SunVTS™ 6.1 Release Notes

Sun Microsystems, Inc.
www.sun.com

Part No. 819-2363-10
January 2006, Revision C

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SunVTS 6.1 Release Notes

The SunVTS™ 6.1 software is designed for the Solaris™ 10 1/06 Operating System (OS) and is compatible with the Solaris 10 3/05 OS.

Note – All new features, tests, and test enhancements that are released in SunVTS 6.1 are documented in the *SunVTS 6.1 Test Reference Manual*, and *SunVTS 6.1 User's Guide*. These documents are included on the Solaris on Sun Hardware collection on the Solaris Documentation DVD, in the extra value (EV) directory. These documents are also available at: `http://docs.sun.com`

For the latest version of this document (819-2363), go to:
`http://www.sun.com/documentation`

SunVTS Support for the Solaris OS on x86-Based Systems

Note – In this document these x86 related terms mean the following:
"x86" refers to the larger family of 64-bit and 32-bit x86 compatible products.
"x64" points out specific 64-bit information about AMD64 or EM64T systems.

Starting with the Solaris 10 OS, the SunVTS infrastructure and core diagnostics are available for x86 platforms. Starting with Solaris 10 3/05 HW1, SunVTS diagnostics for x86 platforms are supported in the AMD 64-bit environment for the SunVTS kernel (`vtsk`). All diagnostics except the System Test (`systest`) are ported to 64-bit.

SunVTS is supported and tested on the following Sun x86 platforms:

- Sun Fire™ V60x

- Sun™ LX50
- Sun Fire B100x
- Sun Fire B200x
- Sun Fire V20z
- Sun Fire V40z
- Sun Fire X4100 Server
- Sun Fire X4200 Server

You must install the x86 version of the SunVTS packages to perform SunVTS on x86 platforms. The software packages use the same names as in the SPARC® environment. The SunVTS packages delivered separately for both x86 and SPARC Solaris platforms are as follows:

- `SUNWvts` – Contains the SunVTS core framework that includes the kernel and user interface.
- `SUNWvtsmn` – Contains the SunVTS online manual pages
- `SUNWvtsr` – Contains the SunVTS framework configuration files in the root partition (superuser).
- `SUNWvtsts` – Contains the SunVTS test binaries.

The SunVTS components available for x86 Solaris platforms are as follows.

Infrastructure:

- `sunvts`
- `vtsk`
- `vts_cmd`
- `vtstty`
- `vtsui`
- `vtsprobe`

SunVTS tests:

- CD DVD Test (`cddvdtest`)
- CPU Test (`cputest`)
- Disk and Floppy Drives Test (`disktest`)
- Data Translation Look-aside Buffer (`dtlbtest`)
- Floating Point Unit Test (`fputest`)
- InfiniBand Host Channel Adapter (`ibhcatest`)
- Level 1 Data Cache Test (`l1dcachetest`)
- Level 2 SRAM Test (`l2sramtest`)
- Ethernet Loopback Test (`netlbtest`)
- Network Hardware Test (`nettest`)
- Physical Memory Test (`pmemtest`)
- RAM test (`ramtest`)
- Serial Port Test (`serialtest`)
- System Test (`systest`)
- Universal Serial Board Test (`usbtest`)
- Virtual Memory Test (`vmemtest`)

Displaying SunVTS Package and Version Information

Use the following command to display SunVTS package information:

```
# pkginfo -c SUNWvts SUNWvtsts SUNWvtsmn
```

You can also use either of the following commands to display additional SunVTS package information:

- `# pkginfo | grep vts`
- `# showrev -p | grep vts`

Use either of the following commands to display SunVTS version information:

- `# sunvts -v`
- `# /opt/SUNWvts/bin/.version`

Open Issues

Possible Installation Issue

Install and Uninstall Using the Same Program

Use the same tool or utility for installation and removal of the SunVTS software. If you use `pkgadd` for installation, use `pkgrm` to uninstall; if you use Web Start for installation, use the Product Registry to uninstall.

Possible Runtime Issues for Both x86 and SPARC Platforms

Blank Dialog Boxes Displayed From the `installer` Utility When Installing SunVTS from the Solaris 10 1/06 SPARC and x86 CD-ROMs (CR 6365751)

When launching the `installer` utility on the Solaris 10 1/06 CD-ROMs, the pop-up dialog box displays two choices: Typical and Custom. If Typical is selected, the next dialog box, "The following items will be installed," is blank. This issue does not occur on the Solaris 10 1/06 DVD.

Workaround: None.

SunVTS Memory or CPU Tests Could Fail Due to Lack of System Resources (CR ID 6331819)

When too many instances of SunVTS functional tests are run in parallel on UltraSPARC® T1 CMT CPU-based (sun4v) entry-level servers with low memory configurations, SunVTS tests might fail due to lack of system resources. For example, you could see an error message similar to the following:

```
"System call fork failed; Resource temporarily unavailable"
```

Workaround: Decrease the number of SunVTS test instances or perform SunVTS functional tests separately. In addition, you can increase the delay value for CPU tests or increase the test memory reserve space.

Using `usbtest` on sun4v Systems (CR ID 6310384)

The `usbtest` keyboard test might indicate a successful keyboard probe when a keyboard is not present.

Workaround: None.

Using `netlbtest` on Sun Fire T2000 Servers (CR ID 6349218)

Performing `netlbtest` on all `ipge` ports simultaneously in systems with Sun PCI-Express Dual Gigabit MMF/UTP adapters could fail. Performing `netlbtest` on one port per adapter, avoids this failure.

