Ultra[™] Enterprise[™] 10000 SSP 3.1 Release Notes



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Contents

Preface v

1.

```
SSP 3.1 Release Notes 1-1

Installation 1-1

SSP 3.1 and Solaris 2.6 1-2

SSP 3.1 and Failover 1-2

Domain-Specific Messages 1-2

Change to the fan(1M) command 1-2

Known Bugs 1-3

Bugs Fixed Since SSP 3.0 1-7

SSP Bugs 1-7

POST-Related Bugs 1-8

OBP-Related Bugs 1-9

DR-Related Bug on the SSP Side 1-9

Patches 1-10
```

2. Inter-Domain Networks 2-1

The domain_create(1M) Command 2-1

System Boards 2-1

Hung Domains 2-2

Arbstop 2-2

Known Bugs 2-3

Preface

This document describes known SSP bugs and other late-breaking information not included in the SSP documentation.

Related Documentation

Other documents that describe the SSP include:

- Ultra Enterprise 10000 SSP 3.1 User's Guide
- Ultra Enterprise 10000 SSP 3.1 Reference Manual
- Ultra Enterprise 10000 System Hardware and Software Installation and De-Installation Guide

Typographic Conventions

The following table describes the typographic changes used in this book.

Typeface or Symbol	Meaning	Example
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your .login file. Use ls -a to list all files. machine_name% You have mail.
AaBbCc123	What you type, contrasted with on-screen computer output	machine_name% su Password:
AaBbCc123	Command-line placeholder: To delete a file, type rm filename. replace with a real name or value	
AaBbCc123	Book titles, new words or terms, or words to be emphasized	Read Chapter 6 in the <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be root to do this.

Shell Prompts

The following table shows the default system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

Shell	Prompt
C shell	machine_name%
C shell superuser	machine_name#
Bourne shell and Korn shell	\$
Bourne shell and Korn shell superuser	#

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Germany	01-30-81-61-91	01-30-81-61-92
Holland	06-022-34-45	06-022-34-46
Japan	0120-33-9096	0120-33-9097
Luxembourg	32-2-720-09-09	32-2-725-88-50
Sweden	020-79-57-26	020-79-57-27
Switzerland	0800-55-19-26	0800-55-19-27
United Kingdom	0800-89-88-88	0800-89-88-87
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SSP 3.1 Release Notes

This release of the SSP includes all patches released against SSP 3.0, and introduces the following features:

- Support for up to eight domains
- Recovery of hung domains
- Enhanced event-monitoring features
- Improved installation procedures

Installation

The *Ultra Enterprise 10000 System Hardware and Software Installation and De-Installation Guide*, a printed copy of which is provided with the SSP 3.1 Media Kit, contains both host and SSP installation instructions. It includes procedures for both upgrading an SSP to SSP 3.1, and for installing SSP 3.1 from scratch.

Note – The *Ultra Enterprise 10000 System Hardware and Software Installation and De-Installation Guide* replaces the two documents *Ultra Enterprise 10000 SSP Hardware and Software Installation Guide* and *Ultra Enterprise 10000 Host Hardware and Software Installation Guide*.

Note – During the installation, skip Step 2, "Terminate all SSP daemons. . . ", on page 9-1 of the *Ultra Enterprise 10000 System Hardware and Software Installation and De-Installation Guide*. Step 3 performs the operation in Step 2. If you execute steps 2 and 3, you will receive a message. Ignore the message and continue with the installation.

SSP 3.1 and Solaris 2.6

Note that SSP 3.1 software can be loaded only on SSP units (primary or redundant) running Solaris 2.5.1; it does not work on Sun workstations that are running Solaris 2.6. However, it does work with Ultra Enterprise 10000 domains running Solaris 2.5.1 or Solaris 2.6.

SSP 3.1 and Failover

The SSP software versions must be the same if you want to set up and use the SSP Failover feature. For example, you cannot use SSP Failover to switch from an SSP running SSP 3.0 to one running SSP 3.1.

Domain-Specific Messages

Previously, many domain-specific messages were routed to the platform-specific message file in \$SSPVAR/adm. These messages are now routed directly to the domain-specific messages file in \$SSPVAR/adm/\$SUNW_HOSTNAME.

Change to the fan(1M)command

The fan(1M) command with its -p on option now turns on all fans; it can no longer turn on only individual fans.

Known Bugs

This section lists and briefly describes important bugs known to exist in this release of SSP 3.1, along with workarounds where applicable. Minor bugs are not included. Each entry includes a 7-digit BugID number that is assigned by Sun to aid in bug-tracking and a brief description of the bug.

4043945

Control board resets when connected to customer's network.

