



System Management Services (SMS) 1.5 Reference Manual

Sun Microsystems, Inc.
www.sun.com

Part No. 817-7296-10
June 2005, Revision A

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Please
Recycle



Adobe PostScript

Contents

Preface	i
Intro	1
addboard	6
addcodlicense	15
addtag	17
cancelcmdsync	20
codd	25
console	27
dca	31
deleteboard	33
deletecodlicense	41
deletetag	43
disablecomponent	45
dsmd	52
dxs	54
efhd	56
elad	58
enablecomponent	59
erd	66
esmd	67
flashupdate	70
fomd	76
frad	77

help 78
hpost 80
hwad 81
initcmdsync 82
kmd 87
mand 90
mld 92
moveboard 94
osd 104
pcd 105
poweroff 109
poweron 112
rcfgadm 116
reset 136
resetsc 139
runcmdsync 141
savecmdsync 143
setbus 148
setcsn 152
setdatasync 154
setdate 158
setdefaults 160
setfailover 164
setkeyswitch 166
setobpparams 172
setupplatform 177
showboards 183
showbus 193
showcmdsync 196
showcodlicense 198
showcodusage 200
showcomponent 206
showdatasync 214
showdate 217

showdevices	219
showenvironment	225
showfailover	249
showkeyswitch	254
showlogs	256
showobpparams	265
showplatform	267
showxirstate	277
smsbackup	282
smsconfig	284
smsconnectsc	297
smsinstall	300
smsrestore	303
smsupgrade	305
smsversion	309
ssd	314
testemail	315
tmd	319
wcapp	320

Preface

This reference manual comprises the System Management Services (SMS) 1.5 man pages. Both novice users and those familiar with the Solaris operating system can use online man pages to obtain information about the system and its features. A man page is intended to answer concisely the question “What does it do?” Man pages are generally intended for reference, not a tutorial.

Overview

This section contains a brief description of the SMS man pages and the information they contain. The `intro(1M)` man page describes, in alphabetical order, commands that are used chiefly for system maintenance and administration purposes.

What follows is a generic format for man pages. Each man page is made up of the following sections, which usually appear in the order shown here. When a particular section is not needed for a particular command, it is omitted. For example, if there are no notes to report, there is no NOTES section. See the `intro(1)` man page for more information and detail about each section, and `man(1)` for more information about man pages in general.

NAME	This section gives the names of the commands or functions documented, followed by a brief description of what they do.
------	--

SYNOPSIS

This section shows the syntax of commands or functions. When a command or file does not exist in the standard path, its full path name is shown. Options and arguments are alphabetized, with single-letter arguments first, and options with arguments next, unless a different argument order is required.

The following special characters are used in this section:

- [] Brackets. The option or argument enclosed in these brackets is optional. If the brackets are omitted, the argument must be specified.
- ... Ellipses. Several values may be provided for the previous argument, or the previous argument can be specified multiple times, for example `"filename..."`.
- | Separator. Only one of the arguments separated by this character can be specified at one time.
- { } Braces. The options and/or arguments enclosed within braces are interdependent, such that everything enclosed must be treated as a unit.

DESCRIPTION

This section defines the functionality and behavior of the service. Thus it describes concisely what the command does. It does not discuss OPTIONS or cite EXAMPLES. Interactive commands, subcommands, requests, macros, functions and such, are described under USAGE.

OPTIONS

This lists the command options with a concise summary of what each option does. The options are listed literally and in the order in which they appear in the SYNOPSIS section. Possible arguments to options are discussed under the option, and where appropriate, default values are supplied.

OPERANDS

This section lists the command operands and describes how they affect the actions of the command.

RETURN VALUES

If the man page documents functions that return values, this section lists these values and describes the conditions under which they are returned. If a function can return only constant values, such as 0 or -1, these values are listed in tagged paragraphs. Otherwise, a single paragraph describes the return values of each function. Functions declared void do not return values, so they are not discussed in RETURN VALUES.

ERRORS

On failure, most functions place an error code in the global variable `errno`, indicating why they failed. This section lists alphabetically all the error codes a function can generate and describes the conditions that cause each error. When more than one condition can cause the same error, each condition is described in a separate paragraph under the error code.

USAGE

This section lists special rules, features, and commands that require in-depth explanation. The subsections listed below are used to explain built-in functionality:

- Commands
- Modifiers
- Variables
- Expressions
- Input Grammar

EXAMPLES

This section provides examples of usage, including how to use a command or function. Wherever possible, a complete example, including command line entry and machine response, is shown. Examples are followed by explanations, variable substitution rules, or returned values. Most examples illustrate concepts from the SYNOPSIS, DESCRIPTION, OPTIONS, and USAGE sections.

ENVIRONMENT VARIABLES

This section lists any environment variables that the command or function affects, followed by a brief description of the effect.

EXIT STATUS	This section lists the values the command returns to the calling program or shell and the conditions that cause these values to be returned. Usually, zero is returned for successful completion and values other than zero for various error conditions.
FILES	This section lists all file names referred to by the man page, files of interest, and files created or required by commands. Each file name is followed by a descriptive summary or explanation.
ATTRIBUTES	This section lists characteristics of commands, utilities, and device drivers by defining the attribute type and its corresponding value. See <code>attributes(5)</code> for more information.
SEE ALSO	This section lists references to other man pages, in-house documentation, and outside publications.
NOTES	This section lists additional information that does not belong anywhere else on the page. It takes the form of an aside to the user, covering points of special interest. Critical information is never covered here.

NAME	Intro - SMS Administration																																										
DESCRIPTION	This section describes the commands executed in the system management software environment.																																										
LIST OF COMMANDS	The following commands are supported:																																										
	<table border="0"> <tr> <td>addboard</td> <td>Assign, connect, and configure a board to a domain.</td> </tr> <tr> <td>addcodlicense</td> <td>Install a Capacity on Demand (COD) license key on the system controller (SC).</td> </tr> <tr> <td>addtag</td> <td>Assign a domain name (tag) to a domain.</td> </tr> <tr> <td>cancelcmdsync</td> <td>Command synchronization command.</td> </tr> <tr> <td>codd</td> <td>Capacity on Demand (COD)daemon.</td> </tr> <tr> <td>console</td> <td>Access the domain console.</td> </tr> <tr> <td>dca</td> <td>Domain configuration agent.</td> </tr> <tr> <td>deleteboard</td> <td>Unconfigure, disconnect, and unassign a system board from a domain.</td> </tr> <tr> <td>deletecodlicense</td> <td>Remove a Capacity on Demand (COD) license key on the system controller (SC).</td> </tr> <tr> <td>deletetag</td> <td>Remove the domain tag name associated with the domain.</td> </tr> <tr> <td>disablecomponent</td> <td>Add the specified component to the specified blacklist file.</td> </tr> <tr> <td>dsmđ</td> <td>Domain status monitoring daemon.</td> </tr> <tr> <td>đxs</td> <td>Domain X server.</td> </tr> <tr> <td>efhd</td> <td>Error- and fault-handling daemon.</td> </tr> <tr> <td>elad</td> <td>Event log access daemon.</td> </tr> <tr> <td>enablecomponent</td> <td>Remove the specified component from the specified blacklist.</td> </tr> <tr> <td>erd</td> <td>Event-reporting daemon.</td> </tr> <tr> <td>esmd</td> <td>Environmental status-monitoring daemon.</td> </tr> <tr> <td>flashupdate</td> <td>Update the Flash PROMs located on the CPU boards, MaxCPU boards, and system controllers (SC).</td> </tr> <tr> <td>fomđ</td> <td>Failover management daemon.</td> </tr> <tr> <td>frad</td> <td>FRU access daemon.</td> </tr> </table>	addboard	Assign, connect, and configure a board to a domain.	addcodlicense	Install a Capacity on Demand (COD) license key on the system controller (SC).	addtag	Assign a domain name (tag) to a domain.	cancelcmdsync	Command synchronization command.	codd	Capacity on Demand (COD)daemon.	console	Access the domain console.	dca	Domain configuration agent.	deleteboard	Unconfigure, disconnect, and unassign a system board from a domain.	deletecodlicense	Remove a Capacity on Demand (COD) license key on the system controller (SC).	deletetag	Remove the domain tag name associated with the domain.	disablecomponent	Add the specified component to the specified blacklist file.	dsmđ	Domain status monitoring daemon.	đxs	Domain X server.	efhd	Error- and fault-handling daemon.	elad	Event log access daemon.	enablecomponent	Remove the specified component from the specified blacklist.	erd	Event-reporting daemon.	esmd	Environmental status-monitoring daemon.	flashupdate	Update the Flash PROMs located on the CPU boards, MaxCPU boards, and system controllers (SC).	fomđ	Failover management daemon.	frad	FRU access daemon.
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help	Display help information for SMS commands.
hpost	Sun Fire high-end system power-on self-test (POST) control application.
hwad	Hardware access daemon.
initcmdsync	Command synchronization command.
kmd	SMS key management daemon.
mand	Management network daemon.
mld	Message-logging daemon.
moveboard	Move a board from one domain to another.
osd	OpenBoot PROM server daemon.
pcd	Platform configuration database daemon.
poweroff	Control power off.
poweron	Control power on.
rcfgadm	Remote configuration administration.
reset	Send reset to all CPU ports of a specified domain.
resetsc	Reset the other system controller (SC).
runcmdsync	Prepare a specified script for recovery after a failover.
savecmdsync	Command synchronization command.
setbus	Perform dynamic bus reconfiguration on active expanders in a domain.
setdatasync	Modify the data propagation list used in data synchronization.
setdate	Set the date and time for the system controller (SC) or a domain.
setdefaults	Remove all instances of a previously active domain.
setfailover	Modify the state of the system controller (SC) failover mechanism.
setkeyswitch	Change the position of the virtual keyswitch.
setobpparams	Set up OpenBoot PROM variables for a domain.
setupplatform	Set up the available component list for domains.
showboards	Show the assignment information and status of the boards.

help	Display help information for SMS commands.
hpost	Sun Fire high-end system power-on self-test (POST) control application.
hwad	Hardware access daemon.
initcmdsync	Command synchronization command.
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resetsc	Reset the other system controller (SC).
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savecmdsync	Command synchronization command.
setbus	Perform dynamic bus reconfiguration on active expanders in a domain.
setdatasync	Modify the data propagation list used in data synchronization.
setdate	Set the date and time for the system controller (SC) or a domain.
setdefaults	Remove all instances of a previously active domain.
setfailover	Modify the state of the system controller (SC) failover mechanism.
setkeyswitch	Change the position of the virtual keyswitch.
setobpparams	Set up OpenBoot PROM variables for a domain.
setupplatform	Set up the available component list for domains.
showboards	Show the assignment information and status of the boards.

showbus	Display the bus configuration of expanders in active domains.
showcmdsyc	Display the current command synchronization list.
showcodlicense	Display the current Capacity on Demand (COD) right-to-use (RTU) licenses stored in the COD license database.
showcodusage	Display the current usage statistics for Capacity on Demand (COD) resources.
showcomponent	Display the blacklist status for a component.
showdatasync	Display the status of system controller (SC) data synchronization for failover.
showdate	Display the date and time for the system controller (SC) or a domain.
showdevices	Display system board devices and resource usage information.
showenvironment	Display the environmental data.
showfailover	Display system controller (SC) failover status or role
showkeyswitch	Display the position of the virtual keyswitch.
showlogs	Display message log files.
showobpparams	Display OpenBoot PROM bring-up parameters for a domain.
showplatform	Display the board available component list and domain state for each domain.
showxirstate	Display CPU dump information after sending a reset pulse to the processors.
smsbackup	Back up the SMS environment.
smsconfig	Configure the SMS environment.
smsconnectsc	Access a remote SC console.
smsinstall	Install the SMS environment.
smsrestore	Restore the SMS environment.
smsupgrade	Upgrade the SMS environment.
smsversion	Change the active version of SMS to another co-resident version of the SMS software.
ssd	SMS startup daemon.

testemail

Test the event-reporting features, which include event message logging and email notification of events.

tmd

Task management daemon.

wcapp

wPCI application daemon.

NAME	addboard - assign, connect and configure a board to a domain
SYNOPSIS	addboard -d <i>domain_indicator</i> [-c <i>function</i>] [-r <i>retry_count</i> [-t <i>timeout</i>]] [-q] [-f] [-y -n] <i>location</i> ... addboard -h
DESCRIPTION	<p>addboard(1M) assigns, connects, and configures a <i>location</i> to the domain <i>domain_id</i> or <i>domain_tag</i>.</p> <p>The board must be either available or assigned to the domain to which it is being added. The -c option is used to specify the transition of the board from the current configuration state to a new configuration state. Configuration states are assign, connect, and configure. If the -c option is not specified, the default expected configuration state is configure.</p> <p>Note – addboard performs tasks synchronously and does not return control to the user until the command is complete. If the board is not powered on or tested and a -c connect configure option is specified, then the command powers on the board and tests it.</p> <p>Note – If only one board is specified and it is in the automatic system recovery (ASR) blacklist file, addboard displays an error message and exits. If more than one board is specified, addboard displays a message that the board is being skipped, and then goes on to the next board or, after the last board, exits.</p> <p>Note – If the addboard command fails, a board does not return to its original state. A dxs or dca error message is logged to the domain. If the error is recoverable, you can retry the command. If it is unrecoverable, you need to reboot the domain in order to use that board.</p>

OPTIONS The following options are supported:



-c function

Valid *function* values are *assign*, *connect*, and *configure*. This option is used to control the configuration state transition. Each successive function builds upon the last. For example, *configure* first assigns and then connects the board before configuring it.

The possible transition states and their meanings are as follows:

<i>assign</i>	Assigns the board to the logical domain. This is a board state in which the domain has sole access to the board; however, the board is not active. Once assigned, the board can be connected or configured into the domain with the use of either <i>setkeyswitch on</i> or the <i>connect</i> or <i>configure</i> options.
<i>connect</i>	Assigns the board to the logical domain (if it is not already assigned). Transitions the board into the <i>connected unconfigured</i> state. In this state the system board is assigned to the logical domain and connected (becomes active). This state allows normal system access to hardware resources on the board, but the hardware resources of the board are not represented by the normal Solaris software data structures and thus are not available for use by the Solaris operating system. Operations allowed on the board are limited to configuration administration operations. This is an intermediate state and does not have any standalone implementation at this time.
<i>configure</i>	Assigns the board to the logical domain (if it is not already assigned). Transitions the board into the <i>connected configured</i> state. In this state the board is not only assigned, active, and connected to a domain, but also configured into the Solaris operating system. The hardware resources on the board can be used by Solaris software.

- `-d domain_indicator` Specifies the domain using one of the following:
- domain_id* – ID for a domain. Valid *domain_ids* are A–R and are not case sensitive.
 - domain_tag* – Name assigned to a domain using `addtag(1M)`.
- `-f` Forces the specified action to occur. Typically, this is a hardware-dependent override of a safety feature. Forcing a state change operation can allow use of the hardware resources of an occupant that is not in the `ok` or `unknown` conditions, at the discretion of any hardware-dependent safety checks.
- `-h` Help. Displays usage descriptions.
- Note** – Use alone. Any option specified in addition to `-h` is ignored.
- `-n` Automatically answers no to all prompts. Prompts are displayed unless used with the `-q` option.
- `-q` Quiet. Suppresses all messages to `stdout` including prompts.
- When used alone `-q` defaults to the `-n` option for all prompts.
- When used with either the `-y` or the `-n` option, `-q` suppresses all user prompts and automatically answers with either 'y' or 'n' based on the option chosen.
- `-r retry_count` This command argument enables the user to specify retries in case of failures encountered during state transitions. The `-r retry_count` option can be used alone and indicates the number of times the configuration state change request should be retried by the domain.
- `-t timeout` This command argument enables the user to specify retries in case of failures encountered during state transitions. The `-t timeout` option cannot be used without the `-r retry_count` option and specifies the number of seconds that the domain should wait before the next retry is made. If the `-t timeout` is not specified, the default *timeout* is zero, meaning that the request is retried immediately.
- `-y` Automatically answers yes to all prompts. Prompts are displayed unless used with the `-q` option.

OPERANDS

The following operands are supported:

location List of board locations separated by a space. Multiple *location* arguments are permitted.

The following *location* forms are accepted:

Sun Fire 12K and E20K:

SB(0...8)

IO(0...8)

Sun Fire 15K and E25K:

SB(0...17)

IO(0...17)

Note – Use `showboards(1M)` to display board type.

EXTENDED DESCRIPTION**Group Privileges Required**

If you have platform administrator privileges, you can perform only the `-c assign` option.

If you have domain administrator or configurator privileges, you can execute this command, but only on your respective domains. If the board(s) are not already assigned to the domain, the board(s) must be in the available component list of the domain.

Refer to Chapter 2 in the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

EXAMPLES**EXAMPLE 1** Assigning Boards to Domain C

To assign four boards to domain C you must have platform privileges or domain privileges and the boards must be in the domain available component list.

```
sc0:sms-user:> addboard -d C -c assign SB0 IO1 SB1 SB2
SB0 assigned to domain: C
IO1 assigned to domain: C
SB1 assigned to domain: C
SB2 assigned to domain: C
sc0:sms-user:>
```

EXAMPLE 2 Assigning a Blacklisted Board to Domain C

To assign four boards to domain C you must have platform privileges or domain privileges and the boards must be in the domain available component list.

```
sc0:sms-user:> addboard -d C -c assign SB0 IO2 SB1 SB2
SB0 assigned to domain: C
IO2 assigned to domain: C
Warning: IO2 is blacklisted.
You will not be able to connect or configure it.
SB1 assigned to domain: C
SB2 assigned to domain: C
sc0:sms-user:>
```

EXAMPLE 3 Connecting Boards to Domain A

This example connects three boards to domain A, setting retries to five and timeout to five seconds. You must have domain privileges for domain A.

```
sc0:sms-user:> addboard -d A -c connect -r 5 -t 5 IO3
IO4 IO5
```

EXAMPLE 4 Connecting Boards Containing an ASR Blacklisted Board to Domain C

You must have domain privileges for domain C. Blacklisted boards are skipped.

```
sc0:sms-user:> addboard -d C -c connect SB0
SB0 is blacklisted. Exiting.
sc0:sms-user:>
```

EXAMPLE 5 Configuring Boards to Domain A

You must have domain privileges for domain A.

```
sc0:sms-user:> addboard -d A -c configure IO3 IO4 IO5
```

EXAMPLE 6 Configuring Boards Containing an ASR Blacklisted Board to Domain A

You must have domain privileges for domain A. Blacklisted boards are skipped.

```
sc0:sms-user:> addboard -d A -c configure IO7 IO8 IO9
Skipping IO8. It is blacklisted.
```

EXIT STATUS

The following exit values are returned:

- | | |
|---|------------------------|
| 0 | Successful completion. |
| 1 | No acknowledge. |
| 2 | Not supported. |

3	Operation not supported.
4	Invalid privileges.
5	Busy.
6	System busy.
7	Data error.
8	Library error.
9	No library.
10	Insufficient condition.
11	Invalid.
12	Error.
13	A PID does not exist.
14	Invalid attribute.
30	Invalid board ID type.
31	Invalid permissions.
32	Assigned to another domain.
33	Unable to get permissions.
34	Unable to get domain board info.
35	Unable to get active board list.
36	Unable to get assigned board list.
38	Solaris not running.
39	Unable to assign/unassign.
40	Unable to get domain permissions.
41	Unable to get platform permissions.
51	Invalid domain.
52	Invalid privileges.
53	Internal error.
54	Library error.
56	DR command syntax error.
57	Location already assigned.
58	Internal error.

3	Operation not supported.
4	Invalid privileges.
5	Busy.
6	System busy.
7	Data error.
8	Library error.
9	No library.
10	Insufficient condition.
11	Invalid.
12	Error.
13	A PID does not exist.
14	Invalid attribute.
30	Invalid board ID type.
31	Invalid permissions.
32	Assigned to another domain.
33	Unable to get permissions.
34	Unable to get domain board info.
35	Unable to get active board list.
36	Unable to get assigned board list.
38	Solaris not running.
39	Unable to assign/unassign.
40	Unable to get domain permissions.
41	Unable to get platform permissions.
51	Invalid domain.
52	Invalid privileges.
53	Internal error.
54	Library error.
56	DR command syntax error.
57	Location already assigned.
58	Internal error.

- 59 Component blacklisted.
- 60 Unable to get ASR blacklist.
- 61 Unable to get domain blacklist.
- 62 Unable to get platform blacklist.
- 70 DR operation failed.

FILES

The following files are used by this command.

- `/etc/opt/SUNWSMS/config/asr/blacklist` List of components excluded by esmd.
- `/etc/opt/SUNWSMS/config/platform/blacklist` List of platform components excluded.
- `/etc/opt/SUNWSMS/config/domain_id/blacklist` List of domain components excluded.

Note – This file is created and used internally and should *not* be edited manually. To remove a component from the ASR blacklist file, use `enablecomponent(1M)`.

ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO

`addtag(1M)`, `enablecomponent(1M)`, `esmd(1M)`, `showcomponent(1M)`

NAME	addcodlicense - add a Capacity on Demand (COD) right-to-use (RTU) license key to the COD license database
SYNOPSIS	addcodlicense <i>license-signature</i> addcodlicense -h
DESCRIPTION	addcodlicense(1M) adds the COD RTU specified license key to the COD license database on the system controller (SC). Note – Before you run this command, you must obtain a COD license key from the Sun License Center. For details on COD RTU license keys, refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> .
OPTIONS	The following option is supported: -h Help. Displays usage descriptions. Note – Use alone. Any option specified in addition to -h is ignored.
OPERANDS	The following operands are supported: <i>license-signature</i> Specifies the COD RTU license key to be added to the COD license database.
EXTENDED DESCRIPTION	
Group Privileges Required	You must have platform administrator group privileges to run this command. Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.
EXAMPLES	EXAMPLE 1 Adding a COD RTU License Key sc0:sms-user:> addcodlicense \ 01:5014936C37048:01001:0201010302:4:20020430:jWGJdg/ kx78b0wyK2xrqIg
EXIT STATUS	The following exit values are returned: 0 Successful completion. 1 Invalid usage. 2 Invalid group privileges.

- 3 Duplicate license exists in the COD license database.
- 4 Invalid license key.
- >4 An internal error occurred. For further information, see `/var/opt/SUNWSMS/adm/platform/messages`.

ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO

`codd(1M)`, `deletecodlicense(1M)`, `showcodlicense(1M)`,
`showcodusage(1M)`

NAME	addtag - assign a domain name (tag) to a domain
SYNOPSIS	addtag -d <i>domain_indicator</i> [-q] [-y -n] <i>new_tag</i> addtag -h
DESCRIPTION	addtag(1M) adds the specified domain tag name (<i>new_tag</i>) to a domain (<i>domain_id</i> <i>domain_tag</i>). Only one name tag can be assigned to a domain, and it must be unique across all domains. addtag can also be used to change the <i>domain_tag</i> .
OPTIONS	<p>The following options are supported:</p> <p>-d <i>domain_indicator</i> Specifies the domain using one of the following: <i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive. <i>domain_tag</i> – Name assigned to a domain.</p> <p>-h Help. Displays usage descriptions. Note – Use alone. Any option specified in addition to -h is ignored.</p> <p>-n Automatically answers no to all prompts. Prompts are displayed unless used with the -q option.</p> <p>-q Quiet. Suppresses all messages to <code>stdout</code> including prompts. When used alone -q defaults to the -n option for all prompts. When used with either the -y or the -n option, -q suppresses all user prompts and automatically answers with either 'y' or 'n' based on the option chosen.</p> <p>-y Automatically answers yes to all prompts. Prompts are displayed unless used with the -q option.</p>
OPERANDS	<p>The following operands are supported:</p> <p><i>new_tag</i> New tag name assigned to a domain. See Extended Description for a description of invalid domain names.</p>

**EXTENDED
DESCRIPTION****Domain Name Tag
Restrictions**

The following restrictions are required on a domain name tag:

- No single character names are permitted.
- All domain name tags must be unique across all domains within a single chassis.
- Tags must adhere to the same restrictions as defined for Solaris software node names. Currently, the size restriction is set to 2 to 64 characters.

**Group Privileges
Required**

You must have platform administrator privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

EXAMPLES

EXAMPLE 1 Assigning the Tag eng2 to Domain A With Prompts

```
sc0:sms-user:> addtag -d A eng2
```

If a tag for this domain exists, you are prompted.

EXAMPLE 2 Assigning the Tag eng2 to Domain A Using the -y Option

```
sc0:sms-user:> addtag -d A -y eng2
```

Prompts are displayed and are automatically answered yes. This forces the domain tag to be set even if a tag already exists for this domain.

EXAMPLE 3 Assigning the Tag eng2 to Domain A Using the -n Option

```
sc0:sms-user:> addtag -d A -n eng2
```

Prompts are displayed and are automatically answered no. This sets the tag for this domain unless it has already been set.

EXAMPLE 4 Assigning the Tag eng2 to Domain A Using the -qy Options

```
sc0:sms-user:> addtag -d A -qy eng2
```

You are not prompted.

EXAMPLE 5 Assigning the Tag eng2 to Domain A Using the -qn Options

```
sc0:sms-user:> addtag -d A -qn eng2
```

The example assigns the tag eng2 to Domain A only if it has not already been set. You are not prompted.

EXAMPLE 6 Assigning the Tag eng2 to Domain A Using the -q Option

```
sc0:sms-user:> addtag -d A -q eng2
```

The example assigns the tag eng2 to Domain A if it is not already set. If it is set, the command does not change it. You are not prompted.

EXIT STATUS The following exit values are returned:

0 Successful completion.
>0 An error occurred.

ATTRIBUTES See **attributes** (5) for descriptions of the following attributes

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO deletetag (1M)

cancelcmdsyc(1M)

NAME	cancelcmdsyc - command synchronization command
SYNOPSIS	cancelcmdsyc <i>cmdsyc_descriptor</i> initcmdsyc <i>script_name</i> [<i>parameters</i>] savecmdsyc -M <i>identifier</i> <i>cmdsyc_descriptor</i> [cancel init save]cmdsyc -h
DESCRIPTION	<p>The command synchronization commands work together to control the recovery of user-defined scripts interrupted by a system controller (SC) failover. Insert the following commands in user-defined scripts to enable command synchronization:</p> <p>initcmdsyc Creates a command synchronization descriptor that identifies the script to be recovered.</p> <p> This descriptor is placed on a command synchronization list that identifies the scripts and commands to be restarted on the new main SC after a failover.</p> <p>savecmdsyc Adds a marker that identifies a location in the script from which processing can be resumed after a failover.</p> <p>cancelcmdsyc Removes a command synchronization descriptor from the command synchronization list. This ensures that the script is run only once and not after subsequent failovers.</p> <p> Be sure that all exit paths of a script have a cancelcmdsyc sequence to remove the descriptor from the command synchronization list. If you do not remove the descriptor and a failover occurs, the script is rerun on the new main SC.</p> <p>Note – Both an initcmdsyc and a cancelcmdsyc sequence must be contained within a script to enable command synchronization. The use of the savecmdsyc command is optional and marks only specific points in a script from which processing can be resumed. If specific restart points are not necessary, consider using runcmdsync(1M) instead.</p>

OPTIONS The following options are supported:

<i>cmdsync_descriptor</i>	Specifies the command synchronization descriptor that identifies the user-defined script. This descriptor is the standard output value returned by the <code>initcmdsync</code> command.
<code>-h</code>	Help. Displays usage descriptions. Note – Use alone. Any option specified in addition to <code>-h</code> is ignored.
<code>-M identifier</code>	Marks a location in the script from which the script can be resumed after a failover. The identifier must be a positive integer.
<i>parameters</i>	Specifies the options or parameters associated with the user-defined script. These parameters are stored on the spare SC and are used to restart the specified script after a failover.
<i>script_name</i>	Identifies the name of the user-defined script to be synchronized. <i>script_name</i> must be the absolute path name of an executable command. The command must exist in the same location on both SCs.

**EXTENDED
DESCRIPTION**

The command synchronization commands are inserted at certain logical points within a user-defined script.

For instance, a Korn shell script might be structured as follows:

```
# MAIN CODE STARTS HERE
# Be sure to use a cleanup procedure to handle any
# interrupts.
# Use the cancelcmdsyc to remove the script from the
# command synchronization list. Otherwise, the command
# will get restarted on the new main SC.
#
clean_up () {
    cancelcmdsyc $desc
    exit
}

# Declare the clean_up function to capture system signals
# and cleanup.
trap "clean_up" INT HUP TERM QUIT PWR URG
goto_label=1
# Process the arguments, capturing the -M marker point
# if provided
#
for arg in $*; do
    case $arg in
        -M )
            goto_label=$arg;;
        .
        .
        .
    esac
done
# Place this script and all its parameters in the command
# synchronization list, which indicates the commands to
# be restarted after an SC failover.
#
# NOTE: The script must be executable by the user defined
# in fomd.cf and reside in the same directory on both the
# main and the spare SC.
```



```

# If the command is not part of the defined PATH for
# the user, the absolute filename must be passed with the
# initcmdsyc command
#
initcmdsyc script_name parameters
# The marker point is stored in the goto_label variable.
# Keep executing this script until all cases have been
# processed or an error is detected.
#
while (( $goto_label != 0 )) ; do
#
# Each case should represent a synchronization point
# in the script.
#
case $goto_label in
#
# Step 1: Do something
#
1 )          do_something
              .
              .
              .

# Execute the savecmdsyc command with the script's
# descriptor and a unique marker to save the position.
# If a failover occurs here, the commands represented in
# the next goto_label (2) will be resumed.
#
              savecmdsyc -M $(( $goto_label + 1 )) $desc
              goto_label=$(( $goto_label + 1 ))
              ;;

#
# Step 2: Do more things
#
2 )          do_more_things
              .
              .
              .
              savecmdsyc -M $(( $goto_label + 1 )) $desc
              goto_label=$(( $goto_label + 1 ))
              ;;

#
# Step 3: Finish the last step and set the goto_label to 0
# so that the script ends.
3 )
              finish_last_step
              .
              .
              .
              goto_label=0
              ;;

        esac
done
# END OF MAIN CODE
# Remember to execute cancelcmdsyc to remove the script from the
# command synchronization list. Otherwise, the command will be restarted
# after the failover.
#
cancelcmdsyc $desc

```

cancelcmdsync(1M)

**Group Privileges
Required**

You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command.

Refer to Chapter 2 in the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

EXIT STATUS

The following exit values are returned:

0 Successful completion.
>0 An error occurred.

Note – The standard output for `initcmdsync` contains the command synchronization descriptor. Also, when failover is disabled (after a failover or in a single SC environment), scripts that contain synchronization commands generate error messages to the platform log file and return nonzero exit codes. These messages can be ignored.

ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO

`runcmdsync(1M)`, `showcmdsync(1M)`

NAME	codd - Capacity on Demand (COD) daemon																		
SYNOPSIS	codd																		
DESCRIPTION	<p>codd(1M) is a process that runs on the main system controller (SC). This process does the following:</p> <ul style="list-style-type: none"> ■ Monitors the COD resources being used and verifies that the resources used are in agreement with the COD right-to-use (RTU) licenses in the COD license database file. Also logs any warning messages. ■ Provides information on installed licenses, resource use, and board status. ■ Handles the requests to add or delete COD RTU license keys. ■ Configures headroom and COD RTU licenses reserved for domains. <p>This daemon is started automatically by the <code>ssd(1M)</code> daemon. If the <code>codd</code> daemon terminates, it is restarted automatically. Do <i>not</i> manually start this daemon from the command line.</p>																		
EXTENDED DESCRIPTION	<p>The <code>codd</code> daemon releases COD RTU licenses when the following events occur:</p> <ul style="list-style-type: none"> ■ A COD CPU board is powered off or disconnected from a running domain. ■ A domain virtual keyswitch state changes from <code>on/secure</code> to <code>standby/off</code> <p>Clients of the <code>codd</code> daemon include:</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>addcodlicense(1M)</code></td> <td>Adds a COD RTU license key to the COD license database on the system controller (SC)</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>dxs(1M)</code></td> <td>Domain X server daemon</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>deletecodlicense(1M)</code></td> <td>Removes a COD RTU license from the SC.</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>hpost(1M)</code></td> <td>Sun Fire high-end systems power-on self-test (POST) control application</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>setdefaults(1M)</code></td> <td>Remove all instances and reset reserved COD RTUs for a previously active domain.</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>setupplatform(1M)</code></td> <td>Sets up the available component list and reserved COD RTUs for domains and configures platform COD headroom.</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>showcodlicense(1M)</code></td> <td>Shows installed COD RTU licenses.</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>showcodusage(1M)</code></td> <td>Shows current usage statistics for COD resources.</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;"><code>showplatform(1M)</code></td> <td>Displays the board available component list, domain state, and reserved COD RTUs for each domain, and platform COD headroom.</td> </tr> </table>	<code>addcodlicense(1M)</code>	Adds a COD RTU license key to the COD license database on the system controller (SC)	<code>dxs(1M)</code>	Domain X server daemon	<code>deletecodlicense(1M)</code>	Removes a COD RTU license from the SC.	<code>hpost(1M)</code>	Sun Fire high-end systems power-on self-test (POST) control application	<code>setdefaults(1M)</code>	Remove all instances and reset reserved COD RTUs for a previously active domain.	<code>setupplatform(1M)</code>	Sets up the available component list and reserved COD RTUs for domains and configures platform COD headroom.	<code>showcodlicense(1M)</code>	Shows installed COD RTU licenses.	<code>showcodusage(1M)</code>	Shows current usage statistics for COD resources.	<code>showplatform(1M)</code>	Displays the board available component list, domain state, and reserved COD RTUs for each domain, and platform COD headroom.
<code>addcodlicense(1M)</code>	Adds a COD RTU license key to the COD license database on the system controller (SC)																		
<code>dxs(1M)</code>	Domain X server daemon																		
<code>deletecodlicense(1M)</code>	Removes a COD RTU license from the SC.																		
<code>hpost(1M)</code>	Sun Fire high-end systems power-on self-test (POST) control application																		
<code>setdefaults(1M)</code>	Remove all instances and reset reserved COD RTUs for a previously active domain.																		
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<code>showcodlicense(1M)</code>	Shows installed COD RTU licenses.																		
<code>showcodusage(1M)</code>	Shows current usage statistics for COD resources.																		
<code>showplatform(1M)</code>	Displays the board available component list, domain state, and reserved COD RTUs for each domain, and platform COD headroom.																		

codd(1M)

The codd daemon is a client of

dsmd(1M)	Domain status monitoring daemon
frad(1M)	FRU access daemon
pcd(1M)	Platform configuration database daemon
setkeyswitch(1M)	Virtual keyswitch control command

FILES

The following file is supported:

<code>/var/opt/SUNWSMS/adm/platform/messages</code>	Stores message files.
---	-----------------------

ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO

`addcodlicense(1M)`, `deletecodlicense(1M)`, `dsmd(1M)`, `dxs(1M)`, `frad(1M)`, `hpost(1M)`, `pcd(1M)`, `setdefaults(1M)`, `setkeyswitch(1M)`, `setupplatform(1M)`, `showcodlicense(1M)`, `showcodusage(1M)`, `showplatform(1M)`, `ssd(1M)`

NAME	console - access the domain console
SYNOPSIS	<pre>console -d <i>domain_indicator</i> [[-f] [-l] [-g] [-r]] [-e <i>escapeChar</i>]</pre> <pre>console -h</pre>
DESCRIPTION	<p>console(1M) creates a remote connection to the domain virtual console driver, making the window in which the command is executed a console window for the specified domain (<i>domain_id</i> or <i>domain_tag</i>). Many <code>console</code> commands can be attached simultaneously to a domain, but only one <code>console</code> has write permissions; all others have read-only permissions. Write permissions are in either locked or unlocked mode.</p> <p>If <code>console</code> is invoked without any options it comes up in exclusive locked write mode (option <code>-f</code>). An exclusive session forcibly detaches all other sessions from the domain virtual console.</p> <p>Locked write mode is more secure. It can be taken away only if another console is opened using <code>console -f</code> or <code>~*</code> is entered from another running <code>console</code> window. In both cases the new <code>console</code> session is an exclusive session.</p> <p>Unlocked write permission is not as secure. It can be taken away if another <code>console</code> command is started using <code>console -g</code>, <code>console -l</code>, or <code>console -f</code>, or if <code>~@</code>, <code>~&</code>, or <code>~*</code> is entered from another console window.</p> <p><code>console</code> can utilize either IOSRAM or the network path for domain console communication. You can manually toggle the communication path by using the <code>~=</code> (tilde-equal sign) command. Doing so is useful if the network becomes inoperable, in which case the <code>console</code> sessions appears to be hung.</p> <p>Tilde commands are described in EXTENDED DESCRIPTION.</p>

OPTIONS

The following options are supported:

- `-d domain_indicator` Specifies the domain using one of the following:
- `domain_id` – ID for a domain. Valid `domain_ids` are A–R and are not case sensitive.
 - `domain_tag` – Name assigned to a domain using `addtag(1M)`.
- `-e escapeChar` Set default escape character. Changes the escape character to be `escapeCharacter`. The default is `~` (tilde).
- Valid escape characters are any *except* the following:
- ```
@ ^ & ? * = . |
```
- See the note on `rlogin` in the Usage section that follows.
- `-f` Force option (the default). Opens a domain console window with locked write permission, terminates all other open sessions, and prevents new ones from being opened. This constitutes an exclusive session. Use it only when you need exclusive use of the console (e.g. for private debugging).
- Note** – To restore multiple-session mode, either release the lock (`~^`) or terminate the console session (`~.`).
- `-g` Grab option. Opens a console window with unlocked write permission. If another session has unlocked write permission, that session becomes read-only. If another session has locked permission, this request is denied and the console window opens in read-only mode instead.
- `-h` Help. Displays usage descriptions.
- Note** – Use alone. Any option specified in addition to `-h` is ignored.
- `-l` Lock option. Opens a console window with locked write permission. If another session has unlocked write permission, that session becomes read-only. If another session has locked permission, the request is denied and the console window opens in read-only mode instead.
- `-r` Opens a console window in read-only mode.

## EXTENDED DESCRIPTION

### Usage

In a domain console window, a tilde (~) that appears as the first character of a line is interpreted as an escape signal that directs `console` to perform some special action, as follows:

- ~?                   Status message.
- ~.                   Disconnect `console` session.
- ~#                   Break to OpenBoot PROM or `kadb`.
- ~@                   Acquire unlocked write permission; see `-g`.
- ~^                   Release write permission.
- ~=                   Toggle the communication path between the network and IOSRAM interfaces. You can use `~=` only in Private mode (see `~*`).
- ~&                   Acquire locked write permission; see `-l`. You can issue this signal during a read-only or unlocked write session.
- ~\*                   Acquire locked write permission, terminate all other open sessions, and prevent new sessions from being opened; see `-f`. To restore multiple-session mode, either release the lock or terminate this session.

**Note** – `rlogin` also processes tilde-escape sequences whenever a tilde is entered at the beginning of a new line. If you need to send a tilde sequence at the beginning of a line and you are using `rlogin`, use two tildes (the first escapes the second for `rlogin`). Alternatively, do not enter a tilde at the beginning of a line when running inside of `rlogin`.

**Note** – If you use a `kill -9` command to terminate a console session, the window or terminal in which the console command was executed goes into raw mode and appears hung. To escape this condition, type `CTRL-j`, then `stty sane`, and then `CTRL-j`.

### Group Privileges Required

You must have domain administrator privileges on the domain specified. Users with only platform group privileges are not allowed access to a domain console.

Refer to Chapter 2 in the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

**EXAMPLE 1** Opening a Console Window in Locked Mode in Domain a

```
sc0:sms-user:> console -d a -l
```

**Note** – In the domain console window, `vi(1)` runs properly and the escape sequences (tilde commands) work as intended only if the environment variable `TERM` has the same setting as that of the console window. For example:

```
sc0:sms-user:> setenv TERM xterm
```

**EXIT STATUS**

The following exit values are returned:

0                   Successful completion.  
>0                   An error occurred.

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

`addtag(1M)`, `dxs(1M)`, `kill(1)`, `rlogin(1)`, `set(1)`, `stty(1)`, `vi(1)`, `xterm(1M)`



|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | dca - domain configuration agent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>SYNOPSIS</b>    | <b>dca</b> -d <i>domain_indicator</i> [-H <i>hostname</i> ]<br><b>dca</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>DESCRIPTION</b> | <p>dca(1M) provides a communication mechanism between the dca on the system controller and the domain configuration server (dcs) on the specified domain. The dca provides communication services for remote dynamic reconfiguration commands.</p> <p>This agent is automatically started by sscd(1M). Do <i>not</i> start it manually from the command line.</p>                                                                                                                                                                                                                                                                                                                                    |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <p>-d <i>domain_indicator</i>      Specifies the domain using one of the following:</p> <p style="padding-left: 40px;"><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p style="padding-left: 40px;"><i>domain_tag</i> – Name assigned to a domain using addtag(1M).</p> <p>-h                              Help. Displays usage description for the dca command.</p> <p style="padding-left: 40px;"><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-H <i>hostname</i>                The Solaris software host name of the domain associated with the dca.</p> |
| <b>FILES</b>       | <p>The following files are used by this command:</p> <p>/var/opt/SUNWSMS/doors/&lt;domain_id&gt;/dca</p> <p>/var/opt/SUNWSMS/pipes/&lt;domain_id&gt;/scdr0</p> <p>/var/opt/SUNWSMS/pipes/&lt;domain_id&gt;/scdr1</p> <p>/var/opt/SUNWSMS/pipes/&lt;domain_id&gt;/scdr2</p> <p>/var/opt/SUNWSMS/pipes/&lt;domain_id&gt;/scdr3</p> <p>/var/opt/SUNWSMS/pipes/&lt;domain_id&gt;/scdr4</p> <p>/var/opt/SUNWSMS/pipes/&lt;domain_id&gt;/scdr5</p> <p>/var/opt/SUNWSMS/pipes/&lt;domain_id&gt;/scdr6</p> <p>/var/opt/SUNWSMS/pipes/&lt;domain_id&gt;/scdr7</p>                                                                                                                                             |

dca1M

/var/opt/SUNWSMS/pipes/<domain\_id>/scdr8

/var/opt/SUNWSMS/pipes/<domain\_id>/scdr9

**ATTRIBUTES**

See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

addboard(1M), deleteboard(1M), moveboard(1M), rcfgadm(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | deleteboard - unconfigure, disconnect, and unassign a system board from a domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SYNOPSIS</b>    | <b>deleteboard</b> [-c <i>function</i> ] [-r <i>retry_count</i> [-t <i>timeout</i> ]] [-q] [-f] [-y -n] <i>location</i> ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>DESCRIPTION</b> | <p><b>deleteboard-h</b></p> <p>deleteboard(1M) removes a <i>location</i> from the domain it is currently assigned to and possibly active in. The board at that <i>location</i> must be in either the <code>assigned</code> or <code>connected configured</code> states. The <code>-c</code> option is used to specify the transition of the board from the current configuration state to the new configuration state.</p> <p>Configuration states are <code>unconfigure</code>, <code>disconnect</code>, and <code>unassign</code>. If the <code>-c</code> option is not specified, the default expected configuration state is <code>unassign</code>.</p> <p>A domain administrator can unconfigure and disconnect a board but cannot unassign a board from a domain unless the board is in the domain available component list. See <code>setupplatform(1M)</code>. This means the <code>deleteboard location</code> field must appear in the domain available component list.</p> |
| <b>OPTIONS</b>     | The following options are supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

deleteboard(1M)

**Note** – If the `deleteboard` command fails, a board does not return to its original state. A `dxs` or `dca` error message is logged to the domain. If the error is recoverable, you can retry the command. If it is unrecoverable, you need to reboot the domain in order to use that board.

*-c function*

Valid *function* values are *unconfigure*, *disconnect*, or *unassign*. The *-c* option is used to control the configuration state transition. Each successive function builds upon the last. For example, *unassign* first *unconfigures* and then *disconnects* the board before *unassigning* it.

The possible transition states and their meanings are as follows:

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>unconfigure</code> | Unconfigures the board from the Solaris operating system running on the domain. Solaris software stops using any of the hardware resources on the board. Transitions the board into the <code>connected unconfigured</code> state. In this state the system board is assigned to the logical domain and <code>connected</code> (remains in the <code>active</code> state). This state allows normal system access to hardware resources on the board, but the hardware resources of the board are not represented by the normal Solaris software data structures and thus are not available to the Solaris operating system. Operations allowed on the board are limited to configuration administration operations. |
| <code>disconnect</code>  | Unconfigures the board from the Solaris operating system running on the domain. See <code>unconfigure</code> . Transitions the board into the <code>disconnected unconfigured</code> state. Removes the board from the physical domain. An UNCLAIM request is sent by the domain to the SC during this step. In this state the system board is assigned to the logical domain and <code>disconnected</code> .                                                                                                                                                                                                                                                                                                        |
| <code>unassign</code>    | Unconfigures the board from the Solaris operating system running on the domain. See <code>unconfigure</code> . Disconnects the board. See <code>disconnect</code> . Moves the board out of the logical domain by changing its state to <code>available</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

- f** Forces the specified action to occur. Typically, this is a hardware-dependent override of a safety feature. Forcing a state change operation can allow use of the hardware resources of an occupant that is not in the `ok` or `unknown` conditions, at the discretion of any hardware-dependent safety checks.
- h** Help. Displays usage descriptions.
- Note** – Use alone. Any option specified in addition to `-h` is ignored.
- n** Automatically answers no to all prompts. Prompts are displayed unless used with the `-q` option.
- q** Quiet. Suppresses all messages to `stdout` including prompts.
- When used alone `-q` defaults to the `-n` option for all prompts.
- When used with either the `-y` or the `-n` option, `-q` suppresses all user prompts, and automatically answers with either 'y' or 'n' based on the option chosen.
- r *retry\_count*** This command argument enables the user to specify retries in case of failures encountered during state transitions. The `-r retry_count` option can be used alone and indicates the number of times the configuration state change request should be retried by the domain.
- t *timeout*** This command argument enables the user to specify retries in case of failures encountered during state transitions. The `-t timeout` option cannot be used without the `-r retry_count` option and specifies the number of seconds that the domain should wait before the next retry is made. If the `-t timeout` is not specified, the default *timeout* is zero, meaning that the request is retried immediately.
- y** Automatically answers yes to all prompts. Prompts are displayed unless used with the `-q` option.

**OPERANDS**

The following operands are supported:

*location* List of board locations separated by a space. Multiple *location* arguments are permitted.

The following *location* forms are accepted:

Sun Fire 12K and E20K:

SB(0...8)

IO(0...8)

Sun Fire 15K and E25K:

SB(0...17)

IO(0...17)

**Note** – Use `showboards(1M)` to display board type.

**EXTENDED DESCRIPTION****Group Privileges Required**

Users with platform administrator privileges can perform only the `-c unassign` option if the board(s) are in the `assigned` state (that is, not active in a running domain).

Users with domain administrator or configurator privileges can execute this command but only on their respective domains. To unassign a board, the board must be in the domain available component list.

Refer to Chapter 2 in the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES****EXAMPLE 1** Unconfiguring Boards From a Domain

To unconfigure four boards from their domain, you must have domain administrator/configurator privileges and the boards must be in the domain available component list.

All boards are in the `configured` state in the example domain.

```
sc0:sms-user:> deleteboard -c unconfigure SB0 IO1 SB1 SB2
```

**EXAMPLE 2** Unassigning Boards From a Running Domain



To unassign three active boards from their domain, set retries to five and timeout to three seconds. The boards are unconfigured and disconnected before being unassigned. You must have domain administrator/configurator privileges, and the boards must be in the domain available component list.

```
sc0:sms-user:> deleteboard -r5 -t3 IO3 IO4 IO5
```

## EXIT STATUS

The following exit values are returned:

|    |                                         |
|----|-----------------------------------------|
| 0  | Successful completion.                  |
| 1  | No acknowledge.                         |
| 2  | Not supported.                          |
| 3  | Operation not supported.                |
| 4  | Invalid privileges.                     |
| 5  | Busy.                                   |
| 6  | System busy.                            |
| 7  | Data error.                             |
| 8  | Library error.                          |
| 9  | No library.                             |
| 10 | Insufficient condition.                 |
| 11 | Invalid.                                |
| 12 | Error.                                  |
| 13 | A PID does not exist.                   |
| 14 | Invalid attribute.                      |
| 30 | Invalid board ID type.                  |
| 31 | Invalid permissions.                    |
| 32 | Assigned to another domain.             |
| 33 | Unable to get permissions.              |
| 34 | Unable to get domain board info.        |
| 35 | Unable to get active board list.        |
| 36 | Unable to get assigned board list.      |
| 38 | Solaris not running.                    |
| 39 | Unable to assign/unassign domain state. |
| 40 | Unable to get domain permissions.       |

deleteboard(1M)

- 41 Unable to get platform permissions.
- 52 Invalid privileges
- 53 Internal error.
- 54 Library error.
- 56 DR command syntax error.
- 58 Internal error.
- 68 Location not assigned.
- 69 Location not configured.
- 70 DR operation failed.

**ATTRIBUTES**

See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

addboard (1M) , moveboard (1M)

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | deletecodlicense - remove a Capacity on Demand (COD) right-to-use (RTU) license key from the COD license database                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SYNOPSIS</b>                  | <b>deletecodlicense</b> [-f] <i>license-signature</i><br><b>deletecodlicense</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>DESCRIPTION</b>               | <p>The <code>deletecodlicense(1M)</code> command removes the specified COD RTU license key from the COD license database on the SC. For further information about COD RTU license keys, refer to the <i>SMS Administrator Guide</i>.</p> <p>The system checks the number of COD RTU licenses against the number of COD CPUs in use. If the license removal will result in an insufficient number of COD RTU licenses with respect to the CPU in use, the system does not delete the license key from the COD RTU license database. If you still want to delete the COD RTU license key, you must reduce the number of COD CPUs in use. You can either power off the appropriate number of domains or use dynamic reconfiguration (DR) to disconnect the appropriate number of boards.</p> <p>However, you can force the deletion of a COD RTU license by specifying the <code>-f</code> option, even if the license removal will result in a license violation.</p> |
| <b>OPTIONS</b>                   | <p>The following options are supported:</p> <p><code>-f</code> Forces the specified COD RTU license key to be deleted from the COD license database.</p> <p><code>-h</code> Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to <code>-h</code> is ignored.</p> <p><i>license-signature</i> Specifies the COD RTU license key to be deleted from the COD license database.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Group Privileges Required</b> | <p>You must have platform administrator group privileges to run this command.</p> <p>Refer to Chapter 2 in the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>EXAMPLES</b>                  | <p><b>EXAMPLE 1</b> Deleting a COD RTU license key</p> <pre>sc0:sms-user:&gt;deletecodlicense\<br/>01:5014936C37048:01001:0201010302:4:20020430:jWGJdg/<br/>kx78b0wyK2xrqIg</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## deletecodlicense(1M)

### EXIT STATUS

The following exit values are returned:

- 0 Successful completion.
- 1 Invalid usage
- 2 Invalid group privileges.
- >2 An internal error occurred. For further information, see `/var/opt/SUNWSMS/adm/platform/messages`.

### ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

### SEE ALSO

`addcodlicense(1M)`, `codd(1M)`, `showcodlicense(1M)`, `showcodusage(1M)`

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | deletetag - remove the domain tag name associated with the domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>SYNOPSIS</b>                  | <b>deletetag</b> -d <i>domain_indicator</i> [-q] [-y   -n]<br><b>deletetag</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>DESCRIPTION</b>               | deletetag(1M) removes the domain tag associated with the domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>OPTIONS</b>                   | The following options are supported:<br><br>-d <i>domain_indicator</i> Specifies the domain using one of the following:<br><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.<br><i>domain_tag</i> – Name assigned to a domain using addtag(1M).<br>-h                                Help. Displays usage descriptions.<br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.<br>-n                                Automatically answers no to all prompts. Prompts are displayed unless used with the -q option.<br>-q                                Quiet. Suppresses all messages to stdout including prompts.<br>When used alone, -q defaults to the -n option for all prompts.<br>When used with either the -y or the -n option, -q suppresses all user prompts and automatically answers with either 'y' or 'n' based on the option chosen.<br>-y                                Automatically answers yes to all prompts. Prompts are displayed unless used with the -q option. |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Group Privileges Required</b> | You must have platform administrator privileges to run this command.<br>Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>EXAMPLES</b>                  | <b>EXAMPLE 1</b> Deleting Tag eng2 From the Domain to Which It Was Assigned<br><br><pre>sc0:sms-user:&gt; deletetag -d eng2 -qy</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## deletetag(1M)

You are not prompted.

### EXIT STATUS

The following exit values are returned:

0                   Successful completion.

>0                   An error occurred.

If the *domain\_id* does not have a tag, no error is returned.  
deletetag(1M) is treated as successful.

### ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

### SEE ALSO

`addtag(1M)`

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | disablecomponent - add the specified component to the specified blacklist file                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>SYNOPSIS</b>    | <b>disablecomponent</b> [-d <i>domain_indicator</i> ] [-i " <i>reason</i> " ] <i>location</i> ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>DESCRIPTION</b> | <p><b>disablecomponent -h</b></p> <p>disablecomponent(1M) adds a component to the domain or platform blacklist, making it ineligible for booting.</p> <p>The <i>blacklist</i> is an internal file that lists components that POST cannot use at boot time. POST reads the blacklist file(s) before preparing the system for booting, and passes along to OpenBoot PROM a list of only those components that have been successfully tested; those on the blacklist are excluded. SMS supports three blacklists: one for domain boards, one for platform boards, and the internal automatic system recovery (ASR) blacklist.</p> <p>disablecomponent, when used without any option, edits the platform blacklist file.</p> <p>disablecomponent <i>cannot</i> be used on the ASR blacklist file; only enablecomponent(1M) can be used to write to the ASR blacklist file.</p> <p>For more information on the use and editing of platform and domain blacklists, refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i>.</p> |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <p>-d <i>domain_indicator</i>      Specifies the domain using one of the following:</p> <p style="padding-left: 40px;"><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p style="padding-left: 40px;"><i>domain_tag</i> – Name assigned to a domain using addtag(1M).</p> <p>-h                              Help. Displays usage descriptions.</p> <p style="padding-left: 40px;"><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-i <i>reason</i>                      Short, descriptive explanation for adding a component to the domain blacklist. Must be enclosed in either single or double quotation marks, or be a single word.</p>                                                                                                                                                                                                                                                               |

disablecomponent(1M)

**OPERANDS**

The following operands are supported:



*location*

List of component locations, separated by forward slashes and comprising the following:

*board\_loc/proc/bank/logical\_bank*

*board\_loc/proc/bank/all\_dimms\_on\_that\_bank*

*board\_loc/proc/all\_banks\_on\_that\_proc*

*board\_loc/all\_banks\_on\_that\_board*

*board\_loc/proc*

*board\_loc/procs*

*board\_loc/cassette*

*board\_loc/bus*

*board\_loc/paroli\_link*

Multiple *location* arguments are permitted, separated by a space.

The *location* forms are optional and are used to specify particular components on boards in specific locations.

For example, the *location* SB5/P0/B1/L1 indicates Logical Bank 1 of Bank 1 on Processor 0 at SB5.

The SB0/PP1 *location* indicates Processor Pair 1 at SB0.

The CS0/ABUS *location* indicates address bus 0 on the centerplane.

The EX11/DBUS1 *location* indicates data bus 1 at expander 11.

The following *board\_loc* forms are accepted:

Sun Fire 12K and E20K:

SB(0 . . . 8)

IO(0 . . . 8)

Sun Fire 15K and E25K:

SB(0 . . . 17)

IO(0 . . . 17)

Processor locations indicate single processors or processor pairs.

There are four possible processors on a CPU/memory board. Processor pairs on that board are procs 0 and 1, and procs 2 and 3.

**Note** – If you blacklist a processor `cpu0` in `procpair0`, its CPU partner, `cpu1`, is also removed from the domain configuration, and neither processor is used. If `cpu1` is disabled, `cpu0` remains in the domain configuration. If either `cpu2` or `cpu3` in `procpair1` is disabled, the other CPU in the pair remains unaffected.

The MaxCPU has two processors, procs 0 and 1, and only one proc pair (PP0). Using PP1 for this board causes `disablecomponent` to exit and display an error message.

The following *proc* forms are accepted:

P(0...3)      PP(0|1)

The following *bank* forms are accepted:

B(0|1)

The following *logical\_bank* forms are accepted:

L(0|1)

The following *all\_dimms\_on\_that\_bank* form is accepted:

D

The following *all\_banks\_on\_that\_proc* form is accepted:

B

The following *all\_banks\_on\_that\_board* form is accepted:

B

The following *paroli\_link* forms are accepted:

PAR(0|1)

The hsPCI assemblies contain hot-swappable cassettes.

The following *hsPCI* forms are accepted:

C (3 | 5) V (0 | 1)

The hsPCI+ assemblies contain hot-swappable cassettes.

The following *hsPCI+* forms are accepted:

C3V (0 | 1 | 2) and C5V0

There are three bus locations: address, data, and response.

