Sun Fire™ 6800/4810/4800/3800 Systems Firmware 5.15.0 Release Notes

Sun Microsystems, Inc.
4150 Network Circle
Santa Clara, CA 95054 U.S.A.
650-960-1300

Part No. 817-1001-10
April 2003, Revision A

Submit comments about this document at: `http://www.sun.com/hwdocs/feedback`

Copyright 2003 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

Sun Microsystems, Inc. has intellectual property rights relating to technology embodied in the product that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the U.S. patents listed at http://www.sun.com/patents and one or more additional patents or pending patent applications in the U.S. and in other countries.

This document and the product to which it pertains are distributed under licenses restricting their use, copying, distribution, and decompilation. No part of the product or of this document may be reproduced in any form by any means without prior written authorization of Sun and its licensors, if any.

Third-party software, including font technology, is copyrighted and licensed from Sun suppliers.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and in other countries, exclusively licensed through X/Open Company, Ltd.

Sun, Sun Microsystems, the Sun logo, docs.sun.com, Java, OpenBoot, Sun Fire, SunStorEdge, and Solaris, are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and in other countries.

All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and in other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

U.S. Government Rights—Commercial use. Government users are subject to the Sun Microsystems, Inc. standard license agreement and applicable provisions of the FAR and its supplements.

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

Copyright 2003 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, Etats-Unis. Tous droits réservés.

Sun Microsystems, Inc. a les droits de propriété intellectuels relatants à la technologie incorporée dans le produit qui est décrit dans ce document. En particulier, et sans la limitation, ces droits de propriété intellectuels peuvent inclure un ou plus des brevets américains énumérés à http://www.sun.com/patents et un ou les brevets plus supplémentaires ou les applications de brevet en attente dans les Etats-Unis et dans les autres pays.

Ce produit ou document est protégé par un copyright et distribué avec des licences qui en restreignent l'utilisation, la copie, la distribution, et la décompilation. Aucune partie de ce produit ou document ne peut être reproduite sous aucune forme, par quelque moyen que ce soit, sans l'autorisation préalable et écrite de Sun et de ses bailleurs de licence, s'il y ena.

Le logiciel détenu par des tiers, et qui comprend la technologie relative aux polices de caractères, est protégé par un copyright et licencié par des fournisseurs de Sun.

Des parties de ce produit pourront être dérivées des systèmes Berkeley BSD licenciés par l'Université de Californie. UNIX est une marque déposée aux Etats-Unis et dans d'autres pays et licenciée exclusivement par X/Open Company, Ltd.

Sun, Sun Microsystems, le logo Sun, docs.sun.com, Java, OpenBoot, Sun Fire, SunStorEdge, et Solaris sont des marques de fabrique ou des marques déposées de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays.

Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits protant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

L'interface d'utilisation graphique OPEN LOOK et Sun™ a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une license non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciées de Sun qui mettent en place l'interface d 'utilisation graphique OPEN LOOK et qui en outre se conforment aux licences écrites de Sun.

Please
Recycle

Adobe PostScript

Contents

Features Introduced in 5.15.0 1

Automatic Diagnosis and Domain Restoration 2

Automatic Recovery of Hung Domains 2

Component Location Status 2

Domain HostID/MAC Address Swap 3

Commands New for 5.15.0 3

Commands Modified for 5.15.0 4

General Information 4

Sensor Status Messages 4

Firmware Compatibility 5

Firmware Upgrade and Downgrade 5

Power Supply Failures 5

Known Sun Fire 6800/4810/4800/3800 Systems Limitations 6

SC Hangs After Automatic `setkeyswitch off` (RFE 4454599) 6

No LED Fault Indicator on System Board After the Board Fails POST (RFE 4454623) 6

SC Prompt is Changed and Not Sync After Replacing SC With Old FW From Another Machine (BugID 4740301) 7

Cannot Boot the Solaris Operating Environment if Bus 1 of Schizo0 is Disabled in a Single I/O Board Domain (BugID 4779052) 7

Platform Console Does Not Report SEEPROM Errors But Domain Console Does (BugID 4793968) 7

Sun Management Center Domain Failed to Recognize V2 CPU Board and Treated it as an Unknown Board (BugID 4808259) 7

Processor Stuck in OpenBoot PROM (OBP) When OBP Console Buffer Full (BugID 4825233) 8

WDR `Solaris_WDRAttachmentPoint/Solaris_CHSystemBoard` Fails to Recognize COD (BugID 4839027) 8

Sun Fire™ 6800/4810/4800/3800 Systems Firmware 5.15.0 Release Notes

This document provides information on new and revised features, as well as late-breaking news, for firmware release 5.15.0 on Sun Fire 6800/4810/4800/3800 systems.

