System Management Services (SMS) 1.4 Reference Manual

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Contents

Preface

This reference manual comprises the System Management Services (SMS 1.4 man pages. Both novice users and those familiar with the SunOS 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 upf 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 `attributes`(5) 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:

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.
dsmd	Domain status monitoring daemon.
dxs	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).
fomd	Failover management daemon.
frad	FRU access daemon.

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.

showbus	Display the bus configuration of expanders in active domains.
showcmdsync	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 *domain_indicator* [−c *function*] [−r *retry_count* [−t *timeout*]] [−q]
[−f] [−y|−n] *location* ...

addboard −h

DESCRIPTION   addboard(1M) assigns, connects, and configures a *location* to the domain *domain_id*
or *domain_tag.*

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.

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.

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.

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.

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:

`assign`   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 `setkeyswitch` on or the `connect` or `configure` options.

`connect`   Assigns the board to the logical domain (if it is not already assigned). Transitions the board into the `connected|unconfigured` 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 environment. 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.

`configure`   Assigns the board to the logical domain (if it is not already assigned). Transitions the board into the `connected|configured` state. In this state the board is not only assigned, active, and connected to a domain, but also configured into the Solaris operating environment. 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_id*s 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*   These command arguments enable the user to specify retries in case of failures encountered during state transitions. The
-t *timeout*   -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. 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 15K, Sun Fire 12K

```
SB(0...17), SB(0...8)

IO(0...17), IO(0...8)
```

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, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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.

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** *license-signature*

                 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 *System
                 Management Services (SMS) 1.4 Administrator Guide.*

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:

                 license-signature   Specifies the COD RTU license key to be added to the COD
                                       license database.

**EXTENDED
DESCRIPTION**

**Group Privileges   You must have platform administrator group privileges to run this command.
Required**
                 Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the
                 System Management Services (SMS) 1.4 Administrator Guide 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.

>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   **codd**(1M), **deletecodlicense**(1M), **showcodlicense**(1M), **showcodusage**(1M)

NAME	addtag - assign a domain name (tag) to a domain
SYNOPSIS	**addtag** -d *domain_indicator* [-q] [-y|-n] *new_tag*
	addtag -h
DESCRIPTION	addtag(1M) adds the specified domain tag name (*new_tag*) to a domain (*domain_id*|*domain_tag*). 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 *domain_tag*.
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_id*s are A–R and are not case sensitive.

domain_tag – Name assigned to a domain.

-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. Prompts are displayed unless used with the -q option.

OPERANDS   The following operands are supported:

new_tag   New tag name assigned to a domain. See Extended Description for a description of invalid domain names.

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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)

Last Modified 19 September 2003   SMS 1.4   **16**

NAME	cancelcmdsync - command synchronization command

SYNOPSIS   **cancelcmdsync** *cmdsync_descriptor*

initcmdsync *script_name* [*parameters*]

savecmdsync −M *identifier cmdsync_descriptor*

[cancel | init | save]cmdsync −h

DESCRIPTION   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:

initcmdsync   Creates a command synchronization descriptor that identifies
                   the script to be recovered.

                   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.

savecmdsync   Adds a marker that identifies a location in the script from
                   which processing can be resumed after a failover.

cancelcmdsync   Removes a command synchronization descriptor from the
                   command synchronization list. This ensures that the script is
                   run only once and not after subsequent failovers.

                   Be sure that all exit paths of a script have a cancelcmdsync
                   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.

Note – Both an initcmdsync and a cancelcmdsync sequence must be contained
within a script to enable command synchronization. The use of the savecmdsync
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.

OPTIONS   The following options are supported:

cmdsync_descriptor Specifies the command synchronization descriptor that
                      identifies the user-defined script. This descriptor is the
                      standard output value returned by the initcmdsync
                      command.

-h	Help. Displays usage descriptions.
	Note – Use alone. Any option specified in addition to -h is ignored.
-M *identifier*	Marks a location in the script from which the script can be resumed after a failover. The identifier must be a positive integer.
parameters	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.
script_name	Identifies the name of the user-defined script to be synchronized. *script_name* 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 cancelcmdsync to remove the script from the
# command synchronization list. Otherwise, the command
# will get restarted on the new main SC.
#
clean_up () {
        cancelcmdsync  $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
# initcmdsync command
#
initcmdsync 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 savecmdsync 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.
#
            savecmdsync -M $(( $goto_label + 1 )) $desc
            goto_label=$(( $goto_label + 1 ))
               ;;
#
# Step 2: Do more things
#
2 )         do_more_things
               .
               .
               .
            savecmdsync -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 cancelcmdsync to remove the script from the
# command synchronization list. Otherwise, the command will be restarted
# after the failover.
#
cancelcmdsync $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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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

codd(1M) is a process that runs on the main system controller (SC). This process does the following:

- 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.

This daemon is started automatically by the ssd(1M) daemon. If the codd daemon terminates, it is restarted automatically. Do *not* manually start this daemon from the command line.

EXTENDED DESCRIPTION

The codd daemon releases COD RTU licenses when the following events occur:

- A COD CPU board is powered off or disconnected from a running domain.
- A domain virtual keyswitch state changes from on/secure to standby/off

Clients of the codd daemon include:

addcodlicense(1M)	Adds a COD RTU license key to the COD license database on the system controller (SC)
dxs(1M)	Domain X server daemon
deletecodlicense(1M)	Removes a COD RTU license from the SC.
hpost(1M)	Sun Fire high-end systems power-on self-test (POST) control application
setdefaults(1M)	Remove all instances and reset reserved COD RTUs for a previously active domain.
setupplatform(1M)	Sets up the available component list and reserved COD RTUs for domains and configures platform COD headroom.
showcodlicense(1M)	Shows installed COD RTU licenses.
showcodusage(1M)	Shows current usage statistics for COD resources.
showplatform(1M)	Displays the board available component list, domain state, and reserved COD RTUs for each domain, and platform COD headroom.

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:

/var/opt/SUNWSMS/adm/platform/messages   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	**console** −d *domain_indicator* [[−f]| [−l]| [−g]| [−r]] [−e *escapeChar*]
	console −h
DESCRIPTION	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 (*domain_id* or *domain_tag*). Many console commands can be attached simultaneously to a domain, but only one console has write permissions; all others have read-only permissions. Write permissions are in either locked or unlocked mode.

If console is invoked without any options it comes up in exclusive locked write mode (option −f). An exclusive session forcibly detaches all other sessions from the domain virtual console.

Locked write mode is more secure. It can be taken away only if another console is opened using console -f or ~* is entered from another running console window. In both cases the new console session is an exclusive session.

Unlocked write permission is not as secure. It can be taken away if another console command is started using console -g, console -l, or console -f, or if ~@, ~&, or ~* is entered from another console window.

console can utilize either IOSRAM or the network path for domain console communication. You can manually toggle the communication path by using the ~= (tilde-equal sign) command. Doing so is useful if the network becomes inoperable, in which case the console sessions appears to be hung.