The following *bus* forms are accepted:

ABUS | DBUS | RBUS (0 | 1)

## EXTENDED DESCRIPTION

### Group Privileges Required

You must have platform administrator, domain administrator, or domain configurator privileges to run this command. If you have platform privileges, you can run this command for the platform components only. If you have domain privileges you can run this command only on the domain for which you have privileges.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

## EXAMPLES

**EXAMPLE 1** Adding CSB 0 and Processor 2 on System Board 1 to the Domain A Blacklist

```
sc0:sms-user:> disablecomponent -dA CS0 SB1/P2
```

**EXAMPLE 2** Adding the Logical Bank 0 of Bank 0 on Processor 0 on System Board 0 to the Domain A Blacklist

```
sc0:sms-user:> disablecomponent -dA SB0/P0/B0/L0
```

**EXAMPLE 3** Adding All DIMMs on Bank 0 of Processor 1 on System Board 3 to the Domain A Blacklist

```
sc0:sms-user:> disablecomponent -dA SB3/P1/B0/D
```

**EXAMPLE 4** Adding All Banks on Processor 0 on System Board 1 to the Domain B Blacklist

```
sc0:sms-user:> disablecomponent -dB SB1/P0/B
```

## disablecomponent(1M)

**EXAMPLE 5** Adding All Banks on System Board 0 to the Domain D Blacklist

```
sc0:sms-user:> disablecomponent -dD SB0/B
```

**EXAMPLE 6** Adding Processor Pair 1 on System Board 3 to the Platform Blacklist

```
sc0:sms-user:> disablecomponent SB3/PP1
```

**EXAMPLE 7** Adding the hsPCI Cassette in the 5V slot 0 of IO Board 6 to the Domain A Blacklist

```
sc0:sms-user:> disablecomponent -dA IO6/C5V0
```

**EXAMPLE 8** Adding Paroli Link 0 on wPCI Board 7 to the Platform Blacklist

```
sc0:sms-user:> disablecomponent IO7/PAR0
```

**EXAMPLE 9** Adding the Data Bus CS0 on EX9 to the Domain A Blacklist

```
sc0:sms-user:> disablecomponent -dA EX9/DBUS0
```

**EXAMPLE 10** Adding CSB 0 and Processor 2 on System Board 1 to the Domain A Blacklist Because It Is Scheduled to Be Upgraded

```
sc0:sms-user:> disablecomponent -dA -i upgrade CS0 SB1/P2
```

**EXAMPLE 11** Adding Processor Pair 1 on System Board 3 to the Platform Blacklist Because It Needs Service

```
sc0:sms-user:> disablecomponent -i "Needs service" SB3/PP1
```

### EXIT STATUS

The following exit values are returned:

|    |                        |
|----|------------------------|
| 0  | Successful completion. |
| >0 | An error occurred.     |

### FILES

The following files are used by this command.

|                                             |                                           |
|---------------------------------------------|-------------------------------------------|
| /etc/opt/SUNWSMS/config/platform/blacklist  | List of platform components excluded.     |
| /etc/opt/SUNWSMS/config/domain_id/blacklist | List of domain components to be excluded. |

**ATTRIBUTES** See attributes (5) for a description of the following attribute.

| Attribute Type | Attribute Value |
|----------------|-----------------|
| Availability   | SUNWSMSop       |

**SEE ALSO** addboard (1M), enablecomponent (1M), esmd (1M), showcomponent (1M)

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------|---------|------------------------|-----|------------------------|---------|----------------------|---------|----------------------------------------|----------|--------------------------------------|
| <b>NAME</b>                 | dsmd - domain status monitoring daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
| <b>SYNOPSIS</b>             | <b>dsmd</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
| <b>DESCRIPTION</b>          | <p>dsmd(1M) monitors domain status and operating system (OS) heartbeat for up to 18 domains on Sun Fire 15K/E25K systems, and up to nine domains on Sun Fire 12K/E20K systems.</p> <p>dsmd automatically recovers the domain and handles domain-related hardware errors. In the event of a domain hang, dsmd resets the domain, collects CPU registers and hardware configuration dumps, and saves them to two files. This daemon also passes to efd(1M) any automatic diagnosis (AD) information related to a domain stop.</p> <p>All domain state changes are monitored and logged in domain-specific log files if the message level is INFO; otherwise there is no log for a state change.</p> <p>This daemon is started automatically by the sdd(1M) daemon. Do <i>not</i> start it manually from the command line.</p> |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
| <b>EXTENDED DESCRIPTION</b> | <p>dsmd logs the following events and attempts to recover from them:</p> <ul style="list-style-type: none"> <li>■ Domain boot failure</li> <li>■ Error reset</li> <li>■ Solaris OS hang</li> <li>■ Domain panic</li> <li>■ Domain reset/reboot</li> <li>■ DStop</li> <li>■ Boot/panic/error_reset_sync timeout</li> </ul> <p>dsmd clients include:</p> <table border="0"> <tr> <td>codd(1M)</td> <td>Capacity on Demand (COD) daemon</td> </tr> <tr> <td>dxs(1M)</td> <td>Domain X server daemon</td> </tr> <tr> <td>efe</td> <td>Event Front-end daemon</td> </tr> <tr> <td>osd(1M)</td> <td>OpenBoot PROM daemon</td> </tr> <tr> <td>pcd(1M)</td> <td>Platform configuration database daemon</td> </tr> <tr> <td>esmd(1M)</td> <td>Environment status monitoring daemon</td> </tr> </table>                               | codd(1M) | Capacity on Demand (COD) daemon | dxs(1M) | Domain X server daemon | efe | Event Front-end daemon | osd(1M) | OpenBoot PROM daemon | pcd(1M) | Platform configuration database daemon | esmd(1M) | Environment status monitoring daemon |
| codd(1M)                    | Capacity on Demand (COD) daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
| dxs(1M)                     | Domain X server daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
| efe                         | Event Front-end daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
| osd(1M)                     | OpenBoot PROM daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
| pcd(1M)                     | Platform configuration database daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |
| esmd(1M)                    | Environment status monitoring daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                                 |         |                        |     |                        |         |                      |         |                                        |          |                                      |



|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | dxs - domain X server                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>SYNOPSIS</b>    | <b>dxs</b> [-S] -d <i>domain_indicator</i><br><b>dxs</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>DESCRIPTION</b> | <p>dxs(1M) provides software support for a domain. This support includes virtual console functionality, dynamic reconfiguration mailbox support, and PCI mailbox support. The mailbox support handles domain driver requests and events. The virtual console functionality enables one or more users running the console program to access the domain's virtual console.</p> <p>When the domain is running Solaris software, dxs acts as a relay between the domain's console driver (<i>cvcd</i>) and the running console windows. When the domain is not running Solaris software, dxs acts as a relay between OpenBoot PROM and the running console windows.</p> <p>A domain X server is automatically started for each active domain by the <i>ssd</i>(1M) daemon. Do <i>not</i> start it manually from the command line. dxs for the domain is terminated when the domain is shut down.</p> |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <p>-d <i>domain_indicator</i>      Specifies the domain using one of the following:</p> <p style="padding-left: 40px;"><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p style="padding-left: 40px;"><i>domain_tag</i> – Name assigned to a domain using <i>addtag</i>(1M).</p> <p>-h                              Help. Displays usage descriptions for the specified <i>hostname</i>.</p> <p style="padding-left: 40px;"><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-S                              Disables console output logging. By default, logging is enabled and is written to the <i>/var/opt/SUNWSMS/adm/domain_id/console</i> file.</p>                                                                                                     |
| <b>EXIT STATUS</b> | <p>The following exit values are returned:</p> <p>0                              Successful completion.</p> <p>&gt;0                             An error occurred.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



**ATTRIBUTES** See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** addtag (1M), console (1M), ssd (1M)

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------|------------------------------|-------------------------------------------|---------------------------------------|-------------------------------------|------------------------|------------------------------------------|----------------------------------------------------------|------------------------------------------|--|-----------------------------------------|--|-----------------------------------------|--|
| <b>NAME</b>                               | efhd - error and fault handling daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| <b>SYNOPSIS</b>                           | <b>efhd</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| <b>DESCRIPTION</b>                        | <p>efhd(1M) performs automatic error diagnosis based on error information passed by dsmd(1M). efhd also updates the health status of components associated with a hardware failure, based on the list event that captures the diagnosis performed by the automatic diagnosis (AD) engine, POST, or the Solaris operating system on domains. efhd passes this list event to erd(1M) for reporting.</p> <p>This daemon is started automatically by the ssd(1M) daemon. Do <i>not</i> start it manually from the command line.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| <b>EXTENDED DESCRIPTION</b>               | <p>efhd(1M) does the following:</p> <ul style="list-style-type: none"> <li>■ Receives the diagnosis results performed by the other diagnosis engines in the system, POST, and the domain Solaris operating system</li> <li>■ Analyzes errors captured in dstop files</li> <li>■ Analyzes errors in the data path</li> <li>■ Analyzes non-fatal CPU errors</li> <li>■ Analyzes ECC errors</li> <li>■ Generates the error information used by the automatic diagnosis engine to determine components associated with the encountered errors</li> <li>■ Updates the component health status of the components associated with the encountered errors</li> <li>■ Passes the diagnosis results to erd(1M) for reporting</li> </ul> <p>For more information, refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i>.</p>                                                                                                                                                                                                                |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| <b>FILES</b>                              | <p>The following files are supported:</p> <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 2em;">/etc/opt/SUNWSMS/startup/ssd_start</td> <td style="padding-left: 2em;">Default startup file for ssd</td> </tr> <tr> <td style="padding-left: 2em;">/etc/opt/SUNWSMS/SMS/config/efhd_rules.cf</td> <td style="padding-left: 2em;">Contains specialized diagnosis rules.</td> </tr> <tr> <td style="padding-left: 2em;">/etc/opt/SUNWSMS/SMS/config/efhd.cf</td> <td style="padding-left: 2em;">Contains efhd tunables</td> </tr> <tr> <td style="padding-left: 2em;">/etc/opt/SUNWSMS/SMS/config/SF12000.dict</td> <td style="padding-left: 2em;">Contains primary and known permutations of fault classes</td> </tr> <tr> <td style="padding-left: 2em;">/etc/opt/SUNWSMS/SMS/config/SF15000.dict</td> <td></td> </tr> <tr> <td style="padding-left: 2em;">/etc/opt/SUNWSMS/SMS/config/E20000.dict</td> <td></td> </tr> <tr> <td style="padding-left: 2em;">/etc/opt/SUNWSMS/SMS/config/E25000.dict</td> <td></td> </tr> </table> |  | /etc/opt/SUNWSMS/startup/ssd_start | Default startup file for ssd | /etc/opt/SUNWSMS/SMS/config/efhd_rules.cf | Contains specialized diagnosis rules. | /etc/opt/SUNWSMS/SMS/config/efhd.cf | Contains efhd tunables | /etc/opt/SUNWSMS/SMS/config/SF12000.dict | Contains primary and known permutations of fault classes | /etc/opt/SUNWSMS/SMS/config/SF15000.dict |  | /etc/opt/SUNWSMS/SMS/config/E20000.dict |  | /etc/opt/SUNWSMS/SMS/config/E25000.dict |  |
| /etc/opt/SUNWSMS/startup/ssd_start        | Default startup file for ssd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| /etc/opt/SUNWSMS/SMS/config/efhd_rules.cf | Contains specialized diagnosis rules.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| /etc/opt/SUNWSMS/SMS/config/efhd.cf       | Contains efhd tunables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| /etc/opt/SUNWSMS/SMS/config/SF12000.dict  | Contains primary and known permutations of fault classes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| /etc/opt/SUNWSMS/SMS/config/SF15000.dict  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| /etc/opt/SUNWSMS/SMS/config/E20000.dict   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |
| /etc/opt/SUNWSMS/SMS/config/E25000.dict   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                    |                              |                                           |                                       |                                     |                        |                                          |                                                          |                                          |  |                                         |  |                                         |  |

**ATTRIBUTES** See attributes (5) for a description of the following attribute:

| Attribute Type | Attribute Value |
|----------------|-----------------|
| Availability   | SUNWSMSop       |

**SEE ALSO** dsmd(1M), erd(1M), ssd(1M)

| <b>NAME</b>                                              | elad - event log access daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------|----------------------------------------------|---------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|
| <b>SYNOPSIS</b>                                          | <b>elad</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
| <b>DESCRIPTION</b>                                       | <p>elad(1M) controls access to the SMS event log (<code>eventlog</code>), which records fault and error events identified by the automatic diagnosis (AD) engine on a Sun Fire high-end system. This daemon also performs the following archive tasks:</p> <ul style="list-style-type: none"> <li>■ Starts a new event log file whenever the current event log reaches its size limit. The current log file is archived as <code>eventlog.0</code>. Whenever a new event log is created, the file names of existing archive logs are incremented by 1. A maximum of ten archive files (<code>eventlog.0</code> through <code>eventlog.9</code>) is maintained.</li> <li>■ Deletes the oldest archive file, <code>eventlog.9</code>, whenever a new event log file is created.</li> <li>■ Passes error and list events to elad(1M) for recording.</li> </ul> <p>This daemon is started automatically by the <code>ssd(1M)</code> daemon. Do <i>not</i> start it manually from the command line.</p> |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
| <b>FILES</b>                                             | <p>The following files are supported:</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"><code>/etc/opt/SUNWSMS/SMS/config/elad_tuning.txt</code></td> <td style="vertical-align: top;">Sets the size, number of archive files to be maintained, and number of days that the archive files are to be retained.</td> </tr> <tr> <td style="vertical-align: top;"><code>/etc/opt/SUNWSMS/startup/ssd_start</code></td> <td style="vertical-align: top;">Default startup file for <code>ssd</code>.</td> </tr> <tr> <td style="vertical-align: top;"><code>/var/opt/SUNWSMS/adm/domain_id/</code></td> <td style="vertical-align: top;">Stores message files and <code>hpost</code> dump files.</td> </tr> <tr> <td style="vertical-align: top;"><code>/var/opt/SUNWSMS/SMS/adm/events/eventlog</code></td> <td style="vertical-align: top;">Stores all the hardware-related error and fault events</td> </tr> </table>                                                | <code>/etc/opt/SUNWSMS/SMS/config/elad_tuning.txt</code> | Sets the size, number of archive files to be maintained, and number of days that the archive files are to be retained. | <code>/etc/opt/SUNWSMS/startup/ssd_start</code> | Default startup file for <code>ssd</code> . | <code>/var/opt/SUNWSMS/adm/domain_id/</code> | Stores message files and <code>hpost</code> dump files. | <code>/var/opt/SUNWSMS/SMS/adm/events/eventlog</code> | Stores all the hardware-related error and fault events |
| <code>/etc/opt/SUNWSMS/SMS/config/elad_tuning.txt</code> | Sets the size, number of archive files to be maintained, and number of days that the archive files are to be retained.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
| <code>/etc/opt/SUNWSMS/startup/ssd_start</code>          | Default startup file for <code>ssd</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
| <code>/var/opt/SUNWSMS/adm/domain_id/</code>             | Stores message files and <code>hpost</code> dump files.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
| <code>/var/opt/SUNWSMS/SMS/adm/events/eventlog</code>    | Stores all the hardware-related error and fault events                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
| <b>ATTRIBUTES</b>                                        | <p>See <code>attributes(5)</code> for descriptions of the following attributes.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Attribute Types</th> <th style="text-align: center;">Attribute Values</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Availability</td> <td style="text-align: center;">SUNWSMSop</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Attribute Types                                          | Attribute Values                                                                                                       | Availability                                    | SUNWSMSop                                   |                                              |                                                         |                                                       |                                                        |
| Attribute Types                                          | Attribute Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
| Availability                                             | SUNWSMSop                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |
| <b>SEE ALSO</b>                                          | <code>efhd(1M)</code> , <code>elad(1M)</code> , <code>erd(1M)</code> , <code>mld(1M)</code> , <code>ssd(1M)</code>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                          |                                                                                                                        |                                                 |                                             |                                              |                                                         |                                                       |                                                        |

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NAME        | enablecomponent - remove the specified component from the specified blacklist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| SYNOPSIS    | <b>enablecomponent</b> [-a   -d <i>domain_indicator</i> ] <i>location</i> ...<br><b>enablecomponent</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| DESCRIPTION | <p>enablecomponent(1M) removes a component from the platform, domain, or ASR blacklist, making it eligible for booting.</p> <p>The <i>blacklist</i> is an internal file that lists components that POST cannot use at boot time. POST reads the blacklist file(s) before preparing the system for booting, and passes along to OpenBoot PROM a list of only those components that have been successfully tested; those on the blacklist are excluded. SMS supports three blacklists: one for domain boards, one for platform boards, and the internal ASR blacklist.</p> <p>The ASR <i>blacklist</i> is an internal file created by esmd when it powers off components due to environmental conditions. The ASR blacklist is also used by the power libraries and SMS commands to prevent turning on a bad component.</p> <p>enablecomponent, when used without any option, edits the platform blacklist.</p> <p>Use showcomponent(1M) to display whether a particular component is currently blacklisted.</p> <p>For more information on the use and editing of platform and domain blacklists refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i>.</p> |
| OPTIONS     | <p>The following options are supported:</p> <p>-a                                Specifies the component named in <i>location</i> will be removed from the ASR blacklist.</p> <p>-d <i>domain_indicator</i>        Specifies the domain using one of the following:</p> <p style="padding-left: 40px;"><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case insensitive.</p> <p style="padding-left: 40px;"><i>domain_tag</i> – Name assigned to a domain using addtag(1M).</p> <p>-h                                Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

enablecomponent(1M)

**OPERANDS**

The following operands are supported:

*location*

List of component locations, separated by forward slashes and comprised of:

*board\_loc/proc/bank/logical\_bank*

*board\_loc/proc/bank/all\_dimms\_on\_that\_bank*

*board\_loc/proc/all\_banks\_on\_that\_proc*

*board\_loc/all\_banks\_on\_that\_board*

*board\_loc/proc*

*board\_loc/procs*

*board\_loc/cassette*

*board\_loc/bus*

*board\_loc/paroli\_link*

Multiple *location* arguments are permitted, separated by a space.

The *location* forms are optional and are used to specify particular components on boards in specific locations.

For example, the *location* SB5/P0/B1/L1 indicates Logical Bank 1 of Bank 1 on Processor 0 at SB5.

The SB0/PP1 *location* indicates Processor Pair 1 at SB0.

The CS0/ABUS *location* indicates address bus 0 on the centerplane.

The EX11/DBUS1 *location* indicates data bus 1 at expander 11.

The following *board\_loc* forms are accepted:

Sun Fire 12K and E20K:

SB(0 . . . 8)

IO(0 . . . 8)

Sun Fire 15K and E25K:

SB(0 . . . 17)

IO(0 . . . 17)

Processor locations indicate single processors or processor pairs.

There are four possible processors on a CPU/memory board. Processor pairs on that board are: procs 0 and 1, and procs 2 and 3.

The MaxCPU has two processors, procs 0 and 1, and only one proc pair (PP0). Using PP1 for this board causes `enablecomponent` to exit and display an error message.

The following *proc* forms are accepted:

P(0 . . . 3)      PP(0 | 1)

The following *bank* forms are accepted:

B(0 | 1)

The following *logical\_bank* forms are accepted:

L(0 | 1)

The following *all\_dimms\_on\_that\_bank* forms are accepted:

D

The following *all\_banks\_on\_that\_proc* forms are accepted:

B

The following *all\_banks\_on\_that\_board* forms are accepted:

B

The following *paroli\_link* forms are accepted:

PAR(0 | 1)



The hsPCI assemblies contain hot-swappable cassettes.

The following *hsPCI* forms are accepted:

C (3 | 5) V (0 | 1)

The hsPCI+ assemblies contain hot-swappable cassettes.

The following *hsPCI+* forms are accepted:

C3V (0 | 1 | 2) and C5V0

There are three bus locations: address, data, and response.

The following *bus* forms are accepted:

ABUS | DBUS | RBUS (0 | 1)

## EXTENDED DESCRIPTION

### Group Privileges Required

You must have platform administrator, domain administrator, or domain configurator privileges to run this command. If you have platform privileges, you can run this command for the platform components only. If you have domain privileges, you can run this command only on the domain for which you have privileges.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

## EXAMPLES

**EXAMPLE 1** Removing CSB0 From the ASR Blacklist

```
sc0:sms-user:> enablecomponent -a CS0
```

**EXAMPLE 2** Removing the Logical Bank 0 of Bank 0 on Processor 0 on System Board 0 From the Domain A Blacklist

```
sc0:sms-user:> enablecomponent -dA SB0/P0/B0/L0
```

**EXAMPLE 3** Removing All DIMMs on Bank 0 of Processor 1 on System Board 3 From the Domain A Blacklist

```
sc0:sms-user:> enablecomponent -dA SB3/P1/B0/D
```

**EXAMPLE 4** Removing All Banks on Processor 0 on System Board 1 From the Domain B Blacklist

```
sc0:sms-user:> enablecomponent -dB SB1/P0/B
```

**EXAMPLE 5** Removing All Banks on System Board 0 From the Domain D Blacklist

```
sc0:sms-user:> enablecomponent -dD SB0/B
```

**EXAMPLE 6** Removing Processor Pair 0 on I/O Board 7 From the Platform Blacklist

```
sc0:sms-user:> enablecomponent IO7/PP0
```

**EXAMPLE 7** Removing Processor 1 on System Board 3 From the Domain A Blacklist

```
sc0:sms-user:> enablecomponent -dA SB3/P1
```

**EXAMPLE 8** Removing the hsPCI Cassette in the 3V slot 0 of IO Board 6 From the Domain A Blacklist

```
sc0:sms-user:> enablecomponent -dA IO6/C3V0
```

**EXAMPLE 9** Removing the Paroli Link 0 on wPCI Board 5 From the Platform Blacklist

```
sc0:sms-user:> enablecomponent IO5/PAR0
```

**EXAMPLE 10** Removing the Address Bus CS0 on EX7 From the Domain A Blacklist

```
sc0:sms-user:> enablecomponent -dA EX7/ABUS0
```

## EXIT STATUS

The following exit values are returned:

|    |                        |
|----|------------------------|
| 0  | Successful completion. |
| >0 | An error occurred.     |

## FILES

The following files are used by this command.

|                                             |                                       |
|---------------------------------------------|---------------------------------------|
| /etc/opt/SUNWSMS/config/asr/blacklist       | List of components excluded by esmd.  |
| /etc/opt/SUNWSMS/config/platform/blacklist  | List of platform components excluded. |
| /etc/opt/SUNWSMS/config/domain_id/blacklist | List of domain components excluded.   |

## ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** | addboard(1M), disablecomponent(1M), esmd(1M), showcomponent(1M)

erd(1M)

| <b>NAME</b>                                                     | erd - event reporting daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------|-----------------------------------------------------------------|------------------------------------------|----------------------------------------------------------------|------------------------------------|-------------------------------------------------|-------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|
| <b>SYNOPSIS</b>                                                 | <b>erd</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| <b>DESCRIPTION</b>                                              | <p>erd(1M) provides reporting services that deliver fault event text messages to platform and domain logs, information for Sun Management Center and Sun Remote Services, and email reports that contain fault event messages.</p> <p>This daemon is started automatically by the <code>ssd(1M)</code> daemon. Do <i>not</i> start it manually from the command line.</p>                                                                                                                                                                                                                                                                                                                              |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| <b>FILES</b>                                                    | <p>The following files are supported:</p> <table><tr><td><code>/etc/opt/SUNWSMS/SMS/config/event_email.cf</code></td><td>Controls email notifications</td></tr><tr><td><code>/etc/opt/SUNWSMS/SMS/config/templates/sample_email</code></td><td>Default format of event content in email</td></tr><tr><td><code>/etc/opt/SUNWSMS/SMS/config/templates/sendmail.sh</code></td><td>Default shell script to send email</td></tr><tr><td><code>/etc/opt/SUNWSMS/startup/ssd_start</code></td><td>Default startup file for <code>ssd</code></td></tr><tr><td><code>/var/opt/SUNWSMS/SMS/adm/platform/events/eventlog</code></td><td>Stores all the hardware-related error and fault events</td></tr></table> | <code>/etc/opt/SUNWSMS/SMS/config/event_email.cf</code> | Controls email notifications | <code>/etc/opt/SUNWSMS/SMS/config/templates/sample_email</code> | Default format of event content in email | <code>/etc/opt/SUNWSMS/SMS/config/templates/sendmail.sh</code> | Default shell script to send email | <code>/etc/opt/SUNWSMS/startup/ssd_start</code> | Default startup file for <code>ssd</code> | <code>/var/opt/SUNWSMS/SMS/adm/platform/events/eventlog</code> | Stores all the hardware-related error and fault events |
| <code>/etc/opt/SUNWSMS/SMS/config/event_email.cf</code>         | Controls email notifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| <code>/etc/opt/SUNWSMS/SMS/config/templates/sample_email</code> | Default format of event content in email                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| <code>/etc/opt/SUNWSMS/SMS/config/templates/sendmail.sh</code>  | Default shell script to send email                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| <code>/etc/opt/SUNWSMS/startup/ssd_start</code>                 | Default startup file for <code>ssd</code>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| <code>/var/opt/SUNWSMS/SMS/adm/platform/events/eventlog</code>  | Stores all the hardware-related error and fault events                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| <b>ATTRIBUTES</b>                                               | <p>See <code>attributes(5)</code> for a description of the following attribute:</p> <table border="1"><thead><tr><th>Attribute Type</th><th>Attribute Value</th></tr></thead><tbody><tr><td>Availability</td><td>SUNWSMSop</td></tr></tbody></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Attribute Type                                          | Attribute Value              | Availability                                                    | SUNWSMSop                                |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| Attribute Type                                                  | Attribute Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| Availability                                                    | SUNWSMSop                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |
| <b>SEE ALSO</b>                                                 | <code>mld(1M)</code> , <code>ssd(1M)</code> , <code>testemail(1M)</code>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                         |                              |                                                                 |                                          |                                                                |                                    |                                                 |                                           |                                                                |                                                        |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------|------------------|----------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------|
| <b>NAME</b>                 | esmd - environmental status monitoring daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
| <b>SYNOPSIS</b>             | <b>esmd</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
| <b>DESCRIPTION</b>          | <p>esmd(1M) monitors system cabinet environmental conditions—for example, voltage, temperature, fan tray, and power supply. esmd logs abnormal conditions and takes action, if necessary, to protect the hardware.</p> <p>This daemon is started automatically by the sssd(1M) daemon. Do <i>not</i> start it manually from the command line.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
| <b>EXTENDED DESCRIPTION</b> | <p>esmd monitors the following boards for out-of-range conditions:</p> <ul style="list-style-type: none"> <li>■ CPU board</li> <li>■ MaxCPU board</li> <li>■ HPCI board</li> <li>■ HPCI+ board</li> <li>■ Expander board</li> <li>■ Centerplane support board</li> <li>■ SC control board</li> <li>■ SC I/O</li> <li>■ Fan control board</li> <li>■ Power supplies (bulk)</li> </ul> <p>esmd recognizes the following events and alerts the appropriate clients/daemons:</p> <table border="0"> <tr> <td style="vertical-align: top;">Component insertion</td> <td>Notices component presence from one polling cycle to the next. esmd sends notification only if that client (hwad(1M), pcd(1M), dsmd(1M), and so on) has requested it for that particular component type.</td> </tr> <tr> <td style="vertical-align: top;">Component removal</td> <td>Notices component absence from one polling cycle to the next. esmd sends notification only if that client (hwad, pcd, and so on) has requested it for that particular component type.</td> </tr> <tr> <td style="vertical-align: top;">PCI card insertion</td> <td>Notices whenever a PCI card has been inserted into a PCI board.</td> </tr> <tr> <td style="vertical-align: top;">PCI card removal</td> <td>Notices whenever a PCI card has been removed from a PCI board.</td> </tr> <tr> <td style="vertical-align: top;">Board power off</td> <td>Notices whenever a board is powered off or when board power, previously on, is off.</td> </tr> <tr> <td style="vertical-align: top;">Board power on</td> <td>Notices when a board is powered on or when board power, previously off, is on.</td> </tr> </table> |  | Component insertion | Notices component presence from one polling cycle to the next. esmd sends notification only if that client (hwad(1M), pcd(1M), dsmd(1M), and so on) has requested it for that particular component type. | Component removal | Notices component absence from one polling cycle to the next. esmd sends notification only if that client (hwad, pcd, and so on) has requested it for that particular component type. | PCI card insertion | Notices whenever a PCI card has been inserted into a PCI board. | PCI card removal | Notices whenever a PCI card has been removed from a PCI board. | Board power off | Notices whenever a board is powered off or when board power, previously on, is off. | Board power on | Notices when a board is powered on or when board power, previously off, is on. |
| Component insertion         | Notices component presence from one polling cycle to the next. esmd sends notification only if that client (hwad(1M), pcd(1M), dsmd(1M), and so on) has requested it for that particular component type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
| Component removal           | Notices component absence from one polling cycle to the next. esmd sends notification only if that client (hwad, pcd, and so on) has requested it for that particular component type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
| PCI card insertion          | Notices whenever a PCI card has been inserted into a PCI board.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
| PCI card removal            | Notices whenever a PCI card has been removed from a PCI board.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
| Board power off             | Notices whenever a board is powered off or when board power, previously on, is off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |
| Board power on              | Notices when a board is powered on or when board power, previously off, is on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                     |                                                                                                                                                                                                          |                   |                                                                                                                                                                                       |                    |                                                                 |                  |                                                                |                 |                                                                                     |                |                                                                                |

|                          |                                                                                                                                                                                                                          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Board temperature change | Notifies when temperature sensors on a board register a two-degree difference or when a temperature crosses a temperature threshold.                                                                                     |
| Board voltage change     | Notifies if a voltage sensor value has changed so that it is close to being out of range and again if the new value is out of range. In this case <code>esmd</code> removes the board from the domain and powers it off. |
| Board current change     | Notifies whenever any of the monitored board current values change.                                                                                                                                                      |
| CSB state change         | Notifies when any of the monitored CSB board properties change.                                                                                                                                                          |
| EXB state change         | Notifies when any of the monitored EXB board properties change.                                                                                                                                                          |
| CPU state change         | Notifies when any of the monitored CPU board properties change.                                                                                                                                                          |
| Bulk power state change  | Notifies when any of the bulk power supply properties change.                                                                                                                                                            |
| Fan tray state change    | Notifies when any of the monitored fan tray properties change.                                                                                                                                                           |
| PCI card state change    | Notifies when any of the monitored PCI card properties change.                                                                                                                                                           |

`esmd` clients include:

|                   |                                        |
|-------------------|----------------------------------------|
| <code>hwad</code> | Hardware access daemon                 |
| <code>pcd</code>  | Platform configuration database daemon |
| <code>dsmd</code> | Domain status monitoring daemon        |

For more information refer to the *System Management Services (SMS) 1.5 Administrator Guide*.

## EXIT STATUS

The following exit values are returned:

|    |                        |
|----|------------------------|
| 0  | Successful completion. |
| >0 | An error occurred.     |

## FILES

The following file is supported.

|                                                     |                       |
|-----------------------------------------------------|-----------------------|
| <code>/var/opt/SUNWSMS/adm/platform/messages</code> | Stores message files. |
|-----------------------------------------------------|-----------------------|

**ATTRIBUTES** See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** dsmd (1M), hwad (1M), pcd (1M), ssd (1M)

## flashupdate(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | flashupdate - update the flash PROMs located on the CPU boards, MaxCPU boards, and system controllers (SCs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>SYNOPSIS</b>    | <b>flashupdate</b> -d <i>domain_indicator</i> -f <i>path</i> [-q -v] [-y -n]<br><b>flashupdate</b> -f <i>path</i> [-q -v] [-y -n] <i>location...</i><br><b>flashupdate</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>DESCRIPTION</b> | <p>flashupdate(1M) updates the flash PROMs (FPROMs) in the system controllers (SC), and the FPROMs in a domain's CPU and MaxCPU boards, given the board location.</p> <p>To update the FPROMs in the system controller, you must log in to the SC you want to update, and specify the FPROM to be updated. (You cannot update one SC from the other SC.) Each FPROM has a specific image file associated with it:</p> <p>FPROMs in CP1500-based SCs use the nSSCPOST.di image file.</p> <p>FROMs in CP2140-based SCs use the oSSCPOST.di image file.</p> <p>Once you have finished updating the SC FPROMs, you must shut down and reset the SC. See <a href="#">Example 6</a> in the EXAMPLES section. You do not need to reset the SC after updating CPU FPROMs.</p> <p>Before you can update the CPU FPROMs, SMS must be running and the specified board must be powered on. This is not required for updating the SC FPROMs. If any of the domain's CPU or MaxCPU boards have the virtual keyswitch set to the secure position, the FPROM(s) are not updated.</p> <p>flashupdate displays both the current FPROM and the flash image file information prior to any updates. You are prompted to update the FPROMs.</p> <p><b>Note</b> – No CLIs should be executed on a system board while flashupdate is running on that board. Wait until flashupdate completes before running any SMS commands involving that system board.</p> |



**OPTIONS**

The following options are supported:

- d *domain\_indicator*      Specifies the domain using one of the following:  
                                   *domain\_id* – ID for a domain. Valid *domain\_ids* are A–R and are not case sensitive.  
                                   *domain\_tag* – Name assigned to a domain using `addtag(1M)`.
- f *path*                      Name of the flash image file.  
                                   The *path* argument specifies the name of the image file that is used to update the FEPROM given in the *location* argument.
- h                              Help. Displays usage descriptions.  
                                   **Note** – Use alone. Any option specified in addition to `-h` is ignored.
- n                              Automatically answers no to all prompts. Prompts are displayed unless used with the `-q` option.
- q                              Quiet. Suppresses all messages to `stdout` including prompts.  
                                   When used alone, `-q` defaults to the `-n` option for all prompts.  
                                   When used with either the `-y` or the `-n` option, `-q` suppresses all user prompts and automatically answers with either 'y' or 'n' based on the option chosen.
- v                              Verbose. Displays version information about the firmware. The information displayed is intended for internal use by Sun service personnel. Its format is private and subject to change.
- y                              Automatically answers yes to all prompts. Prompts are displayed unless used with the `-q` option.

**OPERANDS**

The following operands are supported:

*location*

FEPROM location.

The FEPROM location consists of *board\_loc/FEPROM\_id*, separated by a forward slash.

The *FEPROM\_id* is specified only when you want to update a particular FEPROM (FP0 or FP1) on a CPU board and the system controller (SC).

For example, the location, SB4/FP0, indicates the FEPROM 0 on the CPU board in slot 4.

Sun Fire 12K and E20K:

SB (0 . . . 8)

IO (0 . . . 8)

Sun Fire 15K and E25K:

SB (0 . . . 17)

IO (0 . . . 17)

**EXTENDED DESCRIPTION****Group Privileges Required**

You must have platform administrator or domain administrator privileges to run this command. If you have platform administrator privileges, all boards can be updated. For domain administrators, only boards that are active in the administrator's domain or available to the administrator's domain can be updated.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1** Updating FEPROM 0 in System Controller 0

You must reset the SC after running this command.

```
sc0:sms-user:> flashupdate -f /opt/SUNWSMS/firmware/SCOBPing.di
SC0/FP0
```

**EXAMPLE 2** Updating FEPROM 1 in System Controller 0

The first instance, which uses the nSSCPOST.di image, is for an SC with a CP1500 board. The second instance, which uses the oSSCPOST.di image, is for an SC with a CP2140 board. You must reset the SC after running this command.

```
sc0:sms-user:> flashupdate -f /opt/SUNWSMS/firmware/nSSCPOST.di
SC0/FP1

sc0:sms-user:> flashupdate -f /opt/SUNWSMS/firmware/oSSCPOST.di
SC0/FP1
```

### EXAMPLE 3 Updating FPROM 0 in the System Controller 1

You must reset the SC after running this command.

```
sc1:sms-user:> flashupdate -f /opt/SUNWSMS/firmware/SCOBPimg.di
SC1/FP0
```

### EXAMPLE 4 Updating Both FPROMs on CPU Board 0

SMS must be running, and the SB0 board must be powered on.

```
sc0:sms-user:> flashupdate -f /opt/SUNWSMS/hostobjsg/sgcpu.flash SB0
Do you wish to update the FPROM (yes/no)? y
sc0:sms-user:>
```

### EXAMPLE 5 Updating FPROMs in Domain A

SMS must be running, and the CPU boards in domain A must be powered on.

```
sc0:sms-user:> flashupdate -d A -f /opt/SUNWSMS/hostobjsg/sgcpu.flash
```

### EXAMPLE 6 Resetting the SC After Updating the SC FPROMs

Switch to superuser and shut down the SC.

```
sc0:sms-user:> su -

sc0:# shutdown -y -g0 -i0
...[system messages]
ok
```

In order for the new firmware to be enabled on your SC, you must now perform a reset of the SC. Type:

```
ok reset-all
```

If this does not reset the SC, then you must perform a hard reset.

Physically locate your system controller within your Sun Fire high-end system cabinet, and depress the Abort button and then the Reset button on the SC board. Once the SC has been reset you should see OpenBoot PROM messages indicating that the new version of the firmware is loading. After the system successfully returns to the ok prompt, verify that the flash update worked by typing:

```
ok show-dropins
```

```
Dropins for Flash device: /pci@1f,0/pci@1,1/ibus@1/flashprom@10,400000

Dropin name Size Checksum Date Date Version Vendor
 created flashed

SSCOBP-dropins 90 c84e 11/13/2001 11/13/2001 1.2 SUNW,sscobp
....
....
```

Note the version number of the Dropins (1.2).

You can now boot your new installation of the Solaris software. Type:

```
ok boot new disk
```

Log in as a platform administrate and type:

```
sc0:sms-user:> flashupdate -f /opt/SUNWSMS/firmware/SCOBPimg.di
SC0/FP0
```

```
Current SC FPROM Information
```

```
=====
```

```
SC at SC0, FPROM 0:
```

```
Name: SSCOBP-dropins,
```

```
Version: 1.2
```

```
Size: 144,
```

```
Check Sum: 51278
```

```
Date Flashed: 11/13/01
```

```
Date Created: 11/13/01
```

```
Do you wish to update the SC User FPROM (yes/no)? n
```

```
sc0:sms-user:>
```

Compare version numbers. If they are the same, flashupdate was successful.

**EXIT STATUS** The following exit values are returned:

0                   Successful completion.  
>0                   An error occurred.

**FILES** The following files are used by this command:

|                                                |                                                         |
|------------------------------------------------|---------------------------------------------------------|
| <code>/opt/SUNWSMS/firmware/SCOBPing.di</code> | Used to update the FPROM 0 on the SC.                   |
| <code>/opt/SUNWSMS/firmware/nSSCPOST.di</code> | Used to update the FPROM 1 on the CP1500 SC.            |
| <code>/opt/SUNWSMS/firmware/oSSCPOST.di</code> | Used to update the FPROM1 on the CP2140 SC.             |
| <code>/opt/SUNWSMS/hostobjs/sgcpu.flash</code> | Used to update the FPROMs on the CPU and MaxCPU boards. |

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types     | Attribute Values |
|---------------------|------------------|
| Interface stability | Evolving         |
| Availability        | SUNWSMSop        |

**SEE ALSO** `setkeyswitch(1M)`

## fomd(1M)

| <b>NAME</b>        | fomd - failover management daemon                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |                        |              |                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|--------------|--------------------|
| <b>SYNOPSIS</b>    | <b>fomd</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |                        |              |                    |
| <b>DESCRIPTION</b> | <p>fomd(1M) is the core of the system controller (SC) failover mechanism. The fomd daemon detects faults on the local and remote SCs and takes the appropriate action (directing a failover/takeover).</p> <p>The fomd daemon ensures that the necessary synchronization data between the two SCs is current. fomd runs on both the main and the spare SCs.</p> <p>This daemon is automatically started by ssc(1M). Do <i>not</i> start it manually from the command line.</p> |                 |                        |              |                    |
| <b>EXIT STATUS</b> | <p>The following exit values are returned:</p> <table><tr><td>0</td><td>Successful completion.</td></tr><tr><td>&gt;0</td><td>An error occurred.</td></tr></table>                                                                                                                                                                                                                                                                                                             | 0               | Successful completion. | >0           | An error occurred. |
| 0                  | Successful completion.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |                        |              |                    |
| >0                 | An error occurred.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                        |              |                    |
| <b>FILES</b>       | <p>The following configuration file is required:</p> <p>/etc/opt/SUNWSMS/config/fomd.cf      Failover daemon configuration file</p>                                                                                                                                                                                                                                                                                                                                            |                 |                        |              |                    |
| <b>ATTRIBUTES</b>  | <p>See attributes(5) for descriptions of the following attributes.</p> <table border="1"><thead><tr><th>Attribute Types</th><th>Attribute Values</th></tr></thead><tbody><tr><td>Availability</td><td>SUNWSMSop</td></tr></tbody></table>                                                                                                                                                                                                                                      | Attribute Types | Attribute Values       | Availability | SUNWSMSop          |
| Attribute Types    | Attribute Values                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                        |              |                    |
| Availability       | SUNWSMSop                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                        |              |                    |
| <b>SEE ALSO</b>    | setfailover(1M), showfailover(1M)                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |                        |              |                    |

| <b>NAME</b>        | frad - FRU access daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                  |              |           |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|--------------|-----------|
| <b>SYNOPSIS</b>    | <b>frad</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |                  |              |           |
| <b>DESCRIPTION</b> | <p><code>frad(1M)</code> runs on the system controller (SC) and provides the exclusive mechanism by which SMS processes, including daemons, access any FRU SEEPROM within a given Sun Fire high-end system. <code>frad</code> also provides the platform-dependent interface to the Sun Fire high-end systems SEEPROMs required by the FRU ID software tools.</p> <p>This daemon is started automatically by the <code>ssd(1M)</code> daemon. Do <i>not</i> start it manually from the command line.</p> |                 |                  |              |           |
| <b>EXIT STATUS</b> | <p>The following exit values are returned:</p> <p>0                   Successful completion.</p> <p>&gt;0                   An error occurred.</p>                                                                                                                                                                                                                                                                                                                                                       |                 |                  |              |           |
| <b>ATTRIBUTES</b>  | See <code>attributes(5)</code> for descriptions of the following attributes.                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                  |              |           |
|                    | <table border="1"> <thead> <tr> <th>Attribute Types</th> <th>Attribute Values</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWSMSop</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                          | Attribute Types | Attribute Values | Availability | SUNWSMSop |
| Attribute Types    | Attribute Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |                  |              |           |
| Availability       | SUNWSMSop                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |                  |              |           |
| <b>SEE ALSO</b>    | <code>ssd(1M)</code>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |                  |              |           |

## help(1M)

|                                  |                                                                                                                                                                                                                                                                                                               |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | help - display help information for SMS commands                                                                                                                                                                                                                                                              |
| <b>SYNOPSIS</b>                  | <b>help</b> [ <i>command_name</i> ]<br><b>help</b> -h                                                                                                                                                                                                                                                         |
| <b>DESCRIPTION</b>               | If no argument is included, <code>help(1M)</code> displays a list of valid SMS commands along with their correct syntax. Otherwise, the <i>command_name</i> operand displays that command's man page.                                                                                                         |
| <b>OPTIONS</b>                   | The following options are supported:<br><br>-h                    Help. Displays usage descriptions.                                                                                                                                                                                                          |
| <b>OPERANDS</b>                  | The following operands are supported:<br><br><i>command_name</i> Specific command for which <code>help</code> displays the man page.                                                                                                                                                                          |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                               |
| <b>Group Privileges Required</b> | You must have platform administrator, platform operator, platform service, domain administrator, domain configurator, or superuser privileges to run this command.<br><br>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                  |
| <b>EXAMPLES</b>                  | <b>EXAMPLE 1</b> Using Help<br><br>Displays all commands.<br><br><pre>sc0:sms-user:&gt; <b>help</b> usage: addboard -d domain_indicator [ -c function ] [-r retry_count [-t timeout]] [-q ] [-y   -n] location... addboard -h .... .... .... smsversion -h</pre><br><b>EXAMPLE 2</b> Using Help for a Command |



Displays man(1M) page.

```
sc0:sms-user:> help addtag
```

```
Maintenance Commands
```

```
addtag(1M)
```

```
NAME
```

```
addtag - assign a domain name (tag) to a domain
```

```
SYNOPSIS
```

```
addtag -d domain_indicator -a new_tag [-q] [-y | -n]
.....
```

## EXIT STATUS

The following exit values are returned:

0                Successful completion.

>0              An error occurred.

## ATTRIBUTES

See attributes(5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

## SEE ALSO

man(1M)

| <b>NAME</b>        | hpost - Sun Fire high-end system power-on self-test (POST) control application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |                  |              |           |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|--------------|-----------|
| <b>SYNOPSIS</b>    | <b>hpost</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                  |              |           |
| <b>DESCRIPTION</b> | <p>hpost(1M) is responsible for probing, testing, and configuring the hardware of a Sun Fire high-end system domain, preparing it for use by the OpenBoot PROM and the Solaris operating system. Alternate modes prepare a single board for <code>attach</code> to a running domain using dynamic reconfiguration (DR), create hardware state dump files on the system controller (SC), clear certain nonfatal hardware error states, and perform related Sun Fire high-end system hardware operations.</p> <p><b>Note</b> – This application is intended to be run only by other SMS applications or daemons. Invoking it directly from the command line can cause failures of running domains and is <i>not</i> a supported mode of use.</p> <p>hpost's clients include:</p> <ul style="list-style-type: none"> <li>■ <code>dsmd(1M)</code></li> <li>■ <code>dxs(1M)</code></li> <li>■ <code>setkeyswitch(1M)</code></li> </ul> <p>hpost is a client of:</p> <ul style="list-style-type: none"> <li>■ <code>hwad(1M)</code></li> <li>■ <code>pcd(1M)</code></li> </ul> <p>hpost requires and uses flash PROM images and downloadable local POST executables delivered in the <code>SUNWSMS1p</code> package.</p> |                 |                  |              |           |
| <b>ATTRIBUTES</b>  | <p>See <code>attributes(5)</code> for descriptions of the following attributes.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Attribute Types</th> <th style="text-align: center;">Attribute Values</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Availability</td> <td style="text-align: center;">SUNWSMSpo</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Attribute Types | Attribute Values | Availability | SUNWSMSpo |
| Attribute Types    | Attribute Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |                  |              |           |
| Availability       | SUNWSMSpo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |                  |              |           |
| <b>SEE ALSO</b>    | <code>dsmd(1m)</code> , <code>hwad(1m)</code> , <code>pcd(1m)</code> , <code>setkeyswitch(1m)</code> , <code>dxs(1m)</code>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |                  |              |           |

| <b>NAME</b>        | hwad - hardware access daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |                  |              |           |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|--------------|-----------|
| <b>SYNOPSIS</b>    | <b>hwad</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |                  |              |           |
| <b>DESCRIPTION</b> | <p>hwad(1M) provides the exclusive mechanism by which SMS processes, including daemons, access, control, monitor, and configure the hardware.</p> <p>hwad runs in either main or spare mode and asks the failover daemon (fomd(1M)) for the role that the system controller (SC) should play when it comes up.</p> <p>At start-up, hwad opens all the drivers (sbbc, echip, gchip, and console bus) and uses the ioctl calls to interface with them. It reads the contents of the device presence register to identify the boards present in the system, and makes them accessible to the clients.</p> <p>IOSRAM and Mbox interfaces are also provided by hwad. This helps communication between the SC and the domain. For dynamic reconfiguration (DR), hwad directs communication to the new IOSRAM (tunnel switch). For darb interrupts, hwad notifies the dsmd(1M) if there is a dstop or rstop. It also notifies related SMS daemon(s), depending on the type of Mbox interrupt that occurs.</p> <p>hwad detects and recovers console bus and jtag errors.</p> <p>This daemon is started automatically by the ssd(1M) daemon. Do <i>not</i> start it manually from the command line.</p> |                 |                  |              |           |
| <b>ATTRIBUTES</b>  | See attributes(5) for descriptions of the following attributes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |                  |              |           |
|                    | <table border="1"> <thead> <tr> <th style="text-align: center;">Attribute Types</th> <th style="text-align: center;">Attribute Values</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWSMSop</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Attribute Types | Attribute Values | Availability | SUNWSMSop |
| Attribute Types    | Attribute Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                  |              |           |
| Availability       | SUNWSMSop                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                  |              |           |
| <b>SEE ALSO</b>    | dsmd(1M), ssd(1M)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |                  |              |           |

## initcmdsyc(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | initcmdsyc - command synchronization command                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SYNOPSIS</b>    | <b>cancelcmdsyc</b> <i>cmdsyc_descriptor</i><br><b>initcmdsyc</b> <i>script_name</i> [ <i>parameters</i> ]<br><b>savecmdsyc</b> -M <i>identifier</i> <i>cmdsyc_descriptor</i><br><b>[cancel init save]cmdsyc</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>DESCRIPTION</b> | <p>The command synchronization commands work together to control the recovery of user-defined scripts interrupted by a system controller (SC) failover. Insert the following commands in user-defined scripts to enable command synchronization:</p> <p><b>initcmdsyc</b>      Creates a command synchronization descriptor that identifies the script to be recovered.</p> <p>                    This descriptor is placed on a command synchronization list that identifies the scripts and commands to be restarted on the new main SC after a failover.</p> <p><b>savecmdsyc</b>      Adds a marker that identifies a location in the script from which processing can be resumed after a failover.</p> <p><b>cancelcmdsyc</b>    Removes a command synchronization descriptor from the command synchronization list. This ensures that the script is run only once and not after subsequent failovers.</p> <p>                    Be sure that all exit paths of a script have a <b>cancelcmdsyc</b> sequence to remove the descriptor from the command synchronization list. If you do not remove the descriptor and a failover occurs, the script is rerun on the new main SC.</p> <p><b>Note</b> – Both an <b>initcmdsyc</b> and a <b>cancelcmdsyc</b> sequence must be contained within a script to enable command synchronization. The use of the <b>savecmdsyc</b> command is optional and marks only specific points in a script from which processing can be resumed. If specific restart points are not necessary, consider using <b>runcmdsync(1M)</b> instead.</p> |

**OPTIONS** The following options are supported:

|                            |                                                                                                                                                                                                         |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>cmdsync_descriptor</i>  | Specifies the command synchronization descriptor that identifies the user-defined script. This descriptor is the standard output value returned by the <code>initcmdsync</code> command.                |
| <code>-h</code>            | Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to <code>-h</code> is ignored.                                                                      |
| <code>-M identifier</code> | Marks a location in the script from which the script can be resumed after a failover. The identifier must be a positive integer.                                                                        |
| <i>parameters</i>          | Specifies the options or parameters associated with the user-defined script. These parameters are stored on the spare SC and are used to restart the specified script after a failover.                 |
| <i>script_name</i>         | Identifies the name of the user-defined script to be synchronized. <i>script_name</i> must be the absolute path name of an executable command. The command must exist in the same location on both SCs. |

**EXTENDED  
DESCRIPTION**

The command synchronization commands are inserted at certain logical points within a user-defined script.

For instance, a Korn shell script might be structured as follows:

```
MAIN CODE STARTS HERE
Be sure to use a cleanup procedure to handle any
interrupts.
Use the cancelcmdsyc to remove the script from the
command synchronization list. Otherwise, the command
will get restarted on the new main SC.
#
clean_up () {
 cancelcmdsyc $desc
 exit
}

Declare the clean_up function to capture system signals
and cleanup.
trap "clean_up" INT HUP TERM QUIT PWR URG
goto_label=1
Process the arguments, capturing the -M marker point
if provided
#
for arg in $*; do
 case $arg in
 -M)
 goto_label=$arg;;
 .
 .
 .
 esac
done
Place this script and all its parameters in the command
synchronization list, which indicates the commands to
be restarted after an SC failover.
#
NOTE: The script must be executable by the user defined
in fomd.cf and reside in the same directory on both the
main and the spare SC.
```

```

If the command is not part of the defined PATH for
the user, the absolute filename must be passed with the
initcmdsinc command
#
initcmdsinc script_name parameters
The marker point is stored in the goto_label variable.
Keep executing this script until all cases have been
processed or an error is detected.
#
while (($goto_label != 0)) ; do
#
Each case should represent a synchronization point
in the script.
#
case $goto_label in
#
Step 1: Do something
#
1) do_something
 .
 .
 .

Execute the savecmdsinc command with the script's
descriptor and a unique marker to save the position.
If a failover occurs here, the commands represented in
the next goto_label (2) will be resumed.
#
 savecmdsinc -M $(($goto_label + 1)) $desc
 goto_label=$(($goto_label + 1))
 ;;

#
Step 2: Do more things
#
2) do_more_things
 .
 .
 .
 savecmdsinc -M $(($goto_label + 1)) $desc
 goto_label=$(($goto_label + 1))
 ;;

#
Step 3: Finish the last step and set the goto_label to 0
so that the script ends.
3)
 finish_last_step
 .
 .
 .
 goto_label=0
 ;;

 esac
done
END OF MAIN CODE
Remember to execute cancelcmdsinc to remove the script from the
command synchronization list. Otherwise, the command will be restarted
after the failover.
#
cancelcmdsinc $desc

```

## initcmdsync(1M)

### Group Privileges Required

You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXIT STATUS

The following exit values are returned:

0                      Successful completion.

>0                     An error occurred.

**Note** – The standard output for `initcmdsync` contains the command synchronization descriptor. Also, when failover is disabled (after a failover or in a single SC environment), scripts that contain synchronization commands generate error messages to the platform log file and return nonzero exit codes. These messages can be ignored.

### ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

### SEE ALSO

`runcmdsync(1M)`, `showcmdsync(1M)`



|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | kmd - SMS key management daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SYNOPSIS</b>    | <b>kmd</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>DESCRIPTION</b> | <p>kmd(1M) manages the IPSec security associations (SAs) necessary for securing the communication between the system controller (SC) and servers running on a domain. kmd manages per-socket policies for connections initiated by clients on the SC to servers on a domain. kmd manages shared policies for connections initiated by clients on the domain to servers on the SC.</p> <p>The current default configuration includes authentication policies for the dca(1M) and dxs(1M) clients on the SC, which connect to the dcs(1M) and cvcd(1M) servers on a domain.</p> <p>This daemon is started automatically by the ssd(1M) daemon. Do <i>not</i> start it manually from the command line.</p> <p><b>Note</b> – kmd must be run as a root process to be permitted to use the pf_key interface to IPSec.</p> |
| <b>EXIT STATUS</b> | <p>The following exit values are returned:</p> <p>0                    Successful completion.</p> <p>&gt;0                   An error occurred.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>FILES</b>       | <p>The following file is used to configure kmd:</p> <p style="margin-left: 2em;">/etc/opt/SUNWSMS/config/kmd_policy.cf      kmd_policy.cf configures the shared and per-socket policies managed by kmd.</p> <p>Changes to the policies are made by editing the kmd_policy.cf file on the SC. Corresponding changes must be made on the affected domain(s).</p> <p>The format of kmd_policy.cf is a table of eight fields separated by the pipe ( ) character:</p> <p style="margin-left: 2em;"><i>dir</i>   <i>d_port</i>   <i>protocol</i>   <i>sa_type</i>   <i>auth_alg</i>   <i>encr_alg</i>   <i>domain</i>   <i>login</i></p>                                                                                                                                                                                  |

The fields are defined as follows:

|                 |                                                                                                                                                                                                                          |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>dir</i>      | Direction to connect from.<br>Values: sctodom, domtosc                                                                                                                                                                   |
| <i>d_port</i>   | Destination port.                                                                                                                                                                                                        |
| <i>protocol</i> | Protocol for the socket.<br>Values: tcp, udp                                                                                                                                                                             |
| <i>sa_type</i>  | Security association type.<br>Values: ah, esp                                                                                                                                                                            |
| <i>auth_alg</i> | Authentication algorithm.<br>Values: none, md5, sha1                                                                                                                                                                     |
| <i>encr_alg</i> | Encryption algorithm.<br>Values: none, des, 3des                                                                                                                                                                         |
| <i>domain</i>   | Domain ID.<br>Values: integers 0-17 or a [ <i>space</i> ].<br><br>A space for the domain ID defines a policy that applies to all domains. A policy for a specific domain overrides a policy that applied to all domains. |
| <i>login</i>    | Login name.<br>Values: Any valid login name.                                                                                                                                                                             |

The default policies in the `kmd_policy.cf` file are as follows:

```
sctodom|665|tcp|ah|md5|none| |sms-dca|
```

```
sctodom|442|tcp|ah|md5|none| |sms-dxs|
```

The configuration of policies on a domain is the standard IPsec configuration file (`/etc/inet/ipsecconf.init`).

The default policies are shown below.

```
{ dport sun-dr } permit { auth_alg md5 }
{ sport sun-dr } apply { auth_alg md5 sa unique }
{ dport cvc_hostd } permit { auth_alg md5 }
{ sport cvc_hostd } apply { auth_alg md5 sa unique }
```

**ATTRIBUTES** See attributes(5) for descriptions of the following attributes.

| Attribute Types | Attribute Values      |
|-----------------|-----------------------|
| Availability    | SUNWSMSr<br>SUNWSMSop |

**SEE ALSO** `ssd(1M)`, `sckmd(1M)`, `ipseconf(1M)`, `pf_key(1M)`, `ipsec(1M)`, `dca(1M)`, `dxs(1M)`, `dcs(1M)`, `cvcd(1M)`

## mand(1M)

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |                        |    |                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------------------------|----|--------------------|
| <b>NAME</b>                 | mand - management network daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |                        |    |                    |
| <b>SYNOPSIS</b>             | <b>mand</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |                        |    |                    |
| <b>DESCRIPTION</b>          | <p>mand(1M) supports the management network (MAN) drivers and the failover management daemon (fomd(1M)) by providing the required network configuration. This configuration information includes host names, IP addresses, and netmasks. mand is also responsible for initializing and updating these respective fields in the platform configuration database (pcd(1M)) daemon as well as the in MAN driver on the system controller (SC).</p> <p>mand is an SMS daemon running on both the main and spare SCs. Its role is set up by fomd.</p> <p>This daemon is started automatically by the sscd(1M) daemon. Do <i>not</i> start it manually from the command line.</p> |   |                        |    |                    |
| <b>EXTENDED DESCRIPTION</b> | <p>SC-to-Domain and Domain-to-SC Internal Network (I1) data includes:</p> <ul style="list-style-type: none"><li>■ Network mask</li><li>■ SC host name</li><li>■ SC IP address</li><li>■ Domain[A-R] host name</li><li>■ Domain[A-R] IP address</li></ul> <p>SC-to-SC Internal Network (I2) data includes:</p> <ul style="list-style-type: none"><li>■ Network mask</li><li>■ SC 0 host name</li><li>■ SC 0 IP address</li><li>■ SC 1 host name</li><li>■ SC 1 IP address</li></ul> <p>SC External Community (C) data includes:</p> <ul style="list-style-type: none"><li>■ Community Failover IP address</li><li>■ Community physical interface name</li></ul>              |   |                        |    |                    |
| <b>EXIT STATUS</b>          | <p>The following exit values are returned:</p> <table><tr><td>0</td><td>Successful completion.</td></tr><tr><td>&gt;0</td><td>An error occurred.</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0 | Successful completion. | >0 | An error occurred. |
| 0                           | Successful completion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |                        |    |                    |
| >0                          | An error occurred.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |                        |    |                    |

**FILES** The following configuration file is required:

`/etc/opt/SUNWSMS/config/MAN.cf` This file includes the domain-to-SC, the SC-to-domain, and the SC-to-SC management network data as well as the community data for external access to the SC.

Do *not* manually modify the `MAN.cf` file.

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `fomd(1M)`, `pcd(1M)`, `smsconfig(1M)`, `ssd(1M)`

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | mld - message-logging daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SYNOPSIS</b>    | <b>mld</b> [-f <i>config_file</i> ] [-t]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>DESCRIPTION</b> | <p>mld(1M) provides logging services to all SMS daemons and processes. mld is the first SMS daemon started by <i>ssd</i>(1M) in order to capture the output of all other SMS daemons and processes during their startup phases.</p> <ul style="list-style-type: none"> <li>■ Platform log messages are stored in: <ul style="list-style-type: none"> <li><i>/var/opt/SUNWSMS/adm/platform/messages</i></li> </ul>           in the following format: <br/><br/> <pre>time host program [pid]:[msg_id hrtime_t level file_line] message</pre> <br/> <i>file_line</i> is optional and appears only in verbose mode.           For example: <br/><br/> <pre>Feb 2 09:16:10 2002 sun15 mld[904]:[209 2345678901 INFO MLDLOGGER.cc 141] Platform messages file created.</pre> </li> <li>■ Domain log messages are stored in <ul style="list-style-type: none"> <li><i>/var/opt/SUNWSMS/adm/domain_id/messages</i></li> </ul>           in the same format as platform messages, with additional <i>domain_id domain_tag</i> information following the pid: <br/><br/> <pre>time host program [pid]domain_id domain_tag:[msg_id hrtime_t level file_line] message</pre> <br/>           For example: <br/><br/> <pre>Feb 2 09:18:55 2002 sun15 mld[904]-B(engB): [314 2345678902 ERR LogManager.cc 424] message queue limit exceeded, messages will be dropped.</pre> </li> <li>■ Domain syslog messages are stored in <ul style="list-style-type: none"> <li><i>/var/opt/SUNWSMS/adm/domain_id/syslog</i></li> </ul>           in the same format in which they are received. </li> </ul> |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <ul style="list-style-type: none"> <li>-f <i>config_file</i> Provides an absolute path to an alternative remote-message-reception configuration file.</li> <li>-t Disables remote message reception (for example, domain syslog messages).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**EXIT STATUS** .The following exit values are returned:

0                   Successful completion.  
>0                  An error occurred.

**FILES**       The following file is used by this command:

`/var/opt/SUNWSMS/adm/.logger`           Message logging  
                                          daemon configuration  
                                          file.

This file supports three configuration directives:

**FILE**           Specifies where to send messages. The default is `msgdaemon` and should *not* be changed.

**LEVEL**         Specifies the minimum level necessary for `mld` to log a message. The supported levels are: `debug`, `info`, `notice`, `warning`, `err`, `crit`, `alert`, and `emerg`. The default is `notice`.

**MODE**           Specifies the verbosity of the messages. Two modes are available: `verbose` and `terse`. The default is `verbose`.

**Note** – All directive arguments are not case sensitive.

**ATTRIBUTES**   See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**     `ssd(1M)`

## moveboard(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | moveboard - move a board from one domain to another                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>SYNOPSIS</b>    | <b>moveboard</b> -d <i>domain_indicator</i> [-c <i>function</i> ] [-r <i>retry_count</i> [-t <i>timeout</i> ]] [-q] [-f] [-y -n] <i>location</i><br><b>moveboard</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>DESCRIPTION</b> | <p>moveboard(1M) first attempts to unconfigure, disconnect, and unassign <i>location</i> from the domain it is currently assigned to and possibly active in, and then proceeds to assign, connect, and configure <i>location</i> to the domain <i>domain_id</i> or <i>domain_tag</i>.</p> <p>The -c <i>function</i> command option is used to specify the transition of the board from the current configuration state to a new configuration state. Configuration states are assign, connect, and configure. If the -c option is not specified, the default expected configuration state is configure.</p> <p><b>Note</b> – moveboard performs tasks synchronously and does not return control to the user until the command is complete. If the board is not powered on or tested and a -c connect configure option is specified, then the command powers on the board and tests it.</p> <p><b>Note</b> – If the specified board is in the automatic system recovery (ASR) blacklist file, moveboard displays an error message when assigning a board and then continues. When using the connect or configure functions, moveboard displays an error message and then exits.</p> <p><b>Note</b> – If the moveboard command fails, a board does not return to its original state. A dxs or dca error message is logged to the domain. If the error is recoverable, you can retry the command. If it is unrecoverable, you need to reboot the domain in order to use that board.</p> |



**OPTIONS** | The following options are supported.

-c *function*

Valid *function* values are *assign*, *connect*, and *configure*. One of these values is used to control the configuration state transition.

The possible transition states and their meanings are as follows:

*assign* Unconfigures the board from the Solaris operating system running on the domain. Solaris software stops using any of the hardware resources on the board. (See `deleteboard -c unconfigure`.) Disconnects the board. Transitions the board into the `disconnected|unconfigured` state. (See `deleteboard -c disconnect`.) Unassigns the board from the current domain. (See `deleteboard -c unassign`.) Moves the board out of the logical domain by changing its state to `available`. Assigns the board to the new logical domain. This is a board state in which the domain has sole access to the board; however, the board is not active. Once assigned, the board can be connected or configured into the domain with the use of either `setkeyswitch on` or the `connect` or `configure` options.

connect

Unconfigures the board from the Solaris operating system running on the domain. Solaris software stops using any of the hardware resources on the board. (See `deleteboard -c unconfigure`.) Disconnects the board. Transitions the board into the `disconnected|unconfigured` state. (See `deleteboard -c disconnect`.) Unassigns the board from the current domain. (See `deleteboard -c unassign`.) Moves the board out of the logical domain by changing its state to `available`. Assigns the board to the new logical domain. (See `assign` earlier in this section; see also `addboard(1M) -c assign`.) Transitions the board into the `connected|unconfigured` state. In this state the board is assigned to the logical domain and `connected` (active). This state allows the normal system access to hardware resources on the board. The hardware resources of the board are not represented by the normal Solaris software data structures, however, and cannot be used by the Solaris operating system. Allowed operations on the board are limited to configuration administration operations. (See also `addboard -c connect`.) This is an intermediate state and does not have any standalone implementation at this time.

`configure` Unconfigures the board from the Solaris operating system running on the domain. Solaris software stops using any of the hardware resources on the board. (See `deleteboard -c unconfigure`.) Disconnects the board. Transitions the board into the `disconnected|unconfigured` state. (See `deleteboard -c disconnect`.) Unassigns the board from the current domain. (See `deleteboard -c unassign`.) Moves the board out of the logical domain by changing its state to `available`. Assigns the board to the new logical domain. (See `assign` earlier in this section; see also `addboard -c assign`.) Transitions the board into the `connected|unconfigured` state. In this state, the board is assigned to the logical domain and `connected (active)`. This state allows the normal system access to hardware resources on the board. The hardware resources of the board are not represented by the normal Solaris software data structures, however, and cannot be used by the Solaris operating system. Allowed operations on the board are limited to configuration administration operations. (See `connect` earlier in this section; see also `addboard -c connect`.) Transitions the board into the `connected|configured` state. In this state, the board is not only assigned and connected to a domain, but also configured into the Solaris operating system. The hardware resources on the board can be used by Solaris software. (See also `addboard -c configure`.)

