



Sun Fire™ 6800/4810/4800/3800 Systems Software Release Notes

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Sun Fire™ 3800–6800 System Firmware 5.13.0 Release Notes

This document provides information on new and revised features, as well as late-breaking news, for firmware release 5.13.0 on Sun Fire 3800, 4800, 4810, and 6800 servers. You will find the following:

- New Features
- System Controller Command Changes
 - New Commands
 - Modified Commands
- General Information
- Known Sun Fire 6800/4810/4800/3800 System Limitations

New Features

The following features are new for the 5.13.0 firmware release:

- System controller (SC) failover

SC failover is enabled by default on Sun Fire 3800-6800 systems that have a main and spare system controller and firmware version 5.13.0 installed. In this high availability system configuration, one SC serves as the *main* SC, which manages all the system resources. The other SC serves as a *spare*.

When certain conditions cause the main SC to fail, a switchover or *failover* from the main SC to the spare is triggered automatically, without operator intervention provided that SC failover is enabled. The spare SC assumes the role of the main and takes over all system controller responsibilities.

You can also perform a manual failover, to force a failover from one SC to the other. For details on automatic and manual failover, refer to the *Sun Fire 6800/4810/4800/3800 Systems Platform Administration Manual*.

- Improved system diagnostics for use by your service provider.

Sun Fire 3800–6800 servers now capture the ongoing history of key system components, automatically. This historical information, which includes data on component installation, power, temperature, and parity errors, enables your service provider to track hardware trends for diagnostic and support purposes.

- Firmware compatibility

System boards with 5.12.x firmware are compatible with firmware version 5.13.0. You can check the firmware compatibility of your boards by using 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 system controller. For details on verifying firmware compatibility, refer to the `Install.info` file included with the 5.13.0 firmware and the `showboards` command description in the *Sun Fire 6800/4810/4800/3800 System Controller Command Reference Manual*.

To simplify system administration, it is suggested that you 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 performing `setkeyswitch off` and `setkeyswitch on`. For details on updating your system firmware, see the `Install.info` file included with the firmware.

System Controller Command Changes

Note the following new and modified System Controller commands for the 5.13.0 firmware release. For further details on these commands, refer to the command descriptions in the *Sun Fire 6800/4810/4800/3800 System Controller Command Reference Manual*.

New Commands

<code>setfailover</code>	Controls the state of system controller (SC) failover.
<code>showfailover</code>	Displays system controller failover status.

Modified Commands

The following table summarizes the changes to SC commands in the 5.13.0 release.

TABLE 1 System Controller Command or Behavior Changes

Command	Description of Change
<code>password</code>	If you have a redundant SC configuration and are running firmware version 5.13.0, note that the password on the main system controller for the platform shell is also the same password on the spare system controller.
<code>setupdomain</code>	Parameter changes: <ul style="list-style-type: none">• <code>Trap Hosts</code> You can now specify the name or the IP address of the SNMP (Simple Network Management Protocol) trap host for the domain. The SNMP agent sends traps to the trap host on a SNMP default port number (162). You can optionally specify a different port number to be used, in the format <code>host[:port]</code>.• <code>reboot-on-error</code> The default setting is now set to true, which means that the domain will be rebooted whenever the system controller detects a hardware error. If this parameter value is set to false, the domain is paused whenever the system controller detects a hardware error. For additional information on automatic domain reboot, see the “General Information” section.• <code>error-policy</code> The default value for this new parameter is <code>diagnose</code>, which displays a diagnostic message whenever a problem with a domain component is encountered. The other parameter value, <code>display</code>, reports and logs diagnostic messages.