Tilde commands are described in EXTENDED DESCRIPTION.

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_id*s 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, "SMS Security Options and Administrative Privileges" in the
System Management Services (SMS) 1.4 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)

NAME	dca - domain configuration agent
SYNOPSIS	**dca** -d *domain_indicator* [-H *hostname*]
	dca -h
DESCRIPTION	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.
	This agent is automatically started by ssd(1M). Do *not* start it manually from the command line.
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_id*s are A–R and are not case sensitive.
	domain_tag – Name assigned to a domain using addtag(1M).
-h	Help. Displays usage descriptions for the specified *hostname*.
	Note – Use alone. Any option specified in addition to -h is ignored.
-H *hostname*	The Solaris software host name of the domain associated with the dca.

FILES The following files are used by this command:

> /var/opt/SUNWSMS/doors/<domain_id>/dca
>
> /var/opt/SUNWSMS/pipes/<domain_id>/scdr0
>
> /var/opt/SUNWSMS/pipes/<domain_id>/scdr1
>
> /var/opt/SUNWSMS/pipes/<domain_id>/scdr2
>
> /var/opt/SUNWSMS/pipes/<domain_id>/scdr3
>
> /var/opt/SUNWSMS/pipes/<domain_id>/scdr4
>
> /var/opt/SUNWSMS/pipes/<domain_id>/scdr5
>
> /var/opt/SUNWSMS/pipes/<domain_id>/scdr6
>
> /var/opt/SUNWSMS/pipes/<domain_id>/scdr7

```
/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)

NAME | deleteboard - unconfigure, disconnect, and unassign a system board from a domain

SYNOPSIS | **deleteboard** [-c *function*] [-r *retry_count* [-t *timeout*]] [-q] [-f] [-y|-n] *location*...

deleteboard-h

DESCRIPTION | deleteboard(1M) removes a *location* from the domain it is currently assigned to and possibly active in. The board at that *location* must be in either the assigned or connected|configured states. The -c option is used to specify the transition of the board from the current configuration state to the new configuration state.

Configuration states are unconfigure, disconnect, and unassign. If the -c option is not specified, the default expected configuration state is unassign.

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 setupplatform(1M). This means the deleteboard *location* field must appear in the domain available component list list.

OPTIONS | The following options are supported.

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:

unconfigure   Unconfigures the board from the Solaris operating environment running on the domain. Solaris software stops using any of the hardware resources on the board. Transitions the board into the `connected|unconfigured` state. In this state the system board is assigned to the logical domain and connected (remains in the `active` 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 environment. Operations allowed on the board are limited to configuration administration operations.

disconnect   Unconfigures the board from the Solaris operating environment running on the domain. See `unconfigure`. Transitions the board into the `disconnected|unconfigured` 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 disconnected.

unassign   Unconfigures the board from the Solaris operating environment running on the domain. See `unconfigure`. Disconnects the board. See `disconnect`. Moves the board out of the logical domain by changing its state to `available`.

-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* -t *timeout*	These command arguments enable 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. 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 15K , Sun Fire 12K
	SB(0...17), SB(0...8)
	IO(0...17), IO(0...8)

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, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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 seconds 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.
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)

NAME | deletecodlicense - remove a Capacity on Demand (COD) right-to-use (RTU) license key from the COD license database

SYNOPSIS | **deletecodlicense** [-f] *license-signature*

deletecodlicense -h

DESCRIPTION | The deletecodlicense(1M) 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 *SMS Administrator Guide*.

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.

However, you can force the deletion of a COD RTU license by specifying the -f option, even if the license removal will result in a license violation.

OPTIONS | The following options are supported:

-f   Forces the specified COD RTU license key to be deleted from the COD license database.

-h   Help. Displays usage descriptions.

              Note – Use alone. Any option specified in addition to -h is ignored.

license-signature Specifies the COD RTU license key to be deleted from the COD license database.

Group Privileges Required | You must have platform administrator group privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | **EXAMPLE 1**   Deleting a COD RTU license key

```
sc0:sms-user:>deletecodlicense\
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.

>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)

NAME | deletetag - remove the domain tag name associated with the domain

SYNOPSIS | **deletetag** -d *domain_indicator* [-q] [-y | -n]

deletetag -h

DESCRIPTION | deletetag(1M) removes the domain tag associated with the domain.

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_id*s 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.

-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.

EXTENDED DESCRIPTION

Group Privileges Required | You must have platform administrator privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | **EXAMPLE 1**   Deleting Tag eng2 From the Domain to Which It Was Assigned

```
sc0:sms-user:> deletetag -d eng2 -qy
```

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)

NAME | disablecomponent - add the specified component to the specified blacklist file

SYNOPSIS | **disablecomponent** [-d *domain_indicator*] [-i *"reason"*] *location...*

disablecomponent -h

DESCRIPTION | disablecomponent(1M) adds a component to the domain or platform blacklist, making it ineligible for booting.

The *blacklist* 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.

disablecomponent, when used without any option, edits the platform blacklist file.

disablecomponent *cannot* be used on the ASR blacklist file; only enablecomponent(1M) can be used to write to the ASR blacklist file.

For more information on the use and editing of platform and domain blacklists refer to Chapter 6, "Domain Control," in the *System Management Services (SMS) 1.4 Administrator Guide*.

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_id*s 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.

-i *"reason"*   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.

OPERANDS | The following operands are supported:

location   List of component locations, separated by forward slashes and
                        comprised of 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 15K, Sun Fire 12K

```
SB(0...17), SB(0...8)
```

```
IO(0...17), IO(0...8)
```

```
CS(0|1), CS(0|1)
```

```
EX(0...17), EX(0...8)
```

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 single CPU/mem processor in a processor pair, neither processor is used.

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* 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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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**

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 file is 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 descriptions of the following attributes.

Attribute Types	Attribute Values
Availability	SUNWSMSop

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

NAME	dsmd - domain status monitoring daemon
SYNOPSIS	**dsmd**
DESCRIPTION	dsmd(1M) monitors domain status and operating system (OS) heartbeat for up to 18 domains on a Sun Fire 15K and up to nine domains on a Sun Fire 12K system.

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 efhd(1M) any automatic diagnosis (AD) information related to a domain stop.

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.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

EXTENDED DESCRIPTION

dsmd logs the following events and attempts to recover from them:

- Domain boot failure
- Error reset
- Solaris OS hang
- Domain panic
- Domain reset/reboot
- DStop
- Boot/panic/error_reset_sync timeout

dsmd clients include:

codd(1	Capacity on Demand (COD) daemon
dxs(1M)	Domain *X* server daemon
efe	Sun Management Center daemon
osd(1M)	OpenBoot PROM daemon
pcd(1M)	Platform configuration database daemon
esmd(1M)	Environment status monitoring daemon

dsmd is a client of:

hwad(1M)	Hardware access daemon
setkeyswitch(1M)	Virtual keyswitch control command

For more information refer to the *System Management Services (SMS) 1.4 Administrator Guide*.