`-d domain_indicator` Specifies the domain using one of the following:

*domain\_id* – ID for a domain. Valid *domain\_ids* are A–R and are not case sensitive.

*domain\_tag* – Name assigned to a domain using `addtag(1M)`.

This is the domain to which the board is being moved.

- f** Forces the specified action to occur. Typically, this is a hardware-dependent override of a safety feature. Forcing a state change operation can allow use of the hardware resources of an occupant that is not in the `ok` or `unknown` conditions, at the discretion of any hardware-dependent safety checks.
- h** Help. Displays usage descriptions.
- Note** – Use alone. Any option specified in addition to `-h` is ignored.
- n** Automatically answers no to all prompts. Prompts are displayed unless used with the `-q` option.
- q** Quiet. Suppresses all messages to `stdout` including prompts.
- When used alone `-q` defaults to the `-n` option for all prompts.
- When used with either the `-y` or the `-n` option, `-q` suppresses all user prompts and automatically answers with either 'y' or 'n' based on the option chosen.
- r *retry\_count*** This command argument enables the user to specify retries in case of failures encountered during state transitions. The `-r retry_count` option can be used alone and indicates the number of times the configuration state change request should be retried by the domain.
- t *timeout*** This command argument enables the user to specify retries in case of failures encountered during state transitions. The `-t timeout` option cannot be used without the `-r retry_count` option and specifies the number of seconds that the domain should wait before the next retry is made. If the `-t timeout` is not specified, the default *timeout* is zero, meaning that the request is retried immediately.
- y** Automatically answers yes to all prompts. Prompts are displayed unless used with the `-q` option.

**OPERANDS**

The following operands are supported:

*location* Board location separated by a space. Multiple *location* arguments are *not* permitted.

The following *location* forms are accepted:

Sun Fire 12K and E20K:

SB(0...8)

IO(0...8)

Sun Fire 15K and E25K:

SB(0...17)

IO(0...17)

**Note** – Use `showboards(1M)` to display board type.

**EXTENDED DESCRIPTION**

**Group Privileges Required**

Users with platform administrator privileges can perform the `-c assign` option if the board is in the `assigned` state (not active in a running domain) of the domain from which the board is being removed.

Users with domain administrator or configurator privileges can execute this command, but only on their respective domains. You must belong to both domain groups affected, and the board must be in the available component list of both domains.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES**

For all examples, if the board is currently active in another domain, you must have domain administrator privileges for that domain. In addition, you must have platform administrator privileges or the board must be in the domain available component list in order for it to be unassigned from its current domain.

You must have platform privileges or the board must be in the domain's available component list for you to assign the system board to a new domain. In addition, the user must have domain privileges in the new domain in order to connect or configure the board into the domain.

**EXAMPLE 1** Assigning a CPU Board at SB4 to Domain A

```
sc0:sms-user:> moveboard -d A -c assign SB4
SB4 assigned to domain: A
```

**EXAMPLE 2** Assigning a Blacklisted CPU Board at SB4 to Domain A

```
sc0:sms-user:> moveboard -d A -c assign SB4
SB4 assigned to domain: A
Warning: SB4 is blacklisted.
You will not be able to connect or configure it.
sc0:sms-user:>
```

**EXAMPLE 3** Configuring an IO Board Into Domain A

Note: The default function is set to configure.

```
sc0:sms-user:> moveboard -d A IO2
IO2 unassigned from domain: B
IO2 assigned to domain: A
assign IO2
assign IO2 done
poweron IO2
poweron IO2 done
test IO2
test IO2 done
connect IO2
connect IO2 done
configure IO2
configure IO2 done
notify online /devices/pci@5d,700000
notify online /devices/pci@5d,600000
notify online /devices/pci@5c,700000
notify online /devices/pci@5c,600000
notify add capacity IO2 done
```

**EXAMPLE 4** Connecting an IO Board at IO7 to Domain R

You must have platform privileges, or the board must be in the domain available component list.

```
sc0:sms-user:> moveboard -d R -c connect IO7
```

**EXAMPLE 5** Connecting a Blacklisted Board to Domain C

```
sc0:sms-user:> moveboard -d C -c connect SB0
SB0 is blacklisted. Exiting.
sc0:sms-user:>
```

**EXIT STATUS**

The following exit values are returned:

|    |                                         |
|----|-----------------------------------------|
| 0  | Successful completion.                  |
| 1  | No acknowledge.                         |
| 2  | Not supported.                          |
| 3  | Operation not supported.                |
| 4  | Invalid privileges.                     |
| 5  | Busy.                                   |
| 6  | System busy.                            |
| 7  | Data error.                             |
| 8  | Library error.                          |
| 9  | No library.                             |
| 10 | Insufficient condition.                 |
| 11 | Invalid.                                |
| 12 | Error.                                  |
| 13 | A PID does not exist.                   |
| 14 | Invalid attribute.                      |
| 30 | Invalid board ID type.                  |
| 31 | Invalid permissions.                    |
| 32 | Assigned to another domain.             |
| 33 | Unable to get permissions.              |
| 34 | Unable to get domain board info.        |
| 35 | Unable to get active board list.        |
| 36 | Unable to get assigned board list.      |
| 38 | Solaris not running.                    |
| 39 | Unable to assign/unassign domain state. |
| 40 | Unable to get domain permissions.       |
| 41 | Unable to get platform permissions.     |
| 51 | Invalid domain.                         |
| 52 | Invalid privileges.                     |
| 55 | Library error.                          |



|    |                                     |
|----|-------------------------------------|
| 56 | DR command syntax error.            |
| 58 | Internal error.                     |
| 59 | Component blacklisted.              |
| 60 | Unable to get ASR blacklist.        |
| 61 | Unable to get domain blacklist.     |
| 62 | Unable to get platform blacklist.   |
| 64 | Activity check error.               |
| 65 | Unassign check error.               |
| 66 | Unassign, unrestricted check error. |
| 67 | Domain permissions check error.     |
| 70 | DR operation failed.                |

**FILES** The following files are used by this command:

|                                                          |                                       |
|----------------------------------------------------------|---------------------------------------|
| <code>/etc/opt/SUNWSMS/config/asr/blacklist</code>       | List of components excluded by esmd.  |
| <code>/etc/opt/SUNWSMS/config/platform/blacklist</code>  | List of platform components excluded. |
| <code>/etc/opt/SUNWSMS/config/domain_id/blacklist</code> | List of domain components excluded.   |

**Note** – This file is created and used internally and should *not* be edited manually. To remove a component from the ASR blacklist file, use `enablecomponent(1M)`.

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `addtag(1M)`, `addboard(1M)`, `deleteboard(1M)`, `enablecomponent(1M)`, `esmd(1M)`, `showcomponent(1M)`

| <b>NAME</b>                      | osd - OpenBoot PROM server daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                  |              |           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|--------------|-----------|
| <b>SYNOPSIS</b>                  | <b>osd</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                  |              |           |
| <b>DESCRIPTION</b>               | <p>osd(1M) provides software support for OpenBoot PROM. It provides an SMS event-based interface to setkeyswitch(1M) for laying out IDPROM and REBOOTARGS information prior to domain bring up.</p> <p>osd also receives mailbox commands from OpenBoot PROM. These mailbox commands are acted upon, and a result is returned to OpenBoot PROM. Commands include <code>get-time-of-day</code>, <code>set-time-of-day</code>, <code>get-idprom</code>, <code>get-nvram-data</code>, <code>set-nvram-data</code>, <code>get-reboot-args</code>, <code>set-reboot-args</code>, and <code>do-tunnel-switch</code>. One instance of osd on the system controller (SC) is shared between all domains.</p> <p>This daemon is automatically started by <code>ssd(1M)</code>. Do <i>not</i> start it manually from the command line.</p> |                 |                  |              |           |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                  |              |           |
| <b>Group Privileges Required</b> | osd is run as the <code>sms-osd</code> user.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |                  |              |           |
| <b>EXIT STATUS</b>               | <p>The following exit values are returned:</p> <p>0                   Successful completion.</p> <p>&gt;0                  An error occurred.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                  |              |           |
| <b>ATTRIBUTES</b>                | <p>See <code>attributes(5)</code> for descriptions of the following attributes.</p> <table border="1" data-bbox="349 1095 1308 1204"> <thead> <tr> <th style="text-align: center;">Attribute Types</th> <th style="text-align: center;">Attribute Values</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWSMSop</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Attribute Types | Attribute Values | Availability | SUNWSMSop |
| Attribute Types                  | Attribute Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |                  |              |           |
| Availability                     | SUNWSMSop                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                  |              |           |
| <b>SEE ALSO</b>                  | <code>setkeyswitch(1M)</code>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |                  |              |           |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                 | pcd - platform configuration database daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>SYNOPSIS</b>             | <b>pcd</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>DESCRIPTION</b>          | <p>pcd(1M) provides and manages controlled access to platform, domain, and system board configuration data. It is an SMS daemon running on the system controller (SC) and a key component of SMS configuration. All system management applications access the database information through the pcd daemon.</p> <p>In addition to managing platform configuration data, the pcd notifies registered system management applications when pertinent database changes have occurred. These notifications are registered as events and are transparent to the user.</p> <p>This daemon is started automatically by the ssd(1M) daemon. Do <i>not</i> start it manually from the command line.</p>                                                                                                                                                                                                               |
| <b>EXTENDED DESCRIPTION</b> | <p>Platform data for SMS 1.2 (version 1) includes:</p> <ul style="list-style-type: none"> <li>Platform Type</li> <li>Platform Name</li> <li>Rack ID</li> <li>Coherent Memory Address Slice Map</li> <li>Clock Frequency</li> <li>Clock Device Type</li> <li>SC IP Address</li> <li>SC Logical IP Host Address</li> <li>SC Host Netmask</li> <li>SC0 to SC1 IP Address</li> <li>SC1 to SC0 IP Address</li> <li>SC to SC Netmask</li> </ul> <p>Platform data for SMS 1.3 (version 2) includes:</p> <ul style="list-style-type: none"> <li>Platform Type</li> <li>Platform Name</li> <li>Rack ID</li> <li>Coherent Memory Address Slice Map</li> <li>Clock Frequency</li> <li>Clock Device Type</li> <li>SC IP Address</li> <li>SC Logical IP Host Address</li> <li>SC Host Netmask</li> <li>SC0 to SC1 IP Address</li> <li>SC1 to SC0 IP Address</li> <li>SC to SC Netmask</li> <li>COD Head Room</li> </ul> |

Platform data for SMS 1.4 and later (version 3) includes:

Platform Type  
Platform Name  
Chassis Host ID  
Cachable Memory Address Slice Map  
Clock Frequency  
Clock Device Type  
SC IP Address  
SC Logical IP Host Address  
SC Host Netmask Address  
SC0 to SC1 IP Address  
SC1 to SC0 IP Address  
SC to SC IP Netmask  
COD Head Room  
Chassis Serial Number

Domain data for SMS 1.2 (version 1) includes:

Domain Number  
Domain Tag  
OS Version  
OS Type  
Slot 0 Available Board List  
Slot 1 Available Board List  
Slot 0 Assigned Board List  
Slot 1 Assigned Board List  
Slot 0 Active Board List  
Slot 1 Active Board List  
Golden SRAM Expansion Slot  
Keyswitch  
Active Ethernet Expansion Slot  
Creation Time  
Domain State  
Bringup Priority  
IP Host Address  
Hostname  
Host Netmask  
Broadcast Address  
OBP Virtual Address  
OBP Physical Address

Domain data for SMS 1.3 and later (version 2) includes:

Domain Number  
 Domain Tag  
 OS Version  
 OS Type  
 Slot 0 Available Board List  
 Slot 1 Available Board List  
 Slot 0 Assigned Board List  
 Slot 1 Assigned Board List  
 Slot 0 Active Board List  
 Slot 1 Active Board List  
 Golden SRAM Expansion Slot  
 Keypadswitch  
 Active Ethernet Expansion Slot  
 Creation Time  
 Domain State  
 Bringup Priority  
 IP Host Address  
 Hostname  
 Host Netmask  
 Broadcast Address  
 OBP Virtual Address  
 OBP Physical Address  
 Domain Reserved RTU

System board data for SMS 1.2 (version 1) includes:

Expansion Number  
 Slot Number  
 Board Type Number  
 Board State Number  
 Domain Assigned Number  
 ABL State; Domain(s) Board Is In  
 Test Status  
 Test Level  
 Memory Clear State

System board data for SMS 1.3 and later (version 2) includes:

Expansion Number  
 Slot Number  
 Board Type Number  
 Board State Number  
 Domain Assigned Number  
 ABL State; Domain(s) Board Is In  
 Test Status  
 Test Level  
 Memory Clear State  
 COD Enable

## SIGNALS

SIGHUP      Rereads the database files and recaches information.

**FILES** | **Note** – *Never* modify these files by hand.

The following files are supported:

|                                                  |                                            |
|--------------------------------------------------|--------------------------------------------|
| <code>/var/opt/SUNWSMS/.pcd/platform_info</code> | Contains platform database information.    |
| <code>/var/opt/SUNWSMS/.pcd/domain_info</code>   | Contains domain database information.      |
| <code>/var/opt/SUNWSMS/.pcd/sysboard_info</code> | Contains system board database information |

**ATTRIBUTES** | See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** | `ssd(1M)`

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NAME        | poweroff - control power off                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| SYNOPSIS    | <b>poweroff</b> [-q] [-y  -n] [ <i>location</i> ]<br><b>poweroff</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| DESCRIPTION | <p><code>poweroff(1M)</code> powers off the specified dual 48V power supply, fan tray, or board. If no arguments are specified and you have platform administrator privileges, the entire system, with the exception of the bulk power supplies, the fan trays, and the spare system controller (SC), powers off. If active domains are utilizing the component that is going to be powered off, a listing of those domains and an “Are you sure?” prompt are given by default.</p> <p><b>Note</b> – When you power off a bulk power supply <code>poweroff</code> trips the circuit breaker. In that case the <code>poweron</code> command alone can not restore power. You must manually flip the breaker back on and then run <code>poweron</code>.</p> <p>If you do not have platform administrator privileges, the [<i>location</i>] command operand <i>must</i> be specified and the board must be assigned to a domain for which you have domain administrator or configurator privileges.</p> <p><b>Note</b> – This command has no effect on the position of the virtual keyswitch.</p> |
| OPTIONS     | <p>The following options are supported:</p> <p>-h                    Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-n                    Automatically answers no to all prompts. Prompts are displayed unless used with the -q option.</p> <p>-q                    Quiet. Suppresses all messages to <code>stdout</code> including prompts.</p> <p>                      When used alone -q defaults to the -n option for all prompts.</p> <p>                      When used with either the -y or the -n option, -q suppresses all user prompts, and automatically answers with either 'y' or 'n' based on the option chosen.</p> <p>-y                    Automatically answers yes to all prompts. Prompts are displayed unless used with the -q option.</p>                                                                                                                                                                                                                                              |

**OPERANDS**

The following operands are supported:

*location* Component location separated by a space. Multiple *location* forms are *not* permitted.

The following *location* forms are accepted:

Sun Fire 12K/E20K

SB(0...8)

IO(0...8)

CS(0|1)

FT(0...7)

PS(0...5)

EX (0...8)

SC(0|1) [Only the spare SC can be powered off.]

Sun Fire 15K /E25K

SB(0...17)

IO(0...17)

CS(0|1)

FT(0...7)

PS(0...5)

EX(0...17)

SC(0|1) [Only the spare SC can be powered off.]

**EXTENDED DESCRIPTION****Group Privileges Required**

You must have either platform administrator or domain administrator/configurator privileges to run this command.

If you have domain privileges, you must also specify the [*location*] operand, and the [*location*] must be a domain configuration unit (DCU) that is assigned to a domain for which you have domain privileges.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.



**EXAMPLES**    **EXAMPLE 1**    Powering Off a Power Supply

In this example `poweroff` prompts you for a reply.

```
sc0:sms-user:> poweroff ps5
```

```
!!!WARNING!!!WARNING!!!WARNING!!!WARNING!!!WARNING!!!
!!!WARNING!!!WARNING!!!WARNING!!!WARNING!!!WARNING!!!
```

```
This will trip the breakers on PS at PS5, which must be turned on manually!
Are you sure you want to continue to power off this component? (yes/no)? y
```

**EXAMPLE 2**    Powering Off a CPU Board at Expander Position 0

In this example `poweroff` forces the board off by suppressing any `stdout` messages and answering yes to all prompts.

```
sc0:sms-user:> poweroff -qy SB0
```

**EXIT STATUS**    The following exit values are returned:

0                    Successful completion.

>0                   An error occurred.

**ATTRIBUTES**    See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**    `poweron(1M)`

## poweron(1M)

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NAME        | poweron - control power on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| SYNOPSIS    | <b>poweron</b> [-q] [-y -n] [ <i>location</i> ]<br><b>poweron</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| DESCRIPTION | <p>poweron(1M) powers on the specified dual 48V power supply, fan tray, or board. If no arguments are specified and you have platform administrator privileges, the entire system is powered on (provided that no additional 48V power supply modules need to be powered on to support the new power requirements).</p> <p><b>Note</b> – When you power off a bulk power supply, <i>poweroff</i> trips the circuit breaker. In that case the <i>poweron</i> command alone cannot restore power. You must manually flip the breaker back on, and then run <i>poweron</i>.</p> <p>If you do not have platform administrator privileges, the <i>location</i> command operand <i>must</i> be specified and the board must be assigned to a domain for which you have domain administrator or configurator privileges. If sufficient power and cooling is not available for the requested board, you are prompted whether to continue <i>poweron</i>, or to discontinue <i>poweron</i>. A minimum of five 48V power supply modules (4-KW modules) are required to power a fully configured system. Thus, with N+1 redundancy, six power supply modules are used. If powering on a component requires another component to be powered on, such as a board requiring a 48V power supply module, the <i>poweron</i> request fails.</p> <p>For SMS 1.5 and subsequent releases, the default behavior has changed. When the <i>poweron</i> command fails, instead of terminating automatically, it displays a prompt asking whether you want to continue with the attempt to power on the system:</p> <pre>sc0:sms-user:&gt; <b>poweron SB0</b> EXB at EX0 is off. Attempt to poweron CPU at SB0 is discouraged. Are you sure you want to continue the power ON (yes/no)?</pre> <p>If you enter “Y,” the system will continue to attempt a <i>poweron</i>, and will display the results. If you enter “N,” the system will discontinue the attempt to power on.</p> <p>The <i>-y</i> and <i>-q</i> option automatically selects the “No” answer to this question, replicating the previous default behavior. The <i>-y</i> option does not apply to this particular prompt.</p> <p>If a specified component is in the automatic system recovery (ASR) blacklist file, an error message is displayed. If you have platform administrator privileges you are prompted to continue. If you do not, the operation is terminated and an error message is displayed.</p> |

**OPTIONS** The following options are supported.

- h Help. Displays usage descriptions.  
**Note** – Use alone. Any option specified in addition to -h is ignored.
- n Automatically answers no to all prompts. Prompts are displayed unless used with the -q option.
- q Quiet. Suppresses all messages to `stdout` including prompts.  
When used alone, -q defaults to the -n option for all prompts.  
When used with either the -y or the -n option, -q suppresses all user prompts, and automatically answers with either “Y” or “N” based on the option chosen.
- y Automatically answers “yes” to all prompts (except the prompt that appears when the `poweron` command fails). Prompts are displayed unless used with the -q option.

**OPERANDS**

The following operands are supported:

*location* Component location separated by a space. Multiple *location* forms are *not* permitted.

The following *location* forms are accepted:

Sun Fire 12K/E20K

SB(0...8)

IO(0...8)

CS(0|1)

FT(0...7)

PS(0...5)

EX (0...8)

Sun Fire 15K /E25K

SB(0...17)

IO(0...17)

CS(0|1)

FT(0...7)

PS(0...5)

EX(0...17)

SC(0|1) [Only the spare SC can be powered on.]

**EXTENDED  
DESCRIPTION****Group Privileges  
Required**

You must have either platform administrator or domain administrator/configurator privileges to run this command.

If you have domain privileges, you must also specify the *location* operand and the *location* must be a domain configuration unit (DCU) that is assigned to a domain for which you have domain privileges.

You must have platform administrator privileges in order to power on a board listed in the ASR blacklist file.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.



|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | <code>rcfgadm</code> - remote configuration administration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SYNOPSIS</b>    | <p><code>rcfgadm -d domain_indicator [-f] [-y   -n] [-v ] [-o hardware_options] -c function [-r retry_count [-T timeout]] ap_id...</code></p> <p><code>rcfgadm -d domain_indicator [-f] [-y   -n] [-v ] [-o hardware_options] -x hardware_function ap_id...</code></p> <p><code>rcfgadm -d domain_indicator [-v ] [-a ] [-s listing_options] [-o hardware_options] [-l [ ap_id   ap_type ]...]</code></p> <p><code>rcfgadm -d domain_indicator [-v ] [-o hardware_options] -t ap_id...</code></p> <p><code>rcfgadm -d domain_indicator [-v ] [-o hardware_options] -h [ ap_id   ap_type]</code></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>DESCRIPTION</b> | <p><code>rcfgadm(1M)</code> provides remote configuration administration operations on dynamically reconfigurable hardware resources. The <code>rcfgadm</code> command allows configuration administration operations on the specified domain from the system controller. These operations include displaying status (-l), initiating testing (-t), invoking configuration state changes (-c), invoking hardware specific functions (-x), and obtaining configuration administration help messages (-h).</p> <p><code>rcfgadm</code> performs configuration administration at attachment points, which are places where system software supports dynamic reconfiguration of hardware resources during continued operation of Solaris software.</p> <p>Configuration administration distinguishes between hardware resources that are physically present in the machine and hardware resources that are configured and visible to the Solaris environment. The nature of configuration administration functions are hardware-specific and <code>rcfgadm</code> performs configuration by calling hardware-specific libraries.</p> <p>Configuration administration operates on an attachment point. Hardware resources located at attachment points might or might not be physically replaceable during system operation but are dynamically reconfigurable by way of the configuration administration interfaces.</p> <p>An attachment point defines two unique elements, which are distinct from the hardware resources that exist beyond the attachment point. The two elements of an attachment point are a receptacle and an occupant. Physical insertion or removal of hardware resources occurs at an attachment point and results in a receptacle gaining or losing an occupant. Configuration administration supports the physical insertion and removal operations, as well as other configuration administration functions at an attachment point.</p> <p>Attachment points have associated state and condition information. The configuration administration interfaces provide control for transitioning attachment point states. A receptacle can exist in one of three states: <code>empty</code>, <code>disconnected</code>, or</p> |

connected. An occupant can exist in one of two states: `configured` or `unconfigured`.

A receptacle can provide the `empty` state, which is the normal state of a receptacle when the attachment point has no occupants. A receptacle can also provide the `disconnected` state if it has the capability of isolating its occupants from normal system access. Typically this state is used for various hardware-specific testing prior to bringing the occupant's resources into full use by the system, or as a step in preparing an occupant for physical removal or reconfiguration. A receptacle in the `disconnected` state isolates its occupant from the system as much as its hardware allows, but can provide access for testing and setup. A receptacle must provide the `connected` state, which allows normal access to hardware resources contained on any occupants. The `connected` state is the normal state of a receptacle that contains an occupant and that is not currently undergoing configuration administration operations.

The hardware resources contained on an occupant in the `unconfigured` state are not represented by normal Solaris software data structures and are thus not available for use by the Solaris operating system. Operations allowed on an `unconfigured` occupant are limited to configuration administration operations. The hardware resources of an occupant in the `configured` state are represented by normal Solaris software data structures, and thus some or all of those hardware resources can be in use by the Solaris operating system. All occupants provide both the `configured` and `unconfigured` states.

An attachment point can be in one of five conditions: `unknown`, `ok`, `failing`, `failed`, or `unusable`. An attachment point can enter the system in any condition, depending upon results of power-on tests and nonvolatile record keeping.

An attachment point with an occupant in the `configured` state is in one of four conditions: `unknown`, `ok`, `failing`, or `failed`. If the condition is not `failing` or `failed`, an attachment point can change to `failing` during the course of operation if a hardware-dependent recoverable error threshold is exceeded. If the condition is not `failed`, an attachment point can change to `failed` during operation as a result of an unrecoverable error.

An attachment point with an occupant in the `unconfigured` state can be in any of the defined conditions. The condition of an attachment point with an `unconfigured` occupant can decay from `ok` to `unknown` after a system-dependent time threshold. Initiating a test function changes the attachment point condition to `ok`, `failing`, or `failed`, depending on the outcome of the test. An attachment point that does not provide a test function can leave the attachment point in the `unknown` condition. If a test is interrupted, the attachment point condition can be set to the previous condition, to `unknown`, or to `failed`. An attachment point in the `unknown`, `ok`, `failing`, or `failed` conditions can be retested.

An attachment point can exist in the `unusable` condition for a variety of reasons, such as inadequate power or cooling for the receptacle, an occupant that is

unidentifiable, unsupported, incorrectly configured, and so on. An attachment point in the unusable condition can never be used by the system. It typically remains in this condition until the physical cause is remedied.

An attachment point also maintains *busy* information that indicates when a state change is in progress or the condition is being reevaluated.

Designate attachment points using hardware-specific identifiers (*ap\_ids*) that are related to the type and location of the attachment points in the system device hierarchy. An *ap\_id* cannot be ambiguous; it must identify a single attachment point. Two types of *ap\_id* specifications are supported: physical and logical.

A physical *ap\_id* contains a fully specified path name, while a logical *ap\_id* contains a shorthand notation that identifies an attachment point in a more user-friendly way.

For example, an attachment point representing system board 6 would have a physical *ap\_id* of `/devices/pseudo/dr@0:SB6`, while the logical *ap\_id* would be `SB6`.

Attachment points can also be created dynamically. A dynamic attachment point is named relative to a base attachment point that is present in the system. *ap\_ids* for dynamic attachment points consist of a base component followed by two colons (`::`) and a dynamic component. The base component is the base attachment point *ap\_id*. The dynamic component is hardware-specific and is generated by the corresponding hardware-specific library.

For example, consider a base attachment point, which represents a system board, with the physical *ap\_id* `/devices/pseudo/dr@0:SB16` and logical *ap\_id* `SB16`.

A CPU attached to this system board could be represented by a dynamic attachment point with logical *ap\_id* `SB16::cpu2`, where `SB16` is the base component and `cpu2` is the hardware-specific dynamic component. Similarly, the physical *ap\_id* for this dynamic attachment point would be:

```
/devices/pseudo/dr@0:SB16::cpu2.
```

An *ap\_type* is a partial form of a logical *ap\_id* that can be ambiguous and not specify a particular attachment point. An *ap\_type* is a substring of the portion of the logical *ap\_id*, up to but not including, the colon (`:`) separator. For example, an *ap\_type* of `pci` would show all attachment points whose logical *ap\_ids* begin with `pci`.

The use of *ap\_types* is discouraged. The new select suboption to the `-s` option provides a more general and flexible mechanism for selecting attachment points. See **OPTIONS**.

`rcfgadm` interacts primarily with hardware-dependent functions contained in hardware-specific libraries, and thus its behavior is hardware-dependent.



For each configuration administration operation, a service interruption can be required. If the requested operation requires a noticeable service interruption to interactive users, confirmation is requested before the operation is started.

A prompt is displayed on the standard error output for confirmation on the standard input. Confirmation can be overridden with the `-y` or `-n` option to always answer `yes` or `no`, respectively. Hardware-specific options, such as *test level*, are supplied as suboptions using the `-o` option.

Operations that change the state of the system configuration are audited by the system log daemon `syslogd(1M)`.

The arguments for this command conform to the `getopt(3C)` and `getsubopt(3C)` syntax conventions.

Refer to the *Sun Fire High-end and Midrange Servers Dynamic Reconfiguration User Guide* for more information.

## OPTIONS

The following options are supported.

**Note** – If the `rcfgadm` command fails, a board does not return to its original state. A `dxs` or `dca` error message is logged to the domain. If the error is recoverable, you can retry the command. If it is unrecoverable, you need to reboot the domain in order to use that board.

- a Specifies that the -l option must also list dynamic attachment points.
- c *function* Performs the state change function on the attachment point specified by *ap\_id*.  
  
Specify function as *disconnect*, *connect*, *configure*, or *unconfigure*. These functions cause state transitions at the attachment point by calling hardware-specific library routines.

The possible transition states and their meanings are as follows:

- `disconnect`

Change the receptacle state to disconnected.

If the occupant state is configured, the `disconnect` function first attempts to unconfigure the occupant. The `disconnect` function powers the board off by default. The board is ready to be removed from the slot at that point. The `-o nopoweroff` option specifies skipping the power off step, leaving the board powered on. The board is left assigned to the domain by default. The `-o unassign` option instructs the domain to give up the ownership of the board once the board is disconnected. Once the board has been unassigned, it may no longer be accessible to `cfgadm` because another domain might have assigned the board to itself.

- `connect`

Performs hardware-specific operations to put the receptacle into the `connected` state, which allows an occupant to operate normally through the receptacle.

- `configure`

Performs hardware-specific operations that allow an occupant's hardware resources to be used by Solaris software. Occupants that are configured are part of the system configuration and are available for manipulation by Solaris software device manipulation maintenance commands (for example, `psradm(1M)`, `mount(1M)`, and `ifconfig(1M)`).

- `unconfigure`

Performs hardware-specific operations that logically remove an occupant's hardware resources from the system. The occupant must currently be configured, and its hardware resources must not be in use by the Solaris operating system.

State transition functions can fail due to the condition of the attachment point or other hardware-dependent considerations. All state change functions in the direction of adding resources (`connect` and `configure`) are passed on to the hardware-specific library when the attachment point is in the `ok` or `unknown` condition. All other conditions require the use of the force (`-f`) option to allow these functions to be passed on to the hardware-specific library. Attachment point condition does not prevent a hardware-specific library being called for the removal (`disconnect` and `unconfigure`) of hardware resources from the system. Hardware-specific libraries can reject state change functions if the attachment point is in the `unknown` condition.

The condition of an attachment point is not necessarily changed by the state change functions; however, errors during state change operations can change the attachment point condition. Specify the force option (`-f`) to override a condition and force a state change that would otherwise fail. Hardware-specific safety and integrity checks can prevent the force option from having any effect.

- `-d domain_indicator` Specifies the domain using one of the following:
- domain\_id* – ID for a domain. Valid *domain\_ids* are A–R and are not case sensitive.
- domain\_tag* – Name assigned to a domain using `addtag(1M)`.
- `-f` Forces the specified action to occur. Typically, this is a hardware-dependent override of a safety feature. Forcing a state change operation can allow use of the hardware resources of an occupant that is not in the `ok` or `unknown` condition, at the discretion of any hardware-dependent safety checks.
- `-h [ap_id | ap_type]` Prints the help message text. If *ap\_id* or *ap\_type* is specified, the help routine of the hardware-specific library for the attachment point indicated by the argument is called.

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -l [ <i>ap_id</i>   <i>ap_type</i> ] | Lists the state and condition of attachment points specified. Filter attachment points with the <code>-s</code> option and select suboption. Invoking <code>rcfgadm</code> without one of the action options is equivalent to <code>-l</code> without an argument. The format of the list display is controlled by the <code>-v</code> and <code>-s</code> options. When the <code>-a</code> option is specified, attachment points are dynamically expanded.                                                                                                                                                                                                                                                                                                                                              |
| -n                                   | Automatically answers no to all prompts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| -o <i>hardware_options</i>           | Supplies hardware-specific options to the main command option.<br><br>The following are valid <i>hardware_options</i> : <ul style="list-style-type: none"> <li>■ <code>parsable</code><br/>Applies only when the <code>-s</code> option is used. The <code>parsable</code> suboption specifies that info is returned for system board and IO assembly only.</li> <li>■ <code>unassign</code><br/>Applies only when the <code>-c</code> disconnect option is used. The <code>unassign</code> suboption specifies that the domain is to give up ownership of the board.</li> <li>■ <code>nopoweroff</code><br/>Applies only when the <code>-c</code> disconnect option is used. The <code>nopoweroff</code> suboption specifies that the board is not to be powered off after it is disconnected.</li> </ul> |
| -r <i>retry_count</i>                | Specifies the number of times the dynamic reconfiguration (DR) request is retried on the domain. The default is zero.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| -s <i>listing_options</i>            | Supplies listing options to the list ( <code>-l</code> ) command. <i>listing_options</i> conforms to the <code>getsubopt(3C)</code> syntax convention. The suboptions are used to specify the attachment point selection criteria ( <code>select=select_string</code> ), the type of matching desired ( <code>match=match_type</code> ), the order of listing ( <code>sort=field_spec</code> ), the data that is displayed ( <code>cols=field_spec</code> and <code>cols2=field_spec</code> ), the column delimiter ( <code>delim=string</code> ), and whether to suppress column headings ( <code>noheadings</code> ).                                                                                                                                                                                    |

When the `select` suboption is specified, only attachment points that match the specified criteria are listed. The `select` suboption has the following syntax:

```
rcfgadm -s
select=attr1 (value1) :attr2 (value2) ...
```

where an `attr` is one of `ap_id`, `class`, or `type`. `ap_id` refers to the logical `ap_id` field, `class` refers to attachment point class, and `type` refers to the type field. `value1`, `value2`, and so on are the corresponding values to be matched. The type of match can be specified by the `match` suboption as follows:

```
rcfgadm -s
match=match_type,select=attr1 (value1) ...
```

where `match_type` can be either `exact` or `partial`. The default value is `exact`.

Suboptions can contain special characters that can be interpreted in ways other than as part of `rcfgadm` suboptions. For example, a command might contain parentheses, which are acceptable for suboptions but are interpreted as special characters when entered on the command line. Arguments to the `select` suboption can be quoted to protect them from the UNIX C shell interpretation.

A `field_spec` is one or more data-fields concatenated with the use of a colon (:), as in `data-field:data-field:data-field`. A `data-field` is comprised of `ap_id`, `physid`, `r_state`, `o_state`, `condition`, `type`, `busy`, `status_time`, `status_time_p` and `info`. The `ap_id` field output is the logical name for the attachment point, while the `physid` field contains the physical name. The `r_state` field can be `empty`, `disconnected`, or `connected`. The `o_state` field can be `configured` or `unconfigured`. The `busy` field can be either `y` if the attachment point is `busy`, or `n` if it is not. The `type` and `info` fields are hardware-specific. The `status_time_p` field is a parsable version of the `status_time` field. If an attachment point has an associated class, the `class` field lists the class name.

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -T                | <p>The order of the fields in <i>field_spec</i> is significant. For the sort suboption, the first field given is the primary sort key. For the <i>cols</i> and <i>cols2</i> suboptions, the fields are printed in the order requested. Reverse the order of sorting on a data-field by placing a minus (-) before the data-field name within the <i>field_spec</i> for the sort suboption. The default value for sort is <i>ap_id</i>. The default values for <i>cols</i> and <i>cols2</i> depend on whether the <i>-v</i> option is given. Without it, <i>cols</i> is <i>ap_id:r_state:o_state:condition</i> and <i>cols2</i> is not set; with <i>-v</i>, <i>cols</i> is <i>ap_id:r_state:o_state:condition:info</i> and <i>cols2</i> is <i>status_time:type:busy:physid</i>.</p> <p>The default value for <i>delim</i> is a single space. The value of <i>delim</i> can be a string of arbitrary length. The delimiter cannot include a comma (,) character; see <i>getsubopt(3C)</i>. These listing options can be used to create parsable output.</p> |
| -T <i>timeout</i> | <p>Specifies the time interval, in seconds, between retries. This option cannot be used alone and must be specified with the <i>-r retry_count</i> option. The default value is zero, meaning that the DR request is retried immediately.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| -t                | <p>Performs a test of one or more attachment points. The test function is used to reevaluate the condition of the attachment point.</p> <p>The results of the test are used to update the condition of the specified occupant to <i>ok</i> if no faults are found, <i>failing</i> if recoverable faults are found, or <i>failed</i> if any unrecoverable faults are found.</p> <p>If a test is interrupted, the attachment point condition can be restored to its previous value, set to <i>unknown</i> if no errors were found, set to <i>failing</i> if only recoverable errors were found, or set to <i>failed</i> if any unrecoverable errors were found. The attachment point should be set to <i>ok</i> only upon normal completion of testing with no errors.</p>                                                                                                                                                                                                                                                                                  |



|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -v                                | Executes in verbose mode. For the <code>-c</code> , <code>-t</code> , and <code>-x</code> options, displays a message giving the results of each attempted operation. Displays detailed help information for the <code>-h</code> option. Displays verbose information for each attachment point for the <code>-l</code> option.                                                                                                                                                                               |
| <code>-x hardware_function</code> | <p>Performs hardware-specific functions.</p> <p>Lists hardware-specific private functions using <code>rcfgadm -h ap_id</code>.</p> <p>The following are valid for <i>hardware_function</i>:</p> <ul style="list-style-type: none"><li>■ <code>assign ap_id</code><br/>Assign a board to a domain.</li><li>■ <code>unassign ap_id</code><br/>Unassign a board from a domain.</li><li>■ <code>poweron ap_id</code><br/>Power on a board.</li><li>■ <code>poweroff ap_id</code><br/>Power off a board.</li></ul> |
| -y                                | Automatically answers yes to all prompts. Prompts are displayed.                                                                                                                                                                                                                                                                                                                                                                                                                                              |

rcfgadm(1M)

**OPERANDS**

The following operands are supported:

*ap\_id*

Refer to attachment points by hardware-specific identifiers (*ap\_ids*) that are related to the type and location of the attachment points in the system device hierarchy. An *ap\_id* cannot be ambiguous; it must identify a single attachment point. Two types of *ap\_id* specifications are supported: physical and logical. A physical *ap\_id* contains a fully specified path name, while a logical *ap\_id* contains a shorthand notation that identifies an attachment point in a more user-friendly way.

Physical *ap\_ids*:

```
/devices/pseudo/dr@0:IO4
/devices/pseudo/dr@0:IO6
/devices/pseudo/dr@0:IO14
/devices/pseudo/dr@0:SB4
/devices/pseudo/dr@0:SB6
```

Logical *ap\_ids*:

```
IO4
IO6
IO14
SB4
SB6
```

*ap\_type* An *ap\_type* is a partial form of a logical *ap\_id* that can be ambiguous and not specify a particular attachment point. An *ap\_type* is a substring of the portion of the logical *ap\_id* up to, but not including, the colon (:) separator. For example, an *ap\_type* of `pci` would show all attachment points whose logical *ap\_ids* begin with `pci`. The two *ap\_types* shown here are static and dynamic.

Static *ap\_types*:

HPCI

CPU

MCPU

`pci-pci/hp`

Dynamic *ap\_types*:

cpu

mem

io

## EXTENDED DESCRIPTION

### Group Privileges Required

The privileges required for using this command depend on the desired operation. `rcfgadm` can assign or unassign boards that are not connected to a domain. To assign or unassign a board, you must have either platform administrator privileges or domain administrator/configurator privileges for the specified domain *and* the board must be in the domain's available component list. For more information see `setupplatform(1M)` and `showplatform(1M)`.

The assign and unassign operations are private, hardware-specific operations. Assign a board using `rcfgadm -x assign ap_id`. Unassign a board using `rcfgadm -x unassign ap_id`. The *ap\_ids* for assign and unassign must be logical *ap\_ids* specifying a board, such as `SB0` or `IO2`.

Domain administrator or domain configurator privileges are required for test, state change, list or hardware-specific operations.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

## EXAMPLES

**EXAMPLE 1** Listing Attachment Points in the Device Tree for Domain A

The following example lists all attachment points except dynamic attachment points.

```
sc0:sms-user:> rcfgadm -d a
Ap_Id Type Receptacle Occupant Condition
IO4 PCI connected configured ok
IO6 MCPU disconnected unconfigured unknown
IO14 PCI connected configured ok
SB4 CPU disconnected unconfigured unknown
SB6 CPU connected configured ok
SB16 CPU connected configured ok
```

**EXAMPLE 2** Listing All Configurable Hardware Information for Domain A

The following example lists all current configurable hardware information, including those represented by dynamic attachment points:

```
sc0:sms-user:> rcfgadm -d a -al
Ap_Id Type Receptacle Occupant Condition
IO4 PCI connected configured ok
IO4::pci0 io connected configured ok
IO4::pci1 io connected configured ok
IO4::pci2 io connected configured ok
IO4::pci3 io connected configured ok
IO6 MCPU disconnected unconfigured unknown
IO14 PCI connected configured ok
IO14::pci0 io connected configured ok
IO14::pci1 io connected configured ok
IO14::pci2 io connected configured ok
IO14::pci3 io connected configured ok
SB4 CPU disconnected unconfigured unknown
SB6 CPU connected configured ok
SB6::cpu0 cpu connected configured ok
SB6::cpu1 cpu connected configured ok
SB6::cpu2 cpu connected configured ok
SB6::cpu3 cpu connected configured ok
SB6::memory memory connected configured ok
SB16 CPU connected configured ok
SB16::cpu0 cpu connected configured ok
SB16::cpu1 cpu connected configured ok
SB16::cpu2 cpu connected configured ok
SB16::cpu3 cpu connected configured ok
SB16::memory memory connected configured ok
```

**EXAMPLE 3** Creating a Selective List Based on Attachment Point Attributes for Domain A

The following example lists all attachment points at *location* SB6 and of *type* cpu. The argument to the `-s` option is quoted to protect it from the shell.

```
sc0:sms-user:> rcfgadm -d a -s match=partial,select="type(cpu)" -
1a SB6
```

| Ap_Id     | Type | Receptacle | Occupant   | Condition |
|-----------|------|------------|------------|-----------|
| SB6::cpu0 | cpu  | connected  | configured | ok        |
| SB6::cpu1 | cpu  | connected  | configured | ok        |
| SB6::cpu2 | cpu  | connected  | configured | ok        |
| SB6::cpu3 | cpu  | connected  | configured | ok        |

**EXAMPLE 4** Listing Current Configurable Hardware Information in Verbose Mode for Domain A

The following example lists current configurable hardware information in verbose mode:

```
sc0:sms-user:> rcfgadm -d a -v -l SB16
```

| Ap_Id       | Receptacle | Occupant   | Condition                 | Information          |
|-------------|------------|------------|---------------------------|----------------------|
| SB16        | connected  | configured | ok                        | powered-on, assigned |
| When        | Type       | Busy       | Phys_Id                   |                      |
| Mar 6 13:30 | CPU        | n          | /devices/pseudo/dr@0:SB16 |                      |

**EXAMPLE 5** Using the Force Option on Domain A

The following example configures an occupant in the failing state to the system using the force option:

```
sc0:sms-user:> rcfgadm -d a -f -c configure SB6
```

**EXAMPLE 6** Unconfiguring an Occupant From the System on Domain A

The following example unconfigures an occupant from the system:

```
sc0:sms-user:> rcfgadm -d a -c unconfigure IO14
```

**EXAMPLE 7** Configuring an Occupant at an Attachment Point

The following example configures an occupant:

```
sc0:sms-user:> rcfgadm -d a -c configure SB6
```

**EXAMPLE 8** Using the `-o` parsable option:

The following example displays system board and IO assembly information as a set of “name=value” pairs:

```
sc0:sms-user:> rcfgadm -d G -s cols=ap_id:type -o parsable
Ap_Id Type
IO0 unknown
IO5 HPCI
IO11 HPCI
SB0 CPU
SB11 CPU
```

**EXAMPLE 9** Disconnecting But Not Powering Off SB0:

The following example displays domain G giving up ownership of the board.

```
sc0:sms-user:> rcfgadm -d G -c disconnect -o unassign,nopoweroff
SB0
```

## ENVIRONMENT VARIABLES

See **environ** (5) for descriptions of the following environment variables that affect the execution of `command_name`: LC\_TIME, LC\_MESSAGES, TZ.

|             |                                                                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LC_MESSAGES | Determines how <code>rcfgadm</code> displays column headings and error messages. Listing output data is not affected by the setting of this variable.                               |
| LC_TIME     | Determines how <code>rcfgadm</code> displays human-readable status changed time ( <i>status_time</i> ).                                                                             |
| TZ          | Specifies the time zone used when converting the status changed time. This applies to both the human-readable ( <i>status_time</i> ) and parsable ( <i>status_time_p</i> ) formats. |

## EXIT STATUS

The following exit values are returned:

|   |                          |
|---|--------------------------|
| 0 | Successful completion.   |
| 1 | No acknowledge.          |
| 2 | Not supported.           |
| 3 | Operation not supported. |
| 4 | Invalid privileges.      |
| 5 | Busy.                    |
| 6 | System busy.             |
| 7 | Data error.              |
| 8 | Library error.           |

|    |                                     |
|----|-------------------------------------|
| 9  | No library.                         |
| 10 | Insufficient condition.             |
| 11 | Invalid.                            |
| 12 | Error.                              |
| 13 | A PID does not exist.               |
| 14 | Invalid attribute.                  |
| 30 | Invalid board ID type.              |
| 31 | Invalid permissions.                |
| 32 | Assigned to another domain.         |
| 33 | Unable to get permissions.          |
| 34 | Unable to get domain board info.    |
| 35 | Unable to get active board list.    |
| 36 | Unable to get assigned board list.  |
| 37 | Get blacklist failed.               |
| 38 | Solaris not running.                |
| 39 | Invalid privileges.                 |
| 40 | Unable to get domain permissions.   |
| 41 | Unable to get platform permissions. |
| 42 | Failed to get domain blacklist.     |
| 43 | Failed to get platform blacklist.   |
| 56 | DR command syntax error.            |
| 70 | DR operation failed.                |

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

`addtag(1M)`, `cfgadm_sbd(1M)`, `setupplatform(1M)`, `showplatform(1M)`

**DIAGNOSTICS**

Diagnostic messages appear on the standard error output. Other than options and usage errors, the following are diagnostic messages produced by this utility:



rCFGADM: Configuration administration not supported on *ap\_id*  
rCFGADM: No library found for *ap\_id*  
rCFGADM: *ap\_id* is ambiguous  
rCFGADM: Operation: Insufficient privileges  
rCFGADM: Attachment point is busy, try again  
rCFGADM: No attachment points with specified attributes found  
rCFGADM: System is busy, try again  
rCFGADM: Operation: Operation requires a service interruption  
rCFGADM: Operation: Data error: error\_text  
rCFGADM: Operation: Hardware specific failure: error\_text  
rCFGADM: Attachment point not found  
rCFGADM: Configuration operation succeeded  
rCFGADM: Configuration operation canceled  
rCFGADM: Configuration operation invalid  
rCFGADM: Configuration operation not supported  
rCFGADM: Library error  
rCFGADM: Insufficient condition  
rCFGADM: SCDR/DCA door failure  
rCFGADM: DCA/DCS communication error  
rCFGADM: DCA internal failure  
rCFGADM: PCD event failure  
rCFGADM: Callback function failure  
rCFGADM: SCDR library internal error  
rCFGADM: Board is already assigned to another domain  
rCFGADM: Unable to get active or assigned domain info  
rCFGADM: Unable to get privileges  
rCFGADM: DRCMD library invalid parameter  
See `config_admin(3CFGADM)` for additional details regarding error messages.

## reset(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | reset - send reset to all CPU ports of a specified domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>SYNOPSIS</b>    | <b>reset</b> -d <i>domain_indicator</i> [, <i>domain_indicator</i> ]...<br>[-d <i>domain_indicator</i> [, <i>domain_indicator</i> ]...]... [-q] [-y   -n] [-x]<br><br><b>reset</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>DESCRIPTION</b> | reset(1M) enables you to reset one or more domains in one of two ways: reset the hardware to a clean state or send an externally initiated reset (XIR) signal. The default is to reset the hardware to a clean state. You receive an error if the virtual keyswitch is in the <i>secure</i> position. By default, <i>reset</i> gives an optional confirmation prompt. Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>OPTIONS</b>     | The following options are supported:<br><br>-d <i>domain_indicator</i> Specifies the domain using one of the following:<br><br><i>domain_id</i> -ID for a domain. Valid <i>domain_ids</i> are A-R and are not case sensitive.<br><br><i>domain_tag</i> - Name assigned to a domain using <i>addtag(1M)</i> .<br><br><b>Note</b> – Multiple <i>domain_indicators</i> must be separated by a comma.<br><br>-h                              Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.<br><br>-n                              Automatically answers “no” to all prompts. Prompts are displayed unless used with the -q option.<br><br>-q                              Quiet. Suppresses all messages to <i>stdout</i> , including prompts.<br><br>When used alone, -q defaults to the -n option for all prompts.<br><br>When used with either the -y or the -n option, -q suppresses all user prompts and automatically answers with either “y” or “n” based on the option chosen.<br><br>-x                              Sends an XIR signal to the processors in the specified domain.<br><br>-y                              Automatically answers “yes” to all prompts. Prompts are displayed unless used with the -q option. |

**EXTENDED  
DESCRIPTION****Group Privileges  
Required**

You must have domain administrator privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES****EXAMPLE 1** Resetting Domain C

```
sc0:sms-user:> reset -d C
Do you want to send RESET to domain C? [y|n]: y

RESET initiated for domain: C

Powering on: CSB at CS0

Already powered on: CSB at CS0

Powering on: CSB at CS1

Already powered on: CSB at CS1

Powering on: EXB at EX0

Already powered on: EXB at EX0

Powering on: HPCI at IO0
...
...
...
```

**EXAMPLE 2** XIR Reset of Domain C

```
sc0:sms-user:> reset -d C -x
Do you want to send XIR to domain C? [y|n]:y
XIR to processor SB3/P0 initiated
XIR to processor SB3/P1 initiated
XIR to processor SB3/P2 initiated
XIR to processor SB3/P3 initiated
XIR initiated to all processors for domain: C
```

**EXIT STATUS**

The following exit values are returned:

0                   Successful completion.  
>0                  An error occurred.

**ATTRIBUTES**

See `attributes(5)` for a description of the following attribute.

| Attribute Type | Attribute Value |
|----------------|-----------------|
| Availability   | SUNWSMSop       |

reset(1M)

**SEE ALSO**

addtag(1M)

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | resetsc - reset the <i>other</i> system controller (SC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>SYNOPSIS</b>                  | <b>resetsc</b> [-q] [-y  -n]<br><b>resetsc</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>DESCRIPTION</b>               | <b>resetsc(1M)</b> resets the <i>other</i> SC. This might typically be done after failover. This command either runs from the main SC and resets the spare or runs from the spare and resets the main. An SC cannot reset itself. If the SC chosen is not powered on, <b>resetsc</b> prompts the user to power it on. If the chosen SC does not power on, <b>resetsc</b> terminates and returns an error.                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>OPTIONS</b>                   | The following options are supported:<br><br>-h                    Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.<br><br>-n                    Automatically answers no to all prompts. Prompts are displayed unless used with the -q option.<br><br>-q                    Quiet. Suppresses all messages to <code>stdout</code> including prompts.<br><br>When used alone -q defaults to the -n option for all prompts.<br><br>When used with either the -y or the -n option, -q suppresses all user prompts and automatically answers with either 'y' or 'n' based on the option chosen.<br><br>-y                    Automatically answers yes to all prompts. Prompts are displayed unless used with the -q option. |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Group Privileges Required</b> | You must have platform administrator privileges to run this command.<br><br>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>EXAMPLES</b>                  | <b>EXAMPLE 1</b> Resetting the Other SC Using Prompts<br><br><pre>sc0:sms-user:&gt; <b>resetsc</b> About to reset other SC. Are you sure you want to continue? (y or [n])</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**EXAMPLE 2** Resetting the Other SC When the Other SC Is Powered Off

```
sc0:sms-user:> resetsc
The other SC is not powered on.
Do you want to try to power it on? (y or [n])
```

**EXAMPLE 3** Resetting the Other SC Answering Yes to All Prompts

```
sc0:sms-user:> resetsc -y
About to reset other SC.
Are you sure you want to continue? [y]
```

**EXAMPLE 4** Resetting the Other SC Suppressing All Prompts

```
sc0:sms-user:> resetsc -q
```

**EXIT STATUS**

The following exit values are returned:

- 0 Successful completion.
- 1 The user has invalid permission.
- 2 Memory allocation failed.
- 3 Cannot determine other SC's presence.
- 4 Other SC is not present.
- 5 Cannot determine power state of other SC.
- 6 Unable to power on other SC.
- 7 Unable to reset other SC.
- 8 Flag registration failed.
- 9 Invalid command-line argument.

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | runcmdsync - prepare a specified script for recovery after a failover                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>SYNOPSIS</b>                  | <b>runcmdsync</b> <i>script_name</i> [ <i>parameters</i> ]<br><b>runcmdsync</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>DESCRIPTION</b>               | <p>The <code>runcmdsync(1M)</code> command prepares the specified script for automatic synchronization (recovery) after a failover. <code>runcmdsync</code> creates a command synchronization descriptor that identifies the script to be recovered. This descriptor is added to the command synchronization list that determines the scripts to be restarted after a failover. The <code>runcmdsync</code> command also removes this descriptor from the command synchronization list when the script terminates.</p> <p>To specify restart points in a script, see <code>initcmdsync(1M)</code> and the family of synchronization commands.</p>                                                                                  |
| <b>OPTIONS</b>                   | <p>The following options are supported:</p> <p>-h                    Help. Displays usage descriptions.</p> <p style="padding-left: 100px;"><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p><i>script_name</i>        Identifies the script to be prepared for command synchronization. <i>script_name</i> must be the absolute path name of an executable command. The command must exist in the same location on both SCs.</p> <p><i>parameters</i>        Specifies the options or parameters associated with the specified script. These parameters are stored on the spare system controller (SC) and are used to restart the specified command or script after an automatic failover.</p> |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Group Privileges Required</b> | <p>You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command.</p> <p>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>EXIT STATUS</b>               | <p>The following exit values are returned:</p> <p>0                    Successful completion.</p> <p>&gt;0                   An error occurred.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

runcmdsync(1M)

**ATTRIBUTES**

See attributes(5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

cancelcmdsync(1M), initcmdsync(1M), savecmdsync(1M),  
showcmdsync(1M)



|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | savecmdsyc - command synchronization command                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>SYNOPSIS</b>    | <p><b>cancelcmdsyc</b> <i>cmdsyc_descriptor</i></p> <p><b>initcmdsyc</b> <i>script_name</i> [<i>parameters</i>]</p> <p><b>savecmdsyc</b> -M <i>identifier</i> <i>cmdsyc_descriptor</i></p> <p><b>[cancel init save]cmdsyc -h</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>DESCRIPTION</b> | <p>The command synchronization commands work together to control the recovery of user-defined scripts interrupted by a system controller (SC) failover. Insert the following commands in user-defined scripts to enable command synchronization:</p> <p><b>initcmdsyc</b>      Creates a command synchronization descriptor that identifies the script to be recovered.</p> <p>This descriptor is placed on a command synchronization list that identifies the scripts and commands to be restarted on the new main SC after a failover.</p> <p><b>savecmdsyc</b>      Adds a marker that identifies a location in the script from which processing can be resumed after a failover.</p> <p><b>cancelcmdsyc</b>    Removes a command synchronization descriptor from the command synchronization list. This ensures that the script is run only once and not after subsequent failovers.</p> <p>Be sure that all exit paths of a script have a <b>cancelcmdsyc</b> sequence to remove the descriptor from the command synchronization list. If you do not remove the descriptor and a failover occurs, the script is rerun on the new main SC.</p> <p><b>Note</b> – Both an <b>initcmdsyc</b> and a <b>cancelcmdsyc</b> sequence must be contained within a script to enable command synchronization. The use of the <b>savecmdsyc</b> command is optional, and marks only specific points in a script from which processing can be resumed. If specific restart points are not necessary, consider using <b>runcmdsync(1M)</b> instead.</p> |

**OPTIONS**

The following options are supported:

|                            |                                                                                                                                                                                                         |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>cmdsnc_descriptor</i>   | Specifies the command synchronization descriptor that identifies the user-defined script. This descriptor is the standard output value returned by the <code>initcmdsnc</code> command.                 |
| <code>-h</code>            | Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to <code>-h</code> is ignored.                                                                      |
| <code>-M identifier</code> | Marks a location in the script from which the script can be resumed after a failover. The identifier must be a positive integer.                                                                        |
| <i>parameters</i>          | Specifies the options or parameters associated with the user-defined script. These parameters are stored on the spare SC and are used to restart the specified script after a failover.                 |
| <i>script_name</i>         | Identifies the name of the user-defined script to be synchronized. <i>script_name</i> must be the absolute path name of an executable command. The command must exist in the same location on both SCs. |

**EXTENDED DESCRIPTION**

The command synchronization commands are inserted at certain logical points within a user-defined script.

For instance, a Korn shell script might be structured as follows:

```
MAIN CODE STARTS HERE
Be sure to use a cleanup procedure to handle any
interrupts.
Use the cancelcmdsyc to remove the script from the
command synchronization list. Otherwise, the command
will get restarted on the new main SC.
#
clean_up () {
 cancelcmdsyc $desc
 exit
}

Declare the clean_up function to capture system signals
and cleanup.
trap "clean_up" INT HUP TERM QUIT PWR URG
goto_label=1
Process the arguments, capturing the -M marker point
if provided
#
for arg in $*; do
 case $arg in
 -M)
 goto_label=$arg;;
 .
 .
 .
 esac
done
Place this script and all its parameters in the command
synchronization list, which indicates the commands to
be restarted after an SC failover.
#
NOTE: The script must be executable by the user defined
in fomd.cf and reside in the same directory on both the
main and the spare SC.
```

## savecmdsyc(1M)

```
If the command is not part of the defined PATH for
the user, the absolute filename must be passed with the
initcmdsyc command
#
initcmdsyc script_name parameters
The marker point is stored in the goto_label variable.
Keep executing this script until all cases have been
processed or an error is detected.
#
while (($goto_label != 0)) ; do
#
Each case should represent a synchronization point
in the script.
#
case $goto_label in
#
Step 1: Do something
#
1) do_something
 .
 .
 .

Execute the savecmdsyc command with the script's
descriptor and a unique marker to save the position.
If a failover occurs here, the commands represented in
the next goto_label (2) will be resumed.
#
 savecmdsyc -M $(($goto_label + 1)) $desc
 goto_label=$(($goto_label + 1))
 ;;

#
Step 2: Do more things
#
2) do_more_things
 .
 .
 .
 savecmdsyc -M $(($goto_label + 1)) $desc
 goto_label=$(($goto_label + 1))
 ;;

#
Step 3: Finish the last step and set the goto_label to 0
so that the script ends.
3)
 finish_last_step
 .
 .
 .
 goto_label=0
 ;;

 esac
done
END OF MAIN CODE
Remember to execute cancelcmdsyc to remove the script from the
command synchronization list. Otherwise, the command will be restarted
after the failover.
#
cancelcmdsyc $desc
```

**Group Privileges Required** You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXIT STATUS** The following exit values are returned:

0 Successful completion.

>0 An error occurred.

**Note** – The standard output for `initcmdsnc` contains the command synchronization descriptor. Also, when failover is disabled (after a failover or in a single SC environment), scripts that contain synchronization commands generate error messages to the platform log file and return nonzero exit codes. These messages can be ignored.

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `runccmdsnc(1M)`, `showcmdsnc(1M)`

## setbus(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | setbus - perform dynamic bus reconfiguration on active expanders in a domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>SYNOPSIS</b>    | <b>setbus</b> [-q] [-y -n] -c <i>csb</i> [-b <i>buses</i> ] [ <i>location</i> ...]<br><b>setbus</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>DESCRIPTION</b> | <p>setbus(1M) dynamically reconfigures bus traffic on active expanders in a domain to use either one centerplane support board (CSB) or both. Using both CSBs is considered <i>normal</i> mode. Using one CSB is considered <i>degraded</i> mode.</p> <p>This feature enables you to swap out a CSB without having to power off the system.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>OPTIONS</b>     | <p>The <i>-y</i> and <i>-n</i> are optional arguments that take effect only if the <code>setbus</code> command displays a confirmation message such as the one shown below. The <i>-y</i> argument supplies an automatic affirmative response to the confirmation message. The <i>-n</i> argument supplies an automatic negative response.</p> <p>If changing the configuration on the chosen expander requires changing the configuration on additional expanders, <code>setbus</code> displays the following prompt:</p> <pre>The expander board in position <i>location</i> communicates with expanders not already listed, and will be added to the list of boards to reconfigure. Are you sure you want to continue the reconfiguration? (yes/no)?</pre> <p>Additionally, <code>setbus</code> resets any boards that are powered on but not active. Any attach-ready state is lost. To bring the boards back to an attach-ready state, refer to the <i>Sun Fire High-end and Midrange Systems Dynamic Reconfiguration User Guide</i>.</p> <p><b>Note</b> – If you have degraded all expanders to one CSB you cannot un-degrade a single expander; you must set them all at the same time, otherwise <code>setbus</code> fails.</p> |

The following options are supported

- b *buses*** Specifies which *buses* to configure. There are three *buses* to configure. Valid *buses* are:
- a Configures the address bus
  - d Configures the data bus
  - r Configures the response bus
- The default is to configure all three buses.
- c *csb*** Specifies which CSB(s) to use.
- CS0 Configures the hardware to use CS0 (degraded mode)
  - CS1 Configures the hardware to use CS1 (degraded mode)
  - CS0, CS1 Configures the hardware to use both CSBs (normal mode)
- h** Help. Displays usage descriptions.
- Note** – Use alone. Any option specified in addition to **-h** is ignored.
- n** Automatically answers “no” to any prompt displayed by the setbus command.
- q** Quiet. Suppresses all messages to `stdout` including prompts.
- When used alone, **-q** defaults to the **-n** option for all prompts.
- When used with either the **-y** or the **-n** option, **-q** suppresses all user prompts and automatically answers with either 'y' or 'n' based on the option chosen.
- y** Automatically answers “yes” to any prompt displayed by the setbus command.