This document contains the following information:

- Features Introduced in 5.15.0
- General Information
- Known Sun Fire 6800/4810/4800/3800 Systems Limitations

Features Introduced in 5.15.0

This section provides a brief description of the new features in 5.15.0. For detailed information on these features, refer to the *Sun Fire 6800/4810/4800/3800 Systems Platform Administration Manual* (part number 817-0999-10) and the *Sun Fire 6800/4810/4800/3800 System Controller Command Reference Manual* (part number 817-1000-10).

Automatic Diagnosis and Domain Restoration

The following error diagnosis and domain restoration capabilities are enabled by default:

- *Auto-diagnosis* (AD) engine

  The AD engine detects and diagnoses hardware errors that affect the availability of a platform and its domains. The AD engine analyzes a hardware error and if possible, identifies the field-replaceable units (FRUs) associated with the hardware error. The AD engine records the diagnosis information for the affected components and maintains this information as part of the *component health status* (CHS).

  Auto-diagnosis information is reported through platform and domain event messages. When you see auto-diagnosis event messages, contact your service provider so that the appropriate service action can be initiated.

- *Auto-restoration* of paused domains

  After auto-diagnosis, a domain that was paused due to a hardware error will be automatically rebooted. If possible, any components associated with the hardware error are also disabled (deconfigured) from the system.

For further information, see the "Diagnosis and Domain Restoration" chapter in the *Sun Fire 6800/4810/4800/3800 Systems Platform Administration Manual*.

Automatic Recovery of Hung Domains

The system controller automatically monitors domains for hangs in which a domain does not respond to interrupts or a domain heartbeat stops within a designated timeout period. When the `hang policy` parameter of the `setupdomain` command is set to `reset`, the system controller automatically performs an externally initiated reset (XIR) and reboots the hung domain. For additional information, see the "Diagnosis and Domain Restoration" chapter in the *Sun Fire 6800/4810/4800/3800 Systems Platform Administration Manual*.

Component Location Status

The physical location of a component, such as slots for CPU/Memory boards or slots for I/O assemblies, can be used to manage hardware resources that are configured into or out of the system. A component location has either a disabled or enabled state, which is referred to as the *component location status*. You can enable or disable components based on their physical location in the system.

You change a component location status through the `setls` command. This command replaces the `disablecomponent` and `enablecomponent` commands, which were previously used to blacklist and enable components, respectively.

Note – Sun recommends that you use the `setls` command rather than the `disablecomponent` and `enablecomponent` commands, even though those commands are still supported in 5.15.0.

For additional information, see the "Introduction" chapter in the *Sun Fire 6800/4810/4800/3800 Systems Platform Administration Manual*.

Domain HostID/MAC Address Swap

A new `setupplatform` parameter, the `HostID/MAC Address Swap`, enables you to swap the HostID/MAC address of one domain with another. This feature is useful when host-licensed software is tied to a particular domain HostID and MAC address, but you need to run that host-licensed software on another domain. You can swap the domain HostID/MAC address with that of an available domain and then run the host-licensed software on the available domain, without encountering license restrictions tied to the original HostID/MAC address.

Note – If you swap the HostID/MAC addresses between a pair of domains, but you need to downgrade to an earlier firmware release, you must restore the original domain HostID/MAC addresses before performing the downgrade. For details, refer to the "General Administration" chapter in the *Sun Fire 6800/4810/4800/3800 Systems Platform Administration Manual* and the `Install.info` file included with the firmware.

Commands New for 5.15.0

The `setls` command replaces the `enablecomponent` and `disablecomponent` commands, which have been deprecated starting with the 5.15.0 release. For details, refer to the `setls` command description in the *Sun Fire 6800/4810/4800/3800 System Controller Command Reference Manual*.

Commands Modified for 5.15.0

The following SC commands were changed in 5.15.0:

- `disablecomponent` – Deprecated but still supported. Use the `setls` command instead.
- `enablecomponent` – Deprecated but still supported. Use the `setls` command instead.
- `setupdomain` – Removed the `error-diagnosis` parameter. The error diagnosis feature is now enabled by default.
- `setupplatform -p hostid` – New `HostID/MAC Address Swap` parameter.
- `showcomponent` – The POST status includes a new value called `chs` (component health status). The `chs` value for a disabled component indicates that further service action is required by your service provider.
- `showdomain` – Removed the `error-diagnosis` parameter.
- `showplatform -p hostid` – New `HostID/MAC Address Swap` parameter.

General Information

Sensor Status Messages

In 5.15.0, the following types of status messages are displayed on the platform console when sensors detect an abnormal condition for a component:

- An `over limit` status message indicates that the value is outside the acceptable range for the component. For example:

```
/NO/SB0, sensor status, over limit (7,1,0x201000d00050000)
```

- An `under limit` status message indicates that the value is within the acceptable range for the component. For example:

```
/NO/SB0, sensor status, under limit (7,2,0x201000d00050000)
```

Firmware Compatibility

System boards with 5.12.x firmware are compatible with those running 5.13.0 through 5.15.x firmware; system boards running 5.11.x are not. You can check the firmware compatibility of your boards by running the `showboards -p version -v` command. COD boards must be running firmware version 5.14.x or 5.15.x.