FILES   The following files are supported:

`/etc/opt/SUNWSMS/startup/ssd_start`   Default startup file for `ssd`.

`/var/opt/SUNWSMS/adm/`*domain_id*`/`   Stores message files and `hpost` dump files.

`/var/opt/SUNWSMS/SMS/adm/`*domain_id*`/post/`   Stores the `dstop` and hardware configuration dump files

`/export/home/`*sms-user*`/xir_dump/`   Stores `xir` dump files for all domains.

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO   **codd**(1M), **dxs**(1M), **efhd**(1M), **esmd**(1M), **hwad**(1M), **osd**(1M), **pcd**(1M), **reset**(1M), **setkeyswitch**(1M), **ssd**(1M)

NAME	dxs - domain X server
SYNOPSIS	**dxs** [-S] -d *domain_indicator*
	dxs -h
DESCRIPTION	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.

When the domain is running Solaris software, dxs acts as a relay between the domain's console driver (cvcd) 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.

A domain X server is automatically started for each active domain by the ssd(1M) daemon. Do *not* start it manually from the command line. dxs for the domain is terminated when the domain is shut down.

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_id*s are A–R and are not case sensitive.
	domain_tag – Name assigned to a domain using addtag(1M).
-h	Help. Displays usage descriptions for the specified *hostname*.
	Note – Use alone. Any option specified in addition to -h is ignored.
-S	Disables console output logging. By default, logging is enabled and is written to the /var/opt/SUNWSMS/adm/ *domain_id*/console file.

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), **console**(1M), **ssd**(1M)

NAME | efhd - error and fault handling daemon

SYNOPSIS | **efhd**

DESCRIPTION | efhd(1M) performs automatic error diagnosis based on the domain stop (dstop) 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 environment on domains. efhd passes this list event to erd(1M) for reporting.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

EXTENDED DESCRIPTION | efhd(1M) does the following:

■ Obtains the domain name and location of the dstop file associated with the failure.

■ Receives the diagnosis results performed by the other diagnosis engines in the system, POST and the domain Solaris operating environment.

■ Analyzes the errors captured in the dstop file.

■ Generates the error information used by the automatic diagnosis engine to determine components associated with the encountered errors.

■ Updates the component health status of the components associated with the encountered errors.

■ Passes the diagnosis results to erd(1M) for reporting.

For more information refer to the *System Management Services (SMS) 1.4 Administrator Guide.*

FILES | The following files are supported:

/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/SF15000.dict   Contains primary and known permutations of fault classes.

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

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

NAME | elad - event log access daemon

SYNOPSIS | **elad**

DESCRIPTION | elad(1M) controls access to the SMS event log (eventlog), 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:

- Starts a new event log file whenever the current event log reaches its size limit.

  The current log file is archived as eventlog.0. Whenever a new event log is created, the file names of existing archive logs are incremented by 1. A maximum of ten archive files (eventlog.0 through eventlog.9) is maintained.

- Deletes the oldest archive file, eventlog.9, whenever a new event log file is created.

- Passes error and list events to elad(1M) for recording.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

FILES | The following files are supported:

/etc/opt/SUNWSMS/SMS/config/elad_tuning.txt	Sets the size, number of archive files to be maintained, and number of days that the archive files are to be retained.
/etc/opt/SUNWSMS/startup/ssd_start	Default startup file for ssd.
/var/opt/SUNWSMS/adm/*domain_id*/	Stores message files and hpost dump files.
/var/opt/SUNWSMS/SMS/adm/events/eventlog	Stores all the hardware-related error and fault events

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO | **efhd**(1M), **elad**(1M), **erd**(1M), **mld**(1M), **ssd**(1M)

NAME | enablecomponent - remove the specified component from the specified blacklist

SYNOPSIS | **enablecomponent** [-a | -d *domain_indicator*] *location*...

enablecomponent -h

DESCRIPTION | enablecomponent(1M) removes a component from the platform, domain, or ASR blacklist, making it eligible for booting.

The *blacklist* 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.

The ASR *blacklist* 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.

enablecomponent, when used without any option, edits the platform blacklist.

Use showcomponent(1M) to display whether a particular component is currently blacklisted.

For more information on the use and editing of platform and domain blacklists refer to Chapter 6, "Domain Control," in the *System Management Services (SMS) 1.4 Administrator Guide*.

OPTIONS | The following options are supported:

-a   Specifies the component to remove from the ASR blacklist.

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

domain_id – ID for a domain. Valid *domain_id*s are A–R and are not case insensitive.

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.

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 15K, Sun Fire 12K

```
SB(0...17), SB(0...8)
```

```
IO(0...17), IO(0...8)
```

```
CS(0|1), CS(0|1)
```

```
EX(0...17), EX(0...8)
```