## OPERANDS

The following operands are supported:

*location* Specifies which expander slots to configure. The default is to configure all. Multiple *locations* are separated by spaces.

Valid *locations* are:

Sun Fire 12K/E20K:

EX(0...8)

Sun Fire 15K/E25K:

EX(0...17)

## EXTENDED DESCRIPTION

### Group Privileges Required

You must have platform administrator privileges to reconfigure any set of communicating expanders (SOCX) in the system.

Domain administrators or configurators can reconfigure only the SOCX assigned to the domain(s) in which they have privileges.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

## EXAMPLES

### EXAMPLE 1 Setting All Buses on All Active Domains to Use CS0

This example displays setbus output when there are inactive boards powered on in one or more of the domains.

```
sc0:sms-user:> setbus -c CS0
The following boards are powered on but are not active in a domain:
SB13
IO9 assigned to domain J
IO16 assigned to domain Q
SB17
These boards will be reset, and any attach-ready state will be lost.
```

### EXAMPLE 2 Setting All Buses on All Active Domains to Use Both CSBs

```
sc0:sms-user:> setbus -c CS0,CS1
```

### EXAMPLE 3 Setting Address Bus on All Domains to Use CS0

```
sc0:sms-user:> setbus -c CS0 -b a
```



**EXAMPLE 4** Setting Address and Data Buses on Active EX1 to Use CS1

```
sc0:sms-user:> setbus -c CS1 -b ad EX1
```

#### EXIT STATUS

The following exit values are returned:

0 Successful completion.

>0 An error occurred.

#### ATTRIBUTES

See `attributes(5)` for a description of the following attribute.

| Attribute Type | Attribute Value |
|----------------|-----------------|
| Availability   | SUNWSMSop       |

#### SEE ALSO

`showbus(1M)`

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                                                                                                                                                                       |    |                                    |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------|
| <b>NAME</b>                      | setcsn - set the chassis serial number for a Sun Fire high-end system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                 |                                                                                                                                                                                                                                       |    |                                    |
| <b>SYNOPSIS</b>                  | <pre>setcsn -c chassis_serial_number</pre> <pre>setcsn -h</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                                                                                                                                                                       |    |                                    |
| <b>DESCRIPTION</b>               | <p>setcsn(1M) enables you to record the chassis serial number that identifies a Sun Fire high-end system. The chassis serial number is printed on a label located on the front of the system chassis, near the bottom center.</p> <p>If you are upgrading to SMS 1.5 from an earlier SMS version, you must run the setcsn command to record the chassis serial number. The chassis serial number can be recorded only once. This command verifies the specified serial number, and if the number was previously recorded, this command will not allow you to set a different serial number.</p> <p>Run this command on the main system controller. The chassis serial number is maintained as part of the platform configuration information.</p> <p><b>Note</b> – Sun manufacturing records the chassis serial number of Sun Fire high-end systems that ship with SMS 1.5 installed. Run the showplatform(1M) command to determine whether a chassis serial number was previously assigned to your system.</p> |                                 |                                                                                                                                                                                                                                       |    |                                    |
| <b>OPTIONS</b>                   | <p>The following options are supported:</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; padding-right: 20px;">-c <i>chassis_serial_number</i></td> <td>Specifies the chassis serial number for a Sun Fire high-end system. You obtain this number from a label on the front of the system chassis, near the bottom center. The serial number can be a maximum of 20 alphanumeric characters.</td> </tr> <tr> <td style="vertical-align: top; padding-right: 20px;">-h</td> <td>Help. Displays usage descriptions.</td> </tr> </table> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p>                                                                                                                                                                                                                                                                                                                                                       | -c <i>chassis_serial_number</i> | Specifies the chassis serial number for a Sun Fire high-end system. You obtain this number from a label on the front of the system chassis, near the bottom center. The serial number can be a maximum of 20 alphanumeric characters. | -h | Help. Displays usage descriptions. |
| -c <i>chassis_serial_number</i>  | Specifies the chassis serial number for a Sun Fire high-end system. You obtain this number from a label on the front of the system chassis, near the bottom center. The serial number can be a maximum of 20 alphanumeric characters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                 |                                                                                                                                                                                                                                       |    |                                    |
| -h                               | Help. Displays usage descriptions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                                                                                                                                                                                                                                       |    |                                    |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |                                                                                                                                                                                                                                       |    |                                    |
| <b>Group Privileges Required</b> | <p>You must have platform administrator or platform service privileges to run this command.</p> <p>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |                                                                                                                                                                                                                                       |    |                                    |
| <b>EXAMPLES</b>                  | <p><b>EXAMPLE 1</b> Setting the Chassis Serial Number</p> <pre>sc0:sms-user:&gt; setcsn -c 352A00008</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |                                                                                                                                                                                                                                       |    |                                    |

**EXIT STATUS** The following exit values are returned:

|   |                        |
|---|------------------------|
| 0 | Successful completion. |
| 2 | Usage error.           |
| 4 | Permission error.      |

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes:

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `pcd(1M)`, `showplatform(1M)`

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | setdatasync - modify the data propagation list used in data synchronization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SYNOPSIS</b>    | <pre>setdatasync [-i interval] schedule <i>filename</i> setdatasync cancel <i>filename</i> setdatasync push <i>filename</i> setdatasync backup setdatasync -h</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>DESCRIPTION</b> | <p>setdatasync enables you to specify a user-created file to be added to or removed from the data propagation list. This list identifies the files to be copied from the main to the spare system controller (SC) as part of data synchronization for automatic failover. The specified user file and the directory in which it resides must have read and write permissions for the user on both SCs.</p> <p>The data synchronization process checks the user-created files on the main SC for any changes. If the user-created files on the main SC have changed since the last propagation, they are repropagated to the spare SC. By default, the data synchronization process checks a specified file every 60 minutes; however, you can use setdatasync to indicate how often a user file should be checked for modifications.</p> <p><b>Note</b> – After a file is propagated from the main SC to the spare, the file is repropagated to the spare only when the file on the main SC is updated. If you remove a propagated file from the spare SC, that file is not automatically repropagated until the corresponding file on the main SC has been changed.</p> <p>You can also use setdatasync to do the following:</p> <ul style="list-style-type: none"><li>■ Propagate a specified file to the spare SC without adding the file to the data propagation list.</li><li>■ Resynchronize the SC configuration files on the main and spare SCs.</li></ul> |

**OPTIONS** The following options are supported:

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup                 | <p>Forces re-synchronization after something other than SMS creates undesired changes to SMS files on the spare SC.</p> <p><code>setdatasync backup</code> re-propagates every SMS configuration, data and log file. <code>fomd</code> does this automatically. Using <code>setdatasync backup</code> can slow down automatic <code>fomd</code> file propagation.</p> <p>The time required to execute <code>setdatasync backup</code> is approximately proportional to the number of files being transferred. Other factors that can affect the speed of file transfer include: the average size of files being transferred, the amount of memory available on the SCs, the load (CPU cycles and disk traffic) on the SCs, and whether the I2 network is functioning. For more information, refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i>.</p> <p>Use <code>setdatasync backup</code> only in the following situations.</p> <ul style="list-style-type: none"> <li>■ SMS was re-installed on the spare SC while SMS was running on the main SC.</li> </ul> <p><b>Note</b> – SMS users groups must be setup correctly on the spare before running <code>setdatasync backup</code></p> <ul style="list-style-type: none"> <li>■ SMS files were deleted from the spare SC while SMS was running on the main SC.</li> <li>■ SMS files were overwritten or corrupted on the spare SC (regardless of whether SMS was running or not).</li> </ul> |
| cancel <i>filename</i> | <p>Removes (cancels) the specified file from the data propagation list, which means the specified file will no longer be propagated to the spare SC. This option does not actually remove the specified file from the spare SC. The file name must contain the absolute path and cannot be a symbolic link to another file.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| -h                     | <p>Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to <code>-h</code> is ignored.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                                |                                                                                                                                                                                                                                                  |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>-i interval</code>       | Indicates how often the specified file should be checked for modifications. The default interval is 60 minutes. The interval can range from 1 to 1440 minutes (24 hours).                                                                        |
| <code>push filename</code>     | Propagates (pushes) the specified file to the spare SC without adding it to the data propagation list. The file name must contain the absolute path and cannot be a symbolic link to another file.                                               |
| <code>schedule filename</code> | Adds the specified file to the data propagation list. The file name must contain the absolute path and cannot be a symbolic link to another file. During data synchronization, the file is propagated to the same absolute path on the spare SC. |

## EXTENDED DESCRIPTION

### Group Privileges Required

You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

**EXAMPLE 1** Propagating a User File From Main to Spare Every 30 Minutes

The path to the user-specified file must be an absolute path and cannot contain a symbolic link.

```
sc0:sms-user:> setdatasync -i 30 schedule /path/filename
```

**EXAMPLE 2** Removing File Name From Data Propagation List

The path to the user-specified file must be an absolute path and cannot contain a symbolic link.

```
sc0:sms-user:> setdatasync cancel /path/filename
```

### EXIT STATUS

The following exit values are returned:

|    |                        |
|----|------------------------|
| 0  | Successful completion. |
| >0 | An error occurred.     |

**ATTRIBUTES** See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** showdatasync (1M), smsbackup (1M)

## setdate(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | setdate - set the date and time for the system controller (SC) or a domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SYNOPSIS</b>    | <b>setdate</b> [-d <i>domain_indicator</i> ] [-u] [-q] [ <i>mmdd</i> ]HHMM   <i>mmdd</i> HHMM[ <i>cc</i> ] <i>yy</i> [. <i>SS</i> ]<br><b>setdate</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>DESCRIPTION</b> | setdate(1M) enables the SC platform administrator to set the SC or optionally set a domain date and time values. Enables domain administrators to set the date and time values for their domains. After the date and time are set setdate(1M) displays the current date and time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>OPTIONS</b>     | The following options are supported:<br><br>-d <i>domain_indicator</i> Specifies the domain using one of the following:<br><br><i>domain_id</i> -ID for a domain. Valid <i>domain_ids</i> are A-R and are not case sensitive.<br><br><i>domain_tag</i> - Name assigned to a domain using addtag(1M).<br><br>Sets the domain time of day (TOD) when the domain keyswitch is in the OFF or STANDBY position. This option is not the primary use of setdate. Normally, setdate is used without this option to set the SC TOD.<br><br>-h                              Help. Displays usage descriptions.<br><br><b>Note</b> - Use alone. Any option specified in addition to -h is ignored.<br><br>-q                              Does not display current date and time after you set the new value.<br><br>-u                              Interprets and displays the time using Greenwich Mean Time (GMT). The default is the local time zone. |
| <b>OPERANDS</b>    | The following operands are supported:<br><br><i>[mmdd]HHMM[.SS]</i> Date and time format. <i>mm</i> is the month (1-12), <i>dd</i> is the day of the month (1-31), <i>HH</i> is the hour (0-23), <i>MM</i> is the minute (0-59), and <i>SS</i> is the second (0-59).<br><br><i>mmddHHMM[cc]yy[.SS]</i> Date and time format. <i>mm</i> is the month (1-12), <i>dd</i> is the day of the month (1-31), <i>HH</i> is the hour (0-23), <i>MM</i> is the minute (0-59), <i>cc</i> is century minus one, <i>yy</i> is the two-digit year, and <i>SS</i> is the second (0-59).                                                                                                                                                                                                                                                                                                                                                                        |



**EXTENDED  
DESCRIPTION****Group Privileges  
Required**

You must have platform or domain administrator privileges to run this command. If you have domain administrator privileges you can run this command only for your domain.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES****EXAMPLE 1** Setting the Local Date in Pacific Standard Time

```
sc0:sms-user:> setdate 020210302002.00
System Controller: Sat Feb 2 10:30:00 PST 2002
```

**EXAMPLE 2** Setting the Date Using GMT

```
sc0:sms-user:> setdate -u 020218302002.00
System Controller: Sat Feb 2 18:30:00 GMT 2002
```

**EXAMPLE 3** Setting the Local Time in Pacific Standard Time for Domain A

```
sc0:sms-user:> setdate -d a 020210302002.00
Domain a: Sat Feb 2 10:30:00 PST 2002
```

**EXAMPLE 4** Setting the Date for Domain A Using GMT

```
sc0:sms-user:> setdate -d a -u 020218302002.00
Domain a: Sat Feb 2 18:30:00 GMT 2002
```

**EXIT STATUS**

The following exit values are returned:

|    |                        |
|----|------------------------|
| 0  | Successful completion. |
| >0 | An error occurred.     |

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

`addtag(1M)`, `setkeyswitch(1M)`, `showdate(1M)`

## setdefaults(1M)

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------|----|------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------------------------------------|
| <b>NAME</b>                 | setdefaults - remove all instances of a previously active domain and reset Capacity on Demand (COD) information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
| <b>SYNOPSIS</b>             | <b>setdefaults</b> [ -d <i>domain_indicator</i> [ -p]] [-y  -n]<br><b>setdefaults</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
| <b>DESCRIPTION</b>          | <p>setdefaults(1M) removes all SMS instances of a previously active domain and Capacity on Demand (COD) information. A domain instance includes all <code>pcd</code> entries <i>except</i> network information; all message, console, and syslog log files; and, optionally, all NVRAM and boot parameters. <code>pcd</code> entries and NVRAM and boot parameters are returned to system default settings. IDPROM data is not affected.</p> <p>The COD information that is removed includes instant access CPUs (headroom) and reserved domain COD right-to-use (RTU) licenses. Only the platform administrator can reset the headroom value. The platform or domain administrator can reset reserved domain COD RTU licenses.</p>                                                                                                                                                                         |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
| <b>OPTIONS</b>              | <p>The following options are supported:</p> <table><tr><td>-d <i>domain_indicator</i></td><td>Specifies the domain using one of the following:<br/><br/><i>domain_id</i> -ID for a domain. Valid <i>domain_ids</i> are A-R and are not case sensitive.<br/><br/><i>domain_tag</i> - Name assigned to a domain using <code>addtag(1M)</code>.</td></tr><tr><td>-h</td><td>Help. Displays usage descriptions.<br/><br/><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</td></tr><tr><td>-n</td><td>Automatically answers no to all prompts.</td></tr><tr><td>-p</td><td>Preserves NVRAM and boot parameter data. By default, you are asked whether or not you want to remove the NVRAM and boot parameter data. If the -p option is used, you are not prompted and the data is preserved.</td></tr><tr><td>-y</td><td>Automatically answers yes to all prompts.</td></tr></table> | -d <i>domain_indicator</i> | Specifies the domain using one of the following:<br><br><i>domain_id</i> -ID for a domain. Valid <i>domain_ids</i> are A-R and are not case sensitive.<br><br><i>domain_tag</i> - Name assigned to a domain using <code>addtag(1M)</code> . | -h | Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored. | -n | Automatically answers no to all prompts. | -p | Preserves NVRAM and boot parameter data. By default, you are asked whether or not you want to remove the NVRAM and boot parameter data. If the -p option is used, you are not prompted and the data is preserved. | -y | Automatically answers yes to all prompts. |
| -d <i>domain_indicator</i>  | Specifies the domain using one of the following:<br><br><i>domain_id</i> -ID for a domain. Valid <i>domain_ids</i> are A-R and are not case sensitive.<br><br><i>domain_tag</i> - Name assigned to a domain using <code>addtag(1M)</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
| -h                          | Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
| -n                          | Automatically answers no to all prompts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
| -p                          | Preserves NVRAM and boot parameter data. By default, you are asked whether or not you want to remove the NVRAM and boot parameter data. If the -p option is used, you are not prompted and the data is preserved.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
| -y                          | Automatically answers yes to all prompts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |
| <b>EXTENDED DESCRIPTION</b> | If the -d <i>domain_indicator</i> is specified, the <code>setdefaults</code> command resets domain information. The domain cannot be active, and the virtual keyswitch must be set to off. Otherwise, the <code>setdefaults</code> command exits with an error. Platform administrators can reset the access control list (ACL) and the domain COD RTU licenses, but the domain administrator cannot.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |                                                                                                                                                                                                                                             |    |                                                                                                                       |    |                                          |    |                                                                                                                                                                                                                   |    |                                           |

**Group Privileges  
Required**

If you have platform administrator privileges and you do not specify the `-d domain_indicator`, the `setdefaults` command resets the COD headroom, provided that the reset does not cause any COD RTU license violations.

You must have platform administrator or domain administrator privileges for the specified domain to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1** Setting Defaults on Domain A With Domain, NVRAM, and Boot Parameter Prompts

```
sc0:sms-user:> setdefaults -d a
Are you sure you want to remove domain info? y
Do you want to remove NVRAM and boot parameter data? y
```

**EXAMPLE 2** Setting Defaults on Domain A Without Prompts, Saving NVRAM and Boot Parameter Data

```
sc0:sms-user:> setdefaults -d a -p -y
```

**EXAMPLE 3** Setting Defaults on Domain A Without Prompts and Without Saving NVRAM and Boot Parameter Data

```
sc0:sms-user:> setdefaults -d a -y
```

**EXIT STATUS**

The following exit values are returned:

|   |                                                    |
|---|----------------------------------------------------|
| 0 | Successful completion.                             |
| 1 | An invalid domain was specified.                   |
| 2 | An invalid option was entered.                     |
| 3 | No domain, or more than one domain, was specified. |
| 4 | The user has invalid permission.                   |
| 5 | The keyswitch is in an invalid position.           |
| 6 | The domain is currently active.                    |
| 7 | An error occurred talking to the pcd.              |
| 8 | An error occurred talking to the mld.              |
| 9 | An error occurred talking to the osd.              |

- 10 An internal error occurred.
- 11 The user canceled the operation.
- 12 An error occurred talking to the codd.

**FILES**

The following files are affected by this command:

- `/var/opt/SUNWSMS/.pcd/domain_info` Domain pcd information file.
- `/var/opt/SUNWSMS/.pcd/sysboard_info` Platform pcd information file.
- `/var/opt/SUNWSMS/adm/domain_id/console` Domain console log file. Up to ten message files are stored on the system at any one time—`console.0` through `console.9`.
- `/var/opt/SUNWSMS/adm/domain_id/messages` Domain log file. Up to ten message files are stored on the system at any one time—`message.0` through `message.9`.
- `/var/opt/SUNWSMS/adm/domain_id/syslog` Domain syslog file. Up to ten message files are stored on the system at any one time—`syslog.0` through `syslog.9`.
- `/var/opt/SUNWSMS/data/domain_id/bootparamdata` Domain boot parameter information file.
- `/var/opt/SUNWSMS/data/domain_id/nvramdata` Domain nvram information file.

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** | addtag(1M), mld(1M), osd(1M), pcd(1M), setobpparams(1M),  
showobpparams(1M)

## setfailover(1M)

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | setfailover - modify the state of the system controller (SC) failover mechanism                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SYNOPSIS</b>                  | <b>setfailover</b> <i>action</i><br><b>setfailover</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>DESCRIPTION</b>               | setfailover(1M) provides the ability to modify the state of failover for the SC failover mechanisms.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>OPTIONS</b>                   | The following options are supported:<br><br>-h                    Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>OPERANDS</b>                  | The following operands are supported:<br><br><i>action</i> The following are valid actions:<br><br>force                Forces a failover to the spare SC. The spare SC must be available.<br><br>off                    Disables the failover mechanism. This prevents a failover until the mechanism is reenabled.<br><br>on                    Enables failover for systems that previously had failover disabled due to a failover or an operator request. on instructs the command to attempt to reenable failover only. If failover cannot be reenabled, subsequent use of the showfailover command indicates the current failure that prevented the enable. |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Group Privileges Required</b> | You must have platform administrator privileges to run this command.<br><br>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>EXAMPLES</b>                  | These commands produce no output when successful. An error message appears if the action can not be performed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**EXAMPLE 1** Turning Failover On

```
sc0:sms-user:> setfailover on
```

**EXAMPLE 2** Turning Failover Off

```
sc0:sms-user:> setfailover off
```

**EXAMPLE 3** Forcing a Failover

```
sc0:sms-user:> setfailover force
```

**EXIT STATUS** The following exit values are returned:

0 Successful completion.

>0 An error occurred.

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `showfailover(1M)`

## setkeyswitch(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | setkeyswitch - change the position of the virtual keyswitch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>SYNOPSIS</b>    | <b>setkeyswitch</b> -d <i>domain_indicator</i> [-q] [-y -n] <i>position</i><br><b>setkeyswitch</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>DESCRIPTION</b> | <p>setkeyswitch(1M) changes the position of the virtual keyswitch to the specified value. setkeyswitch is responsible for powering on or powering off boards and bringing up a domain. See the OPERANDS section for more information.</p> <p>If the domain specified contains a board in the automatic system recovery (ASR) blacklist file, an error message is displayed, setkeyswitch skips power on of that board and setkeyswitch continues.</p> <p>The state of each virtual keyswitch is maintained between power cycles of the system controller (SC) or physical power cycling of the power supplies by the pcd(1M). Use showkeyswitch to display the current position of a virtual keyswitch.</p>                                                                                                                       |
| <b>OPTIONS</b>     | <p>The following options are supported.</p> <p><b>Note</b> – The -y and -n are optional arguments to the setkeyswitch(1M) command. If one of these optional arguments is not provided, setkeyswitch prompts you for confirmation when changing from the on, diag, or secure position to the off or standby position.</p> <p>-d <i>domain_indicator</i>      Specifies the domain using one of the following:</p> <p>                                  <i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p>                                  <i>domain_tag</i> — Name assigned to a domain using addtag(1M).</p> <p>-h                                Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> |



- n Automatically answers no to all prompts. Prompts are displayed unless used with the `-q` option.
- q Quiet. Suppresses all messages to `stdout` including prompts.  
  
When used alone `-q` defaults to the `-n` option for all prompts.  
  
When used with either the `-y` or the `-n` option, `-q` suppresses all user prompts and automatically answers with either 'y' or 'n' based on the option chosen.
- y Automatically answers yes to all prompts. Prompts are displayed unless used with the `-q` option.

**OPERANDS**

This section describes operands for the position option. The following operands are supported:

*position*

Valid *position* operands are:

*on*

From the *off* or *standby* position, *on* powers on all boards assigned to the domain (if not already powered on). Then the domain is brought up. From the *diag* position, *on* is nothing more than a position change and does not affect a running domain. From the *secure* position, *on* restores write permission to the domain.

*standby*

From the *on*, *diag*, or *secure* position, *standby* optionally displays a confirmation prompt. If you answer 'yes' then it determines if the domain is in a suitable state to be reset and deconfigured (for example, the OS is not running). If the domain is in a suitable state to be reset and deconfigured, then *setkeyswitch* resets and deconfigures all boards assigned to the domain. If not, then prior to the reset and deconfiguration, *setkeyswitch* gracefully shuts down the domain. From the *off* position, *standby* powers on all boards assigned to the domain (if not already powered on).

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| off    | From the on, diag, or secure position, off optionally displays a confirmation prompt. If you answer 'yes' then it determines if the domain is in a suitable state to be powered off (for example, the OS is not running). If the domain is in a suitable state to be powered off, then setkeyswitch powers off all boards assigned to the domain. If not, then setkeyswitch aborts and logs a message to the domain log. From the standby position, off powers off all the boards in the domain.                                                                                                                                                                                                                                                                                               |
| diag   | From the off or standby position, diag powers on all boards assigned to the domain (if not already powered on). Then the domain is brought up just as in the on position, except that POST is invoked with verbosity and diagnostic levels set to, at least, their defaults. From the on position, diag results in nothing more than a position change, but upon automatic system recovery (ASR) of the domain, POST is invoked with verbosity and diagnostic levels set to, at least, their defaults. From the secure position, diag restores write permission to the domain and upon ASR, post is invoked with verbosity and diagnostic levels set to, at least, their defaults. For more information on ASR, refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> . |
| secure | From the off or standby position, secure powers on all boards assigned to the domain (if not already powered on). Then the domain is brought up just as in the on position, except that the secure position removes write permission to the domain; for example, flashupdates and resets will not work. From the on position, secure removes write permission to the domain (as previously described). From the diag position, secure removes write permission to the domain (as previously described).                                                                                                                                                                                                                                                                                        |

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| off    | From the on, diag, or secure position, off optionally displays a confirmation prompt. If you answer 'yes' then it determines if the domain is in a suitable state to be powered off (for example, the OS is not running). If the domain is in a suitable state to be powered off, then setkeyswitch powers off all boards assigned to the domain. If not, then setkeyswitch aborts and logs a message to the domain log. From the standby position, off powers off all the boards in the domain.                                                                                                                                                                                                                                                                                               |
| diag   | From the off or standby position, diag powers on all boards assigned to the domain (if not already powered on). Then the domain is brought up just as in the on position, except that POST is invoked with verbosity and diagnostic levels set to, at least, their defaults. From the on position, diag results in nothing more than a position change, but upon automatic system recovery (ASR) of the domain, POST is invoked with verbosity and diagnostic levels set to, at least, their defaults. From the secure position, diag restores write permission to the domain and upon ASR, post is invoked with verbosity and diagnostic levels set to, at least, their defaults. For more information on ASR, refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> . |
| secure | From the off or standby position, secure powers on all boards assigned to the domain (if not already powered on). Then the domain is brought up just as in the on position, except that the secure position removes write permission to the domain; for example, flashupdates and resets will not work. From the on position, secure removes write permission to the domain (as previously described). From the diag position, secure removes write permission to the domain (as previously described).                                                                                                                                                                                                                                                                                        |

**EXTENDED  
DESCRIPTION****Group Privileges  
Required**

You must have domain administrator privileges for the specified domain to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1** Setting Keyswitch on Domain A On

```
sc0:sms-user:> setkeyswitch -d A on
```

**EXAMPLE 2** Using Keyswitch on a Domain Containing a Board in the ASR Blacklist File

```
sc0:sms-user:> setkeyswitch -d A on
SB0 is in the ASR Blacklist.
```

**EXIT STATUS**

The following exit values are returned:

```
0 Successful completion.
>0 An error occurred.
```

**FILES**

The following file is used by this command:

```
/etc/opt/SUNWSMS/config/asr/blacklist List of components
 excluded by esmd.
```

**Note** – This file is created and used internally and should *not* be edited manually.

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

`addtag(1M)`, `esmd(1M)`, `flashupdate(1M)`, `pcd(1M)`, `reset(1M)`, `showkeyswitch(1M)`

## setobpparams(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | setobpparams - set up OpenBoot PROM variables for a domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>SYNOPSIS</b>    | <b>setobpparams</b> -d <i>domain_indicator</i> param=value...<br><b>setobpparams</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>DESCRIPTION</b> | <p>setobpparams(1M) enables a domain administrator to set the virtual NVRAM and REBOOT variables passed to OpenBoot PROM by setkeyswitch(1M). The -d option with <i>domain_id</i> or a <i>domain_tag</i> is required. You must reboot the domain in order for any changes to take effect.</p> <p>This command is intended for error recovery and not for routine system administration. For more information refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i>.</p>                                                                         |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <p>-d <i>domain_indicator</i>      Specifies the domain using one of the following:</p> <p>                              <i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p>                              <i>domain_tag</i> – Name assigned to a domain using addtag(1M).</p> <p>-h                            Help. Displays usage descriptions.</p> <p>                              <b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> |

**OPERANDS** | The following operands are supported:

*param=value*

NVRAM and REBOOT variable values for OpenBoot PROM. Valid variables are:

■ `diag-switch?`

Default value= `false`

When set to `false`, the default boot device is specified by `boot-device` and the default boot file by `boot-file`.

When set to `true`, OpenBoot PROM runs in diagnostic mode and you need to set either `diag-device` or `diag-file` to specify the correct default boot device or file. These default boot device and file settings cannot be set using `setobpparams`. Use `setenv(1)` in OpenBoot PROM.

■ `auto-boot?`

Default value= `false`

When set to `true`, the domain boots automatically after power-on or `reset-all`. The boot device and boot file used are based on the settings for `diag-switch` (see above). Neither `boot-device` nor `boot-file` can be set using `setobpparams`. In the event the OK prompt is unavailable, such as a repeated panic, use `setobpparams` to set `auto-boot?` to `false`.

When the `auto-boot?` variable is set to `false` using `setobpparams`, the reboot variables are invalidated, the system will not boot automatically and will stop in OpenBoot PROM where new NVRAM variables can be set.

■ `fcode-debug?`

Default value= `false`

When set to `true`, this variable includes name fields for plugin device FCodes.

■ `use-nvramrc?`

Default value= `false`

When set to `true`, this variable executes commands in NVRAMRC during system start-up.

■ `security-mode`

Default value= `none`

Firmware security level.



Valid variable values for all but security mode are:

- true
- false

Valid variable values for security mode are:

- none
- command
- full

where:

none - Means that no password is required (default)

command - Means that all commands except `boot(1M)` and `go` require the password.

full - Means that all commands except for `go` require the password.

**Note** – It is important to remember your security password and to set the security password before setting the security mode. If you forget this password, you cannot use your system; you must call your vendor's customer support service to make your system bootable again. For more information on `security-mode` and other OpenBoot PROM variables, see the *OpenBoot 4.x Command Reference Manual*.

**Note** – Most, but not all, shells require single quotes around the variable values to prevent the question mark from being treated as a special character. See Example 1.

## EXTENDED DESCRIPTION

### Group Privileges Required

Domain administrator or configurator privileges for the specified domain are required.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

## EXAMPLES

**EXAMPLE 1** Setting OpenBoot PROM Variable `diag-switch` to On for Domain A

```
sc0:sms-user:> setobpparams -d a 'diag-switch?=true'
```

**EXAMPLE 2** Setting OpenBoot PROM Variable `security-mode` to Full for Domain A

```
sc0:sms-user:> setobpparams -d a security-mode=full
```

## setobpparams(1M)

**EXIT STATUS** The following exit values are returned:

0 Successful completion.  
>0 An error occurred.

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `addtag(1M)`, `setkeyswitch(1M)`, `showobpparams(1M)`

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | setupplatform - set up the available component list and Capacity on Demand (COD) resources used for domains                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>SYNOPSIS</b>    | <pre>setupplatform -p available [-d domain_indicator [-a -r] location...] setupplatform -p cod [headroom -d domain_indicator domainRTU] setupplatform [-d domain_indicator - ] setupplatform -h</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>DESCRIPTION</b> | <p>setupplatform(1M) sets up the available component list and COD resources to be used for domains. If a <i>domain_id</i> or <i>domain_tag</i> is specified, a list of boards <i>must</i> be specified. An empty board list can be specified as a dash (-). When no <i>domain_id</i> or <i>domain_tag</i> is specified, current values are displayed in the square brackets ([]) at the command prompt. If no value is specified for a parameter, it retains its current value.</p>                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <ul style="list-style-type: none"> <li>-a Adds the slot(s) to the available component list for the domain.</li> <li>-d <i>domain_indicator</i> Specifies the domain using one of the following: <ul style="list-style-type: none"> <li><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</li> <li><i>domain_tag</i> – Name assigned to a domain using addtag(1M).</li> </ul> </li> <li>-h Help. Displays usage descriptions. <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> </li> <li>-p available Modifies the domain available component list.</li> <li>-p cod Assigns COD resources.</li> <li>-r Removes the slots from the available component list for the domain.</li> <li>- Clears the entire available component list.</li> </ul> |

## setupplatform(1M)

### OPERANDS

The following operands are supported:

*domainRTU*      Number of COD right-to-use (RTU) licenses to be reserved for a domain.

*headroom*        Amount of headroom (processors) to be enabled.

*location*        Board location separated by a space.

The following *location* forms are accepted:

Sun Fire 12K/E20K:

SB (0 . . . 8)

IO (0 . . . 8)

Sun Fire 15K/E25K:

SB (0 . . . 17)

IO (0 . . . 17)

### EXTENDED DESCRIPTION

If you run the `setupplatform` command without specifying any options, the command prompts you for platform and COD information. You are asked to specify the available component list for all 18 domains, the amount of COD headroom to be used, and the number of COD RTU licenses to be reserved for your domains. When you are prompted for COD information, the maximum values allowed are displayed within parentheses () and default values are displayed within brackets [].

Use the `-p cod` option with the `setupplatform` command to enable COD headroom (processors to be used on demand). Use the `-d domain_indicator` with the `-p cod` option to specify the number of domain COD RTU licenses to be reserved.

You can reset the domain available component list and COD RTU reservation values by running the `setupplatform` command with a domain indicator and the `'-'` option.

### Group Privileges Required

You must have platform administrator privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

Use `showplatform(1M)` to display the available component list once you have run `setupplatform`.

**EXAMPLE 1** Setting Up Available Component List for All Domains

```

sc0:sms-user:> setupplatform
Available component list for domain domainA [SB3 SB2 SB1 IO5 IO4 IO3]?
r SB1
Are you sure[no]: (yes/no)? y
Available for domain DomainB [SB6 SB4 SB1 IO3 IO2]? -
Are you sure[no]: (yes/no)? y
Available for domain C [SB7 SB5 IO8 IO7]? -a SB17 SB16
Available for domain D [SB9 SB8 SB4 SB2 IO6 IO5 IO1]?
Available for domain E [SB0 IO0]?
Available for domain F []?
Available for domain G []?
Available for domain H []?
Available for domain I []?
Available for domain J []?
Available for domain K []?
Available for domain L []?
Available for domain M []?
Available for domain N []?
Available for domain O []?
Available for domain P []?
Available for domain Q []?
Available for domain R []?
PROC Headroom Quantiy (0 to disable, 8 MAX) [0]? 4
PROC RTUs reserved for domain A (10 MAX) [0]? 3
PROC RTUs reserved for domain B (7 MAX) [0]? 0
PROC RTUs reserved for domain C (7 MAX) [0]? 0
PROC RTUs reserved for domain D (7 MAX) [0]? 0
PROC RTUs reserved for domain E (7 MAX) [0]? 0
PROC RTUs reserved for domain F (7 MAX) [0]? 0
PROC RTUs reserved for domain G (7 MAX) [0]? 0
PROC RTUs reserved for domain H (7 MAX) [0]? 0
PROC RTUs reserved for domain I (7 MAX) [0]? 0
PROC RTUs reserved for domain J (7 MAX) [0]? 0
PROC RTUs reserved for domain K (7 MAX) [0]? 0
PROC RTUs reserved for domain L (7 MAX) [0]? 0
PROC RTUs reserved for domain M (7 MAX) [0]? 0
PROC RTUs reserved for domain N (7 MAX) [0]? 0
PROC RTUs reserved for domain O (7 MAX) [0]? 0
PROC RTUs reserved for domain P (7 MAX) [0]? 0
PROC RTUs reserved for domain Q (7 MAX) [0]? 0
PROC RTUs reserved for domain R (10 MAX) [3]? 3

```

## setupplatform(1M)

```
sc0:sms-user:> showplatform -p available
Available for domain DomainA:
 SB3 SB2
 IO0 IO4 IO3
Available for domain DomainB:
 None
 None
Available for domain DomainC:
 SB1 SB6 SB7 SB5
 IO8 IO7
Available for domain D:
 SB9 SB8 SB4
 IO6 IO5 IO1
Available for domain E:
 SB0
 IO0
Available for domain DomainF:
 None
 None
Available for domain DomainG:
 None
 None
Available for domain DomainH:
 None
 None
Available for domain I:
 None
 None
Available for domain J:
 None
 None
Available for domain DomainK:
 None
 None
Available for domain L:
 None
 None
Available for domain M:
 None
 None
Available for domain N:
 None
 None
Available for domain O:
 None
 None
Available for domain P:
 None
 None
Available for domain Q:
 None
 None
Available for domain R:
 None
 None
```

**EXAMPLE 2** Setting Up Available Component List for Domain engB to Boards at SB0, IO1,

and IO2

```
sc0:sms-user:> setupplatform -p available -d engB SB0 IO1 IO2
```

**EXAMPLE 3** Clearing All Boards in engB Available Component List and Reserved COD RTUs

```
sc0:sms-user:> setupplatform -d engB -
```

**EXAMPLE 4** Adding Boards at SB0 and IO2 to engB Available Component List

```
sc0:sms-user:> setupplatform -p available engB -a SB0 IO2
```

**EXAMPLE 5** Removing Boards at SB3 and IO3 From engB Available Component List

```
sc0:sms-user:> setupplatform -p available -d engB -r SB3 IO3
```

**EXAMPLE 6** Setting COD CPU Headroom Quantity and Reserve Domain COD RTU Licenses

```
sc0:sms-user:> setupplatform -p cod
PROC Headroom Quantity (0 to disable, 8 MAX) [0]? 4
PROC RTUs reserved for domain A (10 MAX) [0]? 3
PROC RTUs reserved for domain B (7 MAX) [0]? 0
PROC RTUs reserved for domain C (9 MAX) [2]? 0
.
.
.
PROC RTUs reserved for domain R (7 MAX) [0]? 0
```

**EXAMPLE 7** Set the COD Headroom CPUs to 8

```
sc0:sms-user:> setupplatform -p cod 8
```

**EXAMPLE 8** Set the number of COD RTUs for Domain engB to 6

```
sc0:sms-user:> setupplatform -p cod -d engB 6
```

## EXIT STATUS

The following exit values are returned:

|    |                                                                                                                |
|----|----------------------------------------------------------------------------------------------------------------|
| 0  | Successful completion.                                                                                         |
| >0 | An internal error occurred. For further information, see <code>/var/opt/SUNWSMS/adm/platform/messages</code> . |

setupplatform(1M)

**ATTRIBUTES**

See attributes(5) for descriptions of the following attributes.

| <b>Attribute Types</b> | <b>Attribute Values</b> |
|------------------------|-------------------------|
| Availability           | SUNWSMSop               |

**SEE ALSO**

addtag(1M), showplatform(1M)



|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | showboards - show the assignment information and status of the boards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SYNOPSIS</b>                  | <p><b>showboards</b> [-d <i>domain_indicator</i>] [-v ]</p> <p><b>showboards</b> [-d <i>domain_indicator</i>] -c</p> <p><b>showboards</b> -h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>DESCRIPTION</b>               | <p>showboards(1M) displays board assignments and board status, including the clock source and status for all boards . If <i>domain_id</i> or <i>domain_tag</i> is specified, this command displays which boards are assigned or available to the given domain. The information displayed also indicates whether a board is a Capacity on Demand (COD) board.</p> <p>If the -v option is used, showboards displays all components, including <i>domain configuration units</i> (DCUs) such as CPUs, MCPUs, HPCI, HPCI+s, and WPCI; as well as the system controllers (SCs) and other components that are not DCUs.</p>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>OPTIONS</b>                   | <p>The following options are supported:</p> <p>-d <i>domain_indicator</i>      Specifies the domain using one of the following:</p> <p style="padding-left: 40px;"><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p style="padding-left: 40px;"><i>domain_tag</i> – Name assigned to a domain using addtag(1M).</p> <p>-c                              Clock source. Displays the clock source and status for all system, expander, I/O, and centerplane support boards and the SCs. See Example 6.</p> <p style="padding-left: 40px;">If a domain is specified (with the -d option), the -c option displays the clock information only for the system and I/O boards accessible by that domain.</p> <p>-h                              Help. Displays usage descriptions.</p> <p style="padding-left: 40px;"><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-v                              Verbose. Displays all components, including DCUs.</p> |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Group Privileges Required</b> | You must have platform administrator, platform operator, platform service privileges or domain administrator, or domain configurator privileges for the specified domain to run this command.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

Platform administrator privileges:

- If no options are specified, `showboards` displays all components including those DCUs that are assigned or available.
- If `domain_id` or `domain_tag` is specified, `showboards` displays information on DCUs that are assigned and available to that domain. DCUs assigned to other domains are not displayed.
- If the `-v` option is provided, `showboards` displays information on all assigned or available DCUs. In addition, `showboards` displays information on all other components.
- If `domain_id` or `domain_tag` and the `-v` option are specified, `showboards` displays information on DCUs that are assigned or available to that domain. In addition, `showboards` displays information on all other components. DCUs assigned to other domains are not displayed.

Domain administrator/configurator privileges:

- If no options are specified, `showboards` displays all boards for all domains for which you have privileges, including those DCUs that are assigned or available.
- If `domain_id` or `domain_tag` is specified, `showboards` displays information on DCUs that are assigned or available to that domain. DCUs assigned to other domains are not displayed. Available DCUs are those boards that are in the domain's available component list. See `setupplatform(1M)` and `showplatform(1M)`. You must have domain administrator or configurator privileges for the specified domain.
- The `-v` option is not available to this user.

#### Status Fields Displayed

This section describes status information displayed in the `showboards` command output.

The `Pwr` field contains one of five measurements:

|     |                                                      |
|-----|------------------------------------------------------|
| On  | Full voltage detected.                               |
| Off | No voltage detected.                                 |
| Min | Some voltage detected.                               |
| Unk | Unknown. Unable to determine board power on state.   |
| –   | The slot is empty, so power state is not applicable. |

Min does not imply that the board can be used at this point, but only that some power was detected on the board. It should not be used until it has been powered

on. Conversely, it should not be removed from the system before being powered off.

The Board Status field contains one of four values:

|           |                                                                 |
|-----------|-----------------------------------------------------------------|
| Active    | The board is assigned to a domain and has passed POST.          |
| Assigned  | The board is assigned to a domain.                              |
| Available | The board is available to be assigned to a domain.              |
| —         | Domain assignment or activity is not applicable for this board. |

The Test status field reflects the recorded entry in the PCD database from the last POST run. The Test Status field contains one of six values:

|          |                                                                                                           |
|----------|-----------------------------------------------------------------------------------------------------------|
| Passed   | The board passed POST.                                                                                    |
| Degraded | The board is in a degraded mode.                                                                          |
| Failed   | The board failed POST.                                                                                    |
|          | Contact your Sun Service representative, who can determine whether or not the board needs to be replaced. |
| iPOST    | The board is in POST.                                                                                     |
| Unknown  | The board has not been tested.                                                                            |
| —        | The test status for this board is unavailable.                                                            |

The Domain field contains one of four values:

|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| <i>domain_id</i>  | ID for a domain.                                          |
| <i>domain_tag</i> | Name assigned to a domain using <code>addtag(1M)</code> . |
| Isolated          | The board is not assigned to any domain.                  |
| —                 | Domain assignment is not applicable for this board.       |

### Status Fields Displayed by the -c option

This section describes status information displayed by the `showboards -c` output.

The Clock Signal Status field provides three indicators:

|         |                                                       |
|---------|-------------------------------------------------------|
| Good    | A good clock signal is detected by the hardware.      |
| Failed  | A bad clock signal has been detected by the hardware. |
| Unknown | The clock status is unknown.                          |

The Clock Source field provides three indicators:

|           |                                                    |
|-----------|----------------------------------------------------|
| SC0 Clock | System controller 0 is providing the clock signal. |
| SC1 Clock | System controller 1 is providing the clock signal. |
| Unknown   | The current clock source is unknown.               |

The SC0 and SC1 Clock Status fields each provide the following indicators:

|        |                                                          |
|--------|----------------------------------------------------------|
| Good   | System controller is on and is running.                  |
| Failed | System controller has failed.                            |
| SC-Off | System controller is off.                                |
| No-SC  | There is no system controller in the Clock Status field. |

The Auto-Clock Selection field provides three indicators:

|          |                                                                           |
|----------|---------------------------------------------------------------------------|
| Enabled  | Hardware may automatically attempt to switch clock sources, if necessary. |
| Disabled | Hardware will not switch clock sources automatically.                     |
| Unknown  | The clock select mode is unknown.                                         |

## EXAMPLES

**EXAMPLE 1** Listing boards for Platform Administrators on Sun Fire 15K/E25K System

```
sc0:sms-user:> showboards
```

| Location | Pwr | Type       | Board Status | Test Status | Domain   |
|----------|-----|------------|--------------|-------------|----------|
| ----     | --- | ----       | -----        | -----       | -----    |
| SB0      | On  | CPU        | Active       | Passed      | domainC  |
| SB1      | On  | V3CPU      | Active       | Passed      | A        |
| SB2      | On  | V3CPU      | Active       | Passed      | D        |
| SB3      | On  | CPU        | Active       | Passed      | engB     |
| SB4      | On  | CPU        | Active       | Passed      | engB     |
| SB5      | On  | CPU        | Active       | Passed      | engB     |
| SB6      | On  | CPU        | Active       | Passed      | A        |
| SB7      | On  | CPU        | Active       | Passed      | domainC  |
| SB8      | Off | CPU        | Available    | Unknown     | Isolated |
| SB9      | On  | CPU        | Active       | Passed      | dmnJ     |
| SB10     | Off | CPU        | Available    | Unknown     | Isolated |
| SB11     | Off | CPU        | Available    | Unknown     | Isolated |
| SB12     | Off | CPU        | Assigned     | Unknown     | engB     |
| SB13     | -   | Empty Slot | Available    | -           | Isolated |
| SB14     | Off | CPU        | Assigned     | Failed      | domainC  |
| SB15     | On  | CPU        | Active       | Passed      | P        |
| SB16     | On  | CPU        | Active       | Passed      | domainC  |
| SB17     | -   | Empty Slot | Assigned     | -           | dmnR     |
| IO0      | -   | Empty Slot | Available    | -           | Isolated |
| IO1      | On  | HPCI       | Active       | Passed      | A        |
| IO2      | On  | MCPU       | Active       | Passed      | engB     |
| IO3      | On  | MCPU       | Active       | Passed      | domainC  |
| IO4      | On  | HPCI+      | Available    | Degraded    | domainC  |
| IO5      | Off | HPCI+      | Assigned     | Unknown     | engB     |
| IO6      | On  | HPCI       | Active       | Passed      | A        |
| IO7      | On  | HPCI       | Active       | Passed      | dmnJ     |
| IO8      | On  | WPCI       | Active       | Passed      | Q        |
| IO9      | On  | HPCI+      | Assigned     | iPOST       | dmnJ     |
| IO10     | Off | HPCI       | Assigned     | Unknown     | engB     |
| IO11     | Off | HPCI       | Assigned     | Failed      | engB     |
| IO12     | Off | HPCI       | Assigned     | Unknown     | engB     |
| IO13     | -   | Empty Slot | Available    | -           | Isolated |
| IO14     | Off | HPCI+      | Available    | Unknown     | Isolated |
| IO15     | On  | HPCI       | Active       | Passed      | P        |
| IO16     | On  | HPCI       | Assigned     | Unknown     | Q        |
| IO17     | -   | Empty Slot | Assigned     | -           | dmnR     |

The following example illustrates showboards output if you have platform administrator privileges and specify a domain on a Sun Fire 15K/E25 system. The output does not include boards that are assigned to other domains.

**EXAMPLE 2** Listing boards for Platform Administrators for Domain B

```
sc0:sms-user:> showboards -d b
```

| Location | Pwr | Type       | Board Status | Test Status | Domain   |
|----------|-----|------------|--------------|-------------|----------|
| SB3      | On  | CPU        | Active       | Passed      | engB     |
| SB4      | On  | CPU        | Active       | Passed      | engB     |
| SB5      | On  | CPU        | Active       | Passed      | engB     |
| SB8      | Off | CPU        | Available    | Unknown     | Isolated |
| SB10     | Off | CPU        | Available    | Unknown     | Isolated |
| SB11     | Off | CPU        | Available    | Unknown     | Isolated |
| SB12     | Off | CPU        | Assigned     | Unknown     | engB     |
| SB13     | -   | Empty Slot | Available    | -           | Isolated |
| IO0      | -   | Empty Slot | Available    | -           | Isolated |
| IO2      | On  | MCPU       | Active       | Passed      | engB     |
| IO5      | Off | HPCI+      | Assigned     | Unknown     | engB     |
| IO10     | Off | HPCI       | Assigned     | Unknown     | engB     |
| IO11     | Off | HPCI       | Assigned     | Failed      | engB     |
| IO12     | On  | HPCI       | Assigned     | Unknown     | engB     |
| IO13     | -   | Empty Slot | Available    | -           | Isolated |
| IO14     | Off | HPCI+      | Available    | Unknown     | Isolated |

The following example illustrates showboards output if you have platform administrator privileges and use the `-v` option on a Sun Fire 15K/E25K system. The command shows all components. If a board is a COD board, it is specified in the Type of Board field.

**EXAMPLE 3** Listing boards for Platform Administrators Using the `-v` Option

```
sc0:sms-user:> showboards -v
```

| Location | Pwr | Type of Board | Board Status | Test Status | Domain |
|----------|-----|---------------|--------------|-------------|--------|
| SC0      | On  | SC            | Main         | -           | -      |
| SC1      | On  | SC            | Spare        | -           | -      |
| PS0      | On  | PS            | -            | -           | -      |
| PS1      | On  | PS            | -            | -           | -      |
| PS2      | On  | PS            | -            | -           | -      |
| PS3      | On  | PS            | -            | -           | -      |
| PS4      | Off | PS            | -            | -           | -      |
| PS5      | On  | PS            | -            | -           | -      |
| FT0      | On  | FANTRAY       | -            | -           | -      |
| FT1      | On  | FANTRAY       | -            | -           | -      |
| FT2      | On  | FANTRAY       | -            | -           | -      |
| FT3      | On  | FANTRAY       | -            | -           | -      |
| FT4      | On  | FANTRAY       | -            | -           | -      |
| FT5      | On  | FANTRAY       | -            | -           | -      |
| FT6      | On  | FANTRAY       | -            | -           | -      |
| FT7      | On  | FANTRAY       | -            | -           | -      |
| CS0      | On  | CSB           | -            | -           | -      |
| CS1      | On  | CSB           | -            | -           | -      |
| EX0      | -   | EXB           | -            | -           | -      |
| EX1      | -   | EXB           | -            | -           | -      |
| EX2      | -   | EXB           | -            | -           | -      |
| EX3      | -   | EXB           | -            | -           | -      |
| EX4      | On  | EXB           | -            | -           | -      |

|           |     |            |           |          |          |
|-----------|-----|------------|-----------|----------|----------|
| EX5       | -   | EXB        | -         | -        | -        |
| EX6       | On  | EXB        | -         | -        | -        |
| EX7       | -   | EXB        | -         | -        | -        |
| EX8       | -   | EXB        | -         | -        | -        |
| EX9       | -   | EXB        | -         | -        | -        |
| EX10      | -   | EXB        | -         | -        | -        |
| EX11      | -   | EXB        | -         | -        | -        |
| EX12      | Off | EXB        | -         | -        | -        |
| EX13      | -   | EXB        | -         | -        | -        |
| EX14      | -   | EXB        | -         | -        | -        |
| EX15      | -   | EXB        | -         | -        | -        |
| EX16      | On  | EXB        | -         | -        | -        |
| EX17      | -   | EXB        | -         | -        | -        |
| IO4/C3V0  | On  | C3V        | -         | -        | domainC  |
| IO4/C5V0  | On  | C5V        | -         | -        | domainC  |
| IO4/C3V1  | On  | C3V        | -         | -        | domainC  |
| IO4/C5V1  | On  | C5V        | -         | -        | domainC  |
| IO6/C3V0  | On  | C3V        | -         | -        | A        |
| IO6/C5V0  | On  | C5V        | -         | -        | A        |
| IO6/C3V1  | On  | C3V        | -         | -        | A        |
| IO6/C5V1  | On  | C5V        | -         | -        | A        |
| IO9/C3V0  | On  | C3V        | -         | -        | dmnJ     |
| IO9/C5V0  | On  | C3V        | -         | -        | dmnJ     |
| IO9/C3V1  | On  | C3V        | -         | -        | dmnJ     |
| IO9/C3V2  | On  | C3V        | -         | -        | dmnJ     |
| IO12/C3V0 | Off | Unknown    | -         | -        | engB     |
| IO12/C5V0 | Off | Unknown    | -         | -        | engB     |
| IO12/C3V1 | Off | Unknown    | -         | -        | engB     |
| IO12/C5V1 | Off | Unknown    | -         | -        | engB     |
| IO16/C3V0 | On  | C3V        | Assigned  | Unknown  | Q        |
| IO16/C5V0 | On  | C5V        | Assigned  | Unknown  | Q        |
| IO16/C3V1 | On  | C3V        | Assigned  | Unknown  | Q        |
| IO16/C5V1 | On  | C5V        | Assigned  | Unknown  | Q        |
| SB0       | On  | CPU        | Active    | Passed   | domainC  |
| SB1       | On  | V3CPU      | Active    | Passed   | A        |
| SB2       | On  | V3CPU      | Active    | Passed   | D        |
| SB3       | On  | CPU        | Active    | Passed   | engB     |
| SB4       | On  | CPU (COD)  | Active    | Passed   | engB     |
| SB5       | On  | CPU        | Active    | Passed   | engB     |
| SB6       | On  | CPU (COD)  | Active    | Passed   | A        |
| SB7       | On  | CPU        | Active    | Passed   | domainC  |
| SB8       | Off | CPU        | Available | Unknown  | Isolated |
| SB9       | On  | CPU        | Active    | Passed   | dmnJ     |
| SB10      | Off | CPU        | Available | Unknown  | Isolated |
| SB11      | Off | CPU        | Available | Unknown  | Isolated |
| SB12      | Off | CPU (COD)  | Assigned  | Unknown  | engB     |
| SB13      | -   | Empty Slot | Available | -        | Isolated |
| SB14      | Off | CPU        | Assigned  | Failed   | domainC  |
| SB15      | On  | CPU        | Active    | Passed   | P        |
| SB16      | On  | CPU (COD)  | Active    | Passed   | domainC  |
| SB17      | -   | Empty Slot | Assigned  | -        | dmnR     |
| IO0       | -   | Empty Slot | Available | -        | Isolated |
| IO1       | On  | HPCI       | Active    | Passed   | A        |
| IO2       | On  | MCPU       | Active    | Passed   | engB     |
| IO3       | On  | MCPU       | Active    | Passed   | domainC  |
| IO4       | On  | HPCI       | Available | Degraded | domainC  |
| IO5       | Off | HPCI+      | Assigned  | Unknown  | engB     |
| IO6       | On  | HPCI       | Active    | Passed   | A        |
| IO7       | On  | HPCI       | Active    | Passed   | dmnJ     |
| IO8       | On  | wPCI       | Active    | Passed   | Q        |

|      |     |            |           |         |          |
|------|-----|------------|-----------|---------|----------|
| IO9  | On  | HPCI+      | Assigned  | iPOST   | dmnJ     |
| IO10 | Off | HPCI       | Assigned  | Unknown | engB     |
| IO11 | Off | HPCI       | Assigned  | Failed  | engB     |
| IO12 | Off | HPCI       | Assigned  | Unknown | engB     |
| IO13 | -   | Empty Slot | Available | -       | Isolated |
| IO14 | Off | HPCI+      | Available | Unknown | Isolated |
| IO15 | On  | HPCI       | Active    | Passes  | Isolated |
| IO16 | On  | HPCI       | Assigned  | Unknown | Q        |
| IO17 | -   | Empty Slot | Assigned  | -       | dmnR     |

The following example illustrates showboards output if you have domain privileges for domains B, J, and R on a Sun Fire 15K/E25K system. showboards displays information for those boards that are assigned or available to domains B, J, and R. Boards that are assigned to other domains or that do not appear in the available component list for domains B, J, or R are not displayed.

**EXAMPLE 4** Listing boards for Domain Admin With Privileges on Domains B, J, and R

```
sc0:sms-user:> showboards
```

| Location | Pwr | Type       | Board Status | Test Status | Domain   |
|----------|-----|------------|--------------|-------------|----------|
| ----     | --- | ----       | -----        | -----       | -----    |
| SB3      | On  | CPU        | Active       | Passed      | engB     |
| SB4      | On  | CPU        | Active       | Passed      | engB     |
| SB5      | On  | CPU        | Active       | Passed      | engB     |
| SB8      | Off | CPU        | Available    | Unknown     | Isolated |
| SB9      | On  | CPU        | Active       | Passed      | dmnJ     |
| SB10     | Off | CPU        | Available    | Unknown     | Isolated |
| SB11     | Off | CPU        | Available    | Unknown     | Isolated |
| SB12     | Off | CPU        | Assigned     | Unknown     | engB     |
| SB13     | -   | Empty Slot | Available    | -           | Isolated |
| SB17     | -   | Empty Slot | Assigned     | -           | dmnR     |
| IO0      | -   | Empty Slot | Available    | -           | Isolated |
| IO2      | On  | MCPU       | Active       | Passed      | engB     |
| IO5      | Off | HPCI+      | Assigned     | Unknown     | engB     |
| IO7      | On  | HPCI       | Active       | Passed      | dmnJ     |
| IO9      | On  | HPCI+      | Assigned     | iPOST       | dmnJ     |
| IO10     | Off | HPCI       | Assigned     | Unknown     | engB     |
| IO11     | Off | HPCI       | Assigned     | Failed      | engB     |
| IO12     | Off | HPCI       | Assigned     | Unknown     | engB     |
| IO13     | -   | Empty Slot | Available    | -           | Isolated |
| IO14     | Off | HPCI+      | Available    | Unknown     | Isolated |
| IO17     | -   | Empty Slot | Assigned     | -           | dmnR     |

In the following example, showboards displays output if you have domain privileges on domains B, J, and R on a Sun Fire 15K/E25K system. The command shows board information for those DCUs that are assigned or available to the specified domain. DCUs that are assigned to other domains or that do not appear in the specified domain's available component list are not displayed.