When both the SSP and the Ultra Enterprise 10000 system are placed on a busy network with a large amount of network traffic, the control board may reset frequently. Domain bring ups may fail when the control board is being reset; SNMP access may also fail, and console timeouts may occur. **Workaround**: Place the SSP and the Ultra Enterprise system control boards on a private network, which will significantly reduce, but not eliminate, the phenomena.

4084680

Got following message: Failed writing centerplane SMD masks!! Retrying.

Under certain conditions a message similar to the following may display during a DR operation:

```
Failed writing centerplane SMD masks!! Retrying...
```

DR's retry always succeeds. Therefore, just ignore this message.

4092396

Sometimes the messages about the domain go to the platform messages file.

After a domain is recreated, the machine_server(1M) may log domain-specific messages to the platform messages file. This bug is very rare. Workaround: Kill machine_server. Note that whenever machine_server stops running it is automatically restarted by the ssp_startup script.

During an SSP upgrade, syslogd and/or machine_server daemons are not started.

After the SSP is upgraded from SSP 3.0 to SSP 3.1 and the SSP is rebooted, syslogd or machine_server(1M) may not start. This bug is very rare. Workaround: Restart syslogd(1M) as root. Note that whenever machine_server stops running, it is automatically restarted by the ssp_startup script.

4090168

check_host is giving the wrong information that the domain is up.

If $check_{host(1M)}$ is not working properly, you may notice a problem when you manually boot a domain. The bringup(1M) command may display the following message that the domain is already up and ask you to confirm the state of the domain before you can continue.

```
xf3-ssp:xf3-b14% bringup -A on WARNING: Host is active, bringup may corrupt filesystems Do you really wish to continue (y/n)?
```

Workaround: If you receive this message, check the state of the domain. If the domain is up, abort the operation. If the domain is not up, type **y** for yes and continue with the operation.

edd(1M) handling of recordstop/arbstops may lock out other apps from executing.

While recordstop or arbstop are performing their dumps, no other activity can happen on the SSP. A recordstop dump can take longer than five minutes, so if a certain recordstop condition is handled and the dump fails every five minutes (or more), the system could loop forever trying to do recordstops. **Workaround**: Change the edd.erc(4) file to increase the throttle value from 15 minutes to 1 hour.

To edit the edd.erc(4) file, perform the following steps:

1. Change to the platform-specific directory that contains the edd.erc(4) file.

```
# cd /var/opt/SUNWssp/etc/platformname/domainname
```

2. Change the throttle values in the edd.erc(4) file, as follows:

```
arbstop : enabled : 900 : 3 : Arbstopact -d %d
to
arbstop : enabled : 3600 : 1 : Arbstopact -d %d
```

The first line states that for every 900 seconds (15 minutes), 3 arbstops can occur. The second line states that for every 3600 seconds (60 minutes), 1 arbstop can occur.

3. Execute the following command to reread the configuration files.

```
# edd_cmd -x rc
```

Note – You must perform this procedure for every domain that is to have the new settings.

snmpd does not return proper value for sysObjectID MIB member

Currently, snmpd(1M) returns the Sun Enterprise ID as sysObjectID. However, the returning value should identify a Sun Enterprise MIB Object IDentifier (OID). The incorrect value problem is localized to accessing sysObjectID MIB members only, so other Sun Enterprise MIB members are not affected.

Workaround: Change the SNMP agent configuration, then restart the SNMP agent. The configuration file resides in /etc/opt/SUNWssp/snmp/agt/Ultra-Enterprise-10000.snmpd.cnf

Modify the sysObjectID line, as in the following example:

```
sysObjectID 1.3.6.1.4.1.42

to

sysObjectID 1.3.6.1.4.1.42.2.16
```

4063547

System lock contention must be handled gracefully.

Lock timeout is built into the system, so lock contention between programs sometimes occurs, especially during an arbstop when no other activity can happen on the SSP. **Workaround**: If you encounter lock contentions, wait until the present arbstop program is done running, then try the operation again.

Bugs Fixed Since SSP 3.0

This section lists important bugs that have been fixed since the SSP 3.0 Release. Minor bugs are not included. Each entry includes a one-line bug description and a 7-digit BugID assigned by Sun to aid in bug-tracking. The entries are separated into SSP, POST-Related, and DR-Related (on the SSP side) sections.

SSP Bugs

4010341	netcon_server SEGVs.
4011649	netcon is extremely slow and takes long time to return on carriage return in OBP.
4034386	power command needs to continue on error.
4034724	fans do not power back on after power off, removal and replacement.
4035991	netcon login session persists after disconnecting with "~".
4036087	power sometimes fails to invalidate a domain's bootProc MIB member.
4038573	edd starts up hpost dumps while another bringup is in progress.
4039077	hpost complains about "Bogus request flag 0xF0."
4040213	Hostview DR operations should work regardless of SUNW_HOSTNAME setting.
4047272	Starfire netcon does not support JTAG input path switch as it did on SSP 2.1.
4052245	Reboot after DR board move causes arbstop.
4052686	Powering off any system board in a domain that is in OBP (ok>) causes arbstops.
4053884	SNMP agent shows no system boards and support boards.
4056446	<pre>power -off or domain_remove may make a domain unbootable.</pre>
4058972	reboot command will fail forever if hpost fails during quick boot.
4059539	netcontool needs a new option "~=".
4063105	bringup gets invalid hostname when domain name is longer than 14 chars.
4063911	power command clears domain mask when powering down a blacklisted board.