TABLE 1 System Controller Command or Behavior Changes (*Continued*)

Command	Description of Change
setupplatform	<p>Parameter changes:</p> <ul style="list-style-type: none">• New security parameters The <code>Enable telnet servers</code> parameter controls telnet access to the system controller. The <code>Idle connection timeout</code> parameter controls the timeout period for idle telnet or serial port connections to the system controller.• New SNTP parameter The <code>SNTP server</code> parameter identifies the SNTP (Simple Network Time Protocol) server, which automatically tracks and corrects the drift (difference) between the local system clocks managed by each system controller.• Modified SNMP parameter The <code>Trap host</code> parameter specifies the name or the IP address of the SNMP trap host.• New SC failover parameters The <code>Enable SC failover</code> parameter re-activates SC failover. The <code>Logical Hostname or IP Address</code> parameter identifies the working main SC.
showboards	<p>Displays new information:</p> <ul style="list-style-type: none">• The board state values for the system controllers are either Main or Spare.• <code>showboards -p version -v</code> provides firmware compatibility information for each board.
showdomain	<p>Displays the parameter values set through the <code>setupdomain</code> command, including the following new or modified parameters:</p> <ul style="list-style-type: none">• Trap Hosts• reboot on error• error-policy
showplatform	<p>Displays the parameter values set through the <code>setupplatform</code> command, including the following new or modified parameters:</p> <ul style="list-style-type: none">• SNTP server• Trap Hosts• Enable SC failover• Logical Hostname or IP address• Enable telnet servers• Idle connection timeout
showresetstate	<p><code>showresetstate -v -f URL</code> writes a summary report of the domain CPU registers to a specified URL. Your service provider can use this information to analyze failures or problems.</p>
showsc	<p>Shows the status of SC failover and clock failover.</p>

General Information

Firmware Upgrade and Downgrade

Instructions for upgrading firmware from version 5.11.x or 5.12.x to version 5.13.0 are provided in the `Install.info` file included with the 5.13.0 firmware. This file also contains instructions for downgrading firmware from version 5.13.0 to version 5.11.x or 5.12.x. If you are downgrading firmware, note that the downgrade procedure involves power cycling the chassis.



Caution – If you have a redundant SC configuration, be aware that you must first upgrade the firmware to 5.13.0 on the spare SC, then upgrade the firmware on the main SC, as explained in the `Install.info` file.

Firmware Upgrade for System Controllers Connected to a Network Switch

If you are upgrading from firmware version 5.11.x or 5.12.x to 5.13.0, and your system controllers are connected to a network switch that has spanning tree protocol (STP) enabled, you must first set up a temporary hub between the system controllers and the network switch before you run the `flashupdate` command to upgrade the firmware.

After you set up the hub, perform the appropriate upgrade procedures explained in the `Install.info` file. However, when you upgrade the main SC, perform the following steps instead:

1. Update ScApp and RTOS on the main SC:

```
schostname:SC> flashupdate -f URL scapp rtos
```

where *URL* is the URL to the directory containing the 5.13.0 flash image.

2. Verify that ScApp and RTOS have been upgraded on the main SC:

```
schostname:SC> showsc
```

The output from the `showsc` command should indicate that the ScApp version is 5.13.0 and the RTOS version is 23.

3. Update the system boards:

```
schostname:SC> flashupdate -f URL system_boards
```

where

URL is the URL to the directory containing the 5.13.0 flash image.

system_boards are all CPU/Memory boards and I/O assemblies.

Remove the hub after you complete the firmware upgrade. If you have questions regarding the hub, contact your service provider.

Automatic Domain Reboot

The default value for the `reboot-on-error` parameter of the `setupdomain` command is now set to true. When the system detects a domain hardware error, the following occurs:

- A message informs you that a fatal hardware error has occurred.
- The domain is automatically rebooted.

Be aware that an automatic domain error reboot can occur up to a maximum of three times. After the third error reboot, the domain is paused and the error reboots are stopped. Also be aware that an error caused by a domain panic does not apply to the automatic error reboot. It is suggested that you contact your service provider for assistance on resolving a domain hardware error rather than manually restart the domain.

If you set the `reboot-on-error` parameter value to false, the domain is paused when a domain hardware error is encountered. You must then manually restart the domain (perform `setkeyswitch off` and `setkeyswitch on`).

