



Sun Fire™ Midrange Systems Firmware 5.16.0 Release Notes

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Sun Fire™ Midrange Systems Firmware 5.16.0 Release Notes

This document provides information on new and revised features, as well as late-breaking news, for firmware release 5.16.0 on Sun Fire E6900/E4900/6800/4810/4800/3800 systems.

This document contains the following topics:

- [Features Introduced in 5.16.0](#)
- [General Information](#)
- [Known Limitations for Sun Fire Midrange Systems](#)

Features Introduced in 5.16.0

This section provides a brief description of the new features in 5.16.0. For detailed information on these features, refer to the *Sun Fire Midrange Systems Platform Administration Manual* (part number 817-2971-10) and the *Sun Fire Midrange System Controller Command Reference Manual* (part number 817-2972-10).

Secure Shell (SSH) Protocol

The Secure Shell protocol, which provides secure remote access to the system controller, is now available as an alternative to the Telnet protocol on Sun Fire midrange systems. SSH uses encryption to protect data flowing between the host and client, and also authentication mechanisms to identify both hosts and clients.

The SC supports one logical connection on the serial port and up to five logical connections with an SSH (remote) connection. Connections can be set up for either the platform or one of the domains. Each domain can have only one logical connection at a time.

The system controller (SC) provides SSHv2 server capability. For further information on SSH and how to configure secure connections on both the platform and domains, refer to Chapter 6, "Security Guidelines," in the *Sun Fire Midrange Systems Platform Administration Manual*.

SSH-Related Issues

- SSH connections are not supported by Sun™ Explorer Data Collector 4.2.
If you are using Explorer 4.2 or earlier versions to collect Sun system configuration information, use `telnet` as the remote connection type.
- If you use five simultaneous SSH connections, which is the maximum number of simultaneous connections allowed, and also a serial connection, attempting to connect to a domain console from the serial connection by using the `console -d domain` command will cause the SC console to hang.
To recover the SC console, reboot the SC from one of the active SSH connections to the SC. See BugID 4975123.
- The SSH server creates and uses RSA host keys by default.
If you choose to use the default without creating DSA host keys, you will see the following message when the SSH server is enabled:

```
[0XXXXXXXX] Could not load host key: /DsaKey
```

You can ignore this message.

- The SSH server on Sun Fire midrange systems does not support the following features:
 - Remote command-line execution
 - `scp` command (secure copy program)
 - `sftp` command (secure file transfer program)
 - Port forwarding
 - Key-based user authentication
 - SSHv1 clients

If you try to use any of the above features, an error message is generated. For example, running the command

```
# ssh SCHOSt showboards
```

generates the following messages:

- On the SSH client:

```
Connection to SCHOSt closed by remote host.
```

- On the SC console:

```
[0x89d1e0] sshdSessionServerCreate: no server registered  
          for showboards  
[0x89d1e0] sshd: Failed to create sshdSession
```

Supported Board Types

The 5.16.0 release supports the following:

- Enhanced-memory system controllers – These boards are identified as SC V2 in the `showboards` and `showsc` command output. For details on replacing system controller boards with SC V2s, refer to the *Sun Fire Midrange Systems Platform Administration Manual (817-2971)* and the *Sun Fire System Controller Board, Version 2 (Enhanced Memory) Installation Guide (817-4121)*.
- UltraSPARC™ IV CPU/Memory boards – For information on upgrading systems with UltraSPARC IV CPU/Memory boards, refer to the *Sun Fire High-End and Midrange Systems UltraSPARC IV CPU/Memory Board Upgrade Requirements (817-4125)* and the *Sun Fire High-End and Midrange Systems CPU/Memory Board Installation Guide (806-2946)*.

Firmware Documentation for Sun Fire Midrange Systems

The firmware documentation set for 5.16.0 includes the following manuals, in addition to these Release Notes:

- *Sun Fire Midrange Systems Platform Administration Manual* – In previous firmware releases, this document was formerly referred to as the *Sun Fire 6800/4810/4800/3800 Systems Platform Administration Manual*.
- *Sun Fire Midrange System Controller Command Reference Manual* – In previous firmware releases, this document was formerly referred to as the *Sun Fire 6800/4810/4800/3800 System Controller Command Reference Manual*.