**EXAMPLE 5** Listing boards for Domain Administrators for Domain B

```
sc0:sms-user:> showboards -d b
```

| Location | Pwr | Type       | Board Status | Test Status | Domain   |
|----------|-----|------------|--------------|-------------|----------|
| SB3      | On  | CPU        | Active       | Passed      | engB     |
| SB4      | On  | CPU        | Active       | Passed      | engB     |
| SB5      | On  | CPU        | Active       | Passed      | engB     |
| SB6      | -   | Empty Slot | Available    | -           | Isolated |
| SB8      | Off | CPU        | Available    | Unknown     | Isolated |
| SB8      | Off | CPU        | Available    | Unknown     | Isolated |
| SB10     | Off | CPU        | Available    | Unknown     | Isolated |
| SB11     | Off | CPU        | Available    | Unknown     | Isolated |
| SB12     | Off | CPU        | Assigned     | Unknown     | engB     |
| SB13     | -   | Empty Slot | Available    | -           | Isolated |
| IO0      | -   | Empty Slot | Available    | -           | Isolated |
| IO2      | On  | MCPU       | Active       | Passed      | engB     |
| IO5      | Off | HPCI+      | Assigned     | Unknown     | engB     |
| IO6      | -   | Empty Slot | Available    | -           | Isolated |
| IO10     | Off | HPCI       | Assigned     | Unknown     | engB     |
| IO11     | Off | HPCI       | Assigned     | Failed      | engB     |
| IO12     | Off | HPCI       | Assigned     | Unknown     | engB     |
| IO13     | -   | Empty Slot | Available    | -           | Isolated |
| IO14     | Off | HPCI+      | Available    | Unknown     | Isolated |

**EXAMPLE 6** Displaying Clock Source and Status For All Boards

```
sc0:sms-user:> showboards -c
```

| Location | Pwr | Current Clock Source | SC0 Clock Status | SC1 Clock Status | Auto-Clock Selection |
|----------|-----|----------------------|------------------|------------------|----------------------|
| CS0      | On  | SC0 Clock            | Good             | Good             | Disabled             |
| CS1      | On  | SC0 Clock            | Good             | Good             | Disabled             |
| EX0      | On  | SC0 Clock            | Good             | Good             | Disabled             |
| .        |     |                      |                  |                  |                      |
| EX15     | Off | -                    | -                | -                | -                    |
| EX16     | Off | -                    | -                | -                | -                    |
| EX17     | On  | SC0 Clock            | Good             | Good             | Disabled             |
| SB0      | On  | SC0 Clock            | Good             | Good             | Disabled             |
| SB1      | On  | SC0 Clock            | Good             | Good             | Disabled             |
| .        |     |                      |                  |                  |                      |
| .        |     |                      |                  |                  |                      |
| SB17     | On  | SC0 Clock            | Good             | Good             | Disabled             |
| IO0      | On  | SC0 Clock            | Good             | Good             | Disabled             |
| .        |     |                      |                  |                  |                      |
| .        |     |                      |                  |                  |                      |
| IO17     | On  | SC0 Clock            | Good             | Good             | Disabled             |

## showboards(1M)

### EXIT STATUS

The following exit values are returned:

- |   |                                               |
|---|-----------------------------------------------|
| 0 | Successful completion.                        |
| 1 | An invalid domain was specified.              |
| 2 | An invalid command-line option was specified. |
| 3 | An incorrect number of domains was specified. |
| 4 | The user does not have valid privileges.      |
| 5 | An internal error occurred.                   |
| 6 | An error occurred getting board information.  |

### ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types     | Attribute Values |
|---------------------|------------------|
| Availability        | SUNWSMSop        |
| Interface Stability | Evolving         |
| Command Output      | Unstable         |

### SEE ALSO

`addtag(1M)`, `setupplatform(1M)`, `showcodusage(1M)`, `showplatform(1M)`

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------|--|-----------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | showbus - display the bus configuration of expanders in active domains                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |
| <b>SYNOPSIS</b>                  | <b>showbus</b> [-v ]<br><b>showbus</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |
| <b>DESCRIPTION</b>               | showbus(1M) displays the bus configuration of expanders in active domains. This information defaults to displaying configuration by slot order EX0–EX17.                                                                                                                                                                                                                                                                                                                                                                                 |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |
| <b>OPTIONS</b>                   | The following options are supported:<br><br><table border="0"> <tr> <td style="padding-right: 20px;">-h</td> <td>Help. Displays usage descriptions.</td> </tr> <tr> <td></td> <td><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</td> </tr> <tr> <td style="padding-right: 20px;">-v</td> <td>Verbose. Displays all available command information. In addition to expander configuration, the domain, domain keyswitch position, and slot 0 and slot 1 board assignments are displayed.</td> </tr> </table> | -h | Help. Displays usage descriptions. |  | <b>Note</b> – Use alone. Any option specified in addition to -h is ignored. | -v | Verbose. Displays all available command information. In addition to expander configuration, the domain, domain keyswitch position, and slot 0 and slot 1 board assignments are displayed. |
| -h                               | Help. Displays usage descriptions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |
|                                  | <b>Note</b> – Use alone. Any option specified in addition to -h is ignored.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |
| -v                               | Verbose. Displays all available command information. In addition to expander configuration, the domain, domain keyswitch position, and slot 0 and slot 1 board assignments are displayed.                                                                                                                                                                                                                                                                                                                                                |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |
| <b>Group Privileges Required</b> | You must have platform administrator, operator, or service privileges to display all sets of communicating expanders (SOCX) in the system.<br><br>Domain administrators or configurators can display only the SOCX assigned to the domain(s) in which they have privileges.<br><br>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                    |    |                                    |  |                                                                             |    |                                                                                                                                                                                           |

## EXAMPLES

**EXAMPLE 1** Display Bus Configuration for All Domains

This display is the default for platform administrators. A domain administrator/configurator must have privileges on all domains in order to obtain this display. Otherwise only those domains for which the user has privileges are displayed.

```
sc0:sms-user:> showbus
```

| Location | Address | Data   | Response | SOCX    |
|----------|---------|--------|----------|---------|
| EX0      | CS0     | CS1    | CS0      | 0x0001  |
| EX1      | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX2      | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX3      | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX4      | BOTH    | BOTH   | BOTH     | 0x14010 |
| EX5      | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX6      | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX7      | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX8      | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX9      | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX10     | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX11     | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX12     | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX13     | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX14     | BOTH    | BOTH   | BOTH     | 0x14010 |
| EX15     | UNCONF  | UNCONF | UNCONF   | UNCONF  |
| EX16     | BOTH    | BOTH   | BOTH     | 0x14010 |
| EX17     | UNCONF  | UNCONF | UNCONF   | UNCONF  |

**EXAMPLE 2** Display Showbus Information for All Domains Using -v

```
sc0:sms-user:> showbus -v
```

```

SOCX: 0x00002

Address: BOTH
Data: BOTH
Response: BOTH

Domain:A - - ON/Running OBP
Location: EX1 SB1: On/active I01: On/active

UNCONFIGURED

Domain: B - - OFF/Powered Off
Location: EX12 SB12: Off/assigned I012: Off/assigned
Domain: C - - OFF/Powered Off
Location: EX10 SB10: Off/assigned I010: Off/assigned

UNASSIGNED

Location: EX0 SB0: On/unassigned I00: Off/unassigned
Location: EX2 SB2: Off/unassigned I02: On/unassigned
Location: EX6 SB6: Off/unassigned I06: On/unassigned
Location: EX9 SB9: On/unassigned I00: Off/unassigned
Location: EX11 SB11: Off/unassigned I011: Off/unassigned
```

**EXIT STATUS** The following exit values are returned:

0 Successful completion.  
>0 An error occurred.

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `setbus(1M)`

## showcmdsnc(1M)

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | showcmdsnc - display the current command synchronization list                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>SYNOPSIS</b>                  | <b>showcmdsnc</b> [-v]<br><b>showcmdsnc</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>DESCRIPTION</b>               | <p>showcmdsnc displays the command synchronization list to be used by the spare system controller (SC) to determine which commands or scripts need to be restarted after an SC failover.</p> <p>The command synchronization list is displayed in the format <i>Descriptor, Identifier, Cmd</i>, where:</p> <p><i>Descriptor</i> Specifies the command synchronization descriptor that represents a particular script.</p> <p><i>Identifier</i> Identifies a marker point in the script from which the script can be resumed on the new main SC after an automatic failover occurs. The identifier -1 indicates that the script does not have any marker points.</p> <p><i>Cmd</i> Indicates the name of the script to be restarted.</p> |
| <b>OPTIONS</b>                   | <p>The following options are supported:</p> <p>-h Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-v Verbose. Displays all available command information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Group Privileges Required</b> | <p>You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command.</p> <p>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>EXAMPLES</b>                  | <p><b>EXAMPLE 1</b> Displaying a Command Synchronization List</p> <pre>sc0:sms-user:&gt; showcmdsnc DESCRIPTOR      IDENTIFIER      CMD                 0                -1      c1 a1 a2</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**EXIT STATUS** The following exit values are returned:

0 Successful completion.  
>0 An error occurred.

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `cancelcmdsyc(1M)`, `initcmdsyc(1M)`, `runccmdsyc(1M)`,  
`savecmdsyc(1M)`

## showcodlicense(1M)

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------|---------|-----------------------------------------------------------|------------|-------|-------|-----------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------|----------|------------------------------------------------------|-----|---------------------------------------------------------------------------|
| <b>NAME</b>                      | showcodlicense - display the current Capacity on Demand (COD) right-to-use (RTU) licenses stored in the COD license database                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| <b>SYNOPSIS</b>                  | <b>showcodlicense</b> [-r] [-v]<br><b>showcodlicense</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| <b>DESCRIPTION</b>               | showcodlicense(1M) displays COD license information stored in the COD license database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| <b>OPTIONS</b>                   | The following options are supported:<br><br>-h            Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.<br><br>-r            Displays the license information in the raw <i>license-signature</i> format, as stored in the COD license database.<br><br>-v            Verbose. Displays both the formatted license information and raw <i>license-signature</i> data.                                                                                                                                                                                                                                                                                                                                                                                                     |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| <b>EXTENDED DESCRIPTION</b>      | The showcodlicense command displays the following COD information:<br><br><table><tr><td>Description</td><td>Type of resource (processor).</td></tr><tr><td>Lic Ver</td><td>Version number of the license, which is always set to 01.</td></tr><tr><td>Expiration</td><td>None.</td></tr><tr><td>Count</td><td>Number of right-to-use licenses granted for the given resource.</td></tr><tr><td>Status</td><td>GOOD, which indicates that the given resource is valid, or EXPIRED, which indicates that the resource license is no longer valid.</td></tr><tr><td>Cls</td><td>Not supported. Tier class value is always set to 1.</td></tr><tr><td>Tier Num</td><td>Not supported. Tier number value is always set to 1.</td></tr><tr><td>Req</td><td>Not supported. Required number of lower-tier licenses is always set to 0.</td></tr></table> | Description | Type of resource (processor). | Lic Ver | Version number of the license, which is always set to 01. | Expiration | None. | Count | Number of right-to-use licenses granted for the given resource. | Status | GOOD, which indicates that the given resource is valid, or EXPIRED, which indicates that the resource license is no longer valid. | Cls | Not supported. Tier class value is always set to 1. | Tier Num | Not supported. Tier number value is always set to 1. | Req | Not supported. Required number of lower-tier licenses is always set to 0. |
| Description                      | Type of resource (processor).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| Lic Ver                          | Version number of the license, which is always set to 01.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| Expiration                       | None.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| Count                            | Number of right-to-use licenses granted for the given resource.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| Status                           | GOOD, which indicates that the given resource is valid, or EXPIRED, which indicates that the resource license is no longer valid.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| Cls                              | Not supported. Tier class value is always set to 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| Tier Num                         | Not supported. Tier number value is always set to 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| Req                              | Not supported. Required number of lower-tier licenses is always set to 0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |
| <b>Group Privileges Required</b> | You must have platform administrator or platform operator group privileges to run this command.<br><br>Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                               |         |                                                           |            |       |       |                                                                 |        |                                                                                                                                   |     |                                                     |          |                                                      |     |                                                                           |



**EXAMPLES** The following examples show the COD license information displayed:

**EXAMPLE 1** Displaying Formatted License Data

```
sc0:sms-user:> showcodlicense
```

| Description | Lic Ver | Expiration | Count | Status | Cls | Tier Num | Req |
|-------------|---------|------------|-------|--------|-----|----------|-----|
| PROC        | 01      | NONE       | 16    | GOOD   | 1   | 1        | 0   |

**EXAMPLE 2** Displaying Raw License Data

```
sc0:sms-user:> showcodlicense -r
```

```
01:5014936C37048:03001:0201010100:16:00000000:RKQhd8zKNnTwvxT5DJ1ZNQ
```

**EXAMPLE 3** Displaying Formatted and Raw License Data

```
sc0:sms-user:> showcodlicense -v
```

| Description | Lic Ver | Expiration | Count | Status | Cls | Tier Num | Req |
|-------------|---------|------------|-------|--------|-----|----------|-----|
| PROC        | 01      | NONE       | 16    | GOOD   | 1   | 1        | 0   |

```
01:5014936C37048:03001:0201010100:16:00000000:RKQhd8zKNnTwvxT5DJ1ZNQ
```

**EXIT STATUS** The following exit values are returned:

|    |                                                                                                 |
|----|-------------------------------------------------------------------------------------------------|
| 0  | Successful completion.                                                                          |
| 1  | Invalid usage.                                                                                  |
| 2  | The user does not have valid privileges.                                                        |
| >2 | An internal error occurred. For further information see /var/opt/SUNWSMS/adm/platform/messages. |

**ATTRIBUTES** See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** addcodlicense(1M), codd(1M), deletecodlicense(1M), showcodusage(1M)

## showcodusage(1M)

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                 | showcodusage - display the current usage statistics for Capacity on Demand (COD) resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>SYNOPSIS</b>             | <b>showcodusage</b> [-v] [-p resource domains ]<br><b>showcodusage</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>DESCRIPTION</b>          | showcodusage(1M) shows current information about COD right-to-use (RTU) licenses in use. By default, this command displays a summary of COD RTU licenses used and installed, along with the current state of each resource.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>OPTIONS</b>              | The following options are supported:<br><br>-h                    Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.<br><br>-p domains          Displays the license usage for each domain. The statistics reported include the number of COD RTU licenses used by the domain, resources assigned to the domain, and COD RTU licenses reserved for the domain.<br><br>-p resource        Displays license usage by resource type.<br><br>-v                    Verbose. Displays all available COD usage information, including COD RTU license use for both the system and its domains. |
| <b>EXTENDED DESCRIPTION</b> | The showcodusage -p resource command displays the following COD usage information for the system:<br><br>Resource            Identifies the type of COD resources available (processors).<br><br>In Use               Specifies the number of COD CPUs currently used in the system.                                                                                                                                                                                                                                                                                                                                                                        |

|           |                                                                                                                                                                                                                                                                                                                                |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Installed | Specifies the number of COD CPUs installed in the system.                                                                                                                                                                                                                                                                      |
| License   | Specifies the number of COD RTU licenses installed.                                                                                                                                                                                                                                                                            |
| Status    | Specifies one of the following COD attributes:                                                                                                                                                                                                                                                                                 |
| OK        | Indicates that there are sufficient licenses for the COD CPUs in use. Also specifies the number of remaining COD resources available and the number of any instant access CPUs (headroom) available.                                                                                                                           |
| HEADROOM  | The number of instant access COD CPUs in use.                                                                                                                                                                                                                                                                                  |
| Violation | Indicates a COD RTU license violation exists. Specifies the number of COD CPUs in use that exceeds the number of COD RTU licenses available. This situation can occur when you force the deletion of a COD RTU license key from the COD RTU license database, but the COD CPU associated with the license key is still in use. |

The `showcodusage -p domain` command displays the following COD usage information for each domain:

|                 |                                                                                                                                       |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Domain/Resource | Identifies COD RTU resource (processor) for each domain. An Unused processor is a COD CPU that has not yet been assigned to a domain. |
| In Use          | Specifies the number of COD CPUs currently used in the domain.                                                                        |

## showcodusage(1M)

|            |                                                                                                                                                                                                                                                                                                                                                                                  |          |                                                         |            |                                                                                      |        |                            |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------|------------|--------------------------------------------------------------------------------------|--------|----------------------------|
| Installed  | Specifies the number of COD CPU resources installed in the domain.                                                                                                                                                                                                                                                                                                               |          |                                                         |            |                                                                                      |        |                            |
| Reserved   | Specifies the number of COD RTU licenses allocated to the domain.                                                                                                                                                                                                                                                                                                                |          |                                                         |            |                                                                                      |        |                            |
| Status     | Contains one of the following when the <code>-v</code> option is specified:<br><br><table><tr><td>Licensed</td><td>The domain COD CPU has a COD RTU license and is in use.</td></tr><tr><td>Unlicensed</td><td>A COD RTU license for the domain COD CPU could not be obtained and it is not in use.</td></tr><tr><td>Unused</td><td>The COD CPU is not in use.</td></tr></table> | Licensed | The domain COD CPU has a COD RTU license and is in use. | Unlicensed | A COD RTU license for the domain COD CPU could not be obtained and it is not in use. | Unused | The COD CPU is not in use. |
| Licensed   | The domain COD CPU has a COD RTU license and is in use.                                                                                                                                                                                                                                                                                                                          |          |                                                         |            |                                                                                      |        |                            |
| Unlicensed | A COD RTU license for the domain COD CPU could not be obtained and it is not in use.                                                                                                                                                                                                                                                                                             |          |                                                         |            |                                                                                      |        |                            |
| Unused     | The COD CPU is not in use.                                                                                                                                                                                                                                                                                                                                                       |          |                                                         |            |                                                                                      |        |                            |

### Group Privileges Required

You must have platform administrator, platform operator, or domain administrator group privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

Users with platform administrator privileges can view both resource and domain usage summaries. Users with domain administrator privileges can view only the domain usage summaries for which they have privileges, and a report of unused licenses.

#### EXAMPLE 1 Displaying COD Usage by Resource

```
sc0:sms-user:> showcodusage -p resource
Resource In Use Installed Licensed Status
----- -
PROC 4 4 16 OK: 12 available
```

**EXAMPLE 2** Displaying COD Usage by Domain

```
sc0:sms-user:> showcodusage -p domains
Domain/Resource In Use Installed Reserved

A - PROC 0 0 0
B - PROC 0 0 0
C - PROC 0 0 0
D - PROC 4 4 0
E - PROC 0 0 0
F - PROC 0 0 0
G - PROC 0 0 0
H - PROC 0 0 0
I - PROC 0 0 0
J - PROC 0 0 0
K - PROC 0 0 0
L - PROC 0 0 0
M - PROC 0 0 0
N - PROC 0 0 0
O - PROC 0 0 0
P - PROC 0 0 0
Q - PROC 0 0 0
R - PROC 0 0 0
Unused - PROC 0 0 12
```

**EXAMPLE 3** Displaying COD Usage by Resource and Domain

```

sc0:sms-user:> showcodusage -v
Resource In Use Installed Licensed Status

PROC 4 4 16 OK: 12 available

Domain/Resource In Use Installed Reserved Status

A - PROC 0 0 0
B - PROC 0 0 0
 SB6 - PROC 0 0
 SB6/P0 Unused
 SB6/P1 Unused
 SB6/P2 Unused
 SB6/P3 Unused
C - PROC 0 0 0
 SB12 - PROC 0 0
 SB12/P0 Unused
 SB12/P1 Unused
 SB12/P2 Unused
 SB12/P3 Unused
D - PROC 4 4 0
 SB4 - PROC 4 4
 SB4/P0 Licensed
 SB4/P1 Licensed
 SB4/P2 Licensed
 SB4/P3 Licensed
 SB16 - PROC 4 4
 SB16/P0 Unused
 SB16/P1 Unused
 SB16/P2 Unused
 SB16/P3 Unused
E - PROC 0 0 0
F - PROC 0 0 0
G - PROC 0 0 0
H - PROC 0 0 0
I - PROC 0 0 0
J - PROC 0 0 0
K - PROC 0 0 0
L - PROC 0 0 0
M - PROC 0 0 0
N - PROC 0 0 0
O - PROC 0 0 0
P - PROC 0 0 0
Q - PROC 0 0 0
R - PROC 0 0 0
Unused - PROC 0 0 12

```

**EXIT STATUS**

The following exit values are returned:

- 0                   Successful completion.
- 1                   User cancel.

- 2 Invalid usage.
- 3 User does not have valid privileges.
- >3 An internal error occurred. For further information see  
/var/opt/SUNWSMS/adm/platform/messages.

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

`showcodlicense(1M)`, `codd(1M)`

## showcomponent(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | showcomponent - display the blacklist status for a component                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>SYNOPSIS</b>    | <b>showcomponent</b> [-a   -d <i>domain_indicator</i> ] [-v] [ <i>location</i> ]...<br><b>showcomponent</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>DESCRIPTION</b> | <p>showcomponent(1M) indicates whether the specified component is listed in the platform, domain, or ASR blacklist file.</p> <p>If neither the -a nor the -d option is specified, showcomponent displays the platform blacklist. If no <i>location</i> is specified, showcomponent displays all components in the specified blacklist.</p> <p>The <i>blacklist</i> is an internal file that lists components that POST cannot use at boot time. POST reads the blacklist file(s) before preparing the system for booting, and passes along to OpenBoot PROM a list of only those components that have been successfully tested; those on the blacklist are excluded.</p> <p>SMS supports three blacklists: one for domain boards, one for platform boards, and the internal automatic system recovery (ASR) blacklist.</p> <p>For more information on the use and editing of platform and domain blacklists refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i>.</p> |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <ul style="list-style-type: none"><li>-a Specifies the ASR blacklist.</li><li>-d <i>domain_indicator</i> Specifies the domain using one of the following:<ul style="list-style-type: none"><li><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</li><li><i>domain_tag</i> – Name assigned to a domain using addtag(1M).</li></ul></li><li>-h Help. Displays usage descriptions.<br/><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</li><li>-v Verbose. Displays all available command information.</li></ul>                                                                                                                                                                                                                                                                                                                                                          |



**OPERANDS** | The following operands are supported:

## showcomponent(1M)

*location*

List of component locations, separated by forward slashes and comprised of:

*board\_loc/proc/bank/logical\_bank*

*board\_loc/proc/bank/all\_dimms\_on\_that\_bank*

*board\_loc/proc/all\_banks\_on\_that\_proc*

*board\_loc/all\_banks\_on\_that\_board*

*board\_loc/proc*

*board\_loc*

*board\_loc/procs*

*board\_loc/cassette*

*board\_loc/bus*

*board\_loc/paroli\_link*

Multiple *location* arguments are permitted, separated by a space.

The *location* forms are optional and are used to specify particular components on boards in specific locations.

For example, the location SB5/P0/B1/L1 indicates

Logical Bank 1 of Bank 1 on Processor 0 at SB5.

The SB0/PP1 *location* indicates Processor Pair 1 at SB0.

The CS0/ABUS1 *location* indicates address bus 1 at CS0.

The following *board\_loc* forms are accepted:

Sun Fire 12K/E20K:

SB(0...8)

IO(0...8)

CS(0|1)

EX(0...8)

Sun Fire 15K/E25K:

SB(0...17)

IO(0...17)

CS(0|1)

EX(0...17)

Processor locations indicate single processors or processor pairs.

There are four possible processors on a CPU/memory board. Processor pairs on that board are procs 0 and 1, and procs 2 and 3.

The MaxCPU has two processors: procs 0 and 1, and only one proc pair (PP0). Using PP1 for this board causes showcomponent to exit and display an error message.

The following *proc* forms are accepted:

P(0 . . . 3)      PP(0 | 1)

The following *bank* forms are accepted:

B(0 | 1)

The following *logical\_bank* forms are accepted:

L(0 | 1)

The following *all\_dimms\_on\_that\_bank* forms are accepted:

D

The following *all\_banks\_on\_that\_proc* forms are accepted:

B

The following *all\_banks\_on\_that\_board* forms are accepted:

B

The following *paroli\_link* forms are accepted:

PAR(0 | 1)

The hsPCI assemblies contain hot-swappable cassettes.

The following *hsPCI* forms are accepted:

C(3|5)V(0|1)

The hsPCI+ assemblies contain hot-swappable cassettes.

The following *hsPCI+* forms are accepted:

C3V(0|1|2) and C5V0

There are three bus locations: address, data, and response.

The following *bus* forms are accepted:

ABUS|DBUS|RBUS (0|1)

## EXTENDED DESCRIPTION

### Group Privileges Required

You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command. If you have domain privileges you can run this command only on the domain for which you have privileges.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

## EXAMPLES

### EXAMPLE 1 Displaying Whether SB0 is ASR Blacklisted

```
sc0:sms-user:> showcomponent -a SB0
Component SB0 is disabled: #High Voltage
```

### EXAMPLE 2 Displaying Whether SB15 ("V3CPU") is ASR Blacklisted

```
sc0:sms-user:> showcomponent -a SB15
Component V3CPU at SB15 is NOT disabled in the specified blacklist
```

### EXAMPLE 3 Displaying Whether SB11 ("CPU") is ASR Blacklisted

```
sc0:sms-user:> showcomponent -a SB11
Component CPU at SB11 is disabled in the specified blacklist: # ESMD sensor
read failure 0528.1306.24
```

## showcomponent(1M)

### EXAMPLE 4 Displaying Whether Four Boards/Components in Domain B Are Blacklisted

```
sc0:sms-user:> showcomponent -dB IO4/PP0 SB5 IO6/C5V0 EX7/ABUS0
Component IO4/PP0 is disabled: #High temp
Component SB5 is disabled: <no reason given>
Component IO6/C5V0 is NOT disabled.
Component EX7/ABUS0 is NOT disabled.
```

### EXAMPLE 5 Displaying Whether the Logical Bank on IO7 in Domain B Is Blacklisted

```
sc0:sms-user:> showcomponent -dB IO7/P0/B1/L0
Component IO7/P0/B1/L0 is disabled: <no reason given>
```

### EXAMPLE 6 Displaying All Platform-Blacklisted Components

```
sc0:sms-user:> showcomponent
Component SB0 is disabled: #High temp
Component SB3 is disabled:
Component IO2 is disabled. <no reason given>
```

### EXAMPLE 7 Displaying All Domain B Blacklisted Components

```
sc0:sms-user:> showcomponent -dB
Component IO4/PP0 is disabled: #High temp
Component SB5 is disabled: <no reason given>
```

### EXAMPLE 8 Displaying All ASR-Blacklisted Components

```
sc0:sms-user:> showcomponent -a
Component SB0 is disabled: #High temp
```

## EXIT STATUS

The following exit values are returned:

|    |                        |
|----|------------------------|
| 0  | Successful completion. |
| >0 | An error occurred.     |

## FILES

The following files are used by this command.

|                                             |                                       |
|---------------------------------------------|---------------------------------------|
| /etc/opt/SUNWSMS/config/asr/blacklist       | List of components excluded by esmd.  |
| /etc/opt/SUNWSMS/config/platform/blacklist  | List of platform components excluded. |
| /etc/opt/SUNWSMS/config/domain_id/blacklist | List of domain components excluded.   |

**Note** – The ASR blacklist file is created and used internally and should *not* be edited manually.

**ATTRIBUTES** See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** enablecomponent (1M), disablecomponent (1M), esmd (1M)

## showdatasync(1M)

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                 | showdatasync - display the status of system controller (SC) data synchronization for failover                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>SYNOPSIS</b>             | <b>showdatasync</b> [-l   -Q] [-v]<br><b>showdatasync</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>DESCRIPTION</b>          | showdatasync provides the current status of files propagated (copied) from the main SC to its spare. Data propagation synchronizes data on the spare SC with data on the main SC, so that the spare SC is current with the main SC if an SC failover occurs.                                                                                                                                                                                                                                                                            |
| <b>OPTIONS</b>              | The following options are supported:<br><br>-h            Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.<br><br>-l            Lists the files in the current data propagation list. For details on the information displayed see the EXTENDED DESCRIPTION section.<br><br>-Q            Lists the files queued for propagation. Each file name includes the absolute path to the file.<br><br>-v            Verbose. Displays all available command information. |
| <b>EXTENDED DESCRIPTION</b> | This section describes the information displayed by the showdatasync command.<br><br>If you do not specify an option with the showdatasync command, the following information is displayed:<br><br>File Propagation Status:<br>Active File:<br>Queued files:                                                                                                                                                                                                                                                                            |



where:

|                         |                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------|
| File Propagation Status | Displays the current status of data synchronization:                                                                     |
|                         | Active Indicates that the data synchronization process is enabled and functioning normally.                              |
|                         | Disabled Indicates that the data synchronization process has been disabled because SC failover was disabled.             |
|                         | Failed Indicates that the data synchronization process cannot currently propagate files to the spare SC.                 |
| Active File             | Displays either the absolute path of the file currently being propagated or a dash (-) indicating that the link is idle. |
| Queued files            | Specifies the number of files to be propagated but not yet processed.                                                    |

If you specify the `-l` option with the `showdatasync` command, each entry in the data propagation list is displayed in the format:

```

TIME PROPAGATED INTERVAL FILE
time interval filename

```

where:

|                 |                                                                                                               |
|-----------------|---------------------------------------------------------------------------------------------------------------|
| <i>time</i>     | Indicates the last time that the file was propagated from the main SC to the spare.                           |
| <i>interval</i> | Specifies the interval, in minutes, between checks for file modification. The default interval is 60 minutes. |
| <i>filename</i> | Provides the absolute path and name of the propagated file.                                                   |

### Group Privileges Required

You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

#### EXAMPLE 1 Displaying Data Synchronization Status

```

sc0:sms-user:> showdatasync
File Propagation State: ACTIVE
Active File: -
Queued files: 0

```

## showdatasync(1M)

### EXAMPLE 2 Displaying Data Synchronization List

```
sc0:sms-user:> showdatasync -l
TIME PROPAGATED INTERVAL FILE
Mar 23 16:00:00 60 /tmp/t1
```

### EXAMPLE 3 Displaying Data Synchronization Queue

```
sc0:sms-user:> showdatasync -Q
FILE
/tmp/t1
```

### EXIT STATUS

The following exit values are returned:

0                    Successful completion.  
>0                   An error occurred.

### ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

### SEE ALSO

`setdatasync(1M)`

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | showdate - display the date and time for the system controller (SC) or a domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>SYNOPSIS</b>                  | <b>showdate</b> [-d <i>domain_indicator</i> ] [-u ] [-v ]<br><b>showdate</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>DESCRIPTION</b>               | showdate (1M) displays the SC's current date and time. Optionally, showdate displays domain time of day.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>OPTIONS</b>                   | The following options are supported:<br><br>-d <i>domain_indicator</i> Specifies the domain using one of the following:<br><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.<br><i>domain_tag</i> – Name assigned to a domain using addtag(1M).<br>-h                                Help. Displays usage descriptions.<br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.<br>-u                                Interprets and displays the time using Greenwich Mean Time (GMT). The default is the local time zone.<br>-v                                Verbose. Displays all available command information. |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Group Privileges Required</b> | You must have platform administrator, platform operator, or platform service privileges to display the date on the SC. You must have domain administrator or domain configurator privileges for the specified domain to display the domain date.<br><br>Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                                                                                                                             |
| <b>EXAMPLES</b>                  | <b>EXAMPLE 1</b> Showing the Current Local Date in Pacific Standard Time<br><br><pre>sc0:sms-user:&gt; showdate System Controller: Sat Feb 2 15:23:21 PST 2002</pre><br><b>EXAMPLE 2</b> Showing the Current Date Using GMT<br><br><pre>sc0:sms-user:&gt; showdate -u System Controller: Sat Feb 2 23:23:21 GMT 2002</pre>                                                                                                                                                                                                                                                                                                                                                                |

## showdate(1M)

**EXAMPLE 3** Showing the Current Local Date on Domain A in Pacific Standard Time

```
sc0:sms-user:> showdate -d a
Domain a: Sat Feb 2 15:33:20 PST 2002
```

**EXAMPLE 4** Showing the Current Date on Domain A Using GMT

```
sc0:sms-user:> showdate -d a -u
Domain a: Sat Feb 2 23:33:20 GMT 2002
```

### EXIT STATUS

The following exit values are returned:

0                   Successful completion.  
>0                  An error occurred.

### ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

### SEE ALSO

`addtag(1M)`, `setdate(1M)`

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | showdevices - display system board devices and resource usage information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>SYNOPSIS</b>    | <b>showdevices</b> [-v] [-p bydevice   byboard   query   force] <i>location...</i><br><b>showdevices</b> [-v] [-p bydevice   byboard] -d <i>domain_indicator</i><br><b>showdevices</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>DESCRIPTION</b> | <p>showdevices(1M) displays the configured physical devices on system boards and the resources made available by these devices. Usage information is provided by applications and subsystems that are actively managing system resources. You can perform offline queries of managed resources to display the predicted impact of a system board DR operation. Unmanaged devices are not displayed by default; you must use the -v option.</p> <p>showdevices gathers device information from one or more Sun Fire high-end system domains. The command uses dca(1M) as a proxy to gather the information from the domains.</p> |

**OPTIONS**

The following options are supported.

- d** *domain\_indicator*      Specifies the domain using one of the following:
- domain\_id* – ID for a domain. Valid *domain\_ids* are A–R and are not case sensitive.
- domain\_tag* – Name assigned to a domain using `addtag(1M)`.
- h**      Help. Displays usage descriptions.
- Note** – Use alone. Any option specified in addition to `-h` is ignored.
- p**      Displays specific reports.
- Valid arguments for `-p` are:
- bydevice*      List output is grouped by device type (CPU, memory, IO). This is the default.
- byboard*      List output is grouped by system board. Default output is in tabular format grouped by device type (CPU, memory, IO).
- query*      List output is the result of a query to predict the effect of removing a system board
- force*      Forced offline query. Resource consumers are requested to apply force semantics in predicting whether they are able to relinquish usage of the system resources. (see `cfgadm(1M)`).
- Note** – The *query* and *force* arguments are *not* valid with the `-d` option.
- v**      Displays all I/O devices. Includes both managed and unmanaged I/O devices. Managed devices export actively managed resources. Unmanaged devices are physically configured but do not export actively managed resources. No usage information is available for unmanaged devices.

**OPERANDS** The following operands are supported:

*location* List of board locations, separated by a space. Multiple *location* arguments are permitted.

The following *location* forms are accepted:

Sun Fire 12K/E20K:

SB(0...8)

IO(0...8)

Sun Fire 15K/E25K:

SB(0...17)

IO(0...17)

**EXTENDED  
DESCRIPTION**

Showdevices fields:

domain Tag or identifier

board Board identifier

CPU:

id Processor ID

state Processor state

speed CPU frequency in MHz

ecache CPU ecache size in MB

Memory:

board mem Board memory size in MB

perm mem Amount of nonrelocatable memory on board in MB

base address Base physical address of memory on board

domain mem System memory size in MB

board Board identifier

showdevices(1M)

If a memory drain is in progress, the following is available:

|              |                                                |
|--------------|------------------------------------------------|
| target board | Target board identifier                        |
| deleted      | Amount of memory already deleted in MB         |
| remaining    | Amount of memory remaining to be deleted in MB |

I/O devices:

|          |                                        |
|----------|----------------------------------------|
| device   | I/O device instance name               |
| resource | Managed resource name                  |
| usage    | Description of resource usage instance |
| query    | Result of offline query of resources   |

**Group Privileges  
Required**

You must have domain administrator/configurator privileges on all boards specified to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1** Displaying devices for Board IO1

```
sc0:sms-user:> showdevices IO1
IO Devices

domain board device resource usage
A IO1 sd3 /dev/dsk/c0t3d0s0 mounted filesystem "/"
A IO1 sd3 /dev/dsk/c0t3s0s1 dump device (swap)
A IO1 sd3 /dev/dsk/c0t3s0s1 swap area
A IO1 sd3 /dev/dsk/c0t3d0s3 mounted filesystem "/var"
A IO1 sd3 /var/run mounted filesystem "/var/run"
```



**EXAMPLE 2** Displaying devices for SB1 and IO1

```

sc0:sms-user> showdevices sb1 io1
CPU

domain board id state speed ecache usage
B SB1 32 online 1050 8
B SB1 33 online 1050 8
B SB1 34 online 1050 8
B SB1 35 online 1050 8
B SB1 36 online 1050 8
B SB1 37 online 1050 8
B SB1 38 online 1050 8
B SB1 39 online 1050 8

Memory

domain board board perm base domain
B SB1 mem MB mem MB address mem MB
 16384 934 0x200000000 16384

IO Devices

domain board device resource usage
B IO1 ce0 SUNW_network/ce0 ce0 hosts IP
addresses: 10.1.134.133
B IO1 sd0 /dev/dsk/c0t0d0s0 mounted filesystem "/"
B IO1 sd0 /dev/dsk/c0t0d0s1 swap area
B IO1 sd0 /dev/dsk/c0t0d0s1 dump device (swap)

```

**EXAMPLE 3** Displaying Offline Query Result for System Board IO1

```

sc0:sms-user:> showdevices -p query IO1

Location IO1 - Domain A
=====
IO Devices

device resource query usage/reason
sd3 /dev/dsk/c0t3d0s0 fail mounted filesystem "/"
sd3 /dev/dsk/c0t3s0s1 fail dump device (swap)
sd3 /dev/dsk/c0t3s0s1 fail swap area
sd3 /dev/dsk/c0t3d0s3 fail mounted filesystem "/var"
sd3 /var/run - mounted filesystem "/var/run"

```

The query field shows the predicted result of removing the resource. The failure of the mounted file system `/var` to offline prevents the query from reaching the layered mount point `/var/run`.

showdevices(1M)

**EXIT STATUS**

The following exit values are returned:

- 0 Successful completion.
- 1 An invalid domain was specified.
- 2 A command line error such as an invalid option was detected.
- 3 More than one domain was specified.
- 4 An error occurred while communicating with `pcd`.
- 5 An error occurred while communicating with a domain.
- 6 An error occurred while handling device information.
- 7 An internal error, such as failed memory allocation, occurred.

**ATTRIBUTES**

See `attributes(5)` for a description of the following attribute.

| Attribute Type | Attribute Value |
|----------------|-----------------|
| Availability   | SUNWSMSop       |

**SEE ALSO**

`addtag(1M)`, `dca(1M)`, `pcd(1M)`

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | showenvironment - display the environmental data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SYNOPSIS</b>    | <p><b>showenvironment</b> [-d <i>domain_indicator</i> [, <i>domain_indicator</i>]...]...[-p temps   volts   currents   fans   powers [,temps   volts   currents   fans   powers]..] [-v ]</p> <p><b>showenvironment</b> [-d <i>domain_indicator</i>[, <i>domain_indicator</i>]...]... [-p faults] [-v ]</p> <p><b>showenvironment</b> -h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>DESCRIPTION</b> | <p>showenvironment(1M) displays the environmental data (temperatures, voltages, and so on). If a domain <i>domain_id</i> or <i>domain_tag</i> is specified, environmental data relating to the domain is displayed, provided that the user has domain privileges for that domain. If a domain is not specified, all domain data permissible to the user is displayed.</p> <p><b>Note</b> – Only <i>domain configuration units</i> (DCUs) (for example, CPU or I/O) belong to a domain. Displaying environmental data relating to such things as fan trays, bulk power, or other boards (<i>exb</i>, <i>csb</i>) requires platform privileges. You can also specify individual reports for temperatures, voltages, currents, bulk power status, and fan tray status; or specify faults with the <i>-p</i> option. If the <i>-p</i> option is not present, all reports are shown.</p> |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <p><i>-d domain_indicator</i> Specifies the domain using one of the following:</p> <p style="padding-left: 40px;"><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p style="padding-left: 40px;"><i>domain_tag</i> – Name assigned to a domain using <i>addtag(1M)</i>.</p> <p><i>-h</i> Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to <i>-h</i> is ignored.</p>                                                                                                                                                                                                                                                                                                                                                           |

`-p` Displays specific reports. Multiple report arguments are separated by commas.

Valid reports are:

`temps` List output is grouped by temperature

`volts` List output is grouped by voltage

`currents` List output is grouped by current

`fans` List output is grouped by fans

`powers` List output is grouped by bulk power supplies

`-p faults` List output is of all component readings not within the optimum thresholds.

**Note** – The `faults` argument cannot be used in conjunction with any other report argument.

`-v` Verbose. Displays all available command information.

## EXTENDED DESCRIPTION

The Unit field contains one of three measurements:

C Degrees Celsius

V Volts

A Amperes

The Status field can contain one of 16 states.

Temperature readings:

OVERLIMIT Over limit

HIGH\_CRIT High critical

HIGH\_WARN High warning

LOW\_CRIT Low critical

LOW\_WARN Low warning

OK Optimum

INVALID Reading failure

## Voltage readings:

|          |                 |
|----------|-----------------|
| HIGH_MAX | High maximum    |
| LOW_MIN  | Low minimum     |
| OK       | Acceptable      |
| INVALID  | Reading failure |

## Current readings:

|         |                                                                               |
|---------|-------------------------------------------------------------------------------|
| OK      | The difference between both companion component readings is within tolerance. |
| BAD     | The difference between both companion component readings is out of tolerance. |
| INVALID | Reading failure.                                                              |

## Miscellaneous:

|          |                                      |
|----------|--------------------------------------|
| ON       | Power on.                            |
| OFF      | Power off.                           |
| PRESENCE | A HotPlug card is present in slot 1. |
| FAIL     | Failure state.                       |
| HIGH     | Set to high speed.                   |
| NORMAL   | Set to normal speed.                 |
| INVALID  | Reading failure.                     |
| AGE      | Age of the reading.                  |
| UNKNOWN  | Unknown power/board type.            |

**Group Privileges  
Required**

Only domain information for which you have domain administrator or configurator privileges for is displayed. Otherwise, you must have platform administrator, operator, or service privileges.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

## EXAMPLES

## EXAMPLE 1 Displaying Environmental Data for All Domains on a Sun Fire 15K/E25K System

| LOCATION        | SENSOR       | VALUE  | UNIT | AGE      | STATUS    |
|-----------------|--------------|--------|------|----------|-----------|
| SC at SC0       | RIO Temp     | 38     | C    | 64.6 sec | OK        |
| SC at SC0       | IOA Temp     | 31     | C    | 64.6 sec | OK        |
| SC at SC0       | PS0 Temp     | 46     | C    | 64.6 sec | OK        |
| SC at SC0       | PS1 Temp     | 37     | C    | 64.6 sec | OK        |
| SCPER at SCPER0 | AMB 0 Temp   | 26     | C    | 5.8 sec  | HIGH_WARN |
| SCPER at SCPER0 | AMB 1 Temp   | 25     | C    | 5.8 sec  | OK        |
| SCPER at SCPER0 | AMB 2 Temp   | 25     | C    | 5.8 sec  | OK        |
| SC at SC0       | 1.5 VDC      | 1.48   | V    | 76.5 sec | OK        |
| SC at SC0       | 3.3 VDC      | 3.28   | V    | 76.5 sec | OK        |
| SC at SC0       | 3.3 VDC HK   | 3.28   | V    | 76.5 sec | OK        |
| SC at SC0       | 5.0 VDC      | 4.96   | V    | 76.5 sec | OK        |
| SC at SC0       | +12.0 VDC    | 12.33  | V    | 76.5 sec | OK        |
| SC at SC0       | -12.0 VDC    | -12.39 | V    | 76.5 sec | OK        |
| SCPER at SCPER0 | 3.3 VDC HK   | 3.28   | V    | 75.4 sec | OK        |
| SCPER at SCPER0 | 5.0 VDC      | 4.99   | V    | 75.4 sec | OK        |
| SCPER at SCPER0 | +12.0 VDC    | 11.95  | V    | 75.4 sec | OK        |
| SC at SC0       | 1.5 CVT0 VDC | 1.43   | A    | 76.9 sec | OK        |
| SC at SC0       | 1.5 CVT1 VDC | 1.32   | A    | 76.9 sec | OK        |
| SC at SC0       | 3.3 V_PS0    | 5.71   | A    | 76.9 sec | OK        |
| SC at SC0       | 3.3 V_PS1    | 6.29   | A    | 76.9 sec | OK        |
| SC at SC0       | 5.0 V_PS0    | 6.46   | A    | 76.9 sec | OK        |
| SC at SC0       | 5.0 V_PS1    | 6.59   | A    | 76.9 sec | OK        |
| SC at SC1       | RIO Temp     | 34     | C    | 65.9 sec | OK        |
| SC at SC1       | IOA Temp     | 26     | C    | 65.9 sec | OK        |
| SC at SC1       | PS0 Temp     | 42     | C    | 65.9 sec | OK        |
| SC at SC1       | PS1 Temp     | 34     | C    | 65.9 sec | OK        |
| SC at SC1       | SBBC Temp    | 36     | C    | 65.9 sec | OK        |
| SC at SC1       | CBH Temp     | 45     | C    | 65.9 sec | OK        |
| SCPER at SCPER1 | AMB 0 Temp   | 20     | C    | 10.2 sec | OK        |
| SCPER at SCPER1 | AMB 1 Temp   | 20     | C    | 10.2 sec | OK        |
| SCPER at SCPER1 | AMB 2 Temp   | 20     | C    | 10.2 sec | OK        |
| SC at SC1       | 1.5 VDC      | 1.48   | V    | 76.4 sec | OK        |
| SC at SC1       | 3.3 VDC      | 3.28   | V    | 76.4 sec | OK        |
| SC at SC1       | 3.3 VDC HK   | 3.26   | V    | 76.4 sec | OK        |
| SC at SC1       | 5.0 VDC      | 4.99   | V    | 76.4 sec | OK        |
| SC at SC1       | +12.0 VDC    | 12.03  | V    | 76.4 sec | OK        |
| SC at SC1       | -12.0 VDC    | -12.01 | V    | 76.4 sec | OK        |
| SCPER at SCPER1 | 3.3 VDC HK   | 3.28   | V    | 76.6 sec | OK        |
| SCPER at SCPER1 | 5.0 VDC      | 5.02   | V    | 76.6 sec | OK        |
| SCPER at SCPER1 | +12.0 VDC    | 12.10  | V    | 76.6 sec | OK        |
| SC at SC1       | 1.5 CVT0 VDC | 1.32   | A    | 76.9 sec | OK        |
| SC at SC1       | 1.5 CVT1 VDC | 1.32   | A    | 76.9 sec | OK        |
| SC at SC1       | 3.3 V_PS0    | 6.00   | A    | 76.9 sec | OK        |
| SC at SC1       | 3.3 V_PS1    | 6.29   | A    | 76.9 sec | OK        |
| SC at SC1       | 5.0 V_PS0    | 6.22   | A    | 76.9 sec | OK        |
| SC at SC1       | 5.0 V_PS1    | 6.34   | A    | 76.9 sec | OK        |
| CSB at CS0      | AMB Top Temp | 31     | C    | 66.8 sec | OK        |
| CSB at CS0      | AMB Bot Temp | 31     | C    | 66.8 sec | OK        |
| CSB at CS0      | SBBC Temp    | 38     | C    | 66.8 sec | OK        |
| CSB at CS0      | 1.5 VDC      | 1.51   | V    | 78.3 sec | OK        |
| CSB at CS0      | 3.3 VDC      | 3.30   | V    | 78.3 sec | OK        |
| CSB at CS0      | 2.5 VDC      | 2.54   | V    | 78.3 sec | OK        |
| CSB at CS0      | 3.3 VDC HK   | 3.28   | V    | 78.3 sec | OK        |
| CSB at CS1      | AMB Top Temp | 27     | C    | 66.7 sec | OK        |
| CSB at CS1      | AMB Bot Temp | 28     | C    | 66.7 sec | OK        |

|             |              |      |   |      |     |    |
|-------------|--------------|------|---|------|-----|----|
| CSB at CS1  | SBBC Temp    | 44   | C | 66.7 | sec | OK |
| CSB at CS1  | 1.5 VDC      | 1.50 | V | 78.2 | sec | OK |
| CSB at CS1  | 3.3 VDC      | 3.30 | V | 78.2 | sec | OK |
| CSB at CS1  | 2.5 VDC      | 2.56 | V | 78.2 | sec | OK |
| CSB at CS1  | 3.3 VDC HK   | 3.30 | V | 78.2 | sec | OK |
| CP at CP0   | DMX0 Temp    | 40   | C | 67.1 | sec | OK |
| CP at CP0   | DMX1 Temp    | 39   | C | 67.1 | sec | OK |
| CP at CP0   | DMX3 Temp    | 35   | C | 67.1 | sec | OK |
| CP at CP0   | DMX5 Temp    | 33   | C | 67.1 | sec | OK |
| CP at CP0   | AMX0 Temp    | 41   | C | 67.1 | sec | OK |
| CP at CP0   | AMX1 Temp    | 39   | C | 67.1 | sec | OK |
| CP at CP0   | RMX Temp     | 41   | C | 67.1 | sec | OK |
| CP at CP0   | DARB Temp    | 36   | C | 67.1 | sec | OK |
| CP at CP1   | DMX0 Temp    | 39   | C | 66.8 | sec | OK |
| CP at CP1   | DMX1 Temp    | 41   | C | 66.8 | sec | OK |
| CP at CP1   | DMX3 Temp    | 37   | C | 66.8 | sec | OK |
| CP at CP1   | DMX5 Temp    | 35   | C | 66.8 | sec | OK |
| CP at CP1   | AMX0 Temp    | 43   | C | 66.8 | sec | OK |
| CP at CP1   | AMX1 Temp    | 41   | C | 66.8 | sec | OK |
| CP at CP1   | RMX Temp     | 43   | C | 66.8 | sec | OK |
| CP at CP1   | DARB Temp    | 39   | C | 66.8 | sec | OK |
| EXB at EX0  | AMB Top Temp | 36   | C | 68.9 | sec | OK |
| EXB at EX0  | AMB Bot Temp | 33   | C | 68.9 | sec | OK |
| EXB at EX0  | SBBC Temp    | 55   | C | 68.9 | sec | OK |
| EXB at EX0  | AXQ Temp     | 41   | C | 68.9 | sec | OK |
| EXB at EX0  | SDIM Temp    | 43   | C | 68.9 | sec | OK |
| EXB at EX0  | SDISC Temp   | 45   | C | 68.9 | sec | OK |
| EXB at EX0  | SDISE Temp   | 39   | C | 68.9 | sec | OK |
| EXB at EX0  | 1.5 VDC      | 1.51 | V | 79.7 | sec | OK |
| EXB at EX0  | 3.3 VDC      | 3.30 | V | 79.7 | sec | OK |
| EXB at EX0  | 2.5 VDC      | 2.51 | V | 79.7 | sec | OK |
| EXB at EX0  | 3.3 VDC HK   | 3.30 | V | 79.7 | sec | OK |
| CPU at SB0  | PROC 0 Temp  | 63   | C | 6.0  | sec | OK |
| CPU at SB0  | PROC 1 Temp  | 48   | C | 6.0  | sec | OK |
| CPU at SB0  | PROC 2 Temp  | 69   | C | 6.0  | sec | OK |
| CPU at SB0  | PROC 3 Temp  | 75   | C | 6.0  | sec | OK |
| CPU at SB0  | SDC0 Temp    | 67   | C | 6.0  | sec | OK |
| CPU at SB0  | AR0 Temp     | 62   | C | 6.0  | sec | OK |
| CPU at SB0  | DX0 Temp     | 61   | C | 6.0  | sec | OK |
| CPU at SB0  | DX1 Temp     | 63   | C | 6.0  | sec | OK |
| CPU at SB0  | DX2 Temp     | 58   | C | 6.0  | sec | OK |
| CPU at SB0  | DX3 Temp     | 55   | C | 6.0  | sec | OK |
| CPU at SB0  | SBBC0 Temp   | 58   | C | 6.0  | sec | OK |
| CPU at SB0  | SBBC1 Temp   | 59   | C | 6.0  | sec | OK |
| CPU at SB0  | 1.5 VDC      | 1.51 | V | 27.3 | sec | OK |
| CPU at SB0  | 3.3 VDC      | 3.30 | V | 27.3 | sec | OK |
| CPU at SB0  | Core 0 Volt  | 1.63 | V | 27.3 | sec | OK |
| CPU at SB0  | Core 1 Volt  | 1.63 | V | 27.3 | sec | OK |
| CPU at SB0  | Core 2 Volt  | 1.63 | V | 27.3 | sec | OK |
| CPU at SB0  | Core 3 Volt  | 1.66 | V | 27.3 | sec | OK |
| HPCI at IO0 | PS0 Temp     | 40   | C | 71.4 | sec | OK |
| HPCI at IO0 | PS1 Temp     | 35   | C | 71.4 | sec | OK |
| HPCI at IO0 | SDC0 Temp    | 65   | C | 71.4 | sec | OK |
| HPCI at IO0 | AR0 Temp     | 63   | C | 71.4 | sec | OK |
| HPCI at IO0 | DX0 Temp     | 61   | C | 71.4 | sec | OK |
| HPCI at IO0 | DX1 Temp     | 50   | C | 71.4 | sec | OK |
| HPCI at IO0 | SBBC Temp    | 37   | C | 71.4 | sec | OK |
| HPCI at IO0 | IOA0 Temp    | 49   | C | 71.4 | sec | OK |
| HPCI at IO0 | IOA1 Temp    | 49   | C | 71.4 | sec | OK |
| HPCI at IO0 | 1.5 VDC      | 1.50 | V | 14.2 | sec | OK |

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|-------------|-----------------|--------|-----|------|-----|----------|
| HPCI at IO0 | 3.3 VDC         | 3.30   | V   | 14.2 | sec | OK       |
| HPCI at IO0 | 5.0 VDC         | 4.99   | V   | 14.2 | sec | OK       |
| HPCI at IO0 | +12.0 VDC       | 11.95  | V   | 14.2 | sec | OK       |
| HPCI at IO0 | -12.0 VDC       | -11.92 | V   | 14.2 | sec | OK       |
| HPCI at IO0 | 3.3 VDC HK      | 3.28   | V   | 14.2 | sec | OK       |
| HPCI at IO0 | 1.5 CVT0 VDC    | 1.37   | A   | 14.2 | sec | OK       |
| HPCI at IO0 | 1.5 CVT1 VDC    | 1.87   | A   | 14.2 | sec | OK       |
| HPCI at IO0 | 3.3 V_PS0       | 9.81   | A   | 14.2 | sec | OK       |
| HPCI at IO0 | 3.3 V_PS1       | 10.10  | A   | 14.2 | sec | OK       |
| HPCI at IO0 | 5.0 V_PS0       | 3.41   | A   | 14.2 | sec | OK       |
| HPCI at IO0 | 5.0 V_PS1       | 3.29   | A   | 14.2 | sec | OK       |
| Schizo0.0   | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0   | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1   | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1   | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX1  | AMB Top Temp    | 36     | C   | 71.2 | sec | OK       |
| EXB at EX1  | AMB Bot Temp    | 33     | C   | 71.2 | sec | OK       |
| EXB at EX1  | SBBC Temp       | 47     | C   | 71.2 | sec | OK       |
| EXB at EX1  | AXQ Temp        | 38     | C   | 71.2 | sec | OK       |
| EXB at EX1  | SDIM Temp       | 42     | C   | 71.2 | sec | OK       |
| EXB at EX1  | SDISC Temp      | 43     | C   | 71.2 | sec | OK       |
| EXB at EX1  | SDISE Temp      | 36     | C   | 71.2 | sec | OK       |
| EXB at EX1  | 1.5 VDC         | 1.50   | V   | 82.0 | sec | OK       |
| EXB at EX1  | 3.3 VDC         | 3.30   | V   | 82.0 | sec | OK       |
| EXB at EX1  | 2.5 VDC         | 2.49   | V   | 82.0 | sec | OK       |
| EXB at EX1  | 3.3 VDC HK      | 3.28   | V   | 82.0 | sec | OK       |
| CPU at SB1  | PROC 0 Temp     | 43     | C   | 2.0  | sec | OK       |
| CPU at SB1  | PROC 1 Temp     | 45     | C   | 2.0  | sec | OK       |
| CPU at SB1  | PROC 2 Temp     | 46     | C   | 2.0  | sec | OK       |
| CPU at SB1  | PROC 3 Temp     | 45     | C   | 2.0  | sec | OK       |
| CPU at SB1  | SDC0 Temp       | 66     | C   | 2.0  | sec | OK       |
| CPU at SB1  | AR0 Temp        | 72     | C   | 2.0  | sec | OK       |
| CPU at SB1  | DX0 Temp        | 61     | C   | 2.0  | sec | OK       |
| CPU at SB1  | DX1 Temp        | 60     | C   | 2.0  | sec | OK       |
| CPU at SB1  | DX2 Temp        | 59     | C   | 2.0  | sec | OK       |
| CPU at SB1  | DX3 Temp        | 54     | C   | 2.0  | sec | OK       |
| CPU at SB1  | SBBC0 Temp      | 68     | C   | 2.0  | sec | OK       |
| CPU at SB1  | SBBC1 Temp      | 58     | C   | 2.0  | sec | OK       |
| CPU at SB1  | 1.5 VDC         | 1.52   | V   | 26.7 | sec | OK       |
| CPU at SB1  | 3.3 VDC         | 3.32   | V   | 26.7 | sec | OK       |
| CPU at SB1  | Core 0 Volt     | 1.63   | V   | 26.7 | sec | OK       |
| CPU at SB1  | Core 1 Volt     | 1.62   | V   | 26.7 | sec | OK       |
| CPU at SB1  | Core 2 Volt     | 1.62   | V   | 26.7 | sec | OK       |
| CPU at SB1  | Core 3 Volt     | 1.62   | V   | 26.7 | sec | OK       |
| HPCI at IO1 | PS0 Temp        | 48     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | PS1 Temp        | 37     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | SDC0 Temp       | 74     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | AR0 Temp        | 66     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | DX0 Temp        | 62     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | DX1 Temp        | 58     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | SBBC Temp       | 54     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | IOA0 Temp       | 56     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | IOA1 Temp       | 53     | C   | 74.3 | sec | OK       |
| HPCI at IO1 | 1.5 VDC         | 1.49   | V   | 16.9 | sec | OK       |
| HPCI at IO1 | 3.3 VDC         | 3.30   | V   | 16.9 | sec | OK       |
| HPCI at IO1 | 5.0 VDC         | 4.99   | V   | 16.9 | sec | OK       |
| HPCI at IO1 | +12.0 VDC       | 11.95  | V   | 16.9 | sec | OK       |
| HPCI at IO1 | -12.0 VDC       | -11.92 | V   | 16.9 | sec | OK       |
| HPCI at IO1 | 3.3 VDC HK      | 3.28   | V   | 16.9 | sec | OK       |
| HPCI at IO1 | 1.5 CVT0 VDC    | 1.87   | A   | 16.9 | sec | OK       |



|             |                 |        |     |      |     |          |
|-------------|-----------------|--------|-----|------|-----|----------|
| HPCI at IO1 | 1.5 CVT1 VDC    | 1.49   | A   | 16.9 | sec | OK       |
| HPCI at IO1 | 3.3 V_PS0       | 9.96   | A   | 16.9 | sec | OK       |
| HPCI at IO1 | 3.3 V_PS1       | 10.10  | A   | 16.9 | sec | OK       |
| HPCI at IO1 | 5.0 V_PS0       | 5.12   | A   | 16.9 | sec | OK       |
| HPCI at IO1 | 5.0 V_PS1       | 5.12   | A   | 16.9 | sec | OK       |
| Schizo0.0   | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0   | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1   | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1   | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX2  | AMB Top Temp    | 34     | C   | 74.4 | sec | OK       |
| EXB at EX2  | AMB Bot Temp    | 32     | C   | 74.4 | sec | OK       |
| EXB at EX2  | SBBC Temp       | 47     | C   | 74.4 | sec | OK       |
| EXB at EX2  | AXQ Temp        | 38     | C   | 74.4 | sec | OK       |
| EXB at EX2  | SDIM Temp       | 40     | C   | 74.4 | sec | OK       |
| EXB at EX2  | SDISC Temp      | 44     | C   | 74.4 | sec | OK       |
| EXB at EX2  | SDISE Temp      | 38     | C   | 74.4 | sec | OK       |
| EXB at EX2  | 1.5 VDC         | 1.51   | V   | 2.0  | sec | OK       |
| EXB at EX2  | 3.3 VDC         | 3.30   | V   | 2.0  | sec | OK       |
| EXB at EX2  | 2.5 VDC         | 2.51   | V   | 2.0  | sec | OK       |
| EXB at EX2  | 3.3 VDC HK      | 3.30   | V   | 2.0  | sec | OK       |
| CPU at SB2  | PROC 0 Temp     | 41     | C   | 5.1  | sec | OK       |
| CPU at SB2  | PROC 1 Temp     | 44     | C   | 5.1  | sec | OK       |
| CPU at SB2  | PROC 2 Temp     | 44     | C   | 5.1  | sec | OK       |
| CPU at SB2  | PROC 3 Temp     | 42     | C   | 5.1  | sec | OK       |
| CPU at SB2  | SDC0 Temp       | 68     | C   | 5.1  | sec | OK       |
| CPU at SB2  | AR0 Temp        | 61     | C   | 5.1  | sec | OK       |
| CPU at SB2  | DX0 Temp        | 62     | C   | 5.1  | sec | OK       |
| CPU at SB2  | DX1 Temp        | 62     | C   | 5.1  | sec | OK       |
| CPU at SB2  | DX2 Temp        | 62     | C   | 5.1  | sec | OK       |
| CPU at SB2  | DX3 Temp        | 54     | C   | 5.1  | sec | OK       |
| CPU at SB2  | SBBC0 Temp      | 60     | C   | 5.1  | sec | OK       |
| CPU at SB2  | SBBC1 Temp      | 58     | C   | 5.1  | sec | OK       |
| CPU at SB2  | 1.5 VDC         | 1.50   | V   | 28.1 | sec | OK       |
| CPU at SB2  | 3.3 VDC         | 3.30   | V   | 28.1 | sec | OK       |
| CPU at SB2  | Core 0 Volt     | 1.62   | V   | 28.1 | sec | OK       |
| CPU at SB2  | Core 1 Volt     | 1.63   | V   | 28.1 | sec | OK       |
| CPU at SB2  | Core 2 Volt     | 1.63   | V   | 28.1 | sec | OK       |
| CPU at SB2  | Core 3 Volt     | 1.61   | V   | 28.1 | sec | OK       |
| HPCI at IO2 | PS0 Temp        | 48     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | PS1 Temp        | 37     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | SDC0 Temp       | 72     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | AR0 Temp        | 66     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | DX0 Temp        | 59     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | DX1 Temp        | 50     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | SBBC Temp       | 41     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | IOA0 Temp       | 57     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | IOA1 Temp       | 55     | C   | 76.4 | sec | OK       |
| HPCI at IO2 | 1.5 VDC         | 1.48   | V   | 16.4 | sec | OK       |
| HPCI at IO2 | 3.3 VDC         | 3.30   | V   | 16.4 | sec | OK       |
| HPCI at IO2 | 5.0 VDC         | 5.02   | V   | 16.4 | sec | OK       |
| HPCI at IO2 | +12.0 VDC       | 11.95  | V   | 16.4 | sec | OK       |
| HPCI at IO2 | -12.0 VDC       | -11.92 | V   | 16.4 | sec | OK       |
| HPCI at IO2 | 3.3 VDC HK      | 3.28   | V   | 16.4 | sec | OK       |
| HPCI at IO2 | 1.5 CVT0 VDC    | 1.43   | A   | 16.4 | sec | OK       |
| HPCI at IO2 | 1.5 CVT1 VDC    | 1.87   | A   | 16.4 | sec | OK       |
| HPCI at IO2 | 3.3 V_PS0       | 9.96   | A   | 16.4 | sec | OK       |
| HPCI at IO2 | 3.3 V_PS1       | 9.96   | A   | 16.4 | sec | OK       |
| HPCI at IO2 | 5.0 V_PS0       | 3.66   | A   | 16.4 | sec | OK       |
| HPCI at IO2 | 5.0 V_PS1       | 3.41   | A   | 16.4 | sec | OK       |
| Schizo0.0   | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |

