Release Notes for PA0612

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Overview

The Offline Diagnostics Environment (ODE) is a platform that enables you to troubleshoot a system that is not booted to the operating system. ODE can be used to test systems that cannot be tested using the Online Diagnostics tools. The ODE is also useful for some types of testing in which it is not desirable to have to boot the system first, as is often the case in manufacturing applications.

Enhancements

The following enhancements are made in ODE for the December 2006 release:

Support for sx2000

- The MAKODIAG, MAPPER2, MEM2, CIODIAG, ESCDIAG, MOABDIAG, DISKUTIL2, COPYUTIL2, DFDUTIL2, IOTEST2, PCIUTIL, DISKEXPT2, and PERFVER2 tools are supported on the sx2000 platform.

  Note: The ESCDIAG and MOABDIAG tools are new in this release.

MAPPER2

- The MAPPER2 tool is enhanced to display both the Legacy Path mode and the Agile Path mode. The MAPPER2 tool provides a new command called the `switchmode` command to switch between the Agile Path mode and the Legacy Path mode. The Legacy Path mode is the default mode and is comparable to the output of the `ioscan` [HP-UX 11i v1, HP-UX 11i v2, and HP-UX 11i v3] command. The Agile Path mode displays the path with WWN and is comparable to the output of the `ioscan - Ne` [HP-UX 11i v3] command. The path for the SCSI, IDE and the FC module is displayed using the Agile Path mode.

What Is New In This Release

The following new features are supported in ODE for the December 2006 release:

COPYUTIL2, DFDUTIL2, DISKEXPT2, DISKUTIL2, IOTEST2, MAPPER2, PCIUTIL, PERFVER2

- Added support for AB378B and AB379B 4Gb FC based Adapters.

The AB378A and AB378B 4Gb FC based Adapters are identified as:
  - HP AB378A/AB378B 4Gb Single Port FC HBA

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CIODIAG

- The CIODIAG tool is enhanced to support the AB314A Gigabit Ethernet card.

DFDUTIL2

- The DFDUTILU2 tool is enhanced to increase its speed of execution to 94% on N-class machines.

IOTEST2

- The IOTEST2 tool is enhanced to add the Declan internal and external loopback tests.

PCIUTIL

- The ODE tools are enhanced to support the following Vega cards:
  - AD193A - 1-Port 4Gb FC and 1-Port 1000B-T combo adapter
  - AD194A - 2-Port 4Gb FC and 2-Port 1000B-T combo adapter
- The PCIUTIL tool is enhanced to support the SST-B Flash in the 4 GB FC based adapter.

Defect Fixes

The following defects are fixed in this release:

COPYUTIL2, DFDUTIL2, DISKEXPT2, DISKUTIL2

- The disk tools, Diskutil2 and Diskexpt2, fail to initialize the HP A6255A disk controller of StorageWorks DS2405. This defect is now fixed.

ESCDIAG

- The ESCDIAG tool does not display the SYM53C875/876 card. This defect is now fixed.
- If a boot device is under a PCI-PCI bridge, the ESCDIAG tool does not reset the boot device when you run the `exit` command. This defect is now fixed.
- The ESCDIAG tool hangs in section 3.5 when ODE is booted over LAN and when the ESCDIAG tool is run in a loop. This defect is now fixed.

IOTEST2

- The loopback test on Intel Gigabit Ethernet LAN card fails after testing the AB545A adapter. This defect is now fixed.
- The loopback test on Declan cards generate an error message even when the test is successful. This defect is now fixed.
- The section 37 of the IOTEST2 tool displays a wrong MAC address on the Intel Gigabit Ethernet LAN adapters. This defect is now fixed.
- The IOTEST2 tool returns timeout error for the AD332(cyclops) card. This defect is now fixed.
- The cyclops card (AD331 & AD332) component names are wrongly displayed. This defect is now fixed.

MAKODIAG

The section 22 of the MAKODIAG tool hangs when run immediately after the MAPPER2 tool on HP Superdome systems. This defect is now fixed.
- The section 24 of the MAKODIAG tool hangs on the rp8420 system. This defect is now fixed.
- The MAKODIAG tool fails on exit. This defect is now fixed.

PCIUTIL

- The PCIUTIL tool does not support the following commands on the 4-port 2p2g FC/GigE combo adapter AB465A:
  - `download`
  - `VPD`
  - `WWN`

  This defect is now fixed.
- The firmware update on the AB465A adapter using the `update` command fails while updating the firmware from version 3.3.150 to version 3.3.154. This defect is now fixed.

PERFVER2

- The self-test for certain SCSI disk drives fails. This defect is now fixed.

MOABDIAG

- The MOABDIAG tool crashes when you run it on a 128-way sx2000 based superdome. This defect is now fixed.

Known Problems

Following are the known problems that are common to both 32-bit tools and 64-bit tools:

- All ODE programs hangs on the PCX-U and PCX-U+ based workstations (C160, C180, C200, and C240) if the firmware version is earlier than IODC 4.1.
  Workaround: Install the firmware version IODC 4.1 and later.
- After exiting from the TMMGR prompt to the ODE prompt, running any subsequent program may hang the system. The user must use the `exit all` option to exit from the TMMGR prompt to the ISL prompt and reload ODE.