Checking Clock Signals After an SC Failover

If an SC failover has occurred and you need to hotplug an SC (remove an SC that has been powered off and then insert a replacement SC), be sure to verify that the clock signals to the system boards are coming from the new main SC, before you perform the hotplug operation. Use the `showboard -p clock` command to verify the clock signal source.

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

DHCP Fails With S_taskLib_NAME_NOT_FOUND (Bug ID 4628965)

When you run `flashupdate` to downgrade system controller firmware from version 5.13.0 to 5.12.6, the `flashupdate` operation is cancelled and the following message is displayed:

```
dhcpcBind() failed: S_taskLib_NAME_NOT_FOUND
```

Workaround:

1. Use the `setupplatform` command to change the `Network settings` parameter to `static`.
2. Reboot the system controller.
3. Run `flashupdate` to downgrade the system controller firmware.
4. Use the `setupplatform` command to change the `Network settings` parameter to `DHCP`.

Fail to set Security-Password After Clearing out the old one (Bug ID 4633060)

This bug occurs when the following steps are performed to set the security password for OBP:

1. Set the password and security mode.
2. Reset the domain.
3. Change or clear the security password by using `setenv`.
4. Change the security password to the password previously assigned in Step 1.

Workaround: After clearing the security password, set a new security password different from the password previously used.

RTOS Prints Error Messages for Legal Configurations (Bug ID 4635885)

When a default route or DNS server (or both) is not configured, the following message, which implies something is wrong, is printed at the RTOS prompt:

```
Invalid default route ("0.0.0.0"); ignoring
```

Workaround: Ignore this message.

SC Reboots Infinite Times, When RIO Ethernet Test Fails in SC POST (Bug ID 4644974)

Workaround: When SC POST is running, press the spacebar to display the POST menu, and select option 0, Return to SC RTOS. This option will cause POST to be skipped.

showplatform Output for Domain Status is not Accurate (Bug ID 4647377)

The domain is at the OBP state due to a panic, however `showplatform` output indicates that the domain is running the Solaris operating environment.

Workaround: None.

disablecomponent is not Supported Entirely for I/O Assemblies (Bug ID 4651114)

When you use the `disablecomponent` command to disable port 0 of an I/O assembly, be aware that the entire board is disabled and any components on the board are not used in the domain. However, you can disable port 1 only of an I/O assembly.

Workaround: Disable the individual slots that contain the populated cards.

Upgrade/Downgrade of Main and Spare SC can Disturb NVCI Synchronization (Bug ID 4653120)

After the main and spare SC have been upgraded to firmware version 5.13.0, but they are downgraded to version 5.12.x or 5.11.x, and again upgraded to 5.13.0, the spare SC configuration is valid, but the main SC configuration becomes invalid.

Workaround: If you downgrade the SC firmware from version 5.13.0 to 5.11.x or 5.12.x, and then upgrade your firmware to 5.13.0, you must power cycle the chassis after the upgrade to 5.13.0. Perform the power cycle before you set each domain keyswitch to on.

The `setfailover` on Command Sometimes Results in the Failover State Being Enabled but not Active (Bug ID 4656519)

Workaround: Do the following:

1. On the main or spare SC, run `setfailover off`.
2. On both the main and spare SC, look for the message indicating that the failover state is disabled. Check the failover state by running the `showfailover` command.
3. On the main or spare SC, run `setfailover on`.
4. On both the main and spare SC, look for the message indicating that failover is enabled and active. Check the failover state by running the `showfailover` command.

FrameManager Loses Connection Intermittently (Bug ID 4656908)

The system controller sometimes loses the connection to the FrameManager, which means that status may not be updated properly for rack fan trays and redundant transfer units (RTUs) reported through the `showplatform` command.

Workaround: Reboot the system controller to update the status.

SC Hangs After SC Failover, When Reset and SC Failover are Done at the Same Time (Bug ID 4662431)

Workaround: When an SC failover is occurring, do not reset the domain or perform `setkeyswitch` operations. Do not run other system controller commands, except for the `showfailover` command.