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
```

enablecomponent(1M) System Administration

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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)

NAME | erd - event reporting daemon

SYNOPSIS | **erd**

DESCRIPTION | 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.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

FILES | The following files are supported:

/etc/opt/SUNWSMS/SMS/config/event_email.cf	Controls email notifications
/etc/opt/SUNWSMS/SMS/config/templates/ sample_email	Default format of event content in email
/etc/opt/SUNWSMS/SMS/config/templates/ sendmail.sh	Default shell script to send email
/etc/opt/SUNWSMS/startup/ssd_start	Default startup file for ssd
/var/opt/SUNWSMS/SMS/adm/events/eventlog	Stores all the hardware-related error and fault events

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO | **mld**(1M), **ssd**(1M), **testemail**(1M)

NAME	esmd - environmental status monitoring daemon
SYNOPSIS	**esmd**
DESCRIPTION	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.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

EXTENDED DESCRIPTION

esmd monitors the following boards for out-of-range conditions:

- CPU board
- MaxCPU board
- HPCI board
- HPCI+ board
- Expander board
- Centerplane support board
- SC control board
- SC I/O
- Fan control board
- Power supplies (bulk)

esmd recognizes the following events and alerts the appropriate clients/daemons:

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	Notices when temperature sensors on a board register a two-degree difference or when a temperature crosses a temperature threshold.
Board voltage change	Notices 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 esmd removes the board from the domain and powers it off.
Board current change	Notices whenever any of the monitored board current values change.
CSB state change	Notices when any of the monitored CSB board properties change.
EXB state change	Notices when any of the monitored EXB board properties change.
CPU state change	Notices when any of the monitored CPU board properties change.
Bulk power state change	Notices when any of the bulk power supply properties change.
Fan tray state change	Notices when any of the monitored fan tray properties change.
PCI card state change	Notices when any of the monitored PCI card properties change.

esmd clients include:

hwad	Hardware access daemon
pcd	Platform configuration database daemon
dsmd	Domain status monitoring daemon

For more information refer to the *System Management Services (SMS) 1.4 Administrator Guide.*

EXIT STATUS   The following exit values are returned:

0	Successful completion.
>0	An error occurred.

FILES   The following file is supported.

/var/opt/SUNWSMS/adm/platform/messages	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)

NAME   flashupdate - update the flash PROMs located on the CPU boards, MaxCPU boards, and system controllers (SC)

SYNOPSIS   **flashupdate** -d *domain_indicator* -f *path* [-q|-v] [-y|-n]

flashupdate -f *path* [-q|-v] [-y|-n] *location*...

flashupdate -h

DESCRIPTION   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.

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. Once you have finished updating the SC FPROMs, you must shut down and reset the SC. See Example 6 in the EXAMPLES section. You do not need to reset the SC after updating CPU FPROMs.

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.

flashupdate displays both the current FPROM and the flash image file information prior to any updates. You are prompted to update the FPROMs.

Note – 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.

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_id*s 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 FPROM 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   FPROM location.

The FPROM location consists of *board_loc/FPROM_id,* separated by a forward slash.

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

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

Sun Fire 15K, Sun Fire 12K

SB(0...17), SB(0...8)

IO(0...17), IO(0...8)

SC(0|1),   SC(0|1)

The following *FPROM_id* forms are accepted:

FP(0|1),   FP(0|1)

**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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES

EXAMPLE 1   Updating FPROM 0 in the System Controller 0

You must reset the SC after running this command.

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

EXAMPLE 2   Updating FPROM 1 in the System Controller 0

The first instance is for an SC with a CP1500 board, the second 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/hostobjs/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/hostobjs/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/ebus@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:

/opt/SUNWSMS/firmware/SCOBPimg.di   Used to update the FPROM 0 on
                                           the SC.

/opt/SUNWSMS/firmware/nSSCPOST.di   Used to update the FPROM 1 on
                                           the CP1500 SC.

/opt/SUNWSMS/firmware/oSSCPOST.di   Used to update the FPROM1 on
                                           the CP2140 SC.

/opt/SUNWSMS/hostobjs/sgcpu.flash   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)

NAME	fomd - failover management daemon
SYNOPSIS	**fomd**
DESCRIPTION	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).
	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.
	This daemon is automatically started by ssd(1M). Do *not* start it manually from the command line.
EXIT STATUS	The following exit values are returned:
	0 Successful completion.
	>0 An error occurred.
FILES	The following configuration file is required:
	/etc/opt/SUNWSMS/config/fomd.cf Failover daemon configuration file
ATTRIBUTES	See **attributes**(5) for descriptions of the following attributes.

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO	**setfailover**(1M), **showfailover**(1M)

NAME | frad - FRU access daemon

SYNOPSIS | **frad**

DESCRIPTION | frad(1M) 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. frad also provides the platform-dependent interface to the Sun Fire high-end systems SEEPROMs required by the FRU ID software tools.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

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 | **ssd**(1M)

NAME	help - display help information for SMS commands
SYNOPSIS	**help** [*command_name*]
	help -h
DESCRIPTION	If no argument is included, help(1M) displays a list of valid SMS commands along with their correct syntax. Otherwise, the *command_name* operand displays that command's man page.
OPTIONS	The following options are supported:.
	-h Help. Displays usage descriptions.
OPERANDS	The following operands are supported:
	command_name Specific command for which help displays the man page.
EXTENDED DESCRIPTION	
Group Privileges Required	You must have platform administrator, platform operator, platform service, domain administrator, domain configurator, or superuser privileges to run this command.
	Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.
EXAMPLES	**EXAMPLE 1** Using Help
	Displays all commands.

```
sc0:sms-user:> help
usage:
addboard -d domain_indicator [ -c  function] [-r  retry_count [-t timeout]]
 [-q ] [-y | -n] location...
addboard -h
....
....
....
smsversion -h
```

EXAMPLE 2 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)

NAME	hpost - Sun Fire high-end system power-on self-test (POST) control application
SYNOPSIS	**hpost**
DESCRIPTION	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 environment. Alternate modes prepare a single board for attach 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.

Note – 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 *not* a supported mode of use.

hpost's clients include:

- dsmd(1M)
- dxs(1M)
- setkeyswitch(1M)

hpost is a client of:

- hwad(1M)
- pcd(1M)

hpost requires and uses flash PROM images and downloadable local POST executables delivered in the SUNWSMSlp package.

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

Attribute Types	Attribute Values
Availability	SUNWSMSpo

SEE ALSO	**dsmd**(1m), **hwad**(1m), **pcd**(1m), **setkeyswitch**(1m), **dxs**(1m)

NAME | hwad - hardware access daemon

SYNOPSIS | **hwad**

DESCRIPTION | hwad(1M) provides the exclusive mechanism by which SMS processes, including daemons, access, control, monitor, and configure the hardware.

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.

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.

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.

hwad detects and recovers console bus and jtag errors.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

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

NAME | initcmdsync - command synchronization command

SYNOPSIS | **cancelcmdsync** *cmdsync_descriptor*

initcmdsync *script_name* [*parameters*]

savecmdsync -M *identifier cmdsync_descriptor*

[cancel|init|save]cmdsync -h

DESCRIPTION | 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:

initcmdsync   Creates a command synchronization descriptor that identifies the script to be recovered.

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.

savecmdsync   Adds a marker that identifies a location in the script from which processing can be resumed after a failover.

cancelcmdsync   Removes a command synchronization descriptor from the command synchronization list. This ensures that the script is run only once and not after subsequent failovers.

Be sure that all exit paths of a script have a cancelcmdsync 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.

Note – Both an initcmdsync and a cancelcmdsync sequence must be contained within a script to enable command synchronization. The use of the savecmdsync 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.

OPTIONS | The following options are supported:

cmdsync_descriptor   Specifies the command synchronization descriptor that identifies the user-defined script. This descriptor is the standard output value returned by the initcmdsync command.

-h	Help. Displays usage descriptions.
	Note – Use alone. Any option specified in addition to -h is ignored.
-M *identifier*	Marks a location in the script from which the script can be resumed after a failover. The identifier must be a positive integer.
parameters	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.
script_name	Identifies the name of the user-defined script to be synchronized. *script_name* 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 cancelcmdsync to remove the script from the
# command synchronization list. Otherwise, the command
# will get restarted on the new main SC.
#
clean_up () {
        cancelcmdsync  $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
                   # initcmdsync command
                   #
                   initcmdsync 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 savecmdsync 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.
                   #
                           savecmdsync -M $(( $goto_label + 1 )) $desc
                           goto_label=$(( $goto_label + 1 ))
                              ;;
                   #
                   # Step 2: Do more things
                   #
                   2 )         do_more_things
                               .
                               .
                               .
                               savecmdsync -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 cancelcmdsync to remove the script from the
                   # command synchronization list. Otherwise, the command will be restarted
                   # after the failover.
                   #
                   cancelcmdsync $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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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 | kmd - SMS key management daemon

SYNOPSIS | **kmd**

DESCRIPTION | 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.

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.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

Note – kmd must be run as a root process to be permitted to use the pf_key interface to IPSec.

EXIT STATUS | The following exit values are returned:

0   Successful completion.

>0   An error occurred.

FILES | The following file is used to configure kmd:

/etc/opt/SUNWSMS/config/kmd_policy.cf   kmd_policy.cf
                                               configures the shared
                                               and per-socket policies
                                               managed by kmd.

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).

The format of kmd_policy.cf is a table of eight fields separated by the pipe (|) character:

dir | *d_port* | *protocol* | *sa_type* | *auth_alg* | *encr_alg* | *domain* | *login*

The fields are defined as follows:

dir   Direction to connect from.

                      Values: sctodom, domtosc

d_port   Destination port.

protocol	Protocol for the socket.
	Values: `tcp`, `udp`
sa_type	Security association type.
	Values: `ah`, `esp`
auth_alg	Authentication algorithm.
	Values: `none`, `md5`, `sha1`
encr_alg	Encryption algorithm.
	Values: `none`, `des`, `3des`
domain	Domain ID.
	Values: integers `0-17`or a [*space*].
	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.
login	Login name.
	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 SUNWSMSop

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

NAME	mand - management network daemon
SYNOPSIS	**mand**
DESCRIPTION	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).
	mand is an SMS daemon running on both the main and spare SCs. Its role is set up by fomd.
	This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.
EXTENDED DESCRIPTION	SC-to-Domain and Domain-to-SC Internal Network (I1) data includes:

- Network mask
- SC host name
- SC IP address
- Domain[A–R] host name
- Domain[A–R] IP address

SC-to-SC Internal Network (I2) data includes:

- Network mask
- SC 0 host name
- SC 0 IP address
- SC 1 host name
- SC 1 IP address

SC External Community (C) data includes:

- Community Failover IP address
- Community physical interface name

EXIT STATUS	The following exit values are returned:

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)

NAME	mld - message-logging daemon

SYNOPSIS   **mld** [-f *config_file*] [-t]

DESCRIPTION   mld(1M) provides logging services to all SMS daemons and processes. mld is the
first SMS daemon started by ssd(1M) in order to capture the output of all other
SMS daemons and processes during their startup phases.

- Platform log messages are stored in:

  /var/opt/SUNWSMS/adm/platform/messages

  in the following format:

  time   host   program [*pid*]:[*msg_id   hrtime_t   level   file_line*] *message*

  file_line is optional and appears only in verbose mode.

  For example:

  ```
  Feb 2 09:16:10 2002 sun15 mld[904]:[209 2345678901
  INFO MLDLOGGER.cc 141] Platform messages file created.
  ```

- Domain log messages are stored in

  /var/opt/SUNWSMS/adm/*domain_id*/messages

  in the same format as platform messages, with additional *domain_id* | *domain_tag*
  information following the pid:

  time   host   program [*pid*]*domain_id* | *domain_tag*:[*msg_id   hrtime_t   level   file_line*] *message*

  For example:

  ```
  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.
  ```

- Domain syslog messages are stored in

  /var/opt/SUNWSMS/adm/*domain_id*/syslog

  in the same format in which they are received.

OPTIONS   The following options are supported:

-f *config_file*   Provides an absolute path to an alternative remote-message-
reception configuration file.

-t   Disables remote message reception (for example, domain syslog
messages).

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)

NAME   moveboard - move a board from one domain to another

SYNOPSIS   **moveboard** -d *domain_indicator* [-c *function*] [-r *retry_count* [-t *timeout*]] [-q] [-f] [-y | -n] *location*

moveboard -h

DESCRIPTION   moveboard(1M) first attempts to unconfigure, disconnect, and unassign *location* from the domain it is currently assigned to and possibly active in, and then proceeds to assign, connect, and configure *location* to the domain *domain_id* or *domain_tag*.

The -c *function* 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.

Note – 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.

Note – 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.

Note – 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.

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 environment 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 environment 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
                           environment. 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 environment 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
                     environment. 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
                     environment. 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_id*s 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* -t *timeout*	These command arguments enable 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. 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 15K, Sun Fire 12K
	SB(0...17), SB(0...8)
	IO(0...17), IO(0...8)

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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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:

`/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), **addboard**(1M), **deleteboard**(1M), **enablecomponent**(1M), **esmd**(1M), **showcomponent**(1M)

NAME	osd - OpenBoot PROM server daemon
SYNOPSIS	**osd**
DESCRIPTION	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.

osd also receives mailbox commands from OpenBoot PROM. These mailbox commands are acted upon, and a result is returned to OpenBoot PROM. Commands include get-time-of-day, set-time-of-day, get-idprom, get-nvram-data, set-nvram-data, get-reboot-args, set-reboot-args, and do-tunnel-switch. One instance of osd on the system controller (SC) is shared between all domains.

This daemon is automatically started by ssd(1M). Do *not* start it manually from the command line.

EXTENDED DESCRIPTION	
Group Privileges Required	osd is run as the sms-osd 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   **setkeyswitch**(1M)

NAME	pcd - platform configuration database daemon

SYNOPSIS	**pcd**

DESCRIPTION   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.

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.

This daemon is started automatically by the ssd(1M) daemon. Do *not* start it manually from the command line.

EXTENDED DESCRIPTION   Platform data for SMS 1.2 version 1 includes:

```
Platform Type
Platform Name
Rack ID
Coherent Memory Address Slice Map
Clock Frequency
Clock Device Type
SC IP Address
SC Logical IP Host Adress
SC Host Netmask
SCO to SC1 IP Address
SC1 to SC0 IP Adress
SC to SC Netmask
```

Platform data for SMS 1.3 version 2 includes:

```
Platform Type
Platform Name
Rack ID
Coherent Memory Address Slice Map
Clock Frequency
Clock Device Type
SC IP Address
SC Logical IP Host Address
SC Host Netmask
SCO to SC1 IP Address
SC1 to SC0 IP Address
SC to SC Netmask
COD Head Rooom
```

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 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
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 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 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:

/var/opt/SUNWSMS/.pcd/platform_info   Contains platform
                                              database information.

/var/opt/SUNWSMS/.pcd/domain_info   Contains domain
                                              database information.

/var/opt/SUNWSMS/.pcd/sysboard_info   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

poweroff [−q] [−y | −n] [*location*]

poweroff −h

DESCRIPTION

poweroff(1M) 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 is given by default.

Note − When you power off a bulk power supply poweroff trips the circuit breaker. In that case the poweron command alone can not restore power. You must manually flip the breaker back on and then run poweron.

If you do not have platform administrator privileges, the [*location*] command operand *must* be specified and the board must be assigned to a domain for which you have domain administrator or configurator privileges.

Note − This command has no effect on the position of the virtual keyswitch.

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. 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 15K, Sun Fire 12K

                        SB(0...17), SB(0...8)

                        IO(0...17), IO(0...8)

                        CS(0|1), CS(0|1)

                        FT(0...7), FT(0...7)

                        PS(0...5), PS(0...5)

                        EX(0...17), EX (0...8)

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

**EXTENDED
DESCRIPTION**

**Group Privileges   You must have either platform administrator or domain administrator/configurator
Required**   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 Chapter 2, "SMS Security Options and Administrative Privileges" in the
System Management Services (SMS) 1.4 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)

NAME	poweron - control power on

SYNOPSIS

poweron [−q] [−y | −n] [*location*]

poweron −h

DESCRIPTION

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).

Note – When you power off a bulk power supply poweroff trips the circuit breaker. In that case the poweron command alone can not restore power. You must manually flip the breaker back on, and then run poweron.

If you do not have platform administrator privileges, the *location* command operand *must* 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, the poweron operation fails. 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 poweron request fails.

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.

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. 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 15K, Sun Fire 12K