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|-------------|-----------------|--------|-----|----------|----------|
| Schizo1.0   | Schizo 1 Slot 0 | N/A    | N/A | N/A      | PRESENCE |
| Schizo0.1   | Schizo 0 Slot 1 | N/A    | N/A | N/A      | PRESENCE |
| Schizo1.1   | Schizo 1 Slot 1 | N/A    | N/A | N/A      | PRESENCE |
| EXB at EX3  | AMB Top Temp    | 34     | C   | 77.4 sec | OK       |
| EXB at EX3  | AMB Bot Temp    | 33     | C   | 77.4 sec | OK       |
| EXB at EX3  | SBBC Temp       | 55     | C   | 77.4 sec | OK       |
| EXB at EX3  | AXQ Temp        | 39     | C   | 77.4 sec | OK       |
| EXB at EX3  | SDIM Temp       | 44     | C   | 77.4 sec | OK       |
| EXB at EX3  | SDISC Temp      | 45     | C   | 77.4 sec | OK       |
| EXB at EX3  | SDISE Temp      | 41     | C   | 77.4 sec | OK       |
| EXB at EX3  | 1.5 VDC         | 1.51   | V   | 4.0 sec  | OK       |
| EXB at EX3  | 3.3 VDC         | 3.30   | V   | 4.0 sec  | OK       |
| EXB at EX3  | 2.5 VDC         | 2.49   | V   | 4.0 sec  | OK       |
| EXB at EX3  | 3.3 VDC HK      | 3.28   | V   | 4.0 sec  | OK       |
| CPU at SB3  | PROC 0 Temp     | 43     | C   | 3.0 sec  | OK       |
| CPU at SB3  | PROC 1 Temp     | 43     | C   | 3.0 sec  | OK       |
| CPU at SB3  | PROC 2 Temp     | 43     | C   | 3.0 sec  | OK       |
| CPU at SB3  | PROC 3 Temp     | 42     | C   | 3.0 sec  | OK       |
| CPU at SB3  | SDC0 Temp       | 68     | C   | 3.0 sec  | OK       |
| CPU at SB3  | AR0 Temp        | 58     | C   | 3.0 sec  | OK       |
| CPU at SB3  | DX0 Temp        | 58     | C   | 3.0 sec  | OK       |
| CPU at SB3  | DX1 Temp        | 56     | C   | 3.0 sec  | OK       |
| CPU at SB3  | DX2 Temp        | 58     | C   | 3.0 sec  | OK       |
| CPU at SB3  | DX3 Temp        | 56     | C   | 3.0 sec  | OK       |
| CPU at SB3  | SBBC0 Temp      | 58     | C   | 3.0 sec  | OK       |
| CPU at SB3  | SBBC1 Temp      | 54     | C   | 3.0 sec  | OK       |
| CPU at SB3  | 1.5 VDC         | 1.50   | V   | 30.8 sec | OK       |
| CPU at SB3  | 3.3 VDC         | 3.30   | V   | 30.8 sec | OK       |
| CPU at SB3  | Core 0 Volt     | 1.63   | V   | 30.8 sec | OK       |
| CPU at SB3  | Core 1 Volt     | 1.63   | V   | 30.8 sec | OK       |
| CPU at SB3  | Core 2 Volt     | 1.62   | V   | 30.8 sec | OK       |
| CPU at SB3  | Core 3 Volt     | 1.62   | V   | 30.8 sec | OK       |
| HPCI at IO3 | PS0 Temp        | 46     | C   | 79.4 sec | OK       |
| HPCI at IO3 | PS1 Temp        | 37     | C   | 79.4 sec | OK       |
| HPCI at IO3 | SDC0 Temp       | 73     | C   | 79.4 sec | OK       |
| HPCI at IO3 | AR0 Temp        | 65     | C   | 79.4 sec | OK       |
| HPCI at IO3 | DX0 Temp        | 64     | C   | 79.4 sec | OK       |
| HPCI at IO3 | DX1 Temp        | 55     | C   | 79.4 sec | OK       |
| HPCI at IO3 | SBBC Temp       | 40     | C   | 79.4 sec | OK       |
| HPCI at IO3 | IOA0 Temp       | 55     | C   | 79.4 sec | OK       |
| HPCI at IO3 | IOA1 Temp       | 50     | C   | 79.4 sec | OK       |
| HPCI at IO3 | 1.5 VDC         | 1.49   | V   | 16.0 sec | OK       |
| HPCI at IO3 | 3.3 VDC         | 3.30   | V   | 16.0 sec | OK       |
| HPCI at IO3 | 5.0 VDC         | 4.99   | V   | 16.0 sec | OK       |
| HPCI at IO3 | +12.0 VDC       | 12.03  | V   | 16.0 sec | OK       |
| HPCI at IO3 | -12.0 VDC       | -12.01 | V   | 16.0 sec | OK       |
| HPCI at IO3 | 3.3 VDC HK      | 3.28   | V   | 16.0 sec | OK       |
| HPCI at IO3 | 1.5 CVT0 VDC    | 1.86   | A   | 16.0 sec | OK       |
| HPCI at IO3 | 1.5 CVT1 VDC    | 1.73   | A   | 16.0 sec | OK       |
| HPCI at IO3 | 3.3 V_PS0       | 9.96   | A   | 16.0 sec | OK       |
| HPCI at IO3 | 3.3 V_PS1       | 10.25  | A   | 16.0 sec | OK       |
| HPCI at IO3 | 5.0 V_PS0       | 3.29   | A   | 16.0 sec | OK       |
| HPCI at IO3 | 5.0 V_PS1       | 3.41   | A   | 16.0 sec | OK       |
| Schizo0.0   | Schizo 0 Slot 0 | N/A    | N/A | N/A      | PRESENCE |
| Schizo1.0   | Schizo 1 Slot 0 | N/A    | N/A | N/A      | PRESENCE |
| Schizo0.1   | Schizo 0 Slot 1 | N/A    | N/A | N/A      | PRESENCE |
| Schizo1.1   | Schizo 1 Slot 1 | N/A    | N/A | N/A      | PRESENCE |
| EXB at EX4  | AMB Top Temp    | 35     | C   | 79.0 sec | OK       |
| EXB at EX4  | AMB Bot Temp    | 32     | C   | 79.0 sec | OK       |
| EXB at EX4  | SBBC Temp       | 45     | C   | 79.0 sec | OK       |

|             |                 |        |     |      |     |          |
|-------------|-----------------|--------|-----|------|-----|----------|
| EXB at EX4  | AXQ Temp        | 40     | C   | 79.0 | sec | OK       |
| EXB at EX4  | SDIM Temp       | 42     | C   | 79.0 | sec | OK       |
| EXB at EX4  | SDISC Temp      | 44     | C   | 79.0 | sec | OK       |
| EXB at EX4  | SDISE Temp      | 36     | C   | 79.0 | sec | OK       |
| EXB at EX4  | 1.5 VDC         | 1.50   | V   | 5.5  | sec | OK       |
| EXB at EX4  | 3.3 VDC         | 3.28   | V   | 5.5  | sec | OK       |
| EXB at EX4  | 2.5 VDC         | 2.51   | V   | 5.5  | sec | OK       |
| EXB at EX4  | 3.3 VDC HK      | 3.28   | V   | 5.5  | sec | OK       |
| CPU at SB4  | PROC 0 Temp     | 60     | C   | 2.1  | sec | OK       |
| CPU at SB4  | PROC 1 Temp     | 65     | C   | 2.1  | sec | OK       |
| CPU at SB4  | PROC 2 Temp     | 68     | C   | 2.1  | sec | OK       |
| CPU at SB4  | PROC 3 Temp     | 62     | C   | 2.1  | sec | OK       |
| CPU at SB4  | SDC0 Temp       | 70     | C   | 2.1  | sec | OK       |
| CPU at SB4  | AR0 Temp        | 62     | C   | 2.1  | sec | OK       |
| CPU at SB4  | DX0 Temp        | 62     | C   | 2.1  | sec | OK       |
| CPU at SB4  | DX1 Temp        | 60     | C   | 2.1  | sec | OK       |
| CPU at SB4  | DX2 Temp        | 57     | C   | 2.1  | sec | OK       |
| CPU at SB4  | DX3 Temp        | 53     | C   | 2.1  | sec | OK       |
| CPU at SB4  | SBBC0 Temp      | 64     | C   | 2.1  | sec | OK       |
| CPU at SB4  | SBBC1 Temp      | 62     | C   | 2.1  | sec | OK       |
| CPU at SB4  | 1.5 VDC         | 1.51   | V   | 31.9 | sec | OK       |
| CPU at SB4  | 3.3 VDC         | 3.34   | V   | 31.9 | sec | OK       |
| CPU at SB4  | Core 0 Volt     | 1.65   | V   | 31.9 | sec | OK       |
| CPU at SB4  | Core 1 Volt     | 1.65   | V   | 31.9 | sec | OK       |
| CPU at SB4  | Core 2 Volt     | 1.62   | V   | 31.9 | sec | OK       |
| CPU at SB4  | Core 3 Volt     | 1.63   | V   | 31.9 | sec | OK       |
| HPCI at IO4 | PS0 Temp        | 42     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | PS1 Temp        | 35     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | SDC0 Temp       | 68     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | AR0 Temp        | 64     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | DX0 Temp        | 64     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | DX1 Temp        | 50     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | SBBC Temp       | 40     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | IOA0 Temp       | 53     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | IOA1 Temp       | 50     | C   | 81.3 | sec | OK       |
| HPCI at IO4 | 1.5 VDC         | 1.50   | V   | 15.5 | sec | OK       |
| HPCI at IO4 | 3.3 VDC         | 3.30   | V   | 15.5 | sec | OK       |
| HPCI at IO4 | 5.0 VDC         | 4.99   | V   | 15.5 | sec | OK       |
| HPCI at IO4 | +12.0 VDC       | 11.95  | V   | 15.5 | sec | OK       |
| HPCI at IO4 | -12.0 VDC       | -11.92 | V   | 15.5 | sec | OK       |
| HPCI at IO4 | 3.3 VDC HK      | 3.28   | V   | 15.5 | sec | OK       |
| HPCI at IO4 | 1.5 CVT0 VDC    | 1.55   | A   | 15.5 | sec | OK       |
| HPCI at IO4 | 1.5 CVT1 VDC    | 1.85   | A   | 15.5 | sec | OK       |
| HPCI at IO4 | 3.3 V_PS0       | 9.66   | A   | 15.5 | sec | OK       |
| HPCI at IO4 | 3.3 V_PS1       | 9.66   | A   | 15.5 | sec | OK       |
| HPCI at IO4 | 5.0 V_PS0       | 3.41   | A   | 15.5 | sec | OK       |
| HPCI at IO4 | 5.0 V_PS1       | 3.54   | A   | 15.5 | sec | OK       |
| Schizo0.0   | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0   | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1   | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1   | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX5  | AMB Top Temp    | 35     | C   | 80.6 | sec | OK       |
| EXB at EX5  | AMB Bot Temp    | 32     | C   | 80.6 | sec | OK       |
| EXB at EX5  | SBBC Temp       | 45     | C   | 80.6 | sec | OK       |
| EXB at EX5  | AXQ Temp        | 40     | C   | 80.6 | sec | OK       |
| EXB at EX5  | SDIM Temp       | 41     | C   | 80.6 | sec | OK       |
| EXB at EX5  | SDISC Temp      | 46     | C   | 80.6 | sec | OK       |
| EXB at EX5  | SDISE Temp      | 36     | C   | 80.6 | sec | OK       |
| EXB at EX5  | 1.5 VDC         | 1.51   | V   | 6.9  | sec | OK       |
| EXB at EX5  | 3.3 VDC         | 3.30   | V   | 6.9  | sec | OK       |

|             |                 |        |     |      |     |          |
|-------------|-----------------|--------|-----|------|-----|----------|
| EXB at EX5  | 2.5 VDC         | 2.49   | V   | 6.9  | sec | OK       |
| EXB at EX5  | 3.3 VDC HK      | 3.28   | V   | 6.9  | sec | OK       |
| CPU at SB5  | PROC 0 Temp     | 62     | C   | 3.8  | sec | OK       |
| CPU at SB5  | PROC 1 Temp     | 68     | C   | 3.8  | sec | OK       |
| CPU at SB5  | PROC 2 Temp     | 66     | C   | 3.8  | sec | OK       |
| CPU at SB5  | PROC 3 Temp     | 64     | C   | 3.8  | sec | OK       |
| CPU at SB5  | SDC0 Temp       | 66     | C   | 3.8  | sec | OK       |
| CPU at SB5  | AR0 Temp        | 60     | C   | 3.8  | sec | OK       |
| CPU at SB5  | DX0 Temp        | 58     | C   | 3.8  | sec | OK       |
| CPU at SB5  | DX1 Temp        | 58     | C   | 3.8  | sec | OK       |
| CPU at SB5  | DX2 Temp        | 58     | C   | 3.8  | sec | OK       |
| CPU at SB5  | DX3 Temp        | 52     | C   | 3.8  | sec | OK       |
| CPU at SB5  | SBBC0 Temp      | 58     | C   | 3.8  | sec | OK       |
| CPU at SB5  | SBBC1 Temp      | 59     | C   | 3.8  | sec | OK       |
| CPU at SB5  | 1.5 VDC         | 1.51   | V   | 31.7 | sec | OK       |
| CPU at SB5  | 3.3 VDC         | 3.30   | V   | 31.7 | sec | OK       |
| CPU at SB5  | Core 0 Volt     | 1.64   | V   | 31.7 | sec | OK       |
| CPU at SB5  | Core 1 Volt     | 1.65   | V   | 31.7 | sec | OK       |
| CPU at SB5  | Core 2 Volt     | 1.63   | V   | 31.7 | sec | OK       |
| CPU at SB5  | Core 3 Volt     | 1.63   | V   | 31.7 | sec | OK       |
| HPCI at IO5 | PS0 Temp        | 42     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | PS1 Temp        | 32     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | SDC0 Temp       | 64     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | AR0 Temp        | 58     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | DX0 Temp        | 57     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | DX1 Temp        | 51     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | SBBC Temp       | 40     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | IOA0 Temp       | 49     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | IOA1 Temp       | 52     | C   | 83.1 | sec | OK       |
| HPCI at IO5 | 1.5 VDC         | 1.49   | V   | 16.9 | sec | OK       |
| HPCI at IO5 | 3.3 VDC         | 3.30   | V   | 16.9 | sec | OK       |
| HPCI at IO5 | 5.0 VDC         | 4.99   | V   | 16.9 | sec | OK       |
| HPCI at IO5 | +12.0 VDC       | 12.03  | V   | 16.9 | sec | OK       |
| HPCI at IO5 | -12.0 VDC       | -12.01 | V   | 16.9 | sec | OK       |
| HPCI at IO5 | 3.3 VDC HK      | 3.28   | V   | 16.9 | sec | OK       |
| HPCI at IO5 | 1.5 CVT0 VDC    | 1.90   | A   | 16.9 | sec | OK       |
| HPCI at IO5 | 1.5 CVT1 VDC    | 1.39   | A   | 16.9 | sec | OK       |
| HPCI at IO5 | 3.3 V_PS0       | 9.81   | A   | 16.9 | sec | OK       |
| HPCI at IO5 | 3.3 V_PS1       | 9.96   | A   | 16.9 | sec | OK       |
| HPCI at IO5 | 5.0 V_PS0       | 3.29   | A   | 16.9 | sec | OK       |
| HPCI at IO5 | 5.0 V_PS1       | 3.41   | A   | 16.9 | sec | OK       |
| Schizo0.0   | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0   | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1   | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1   | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX6  | AMB Top Temp    | 35     | C   | 87.1 | sec | OK       |
| EXB at EX6  | AMB Bot Temp    | 32     | C   | 87.1 | sec | OK       |
| EXB at EX6  | SBBC Temp       | 57     | C   | 87.1 | sec | OK       |
| EXB at EX6  | AXQ Temp        | 38     | C   | 87.1 | sec | OK       |
| EXB at EX6  | SDIM Temp       | 40     | C   | 87.1 | sec | OK       |
| EXB at EX6  | SDISC Temp      | 42     | C   | 87.1 | sec | OK       |
| EXB at EX6  | SDISE Temp      | 36     | C   | 87.1 | sec | OK       |
| EXB at EX6  | 1.5 VDC         | 1.51   | V   | 13.1 | sec | OK       |
| EXB at EX6  | 3.3 VDC         | 3.32   | V   | 13.1 | sec | OK       |
| EXB at EX6  | 2.5 VDC         | 2.51   | V   | 13.1 | sec | OK       |
| EXB at EX6  | 3.3 VDC HK      | 3.28   | V   | 13.1 | sec | OK       |
| CPU at SB6  | PROC 0 Temp     | 60     | C   | 12.6 | sec | OK       |
| CPU at SB6  | PROC 1 Temp     | 65     | C   | 12.6 | sec | OK       |
| CPU at SB6  | PROC 2 Temp     | 67     | C   | 12.6 | sec | OK       |
| CPU at SB6  | PROC 3 Temp     | 62     | C   | 12.6 | sec | OK       |

|             |                 |        |     |      |     |          |
|-------------|-----------------|--------|-----|------|-----|----------|
| CPU at SB6  | SDC0 Temp       | 81     | C   | 12.6 | sec | OK       |
| CPU at SB6  | AR0 Temp        | 69     | C   | 12.6 | sec | OK       |
| CPU at SB6  | DX0 Temp        | 66     | C   | 12.6 | sec | OK       |
| CPU at SB6  | DX1 Temp        | 61     | C   | 12.6 | sec | OK       |
| CPU at SB6  | DX2 Temp        | 58     | C   | 12.6 | sec | OK       |
| CPU at SB6  | DX3 Temp        | 55     | C   | 12.6 | sec | OK       |
| CPU at SB6  | SBBC0 Temp      | 60     | C   | 12.6 | sec | OK       |
| CPU at SB6  | SBBC1 Temp      | 60     | C   | 12.6 | sec | OK       |
| CPU at SB6  | 1.5 VDC         | 1.51   | V   | 36.7 | sec | OK       |
| CPU at SB6  | 3.3 VDC         | 3.32   | V   | 36.7 | sec | OK       |
| CPU at SB6  | Core 0 Volt     | 1.65   | V   | 36.7 | sec | OK       |
| CPU at SB6  | Core 1 Volt     | 1.65   | V   | 36.7 | sec | OK       |
| CPU at SB6  | Core 2 Volt     | 1.63   | V   | 36.7 | sec | OK       |
| CPU at SB6  | Core 3 Volt     | 1.63   | V   | 36.7 | sec | OK       |
| HPCI at IO6 | PS0 Temp        | 48     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | PS1 Temp        | 30     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | SDC0 Temp       | 73     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | AR0 Temp        | 66     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | DX0 Temp        | 60     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | DX1 Temp        | 50     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | SBBC Temp       | 40     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | IOA0 Temp       | 56     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | IOA1 Temp       | 53     | C   | 3.8  | sec | OK       |
| HPCI at IO6 | 1.5 VDC         | 1.50   | V   | 21.7 | sec | OK       |
| HPCI at IO6 | 3.3 VDC         | 3.28   | V   | 21.7 | sec | OK       |
| HPCI at IO6 | 5.0 VDC         | 4.99   | V   | 21.7 | sec | OK       |
| HPCI at IO6 | +12.0 VDC       | 11.95  | V   | 21.7 | sec | OK       |
| HPCI at IO6 | -12.0 VDC       | -12.01 | V   | 21.7 | sec | OK       |
| HPCI at IO6 | 3.3 VDC HK      | 3.30   | V   | 21.7 | sec | OK       |
| HPCI at IO6 | 1.5 CVT0 VDC    | 1.56   | A   | 21.7 | sec | OK       |
| HPCI at IO6 | 1.5 CVT1 VDC    | 1.84   | A   | 21.7 | sec | OK       |
| HPCI at IO6 | 3.3 V_PS0       | 10.25  | A   | 21.7 | sec | OK       |
| HPCI at IO6 | 3.3 V_PS1       | 10.10  | A   | 21.7 | sec | OK       |
| HPCI at IO6 | 5.0 V_PS0       | 4.02   | A   | 21.7 | sec | OK       |
| HPCI at IO6 | 5.0 V_PS1       | 3.78   | A   | 21.7 | sec | OK       |
| Schizo0.0   | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0   | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1   | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1   | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX7  | AMB Top Temp    | 34     | C   | 88.1 | sec | OK       |
| EXB at EX7  | AMB Bot Temp    | 32     | C   | 88.1 | sec | OK       |
| EXB at EX7  | SBBC Temp       | 46     | C   | 88.1 | sec | OK       |
| EXB at EX7  | AXQ Temp        | 38     | C   | 88.1 | sec | OK       |
| EXB at EX7  | SDIM Temp       | 42     | C   | 88.1 | sec | OK       |
| EXB at EX7  | SDISC Temp      | 42     | C   | 88.1 | sec | OK       |
| EXB at EX7  | SDISE Temp      | 36     | C   | 88.1 | sec | OK       |
| EXB at EX7  | 1.5 VDC         | 1.51   | V   | 14.1 | sec | OK       |
| EXB at EX7  | 3.3 VDC         | 3.30   | V   | 14.1 | sec | OK       |
| EXB at EX7  | 2.5 VDC         | 2.51   | V   | 14.1 | sec | OK       |
| EXB at EX7  | 3.3 VDC HK      | 3.28   | V   | 14.1 | sec | OK       |
| CPU at SB7  | PROC 0 Temp     | 47     | C   | 2.1  | sec | OK       |
| CPU at SB7  | PROC 1 Temp     | 50     | C   | 2.1  | sec | OK       |
| CPU at SB7  | PROC 2 Temp     | 53     | C   | 2.1  | sec | OK       |
| CPU at SB7  | PROC 3 Temp     | 49     | C   | 2.1  | sec | OK       |
| CPU at SB7  | SDC0 Temp       | 64     | C   | 2.1  | sec | OK       |
| CPU at SB7  | AR0 Temp        | 59     | C   | 2.1  | sec | OK       |
| CPU at SB7  | DX0 Temp        | 60     | C   | 2.1  | sec | OK       |
| CPU at SB7  | DX1 Temp        | 59     | C   | 2.1  | sec | OK       |
| CPU at SB7  | DX2 Temp        | 58     | C   | 2.1  | sec | OK       |
| CPU at SB7  | DX3 Temp        | 53     | C   | 2.1  | sec | OK       |

|             |              |        |    |      |     |     |
|-------------|--------------|--------|----|------|-----|-----|
| CPU at SB7  | SBBC0 Temp   | 57     | C  | 2.1  | sec | OK  |
| CPU at SB7  | SBBC1 Temp   | 56     | C  | 2.1  | sec | OK  |
| CPU at SB7  | 1.5 VDC      | 1.51   | V  | 37.4 | sec | OK  |
| CPU at SB7  | 3.3 VDC      | 3.32   | V  | 37.4 | sec | OK  |
| CPU at SB7  | Core 0 Volt  | 1.63   | V  | 37.4 | sec | OK  |
| CPU at SB7  | Core 1 Volt  | 1.63   | V  | 37.4 | sec | OK  |
| CPU at SB7  | Core 2 Volt  | 1.63   | V  | 37.4 | sec | OK  |
| CPU at SB7  | Core 3 Volt  | 1.62   | V  | 37.4 | sec | OK  |
| HPCI at IO7 | PS0 Temp     | 42     | C  | 4.6  | sec | OK  |
| HPCI at IO7 | PS1 Temp     | 32     | C  | 4.6  | sec | OK  |
| HPCI at IO7 | SDC0 Temp    | 69     | C  | 4.6  | sec | OK  |
| HPCI at IO7 | AR0 Temp     | 61     | C  | 4.6  | sec | OK  |
| HPCI at IO7 | DX0 Temp     | 55     | C  | 4.6  | sec | OK  |
| HPCI at IO7 | DX1 Temp     | 48     | C  | 4.6  | sec | OK  |
| HPCI at IO7 | SBBC Temp    | 44     | C  | 4.6  | sec | OK  |
| HPCI at IO7 | IOA0 Temp    | 53     | C  | 4.6  | sec | OK  |
| HPCI at IO7 | IOA1 Temp    | --     | -- | --   |     | BAD |
| HPCI at IO7 | 1.5 VDC      | 1.49   | V  | 22.0 | sec | OK  |
| HPCI at IO7 | 3.3 VDC      | 3.30   | V  | 22.0 | sec | OK  |
| HPCI at IO7 | 5.0 VDC      | 4.99   | V  | 22.0 | sec | OK  |
| HPCI at IO7 | +12.0 VDC    | 11.95  | V  | 22.0 | sec | OK  |
| HPCI at IO7 | -12.0 VDC    | -11.92 | V  | 22.0 | sec | OK  |
| HPCI at IO7 | 3.3 VDC HK   | 3.30   | V  | 22.0 | sec | OK  |
| HPCI at IO7 | 1.5 CVT0 VDC | 1.82   | A  | 22.0 | sec | OK  |
| HPCI at IO7 | 1.5 CVT1 VDC | 1.49   | A  | 22.0 | sec | OK  |
| HPCI at IO7 | 3.3 V_PS0    | 9.66   | A  | 22.0 | sec | OK  |
| HPCI at IO7 | 3.3 V_PS1    | 9.81   | A  | 22.0 | sec | OK  |
| HPCI at IO7 | 5.0 V_PS0    | 3.41   | A  | 22.0 | sec | OK  |
| HPCI at IO7 | 5.0 V_PS1    | 3.54   | A  | 22.0 | sec | OK  |
| EXB at EX8  | AMB Top Temp | 35     | C  | 1.4  | sec | OK  |
| EXB at EX8  | AMB Bot Temp | 33     | C  | 1.4  | sec | OK  |
| EXB at EX8  | SBBC Temp    | 56     | C  | 1.4  | sec | OK  |
| EXB at EX8  | AXQ Temp     | 38     | C  | 1.4  | sec | OK  |
| EXB at EX8  | SDIM Temp    | 44     | C  | 1.4  | sec | OK  |
| EXB at EX8  | SDISC Temp   | 46     | C  | 1.4  | sec | OK  |
| EXB at EX8  | SDISE Temp   | 40     | C  | 1.4  | sec | OK  |
| EXB at EX8  | 1.5 VDC      | 1.51   | V  | 18.1 | sec | OK  |
| EXB at EX8  | 3.3 VDC      | 3.30   | V  | 18.1 | sec | OK  |
| EXB at EX8  | 2.5 VDC      | 2.49   | V  | 18.1 | sec | OK  |
| EXB at EX8  | 3.3 VDC HK   | 3.28   | V  | 18.1 | sec | OK  |
| CPU at SB8  | PROC 0 Temp  | 62     | C  | 0.1  | sec | OK  |
| CPU at SB8  | PROC 1 Temp  | 67     | C  | 0.1  | sec | OK  |
| CPU at SB8  | PROC 2 Temp  | 72     | C  | 0.1  | sec | OK  |
| CPU at SB8  | PROC 3 Temp  | 70     | C  | 0.1  | sec | OK  |
| CPU at SB8  | SDC0 Temp    | 66     | C  | 0.1  | sec | OK  |
| CPU at SB8  | AR0 Temp     | 63     | C  | 0.1  | sec | OK  |
| CPU at SB8  | DX0 Temp     | 61     | C  | 0.1  | sec | OK  |
| CPU at SB8  | DX1 Temp     | 59     | C  | 0.1  | sec | OK  |
| CPU at SB8  | DX2 Temp     | 59     | C  | 0.1  | sec | OK  |
| CPU at SB8  | DX3 Temp     | 53     | C  | 0.1  | sec | OK  |
| CPU at SB8  | SBBC0 Temp   | 65     | C  | 0.1  | sec | OK  |
| CPU at SB8  | SBBC1 Temp   | 66     | C  | 0.1  | sec | OK  |
| CPU at SB8  | 1.5 VDC      | 1.52   | V  | 41.1 | sec | OK  |
| CPU at SB8  | 3.3 VDC      | 3.30   | V  | 41.1 | sec | OK  |
| CPU at SB8  | Core 0 Volt  | 1.63   | V  | 41.1 | sec | OK  |
| CPU at SB8  | Core 1 Volt  | 1.64   | V  | 41.1 | sec | OK  |
| CPU at SB8  | Core 2 Volt  | 1.64   | V  | 41.1 | sec | OK  |
| CPU at SB8  | Core 3 Volt  | 1.65   | V  | 41.1 | sec | OK  |
| HPCI at IO8 | PS0 Temp     | 45     | C  | 6.3  | sec | OK  |
| HPCI at IO8 | PS1 Temp     | 37     | C  | 6.3  | sec | OK  |

|              |                 |        |     |      |     |          |
|--------------|-----------------|--------|-----|------|-----|----------|
| HPCI at IO8  | SDC0 Temp       | 74     | C   | 6.3  | sec | OK       |
| HPCI at IO8  | AR0 Temp        | 66     | C   | 6.3  | sec | OK       |
| HPCI at IO8  | DX0 Temp        | 64     | C   | 6.3  | sec | OK       |
| HPCI at IO8  | DX1 Temp        | 54     | C   | 6.3  | sec | OK       |
| HPCI at IO8  | SBBC Temp       | 40     | C   | 6.3  | sec | OK       |
| HPCI at IO8  | IOA0 Temp       | 56     | C   | 6.3  | sec | OK       |
| HPCI at IO8  | IOA1 Temp       | 49     | C   | 6.3  | sec | OK       |
| HPCI at IO8  | 1.5 VDC         | 1.49   | V   | 25.6 | sec | OK       |
| HPCI at IO8  | 3.3 VDC         | 3.30   | V   | 25.6 | sec | OK       |
| HPCI at IO8  | 5.0 VDC         | 4.99   | V   | 25.6 | sec | OK       |
| HPCI at IO8  | +12.0 VDC       | 12.03  | V   | 25.6 | sec | OK       |
| HPCI at IO8  | -12.0 VDC       | -12.01 | V   | 25.6 | sec | OK       |
| HPCI at IO8  | 3.3 VDC HK      | 3.30   | V   | 25.6 | sec | OK       |
| HPCI at IO8  | 1.5 CVT0 VDC    | 1.85   | A   | 25.6 | sec | OK       |
| HPCI at IO8  | 1.5 CVT1 VDC    | 1.48   | A   | 25.6 | sec | OK       |
| HPCI at IO8  | 3.3 V_PS0       | 9.81   | A   | 25.6 | sec | OK       |
| HPCI at IO8  | 3.3 V_PS1       | 10.10  | A   | 25.6 | sec | OK       |
| HPCI at IO8  | 5.0 V_PS0       | 3.54   | A   | 25.6 | sec | OK       |
| HPCI at IO8  | 5.0 V_PS1       | 3.54   | A   | 25.6 | sec | OK       |
| Schizo0.0    | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0    | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1    | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1    | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX9   | AMB Top Temp    | 34     | C   | 4.2  | sec | OK       |
| EXB at EX9   | AMB Bot Temp    | 31     | C   | 4.2  | sec | OK       |
| EXB at EX9   | SBBC Temp       | 46     | C   | 4.2  | sec | OK       |
| EXB at EX9   | AXQ Temp        | 36     | C   | 4.2  | sec | OK       |
| EXB at EX9   | SDIM Temp       | 40     | C   | 4.2  | sec | OK       |
| EXB at EX9   | SDISC Temp      | 42     | C   | 4.2  | sec | OK       |
| EXB at EX9   | SDISE Temp      | 36     | C   | 4.2  | sec | OK       |
| EXB at EX9   | 1.5 VDC         | 1.51   | V   | 20.9 | sec | OK       |
| EXB at EX9   | 3.3 VDC         | 3.30   | V   | 20.9 | sec | OK       |
| EXB at EX9   | 2.5 VDC         | 2.49   | V   | 20.9 | sec | OK       |
| EXB at EX9   | 3.3 VDC HK      | 3.28   | V   | 20.9 | sec | OK       |
| CPU at SB9   | PROC 0 Temp     | 39     | C   | 1.0  | sec | OK       |
| CPU at SB9   | PROC 1 Temp     | 41     | C   | 1.0  | sec | OK       |
| CPU at SB9   | PROC 2 Temp     | 43     | C   | 1.0  | sec | OK       |
| CPU at SB9   | PROC 3 Temp     | 41     | C   | 1.0  | sec | OK       |
| CPU at SB9   | SDC0 Temp       | 62     | C   | 1.0  | sec | OK       |
| CPU at SB9   | AR0 Temp        | 56     | C   | 1.0  | sec | OK       |
| CPU at SB9   | DX0 Temp        | 56     | C   | 1.0  | sec | OK       |
| CPU at SB9   | DX1 Temp        | 56     | C   | 1.0  | sec | OK       |
| CPU at SB9   | DX2 Temp        | 53     | C   | 1.0  | sec | OK       |
| CPU at SB9   | DX3 Temp        | 47     | C   | 1.0  | sec | OK       |
| CPU at SB9   | SBBC0 Temp      | 49     | C   | 1.0  | sec | OK       |
| CPU at SB9   | SBBC1 Temp      | 54     | C   | 1.0  | sec | OK       |
| CPU at SB9   | 1.5 VDC         | 1.51   | V   | 43.7 | sec | OK       |
| CPU at SB9   | 3.3 VDC         | 3.34   | V   | 43.7 | sec | OK       |
| CPU at SB9   | Core 0 Volt     | 1.63   | V   | 43.7 | sec | OK       |
| CPU at SB9   | Core 1 Volt     | 1.63   | V   | 43.7 | sec | OK       |
| CPU at SB9   | Core 2 Volt     | 1.62   | V   | 43.7 | sec | OK       |
| CPU at SB9   | Core 3 Volt     | 1.62   | V   | 43.7 | sec | OK       |
| HPCI+ at IO9 | D147#0_0        | 34     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | D147#0_1        | 41     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | D147#0_2        | 33     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | D147#1_0        | 36     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | D147#1_1        | 42     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | D147#1_2        | 39     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | XMITS0 Temp     | 37     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | XMITS1 Temp     | 49     | C   | 9.3  | sec | OK       |

|              |                |        |     |      |     |          |
|--------------|----------------|--------|-----|------|-----|----------|
| HPCI+ at IO9 | SBBC Temp      | 35     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | SDC0 Temp      | 58     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | AR0 Temp       | 57     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | DX0 Temp       | 55     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | DX1 Temp       | 48     | C   | 9.3  | sec | OK       |
| HPCI+ at IO9 | 1.5 VDC0       | 1.51   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 2.5 VDC0       | 2.48   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 3.3 VDC0       | 3.28   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 5.0 VDC0       | 5.05   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | +12.0 VDC0     | 12.34  | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | -12.0 VDC0     | -12.18 | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 3.3 VDC HK0    | 3.32   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 1.5 VDC1       | 1.52   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 2.5 VDC1       | 2.48   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 3.3 VDC1       | 3.28   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 5.0 VDC1       | 5.05   | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | +12.0 VDC1     | 12.34  | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | -12.0 VDC1     | -12.10 | V   | 28.3 | sec | OK       |
| HPCI+ at IO9 | 3.3 VDC HK1    | 3.32   | V   | 28.3 | sec | OK       |
| XMITS0.0     | XMITS 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| XMITS1.0     | XMITS 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| XMITS0.1     | XMITS 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| XMITS1.1     | XMITS 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX10  | AMB Top Temp   | 32     | C   | 4.3  | sec | OK       |
| EXB at EX10  | AMB Bot Temp   | 30     | C   | 4.3  | sec | OK       |
| EXB at EX10  | SBBC Temp      | 43     | C   | 4.3  | sec | OK       |
| EXB at EX10  | AXQ Temp       | 36     | C   | 4.3  | sec | OK       |
| EXB at EX10  | SDIM Temp      | 38     | C   | 4.3  | sec | OK       |
| EXB at EX10  | SDISC Temp     | 40     | C   | 4.3  | sec | OK       |
| EXB at EX10  | SDISE Temp     | 34     | C   | 4.3  | sec | OK       |
| EXB at EX10  | 1.5 VDC        | 1.51   | V   | 19.0 | sec | OK       |
| EXB at EX10  | 3.3 VDC        | 3.30   | V   | 19.0 | sec | OK       |
| EXB at EX10  | 2.5 VDC        | 2.51   | V   | 19.0 | sec | OK       |
| EXB at EX10  | 3.3 VDC HK     | 3.30   | V   | 19.0 | sec | OK       |
| CPU at SB10  | PROC 0 Temp    | 51     | C   | 4.4  | sec | OK       |
| CPU at SB10  | PROC 1 Temp    | 57     | C   | 4.4  | sec | OK       |
| CPU at SB10  | PROC 2 Temp    | 59     | C   | 4.4  | sec | OK       |
| CPU at SB10  | PROC 3 Temp    | 54     | C   | 4.4  | sec | OK       |
| CPU at SB10  | SDC0 Temp      | 64     | C   | 4.4  | sec | OK       |
| CPU at SB10  | AR0 Temp       | 58     | C   | 4.4  | sec | OK       |
| CPU at SB10  | DX0 Temp       | 58     | C   | 4.4  | sec | OK       |
| CPU at SB10  | DX1 Temp       | 58     | C   | 4.4  | sec | OK       |
| CPU at SB10  | DX2 Temp       | 58     | C   | 4.4  | sec | OK       |
| CPU at SB10  | DX3 Temp       | 53     | C   | 4.4  | sec | OK       |
| CPU at SB10  | SBBC0 Temp     | 56     | C   | 4.4  | sec | OK       |
| CPU at SB10  | SBBC1 Temp     | 55     | C   | 4.4  | sec | OK       |
| CPU at SB10  | 1.5 VDC        | 1.52   | V   | 43.3 | sec | OK       |
| CPU at SB10  | 3.3 VDC        | 3.32   | V   | 43.3 | sec | OK       |
| CPU at SB10  | Core 0 Volt    | 1.65   | V   | 43.3 | sec | OK       |
| CPU at SB10  | Core 1 Volt    | 1.66   | V   | 43.3 | sec | OK       |
| CPU at SB10  | Core 2 Volt    | 1.64   | V   | 43.3 | sec | OK       |
| CPU at SB10  | Core 3 Volt    | 1.63   | V   | 43.3 | sec | OK       |
| HPCI at IO10 | PS0 Temp       | 40     | C   | 8.4  | sec | OK       |
| HPCI at IO10 | PS1 Temp       | 29     | C   | 8.4  | sec | OK       |
| HPCI at IO10 | SDC0 Temp      | 68     | C   | 8.4  | sec | OK       |
| HPCI at IO10 | AR0 Temp       | 64     | C   | 8.4  | sec | OK       |
| HPCI at IO10 | DX0 Temp       | 55     | C   | 8.4  | sec | OK       |
| HPCI at IO10 | DX1 Temp       | 46     | C   | 8.4  | sec | OK       |
| HPCI at IO10 | SBBC Temp      | 37     | C   | 8.4  | sec | OK       |
| HPCI at IO10 | IOA0 Temp      | 51     | C   | 8.4  | sec | OK       |



|              |                 |        |     |      |     |          |
|--------------|-----------------|--------|-----|------|-----|----------|
| HPCI at IO10 | IOA1 Temp       | 48     | C   | 8.4  | sec | OK       |
| HPCI at IO10 | 1.5 VDC         | 1.48   | V   | 27.9 | sec | OK       |
| HPCI at IO10 | 3.3 VDC         | 3.32   | V   | 27.9 | sec | OK       |
| HPCI at IO10 | 5.0 VDC         | 4.99   | V   | 27.9 | sec | OK       |
| HPCI at IO10 | +12.0 VDC       | 12.03  | V   | 27.9 | sec | OK       |
| HPCI at IO10 | -12.0 VDC       | -12.01 | V   | 27.9 | sec | OK       |
| HPCI at IO10 | 3.3 VDC HK      | 3.28   | V   | 27.9 | sec | OK       |
| HPCI at IO10 | 1.5 CVT0 VDC    | 1.87   | A   | 27.9 | sec | OK       |
| HPCI at IO10 | 1.5 CVT1 VDC    | 1.41   | A   | 27.9 | sec | OK       |
| HPCI at IO10 | 3.3 V_PS0       | 9.81   | A   | 27.9 | sec | OK       |
| HPCI at IO10 | 3.3 V_PS1       | 9.81   | A   | 27.9 | sec | OK       |
| HPCI at IO10 | 5.0 V_PS0       | 3.41   | A   | 27.9 | sec | OK       |
| HPCI at IO10 | 5.0 V_PS1       | 3.78   | A   | 27.9 | sec | OK       |
| Schizo0.0    | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0    | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1    | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1    | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX11  | AMB Top Temp    | 31     | C   | 4.8  | sec | OK       |
| EXB at EX11  | AMB Bot Temp    | 29     | C   | 4.8  | sec | OK       |
| EXB at EX11  | SBBC Temp       | 53     | C   | 4.8  | sec | OK       |
| EXB at EX11  | AXQ Temp        | 38     | C   | 4.8  | sec | OK       |
| EXB at EX11  | SDIM Temp       | 59     | C   | 4.8  | sec | OK       |
| EXB at EX11  | SDISC Temp      | 42     | C   | 4.8  | sec | OK       |
| EXB at EX11  | SDISE Temp      | 26     | C   | 4.8  | sec | OK       |
| EXB at EX11  | 1.5 VDC         | 1.51   | V   | 20.2 | sec | OK       |
| EXB at EX11  | 3.3 VDC         | 3.30   | V   | 20.2 | sec | OK       |
| EXB at EX11  | 2.5 VDC         | 2.49   | V   | 20.2 | sec | OK       |
| EXB at EX11  | 3.3 VDC HK      | 3.28   | V   | 20.2 | sec | OK       |
| CPU at SB11  | PROC 0 Temp     | 38     | C   | 2.8  | sec | OK       |
| CPU at SB11  | PROC 1 Temp     | 41     | C   | 2.8  | sec | OK       |
| CPU at SB11  | PROC 2 Temp     | 41     | C   | 2.8  | sec | OK       |
| CPU at SB11  | PROC 3 Temp     | 41     | C   | 2.8  | sec | OK       |
| CPU at SB11  | SDC0 Temp       | 60     | C   | 2.8  | sec | OK       |
| CPU at SB11  | AR0 Temp        | 62     | C   | 2.8  | sec | OK       |
| CPU at SB11  | DX0 Temp        | 59     | C   | 2.8  | sec | OK       |
| CPU at SB11  | DX1 Temp        | 55     | C   | 2.8  | sec | OK       |
| CPU at SB11  | DX2 Temp        | 54     | C   | 2.8  | sec | OK       |
| CPU at SB11  | DX3 Temp        | 46     | C   | 2.8  | sec | OK       |
| CPU at SB11  | SBBC0 Temp      | 52     | C   | 2.8  | sec | OK       |
| CPU at SB11  | SBBC1 Temp      | 52     | C   | 2.8  | sec | OK       |
| CPU at SB11  | 1.5 VDC         | 1.50   | V   | 44.6 | sec | OK       |
| CPU at SB11  | 3.3 VDC         | 3.32   | V   | 44.6 | sec | OK       |
| CPU at SB11  | Core 0 Volt     | 1.63   | V   | 44.6 | sec | OK       |
| CPU at SB11  | Core 1 Volt     | 1.62   | V   | 44.6 | sec | OK       |
| CPU at SB11  | Core 2 Volt     | 1.61   | V   | 44.6 | sec | OK       |
| CPU at SB11  | Core 3 Volt     | 1.62   | V   | 44.6 | sec | OK       |
| HPCI at IO11 | PS0 Temp        | 37     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | PS1 Temp        | 29     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | SDC0 Temp       | 61     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | AR0 Temp        | 54     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | DX0 Temp        | 49     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | DX1 Temp        | 42     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | SBBC Temp       | 34     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | IOA0 Temp       | 46     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | IOA1 Temp       | 42     | C   | 10.0 | sec | OK       |
| HPCI at IO11 | 1.5 VDC         | 1.49   | V   | 29.1 | sec | OK       |
| HPCI at IO11 | 3.3 VDC         | 3.30   | V   | 29.1 | sec | OK       |
| HPCI at IO11 | 5.0 VDC         | 4.99   | V   | 29.1 | sec | OK       |
| HPCI at IO11 | +12.0 VDC       | 12.03  | V   | 29.1 | sec | OK       |
| HPCI at IO11 | -12.0 VDC       | -12.11 | V   | 29.1 | sec | OK       |

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|--------------|-----------------|--------|-----|------|-----|----------|
| HPCI at IO11 | 3.3 VDC HK      | 3.28   | V   | 29.1 | sec | OK       |
| HPCI at IO11 | 1.5 CVT0 VDC    | 1.88   | A   | 29.1 | sec | OK       |
| HPCI at IO11 | 1.5 CVT1 VDC    | 1.50   | A   | 29.1 | sec | OK       |
| HPCI at IO11 | 3.3 V_PS0       | 9.66   | A   | 29.1 | sec | OK       |
| HPCI at IO11 | 3.3 V_PS1       | 9.81   | A   | 29.1 | sec | OK       |
| HPCI at IO11 | 5.0 V_PS0       | 3.54   | A   | 29.1 | sec | OK       |
| HPCI at IO11 | 5.0 V_PS1       | 3.41   | A   | 29.1 | sec | OK       |
| EXB at EX12  | AMB Top Temp    | 32     | C   | 8.5  | sec | OK       |
| EXB at EX12  | AMB Bot Temp    | 31     | C   | 8.5  | sec | OK       |
| EXB at EX12  | SBBC Temp       | 50     | C   | 8.5  | sec | OK       |
| EXB at EX12  | AXQ Temp        | 38     | C   | 8.5  | sec | OK       |
| EXB at EX12  | SDIM Temp       | 44     | C   | 8.5  | sec | OK       |
| EXB at EX12  | SDISC Temp      | 42     | C   | 8.5  | sec | OK       |
| EXB at EX12  | SDISE Temp      | 38     | C   | 8.5  | sec | OK       |
| EXB at EX12  | 1.5 VDC         | 1.50   | V   | 24.6 | sec | OK       |
| EXB at EX12  | 3.3 VDC         | 3.28   | V   | 24.6 | sec | OK       |
| EXB at EX12  | 2.5 VDC         | 2.51   | V   | 24.6 | sec | OK       |
| EXB at EX12  | 3.3 VDC HK      | 3.28   | V   | 24.6 | sec | OK       |
| CPU at SB12  | PROC 0 Temp     | 32     | C   | 4.6  | sec | OK       |
| CPU at SB12  | PROC 1 Temp     | 35     | C   | 4.6  | sec | OK       |
| CPU at SB12  | PROC 2 Temp     | 34     | C   | 4.6  | sec | OK       |
| CPU at SB12  | PROC 3 Temp     | 32     | C   | 4.6  | sec | OK       |
| CPU at SB12  | SDC0 Temp       | 60     | C   | 4.6  | sec | OK       |
| CPU at SB12  | AR0 Temp        | 55     | C   | 4.6  | sec | OK       |
| CPU at SB12  | DX0 Temp        | 54     | C   | 4.6  | sec | OK       |
| CPU at SB12  | DX1 Temp        | 54     | C   | 4.6  | sec | OK       |
| CPU at SB12  | DX2 Temp        | 52     | C   | 4.6  | sec | OK       |
| CPU at SB12  | DX3 Temp        | 48     | C   | 4.6  | sec | OK       |
| CPU at SB12  | SBBC0 Temp      | 53     | C   | 4.6  | sec | OK       |
| CPU at SB12  | SBBC1 Temp      | 52     | C   | 4.6  | sec | OK       |
| CPU at SB12  | 1.5 VDC         | 1.51   | V   | 49.7 | sec | OK       |
| CPU at SB12  | 3.3 VDC         | 3.30   | V   | 49.7 | sec | OK       |
| CPU at SB12  | Core 0 Volt     | 1.36   | V   | 49.7 | sec | OK       |
| CPU at SB12  | Core 1 Volt     | 1.36   | V   | 49.7 | sec | OK       |
| CPU at SB12  | Core 2 Volt     | 1.36   | V   | 49.7 | sec | OK       |
| CPU at SB12  | Core 3 Volt     | 1.36   | V   | 49.7 | sec | OK       |
| HPCI at IO12 | PS0 Temp        | 40     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | PS1 Temp        | 35     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | SDC0 Temp       | 67     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | AR0 Temp        | 60     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | DX0 Temp        | 56     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | DX1 Temp        | 49     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | SBBC Temp       | 36     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | IOA0 Temp       | 50     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | IOA1 Temp       | 46     | C   | 15.4 | sec | OK       |
| HPCI at IO12 | 1.5 VDC         | 1.49   | V   | 34.1 | sec | OK       |
| HPCI at IO12 | 3.3 VDC         | 3.30   | V   | 34.1 | sec | OK       |
| HPCI at IO12 | 5.0 VDC         | 5.02   | V   | 34.1 | sec | OK       |
| HPCI at IO12 | +12.0 VDC       | 11.88  | V   | 34.1 | sec | OK       |
| HPCI at IO12 | -12.0 VDC       | -11.92 | V   | 34.1 | sec | OK       |
| HPCI at IO12 | 3.3 VDC HK      | 3.28   | V   | 34.1 | sec | OK       |
| HPCI at IO12 | 1.5 CVT0 VDC    | 1.49   | A   | 34.1 | sec | OK       |
| HPCI at IO12 | 1.5 CVT1 VDC    | 1.87   | A   | 34.1 | sec | OK       |
| HPCI at IO12 | 3.3 V_PS0       | 10.10  | A   | 34.1 | sec | OK       |
| HPCI at IO12 | 3.3 V_PS1       | 9.96   | A   | 34.1 | sec | OK       |
| HPCI at IO12 | 5.0 V_PS0       | 3.66   | A   | 34.1 | sec | OK       |
| HPCI at IO12 | 5.0 V_PS1       | 3.54   | A   | 34.1 | sec | OK       |
| Schizo0.0    | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0    | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1    | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |

|              |                 |        |     |          |          |
|--------------|-----------------|--------|-----|----------|----------|
| Schizo1.1    | Schizo 1 Slot 1 | N/A    | N/A | N/A      | PRESENCE |
| EXB at EX13  | AMB Top Temp    | 32     | C   | 10.4 sec | OK       |
| EXB at EX13  | AMB Bot Temp    | 29     | C   | 10.4 sec | OK       |
| EXB at EX13  | SBBC Temp       | 43     | C   | 10.4 sec | OK       |
| EXB at EX13  | AXQ Temp        | 36     | C   | 10.4 sec | OK       |
| EXB at EX13  | SDIM Temp       | 38     | C   | 10.4 sec | OK       |
| EXB at EX13  | SDISC Temp      | 42     | C   | 10.4 sec | OK       |
| EXB at EX13  | SDISE Temp      | 34     | C   | 10.4 sec | OK       |
| EXB at EX13  | 1.5 VDC         | 1.51   | V   | 26.5 sec | OK       |
| EXB at EX13  | 3.3 VDC         | 3.32   | V   | 26.5 sec | OK       |
| EXB at EX13  | 2.5 VDC         | 2.51   | V   | 26.5 sec | OK       |
| EXB at EX13  | 3.3 VDC HK      | 3.30   | V   | 26.5 sec | OK       |
| CPU at SB13  | PROC 0 Temp     | 42     | C   | 7.0 sec  | OK       |
| CPU at SB13  | PROC 1 Temp     | 45     | C   | 7.0 sec  | OK       |
| CPU at SB13  | PROC 2 Temp     | 44     | C   | 7.0 sec  | OK       |
| CPU at SB13  | PROC 3 Temp     | 44     | C   | 7.0 sec  | OK       |
| CPU at SB13  | SDC0 Temp       | 63     | C   | 7.0 sec  | OK       |
| CPU at SB13  | AR0 Temp        | 58     | C   | 7.0 sec  | OK       |
| CPU at SB13  | DX0 Temp        | 56     | C   | 7.0 sec  | OK       |
| CPU at SB13  | DX1 Temp        | 59     | C   | 7.0 sec  | OK       |
| CPU at SB13  | DX2 Temp        | 53     | C   | 7.0 sec  | OK       |
| CPU at SB13  | DX3 Temp        | 48     | C   | 7.0 sec  | OK       |
| CPU at SB13  | SBBC0 Temp      | 52     | C   | 7.0 sec  | OK       |
| CPU at SB13  | SBBC1 Temp      | 54     | C   | 7.0 sec  | OK       |
| CPU at SB13  | 1.5 VDC         | 1.49   | V   | 50.9 sec | OK       |
| CPU at SB13  | 3.3 VDC         | 3.30   | V   | 50.9 sec | OK       |
| CPU at SB13  | Core 0 Volt     | 1.61   | V   | 50.9 sec | OK       |
| CPU at SB13  | Core 1 Volt     | 1.63   | V   | 50.9 sec | OK       |
| CPU at SB13  | Core 2 Volt     | 1.61   | V   | 50.9 sec | OK       |
| CPU at SB13  | Core 3 Volt     | 1.61   | V   | 50.9 sec | OK       |
| HPCI at IO13 | PS0 Temp        | 37     | C   | 16.5 sec | OK       |
| HPCI at IO13 | PS1 Temp        | 32     | C   | 16.5 sec | OK       |
| HPCI at IO13 | SDC0 Temp       | 64     | C   | 16.5 sec | OK       |
| HPCI at IO13 | AR0 Temp        | 62     | C   | 16.5 sec | OK       |
| HPCI at IO13 | DX0 Temp        | 60     | C   | 16.5 sec | OK       |
| HPCI at IO13 | DX1 Temp        | 48     | C   | 16.5 sec | OK       |
| HPCI at IO13 | SBBC Temp       | 35     | C   | 16.5 sec | OK       |
| HPCI at IO13 | IOA0 Temp       | 47     | C   | 16.5 sec | OK       |
| HPCI at IO13 | IOA1 Temp       | 43     | C   | 16.5 sec | OK       |
| HPCI at IO13 | 1.5 VDC         | 1.50   | V   | 35.0 sec | OK       |
| HPCI at IO13 | 3.3 VDC         | 3.30   | V   | 35.0 sec | OK       |
| HPCI at IO13 | 5.0 VDC         | 5.02   | V   | 35.0 sec | OK       |
| HPCI at IO13 | +12.0 VDC       | 11.88  | V   | 35.0 sec | OK       |
| HPCI at IO13 | -12.0 VDC       | -12.01 | V   | 35.0 sec | OK       |
| HPCI at IO13 | 3.3 VDC HK      | 3.28   | V   | 35.0 sec | OK       |
| HPCI at IO13 | 1.5 CVT0 VDC    | 1.76   | A   | 35.0 sec | OK       |
| HPCI at IO13 | 1.5 CVT1 VDC    | 1.53   | A   | 35.0 sec | OK       |
| HPCI at IO13 | 3.3 V_PS0       | 9.81   | A   | 35.0 sec | OK       |
| HPCI at IO13 | 3.3 V_PS1       | 9.81   | A   | 35.0 sec | OK       |
| HPCI at IO13 | 5.0 V_PS0       | 3.17   | A   | 35.0 sec | OK       |
| HPCI at IO13 | 5.0 V_PS1       | 3.29   | A   | 35.0 sec | OK       |
| Schizo0.0    | Schizo 0 Slot 0 | N/A    | N/A | N/A      | PRESENCE |
| Schizo1.0    | Schizo 1 Slot 0 | N/A    | N/A | N/A      | PRESENCE |
| Schizo0.1    | Schizo 0 Slot 1 | N/A    | N/A | N/A      | PRESENCE |
| Schizo1.1    | Schizo 1 Slot 1 | N/A    | N/A | N/A      | PRESENCE |
| EXB at EX14  | AMB Top Temp    | 33     | C   | 11.3 sec | OK       |
| EXB at EX14  | AMB Bot Temp    | 30     | C   | 11.3 sec | OK       |
| EXB at EX14  | SBBC Temp       | 51     | C   | 11.3 sec | OK       |
| EXB at EX14  | AXQ Temp        | 38     | C   | 11.3 sec | OK       |
| EXB at EX14  | SDIM Temp       | 38     | C   | 11.3 sec | OK       |

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|--------------|-----------------|--------|-----|------|-----|----------|
| EXB at EX14  | SDISC Temp      | 40     | C   | 11.3 | sec | OK       |
| EXB at EX14  | SDISE Temp      | 36     | C   | 11.3 | sec | OK       |
| EXB at EX14  | 1.5 VDC         | 1.51   | V   | 27.5 | sec | OK       |
| EXB at EX14  | 3.3 VDC         | 3.30   | V   | 27.5 | sec | OK       |
| EXB at EX14  | 2.5 VDC         | 2.51   | V   | 27.5 | sec | OK       |
| EXB at EX14  | 3.3 VDC HK      | 3.30   | V   | 27.5 | sec | OK       |
| CPU at SB14  | PROC 0 Temp     | 39     | C   | 5.5  | sec | OK       |
| CPU at SB14  | PROC 1 Temp     | 41     | C   | 5.5  | sec | OK       |
| CPU at SB14  | PROC 2 Temp     | 42     | C   | 5.5  | sec | OK       |
| CPU at SB14  | PROC 3 Temp     | 40     | C   | 5.5  | sec | OK       |
| CPU at SB14  | SDC0 Temp       | 62     | C   | 5.5  | sec | OK       |
| CPU at SB14  | AR0 Temp        | 58     | C   | 5.5  | sec | OK       |
| CPU at SB14  | DX0 Temp        | 58     | C   | 5.5  | sec | OK       |
| CPU at SB14  | DX1 Temp        | 58     | C   | 5.5  | sec | OK       |
| CPU at SB14  | DX2 Temp        | 57     | C   | 5.5  | sec | OK       |
| CPU at SB14  | DX3 Temp        | 50     | C   | 5.5  | sec | OK       |
| CPU at SB14  | SBBC0 Temp      | 54     | C   | 5.5  | sec | OK       |
| CPU at SB14  | SBBC1 Temp      | 62     | C   | 5.5  | sec | OK       |
| CPU at SB14  | 1.5 VDC         | 1.51   | V   | 0.2  | sec | OK       |
| CPU at SB14  | 3.3 VDC         | 3.32   | V   | 0.2  | sec | OK       |
| CPU at SB14  | Core 0 Volt     | 1.63   | V   | 0.2  | sec | OK       |
| CPU at SB14  | Core 1 Volt     | 1.63   | V   | 0.2  | sec | OK       |
| CPU at SB14  | Core 2 Volt     | 1.62   | V   | 0.2  | sec | OK       |
| CPU at SB14  | Core 3 Volt     | 1.61   | V   | 0.2  | sec | OK       |
| HPCI at IO14 | PS0 Temp        | 43     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | PS1 Temp        | 37     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | SDC0 Temp       | 60     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | AR0 Temp        | 56     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | DX0 Temp        | 55     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | DX1 Temp        | 48     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | SBBC Temp       | 41     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | IOA0 Temp       | 46     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | IOA1 Temp       | 45     | C   | 17.8 | sec | OK       |
| HPCI at IO14 | 1.5 VDC         | 1.53   | V   | 35.9 | sec | OK       |
| HPCI at IO14 | 3.3 VDC         | 3.30   | V   | 35.9 | sec | OK       |
| HPCI at IO14 | 5.0 VDC         | 5.02   | V   | 35.9 | sec | OK       |
| HPCI at IO14 | +12.0 VDC       | 11.95  | V   | 35.9 | sec | OK       |
| HPCI at IO14 | -12.0 VDC       | -11.92 | V   | 35.9 | sec | OK       |
| HPCI at IO14 | 3.3 VDC HK      | 3.30   | V   | 35.9 | sec | OK       |
| HPCI at IO14 | 1.5 CVT0 VDC    | 2.07   | A   | 36.0 | sec | OK       |
| HPCI at IO14 | 1.5 CVT1 VDC    | 1.52   | A   | 36.0 | sec | OK       |
| HPCI at IO14 | 3.3 V_PS0       | 9.81   | A   | 36.0 | sec | OK       |
| HPCI at IO14 | 3.3 V_PS1       | 9.81   | A   | 36.0 | sec | OK       |
| HPCI at IO14 | 5.0 V_PS0       | 3.66   | A   | 36.0 | sec | OK       |
| HPCI at IO14 | 5.0 V_PS1       | 3.17   | A   | 36.0 | sec | OK       |
| Schizo0.0    | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0    | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1    | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1    | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX15  | AMB Top Temp    | 35     | C   | 12.5 | sec | OK       |
| EXB at EX15  | AMB Bot Temp    | 31     | C   | 12.5 | sec | OK       |
| EXB at EX15  | SBBC Temp       | 48     | C   | 12.5 | sec | OK       |
| EXB at EX15  | AXQ Temp        | 40     | C   | 12.5 | sec | OK       |
| EXB at EX15  | SDIM Temp       | 40     | C   | 12.5 | sec | OK       |
| EXB at EX15  | SDISC Temp      | 42     | C   | 12.5 | sec | OK       |
| EXB at EX15  | SDISE Temp      | 36     | C   | 12.5 | sec | OK       |
| EXB at EX15  | 1.5 VDC         | 1.51   | V   | 29.2 | sec | OK       |
| EXB at EX15  | 3.3 VDC         | 3.30   | V   | 29.2 | sec | OK       |
| EXB at EX15  | 2.5 VDC         | 2.49   | V   | 29.2 | sec | OK       |
| EXB at EX15  | 3.3 VDC HK      | 3.28   | V   | 29.2 | sec | OK       |