- 4065377 BulkPowerFailact shuts down entire system when one Bulk Power is turned off.
- 4071617 Bad power supply brought down the machine.
- 4075799 cb_reset only possible via le0.
- **4073874** SSP-based BBSRAM mondo vector interrupts can arbstop domain(s).
- 4092613 domain_remove does not "effectively" kill
 netcon_server and/or obp_helper.
- 4090885 sys_reset causes running domains to arbstop.
- 4084689 netcon_server sometimes exits after bringup.
- 4060039 cvcd loops when it cannot connect to the hostname in /etc/ssphostname.
- 4063547 System lock contention must be handled gracefully.
- 4083492 Recordstop during DR operation causes problems.
- 4090885 Customer issued sys_reset to a non-running domain and the other running domain arbstopped.

POST-Related Bugs

- 4034192 Recordstops with no cause found during final config.
- 4035534 redx will fail; dumps core if dump contains only one centerplane.
- 4036337 When hpost is being run as part of a DR Attach, Scards quantity appears wrong.
- 4036371 CPU frequency as reported by hpost can be confusing.
- 4038190 Bogus check compare fail messages from xp_write_cplane_dcmasks().
- 4038268 XDB X.2 config failure if no IO module is present.
- 4052245 reboot after DR board move causes arbstop.
- 4057239 Calculated xmux parity in XDB display is wrong.
- 4060917 npb_io test sequence of hpost clobbers SMD mask register causing arbstops.
- 4062988 Reconfiguration causes the SOC cards to disappear on the E10000.
- 4063119 New DTAG SRAM component IDs will cause POST failures.
- 4063593 hpost should create individual domain log files by default.

4068629	PC ASIC timeout configuration change
4069096	XBAR ASICs 2 and 3 are swapped on JTAG ring.
4071617	Bad power supply brought down the machine.
4083492	Recordstop during DR operation causes problems.
4080848	A panicked domain could not be brought up without
	reconfiguring the centerplane.

OBP-Related Bugs

4039094	OBP incorrectly reports the boot alias instead of the
	boot device to AP.
4055211	Add full address to SBE display (E10000 OBP only).

4066129 Performance counter sub node properties needs to be moved to perf-counter node.

4073434 System crashes with "data access exception" and drops to ok prompt.

4073438 "Dictionary overflow" msgs with QFE host adapters.

4075932 Missing properties for PC performance counter 0 and incorrect CIC register offsets.

4084309 If KADB is installed, OBP does not idle other CPUs after it runs the Solaris halt command. The signatures still read OS/RUN, and bringup acts as though the domain is still up.

DR-Related Bug on the SSP Side

4093482 Cannot detach a board that only shows up in the software domain (that is, the domain_config file).

Patches

This section lists the patches released against SSP 3.0.

Patch-ID# 104846-07

Description: SSP 3.0: bringup and power fixes

BugId's fixed with this patch: 4031962 4033063 4034724 4036087 4037361 4040939 4041791 4042417 4045478 4052366 4052686 4056446 4057026 4059181 4059404 4063911 4064420 4068396 4073324 4081510

Patch-ID# 104853-04

Description: SSP 3.0: OBP fixes

BugId's fixed with this patch: $4039094\ 4049092\ 4050021\ 40734347\ 4073438\ 4075932\ 4084309$

Patch-ID# 104900-04

Description: SSP 3.0: hpost and redx fixes

BugId's fixed with this patch: $4052245\ 4057239\ 4063119\ 4069096\ 4071617\ 4080848\ 4083492$

Patch-ID# 105005-04

Description: SSP 3.0: cbs, obp_helper, netcon_server and snmpd fixes

BugId's fixed with this patch: 4007096 4022406 4033066 4034875 4034881 4035991 4038388 4038590 4038723 4038751 4039488 4041183 4041236 4047095 4053884 4062788 4063544 4080630Patch-ID# 105024-01

Description: SSP 3.0: drview fixes

BugId's fixed with this patch: 4056953

Patch-ID# 105111-01

Description: SSP 3.0: hostview fixes

BugId's fixed with this patch: 4057857

Patch-ID# 105180-01

Description: SSP 3.0: libdr fixes BugId's fixed with this patch: 4060493 4066729

Patch-ID# 105376-01

Description: SSP 3.0: cb_reset only possible via le0

BugId's fixed with this patch: 4075799

Patch-ID# 105435-01

Description: SSP 3.0: 911 temp. alarm when power off of secondary control

BugId's fixed with this patch: 4071755

1-12

Inter-Domain Networks

This section includes information about Inter-Domain Networks (IDNs) as they apply to SSP 3.1.