The information displayed indicates whether the firmware for each board is compatible with the ScApp version running on the SC. For details on verifying firmware compatibility, refer to the `Install.info` file included with this firmware release and the `showboards` command description in the *Sun Fire 6800/4810/4800/3800 System Controller Command Reference Manual.*

To simplify system administration, update all your system boards to the same firmware version and activate the new firmware version on your domains as soon as possible. Activate the domain firmware by running the `setkeyswitch off` and `setkeyswitch on` commands. For details on updating your system firmware, see the release-specific `Install.info` file included with each release of the firmware.

Firmware Upgrade and Downgrade

Instructions for upgrading firmware are provided in the `Install.info` file included with this firmware release. The `Install.info` file also contains instructions for downgrading to an earlier version of the firmware.

Caution – If you have a redundant system controller (SC) configuration, you must first upgrade the firmware on the spare SC, then on the main SC, as explained in the `Install.info` file.

Power Supply Failures

In some cases powering off or powering on a power supply after you upgrade to firmware version 5.15.x can cause a power supply fault. The power supply failure might exhibit the following characteristics:

- Only the amber *ready* LED of the power supply is illuminated.
- The `showboards` command output identifies the Status for the power supply as Failed or the Component Type as No Grid Power.

Use the following workarounds to resolve the power supply failure. Start with Workaround 1. If this workaround is unsuccessful, perform Workaround 2. If the second workaround is unsuccessful, perform Workaround 3.

- Workaround 1 – Turn the power supply switch off and then on. However, if you have a Sun Fire 6800 system, perform Workaround 2 instead, as the power supplies do not have a switch.
- Workaround 2 – Remove the failed power supply from the system, wait 20 seconds, then put it back in. If its green *power on* LED is not the only LED illuminated, repeat the procedure until it is. Several attempts may be necessary.
- Workaround 3 – Reboot the SC, then use the `power on` command to turn on the power supply.

Known Sun Fire 6800/4810/4800/3800 Systems Limitations

This section describes only those bugs with potentially significant impact. The README file lists all bugs, including those seen only internally at Sun.

SC Hangs After Automatic `setkeyswitch off` (RFE 4454599)

Manual reset of the SC has no effect.

Workaround: Do the following:

1. Connect to each active domain through a network connection, such as `telnet` or `rlogin`.
2. Shut down each domain, if possible.
3. Power down the Sun Fire system, then power it up again.

No LED Fault Indicator on System Board After the Board Fails POST (RFE 4454623)

Workaround: Run the `showlogs` or `showboards` command (from the platform shell) to show errors and the test status of a faulty system board.

SC Prompt is Changed and Not Sync After Replacing SC With Old FW From Another Machine (BugID 4740301)

After the spare SC is replaced and SC failover is enabled, the prompt shown on the spare SC is that of the machine from which it was removed.

Workaround: Execute **setupplatform -p network** to change the IP address and SC host name, reboot the SC, then do an SC failover.

Cannot Boot the Solaris Operating Environment if Bus 1 of Schizo0 is Disabled in a Single I/O Board Domain (BugID 4779052)

If there is only one I/O boat in a domain, disabling bus B of an I/O controller results in an error message indicating that there are no good I/O boards available to boot the Solaris operating environment.

Workaround: Disable only the slots on the bus that are not working instead of the bus.

Platform Console Does Not Report SEEPROM Errors But Domain Console Does (BugID 4793968)

Some messages, for example SEEPROM-related information, are displayed on the domain console but not the platform console.

Workaround: Check all system logs.

Sun Management Center Domain Failed to Recognize V2 CPU Board and Treated it as an Unknown Board (BugID 4808259)

Sun Management Center 3.0, Platform Update 4, does not recognize CPU V2 board components.

Workaround: None.

Processor Stuck in OpenBoot PROM (OBP) When OBP Console Buffer Full (BugID 4825233)

In Sun Fire 6800/4810/4800/3800 systems, console messages for the Solaris operating environment and OBP are placed in domain console buffers that are accessed by the system controller. If the system controller is unavailable, the buffers may fill up with messages, which in turn affects domain functionality. OBP appears to be stuck, while it waits for additional buffer space to become available.

Workaround: Try to ensure that the system controller is always available, or that it is unavailable only for a short period. You can also do the following to mitigate this situation:

- Try to keep the system free from hardware errors, as such errors typically generate numerous error messages that are directed to the console.
- Change the `syslog.conf` file so that little or nothing is sent to the console.

WDR `Solaris_WDRAttachmentPoint/ Solaris_CHSystemBoard` Fails to Recognize COD (BugID 4839027)

WBEM-based dynamic reconfiguration operations do not recognize COD CPU/Memory boards. For example, when you check instances of `Solaris_WDRAttachmentPoint`, information displayed for the `Solaris_CHSystemBoard` class will not include information on any COD boards in the system.

Workaround: None.