```
SB(0...17), SB(0...8)
```

```
IO(0...17), IO(0...8)
```

```
CS(0|1), CS(0|1)
```

```
FT(0...7), FT(0...7)
```

```
PS(0...5), PS(0...5)
```

```
EX(0...17), EX (0...8)
```

**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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | **EXAMPLE 1**   Powering On the Dual 48V Power Supply

The power supply is located on the front side in the 0 bank position.

```
sc0:sms-user:> poweron PS0
```

EXAMPLE 2   Powering On the Dual 48V Power Supply When Both AC Inputs are Bad

When the AC inputs are bad you will receive a warning.

```
sc0:sms-user:> poweron PS0
Both AC inputs to PS0 are bad, did you remember to turn on the breakers?
```

EXAMPLE 3   Powering On a CPU in the ASR Blacklist File

You must have platform administrator privileges. Otherwise, poweron terminates and displays an error message.

```
sc0:sms-user:> poweron SB0
Component SB0 is in the ASR blacklist.
Are you sure you want to continue the power ON (yes/no)? Y
```

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   **esmd**(1M), **poweroff**(1M)

NAME | rcfgadm - remote configuration administration

SYNOPSIS | **rcfgadm** -d *domain_indicator* [-f] [-y | -n] [-v] [-o *hardware_options*] -c *function* [-r *retry_count* [-T *timeout*]] *ap_id...*

rcfgadm -d *domain_indicator* [-f] [-y | -n] [-v] [-o *hardware_options*] -x *hardware_function ap_id...*

rcfgadm -d *domain_indicator* [-v] [-a] [-s *listing_options*] [-o *hardware_options*] [-l [*ap_id* | *ap_type*]...]

rcfgadm -d *domain_indicator* [-v] [-o *hardware_options*] -t *ap_id...*

rcfgadm -d *domain_indicator* [-v] [-o *hardware_options*] -h [*ap_id* | *ap_type*]

DESCRIPTION | rcfgadm(1M) provides remote configuration administration operations on dynamically reconfigurable hardware resources. The rcfgadm 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).

rcfgadm performs configuration administration at attachment points, which are places where system software supports dynamic reconfiguration of hardware resources during continued operation of Solaris software.

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 rcfgadm performs configuration by calling hardware-specific libraries.

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.

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.

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: empty, disconnected, or

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 environment. 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 environment. 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_id*s) 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_type*s 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 15K/12K 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 environment.

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_id*s 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 [*ap_id* | *ap_type*]	Lists the state and condition of attachment points specified. Filter attachment points with the −s option and select suboption. Invoking rcfgadm without one of the action options is equivalent to −l without an argument. The format of the list display is controlled by the −v and −s options. When the −a option is specified, attachment points are dynamically expanded.
−n	Automatically answers no to all prompts.
−o *hardware_options*	Supplies hardware-specific options to the main command option.

The following are valid *hardware_options*:

- parsable

  Applies only when the −s option is used. The parsable suboption specifies that info is returned for system board and IO assembly only.

- unassign

  Applies only when the −c disconnect option is used. The unassign suboption specifies that the domain is to give up ownership of the board.

- nopoweroff

  Applies only when the −c disconnect option is used. The nopoweroff suboption specifies that the board is not to be powered off after it is disconnected.

−r *retry_count*	Specifies the number of times the dynamic reconfiguration (DR) request is retried on the domain. The default is zero.
−s *listing_options*	Supplies listing options to the list (−l) command. *listing_options* conforms to the getsubopt(3C) syntax convention. The suboptions are used to specify the attachment point selection criteria (select=select_string), the type of matching desired (match=match_type), the order of listing (sort=field_spec), the data that is displayed (cols=field_spec and cols2=field_spec), the column delimiter (delim=string), and whether to suppress column headings (noheadings).

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.

The order of the fields in *field_spec* is significant. For the sort suboption, the first field given is the primary sort key. For the `cols` and `cols2` 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 *field_spec* for the sort suboption. The default value for sort is *ap_id*. The default values for `cols` and `cols2` depend on whether the `-v` option is given. Without it, `cols` is `ap_id:r_state:o_state:condition` and `cols2` is not set; with `-v`, `cols` is `ap_id:r_state:o_state:condition:info` and `cols2` is `status_time:type:busy:physid`.

The default value for `delim` is a single space. The value of `delim` can be a string of arbitrary length. The delimiter cannot include a comma (,) character; see `getsubopt`(3C). These listing options can be used to create parsable output.

`-T` *timeout* Specifies the time interval, in seconds, between retries. This option cannot be used alone and must be specified with the `-r` *retry_count* option. The default value is zero, meaning the that DR request is retried immediately.

`-t` Performs a test of one or more attachment points. The test function is used to reevaluate the condition of the attachment point.

The results of the test are used to update the condition of the specified occupant to `ok` if no faults are found, `failing` if recoverable faults are found, or `failed` if any unrecoverable faults are found.

If a test is interrupted, the attachment point condition can be restored to its previous value, set to `unknown` if no errors were found, set to `failing` if only recoverable errors were found, or set to `failed` if any unrecoverable errors were found. The attachment point should be set to `ok` only upon normal completion of testing with no errors.

`-v` Executes in verbose mode. For the `-c`, `-t`, and `-x` options, displays a message giving the results of each attempted operation. Displays detailed help information for the `-h` option. Displays verbose information for each attachment point for the `-l` option.

-x *hardware_function*	Performs hardware-specific functions.

Lists hardware-specific private functions using `rcfgadm` -h *ap_id*.

The following are valid for *hardware_function*:

- `assign` *ap_id*

  Assign a board to a domain.
- `unassign` *ap_id*

  Unassign a board from a domain.
- `poweron` *ap_id*

  Power on a board.
- `poweroff` *ap_id*

  Power off a board.

-y	Automatically answers yes to all prompts. Prompts are displayed.

OPERANDS | The following operands are supported:

      ap_id   Refer to attachment points by hardware-specific identifiers (*ap_id*s) 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_id*s 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_id*s for assign and unassign must be logical *ap_id*s 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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)"  -
la 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 rcfgadm displays column headings and error messages. Listing output data is not affected by the setting of this variable.

LC_TIME   Determines how rcfgadm displays human-readable status changed time (*status_time*).

TZ   Specifies the time zone used when converting the status changed time. This applies to both the human-readable (*status_time*) and parsable (*status_time_p*) 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.

NAME	reset - send reset to all CPU ports of a specified domain
SYNOPSIS	**reset** -d *domain_indicator* [, *domain_indicator*]... [-d *domain_indicator* [, *domain_indicator*]...]... [-q] [-y	-n] [-x] **reset** -h
DESCRIPTION	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 secure position. By default, reset gives an optional confirmation prompt. Refer to Chapter 6, "Domain Control," in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.
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_id*s are A–R and are not case sensitive.
	domain_tag – Name assigned to a domain using addtag(1M).
	Note – Multiple *domain_indicator*s must be separated by a comma.
-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.
-x	Send an XIR signal to the processors in the specified domain.
-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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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 to port SB4/P0 initiated. RESET to port SB4/P1 initiated.
RESET initiated to all ports for domain: C
```

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 descriptions of the following attributes.