Commands New for 5.16.0

The following commands are new for the 5.16.0 release:

- `restartssh` – Restarts the SSH server and also loads and stores the latest host keys.
- `setescape` – Sets the escape sequence.
- `showescape` – Displays the escape sequence.
- `showfru` – Displays the field replaceable units (FRUs) currently installed in a Sun Fire midrange system. Note that in a fully configured system, it may take a few minutes for all the FRU information to display.
- `ssh-keygen` – Generates SSH host keys and displays the host key fingerprint on the system controller.

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

Commands Modified for 5.16.0

The following SC commands were changed in 5.16.0:

- `connections` – Extended to include SSH connections.
- `disconnect` – Disconnects remote connections, including SSH or Telnet.
- `dumpconfig` – By default, saves platform and domain configuration data in encrypted format. You are prompted to enter the password for the encrypted data. The `-t` option can be used to save configuration data in unencrypted format if necessary, but using this option is not recommended.
- `restoreconfig` – Restores encrypted configuration data saved through the `dumpconfig` command. You are prompted to enter the same password that was used to encrypt the configuration data.
- `setdefaults` – Extended to remove host keys and reset the connection type to none.

- `setupplatform -p network` – Extended this parameter to include the specification of the remote connection type and the idle connection timeout. The `security` parameter has been removed.
- `showboards` – Identifies the following CPU board types: CPU board (revision 1), CPU Board V2 (revision 2), CPU V3 (revision 3).
- `showplatform -p network` – Extended this parameter to display the remote connection type and the idle connection timeout. The `security` parameter has been removed.

General Information

Requirements for Certain Midrange Systems

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

Sensor Status Messages

In 5.16.0, the following types of status messages are displayed on the platform console when sensors evaluate the condition of a component:

- When sensors determine that the value is outside the acceptable limits for the component, a message similar to the following is displayed:

```
/NO/SB0,sensor status, outside acceptable limits (7,1,0x201000d00050000)
```

- When sensors determine that the value is within the acceptable limits for the component, a message similar to the following is displayed:

```
/NO/SB0,sensor status, within acceptable limits (7,2,0x201000d00050000)
```

WDR

If you are using WDR (WBEM Dynamic Reconfiguration), contact your Sun Service provider for assistance in handling 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 UltraSPARC IV CPU/Memory boards and Sun Fire E6900/E4900 midrange systems.

Firmware Compatibility

System boards with 5.12.x firmware are compatible with those running 5.13.0 through 5.16.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. The information displayed indicates whether the firmware for each board is compatible with the ScApp version running on the SC.

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

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 Midrange 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.

E6900 or E4900 systems, or systems that contain UltraSPARC IV boards, must run firmware version 5.16.0. Earlier firmware versions will not support such systems.



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 5.16.x can cause a power supply fault on Sun Fire 6800/4810/4800/3800 systems. 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.

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 board 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.

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.

Going to the Console from the SC Hangs the SC When Using the Maximum Number of Connections (BugID 4975123)

If you use five (the maximum number) simultaneous SSH connections and a serial connection, attempting to connect to a domain console from the serial connection by using the `console -d domain` command will cause the SC console to hang.

Workaround: Reboot the SC from one of the active SSH connections to the SC.

SC Sends an Incorrect Number of Console Connections to Sun Management Center (BugID 4975797)

The SC sends an incorrect number of console connections from the SC to Sun Management Center.

Workaround: None.

SC Power Status in ScApp MIB is Not Updated After Powering Off the Spare SSC1 (BugID 4976504)

The ScApp SNMP output for the power of the spare SC is incorrectly reported. The power state appears to be on, regardless of the actual state of the spare SC.

Workaround: None.

ScApp Does Not Warn if US-IV CPUs Are Powered On in a Non-Supported Chassis (BugID 4983481)

ScApp does not provide a warning message indicating that the appropriate power supplies and fan trays are required when an UltraSPARC IV CPU/Memory board is detected.

Workaround: None.

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` 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.

