Sun Fire™ Midrange Systems Firmware 5.17.0 Release Notes

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Part No. 817-5242-10
March 2004, Revision A

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Sun Fire™ Midrange Systems Firmware 5.17.0 Release Notes

This document provides information on new and revised features for firmware release 5.17.0 on Sun Fire E6900/E4900/6800/4810/4800/3800 systems.

This document contains the following topics:

Firmware Documentation for Sun Fire Midrange and Entry-Level Midrange Systems

The following documentation sets are included with the 5.17.0 firmware:

- Sun Fire midrange (E6900/E4900/6800/4810/4800/3800) systems
  - *Sun Fire Midrange Systems Platform Administration Manual* (part number 817-5243-10)
  - *Sun Fire Midrange System Controller Command Reference Manual* (part number 817-5244-10)
  - *Sun Fire Midrange Systems Firmware 5.17.0 Release Notes* (part number 817-5242-10)
  - `Install.info` – A text file included with the firmware that describes the firmware upgrade and downgrade procedures for Sun Fire midrange systems.

For firmware upgrade and downgrade information on entry-level midrange (E2900/V1280/Netra 1280) systems, refer to the *Sun Fire Entry-Level Midrange System Administration Guide.*

- Sun Fire entry-level midrange (E2900/V1280/Netra 1280) systems
  - *Sun Fire Entry-Level Midrange System Administration Guide (*part number 817-5233-10)
  - *Sun Fire Entry-Level Midrange System Controller Command Reference Manual* (part number 817-5232-10)
  - *Sun Fire Entry-Level Midrange System Firmware 5.17.0 Release Notes* (part number 817-5234-10)

Features Introduced in 5.17.0

Beginning with the 5.17.0 release, the firmware supports both Sun Fire midrange systems (E6900/E4900/6800/4810/4800/3800) and Sun Fire entry-level midrange systems (E2900/V1280/Netra 1280).

This section provides a brief description of the new features in 5.17.0 for Sun Fire midrange systems.

Persistent Logging

In midrange systems configured with SC V2s (enhanced-memory system controllers), system error messages and certain types of message logs are retained in persistent storage. You can determine if your system is configured with SC V2s by running the `showsc` command. For an example of the `showsc` output, refer to the command description in the *Sun Fire Midrange System Controller Command Reference Manual*.

- The persistent system error messages can be viewed by using the `showerrorbuffer [-p [-n` *nnn*`]]` command, where *nnn* indicates the last number of messages in persistent storage to be displayed.
- The persistent logs can be viewed by using the `showlogs [-p [-f` *filter*`][-n` *nnn*`]]` command, where *filter* identifies the type of message log and *nnn* indicates the last number of messages in the log to be displayed.

The information displayed can be used by your service provider for troubleshooting purposes. For details on message logs and system error messages, refer to the *Sun Fire Midrange Systems Platform Administration Manual* and the `showlogs` and `showerrorbuffer` command descriptions in the *Sun Fire Midrange System Controller Command Reference Manual.*

Showerrorbuffer

Sun Fire midrange systems have the following:

- All midrange systems have a dynamic showerrorbuffer that provides short-term storage of system error records. Once the system errors are recorded in the message log buffer, system error records are cleared automatically from the dynamic showerrorbuffer whenever more space in the buffer is required.
- Midrange systems with SC V2s have both dynamic and persistent showerrorbuffers. The persistent showerrorbuffer captures the system errors that occur and stores the system error records until the showerrorbuffer is full. Once the persistent showerrorbuffer is full, any new system error records will overwrite the existing error records in the persistent buffer, starting with the records at the beginning of the buffer.

Commands Modified for 5.17.0

The following SC commands were changed in 5.17.0:

- `showerrorbuffer [-p [-n` *nnn*`]] -` New options that enable you to view persistent system errors, for systems with SC V2s.
- `showlogs [-p [-f` *filter*`][-n` *nnn*`]]-` New options that enable you to view persistent message logs, for systems with SC V2s.
- `setupplatform` – If your system contains Sun Fire Link boards, a new `network` parameter is displayed for enabling Sun Fire Link software. Sun Fire Link software is disabled by default. In previous versions Sun Fire Link software was enabled by default and could not be disabled.
- `showplatform` - Extended the `network` parameter to indicate whether the Sun Fire Link is enabled or disabled, only if your system contains Sun Fire Link boards.

For details on these commands, refer to their descriptions in the *Sun Fire Midrange System Controller Command Reference Manual.*

General Information

Minimum Requirements for Systems with UltraSPARC IV™ CPU/Memory Boards

E6900/E4900 systems and midrange systems with UltraSPARC IV CPU/Memory boards require 5.16.0 firmware or greater and the Solaris 8 2/04 operating environment as the minimum Solaris release.

WDR

If you are using WDR (WBEM Dynamic Reconfiguration), apply Sun Solve patch 113507-03, which ensures that WDR correctly handles UltraSPARC IV CPU/Memory boards.

Sun Management Center

If you are using Sun Management Center, note that the Sun Management Center 3.5 Version 3 Add-on Software for Sun Fire Midrange Systems supports midrange systems with UltraSPARC IV CPU/Memory boards.

Firmware Compatibility

System boards running firmware versions 5.12.x through 5.17.x firmware are compatible with each other, but system boards running 5.11.x are not compatible with system boards running firmware versions 5.12.x through 5.17.x. You can check the firmware compatibility of your boards by running the `showboards -p version -v` command. The information displayed indicates whether the firmware for each board is compatible with the ScApp version running on the SC.