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|--------------|-----------------|--------|-----|------|-----|----------|
| CPU at SB15  | PROC 0 Temp     | 62     | C   | 0.5  | sec | OK       |
| CPU at SB15  | PROC 1 Temp     | 67     | C   | 0.5  | sec | OK       |
| CPU at SB15  | PROC 2 Temp     | 68     | C   | 0.5  | sec | OK       |
| CPU at SB15  | PROC 3 Temp     | 61     | C   | 0.5  | sec | OK       |
| CPU at SB15  | SDC0 Temp       | 67     | C   | 0.5  | sec | OK       |
| CPU at SB15  | AR0 Temp        | 66     | C   | 0.5  | sec | OK       |
| CPU at SB15  | DX0 Temp        | 60     | C   | 0.5  | sec | OK       |
| CPU at SB15  | DX1 Temp        | 58     | C   | 0.5  | sec | OK       |
| CPU at SB15  | DX2 Temp        | 58     | C   | 0.5  | sec | OK       |
| CPU at SB15  | DX3 Temp        | 50     | C   | 0.5  | sec | OK       |
| CPU at SB15  | SBBC0 Temp      | 56     | C   | 0.5  | sec | OK       |
| CPU at SB15  | SBBC1 Temp      | 57     | C   | 0.5  | sec | OK       |
| CPU at SB15  | 1.5 VDC         | 1.52   | V   | 1.8  | sec | OK       |
| CPU at SB15  | 3.3 VDC         | 3.34   | V   | 1.8  | sec | OK       |
| CPU at SB15  | Core 0 Volt     | 1.66   | V   | 1.8  | sec | OK       |
| CPU at SB15  | Core 1 Volt     | 1.65   | V   | 1.8  | sec | OK       |
| CPU at SB15  | Core 2 Volt     | 1.64   | V   | 1.8  | sec | OK       |
| CPU at SB15  | Core 3 Volt     | 1.63   | V   | 1.8  | sec | OK       |
| HPCI at IO15 | PS0 Temp        | 42     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | PS1 Temp        | 34     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | SDC0 Temp       | 69     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | AR0 Temp        | 62     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | DX0 Temp        | 56     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | DX1 Temp        | 48     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | SBBC Temp       | 38     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | IOA0 Temp       | 52     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | IOA1 Temp       | 50     | C   | 19.6 | sec | OK       |
| HPCI at IO15 | 1.5 VDC         | 1.49   | V   | 37.5 | sec | OK       |
| HPCI at IO15 | 3.3 VDC         | 3.28   | V   | 37.5 | sec | OK       |
| HPCI at IO15 | 5.0 VDC         | 4.99   | V   | 37.5 | sec | OK       |
| HPCI at IO15 | +12.0 VDC       | 11.95  | V   | 37.5 | sec | OK       |
| HPCI at IO15 | -12.0 VDC       | -12.01 | V   | 37.5 | sec | OK       |
| HPCI at IO15 | 3.3 VDC HK      | 3.30   | V   | 37.5 | sec | OK       |
| HPCI at IO15 | 1.5 CVT0 VDC    | 1.49   | A   | 37.5 | sec | OK       |
| HPCI at IO15 | 1.5 CVT1 VDC    | 1.85   | A   | 37.5 | sec | OK       |
| HPCI at IO15 | 3.3 V_PS0       | 10.25  | A   | 37.5 | sec | OK       |
| HPCI at IO15 | 3.3 V_PS1       | 9.81   | A   | 37.5 | sec | OK       |
| HPCI at IO15 | 5.0 V_PS0       | 3.78   | A   | 37.5 | sec | OK       |
| HPCI at IO15 | 5.0 V_PS1       | 3.78   | A   | 37.5 | sec | OK       |
| Schizo0.0    | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0    | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1    | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1    | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX16  | AMB Top Temp    | 34     | C   | 13.7 | sec | OK       |
| EXB at EX16  | AMB Bot Temp    | 32     | C   | 13.7 | sec | OK       |
| EXB at EX16  | SBBC Temp       | 54     | C   | 13.7 | sec | OK       |
| EXB at EX16  | AXQ Temp        | 38     | C   | 13.7 | sec | OK       |
| EXB at EX16  | SDIM Temp       | 42     | C   | 13.7 | sec | OK       |
| EXB at EX16  | SDISC Temp      | 44     | C   | 13.7 | sec | OK       |
| EXB at EX16  | SDISE Temp      | 38     | C   | 13.7 | sec | OK       |
| EXB at EX16  | 1.5 VDC         | 1.51   | V   | 30.3 | sec | OK       |
| EXB at EX16  | 3.3 VDC         | 3.32   | V   | 30.3 | sec | OK       |
| EXB at EX16  | 2.5 VDC         | 2.51   | V   | 30.3 | sec | OK       |
| EXB at EX16  | 3.3 VDC HK      | 3.30   | V   | 30.3 | sec | OK       |
| CPU at SB16  | PROC 0 Temp     | 39     | C   | 1.8  | sec | OK       |
| CPU at SB16  | PROC 1 Temp     | 42     | C   | 1.8  | sec | OK       |
| CPU at SB16  | PROC 2 Temp     | 42     | C   | 1.8  | sec | OK       |
| CPU at SB16  | PROC 3 Temp     | 40     | C   | 1.8  | sec | OK       |
| CPU at SB16  | SDC0 Temp       | 67     | C   | 1.8  | sec | OK       |
| CPU at SB16  | AR0 Temp        | 60     | C   | 1.8  | sec | OK       |

|              |                 |        |     |      |     |          |
|--------------|-----------------|--------|-----|------|-----|----------|
| CPU at SB16  | DX0 Temp        | 62     | C   | 1.8  | sec | OK       |
| CPU at SB16  | DX1 Temp        | 62     | C   | 1.8  | sec | OK       |
| CPU at SB16  | DX2 Temp        | 60     | C   | 1.8  | sec | OK       |
| CPU at SB16  | DX3 Temp        | 54     | C   | 1.8  | sec | OK       |
| CPU at SB16  | SBBC0 Temp      | 57     | C   | 1.8  | sec | OK       |
| CPU at SB16  | SBBC1 Temp      | 55     | C   | 1.8  | sec | OK       |
| CPU at SB16  | 1.5 VDC         | 1.51   | V   | 3.6  | sec | OK       |
| CPU at SB16  | 3.3 VDC         | 3.32   | V   | 3.6  | sec | OK       |
| CPU at SB16  | Core 0 Volt     | 1.61   | V   | 3.6  | sec | OK       |
| CPU at SB16  | Core 1 Volt     | 1.62   | V   | 3.6  | sec | OK       |
| CPU at SB16  | Core 2 Volt     | 1.62   | V   | 3.6  | sec | OK       |
| CPU at SB16  | Core 3 Volt     | 1.60   | V   | 3.6  | sec | OK       |
| HPCI at IO16 | PS0 Temp        | 46     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | PS1 Temp        | 37     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | SDC0 Temp       | 70     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | AR0 Temp        | 64     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | DX0 Temp        | 59     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | DX1 Temp        | 49     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | SBBC Temp       | 43     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | IOA0 Temp       | 57     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | IOA1 Temp       | 48     | C   | 21.6 | sec | OK       |
| HPCI at IO16 | 1.5 VDC         | 1.49   | V   | 39.2 | sec | OK       |
| HPCI at IO16 | 3.3 VDC         | 3.30   | V   | 39.2 | sec | OK       |
| HPCI at IO16 | 5.0 VDC         | 4.96   | V   | 39.2 | sec | OK       |
| HPCI at IO16 | +12.0 VDC       | 12.03  | V   | 39.2 | sec | OK       |
| HPCI at IO16 | -12.0 VDC       | -12.01 | V   | 39.2 | sec | OK       |
| HPCI at IO16 | 3.3 VDC HK      | 3.30   | V   | 39.2 | sec | OK       |
| HPCI at IO16 | 1.5 CVT0 VDC    | 1.57   | A   | 39.2 | sec | OK       |
| HPCI at IO16 | 1.5 CVT1 VDC    | 1.86   | A   | 39.2 | sec | OK       |
| HPCI at IO16 | 3.3 V_PS0       | 9.96   | A   | 39.2 | sec | OK       |
| HPCI at IO16 | 3.3 V_PS1       | 9.81   | A   | 39.2 | sec | OK       |
| HPCI at IO16 | 5.0 V_PS0       | 3.29   | A   | 39.2 | sec | OK       |
| HPCI at IO16 | 5.0 V_PS1       | 3.29   | A   | 39.2 | sec | OK       |
| Schizo0.0    | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0    | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1    | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1    | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| EXB at EX17  | AMB Top Temp    | 36     | C   | 14.8 | sec | OK       |
| EXB at EX17  | AMB Bot Temp    | 34     | C   | 14.8 | sec | OK       |
| EXB at EX17  | SBBC Temp       | 58     | C   | 14.8 | sec | OK       |
| EXB at EX17  | AXQ Temp        | 54     | C   | 14.8 | sec | OK       |
| EXB at EX17  | SDIM Temp       | 66     | C   | 14.8 | sec | OK       |
| EXB at EX17  | SDISC Temp      | 44     | C   | 14.8 | sec | OK       |
| EXB at EX17  | SDISE Temp      | 18     | C   | 14.8 | sec | OK       |
| EXB at EX17  | 1.5 VDC         | 1.51   | V   | 31.2 | sec | OK       |
| EXB at EX17  | 3.3 VDC         | 3.30   | V   | 31.2 | sec | OK       |
| EXB at EX17  | 2.5 VDC         | 2.51   | V   | 31.2 | sec | OK       |
| EXB at EX17  | 3.3 VDC HK      | 3.30   | V   | 31.2 | sec | OK       |
| CPU at SB17  | PROC 0 Temp     | 54     | C   | 5.6  | sec | OK       |
| CPU at SB17  | PROC 1 Temp     | 43     | C   | 5.6  | sec | OK       |
| CPU at SB17  | PROC 2 Temp     | 45     | C   | 5.6  | sec | OK       |
| CPU at SB17  | PROC 3 Temp     | 42     | C   | 5.6  | sec | OK       |
| CPU at SB17  | SDC0 Temp       | 68     | C   | 5.6  | sec | OK       |
| CPU at SB17  | AR0 Temp        | 62     | C   | 5.6  | sec | OK       |
| CPU at SB17  | DX0 Temp        | 62     | C   | 5.6  | sec | OK       |
| CPU at SB17  | DX1 Temp        | 60     | C   | 5.6  | sec | OK       |
| CPU at SB17  | DX2 Temp        | 61     | C   | 5.6  | sec | OK       |
| CPU at SB17  | DX3 Temp        | 54     | C   | 5.6  | sec | OK       |
| CPU at SB17  | SBBC0 Temp      | 58     | C   | 5.6  | sec | OK       |
| CPU at SB17  | SBBC1 Temp      | 58     | C   | 5.6  | sec | OK       |

|              |                 |        |     |      |     |          |
|--------------|-----------------|--------|-----|------|-----|----------|
| CPU at SB17  | 1.5 VDC         | 1.50   | V   | 4.6  | sec | OK       |
| CPU at SB17  | 3.3 VDC         | 3.32   | V   | 4.6  | sec | OK       |
| CPU at SB17  | Core 0 Volt     | 1.62   | V   | 4.6  | sec | OK       |
| CPU at SB17  | Core 1 Volt     | 1.62   | V   | 4.6  | sec | OK       |
| CPU at SB17  | Core 2 Volt     | 1.63   | V   | 4.6  | sec | OK       |
| CPU at SB17  | Core 3 Volt     | 1.62   | V   | 4.6  | sec | OK       |
| HPCI at IO17 | PS0 Temp        | 46     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | PS1 Temp        | 35     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | SDC0 Temp       | 72     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | AR0 Temp        | 65     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | DX0 Temp        | 68     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | DX1 Temp        | 56     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | SBBC Temp       | 54     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | IOA0 Temp       | 55     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | IOA1 Temp       | 48     | C   | 22.7 | sec | OK       |
| HPCI at IO17 | 1.5 VDC         | 1.49   | V   | 40.1 | sec | OK       |
| HPCI at IO17 | 3.3 VDC         | 3.30   | V   | 40.1 | sec | OK       |
| HPCI at IO17 | 5.0 VDC         | 4.99   | V   | 40.1 | sec | OK       |
| HPCI at IO17 | +12.0 VDC       | 11.95  | V   | 40.1 | sec | OK       |
| HPCI at IO17 | -12.0 VDC       | -12.01 | V   | 40.1 | sec | OK       |
| HPCI at IO17 | 3.3 VDC HK      | 3.30   | V   | 40.1 | sec | OK       |
| HPCI at IO17 | 1.5 CVT0 VDC    | 1.87   | A   | 40.1 | sec | OK       |
| HPCI at IO17 | 1.5 CVT1 VDC    | 1.49   | A   | 40.1 | sec | OK       |
| HPCI at IO17 | 3.3 V_PS0       | 9.81   | A   | 40.1 | sec | OK       |
| HPCI at IO17 | 3.3 V_PS1       | 9.81   | A   | 40.1 | sec | OK       |
| HPCI at IO17 | 5.0 V_PS0       | 3.54   | A   | 40.1 | sec | OK       |
| HPCI at IO17 | 5.0 V_PS1       | 3.29   | A   | 40.1 | sec | OK       |
| Schizo0.0    | Schizo 0 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.0    | Schizo 1 Slot 0 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo0.1    | Schizo 0 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |
| Schizo1.1    | Schizo 1 Slot 1 | N/A    | N/A | N/A  |     | PRESENCE |

| FANTRAY | POWER | SPEED  | FAN0  | FAN1  | FAN2  | FAN3  | FAN4  | FAN5  |
|---------|-------|--------|-------|-------|-------|-------|-------|-------|
| -----   | ----- | -----  | ----- | ----- | ----- | ----- | ----- | ----- |
| FT0     | ON    | NORMAL | OK    | OK    | OK    | OK    | OK    | OK    |
| FT1     | ON    | NORMAL | OK    | OK    | OK    | OK    | OK    | OK    |
| FT2     | ON    | NORMAL | OK    | OK    | OK    | OK    | OK    | OK    |
| FT3     | ON    | NORMAL | OK    | OK    | OK    | OK    | OK    | OK    |
| FT4     | ON    | NORMAL | OK    | OK    | OK    | OK    | OK    | OK    |
| FT5     | ON    | NORMAL | OK    | OK    | OK    | OK    | OK    | OK    |
| FT6     | ON    | NORMAL | OK    | OK    | OK    | OK    | OK    | OK    |
| FT7     | ON    | NORMAL | OK    | OK    | OK    | OK    | OK    | OK    |

| POWER     | UNIT  | AC0  | AC1  | DC0 | DC1 | FAN0  | FAN1  |
|-----------|-------|------|------|-----|-----|-------|-------|
| -----     | ----- | ---  | ---  | --- | --- | ----- | ----- |
| PS at PS0 | OK    | OK   | FAIL | ON  | ON  | OK    | OK    |
| PS at PS1 | OK    | OK   | FAIL | ON  | ON  | OK    | OK    |
| PS at PS2 | OK    | OK   | FAIL | ON  | ON  | OK    | OK    |
| PS at PS3 | OK    | OK   | FAIL | ON  | ON  | OK    | OK    |
| PS at PS4 | OK    | FAIL | OK   | ON  | ON  | OK    | OK    |
| PS at PS5 | OK    | OK   | FAIL | ON  | ON  | OK    | OK    |

| POWER     | VALUE | UNIT  | STATUS |
|-----------|-------|-------|--------|
| -----     | ----- | ----- | -----  |
| PS at PS0 |       |       |        |
| Current0  | 41.83 | A     | N/A    |
| Current1  | 0.00  | A     | N/A    |
| 48VDC     | 49.20 | V     | N/A    |

showenvironment1M

|             |          |   |     |
|-------------|----------|---|-----|
| Power       | 2058.04  | W | N/A |
| PS at PS1   |          |   |     |
| Current0    | 40.64    | A | N/A |
| Current1    | 0.00     | A | N/A |
| 48VDC       | 47.01    | V | N/A |
| Power       | 1910.49  | W | N/A |
| PS at PS2   |          |   |     |
| Current0    | 40.24    | A | N/A |
| Current1    | 0.00     | A | N/A |
| 48VDC       | 48.21    | V | N/A |
| Power       | 1939.97  | W | N/A |
| PS at PS3   |          |   |     |
| Current0    | 38.64    | A | N/A |
| Current1    | 0.00     | A | N/A |
| 48VDC       | 48.41    | V | N/A |
| Power       | 1870.56  | W | N/A |
| PS at PS4   |          |   |     |
| Current0    | 0.00     | A | N/A |
| Current1    | 40.64    | A | N/A |
| 48VDC       | 48.60    | V | N/A |
| Power       | 1975.10  | W | N/A |
| PS at PS5   |          |   |     |
| Current0    | 41.43    | A | N/A |
| Current1    | 0.00     | A | N/A |
| 48VDC       | 48.60    | V | N/A |
| Power       | 2013.50  | W | N/A |
| Total Power | 11767.66 | W | N/A |



**EXAMPLE 2** Showing Power Output

| POWER     | UNIT | AC0  | AC1  | DC0  | DC1  | FAN0 | FAN1 |
|-----------|------|------|------|------|------|------|------|
| ----      | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| PS at PS0 | OK   | OK   | FAIL | ON   | ON   | OK   | OK   |
| PS at PS1 | OK   | OK   | FAIL | ON   | ON   | OK   | OK   |
| PS at PS2 | OK   | OK   | FAIL | ON   | ON   | OK   | OK   |
| PS at PS3 | OK   | OK   | FAIL | ON   | ON   | OK   | OK   |
| PS at PS4 | OK   | FAIL | OK   | ON   | ON   | OK   | OK   |
| PS at PS5 | OK   | OK   | FAIL | ON   | ON   | OK   | OK   |

| POWER       | VALUE    | UNIT | STATUS |
|-------------|----------|------|--------|
| ----        | ----     | ---- | ----   |
| PS at PS0   |          |      |        |
| Current0    | 41.83    | A    | N/A    |
| Current1    | 0.00     | A    | N/A    |
| 48VDC       | 49.20    | V    | N/A    |
| Power       | 2058.04  | W    | N/A    |
| PS at PS1   |          |      |        |
| Current0    | 39.84    | A    | N/A    |
| Current1    | 0.00     | A    | N/A    |
| 48VDC       | 47.01    | V    | N/A    |
| Power       | 1872.88  | W    | N/A    |
| PS at PS2   |          |      |        |
| Current0    | 39.84    | A    | N/A    |
| Current1    | 0.00     | A    | N/A    |
| 48VDC       | 48.21    | V    | N/A    |
| Power       | 1920.69  | W    | N/A    |
| PS at PS3   |          |      |        |
| Current0    | 38.25    | A    | N/A    |
| Current1    | 0.00     | A    | N/A    |
| 48VDC       | 48.41    | V    | N/A    |
| Power       | 1851.68  | W    | N/A    |
| PS at PS4   |          |      |        |
| Current0    | 0.00     | A    | N/A    |
| Current1    | 39.84    | A    | N/A    |
| 48VDC       | 48.60    | V    | N/A    |
| Power       | 1936.22  | W    | N/A    |
| PS at PS5   |          |      |        |
| Current0    | 41.03    | A    | N/A    |
| Current1    | 0.00     | A    | N/A    |
| 48VDC       | 48.60    | V    | N/A    |
| Power       | 1994.06  | W    | N/A    |
| Total Power | 11633.57 | W    | N/A    |

**EXIT STATUS**

The following exit values are returned:

- |   |                                          |
|---|------------------------------------------|
| 0 | Successful completion.                   |
| 1 | An invalid domain was used.              |
| 2 | An invalid command-line option was used. |
| 3 | Invalid permission.                      |
| 4 | An internal error occurred.              |

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| <b>Attribute Types</b> | <b>Attribute Values</b> |
|------------------------|-------------------------|
| Availability           | SUNWSMSop               |
| Interface Stability    | Evolving                |
| Command Output         | Unstable                |

**SEE ALSO**

`addtag(1M)`

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                 | showfailover - display system controller (SC) failover status or role                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SYNOPSIS</b>             | <b>showfailover</b> [-r] [-v]<br><b>showfailover</b> -h                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>DESCRIPTION</b>          | <p>showfailover(1M) enables you to monitor the state of the SC failover mechanism. This command displays the current status of the failover mechanisms. If you do not specify a -r option, then the following information is displayed:</p> <pre style="margin-left: 40px;">SC Failover Status: <i>state</i></pre> <p>The failover mechanism can be in one of four states: ACTIVATING, ACTIVE, DISABLED, or FAILED. See the EXTENDED DESCRIPTION section.</p> |
| <b>OPTIONS</b>              | <p>The following options are supported:</p> <p>-h            Help. Displays usage descriptions.</p> <p style="margin-left: 100px;"><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-r            Displays the SC's role as either MAIN, SPARE, or UNKNOWN.</p> <p>-v            Verbose. Displays all available command information.</p>                                                                                   |
| <b>EXTENDED DESCRIPTION</b> | <p>The failover mechanism states are as follows:</p> <p>ACTIVATING        Indicates that the failover mechanism is preparing to transition to the ACTIVE state. Failover becomes active when all tests have passed and files have been synchronized.</p>                                                                                                                                                                                                      |

## showfailover(1M)

|          |                                                                                                                                                |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------|
| ACTIVE   | Indicates that the failover mechanism is enabled and is functioning normally.                                                                  |
| DISABLED | Indicates that the failover mechanism has been disabled due to a failover or an operator request (for example, <code>setfailover off</code> ). |
| FAILED   | Indicates that the failover mechanism has detected a failure that prevents a failover.                                                         |

In addition, if the external network has been configured, `showfailover` displays the state of each of the external network interface links monitored by the failover processes. The display format is as follows:

*external community name:* [UP|DOWN]

A failure string is returned, describing the failure condition. Each failure string has a code associated with it. The codes and associated failure strings are defined in the following table.

---

| String             | Explanation                                                                                                                                                                         |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| None               | No failure.                                                                                                                                                                         |
| S-SC EXT NET       | The spare SC external network interface has failed.                                                                                                                                 |
| S-SC CONSOLE BUS   | A fault has been detected on the spare SC's console bus path.                                                                                                                       |
| S-SC LOC CLK       | The spare SC's local clock has failed.                                                                                                                                              |
| S-SC DISK FULL     | The spare SC's system is full.                                                                                                                                                      |
| S-SC IS DOWN       | The spare SC is down and/or unresponsive. If this message results from the I2 network/HASRAMs being down then the spare SC could still be running. Login to the spare SC to verify. |
| S-SC MEM EXHAUSTED | The spare SC's memory/swap space has been exhausted.                                                                                                                                |

---

| String                           | Explanation                                                                                                                                                                                                                                                                                          |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S-SC SMS DAEMON                  | At least one SMS daemon could not be started/<br>restarted on the spare SC.                                                                                                                                                                                                                          |
| S-SC INCOMPATIBLE SMS<br>VERSION | The spare SC is running a different version of SMS<br>software. Both SCs must be running the same version.                                                                                                                                                                                           |
| I2 NETWORK/HASRAMS DOWN          | Both interfaces for communication between the SCs<br>are down. The main cannot tell what version of SMS<br>is running on the spare nor what its state is. It<br>declares the spare SC down and logs a message to that<br>effect. Dependent services, including file propagation,<br>are unavailable. |

### Group Privileges Required

You must have platform administrator, platform operator, or platform service privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

**EXAMPLE 1** Displaying a Failover Status That Indicates That Everything is OK

```
sc0:sms-user:> showfailover
SC Failover Status: ACTIVE
C1: UP
```

**EXAMPLE 2** Displaying a Failover Status That Indicates That the Spare SC System is Full

```
sc0:sms-user:> showfailover
SC Failover Status: FAILED
S-SC DISK FULL
C1: UP
```

**EXAMPLE 3** Displaying the SC Role

```
sc0:sms-user:> showfailover -r
SPARE
```

**EXAMPLE 4** Displaying the Status of All Monitored Components

```

sc0:sms-user:> showfailover -v
SC Failover Status: ACTIVE
Status of Shared Memory:
 HASRAM (CSB at CS0): Good
 HASRAM (CSB at CS1): Good

Status of xc30p13-sc0:
 Role:MAIN
 SMS Daemons:Good
 System Clock:Good
 Private I2 Network:Good
 Private HASRAM Network:.....Good
 Public Network.....NOT TESTED
 System Memory:38.9%
 Disk Status:
 /:17.4%
Console Bus Status:
 EXB at EX1:Good
 EXB at EX2:Good
 EXB at EX4:Good

Status of xc30p13-scl:
 Role:SPARE
 SMS Daemons:Good
 System Clock:Good
 Private I2 Network:Good
 Private HASRAM Network:.....Good
 Public Network:NOT TESTED
 System Memory:34.2%
 Disk Status:
 /:17.1%
Console Bus Status:
 EXB at EX1:Good
 EXB at EX2:Good
 EXB at EX4:Good

```

**EXIT STATUS**

The following exit values are returned:

- 0           Successful completion.
- >0         An error occurred.

**ATTRIBUTES**

See attributes (5) for descriptions of the following attributes:

| Attribute Types     | Attribute Values |
|---------------------|------------------|
| Availability        | SUNWSMSop        |
| Interface Stability | Evolving         |
| Command Output      | Unstable         |

**SEE ALSO** | setfailover(1M)

## showkeyswitch(1M)

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | showkeyswitch - display the position of the virtual keyswitch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>SYNOPSIS</b>                  | <b>showkeyswitch</b> -d <i>domain_indicator</i> [-v ]<br><b>showkeyswitch</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>DESCRIPTION</b>               | showkeyswitch(1M) displays the position of the virtual keyswitch of the specified domain. The state of each virtual keyswitch is maintained between power cycles of the system controller (SC) or physical power cycling of the power supplies by the pcd(1M).                                                                                                                                                                                                                                                                                            |
| <b>OPTIONS</b>                   | The following options are supported:<br><br>-d <i>domain_indicator</i> Specifies the domain using one of the following:<br><br><i>domain_id</i> -ID for a domain. Valid <i>domain_ids</i> are A-R and are not case sensitive.<br><br><i>domain_tag</i> - Name assigned to a domain using addtag(1M).<br><br>-h                            Help. Displays usage descriptions.<br><br><b>Note</b> - Use alone. Any option specified in addition to -h is ignored.<br><br>-v                            Verbose. Displays all available command information. |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Group Privileges Required</b> | You must have platform administrator, platform operator, platform service, domain administrator, or configurator privileges for the specified domain to run this command.<br><br>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                                                                                                                                       |
| <b>EXAMPLES</b>                  | <b>EXAMPLE 1</b> Displaying the Keyswitch Status for Domain A<br><br>sc0:sms-user:> <b>showkeyswitch -d A</b><br>Virtual keyswitch position: ON                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>EXIT STATUS</b>               | The following exit values are returned:<br><br>0                            Successful completion.<br><br>>0                           An error occurred.                                                                                                                                                                                                                                                                                                                                                                                                 |



**ATTRIBUTES** See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** addtag (1M), setkeyswitch (1M), pcd (1M)

## showlogs(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | showlogs - display message log files or the event logs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>SYNOPSIS</b>    | <b>showlogs</b> [-F] [-f <i>filename</i> ] [-d <i>domain_indicator</i> ] [-p m c s ] [-v ]<br><b>showlogs</b> [-F] [-f <i>filename</i> ] [-d <i>domain_indicator</i> ] [-E ] [-p e<br>[ <i>event_class</i>   list   ereport   ena0x< <i>ena_value</i> >   uuid< <i>uuid_value</i> >   <i>event_code</i> ] [ <i>number</i> ] ]<br><b>showlogs</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>DESCRIPTION</b> | <p>showlogs(1M) displays the following:</p> <ul style="list-style-type: none"><li>■ Message logs, console logs, or syslog for the platform or a specified domain, depending on the options specified. The default is the platform message log. You must have platform group privileges to run the default; otherwise you receive an error message.</li><li>■ Portions of the event log, depending on the options specified.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>OPTIONS</b>     | <p>The following options are supported:</p> <p>-d <i>domain_indicator</i>      Specifies the domain using one of the following:</p> <p><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p><i>domain_tag</i> – Name assigned to a domain using addtag(1M).</p> <p>If you specify a domain with the -p e options, the event logs for only that domain are displayed.</p> <p>-F      Displays only lines that have been appended to the log file since the showlogs command was executed. Similar to the tail -f command. Output continues until interrupted by Ctrl-C.</p> <p>-f <i>filename</i>      Places the output of the showlogs command into a specified file.</p> <p>-E      Formats and condenses the event log information displayed when specified with the -p e options.</p> <p>-h      Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> |

-p

Displays a specific log type: the platform message log, domain console log, domain syslog, or event log.

Valid arguments for `-p` are:

- `m`  
Displays the platform message log. Displaying the platform message log requires platform group privileges.
- `c`  
Displays the domain console log. Displaying the domain console log requires the `-d` option and domain privileges for that domain.
- `s`  
Displays the domain syslog. Displaying the domain syslog requires domain privileges for that domain. `syslogs` forwarded to the system controller (SC) are stored in `/var/opt/SUSNWSMS/adm/anonymous`.
- `e [event_class|list|ereport|ena0x<ena_value>|uuid<uuid_value>|event_code] [number]`  
Displays information from the event log. The `-p e` option displays the last entry in the event log by default, unless you specify a *number* of events to be displayed. Displaying event log information requires platform administration or service privileges.  
  
You can use the following arguments to display certain event log information. This information can be used for additional troubleshooting purposes by your service provider.

-p

Displays a specific log type: the platform message log, domain console log, domain syslog, or event log.

Valid arguments for `-p` are:

- `m`  
Displays the platform message log. Displaying the platform message log requires platform group privileges.
- `c`  
Displays the domain console log. Displaying the domain console log requires the `-d` option and domain privileges for that domain.
- `s`  
Displays the domain syslog. Displaying the domain syslog requires domain privileges for that domain. syslogs forwarded to the system controller (SC) are stored in `/var/opt/SUSNWSMS/adm/anonymous`.
- `e [event_class|list|ereport|ena0x<ena_value>|uuid<uuid_value>|event_code] [number]`

Displays information from the event log. The `-p e` option displays the last entry in the event log by default, unless you specify a *number* of events to be displayed. Displaying event log information requires platform administration or service privileges.

You can use the following arguments to display certain event log information. This information can be used for additional troubleshooting purposes by your service provider.

- *event\_class* – Displays the last event in the event log that matches a specified ereport event class. The *event\_class* is a dot-separated string that identifies the error report event class, for example: `ereport.asic.sdc.porterr.parity_bidi_error`
- *list* – Displays the last list event in the event log. A list event provides a list of faults associated with the hardware error.
- *ereport* – Displays the last error event in the event log. An error report contains data on an unexpected condition or behavior.
- *ena0x<ena\_value>* – Displays the error event in the event log that matches the Error Numeric Association (ENA) hex value specified, where *<ena\_value>* is a hex value. For example, in the ENA specification `ena0xc4fc168cfe77b402`, the hex value is `c4fc168cfe77b402`. The ENA differentiates multiple instances of the same error event.
- *uuid<uuid\_value>* – Displays the list event in the event log that matches the Universal Unique Identifier (UUID) value specified, where *<uuid\_value>* is the UUID value. For example, in the UUID specification `uuid042c2762-982f-11d7-800a-080020fa6556`, the UUID value is `042c2762-982f-11d7-800a-080020fa6556`. The UUID is used by the system to track fault management activity.
- *event\_code* – Displays the last list event that matches the specified event code, which is a dash-separated alphanumeric text string that uniquely identifies an event type, for example: `SF15000-8000-A1`. The event code summarizes the fault classes involved in the list events and is used by your service provider to obtain further information concerning the event.
- *number* – An integer that indicates a specific number of events to be displayed. The events displayed match any other arguments specified. If a number is specified with the `-p e` option, the specified number of the events in the event log is displayed. For example, `-p e 5` displays the last five events in the event log.

-v                      Verbose. Displays all available command information.

## EXTENDED DESCRIPTION

### Group Privileges Required

The group privileges determines the type of `showlogs` output that you can view:

- If you have platform administrator, operator, or service privileges, you can display the platform messages log file.
- If you have platform administrator or service privileges, you can display event log information.
- If you have domain administrator/configurator privileges, you can display only those log files for domains for which you have privileges.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

## EXAMPLES

### EXAMPLE 1    Displaying Platform Message Log to Standard Out

```
sc0:sms-user:> showlogs
Aug 24 14:30:53 2000 xc8-sc0 hwad[104609]: [0 5751139758216 ERR SCCSR.cc
1347] getCrt - Client: 104621.14 has locked - 167
Aug 24 14:30:53 2000 xc8-sc0 hwad[104609]: [0 5751170721148 ERR SCCSR.cc
1362] getCrt - Client: 104621.14 about to unlock - 167.....
```

### EXAMPLE 2    Displaying Domain A Message Log to Standard Out

```
sc0:sms-user:> showlogs -d A
Aug 15 14:28:05 2000 xc8-sc0 dsmd[106850]-A(): [0 8500962546702 INFO
Observers.cc 125] DOMAIN_UP A event has been sent to SYMON, rc = 0.
Aug 15 14:28:05 2000 xc8-sc0 dsmd[106850]-A(): [0 8500963756755 INFO
DomainMon.cc 183] Start monitoring domain A every 5 second....
```

### EXAMPLE 3    Displaying Newly Appended Lines to Domain A Message Log to Standard Out

```
sc0:sms-user:> showlogs -d A -F
Aug 25 14:28:05 2000 xc8-sc0 dsmd[106850]-A(): [0 8500960648900 INFO
Observers.c c 193] DOMAIN_UP A event has been sent to DXS, rc = 0.....
```

### EXAMPLE 4    Displaying Domain A Console Log to Standard Out

```
sc0:sms-user:> showlogs -d A -p c
** Domain Server Shutting Down - disconnecting
** Domain Server Shutting Down - disconnecting
Sun Fire 15K/E25K system, using IOSRAM based Console OpenBoot 4.0, 2048
MB memory installed, Serial #10000000. Ethernet address 8:0:20:b8:2d:b1,
Host ID: 80a3e446.
```

**EXAMPLE 5** Displaying Domain sms2 Syslog to Standard Out

```

sc0:sms-user:> showlogs -d sms2 -p s
Sep 7 13:51:49 sms2 agent[6629]: [ID 240586 daemon.alert] syslog
Sep 7 13:51:49 agent {received software termination signal)
Sep 7 13:51:49 sms2 agent[6629]: [ID 985882 daemon.alert] syslog
Sep 7 13:51:49 agent *** terminating execution ***
Sep 7 13:51:50 sms2 platform[22481]: [ID 345917 daemon.alert] syslog
Sep 7 13:51:50 platform *** terminating execution ***
Sep 7 14:49:07 sms2 platform[4309]: [ID 745356 daemon.alert] syslog
Sep 7 14:49:07 platform general parsing error
Sep 7 14:49:07 sms2 platform[4309]: [ID 334248 daemon.alert] syslog
Sep 7 14:49:07 platform file://localhost/scmonitor-d.x;flags=ro
Sep 7 14:49:07 sms2 platform[4309]: [ID 449452 daemon.alert] syslog
Sep 7 14:49:07 platform couldn't load file ...

```

**EXAMPLE 6** Displaying the Last Event in the Event Log

```

sc0:sms-user:> showlogs -p e
version: 1
class: list.suspects
fault-diag-time: Mon Jun 6 17:20:15 MDT 2005
DE:
 scheme: diag-engine
 authority:
 product-id: SF15000
 chassis-id: 301AFFFFFF
 domain-id: D
 name: sms-de
 version: 1.5
uuid: 0x147e965ebb5ec
code: SF15000-8000-A1
list-sz: 1
fault-events:
 version: 1
 class: fault.board.io.proc
 fault-diag-time: Mon Jun 6 17:20:15 MDT 2005
 DE:
 scheme: diag-engine
 authority:
 product-id: SF15000
 chassis-id: 301AFFFFFF
 domain-id: D
 name: sms-de
 version: 1.5
 ENA-list-sz: 4
 ENA-list: 0x62a6680600000002
 0x636a74de00000402
 0x6400cd9800000802
 0x64be80d400000c02
 FRU:
 scheme: sf-hc
 part: 5015396
 serial: 445883
 authority:
 product-id: SF15000
 chassis-id: 301AFFFFFF
 domain-id: D

```

```

 component: IO15
resource:
 scheme: sf-hc
 part: 5015396
 serial: 445883
 authority:
 product-id: SF15000
 chassis-id: 301AFFFFFF
 domain-id: D
 component: io15/p0
certainty: 100

```

#### EXAMPLE 7 Displaying the Last Event in the Event Log – Condensed Format

```

sc0:sms-user:> showlogs -E -p e
List Event Class: list.suspects
Diagnosis Engine Name: sms-de
Diagnosis EngineVersion: 1.5
Timestamp: Mon Jun 6 17:20:15 MDT 2004
Code: SF15000-8000-A1

Number of fault events: 1
Fault Event Class: fault.board.io.proc
Fault Event Timestamp: Mon Jun 6 17:20:15 MDT 2005
Domain ID affected by the failure: D
Diagnosis Engine Name: sms-de
Diagnosis Engine Version: 1.5

Indicted resource component: io15/p0
PnSn: 5015396445883

Certainty: 100
FRU: IO15
Part Number Serial Number : 5015396445883

```

#### EXAMPLE 8 Displaying the Last Three List Events in the Event Log – Condensed Format

```

sc0:sms-user:> showlogs -E -p e list 3
List Event Class: list.suspects
Diagnosis Engine Name: sms-de
Diagnosis EngineVersion: 1.5
Timestamp: Mon Jun 6 17:20:15 MDT 2005
Code: SF15000-8000-A1

Number of fault events: 1
Fault Event Class: fault.board.io.proc
Fault Event Timestamp: Mon Jun 6 17:20:15 MDT 2005
Domain ID affected by the failure: D
Diagnosis Engine Name: sms-de
Diagnosis Engine Version: 1.5

Indicted resource component: io15/p0
PnSn: 5015396445883

Certainty: 100
FRU: IO15

```



Part Number Serial Number : 5015396445883

List Event Class: list.suspects  
 Diagnosis Engine Name: sms-de  
 Diagnosis EngineVersion: 1.5  
 Timestamp: Mon Jun 6 13:21:20 MDT 2005  
 Code: SF15000-8000-A1

Number of fault events: 1  
 Fault Event Class: fault.board.io.proc  
 Fault Event Timestamp: Mon Jun 6 13:21:20 MDT 2005  
 Domain ID affected by the failure: D  
 Diagnosis Engine Name: sms-de  
 Diagnosis Engine Version: 1.5

Indicted resource component: io4/p1  
 PnSn: 5015397028518

Certainty: 100  
 FRU: IO4  
 Part Number Serial Number : 5015397028518

List Event Class: list.suspects  
 Diagnosis Engine Name: sms-de  
 Diagnosis EngineVersion: 1.5  
 Timestamp: Mon Jun 6 13:15:18 MDT 2005  
 Code: SF15000-8000-A1

Number of fault events: 1  
 Fault Event Class: fault.board.io.proc  
 Fault Event Timestamp: Mon Jun 6 13:15:18 MDT 2005  
 Domain ID affected by the failure: D  
 Diagnosis Engine Name: sms-de  
 Diagnosis Engine Version: 1.5

Indicted resource component: io17/p1  
 PnSn: 5015397028488

Certainty: 100  
 FRU: IO17  
 Part Number Serial Number : 5015397028488

#### EXAMPLE 9 Displaying the Event Log for a Specific Event Code – Condensed Format

```
sc0:sms-user:> showlogs -E -p e SF15000-8000-H7
```

List Event Class: list.suspects  
 Diagnosis Engine Name: sms-de  
 Diagnosis EngineVersion: 1.5  
 Timestamp: Mon Jun 6 12:28:12 MDT 2005  
 Code: SF15000-8000-H7

Number of fault events: 1  
 Fault Event Class: fault.board.sb.proc  
 Fault Event Timestamp: Mon Jun 6 12:28:12 MDT 2005  
 Domain ID affected by the failure: B  
 Diagnosis Engine Name: sms-de  
 Diagnosis Engine Version: 1.5

Indicted resource component: sb12/p0

## showlogs(1M)

```
PnSn: 5014362008423
Certainty: 100
FRU: SB12
Part Number Serial Number : 5014362008423
```

### EXAMPLE 10 Displaying an Ereport (Error Report) – Condensed Format

```
sc0:sms-user:> showlogs -E -p e ereport
Error Event Class:
ereport.asic.proc.emushad.isap:_system_request_parity_error_on_incoming
addr.
Domain ID affected by the failure: D
```

### EXIT STATUS

The following exit values are returned:

```
0 Successful completion.
>0 An error occurred.
```

### FILES

The following files are used:

```
/var/opt/SUNWSMS/adm/platform/messages Platform message file
/var/opt/SUNWSMS/adm/domain_id/messages Domain message file
/var/opt/SUNWSMS/adm/domain_id/console Domain console file
/var/opt/SUNWSMS/adm/domain_id/syslog Domain syslog file
/var/opt/SUNWSMS/SMS/adm/platform/events/eventlog Stores all the hardware-
related error and fault
events
```

### ATTRIBUTES

See attributes(5) for a description of the following attribute.

| Attribute Type | Attribute Value |
|----------------|-----------------|
| Availability   | SUNWSMSop       |

### SEE ALSO

tail(1)

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | showobpparams - display OpenBoot PROM bring up parameters for a domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SYNOPSIS</b>                  | <b>showobpparams</b> -d <i>domain_indicator</i> [-v ]<br><b>showobpparams</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>DESCRIPTION</b>               | showobpparams(1M) enables a domain administrator to display the virtual NVRAM and REBOOT parameters passed to OpenBoot PROM by setkeyswitch(1M). The -d option with <i>domain_id</i> or <i>domain_tag</i> is required.                                                                                                                                                                                                                                                                                                                                         |
| <b>OPTIONS</b>                   | The following options are supported:<br><br>-d <i>domain_indicator</i> Specifies the domain using one of the following:<br><br><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.<br><br><i>domain_tag</i> – Name assigned to a domain using addtag(1M).<br><br>-h                              Help. Displays usage descriptions.<br><br><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.<br><br>-v                              Verbose. Displays all available command information. |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Group Privileges Required</b> | You must have domain administrator or domain configurator privileges for the specified domain to run this command.<br><br>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.                                                                                                                                                                                                                                                                                                                                   |
| <b>EXAMPLES</b>                  | <b>EXAMPLE 1</b> Displaying OpenBoot PROM Parameters for Domain A<br><br>sc0:sms-user:> <b>showobpparams -d a</b><br>auto-boot?=false<br>diag-switch?=true<br>fcode-debug?=false<br>use-nvramrc?=false<br>security-mode=none                                                                                                                                                                                                                                                                                                                                   |
| <b>EXIT STATUS</b>               | The following exit values are returned:<br><br>0                              Successful completion.<br><br>>0                             An error occurred.                                                                                                                                                                                                                                                                                                                                                                                                  |

showobpparams(1M)

**ATTRIBUTES**

See attributes (5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

addtag(1M), setkeyswitch(1M), setobpparams(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | showplatform - display the platform type, board available component list, the domain state for each domain, and Capacity on Demand (COD) information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>SYNOPSIS</b>    | <b>showplatform</b> [-d <i>domain_indicator</i> ] [-p <i>report</i> ] [-v ]<br><b>showplatform</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>DESCRIPTION</b> | <p>showplatform(1M) displays the platform type, chassis serial number, available component list, domain state, and Ethernet address for domains. COD information includes the headroom amount, number of installed COD right-to-use (RTU) licenses, and the number of COD RTU licenses reserved for domains. If a <i>domain_id</i> or <i>domain_tag</i> is specified, only the information for that domain is displayed. If <i>domain_indicator</i> and -p option are not specified, the available component list, domain states, Ethernet addresses, and COD information for all domains for which you have privileges are displayed.</p> <p>For platform type, older Sun Fire 12K/15K systems will display Sun Fire 15000, unless they have been manually updated by Sun service. Newer systems will display one of the following:</p> <ul style="list-style-type: none"><li>Sun Fire 12K</li><li>Sun Fire 15K</li><li>Sun Fire E20K</li><li>Sun Fire E25K</li></ul> |

**OPTIONS**

The following options are supported:

- `-d domain_indicator` Specifies the domain using one of the following:
- domain\_id* – ID for a domain. Valid *domain\_ids* are A–R and are not case sensitive.
- domain\_tag* – Name assigned to a domain using `addtag(1M)`.
- `-h` Help. Displays usage descriptions.
- Note** – Use alone. Any option specified in addition to `-h` is ignored.
- `-p report` Displays specific reports.
- Valid reports are:
- |                        |                                                                         |
|------------------------|-------------------------------------------------------------------------|
| <code>domains</code>   | List output is grouped by domain state.                                 |
| <code>available</code> | List output is grouped by domain available component list.              |
| <code>ethernet</code>  | List output is grouped by domain Ethernet addresses.                    |
| <code>cod</code>       | Capacity on Demand information is displayed.                            |
| <code>csn</code>       | The chassis serial number of the Sun Fire high-end system is displayed. |
| <code>platform</code>  | Displays the platform type of the Sun Fire high-end system.             |
- `-v` Verbose. Displays all available command information.

**EXTENDED DESCRIPTION**

The domain status is one of the following:

- |                     |                                                                                                                                                                      |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unknown             | The domain state could not be determined. For Ethernet addresses, the domain <code>idprom</code> image file does not exist. Contact your Sun service representative. |
| Powered Off         | The domain is powered off.                                                                                                                                           |
| Keyswitch Standby   | The keyswitch for the domain is in STANDBY position.                                                                                                                 |
| Running Domain POST | The domain power-on self-test is running.                                                                                                                            |
| Loading OBP         | The OpenBoot PROM for the domain is being loaded.                                                                                                                    |

|                             |                                                                      |
|-----------------------------|----------------------------------------------------------------------|
| Booting OBP                 | The OpenBoot PROM for the domain is booting.                         |
| Running OBP                 | The OpenBoot PROM for the domain is running.                         |
| In OBP Callback             | The domain has been halted and has returned to the OpenBoot PROM.    |
| Loading Solaris             | The OpenBoot PROM is loading the Solaris software.                   |
| Booting Solaris             | The domain is booting the Solaris software.                          |
| Domain Exited OBP           | The domain OpenBoot PROM has exited.                                 |
| OBP Failed                  | The domain OpenBoot PROM has failed.                                 |
| OBP in sync Callback to OS  | The OpenBoot PROM is in sync callback to the Solaris software.       |
| Exited OBP                  | The OpenBoot PROM has exited.                                        |
| In OBP Error Reset          | The domain is in OpenBoot PROM due to an error reset condition.      |
| Solaris Halted, in OBP      | Solaris software is halted and the domain is in OpenBoot PROM.       |
| OBP Debugging               | The OpenBoot PROM is being used as a debugger.                       |
| Environmental Domain Halt   | The domain was shut down due to an environmental emergency.          |
| Booting Solaris Failed      | OpenBoot PROM is running, but boot attempt has failed.               |
| Loading Solaris Failed      | OpenBoot PROM is running, but loading attempt has failed.            |
| Running Solaris             | Solaris software is running on the domain.                           |
| Solaris Quiesce In-progress | A Solaris software quiesce is in progress.                           |
| Solaris Quiesced            | Solaris software has quiesced.                                       |
| Solaris Resume In-progress  | A Solaris software resume is in progress.                            |
| Solaris Panic               | Solaris software has panicked, and panic flow has started.           |
| Solaris Panic Debug         | Solaris software has panicked and is entering debugger mode.         |
| Solaris Panic Continue      | Solaris software has exited debugger mode, and panic flow continues. |

|                            |                                                                             |
|----------------------------|-----------------------------------------------------------------------------|
| Solaris Panic Dump         | Panic dump has started.                                                     |
| Solaris Halt               | Solaris software is halted.                                                 |
| Solaris Panic Exit         | Solaris software has exited as a result of a panic.                         |
| Environmental<br>Emergency | An environmental emergency has been detected.                               |
| Debugging Solaris          | Debugging Solaris software; this is not a hung condition.                   |
| Solaris Exited             | Solaris software has exited.                                                |
| Domain Down                | The domain is down and setkeyswitch is in the ON, DIAG, or SECURE position. |
| In Recovery                | The domain is in the midst of an automatic system recovery.                 |

### Group Privileges Required

If you have platform administrator, operator, or service privileges, `showplatform` displays the available component list and board state information on all domains. Otherwise, only information for domains for which you have domain administrator or configurator privileges is displayed.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

**Note** – An Unknown state for an Ethernet address as shown in the following example indicates a missing `idprom` image file for the domain. Contact your Sun service representative.

**EXAMPLE 1** Displaying the Available Component List, Domain State, and COD Information for All Domains on a Sun Fire 15K/E25K System

The output shown is what you would see if you had platform privileges.

```
sc0:sms-user:> showplatform

PLATFORM:
=====
Platform Type: Sun Fire 15000

CSN:
====
Chassis Serial Number: 353A00053

COD:
====
Chassis HostID : 5014936C37048
PROC RTUs installed : 8
PROC Headroom Quantity : 0
PROC RTUs reserved for domain A : 4
```



```

PROC RTUs reserved for domain B : 0
PROC RTUs reserved for domain C : 0
PROC RTUs reserved for domain D : 0
PROC RTUs reserved for domain E : 0
PROC RTUs reserved for domain F : 0
PROC RTUs reserved for domain G : 0
PROC RTUs reserved for domain H : 0
PROC RTUs reserved for domain I : 0
PROC RTUs reserved for domain J : 0
PROC RTUs reserved for domain K : 0
PROC RTUs reserved for domain L : 0
PROC RTUs reserved for domain M : 0
PROC RTUs reserved for domain N : 0
PROC RTUs reserved for domain O : 0
PROC RTUs reserved for domain P : 0
PROC RTUs reserved for domain Q : 0
PROC RTUs reserved for domain R : 0

```

Available Component List for Domains:

```

=====
Available for domain newA:
 SB0 SB1 SB2 SB7
 IO1 IO3 IO6
Available for domain engB:
 No System boards
 No IO boards
Available for domain domainC:
 No System boards
 IO0 IO1 IO2 IO3 IO4
Available for domain eng1:
 No System boards
 No IO boards
Available for domain E:
 No System boards
 No IO boards
Available for domain domainF:
 No System boards
 No IO boards
Available for domain dmnG:
 No System boards
 No IO boards
Available for domain domain H:
 No System boards
 No IO boards
Available for domain I:
 No System boards
 No IO boards
Available for domain dmnJ:
 No System boards
 No IO boards
Available for domain K:
 No System boards
 No IO boards
Available for domain L:
 No System boards
 No IO boards
Available for domain M:
 No System boards
 No IO boards

```

```

Available for domain N:
 No System boards
 No IO boards
Available for domain O:
 No System boards
 No IO boards
Available for domain P:
 No System boards
 No IO boards
Available for domain Q:
 No System boards
 No IO boards
Available for domain dmnR:
 No System boards
 No IO boards

```

Domain Ethernet Addresses:

```

=====
Domain ID Domain Tag Ethernet Address
A newA 8:0:20:b8:79:e4
B engB 8:0:20:b4:30:8c
C domainC 8:0:20:b7:30:b0
D - 8:0:20:b8:2d:b0
E eng1 8:0:20:f1:b7:0
F domainF 8:0:20:be:f8:a4
G dmnG 8:0:20:b8:29:c8
H - 8:0:20:f3:5f:14
I - 8:0:20:be:f5:d0
J dmnJ UNKNOWN
K - 8:0:20:f1:ae:88
L - 8:0:20:b7:5d:30
M - 8:0:20:f1:b8:8
N - 8:0:20:f3:5f:74
O - 8:0:20:f1:b8:8
P - 8:0:20:b8:58:64
Q - 8:0:20:f1:b7:ec
R dmnR 8:0:20:f1:b7:10

```

Domain Configurations:

```

=====
DomainID Domain Tag Solaris Nodename Domain Status
A newA - Powered Off
B engB sun15-b Keyswitch Standby
C domainC sun15-c Running OBP
D - sun15-d Running Solaris
E eng1 sun15-e Running Solaris
F domainF sun15-f Running Solaris
G dmnG sun15-g Running Solaris
H - sun15-g Solaris Quiesced
I - - Powered Off
J dmnJ - Powered Off
K - sun15-k Booting Solaris
L - - Powered Off
M - - Powered Off
N - sun15-n Keyswitch Standby
O - - Powered Off

```

|   |      |         |                 |
|---|------|---------|-----------------|
| P | -    | sun15-p | Running Solaris |
| Q | -    | sun15-q | Running Solaris |
| R | dnmR | sun15-r | Running Solaris |

**EXAMPLE 2** Showing the Available Component List and Domain State for Domain engB

```
sc0:sms-user:> showplatform -d engB
```

```
PLATFORM TYPE:
```

```
====
```

```
Platform Type: Sun Fire 15000
```

```
COD:
```

```
====
```

```
PROC RTUs reserved for domain B : 0
```

```
Available Component List for Domains:
```

```
=====
```

```
Available for domain engB:
```

```
SB4 SB5 SB6
```

```
IO4 IO5
```

```
Domain Ethernet Addresses:
```

```
=====
```

| Domain ID | Domain Tag | Ethernet Address |
|-----------|------------|------------------|
|-----------|------------|------------------|

|   |      |                 |
|---|------|-----------------|
| B | engB | 8:0:20:b4:30:8c |
|---|------|-----------------|

```
Domain Configurations:
```

```
=====
```

| DomainID | Domain Tag | Solaris Nodename | Domain Status     |
|----------|------------|------------------|-------------------|
| B        | engB       | sun15-b          | Keyswitch Standby |

**EXAMPLE 3** Displaying the Platform for Domain Administrators

The following example shows the domain available component list and state information for all domains for which you have domain administrator or configurator privileges; in this case, domains engB, C, and E.

```
sc0:sms-user:> showplatform

PLATFORM TYPE
=====
Platform type: Sun Fire 15000

COD:
====
PROC RTUs reserved for domain B : 0
PROC RTUs reserved for domain C : 0
PROC RTUs reserved for domain E : 0

Available Component List for Domains:
=====
Available for domain engB:
 SB1 SB2 SB3 SB4 SB5 SB6
 IO1 IO2 IO3 IO4 IO5 IO6 IO7
Available for domain C:
 SB1 SB2 SB3 SB4 SB5 SB6
 IO1 IO2 IO3 IO4 IO5 IO6 IO7
Available for domain E:
 SB1 SB2 SB3 SB4 SB5 SB6
 IO1 IO2 IO3 IO4 IO5 IO6 IO7

Domain Ethernet Addresses:
=====
Domain ID Domain Tag Ethernet Address
B engB 8:0:20:b4:30:8c
C domainC 8:0:20:b7:30:b0
E engl 8:0:20:f1:b7:0

Domain Configurations:
=====
DomainID Domain Tag Solaris Nodename Domain Status
B engB sun15-b Keyswitch Standby
C domainC sun15-c Running OBP
E engl sun15-e Running Solaris
```

**EXAMPLE 4** Showing the Available Component List for Domain engB

```
sc0:sms-user:> showplatform -d engB -p available

Available Component List for Domains:
=====
Available for domain engB:
 SB4 SB5 SB6
 IO4 IO5
```

**EXAMPLE 5** Displaying Domain Status for Domain engB

```
sc0:sms-user:> showplatform -d engB -p domains

Domain Configurations:
=====
DomainID Domain Tag Solaris Nodename Domain Status
B engB sun15-b Keyswitch Standby
```

**EXAMPLE 6** Displaying COD Right-to-Use (RTU) License Reservation for Domain engB

```
sc0:sms-user:> showplatform -d engB -p cod

COD:
====
PROC RTUs reserved for domain B : 0
```

**EXAMPLE 7** Displaying All COD Information

The output shown is what you would see if you had platform privileges. If the Chassis HostID value is Unknown, power on the centerplane support boards and then run the command `showplatform -p cod` again to display the Chassis HostID. After you power on the centerplane support boards, allow up to one minute for the Chassis HostID information to display in the `showplatform` output.

```
sc0:sms-user:> showplatform -p cod

COD:
====
Chassis HostID : 5014936C37048
PROC RTUs installed : 8
PROC Headroom Quantity : 0
PROC RTUs reserved for domain A : 4
PROC RTUs reserved for domain B : 0
PROC RTUs reserved for domain C : 0
PROC RTUs reserved for domain D : 0
PROC RTUs reserved for domain E : 0
PROC RTUs reserved for domain F : 0
PROC RTUs reserved for domain G : 0
PROC RTUs reserved for domain H : 0
PROC RTUs reserved for domain I : 0
PROC RTUs reserved for domain J : 0
PROC RTUs reserved for domain K : 0
PROC RTUs reserved for domain L : 0
PROC RTUs reserved for domain M : 0
PROC RTUs reserved for domain N : 0
PROC RTUs reserved for domain O : 0
PROC RTUs reserved for domain P : 0
PROC RTUs reserved for domain Q : 0
PROC RTUs reserved for domain R : 0
```

**EXIT STATUS**

The following exit values are returned:

|   |                                                                                         |
|---|-----------------------------------------------------------------------------------------|
| 0 | Successful completion.                                                                  |
| 1 | An invalid domain was specified.                                                        |
| 2 | An invalid command-line option was specified.                                           |
| 3 | An incorrect number of domains was specified.                                           |
| 4 | The user does not have valid privileges.                                                |
| 5 | An error occurred while communicating with the platform configuration daemon (pcd(1M)). |
| 6 | An error occurred while communicating with the hardware access daemon (hwad(1M)).       |
| 7 | An error occurred while communicating with the task management daemon (tmd(1M)).        |
| 8 | An internal error occurred.                                                             |
| 9 | An error occurred while communicating with the Capacity on Demand daemon (codd(1M)).    |

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types     | Attribute Values |
|---------------------|------------------|
| Availability        | SUNWSMSop        |
| Interface Stability | Evolving         |
| Command Output      | Unstable         |

**SEE ALSO**

`addcodlicense(1M)`, `addtag(1M)`, `hwad(1M)`, `pcd(1M)`, `setupplatform(1M)`, `tmd(1M)`

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | showxirstate - display CPU dump information only after a reset pulse has been sent to the processors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>SYNOPSIS</b>                  | <p><b>showxirstate</b> -d <i>domain_indicator</i> [-v ]</p> <p><b>showxirstate</b> -f <i>filename</i> [-v ]</p> <p><b>showxirstate</b> -h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>DESCRIPTION</b>               | <p>showxirstate(1M) displays CPU dump information, but only after a reset pulse (with the reset -x command) has been sent to the processors. This save-state dump can be used to analyze the cause of abnormal domain behavior. showxirstate creates a list of all active processors in that domain and retrieves the save-state information for each processor, including its signature.</p> <p>If a <i>domain_indicator</i> or <i>filename</i> is not specified, showxirstate returns an error.</p>                                                                                                                                                                                                                                                                                                                                                 |
| <b>OPTIONS</b>                   | <p>The following options are supported:</p> <p>-d <i>domain_indicator</i>      Specifies the domain using one of the following:</p> <p style="padding-left: 40px;"><i>domain_id</i> – ID for a domain. Valid <i>domain_ids</i> are A–R and are not case sensitive.</p> <p style="padding-left: 40px;"><i>domain_tag</i> – Name assigned to a domain using addtag(1M).</p> <p>-f <i>filename</i>                Name of the file containing a previously generated xir_dump. The default is /var/opt/SUNWSMS/adm/<i>domain_id</i>/dump and cannot be changed.</p> <p>-h                              Help. Displays usage descriptions.</p> <p style="padding-left: 40px;"><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-v                              Verbose. Displays all available command information.</p> |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Group Privileges Required</b> | <p>You must have domain administrator privileges on the specified domain to run this command. No special privileges are required to read the xir_dump files.</p> <p>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## EXAMPLES

## EXAMPLE 1 Displaying Dump Information for Domain A With 1 CPU

```

sc0:sms-user:> showxirstate -dA

Location: SB4/P0
XIR Magic XIR Version 00415645 Buglevel 00000000

XIR Save Total Size 0x58495253 bytes

ver : 00000000.00000000
tba : 00000000.00000000

pil : 0x0
y : 00000000.00000000
afsr : 00000000.00000000 afar : 00000000.00000000
pcontext: 00000000.00000000 scontext: 00000000.00000000
dcu : 00000000.00000000
dcr : 00000000.00000000
pcr : 00000000.00000000
gsr : 00000000.00000000
softint : 0x0000
pa_watch: 00000000.00000000
va_watch: 00000000.00000000
instbp : 00000000.00000000
tick: 00000000.00000000 tick_cmpr: 00000000.00000000
stick: 00000000.00000000 stick_cmpr: 00000000.00000000
tl: 0

tt tstate tpc tnpc
0x00 0x000000000000 00000000.00000000 00000000.00000000
0x00 0x000000000000 00000000.00000000 00000000.00000000
0x00 0x000000000000 00000000.00000000 00000000.00000000
0x00 0x000000000000 00000000.00000000 00000000.00000000
0x00 0x000000000000 00000000.00000000 00000000.00000000

Globals:
R Normal Alternate Interrupt MMU
0 00000000.00000000 00000000.00000000 00000000.00000000
00000000.00000000
1 00000000.00000000 00000000.00000000 00000000.00000000
00000000.00000000
2 00000000.00000000 00000000.00000000 00000000.00000000
00000000.00000000
3 00000000.00000000 00000000.00000000 00000000.00000000
00000000.00000000
4 00000000.00000000 00000000.00000000 00000000.00000000
00000000.00000000
5 00000000.00000000 00000000.00000000 00000000.00000000
00000000.00000000
6 00000000.00000000 00000000.00000000 00000000.00000000
00000000.00000000
7 00000000.00000000 00000000.00000000 00000000.00000000
00000000.00000000

wstate: 0x00
cansave: 0 cleanwin: 0
canrestore: 0 otherwin: 0

Register Windows:
Window 0

```



| R Locals            | Ins               |
|---------------------|-------------------|
| 0 00000000.00000000 | 00000000.00000000 |
| 1 00000000.00000000 | 00000000.00000000 |
| 2 00000000.00000000 | 00000000.00000000 |
| 3 00000000.00000000 | 00000000.00000000 |
| 4 00000000.00000000 | 00000000.00000000 |
| 5 00000000.00000000 | 00000000.00000000 |
| 6 00000000.00000000 | 00000000.00000000 |
| 7 00000000.00000000 | 00000000.00000000 |

Window 1

| R Locals            | Ins               |
|---------------------|-------------------|
| 0 00000000.00000000 | 00000000.00000000 |
| 1 00000000.00000000 | 00000000.00000000 |
| 2 00000000.00000000 | 00000000.00000000 |
| 3 00000000.00000000 | 00000000.00000000 |
| 4 00000000.00000000 | 00000000.00000000 |
| 5 00000000.00000000 | 00000000.00000000 |
| 6 00000000.00000000 | 00000000.00000000 |
| 7 00000000.00000000 | 00000000.00000000 |

Window 2

| R Locals            | Ins               |
|---------------------|-------------------|
| 0 00000000.00000000 | 00000000.00000000 |
| 1 00000000.00000000 | 00000000.00000000 |
| 2 00000000.00000000 | 00000000.00000000 |
| 3 00000000.00000000 | 00000000.00000000 |
| 4 00000000.00000000 | 00000000.00000000 |
| 5 00000000.00000000 | 00000000.00000000 |
| 6 00000000.00000000 | 00000000.00000000 |
| 7 00000000.00000000 | 00000000.00000000 |

Window 3

| R Locals            | Ins               |
|---------------------|-------------------|
| 0 00000000.00000000 | 00000000.00000000 |
| 1 00000000.00000000 | 00000000.00000000 |
| 2 00000000.00000000 | 00000000.00000000 |
| 3 00000000.00000000 | 00000000.00000000 |
| 4 00000000.00000000 | 00000000.00000000 |
| 5 00000000.00000000 | 00000000.00000000 |
| 6 00000000.00000000 | 00000000.00000000 |
| 7 00000000.00000000 | 00000000.00000000 |

Window 4

| R Locals            | Ins               |
|---------------------|-------------------|
| 0 00000000.00000000 | 00000000.00000000 |
| 1 00000000.00000000 | 00000000.00000000 |
| 2 00000000.00000000 | 00000000.00000000 |
| 3 00000000.00000000 | 00000000.00000000 |
| 4 00000000.00000000 | 00000000.00000000 |
| 5 00000000.00000000 | 00000000.00000000 |
| 6 00000000.00000000 | 00000000.00000000 |
| 7 00000000.00000000 | 00000000.00000000 |

Window 5

| R Locals | Ins |
|----------|-----|
|----------|-----|

showxirstate(1M)

```
0 00000000.00000000 00000000.00000000
1 00000000.00000000 00000000.00000000
2 00000000.00000000 00000000.00000000
3 00000000.00000000 00000000.00000000
4 00000000.00000000 00000000.00000000
5 00000000.00000000 00000000.00000000
6 00000000.00000000 00000000.00000000
7 00000000.00000000 00000000.00000000
```

Window 6

R Locals Ins

```
0 00000000.00000000 00000000.00000000
1 00000000.00000000 00000000.00000000
2 00000000.00000000 00000000.00000000
3 00000000.00000000 00000000.00000000
4 00000000.00000000 00000000.00000000
5 00000000.00000000 00000000.00000000
6 00000000.00000000 00000000.00000000
7 00000000.00000000 00000000.00000000
```

Window 7

R Locals Ins

```
0 00000000.00000000 00000000.00000000
1 00000000.00000000 00000000.00000000
2 00000000.00000000 00000000.00000000
3 00000000.00000000 00000000.00000000
4 00000000.00000000 00000000.00000000
5 00000000.00000000 00000000.00000000
6 00000000.00000000 00000000.00000000
7 00000000.00000000 00000000.00000000
```

nest\_save\_ptr: 00000000

XIR Nest Version 00000000 Buglevel 00000000

XIR Nest nest\_count 0 save\_block 88

tick: 00000000.00000000

stick: 00000000.00000000

t1: 73

tt tstate tpc tnpc

0x00 0x000000000000 00000000.00000000 00000000.00000000

0x00 0x000000000000 00000000.00000000 00000000.00000000

```

0x00 0x0000000000 00000000.00000000 00000000.00000000
0x00 0x0000000000 00000000.00000000 00000000.00000000
0x00 0x0000000000 00000000.00000000 00000000.00000000

```

Processor signatures:

```

SB0/P0: Solaris/Run/Null (4f530100)
SB0/P1: Solaris/Run/Null (4f530100)
SB0/P2: Solaris/Run/Null (4f530100)
SB0/P3: Solaris/Run/Null (4f530100)
IO0/P0: Solaris/Run/Null (4f530100)
IO0/P1: Solaris/Run/Null (4f530100)
SB1/P0: OBP/???.Null (4f421300)
SB1/P1: Solaris/Run/Null (4f530100)
SB1/P2: OBP/Exit/Error Reset Reboot (4f420209)
SB1/p3: Solaris/Run/Null (4f530100)
IO1/P0: Solaris/Run/Null (4f530100)
IO1/P1: Solaris/Run/Null (4f530100)

```

**EXIT STATUS** The following exit values are returned:

```

0 Successful completion.
>0 An error occurred.

```

**ATTRIBUTES** See attributes(5) for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `reset(1M)`

## smsbackup(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | smsbackup - back up the SMS environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>SYNOPSIS</b>    | <b>smsbackup</b> <i>directory_name</i><br><b>smsbackup</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>DESCRIPTION</b> | <p>smsbackup(1M) creates a <code>cpio(1)</code> archive of files that maintain the operational environment of SMS. To create a complete and accurate backup, turn off SMS before running <code>smsbackup</code>. For information about manually starting and stopping SMS refer to the <i>System Management Services (SMS) 1.5 Installation Guide</i> .</p> <p>Whenever changes are made to the SMS environment—for example, by shutting down a domain— you must run <code>smsbackup</code> again to maintain a current backup file for the system controller.</p> <p>The name of the backup file is <code>sms_backup.X.X.cpio</code>, where <code>X.X</code> represents the active version from which the backup was taken.</p> <p>Restore SMS backup files using the <code>smsrestore(1M)</code> command.</p> <p>If any errors occur, <code>smsbackup</code> writes error messages to <code>/var/sadm/system/logs/smsbackup</code> if <code>/var/sadm/system/logs</code> exists and <code>/var/tmp</code> if it does not exist.</p> |
| <b>OPTIONS</b>     | <p>The following option is supported</p> <p>-h                    Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>OPERANDS</b>    | <p>The following operands are supported:</p> <p><i>directory_name</i>    Name of the directory in which the backup file is created. This file can reside in any directory on the system, connected network or tape device to which you have read/write privileges. If no <i>directory_name</i> is specified, a backup file is created in <code>/var/tmp</code>. The <i>directory_name</i> does not require the absolute path name for the file.</p> <p>The <i>directory_name</i> specified must be mounted as a UFS file system. Specifying a TMPFS file system, such as <code>/tmp</code>, causes <code>smsbackup</code> to fail. If you are not certain that your <i>directory_name</i> is mounted as a UFS file system, type:</p> <pre>/usr/bin/df -F ufs <i>directory_name</i></pre> <p>A UFS file system returns directory information. Any other type of file system returns a warning.</p>                                                                                                                                     |

**EXTENDED  
DESCRIPTION****Group Privileges  
Required**

You must have superuser privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1** Backing Up SMS to /var/opt/SUNWSMS/bkup

```
sc0:sms-user:> smsbackup /var/opt/SUNWSMS/bkup
```

**EXAMPLE 2** Backing Up SMS to Tape Device 0

```
sc0:sms-user:> smsbackup /dev/rmt/0
```

**EXAMPLE 3** Backing Up SMS to TMPFS System

```
sc0:sms-user:> smsbackup /tmp
```

```
ERROR: smsbackup fails to backup to /tmp, a TMPFS
file system. Please specify a directory that is
mounted on a UFS file system.
```

```
ABORT:
```

**EXIT STATUS**

The following exit values are returned:

0 Successful completion.

>0 An error occurred.