The domain_create(1M) Command

You can use the $domain_create(1M)$ command to specify the version of the operating system you plan to run in a particular domain. However, the $domain_create(1M)$ command cannot verify which version of the operating system you plan to use; therefore, you could define a Solaris 2.6 domain for a domain that is actually running Solaris 2.5.1.

SSP uses libraries and commands that are based on the version number of the operating system's domain, specified when you create the domain. If you have version 2.5.1 on your system and define a new domain as version 2.6, the SSP invokes Solaris 2.6-based SSP operations, such as domain_unlink(lM). Thus, you may encounter IDN operations, even though the new host environment is really only running version 2.5.1.

System Boards

For any domain to be linked into an IDN, each system board within that domain must have at least one CPU. This one-CPU rule enables the system to appropriately update the CIC registers on all of the system boards within that domain with respect to the IDN's configuration.

Hung Domains

The presence of one or more hung domains may stop all IDN network traffic within that IDN. The stoppage could last one to two minutes depending on when the SSP IDN-handling software can recognize the presence of a hung domain and unlink it from the network. The network traffic within that IDN could permanently stop if the SSP IDN-handling software fails to unlink the hung domain properly. The network stoppages could result in application timeouts that require user intervention. In addition, manual intervention may be necessary to resolve a hung domain and to reestablish the IDN network connection.

Arbstop

Unless the state of all of the member domains is known, the IDN drivers are not permitted to reconfigure an IDN to use an alternative Master (IDN) domain. Without this safeguard, the occurrence of an arbstop within a member domain could arbstop all of the domains within the IDN. In addition, domains in unknown states may prevent IDN operations, or they may require you to "force" the desired operation using the -f option.

Known Bugs

This section lists and briefly describes important bugs known to exist in this release of SSP 3.1 and IDN, along with workarounds where applicable. Minor bugs are not included. Each entry includes a 7-digit BugID number that is assigned by Sun to aid in bug-tracking, and a brief description of the bug.

4091985

domain_unlink(1M) is not checking for arbstop dumps.

If you execute <code>bringup(1M)</code> on a domain that is defined to run Solaris 2.6, <code>domain_unlink(1M)</code> will execute and possibly not check for arbstop dumps. During the <code>bring up</code>, <code>domain_unlink(1M)</code> attempts to lock hardware resources while <code>hpost(1M)</code> has them locked as it performs a machine dump within another domain. <code>Workaround</code>: Wait until <code>hpost(1M)</code> has completed the machine dump before you attempt the bring up.

4094476

The (-m) option for domain_link does not cause the desired effect.

Using the −m option to specify the Master domain in an IDN does not work. **Workaround**: None.

 $domain_unlink(1M)$ causes misleading error messages to be logged.

During IDN status queries of the host domains, IDN may find domains that are down and unable to respond, a condition that causes the SSP libraries to report failures of low-level SSP operations. These reports are acceptable, given the state of the respective domain. The messages reported in the SSP messages file are reported as errors, even though they are not catastrophic failures. The messages should be classified as warnings.

If a domain encounters an arbstop condition, the domain's signatures will remain unchanged. Thus, if the operating system was running prior to the arbstop, the domain appears to the IDN operations as a domain that is still running the operating system. However, because the IDN is not able to get a response from the domain when it is directly queried, IDN becomes confused and marks the domain's state as unknown. This can prevent IDN operations from performing on the given domain causing <code>domain_unlink(1M)</code> to log misleading error messages.

This bug also may occur after execution of bringup(1M), since bringup runs the domain unlink command.

Workaround: Either execute the <code>bringup(1M)</code> command with its <code>-f</code> (force) option; or, execute <code>domain_unlink(1M)</code> with its <code>-f</code> option then manually run a short <code>hpost(1M)</code> operation to clear the domain's hardware state.

4093896

libidn does not properly unlink newly (DR) attached system boards.

A DR init_attach(1M) operation fails (that is, probably panics) after the IDN unlink operation has been internally performed; however, the failure occurs before the IDN link operation has been completed. **Workaround**: None.

4094093

domain_unlink fails with unclaimed boards message.

domain_unlink(1M) will mistakenly report that a hardware configuration problem exists with respect to board associations seen in the hardware and those described in the domain_config file. The command will possibly report that it cannot associate some boards with any particular domain; thus, it classifies them as unclaimed. Workaround: None.