DR in a 5.13.0 Board Into a 5.12.6 Domain and Rebooting Fails (Bug ID 4673352)

A domain reboot will fail after you use dynamic reconfiguration (DR) to add a system board running 5.13.0 firmware into a domain running 5.12.6 firmware.

Workaround: Do one of the following:

- After you use DR to add the board into the domain, restart the domain by running `setkeyswitch off` and `setkeyswitch on`. Do not reboot the domain.
- Downgrade the system board firmware to 5.12.6 (see the `Install.info` file for instructions on downgrading firmware), and then use DR to add the board to the domain. Restart the domain by running `setkeyswitch off` and `setkeyswitch on`.

After Failover, Switching Clocks to new Main SC Takes Time (Bug ID 4676081)

When a system controller (SC) failover occurs, the switchover of clocks to the new main SC can sometimes take more than ten minutes.

Workaround: Power off and then power on the new spare SC to switch the clocks to the new main SC. If you are powering off the failed SC, and you see a message indicating that the clocks are not phase aligned and that it is not safe to remove the SC, schedule system downtime to remove the failed system controller.

After Failover, Failover Status on new Spare SC is Enabled but not Active (Bug ID 4678108)

After an SC failover, the failover status on the new spare SC sometimes indicates that failover is enabled but not active, when it should show that SC failover is disabled. After a failover, both the main and spare SC should show that failover is disabled.

Workaround: On the spare SC, run `setfailover off`. The spare SC will show the failover status as disabled.

Power Supply LED is on Even When ScApp Shows the Supply is in OFF State (Bug ID 4678341)

A power supply LED indicates that a power supply unit is receiving power, even though the system controller (output from the `showboards` command) indicates the power to that unit is off.

Workaround: Turn off the power supply unit and then remove and re-insert it, even though the power supply LED is green (which indicates that the power supply is on). However, be aware that under normal circumstances you should not remove a component from the system when the LED for that component is green.

Requests for Enhancement (RFEs)

System Controller Hangs After Automatic `setkeyswitch off` (RFE 4454599)

Manual reset of the system controller has no effect.

Workaround: Do the following:

1. Connect to each active domain through a network connection, `telnet`, `rlogin`, and so on.

2. Shut down each domain if possible.
3. Power off the Sun Fire system and power it on again.

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

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

Software Licensing Problems with Host ID And MAC (RFE 4492051)

The current scheme of assigning the host ID and MAC address based on which physical domain is in use (A, B, and so forth) can prevent host licensed software from running. In situations where a hardware failure would require changing domains, host licensed software will refuse to start.

Workaround: It may be possible to reconfigure the system hardware to support the required domain. Contact your service provider for assistance.

Single I/O Assembly Failure Causes Boot Failure (RFE 4502247)

The I/O assemblies are not capable of being tested in isolation. For this reason, the failures that become visible when I/O POST runs will stop the entire boot process because the failures pause the domain hardware.

Workaround: Remove the failed I/O assembly from the domain with `deleteboard`. Turn the keyswitch on with `setkeyswitch on` to reboot without the failed board. Refer to the *Sun Fire 6800/4810/4800/3800 System Controller Command Reference Manual* for correct usage of the `deleteboard` command.

Changing the Date On the Main SC and Doing SC Failover Affects the Domain Date (RFE 4663142)

If the SNTP (Simple Network Time Protocol) server has not been configured, and the main and spare SC have different dates, an SC failover will change the domain date and time.

Workaround: Do one of the following:

- Configure the SNTP server (for details, see the `setupplatform` command description in the *Sun Fire 6800/4810/4800/3800 System Controller Command Reference Manual*) on both system controllers to establish the correct date and time. Then establish the correct domain date and time by running the `setdate` command at the domain shell or `rdate(1M)` at the Solaris operating environment level.
- Run the `setdate` command on both SCs to set the correct date and time:

```
schostname:SC> setdate -r datehost
```

where *datehost* is the remote system used as the time server.