**FILES**

The following file is used by this command:

/var/sadm/system/logs/smsbackup smsbackup log file

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

`smsrestore(1M)`

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | smsconfig - configures the SMS environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SYNOPSIS</b>    | <pre> <b>smsconfig</b> -m <b>smsconfig</b> -m I1 [ <i>domain_id</i>   sc   netmask] <b>smsconfig</b> -m I2 [sc0   sc1   netmask] <b>smsconfig</b> -m L <b>smsconfig</b> -g <b>smsconfig</b> -a -u <i>username</i> -G <i>platform_role</i> platform <b>smsconfig</b> -r -u <i>username</i> -G <i>platform_role</i> platform <b>smsconfig</b> -a -u <i>username</i> -G <i>domain_role</i> <i>domain_id</i> <b>smsconfig</b> -r -u <i>username</i> -G <i>domain_role</i> <i>domain_id</i> <b>smsconfig</b> -l <i>domain_id</i> <b>smsconfig</b> -l platform <b>smsconfig</b> -v <b>smsconfig</b> -h </pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>DESCRIPTION</b> | <p>smsconfig(1M) configures the SMS environment in a three areas: network management, security, and user group privileges.</p> <p>smsconfig configures and modifies host name and IP address settings used by the MAN daemon, mand(1M). For each network, smsconfig can singularly set one or more <i>interface</i> designations within that network. By default, smsconfig steps through the configuration of both internal networks and the external community network.</p> <p><b>Note</b> – Once you have configured or changed the configuration of the MAN network you <i>must</i> reboot the system controller (SC) in order for the changes to take effect.</p> <p>To configure an individual network, append the <i>net_id</i> to the command line. Management network <i>net_ids</i> are designated I1, I2, and L. Configure a single <i>interface</i> within an enterprise network by specifying both the desired <i>interface</i> and its <i>net_id</i>. Any changes made to the network configuration on one SC using smsconfig -m must be run on the other SC. Network configurations files are not automatically propagated.</p> <p>For security purposes, SMS disables forwarding, broadcast, and multicast by setting the appropriate ndd utility variables upon startup.</p> |

`smsconfig` configures the UNIX groups used by SMS to describe user privileges. SMS uses a default set of UNIX groups installed locally on each SC. `smsconfig` enables you to customize those groups using the `-g` option. For more information refer to the *System Management Services (SMS) 1.5 Installation Guide*.

`smsconfig` also adds users to SMS groups and configures domain and platform administrative privileges. `smsconfig` sets access control list (ACL) attributes on SMS directories.

**Note** – Do *not* manually edit the `/etc/group` SMS file entries to add or remove users. Otherwise user access will be compromised.

## OPTIONS

The following options are supported:

- `-a` Adds a user to an SMS group and provides read, write, and execute access for a domain or for the platform directories. You must specify a valid *username*, SMS group, and if applicable, a *domain\_id*
- `-G` Indicates an SMS group. No group name is case sensitive.
- `-g` Configures the UNIX groups used by SMS to describe user privileges.
- `-h` Help. Displays usage descriptions.  
**Note** – Use alone. Any option specified in addition to `-h` is ignored.
- `-l` Lists all users with access to the specified SMS domain or platform.
- `-m` Configures all interfaces for all enterprise networks and the external community.
- `-m I1` Configures all interfaces for enterprise network I1. Network designation is not case sensitive. You can exclude a domain from the I1 network configuration by using the word `NONE` as the MAN *hostname*. This applies to the I1 network only.
- `-m I2` Configures all interfaces for enterprise network I2. Network designation is not case sensitive.
- `-m L` Configures all interfaces for the external community network. Network designation is not case sensitive.
- `-r` Removes a user from an SMS group and denies read, write, and execute access for a domain or for the platform directories. You must specify a valid *username*, SMS group and if applicable, a *domain\_id*.

- s This interface is deprecated. rsh/ssh is no longer required.
- u *username* Indicates user login name.
- v Displays the network configuration.

**OPERANDS**

The following operands are supported:

- domain\_id* ID for a domain. Valid *domain\_ids* are A–R and are not case sensitive.
- domain\_role* Valid *domain\_roles* are:
  - adm
  - rcfg
- platform* Specifies the Sun Fire high-end platform and platform-specific directories. The platform name must begin with a letter, can contain numbers, letters, and the "-" symbol, and must not exceed 15 characters. (It must comply with RFC-921.) The platform name is used as the default prefix for hostnames of internal network interfaces. In Example 1, below, the platform name is sun15.
- platform\_role* Valid *platform\_roles* are:
  - adm
  - oper
  - svc
- SC0, SC1 Interface designation for the Sun Fire high end systems SC. Interface designations are not case sensitive.
- netmask* A 32-bit number that masks or screens out the network part of an IP address in a subnet so that only the host computer part of the address remains visible. Commonly displayed in decimal numbers; for example, 255.255.255.0 is a common netmask in a Class C subnet. *netmask* is not case sensitive.

**EXTENDED DESCRIPTION**

**Group Privileges Required**

You must have superuser privileges to run this command.  
 Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.



**EXAMPLES** | Setting Up the MAN Network

You must configure all interfaces in the MAN network. This example steps through all the prompts needed to completely set up all three enterprise networks using IPv4.

Caution — The IP addresses shown in the following examples are examples only. Refer to your *Sun Fire System Site Planning Guide* for valid IP addresses for your network. Using invalid network IP addresses could, under certain circumstances, make your system unbootable!

There are no prompts for netmasks, and `/etc/ipnodes` are modified in addition to `/etc/hosts`.

On the CP1500 board, the default NICs for community C1 are `hme0` and `eri1`. On the CP2140 board, they are `eri0` and `eri3`. The CP2140 board has no `hme` devices. IP addresses on the external network for `failover`, `hme0`, `eri0`, `eri1`, and `eri3` on each SC must be unique. The floating IP address is the same on both SCs.

By default, the I1 network settings are derived from the base network address entered for that network. You can exclude a domain from the I1 network configuration by using the word `NONE` as the MAN *hostname*. See [EXAMPLE 4](#). For more information, refer to the *System Management Services (SMS) 1.5 Installation Guide*.

Once you have configured the MAN network, you *must* reboot the SC.

**EXAMPLE 1** | Configuring the MAN Network

```
sc0:# smsconfig -m
The platform name identifies the entire host machine to the SMS software.
The platform name occupies a different name space than domain names
(hostnames of bootable systems).

What is the name of the platform this SMS will service? sun15

Configuring the External Network for Community C1

Do you want to define this Community? [y,n] y
Two network interfaces controllers (NICs) are required for IPMP network
failover.
Enter NICs associated with community C1 [hme0 eri1]: [Return]

Enter hostname for hme0 [sun15-sc0-hme0]: [Return]
Enter IP address for sun15-sc0-hme0: 10.1.1.52

Enter hostname for eri1 [sun15-sc0-eri1]: [Return]
Enter IP address for sun15-sc0-eri1: 10.1.1.53

The Logical/Floating IP hostname and address will "float" over to
whichever system controller (SC0 or SC1) is acting as the main SC.

Enter Logical/Floating IP hostname for community C1 [sun15-sc-C1]:
[Return]
Enter IP address for sun15-sc-C1: 10.1.1.50
```

Enter Netmask for community C1: **255.255.255.0**

Enter hostname for community C1 failover address [sun15-sc0-C1-failover]: **[Return]**

Enter IP address for sun15-sc0-C1-failover: **10.1.1.51**

| Hostname              | IP Address (platform=sun15) |
|-----------------------|-----------------------------|
| -----                 | -----                       |
| sun15-sc-C1           | 10.1.1.50                   |
| sun15-sc0-C1-failover | 10.1.1.51                   |
| sun15-sc0-eri0        | 10.1.1.52                   |
| sun15-sc0-eri3        | 10.1.1.53                   |

Do you want to:

- 1) Accept these network settings.
- 2) Edit these network settings.
- 3) Delete these network settings and go onto the next community? [y,n] **y**

Configuring the External Network for Community C2

Do you want to define this Community? [y,n] **n**

Configuring I1 Management Network - 'I1' is the Domain to SC MAN.

MAN I1 Network Identification

Enter the IP network number (base address) for the I1 network: **10.2.1.0**

Enter the netmask for the I1 MAN network [ 255.255.255.224 ]: **[Return]**

| Hostname    | IP Address      | platform=sun15) |
|-------------|-----------------|-----------------|
| -----       | -----           |                 |
| netmask-i1  | 255.255.255.224 |                 |
| sun15-sc-i1 | 10.2.1.1        |                 |
| sun15-a     | 10.2.1.2        |                 |
| sun15-b     | 10.2.1.3        |                 |
| sun15-c     | 10.2.1.4        |                 |
| sun15-d     | 10.2.1.5        |                 |
| sun15-e     | 10.2.1.6        |                 |
| sun15-f     | 10.2.1.7        |                 |
| sun15-g     | 10.2.1.8        |                 |
| sun15-h     | 10.2.1.9        |                 |
| sun15-i     | 10.2.1.10       |                 |
| sun15-j     | 10.2.1.11       |                 |
| sun15-k     | 10.2.1.12       |                 |
| sun15-l     | 10.2.1.13       |                 |
| sun15-m     | 10.2.1.14       |                 |
| sun15-n     | 10.2.1.15       |                 |
| sun15-o     | 10.2.1.16       |                 |
| sun15-p     | 10.2.1.17       |                 |
| sun15-q     | 10.2.1.18       |                 |
| sun15-r     | 10.2.1.19       |                 |

Do you want to accept these network settings? [y,n] **y**

Configuring I2 Management Network - 'I2' is for SC to SC MAN.

MAN I2 Network Identification

Enter the IP network number (base address) for the I2 network: **10.3.1.0**

Enter the netmask for the I2 MAN network [ 255.255.255.252 ]: **[Return]**

| Hostname | IP Address (platform=sun15) |
|----------|-----------------------------|
| -----    | -----                       |

```

netmask-i2 255.255.255.252
sun15-sc0-i2 10.3.1.1
sun15-sc1-i2 10.3.1.2

```

Do you want to accept these settings? [y,n] **y**  
 Creating /.rhosts to facilitate file propagation ... done.

MAN Network configuration modified!  
 Changes will take effect on next reboot.

The following changes are about to be applied to the "/etc/hosts" hosts file.

```

ADD: 10.2.1.2 sun15-a #smsconfig-entry#
ADD: 10.2.1.3 sun15-b #smsconfig-entry#
ADD: 10.2.1.4 sun15-c #smsconfig-entry#
ADD: 10.2.1.5 sun15-d #smsconfig-entry#
ADD: 10.2.1.6 sun15-e #smsconfig-entry#
ADD: 10.2.1.7 sun15-f #smsconfig-entry#
ADD: 10.2.1.8 sun15-g #smsconfig-entry#
ADD: 10.2.1.9 sun15-h #smsconfig-entry#
ADD: 10.2.1.10 sun15-i #smsconfig-entry#
ADD: 10.2.1.11 sun15-j #smsconfig-entry#
ADD: 10.2.1.12 sun15-k #smsconfig-entry#
ADD: 10.2.1.13 sun15-l #smsconfig-entry#
ADD: 10.2.1.14 sun15-m #smsconfig-entry#
ADD: 10.2.1.15 sun15-n #smsconfig-entry#
ADD: 10.2.1.16 sun15-o #smsconfig-entry#
ADD: 10.2.1.17 sun15-p #smsconfig-entry#
ADD: 10.2.1.18 sun15-q #smsconfig-entry#
ADD: 10.2.1.19 sun15-r #smsconfig-entry#
ADD: 10.2.1.1 sun15-sc-i1 #smsconfig-entry#
ADD: 10.1.1.50 sun15-sc-C1 #smsconfig-entry#
ADD: 10.1.1.51 sun15-sc0-C1-failover #smsconfig-entry#
ADD: 10.1.1.52 sun15-sc0-hme0 #smsconfig-entry#
ADD: 10.1.1.53 sun15-sc0-eri1 #smsconfig-entry#
ADD: 10.3.1.1 sun15-sc0-i2 #smsconfig-entry#
ADD: 10.3.1.2 sun15-sc1-i2 #smsconfig-entry#

```

Update the hosts file, "/etc/hosts", with these changes? [y,n] **y**  
 Hosts file "/etc/hosts" has been updated.

The following information is about to be applied to the "/etc/netmasks" file.

```

ADD network: 10.1.1.50, mask: 255.255.255.0
ADD network: 10.2.1.0, mask: 255.255.255.224
ADD network: 10.3.1.0, mask: 255.255.255.252

```

Update the netmasks file, "/etc/netmasks", with these changes? [y,n] **y**  
 Netmasks file "/etc/netmasks" has been updated.  
 smsconfig complete. Log file is /var/sadm/system/logs/smsconfig  
 sc#

**EXAMPLE 2** Configuring the I2 Network

```

sc0: # smsconfig -m I2
Configuring I2 Management Network - 'I2' is for SC to SC MAN
Which System Controller are you configuring [choose 0 or 1]: 0.
Hostname IP Address (platform=sun15)

netmask-i2 255.255.255.252
sun15-sc0-i2 10.3.1.1
sun15-sc1-i2 10.3.1.2
Do you want to accept these network settings? [y,n] n
MAN I2 Network Identification
Enter the IP network number (base address) for the I2 network: 172.16.0.0
Enter the netmask for the I2 MAN network [255.255.255.252]: [Return]
Hostname IP Address (platform=sun15)

netmask-i2 255.255.255.252
sun15-sc0-i2 172.16.0.1
sun15-sc1-i2 172.16.0.2
Do you want to accept these network settings? [y,n] y
Creating /.rhosts to facilitate file propagation ... done.

MAN Network configuration modified!
Changes will take effect on the next reboot.
The following changes are about to be applied to the "/etc/hosts" hosts
file.

ADD: 172.16.0.1 sun15-sc0-i2 #smsconfig-entry#
ADD: 172.16.0.2 sun15-sc1-i2 #smsconfig-entry#

Update the hosts file, "/etc/hosts". with these changes [y,n] y
Hosts file "/etc/hosts" has been updated.

The following information is about to be applied to the "/etc/netmasks"
file.

ADD network: 172.16.0.0, mask: 255.255.255.252

Update the netmasks file, "/etc/netmasks", with these changes? [y,n] y
Netmasks file "/etc/netmasks" has been updated.

sc#

```

**EXAMPLE 3** Configuring Internal Host Name and IP Address, SC to Domain B, on the I1 Network

```

sc0: # smsconfig -m I1 B

Enter the MAN hostname for DB-I1 [sun15-b]: domainB-i1
I could not automatically determine the IP address of domainB-i1.

Please enter the IP address of domainB-i1: 10.2.1.20

You should make sure that this host/IP address is set up properly in the
/etc/inet/hosts file or in your local name service system.

Network: I1 (DB-I1) Hostname: domainB-i1 IP Address: 10.2.1.20

Do you want to accept these settings? [y,n] y

Creating /.rhosts to facilitate file propagation ... done.

MAN Network configuration modified!
Changes will take effect on the next reboot.

The following changes are about to be applied to the "/etc/hosts" hosts
file.

ADD: 10.2.1.20 domainB-i1 #smsconfig-entry#

Update the hosts file, "/etc/hosts", with these changes? [y,n] y
Hosts file "/etc/hosts" has been updated.

sc#

```

**EXAMPLE 4** Excluding Domain D From the I1 Network

By excluding a domain, you will no longer be able to perform DR operations (rcfgadm) from the SC on that domain. You can still perform DR operations (cfgadm) on the domain itself. Refer to the *Sun Fire High-End Systems Dynamic Reconfiguration (DR) User Guide* for more information.

```

sc0: # smsconfig -m I1 D
Enter the MAN hostname for DB-I1 [sun15-b]: NONE
Network: I1 (DB-I1)
Hostname: NONE IP Address: None

Do you want to accept these settings? [y,n] y

Creating /.rhosts to facilitate file propagation ... done.

sc#

```

**EXAMPLE 5** Configuring Non-Default Groups

In this example, all domain administrator and domain reconfiguration groups are left as the default groups.

```
sc0: # smsconfig -g
1) Edit current configuration
2) Restore default groups
3) Quit
```

Select one of the above options: 1

NOTE: In order to configure a new group the group must already exist.

The Platform Administrator group has configuration control, a means to get environmental status, the ability to assign boards to domains, power control and other generic service processor functions.

Enter the name of the Platform Administrator group [platadm]? zeus

The Platform Operator group has a subset of the platform privileges, limited generally to platform power control and platform status.

Enter the name of the Platform Operator group [platoper]? poseidon

The Platform Service group possesses platform service command privileges in addition to limited platform control and platform configuration status privileges

Enter the name of the Platform Service group [platsvc]? kronos

The Domain Administrator group possesses domain control and status, and console access privileges (for the respective domain), but does not possess platform wide control or platform resource allocation privileges.

Enter the name of the Domain A Administrator group [dmnaadm]? [Return]

Enter the name of the Domain B Administrator group [dmnbadm]? [Return]

Enter the name of the Domain C Administrator group [dmncadm]? [Return]

Enter the name of the Domain D Administrator group [dmndadm]? [Return]

Enter the name of the Domain E Administrator group [dmneadm]? [Return]

Enter the name of the Domain F Administrator group [dmnfadm]? [Return]

Enter the name of the Domain G Administrator group [dmngadm]? [Return]

Enter the name of the Domain H Administrator group [dmnhadm]? [Return]

Enter the name of the Domain I Administrator group [dmniadm]? [Return]

Enter the name of the Domain J Administrator group [dmnjadm]? [Return]

Enter the name of the Domain K Administrator group [dmnkadm]? [Return]

Enter the name of the Domain L Administrator group [dmnladm]? [Return]

Enter the name of the Domain M Administrator group [dmnmadm]? [Return]

Enter the name of the Domain N Administrator group [dmnnadm]? [Return]

Enter the name of the Domain O Administrator group [dmnoadm]? [Return]

Enter the name of the Domain P Administrator group [dmnpadm]? [Return]

Enter the name of the Domain Q Administrator group [dmnqadm]? [Return]

Enter the name of the Domain R Administrator group [dmnradm]? [Return]

The Domain Reconfiguration group possesses a subset of the Domain Administration group privileges. This group has no domain control other than board power and reconfiguration (for the respective domain).

```

Enter the name of the Domain A Reconfiguration group [dmnarcfg]? [Return]
Enter the name of the Domain B Reconfiguration group [dmnbrcfg]? [Return]
Enter the name of the Domain C Reconfiguration group [dmncrcfg]? [Return]
Enter the name of the Domain D Reconfiguration group [dmndrcfg]? [Return]
Enter the name of the Domain E Reconfiguration group [dmnercfg]? [Return]
Enter the name of the Domain F Reconfiguration group [dmnfrcfg]? [Return]
Enter the name of the Domain G Reconfiguration group [dmngrcfg]? [Return]
Enter the name of the Domain H Reconfiguration group [dmnhrcfg]? [Return]
Enter the name of the Domain I Reconfiguration group [dmnircfg]? [Return]
Enter the name of the Domain J Reconfiguration group [dmnjrcfg]? [Return]
Enter the name of the Domain K Reconfiguration group [dmnkrcfg]? [Return]
Enter the name of the Domain L Reconfiguration group [dmnlrcfg]? [Return]
Enter the name of the Domain M Reconfiguration group [dmnmrcfg]? [Return]
Enter the name of the Domain N Reconfiguration group [dmnnrcfg]? [Return]
Enter the name of the Domain O Reconfiguration group [dmnorcfg]? [Return]
Enter the name of the Domain P Reconfiguration group [dmnprcfg]? [Return]
Enter the name of the Domain Q Reconfiguration group [dmnqrcfg]? [Return]
Enter the name of the Domain R Reconfiguration group [dmnrrcfg]? [Return]

```

Configuration complete.

Select one of the above options:

- 1) Edit current configuration
- 2) Restore default groups
- 3) Quit

Select one of the above options: 3

sc#

### EXAMPLE 6 Displaying the Network Configuration

```

sc0: # smsconfig -v
NETWORK CONFIGURATION

```

Platform name: xc

Internal I1 Management Network - Used for Domain to SC communication

```

MAN I1 SC Hostname: sun15-sc-i1
MAN I1 SC IP Address: 192.168.103.1
MAN I1 Network Mask: 255.255.255.224

```

| Domain  | Hostname | IP Address     |
|---------|----------|----------------|
| sun15-a |          | 192.168.103.2  |
| sun15-b |          | 192.168.103.3  |
| sun15-c |          | 192.168.103.4  |
| sun15-d |          | 192.168.103.5  |
| sun15-e |          | 192.168.103.6  |
| sun15-f |          | 192.168.103.7  |
| sun15-g |          | 192.168.103.8  |
| sun15-h |          | 192.168.103.9  |
| sun15-i |          | 192.168.103.10 |
| sun15-j |          | 192.168.103.11 |
| sun15-k |          | 192.168.103.12 |
| sun15-l |          | 192.168.103.13 |
| sun15-m |          | 192.168.103.14 |
| sun15-n |          | 192.168.103.15 |

```
sun15-o 192.168.103.16
sun15-p 192.168.103.17
sun15-q 192.168.103.18
sun15-r 192.168.103.19
```

Internal I2 Management Network - Used for SC to SC communication

MAN I2 Network Mask: 255.255.255.252

```
SC Hostname IP Address

sun15-sc0-i2 192.168.103.33
sun15-sc1-i2 192.168.103.34
```

No External Network Configured.

Fri Jun 3 11:00:47 PDT 2005  
smsconfig complete.

**EXAMPLE 7** Adding a User to the Domain Administrator Group and Configuring Access to the Domain B Directories

You must specify a valid user name and valid SMS group and domain.

```
sc0: # smsconfig -a -u fdjones -G admn B
fdjones has been added to the dmnBadmn group.
All privileges to domain B have been applied.
```

**EXAMPLE 8** Adding a User to the Domain Configurator Group and Configuring Access to the Domain C Directories

You must specify a valid user name and valid SMS group and domain.

```
sc0: # smsconfig -a -u fdjones -G rcfg C
fdjones has been added to the dmnCrcfg group.
All privileges to domain C have been applied.
```

**EXAMPLE 9** Configuring Access to the Platform Directories

You must specify a valid user name and valid SMS group and the platform.

```
sc0: # smsconfig -a -u jtd -G svc platform
jtd has been added to the platsvc group.
All privileges to the platform have been applied.
```



**EXAMPLE 10** Displaying Users With Access to the Domain C Directories

```
sc0: # smsconfig -l C
fdjones
shea
```

**EXAMPLE 11** Displaying Users With Access to the Platform Directories

```
sc0: # smsconfig -l platform
fdjones
jtd
```

**EXAMPLE 12** Removing User Access to the Domain C Directories

You must specify a valid username and valid SMS group. Any user who belongs to more than one group with access to a domain must be removed from all groups before directory access is denied.

```
sc0: # smsconfig -r -u fdjones -G rcfg C
fdjones has been removed from the dmnCrcfg group.
fdjones belongs to the dmnCadmn group
Access to domain C remains unchanged.
```

```
sc0: # smsconfig -r -u fdjones -G admn C
fdjones has been removed from the dmnCadmn group.
All access to domain C is now denied.
```

**EXAMPLE 13** Configuring Using an Invalid Group name

You must specify a valid SMS group.

```
sc0: # smsconfig -a -u fdjones -G staff D
ERROR: group staff does not exist
ABORTING.
```

**EXAMPLE 14** Mixing Groups and Designations

You must specify group names with the correct area designations. The admn group works with either designation.

```
sc0: # smsconfig -a -u fdjones -G rcfg platform
ERROR: group rcfg cannot access the platform
ABORTING.
```

## smsconfig(1M)

```
sc0: # smsconfig -a -u fdjones -G oper D
ERROR: group oper cannot access a domain
ABORTING.
```

### EXIT STATUS

The following exit values are returned:

0                   Successful completion.  
>0                  An error occurred.

### FILES

The following configuration files are required:

/etc/hostname.scman0           MAN Ethernet interface file  
/etc/hostname.scman1           MAN Ethernet interface file  
/etc/opt/SUNWSMS/config/MAN.cf   MAN daemon configuration file

**Note** – `MAN.cf` is an internal SMS system file and should *not* be modified except by authorized Sun Microsystems personnel.

### ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types     | Attribute Values |
|---------------------|------------------|
| Availability        | SUNWSMSop        |
| Interface Stability | Evolving         |

### SEE ALSO

`mand(1M)`, `ndd(1M)`, `scp(1)`

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | smsconnectsc - accesses a remote SC console                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SYNOPSIS</b>    | <p><b>smsconnectsc</b> [-y   n]</p> <p><b>smsconnectsc</b> -h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>DESCRIPTION</b> | <p>smsconnectsc creates a remote tip console session from a local SC in order to reach a hung remote SC console.</p> <p>smsconnectsc enables the bit that connects the local SC's port B to the remote SC's RS-232 port A when you are logged in to the local SC. The remote SC is the SC that is hanging. Once the tty connection is enabled, smsconnectsc invokes a tip console session to the remote SC. Using the tip console session, you can do whatever needs to be done to the remote SC.</p> <p>smsconnectsc works in the absence of an external connection to the remote SC. If the remote SC has an active external connection to port A, then smsconnectsc fails and the session usually hangs. To exit, type:</p> <p>~.</p> <p>After you finish, there are several ways to end the session, depending on whether you logged in to the local SC using telnet or rlogin. See the EXTENDED DESCRIPTION section.</p> <p>Using smsconnectsc as your permanent console connection to your system controller is not recommended; it should only be used when there is a problem with your external console connection.</p> |
| <b>OPTIONS</b>     | <p>The following options are supported.</p> <p>-h                    Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-n                    Automatically answers “no” to all prompts.</p> <p>-y                    Automatically answers “yes” to all prompts.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## EXTENDED DESCRIPTION

### Usage

In the `tip` console window established by `smsconnectsc`, a tilde (`~`) that appears as the first character of a line is interpreted as an escape signal that directs the `tip` console to perform the following action:

`~.` Disconnect the `tip` session.

If you have established a `telnet` session to the local SC this disconnects the `tip` session and you remain logged in to the local SC.

If you have established an `rlogin` session in to the local SC, this disconnects the `tip` session and *also* disconnects your `rlogin` session.

**Note** – The tilde does not appear on the display until after you have pressed the period.

`~~.` Disconnect `tip` session.

`~~.` Works only with `rlogin`. If you have established a `telnet` session in to the local SC, you receive the following error message:

```
~.: Command not found
```

If you have established an `rlogin` session in to the local SC, this disconnects the `tip` session and you remain logged in to the local SC.

**Note** – The first tilde does not appear on the display screen. The second tilde does not appear until after you have pressed the period.

`rlogin` also processes tilde-escape sequences whenever a tilde is displayed at the beginning of a new line. If you need to send tilde sequence at the beginning of a line and you are using `rlogin`, use two tildes (the first escapes the second for `rlogin`). Alternatively, do not enter a tilde at the beginning of a line when running inside of `rlogin`. If you use a `kill -9` command to terminate a console session, the window or terminal in which the `smsconnectsc` command was executed goes into raw mode, and appears hung. To escape this condition, type:

```
sc#:sms-user:> CTRL-j
sc#:sms-user:> stty sane
sc#:sms-user:> CTRL-j
```

### Group Privileges Required

You must have platform administrator privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

**EXAMPLE 1** Creating a Remote Connection From the Local SC to the Hung Remote SC

In the following example the local SC is shown as `sc1` and the remote SC is shown as `sc0`. Log in to the local SC as a platform administrator.

```
sc1:sms-user:> smsconnectsc
TTY connection is OFF. About to connect to other SC.
Do you want to continue (yes/no)? y
connected
sc0:sms-user:>
```

**EXIT STATUS** The following exit values are returned:

```
0 Successful completion.
>0 An error occurred.
```

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO** `rlogin(1M)`, `tip(1M)`

## smsinstall(1M)

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | smsinstall - install the SMS environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>SYNOPSIS</b>                  | <b>smsinstall</b> <i>directory_name</i><br><b>smsinstall</b> -p<br><b>smsinstall</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>DESCRIPTION</b>               | <p>smsinstall(1M) installs SMS packages on the main or spare SMS system controllers (SCs). You use this command when there are no previous versions of SMS on your system. If you use this command and there are previous versions of SMS installed, the command exits and returns an error message.</p> <p>The smsinstall command automatically hardens the SCs after installation. Refer to the <i>System Management Services (SMS) 1.5 Installation Guide</i> for instructions on how to install SMS using this command.</p> <p>If you are not running smsinstall from the Product directory (<i>/download_directory/System_Management_Services_1_5/Product</i>), you must use the absolute path.</p> <p>If any errors occur, smsinstall writes error messages to <i>/var/sadm/system/logs/smsinstall</i>.</p> |
| <b>OPTIONS</b>                   | <p>The following options are supported</p> <p>-h            Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-p            Performs post-package add actions only.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>OPERANDS</b>                  | <p>The following operand is supported:</p> <p><i>directory_name</i>    Name of the directory which contains the SMS packages.</p> <p>The default path to the Product directory, <i>directory_name</i>, is: <i>/download_directory/System_Management_Services_1_5/Product</i> where <i>download_directory</i> is the location where you downloaded the files from the Web.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Group Privileges Required</b> | <p>You must have superuser privileges to run this command.</p> <p>Refer to the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## EXAMPLES

## EXAMPLE 1 Installing SMS From the Web

```
sc#:sms-user:> /opt/SUNWSMS/bin/smsinstall download_directory
```

```
Checking if Solaris Security Toolkit is already installed.
Installing Solaris Security Toolkit package SUNWjass
Copyright 2004 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
```

```
Installation of <SUNWjass> was successful.
Installing Solaris Security Toolkit package SUNBEfixm
```

```
Installation of <SUNBEfixm> was successful.
Installing Solaris Security Toolkit package SUNBEmd5
```

```
Installation of <SUNBEmd5> was successful.
Solaris Security Toolkit packages installed successfully.
Installing SMS packages. Please wait. . .
pkgadd -n -d "../Product" -a /tmp/smsinstall.admin.24308 SUNWscdvr.u
SUNWSMSr SUNWSMSop SUNWSMSdf SUNWSMSjh SUNWSMSlp SUNWSMSmn SUNWSMSob
SUNWSMSod SUNWSMSpd SUNWSMSpo SUNWSMSpp SUNWSMSsu SUNWufrx.u SUNWufu
SUNWwccmn
Copyright 2005 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
```

```
Installation of <SUNWscdvr> was successful.
[...]
Verifying that all SMS packages are installed.OK
Setting up /etc/init.d/sms run control script for SMS 1.5
Setting up /etc/init.d/zoedsms run control script for SMS 1.5
/etc/opt/SUNWSMS/SMS1.5/startup/zoedsms.
```

```
Attempting to restart daemon picld
/etc/init.d/picld stop
/etc/init.d/picld start
Running Solaris Security Toolkit 4.1.1 hardening on System Controller.
[NOTE] The following prompt can be disabled by setting JASS_NOVICE_USER
to 0.
[WARN] Depending on how the Solaris Security Toolkit is configured, it is
both possible and likely that by default all remote shell and file transfer
access to this system will be disabled upon reboot effectively locking out
any user without console access to the system.
```

```
Are you sure that you want to continue? (YES/NO) [YES]
[NOTE] Executing driver, sunfire_15k_sc-secure.driver
Solaris Security Toolkit hardening step executed successfully on the
System Controller but it will not take effect until the next reboot.
Before rebooting, please make sure SSH or the serial line is setup for use
after the reboot.
smsinstallcomplete. Log file is /var/sadm/system/logs/smsinstall.
```

## EXIT STATUS

The following exit values are returned:

|    |                        |
|----|------------------------|
| 0  | Successful completion. |
| >0 | An error occurred.     |





|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                      | smsrestore - restore the SMS environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SYNOPSIS</b>                  | <b>smsrestore</b> <i>filename</i><br><b>smsrestore</b> -h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>DESCRIPTION</b>               | <p>smsrestore(1M) restores the operational environment of the SMS from a backup file created by smsbackup(1M). Use smsrestore to restore the SMS environment after the SMS software has been installed on a new disk.</p> <p>Turn off failover and stop SMS before running smsrestore; start SMS and turn on failover, if you want, afterward. For information about manually starting and stopping SMS refer to the <i>System Management Services (SMS) 1.5 Installation Guide</i> .</p> <p>If any errors occur, smsrestore writes error messages to /var/sadm/system/logs/smsrestore.</p> <p><b>Note</b> – If the main SMS environment has changed since the backup file was created— for example, by shutting down a domain— you must run smsbackup(1M) again in order to maintain a current backup file for the system controller.</p> |
| <b>OPTIONS</b>                   | <p>The following option is supported.</p> <p>-h                    Help. Displays usage descriptions.</p> <p><b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>OPERANDS</b>                  | <p>The following operands are supported:</p> <p><i>filename</i>            Name of the backup file that was created by smsbackup(1M). If the specified file is not in the current directory, the <i>filename</i> must contain the full path name for the file. This file can reside anywhere on the system, connected network, or tape device. If no <i>filename</i> is specified, you receive an error message.</p>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>EXTENDED DESCRIPTION</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Group Privileges Required</b> | <p>You must have superuser privileges to run this command.</p> <p>Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the <i>System Management Services (SMS) 1.5 Administrator Guide</i> for more information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>EXAMPLES</b>                  | <p><b>EXAMPLE 1</b> Restoring SMS</p> <pre>sc# <b>smsrestore</b> sms_backup.1.0.cpio</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**EXAMPLE 2** Restoring SMS From Tape Device 0

```
sc# smsrestore /dev/rmt/0/sms_backup.1.0.cpio
```

**EXIT STATUS**

The following exit values are returned:

0 Successful completion.

>0 An error occurred.

**FILES**

The following file is used by this command:

/var/sadm/system/logs/smsrestore smsrestore log file

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

**SEE ALSO**

smsbackup(1M)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | smsupgrade - upgrades the SMS software to the current version                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>SYNOPSIS</b>    | <p><b>smsupgrade</b> [-b] [-r] <i>directory_name</i></p> <p><b>smsupgrade</b> -p</p> <p><b>smsupgrade</b> -h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>DESCRIPTION</b> | <p>smsupgrade(1M) upgrades SMS software on the main or spare SMS system controllers. Refer to the <i>System Management Services (SMS) 1.5 Installation Guide</i> for instructions about how to upgrade SMS using this command.</p> <p>If you are not running smsupgrade from the Product directory you must use the absolute path.</p> <p>If any errors occur, smsupgrade writes error messages to /var/sadm/system/logs/smsupgrade.</p>                                                                                                                                                                                                                |
| <b>OPTIONS</b>     | <p>The following options are supported</p> <p>-b            Neither smsbackup(1M) nor smsrestore(1M) are performed. The default is to run smsbackup to directory /var/tmp before upgrading SMS.</p> <p>-h            Help. Displays usage descriptions.</p> <p>              <b>Note</b> – Use alone. Any option specified in addition to -h is ignored.</p> <p>-p            Performs post-package add actions only; it does not perform smsbackup or smsrestore.</p> <p>-r            smsrestore(1M) is <i>not</i> performed after the upgrade</p> <p>              The default is to run smsrestore from directory /var/tmp after upgrading SMS.</p> |
| <b>OPERANDS</b>    | <p>The following operands are supported:</p> <p><i>directory_name</i>    Name of the directory that contains the SMS packages.</p> <p>                      If you are installing from the Web, the path to the Product directory, <i>directory_name</i>, is /<i>download_directory</i>/System_Management_Services_1_5/Product; where <i>download_directory</i> is the location where you downloaded the files from the Web.</p>                                                                                                                                                                                                                        |

**EXTENDED  
DESCRIPTION****Group Privileges  
Required**

You must have superuser privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES****EXAMPLE 1** Upgrading SMS

```
sc0:sms-user:> cd download_directory/System_Management_Services_1_5/Tools/
```

```
sc0:sms-user:> ./smsupgrade directory_name
```

```
Attempting to stop daemon picld
/etc/init.d/picld stop
```

```
Verifying that all SMS packages are installed
.....OK
```

```
Backing up SMS to /var/tmp/sms_backup.1.5.cpio before upgrade.
Please wait. . .
smsbackup /var/tmp
```

```
smsbackup: Backup configuration file created: /var/tmp
sms_backup.1.5.cpio
```

SMS backup complete.

```
Checking if Solaris Security Toolkit is already installed.
Installing Solaris Security Toolkit package SUNWjass
Copyright 2005 Sun Microsystems, Inc. All rights
reserved.
Use is subject to license terms.
```

```
Installation of <SUNWjass> was successful.
Installing Solaris Security Toolkit package SUNBEfixm
```

```
Installation of <SUNBEfixm> was successful.
Installing Solaris Security Toolkit package SUNBEmd5
```

```
Installation of <SUNBEmd5> was successful.
Solaris Security Toolkit packages installed successfully.
```

```
Installing SMS packages. Please wait. . .
pkgadd -n -d "../Product" -a /tmp/smsinstall.admin.24308 SUNWscdvr.u
SUNWSMSr SUNWSMSop SUNWSMSdf SUNWSMSjh SUNWSMSlp
SUNWSMSmn SUNWSMSob
SUNWSMSod SUNWSMSpd SUNWSMSpo SUNWSMSpp SUNWSMSsu
SUNWufrx.u SUNWufu
SUNWwccmn
Copyright 2005 Sun Microsystems, Inc. All rights
reserved.
Use is subject to license terms.
```

```
Installation of <SUNWscdvr> was successful.
Installation of <SUNWSMSr> was successful.
Verifying that all SMS packages are installed. OK
Setting up /etc/init.d/sms run control script for SMS 1.5
Setting up /etc/init.d/zoedsms run control script for SMS 1.5
New SMS version 1.5 is active
Restoring SMS from /var/tmp/sms_backup.1.4.1.cpio after upgrade.
Please wait...
smsrestore /var/tmp/sms_backup.1.4.1.cpio
smsrestore complete. Log file is /var/sadm/system/logs/smsrestore.
Attempting to start daemon picld
/etc/init.d/picld start
Attempting to start zoed...
zoed started.
```

It is recommended to harden the System Controller after an SMS upgrade. Execute the following to do this:

- 1) /opt/SUNWjass/bin/jass-execute -q \
sunfire\_15k\_sc-secure.driver
- 2) Reboot the System Controller

```
smsupgrade complete. Log file is /var/sadm/system/logs
smsupgrade.
```

**EXIT STATUS** The following exit values are returned:

- 0 Successful completion.
- >0 An error occurred.

**FILES** The following files are used by this command:

- /var/sadm/system/logs/smsupgrade smsupgrade log file
- /var/tmp/sms\_backup.1.5.cpio SMS backup file

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes.

| Attribute Types     | Attribute Values |
|---------------------|------------------|
| Availability        | SUNWSMSop        |
| Interface Stability | Evolving         |

**SEE ALSO** `smsbackup(1M)`, `smsconfig(1M)`, `smsinstall(1M)`, `smsrestore(1M)`

*System Management Services (SMS) 1.5 Installation Guide*

**NAME** smsversion - change the active version of SMS to another co-resident version of the SMS software

**SYNOPSIS** **smsversion** *new\_version*

**smsversion** -t

**smsversion** -h

**DESCRIPTION** smsversion(1M) can be used to switch between two co-installed (and consecutively released) versions of SMS.

You can switch versions between SMS 1.4 and 1.5; however, if you also have SMS 1.4.1 installed, you can only switch from SMS 1.5 to 1.4.1, not back to SMS 1.4. Refer to the System Management Services (SMS) 1.5 Installation Guide for more information.

smsversion permits two-way SMS version-switching between sequential co-resident installations on the same operating environment but with the following conditions:

| Condition              | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| New features           | The features supported in the newer version of SMS may not be supported in the older version. Switching to an older version of SMS can result in the loss of those features. Also, the settings for the new features might be erased.                                                                                                                                                                                                                                                                                          |
| Flash PROM differences | Switching versions of SMS requires reflashing the CPU flash PROMs with the correct files. These files can be found in the <code>/opt/SUNWSMS/&lt;SMS_version&gt;/firmware</code> directory. Use <code>flashupdate(1M)</code> to reflash the PROMs after you have switched versions. Refer to the <code>flashupdate</code> man page, the <i>System Management Services (SMS) 1.5 Administrator Guide</i> , and the <i>System Management Services (SMS) 1.5 Installation Guide</i> for more information on updating flash PROMs. |

smsversion, when invoked with no command-line argument, displays the list of all properly installed versions of SMS on the current system controller. You can pick from that list, and smsversion stores a copy of the current configuration environment and then switches all necessary software links necessary for activating the new version of the software. smsversion can run with an optional command-line argument specifying the target version for switching.

Once smsversion completes the switch, the target version becomes the active version. To restore the configuration automatically saved by smsversion you must use smsrestore(1M). Your previous configuration is not automatically restored as part of the version switch.

To restore your previous configuration, do the following:

- Turn off failover and stop SMS. Then run `smsrestore`.

**Note** – If you changed your network configuration using `smsconfig -m` after you created the backup you just restored, you must run `smsconfig -m` and reboot before proceeding to the next step.

- Start SMS and turn on failover. For information about manually starting and stopping SMS, refer to the *System Management Services (SMS) 1.5 Installation Guide*.

If any errors occur, `smsversion` writes error messages to `/var/sadm/system/logs/smsversion`.

**OPTIONS**

The following options are supported:

`-h` Help. Displays usage descriptions.

**Note** – Use alone. Any option specified in addition to `-h` is ignored.

`-t` Displays the current active version of SMS and exits.

**OPERANDS**

The following operand is supported:

*version\_number* Release number of the target SMS version

**EXTENDED DESCRIPTION**

**Group Privileges Required**

You must have superuser privileges to run this command. This command must be run as root, or SMS will return an error.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1** Displaying the Version with One Version of SMS Installed

Displays the active version and exits when only one version of SMS is installed.

```
sc# /opt/SUNWSMS/bin/smsversion -t
1.4.1
```

**EXAMPLE 2** Changing the Active Version of SMS

Displays versions of SMS installed on this system controller. Choose the inactive version and perform a version switch.



You must stop SMS before switching versions; otherwise, SMS returns an error.

To switch versions, you perform these steps in order, as described in the *System Management Services (SMS) 1.5 Installation Guide*. Examples of the output for upgrade and downgrade follow.

Disable failover.

Stop SMS on the Main SC.

Run smsversion on the Main SC.

Run smsrestore on the Main SC, using the backup cpio file created by smsversion.

Restart SMS on the Main SC.

Stop SMS on the Spare SC.

Run smsversion on the Spare SC.

Run smsrestore on the Spare SC.

Restart SMS on the Spare SC.

Enable failover.

**EXAMPLE 3** Switching To a Higher SMS Version

```

sc# /opt/SUNWSMS/bin/smsversion 1.5
smsversion: Active SMS version < 1.4.1 >
You have requested SMS Version 1.5

Is this correct? [y,n] y

smsversion: Upgrading SMS from <1.4.1> to <1.5>.
smsversion: SMS version 1.5 installed
To move to a different version of SMS an archive of
critical files will be created. What is the name of
the directory or tape device where the archive will be
stored? [/var/tmp] [return]

smsversion: Backup configuration file created: /var/tmp/
sms_backup.1.5.cpio
smsversion: Switching to target version <1.5>.
smsversion: New Version <1.5> Active
smsversion: Active SMS version < 1.5 >
To use the previous SMS configuration settings type:
smsrestore /var/tmp/sms_backup.1.5.cpio
smsversion complete. Log file is /var/sadm/system/logs/smsversion.

```

**EXAMPLE 4** Downgrading SMS Versions

```

sc# /opt/SUNWSMS/bin/smsversion 1.4.1
smsversion: Active SMS version < 1.5 >
You have requested SMS Version 1.4.1

Is this correct? [y,n] y

smsversion: Downgrading SMS from <1.5> to <1.4>.
To move to a different version of SMS an archive of
critical files will be created. What is the name of
the directory or tape device where the archive will be
stored?
Enter archive location [/var/tmp]: [return]
smsversion: Backup configuration file created: /var/tmp/
sms_backup.1.5.cpio
smsversion: Switching to target version <1.4.1>.
smsversion: New Version <1.4.1> Active
You are downgrading to a version of SMS that requires you
to perform the following operations:
 1) Undo hardening
 2) Redo hardening
 3) Reboot the System Controller

Perform these activities with the following command sequence:
 1) /opt/SUNWjass/bin/jass-execute -u
 2) /opt/SUNWjass/bin/jass-execute -q sunfire_15k_sc-secure.driver
 3) reboot

smsversion: Active SMS version < 1.4.1 >
To restore the previous SMS configuration setting type: smsrestore
/var/tmp/sms_backup.1.5.cpio
smsversion complete. Log file is /var/sadm/system/logs/smsversion.

```

**EXIT STATUS** The following exit values are returned:

0                    Successful completion.  
 >0                   An error occurred.

**FILES** The following files are used by this command:

/opt/SUNWsms/bin/smsversion                    smsversion command  
 /var/sadm/system/logs/smsversion               smsversion log file

**ATTRIBUTES** See `attributes(5)` for a description of the following attribute.

| Attribute Type | Attribute Value |
|----------------|-----------------|
| Availability   | SUNWSMSop       |

**SEE ALSO** `smsbackup(1M)`, `smsrestore(1M)`

**NAME** | ssd - SMS startup daemon

**SYNOPSIS** | **ssd** [-f *startup\_file*]  
**ssd** [-i *message* ]

**DESCRIPTION** | **ssd(1M)** starts, stops, and monitors all the key daemons and servers of SMS. When executed with no options **ssd** reads from the **ssd\_start** file, which lists the daemons and servers that **ssd** starts and monitors.

Do *not* execute this program manually. **ssd(1M)** is automatically invoked by a Solaris software run-control script and is periodically monitored for restart.

**OPTIONS** | The following options are supported:

-f *startup\_file* | Uses this file instead of the default **ssd\_start** file.

-i *message* | Places a notice message in the platform log file. Specified and used exclusively by the **sms** startup script.

**FILES** | The following files are supported:

/etc/opt/SUNWSMS/startup/ssd\_start | Default startup file for **ssd**

/etc/opt/SUNWSMS/startup/sms | Default startup file for **SMS**

**ATTRIBUTES** | See **attributes(5)** for descriptions of the following attributes.

| Attribute Types | Attribute Values |
|-----------------|------------------|
| Availability    | SUNWSMSop        |

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>        | testemail - Test SMS event-reporting features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SYNOPSIS</b>    | <p><b>testemail</b><br/> -c <i>fault_class</i>[,<i>fault_class</i>...]<br/> -d <i>domain_indicator</i><br/> [ -i <i>indicted_resource</i>[,<i>indicted_resource</i>...] ]</p> <p><b>testemail -h</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>DESCRIPTION</b> | <p>testemail(1M) generates test events so you can verify that they were logged in the SMS platform message log file and reported by email as specified in the email control file (<i>event_email.cf</i>). For more information about the email control file, see the <i>System Management Services (SMS) 1.5 Administrator Guide</i>.</p> <p>When you invoke testemail, you can specify:</p> <ul style="list-style-type: none"> <li>■ The event (or events) that testemail will generate</li> <li>■ The domain in which the event (or events) will be generated</li> <li>■ The components that will be reported faulty by the test event.</li> </ul> <p>Make sure that the system board is powered on before you run testemail, or the command will write error messages to the platform message log file.</p>                                                                                                                                     |
| <b>OPTIONS</b>     | <p>Use these options:</p> <p>-h Help. Displays descriptions of testemail arguments and options.</p> <p><b>Note</b> – Use alone. Other options included with -h are ignored.</p> <p>-c <i>fault_class</i><br/> [<i>fault_class</i> ...] The event class or comma-separated list of event classes that testemail will generate. For example:</p> <p style="padding-left: 20px;">-c <i>fault_class</i>,<i>fault_class</i>,<i>fault_class</i></p> <p style="padding-left: 20px;">Valid event classes are described in the file <i>/etc/opt/SUNWSMS/SMS/config/SF15000.dict</i>.</p> <p>-d <i>domain-indicator</i> The domain in which testemail will generate the events. Can be one of the following:</p> <p style="padding-left: 20px;"><i>domain_id</i> – Valid <i>domain_ids</i> are the characters A–R, and are not case sensitive.</p> <p style="padding-left: 20px;"><i>domain_tag</i> – Name assigned to a domain using <i>addtag(1M)</i>.</p> |

[ -i *indicted\_resource*  
[,indicted\_  
resource ...]]

Optional. The component, or a comma-separated list of components, that will be reported faulty by the event. For example:

-i indicted\_resource,indicted\_resource,indicted\_resource

A component does not have to be faulty to be included in the test event.

Accepted components are:

- *board* (a *system\_board*, *io\_board*, *expander\_board*, or *centerplane\_support\_board*)
- *system\_board/port*
- *io\_board/port*
- *system\_board/port/physical bank/dimm*
- *system\_board/port/physical bank/dimm/logical\_dimm*
- *system\_board/port/ecache*
- *io\_board/port/iobus*
- *centerplane*
- *centerplane support*
- *bus* (address bus, data bus, or response bus)
- *expander\_board/cdcdimm0*
- *expander\_board/bus*
- *system\_controller*
- *system\_controller\_peripheral*
- *fan\_tray*
- *power\_supply*

|                                             |                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------|
| <i>where</i>                                |                                                                                     |
| <i>system_board</i>                         | SB(0...17) for Sun Fire 15K/E25K systems<br>SB(0...8) for Sun Fire 12K/E20K systems |
| <i>io_board</i>                             | IO(0...17) for Sun Fire 15K/E25K systems<br>IO(0...8) for Sun Fire 12K/E20K systems |
| <i>expander_board</i>                       | EX(0...17) for Sun Fire 15K/E25K systems<br>EX(0...8) for Sun Fire 12K/20K systems  |
| <i>port or processors for system_boards</i> | P(0...3)                                                                            |
| <i>physical bank</i>                        | B(0 1)                                                                              |
| <i>dim</i>                                  | D(0...3)                                                                            |
| <i>logical dim</i>                          | L(0 1)                                                                              |
| <i>io_bus</i>                               | I(0 1)                                                                              |
| <i>ecache</i>                               | E(0 1)                                                                              |
| <i>centerplane</i>                          | CP(0 1)                                                                             |
| <i>centerplane support</i>                  | CS(0 1)                                                                             |
| <i>bus</i>                                  | ABUS DBUS RBUS(0 1)                                                                 |
| <i>system_controller</i>                    | SC(0 1)                                                                             |
| <i>system_controller_peripheral</i>         | SCPER(0 1)                                                                          |
| <i>fan tray</i>                             | FT(0...7)                                                                           |
| <i>power supply</i>                         | PS(0...5)                                                                           |

## EXTENDED DESCRIPTION

### Test Results

The results of the email test consist of:

## testemail(1M)

- Event messages in the platform messages log that record the test fault and event code, and a text string to ignore the message.
- Emails that notify the recipients specified in the email control file

### Group Privileges Required

You must have platform administrator or platform service privileges to run this command.

Refer to the *System Management Services (SMS) 1.5 Administrator Guide* for more information.

### EXAMPLES

**EXAMPLE 1** Generating Test Fault Events for Expander and I/O Boards

```
sc0:sms-user:> /opt/SUNWSMS/SMS/lib/smsadmin/testemail -c
fault.board.ex.1112,fault.board.io.1112 -dD -i EX7,I08
```

### EXIT STATUS

The following exit values are returned:

- 0                    Successful completion.
- >0                   An error occurred.

### FILES

The following files are used by this command:

/etc/opt/SUNWSMS/SMS/config/event\_email.cf            Specifies the recipients of email notifications for different fault classes

### ATTRIBUTES

See attributes (5) for descriptions of the following attributes:

| Attribute Types     | Attribute Values |
|---------------------|------------------|
| Availability        | SUNWSMSop        |
| Interface Stability | Evolving         |
| Command Output      | Unstable         |

### SEE ALSO

erd (1M)



| <b>NAME</b>        | tmd - task management daemon                                                                                                                                                                                                                                                                                                                                                                             |                 |                  |              |           |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|--------------|-----------|
| <b>SYNOPSIS</b>    | <b>tmd</b> [-t <i>number</i> ]                                                                                                                                                                                                                                                                                                                                                                           |                 |                  |              |           |
| <b>DESCRIPTION</b> | <p>tmd(1M) provides task management services, such as scheduling for SMS. The purpose of this service is to reduce the number of conflicts that can arise during concurrent invocations of the hardware tests and configuration software.</p> <p>This daemon is started automatically by <i>ssd</i>(1M). Do <i>not</i> start it manually from the command line.</p>                                      |                 |                  |              |           |
| <b>OPTIONS</b>     | <p>The following option is supported:</p> <p>-t <i>number</i>      This option allows the number of concurrent invocations to be throttled. The value must be a positive number, greater than or equal to one.</p> <p>Caution– Changing the default value can adversely affect system functionality. Do <i>not</i> adjust this parameter unless instructed by a Sun service representative to do so.</p> |                 |                  |              |           |
| <b>EXIT STATUS</b> | <p>The following exit values are returned:</p> <p>0                  Successful completion.</p> <p>&gt;0                 An error occurred.</p>                                                                                                                                                                                                                                                          |                 |                  |              |           |
| <b>ATTRIBUTES</b>  | <p>See <i>attributes</i>(5) for descriptions of the following attributes.</p> <table border="1"> <thead> <tr> <th>Attribute Types</th> <th>Attribute Values</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWSMSop</td> </tr> </tbody> </table>                                                                                                                                            | Attribute Types | Attribute Values | Availability | SUNWSMSop |
| Attribute Types    | Attribute Values                                                                                                                                                                                                                                                                                                                                                                                         |                 |                  |              |           |
| Availability       | SUNWSMSop                                                                                                                                                                                                                                                                                                                                                                                                |                 |                  |              |           |
| <b>SEE ALSO</b>    | <i>ssd</i> (1M)                                                                                                                                                                                                                                                                                                                                                                                          |                 |                  |              |           |

## wcapp(1M)

| <b>NAME</b>        | wcapp - wPCI application daemon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |                        |              |                    |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|--------------|--------------------|
| <b>SYNOPSIS</b>    | <b>wcapp</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                        |              |                    |
| <b>DESCRIPTION</b> | <p>wcapp(1M) is responsible for implementing Sun Fire Link clustering functionality—specifically, handling requests from the domain-side drivers and responding to requests for information from the external Sun Fire Link fabric manager server. wcapp runs in a Java Virtual Machine (JVM) included with Solaris 8 02/02 operating environment or later.</p> <p>wcapp is responsible for managing Sun Fire Link clustering for all the domains in the Sun Fire high-end system. The Java side of wcapp exports a set of Java Remote Method Invocation (RMI) interfaces that can be used by the Sun Fire Link fabric manager to set up and monitor a cluster.</p> <p>This daemon is automatically started by ssd(1M). Do <i>not</i> start it manually from the command line.</p> |                 |                        |              |                    |
| <b>EXIT STATUS</b> | <p>The following exit values are returned:</p> <table><tr><td>0</td><td>Successful completion.</td></tr><tr><td>&gt;0</td><td>An error occurred.</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0               | Successful completion. | >0           | An error occurred. |
| 0                  | Successful completion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                        |              |                    |
| >0                 | An error occurred.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                        |              |                    |
| <b>ATTRIBUTES</b>  | <p>See <code>attributes(5)</code> for descriptions of the following attributes.</p> <table border="1"><thead><tr><th>Attribute Types</th><th>Attribute Values</th></tr></thead><tbody><tr><td>Availability</td><td>SUNWSMSop</td></tr></tbody></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Attribute Types | Attribute Values       | Availability | SUNWSMSop          |
| Attribute Types    | Attribute Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |                        |              |                    |
| Availability       | SUNWSMSop                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |                        |              |                    |
| <b>SEE ALSO</b>    | ssd(1M)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |                        |              |                    |