Known Problems for 32-bit Tools

Following are the known problems for 32-bit tools:

- Offline diagnostics may not recognize some SCSI disks attached through HP-GSC and HP-HSC cards. For example, MAPPER may fail to recognize a lone AutoRAID Disk Array Model 12H. This problem will be fixed in a subsequent version of the offline diagnostics.
  Following lists the systems and the cards that are affected:
  - D/R-Class: A4107A (HP-HSC card F/W/Diff SCSI-2)
  - K-Class: A2969A (HP-HSC card F/W/Diff SCSI-2)
  - T-Class: A3644A (HP-HSC card F/W/Diff SCSI-2)
  - A-Class: HP-HSC card F/W/Diff SCSI-2

  Workaround:
  - Run the `search` command from the Boot Console Handler (BCH) prompt.
  - Run the MAPPER tool or other ODE disk tools as desired.

Workaround for A180 and A180C servers:
  - Boot to the HP-UX prompt.
  - Reboot to ISL.
  - Run the MAPPER tool or other ODE disk tools as desired.

ASTRODIAG

- At least one PCI SCSI card must be placed under each Local Bus Adapter (LBA) on sx1000 systems.
- For B2000, at least one PCI SCSI card must be installed in the system to run all sections on ASTRODIAG.

CLKUTIL

- This version of CLKUTIL will not work on a graphics terminal.

DINOTEST

- If section 9 runs, cards on the secondary PCI bus may loose their configuration. When this happens, users must reset the system before booting the OS.

KEYDIAG

- Tested on Hversion 0x580 K-Class systems and not on Hversion 0x581 K-Class.

LANCONFIG

- Does not support C-class workstations on this version.

LASIDIAG

- The `sect 32 10;run` command returns the following error message although there were no errors found:
  `HARDWARE ERROR`
  Ignore this error message.

SIODIAG

- The message "Test section completed successfully" means that the test section code is complete and has been tested.
- The message "Test section not yet implemented" means that the test section is either not code complete or not completely tested.

TIMIDIAG

- If the system console path is set to the TIMI serial port, execution of TIMIDIAG SECTION 004 (Timi UART test internal and external loopback) will crash the system.
- If the system is booted from either of the Backplane Networking, Backplane ROM or PCMCIA boot devices, execution of TIMIDIAG will crash the system.

TMMGR

- The TMMGR prompt is currently only supported when ODE is booted from the HP9000 Offline Diagnostics CD-ROM. If ODE is booted from tape, diagnostics can be run from the ODE prompt rather than from the TMMGR prompt.

Known Problems for 64-bit Tools

Following are the known problems for 64-bit tools:

- The class license may not work for some rp8400 systems (HVersion 5E4 and 5E6). The work around is to install the class license from the Online Diagnostic tools.

DISKEXPT2, DISKUTIL2

- READLOG on a Quantum FIREBALL1050S disk will return a "Device wants to Transfer More Data then Allocated." error message. This is a bug in the disk driver firmware.

ASTRODIAG2

- Return values for each test section are inconsistent. They can cause the diag to return TM_STATUS_FAILED under the wrong circumstances.
  Important: PCI-TO-PCI devices are not supported on Shared Slots.
- Interrupt tests (Section 6) are not executed.
- PIO transactions (Section 8) are not executed.

CIODIAG

IMPORTANT: There is no USB coverage implemented for this release and there are no plans to test the RS232 users port. Only the UPS or Aux port in rp8400 is tested on an external loopback test.

IKEDIAG2

- On rp5470 servers, section 3, subtest 1 & 2 are disabled.
- ON rp5470 servers with 875MHz CPUs, Section 8: Subtest 004 DMA Ext. Interrupt Test fails.

IOTEST2

- IOTEST2 loopback test fails on AD332-60001 1000Base-SX Adapter, when Lan cable is connected to it.
  Workaround: Unplug the Lan cable and run the loopback test.
- IOTEST2 runs very slowly on c8000 machines when USB devices are connected.

MAKODIAG

- Section 81 fails after several loops when run with other ODE Tools.
  Workaround: Enter `resume` at the command prompt to continue with the test.
- The MAKODIAG tool report errors in multiple processors if it is run after the MAPPER2 tool.
  Workaround: Run the MAKODIAG tool before running other ODE tools.

MAPPER2

- Runs very slowly on c8000 machines when USB devices are connected.
- Does not list MSA1500 devices when connected to A6795A Fibre Channel HBA.
- Does not detect EVA3000 and EVA5000 storage array devices when connected to A6795A Fibre channel controller.

MEM2

- Due to a firmware bug in zx1 based systems, MEM2 detects SBE and pauses. However, it does not report the correct location of the faulty DIMM.
- Due to a firmware bug in zx1 based systems, MEM2 works only when run from a disk. If booted from LAN, it will work for the first run as long as the user does not exit to the ISL prompt. If exited, the user needs to reset the server before running MEM2 again.

PLUTODIAG

- Section 5 does not receive any interrupts on the c8000 system.

REODIAG

- Two CPUs are deconfigured in rp7410 after running section 8. Further investigation in section 8 is needed. Therefore, forwarding of interrupt 0 to the processor in section 8 is temporarily skipped.
- Section 11 is not implemented because the PCI Exerciser card, HP E2928A, is no longer supported.

TOGODIAG

- TOGODIAG takes variable amount of time to load on rp8420 systems. The delay is due to the PDC calls that takes more time to fetch the system information.

Documentation

For latest information on ODE, see the Diagnostics website at:
http://www.hp.com/go/hpux-diagnostics-docs

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