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO

addtag(1M)

NAME | resetsc - reset the *other* system controller (SC)

SYNOPSIS | **resetsc** [−q] [−y | −n]

resetsc −h

DESCRIPTION | resetsc(1M) resets the *other* 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, resetsc prompts the user to power it on. If the chosen SC does not power on, resetsc terminates and returns an error.

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. Prompts are displayed unless used with the −q option.

EXTENDED DESCRIPTION

Group Privileges Required | You must have platform administrator privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | **EXAMPLE 1**   Resetting the Other SC Using Prompts

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

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

NAME   runcmdsync - prepare a specified script for recovery after a failover

SYNOPSIS   **runcmdsync** *script_name* [*parameters*]

runcmdsync -h

DESCRIPTION   The runcmdsync(1M) command prepares the specified script for automatic synchronization (recovery) after a failover. runcmdsync 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 runcmdsync command also removes this descriptor from the command synchronization list when the script terminates.

To specify restart points in a script, see initcmdsync(1M) and the family of synchronization commands.

OPTIONS   The following options are supported:

-h   Help. Displays usage descriptions.

                Note – Use alone. Any option specified in addition to -h is ignored.

script_name   Identifies the script to be prepared for command synchronization. *script_name* must be the absolute path name of an executable command. The command must exist in the same location on both SCs.

parameters   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.

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) 1.4 Administrator Guide* for more information.

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

NAME	savecmdsync - command synchronization command
SYNOPSIS	**cancelcmdsync** *cmdsync_descriptor*
	initcmdsync *script_name* [*parameters*]
	savecmdsync −M *identifier cmdsync_descriptor*
	**[cancel	init	save]cmdsync** −h

DESCRIPTION

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:

initcmdsync   Creates a command synchronization descriptor that identifies the script to be recovered.

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.

savecmdsync   Adds a marker that identifies a location in the script from which processing can be resumed after a failover.

cancelcmdsync   Removes a command synchronization descriptor from the command synchronization list. This ensures that the script is run only once and not after subsequent failovers.

Be sure that all exit paths of a script have a cancelcmdsync 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.

Note – Both an initcmdsync and a cancelcmdsync sequence must be contained within a script to enable command synchronization. The use of the savecmdsync 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.

OPTIONS

The following options are supported:

cmdsync_descriptor   Specifies the command synchronization descriptor that identifies the user-defined script. This descriptor is the standard output value returned by the initcmdsync command.

`-h`	Help. Displays usage descriptions.
	Note – Use alone. Any option specified in addition to `-h` is ignored.
`-M` *identifier*	Marks a location in the script from which the script can be resumed after a failover. The identifier must be a positive integer.
parameters	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.
script_name	Identifies the name of the user-defined script to be synchronized. *script_name* 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 cancelcmdsync to remove the script from the
# command synchronization list. Otherwise, the command
# will get restarted on the new main SC.
#
clean_up () {
        cancelcmdsync  $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
# initcmdsync command
#
initcmdsync 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 savecmdsync 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.
#
             savecmdsync -M $(( $goto_label + 1 )) $desc
             goto_label=$(( $goto_label + 1 ))
                ;;
#
# Step 2: Do more things
#
2 )          do_more_things
                .
                .
                .
             savecmdsync -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 cancelcmdsync to remove the script from the
# command synchronization list. Otherwise, the command will be restarted
# after the failover.
#
cancelcmdsync $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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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 | setbus - perform dynamic bus reconfiguration on active expanders in a domain

SYNOPSIS | **setbus** [-q] [-y|-n] -c *csb* [-b *buses*] [*location*]...

setbus -h

DESCRIPTION | 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 normal mode. Using one CSB is considered degraded mode.

This feature enables you to swap out a CSB without having to power off the system.

OPTIONS | The -y and -n are optional arguments that take effect only if the setbus command displays a confirmation message such as the one shown below. The -y argument supplies an automatic affirmative response to the confirmation message. The -n argument supplies an automatic negative response.

If changing the configuration on the chosen expander requires changing the configuration on additional expanders, setbus displays the following prompt:

```
The expander board in position location 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)?
```

Additionally, setbus 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 *System Management Services (SMS) 1.4 Dynamic Reconfiguration User Guide*.

Note – 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 setbus fails.

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 *location*s are separated by spaces.

Valid *location*s are:

Sun Fire 15K, Sun Fire 12K

EX(0...17), EX(0...8)

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 Chapter 2, "SMS Security Options and Administrative Privileges" in the
System Management Services (SMS) 1.4 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 descriptions of the following attributes.

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO

showbus(1M)

NAME | setcsn - set the chassis serial number for a Sun Fire high-end system

SYNOPSIS | **setcsn** -c *chassis_serial_number*

setcsn −h

DESCRIPTION | 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.

If you are upgrading to SMS 1.4 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.

Run this command on the main system controller. The chassis serial number is maintained as part of the platform configuration information.

Note – Sun manufacturing records the chassis serial number of Sun Fire high-end systems that ship with SMS 1.4 installed. Run the showplatform(1M) command to determine whether a chassis serial number was previously assigned to your system.

OPTIONS | The following options are supported:

-c *chassis_serial_ number*   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.

Note – Use alone. Any option specified in addition to −h is ignored.

EXTENDED DESCRIPTION

Group Privileges Required | You must have platform administrator or platform service privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | **EXAMPLE 1** Setting the Chassis Serial Number

```
sc0:sms-user:> setcsn -c 352A00008
```

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)

NAME

setdatasync - modify the data propagation list used in data synchronization

SYNOPSIS

setdatasync [-i interval] schedule *filename*

setdatasync cancel *filename*

setdatasync push *filename*

setdatasync backup

setdatasync -h

DESCRIPTION

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.

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.

Note – 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.

You can also use setdatasync to do the following:

- Propagate a specified file to the spare SC without adding the file to the data propagation list.
- Resynchronize the SC configuration files on the main and spare SCs.

OPTIONS The following options are supported:

backup   Forces re-synchronization after something other than SMS
                      creates undesired changes to SMS files on the spare SC.

