has been done. With this release it is recommended that ddb be used as the mechanism for running cpu diagnostics.

6.2.5 spu4000

- Testing the connections between an SP board and the reset of the system requires the associated VP board be present.

7. Known Hardware Problems

There are no known hardware problems.

8. Known Documentation Problems

There are no known documentation problems.

9. New Documentation

There is no new documentation for this product.

Installing CONVEX C3800 System Diagnostics V2.0

A

1. Installation procedure

The CONVEX C3800 System Diagnostics V2.0 tape can not be installed while ConvexOS is running. This restriction will be removed in a future release.

There are two conditions from which a diagnostic install can take place. Instance one, is when the SPU workstation is up running multi-user and instance two is when the SPU workstation has been booted single-user.

Step 1: SPU workstation is booted multi-user:

- If ConvexOS is running, bring it down.
  - To bring ConvexOS down, refer to the System Administrators Manual.
- If the C3800 is powered up, power down the C3800.
  - Execute the SPU command 'sys_shutdown' via the menu by clicking the mouse (or from a dsh window). If you are in doubt that a window is a dsh window, execute the SPU command 'dsh'.
- Bring the CONVEX C3800 SPUOS down to single user.
  - become root user by executing the SPU command 'su'
  - execute the SPU command 'cd /'
  - execute the SPU command '/etc/shutdown'

Step 2: If the SPU workstation was not brought down from multi-user as outlined in STEP1; but was booted single user, the file system must be mounted before continuing.

- Mount the file system by executing the SPU command 'mount -a'

Step 3: Place the CONVEX C3800 System Diagnostics V2.0 tape in the DAT drive located in the SPU workstation and enter the following command at the SPU prompt:

 # /etc/installsw -i -d /dev/nrst0 2>&1 | tee /tmp/installsw.log

The following prompts appear during the installation:

1) 60hz

2) 50 hz

Select installation line frequency >

Select the appropriate line frequency.

Is this a field production installation? [[y]/n] >

Enter "n" if the system is a not a field production machine. The default is a field production machine.

The installation will proceed from this point and take approximately 25-30 minutes to complete.

Step 4: After installation is complete, remove the tape from the DAT tape drive.

Step 5: If you need to set the date on the SPU do so at this time.

Step 6: Reboot the Service Processor

 # /etc/reboot

Supplemental Documentation

B

1. Documentation Caveat

This appendix contains documentation that is relevant to C3800 System Diagnostics V2.0 that was unavailable in the documentation available at the time this product was released.