Workaround: Perform `netlbtest` on one port per Sun PCI-Express Dual Gigabit MMF/UTP adapter.

Using `netlbtest` (CR ID 6331398)

The `netlbtest` external loopback test could incorrectly report that the test passed when no loopback packets were transmitted or received by the `ipge` driver.

Workaround: None.

Using `qlctest` (CR ID 6306254)

On dual-port host bus adapters (HBAs), testing both ports simultaneously could cause intermittent test failures.

Workaround: Test only one port of dual-port HBAs at a time.

Using `audiotest` Loopback Tests (CR ID 6344984)

`audiotest` on Sun Ultra™ 45 workstations currently supports the line-in/line-out external loopback test only.

Workaround: None.

Creating Option Files on Enterprise Servers (CR ID 6345990)

Creating option files on Sun Enterprise™ and Sun Fire 15K servers (UltraSPARC III) with the SunVTS GUI could cause a core dump.

Workaround: Use the TTY user interface to create option files.

Using Memory Tests (CR ID 6347456)

SunVTS memory tests might log a warning message similar to the following in rare cases when the ECC Error Monitor (`errmon`) option is enabled.

```
WARNING: software error encountered while processing
/var/fm/fmd/errlog
         Additional-Information: end-of-file reached
Workaround: Do not enable the errmon option. The errmon option is
disabled by default.
```

Workaround: Disable the `errmon` option. The `errmon` option is disabled by default.

Supporting x86 Clients on a SPARC Server (CR ID 6344791)

Installing SunVTS x86 packages on a SPARC server to serve x86 clients with SunVTS images is not supported. Installing SunVTS SPARC packages on an x64 or x86 server to serve SPARC clients is supported.

Workaround: None.

Using `cddvdrwtest` (CR ID 6333687)

In rare cases, repeated reuse of DVD+RW optical media on Sun Ultra 45 workstations could cause failures when performing high stress DVD+RW SunVTS tests.

Workaround: Replace the DVD+RW media upon failure, or use other types of media such as CD-RW.

Using `cddvdtest` (CR ID 6220163)

`cddvdtest` might fail when used for testing CD/DVD RW drives with Read/Write media.

Workaround: Either use a blank media for testing, or insert a CD-ROM media into the drive and restart SunVTS. The user interface then invokes the test with read only options.

Using `serialtest` and `disktest` Simultaneously (CR ID 4858028)

Sun Blade™ 100 and 150 systems with SunVTS can produce errors when the serial port controller (southbridge) is also handling other traffic as data access from and to the IDE hard disk. With SunVTS simultaneously running `serialtest` and `disktest` on Sun Blade 100 and 150 systems, you might see `serialtest` report failures.

Workaround: Do not perform `serialtest` and `disktest` simultaneously.

SunVTS Does Not Support Processor Sets

If processor sets are defined, you must first delete the processor sets before running SunVTS.

Workaround: None.

Netra CT 820 Server Support

The Netra™ CT 820 server is not currently supported in Solaris 9 or Solaris 10 Operating Systems.

Possible Runtime Issues for x86 Platforms

`bmcenvironment` Test Displays Failure When Critical Threshold is Reached but Not Exceeded (CRs 6328901, 6363524, 6368948, and 6368997)

On Sun Fire V20z and Sun Fire V40z servers, it is possible for some sensor readings to reach the corresponding critical threshold without exceeding it. The `bmcenvironment` test flags a sensor reading as a failure both when the critical threshold is reached and exceeded. If a failure occurs due to a sensor reading reaching but not exceeding the critical threshold value, as shown in the log, the failure can be disregarded.

Workaround: None.

Using `qlctest` (CR ID 6344143)

Performing `qlctest` with the default settings (Exclusive test mode and Online Selftest enabled) could fail with an error message similar to the following:

```
......
Probable_Cause(s):
    (1)wrong/missing QLC driver
    (2)system software
  Recommended_Actions:
    (1)Reload correct revision driver
    (2)if the problem persists, contact authorized Sun service
provider
.......
```

Workaround: Disable the Online Selftest.

Possible Runtime Issues for SPARC Platforms

Using `env5test` (CR ID 6176527) and `i2ctest` (CR ID 6176554)

`env5test` and `i2ctest` could fail due to a Solaris 10 OS PICL initialization issue. When PICL is stopped and started, the tests pass appropriately.

Workaround: Enter the following commands directly after the Solaris OS is booted:

```
# cvsadm disable /system/picl
# cvsadm enable /system/picl
```

Adding Boards With Dynamic Reconfiguration (DR) to Sun Fire 15K Systems (CR ID 4959606)

On Sun Fire 15K systems, adding new boards with DR might cause some of the processor and memory related tests to perform ineffectively. Specifically, `cmttest` might fail to recognize the CMT processors on the new board. Similar failures might also occur in `l2sramtest`, `l1dcachetest`, `dtlbtest`, `ramtest`, `bustest`, `mptest`, and `fputest`.

Workaround: Reboot the system after adding a new board with DR.

`pfbtest` Fails When Used in the Gnome Desktop Environment (CR ID 4938281)

`pfbtest` might fail when performed in the Gnome desktop environment on a Sun XVR-100 graphics accelerator if the test is performed in the default console window.

This failure does not occur in the Solaris 8 2/02 OS and the Solaris 8 HW 3/03 OS. If this failure occurs, an error message similar to the following is displayed:

```
pfb3(pfbtest)            passes: 26 errors: 12
```

Workaround: Most graphics tests fail when running under Gnome. Enter the `xscreensaver-command -exit` command before performing graphics test under the Gnome desktop environment to avoid these failures.