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 and verifying firmware compatibility, refer to the `Install.info` file included with this firmware release.

UltraSPARC IV CPU/Memory boards require 5.16.0 firmware or greater. The UltraSPARC IV CPU/Memory boards will not run on firmware releases earlier than 5.16.0. COD boards must be running a firmware version that supports COD, which was introduced in firmware release 5.14.0.

Firmware Upgrade and Downgrade

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

E6900/E4900 systems and systems that contain UltraSPARC IV CPU/Memory boards must run firmware version 5.16.0 or greater. Earlier firmware versions do not support the UltraSPARC IV CPU/Memory boards.

Midrange systems with SC V2s can be downgraded from 5.17.0 to earlier firmware releases, but note that those earlier releases will not support features introduced in 5.17.0.

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.

Secure Shell (SSH) Protocol

Before release 5.16.0, an ASCII break signal (a `send brk` in a telnet session or `~#` from a tip session) was used to navigate from the domain console to the domain shell. Starting with the 5.16.0 release, `~#` is not supported for tip sessions. A `send brk` or the default escape sequence, `#.` (pound dot), works for telnet and tip sessions.

For SSH sessions, you cannot use an ASCII break signal, but you can use the `#.` (pound dot) to navigate from the domain console to the domain shell. Use the `showescape` command to view the escape sequence and the `setescape` command to change the default escape sequence. Both commands were introduced in the 5.16.0 release. For details on these commands, refer to their descriptions in the *Sun Fire Midrange System Controller Command Reference Manual*.

Power Supply Failures

In some cases powering off or powering on a power supply after you upgrade to firmware version 5.14.x or greater can cause a power supply fault on Sun Fire 6800/4810/4800/3800 systems.

Note – The faults described here do *not* apply to the A184 and A185 power supplies.

The power supply failure might exhibit the following characteristics:

- Only the amber *fault* 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 *activated* LED is not the only LED illuminated, repeat the procedure until only the green *activated* LED is illuminated. Several attempts may be necessary.
- Workaround 3 – Reboot the SC, then use the `power on` command to turn on the power supply.

Known Limitations for Sun Fire Midrange Systems

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 midrange system, then power it up again.

Domain Hard Hang After Multiple `reset-all` Commands at OK Prompt (BugID 4951098)

Performing multiple `reset-all` commands at the OBP level can cause domain hard hangs.

Workaround: Avoid running multiple `reset-all` commands.

ScApp Does Not Provide SC Board Revision to Sun Management Center (BugID 4984780)

The SC board revision number, SC V2, is not provided by ScApp to Sun Management Center.

Workaround: None.

Frame Fan Tray and RTS Status Are Not Logged (BugID 4984203)

Workaround: Run the `showplatform -v` command periodically to obtain the status of the Frame fan tray and redundant transfer switches (RTS).

Error Events Are Being Reported After an Automatic Restoration Has Initiated (BugID 4985737)

After an automatic diagnosis [AD] message occurs, subsequent error events concerning the domain continue to be displayed even after the message indicating that automatic domain restoration has occurred.

Workaround: After the first AD message and the message indicating that automatic domain restoration occurs, ignore the subsequent event error messages displayed for the domain.

SNMP: FrameManager Does Not Have an Entry in the MIB and Frame State Traps (BugID 4987286)

SNMP is a private interface for the midrange system controllers. This means that Sun Management Center will not receive FrameManager information through SNMP. See also BugID 4984203.

Workaround: None.

Repetitive Message "`The error buffer is full`" Can Overwrite Persistent Logs (BugID 4987854)

When the dynamic showerrorbuffer is full (contains 100 error records), the message "`The error buffer is full`" can appear repeatedly in the persistent showerrorbuffer of systems with SC V2s and overwrite the system errors stored in the persistent buffer.

Workaround: None.

After Bootup, "Enable Sun Fire Link?" Is Not Enabled Even When It Says Yes (BugID 4994112)

Sun Fire Link software is disabled after the SC is rebooted, even when the `Enable Sun Fire Link?` parameter in the `setupplatform` command has been set to yes. You cannot register a Sun Fire Link cluster node to the fabric.

Workaround: Run the `setupplatform` command and disable the `Enable Sun Fire Link?` parameter (set the parameter to no), then re-enable this parameter (set the parameter to yes).

Functioning A184 PS Are Not Detected and Acknowledged as Powered On (BugID 4994905)

The firmware does not recognize the powered on state of the A184 power supply.

Workaround: Do one of the following:

- Bring down all domains to the `OK` prompt and set the keyswitch to off. Then power cycle the machine (turn it off and then on).
- Perform a manual failover from SC1 to SC0 (do a manual failover from the spare to the main SC so that the spare becomes the main SC). The new main SC is able to control and recognize the power supplies.

After Doing a Setkeyswitch On, the SC Shows a Warning (BugID 5010907)

After performing a `setkeyswitch on` operation on any domain, a warning message indicating that the "`DomainBufferWriter thread did not die`," appears 60 seconds later in the platform log.

Workaround: This message does not affect domain or platform operation. Ignore this warning message.

"`The error buffer is full`" Message is Misleading (BugID 5011243)

As each error in the dynamic showerrorbuffer is interpreted and reported to the message log buffer, those errors no longer need to be retained in the dynamic showerrorbuffer. These errors are removed from the buffer whenever space for new errors is required. As a result, this message is not necessary.

Workaround: This message does not affect domain or platform operation. Ignore this message. However this message can potentially fill the persistent showerrorbuffer. See also BugID 4987854.