                      `setdatasync backup` re-propagates every SMS
                      configuration, data and log file. `fomd` does this
                      automatically. Using `setdatasync backup` can slow
                      down automatic `fomd` file propagation.

                      The time required to execute `setdatasync backup` 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
                      Chapter 9, "SC Failover," of the *System Management Services
                      (SMS) 1.4 Administrator Guide.*

                      Use `setdatasync backup` only in the following
                      situations.

                      ■ SMS was re-installed on the spare SC while SMS was
                        running on the main SC.

                      Note – SMS users groups must be setup correctly on the
                      spare before running `setdatasync backup`

                      ■ SMS files were deleted from the spare SC while SMS was
                        running on the main SC.

                      ■ SMS files were overwritten or corrupted on the spare SC
                        (regardless of whether SMS was running or not).

cancel *filename*   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.

-h   Help. Displays usage descriptions.

                      Note – Use alone. Any option specified in addition to -h is
                      ignored.

-i *interval*   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).

push *filename*   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.

schedule *filename*   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) 1.4 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)

NAME | setdate - set the date and time for the system controller (SC) or a domain

SYNOPSIS | **setdate** [-d *domain_indicator*] [-u] [-q] *[mmdd]HHMM | mmddHHMM[cc]yy[.SS]*

setdate -h

DESCRIPTION | 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.

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_id*s are A–R and are not case sensitive.

domain_tag – Name assigned to a domain using addtag(1M).

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.

-h   Help. Displays usage descriptions.

Note – Use alone. Any option specified in addition to -h is ignored.

-q   Does not display current date and time after you set the new value.

-u   Interprets and displays the time using Greenwich Mean Time (GMT). The default is the local time zone.

OPERANDS | The following operands are supported:

[mmdd]HHMM[.SS]   Date and time format. mm is the month (1–12), dd is the day of the month (1–31), HH is the hour (0–23), MM is the minute (0–59), and SS is the second (0–59).

mmddHHMM[cc]yy[.SS]   Date and time format. mm is the month (1–12), dd is the day of the month (1–31), HH is the hour (0–23), MM is the minute (0–59), cc is century minus one, yy is the two-digit year, and SS 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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)

NAME | setdefaults - remove all instances of a previously active domain and reset Capacity on Demand (COD) information

SYNOPSIS | **setdefaults** [-d *domain_indicator* [-p]] [-y | -n]

setdefaults -h

DESCRIPTION | setdefaults(1M) removes all SMS instances of a previously active domain and Capacity on Demand (COD) information. A domain instance includes all pcd entries *except* network information; all message, console, and syslog log files; and, optionally, all NVRAM and boot parameters. pcd entries and NVRAM and boot parameters are returned to system default settings. IDPROM data is not affected.

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.

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_id*s 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.
-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.

EXTENDED DESCRIPTION | If the -d *domain_indicator* is specified, the setdefaults command resets domain information. The domain cannot be active, and the virtual keyswitch must be set to off. Otherwise, the setdefaults 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.

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.

Group Privileges Required

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

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)

NAME | setfailover - modify the state of the system controller (SC) failover mechanism

SYNOPSIS | **setfailover** *action*

setfailover -h

DESCRIPTION | setfailover(1M) provides the ability to modify the state of failover for the SC failover mechanisms.

OPTIONS | The following options are supported:

-h   Help. Displays usage descriptions.

Note – Use alone. Any option specified in addition to -h is ignored.

OPERANDS | The following operands are supported:

action   The following are valid actions:

force   Forces a failover to the spare SC. The spare SC must be available.

off   Disables the failover mechanism. This prevents a failover until the mechanism is reenabled.

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.

EXTENDED DESCRIPTION

Group Privileges Required | You must have platform administrator privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | 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)

NAME	setkeyswitch - change the position of the virtual keyswitch
SYNOPSIS	**setkeyswitch** -d *domain_indicator* [-q] [-y|-n] *position*
	setkeyswitch -h
DESCRIPTION	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.

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.

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.

OPTIONS   The following options are supported.

Note – 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.

-d *domain_indicator*	Specifies the domain using one of the following:
	domain_id – ID for a domain. Valid *domain_id*s 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.
-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   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 Chapter 6, "Domain Control," in the *System Management Services (SMS) 1.4 Administrator Guide*.
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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)

NAME | setobpparams - set up OpenBoot PROM variables for a domain

SYNOPSIS | **setobpparams** -d *domain_indicator* *param=value*...

setobpparams -h

DESCRIPTION | 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 *domain_id* or a *domain_tag* is required. You must reboot the domain in order for any changes to take effect.

This command is intended for error recovery and not for routine system administration. For more information refer to Chapter 4, "SMS Configuration," in the *System Management Services (SMS) 1.4 Administrator Guide*.

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_id*s 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.

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 plug-
                        in 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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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
```

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)

NAME
setupplatform - set up the available component list and Capacity on Demand (COD) resources used for domains

SYNOPSIS
setupplatform-p available [-d *domain_indicator* [-a|-r] *location*...]

setupplatform -p cod [*headroom*|-d *domain_indicator* *domainRTU*]

setupplatform [-d *domain_indicator* -]

setupplatform -h

DESCRIPTION
setupplatform(1M) sets up the available component list and COD resources to be used for domains. If a *domain_id* or *domain_tag* is specified, a list of boards *must* be specified. An empty board list can be specified as a dash(-). When no *domain_id* or *domain_tag* 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.

OPTIONS
The following options are supported:

-a	Adds the slot(s) to the available component list for the domain.
-d *domain_indicator*	Specifies the domain using one of the following:
	domain_id – ID for a domain. Valid *domain_id*s 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 available	Modifies the domain available component list.
-p cod	Assigns COD resources.
-r	Removes the slots from the available component list for the domain.
-	Clears the entire available component list.

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 15K, Sun Fire 12K
	SB(0...17), SB(0...8)
	IO(0...17), IO(0...8)

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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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
```

```
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
            /var/opt/SUNWSMS/adm/platform/messages.

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO   **addtag**(1M), **showplatform**(1M)

NAME	showboards - show the assignment information and status of the boards

SYNOPSIS   **showboards** [-d *domain_indicator*] [-v]

                 showboards [-d *domain_indicator*] -c

                 showboards -h

DESCRIPTION   showboards(1M) displays board assignments and board status, including the clock source and status for all boards . If *domain_id* or *domain_tag* 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.

If the -v option is used, showboards displays all components, including *domain configuration units* (DCUs) such as CPUs, MCPUs, HPCI, HPCI+s, and WPCI; as well as the system controller (SC), that are not DCUs.

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_id*s are A–R and are not case sensitive.

                                   domain_tag – Name assigned to a domain using addtag(1M).

-c   Clock source. Displays the clock source and status for all system, expander, I/O, and centerplane support boards. See example 6.

              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.

-h   Help. Displays usage descriptions.

              Note – Use alone. Any option specified in addition to -h is ignored.

-v   Verbose. Displays all components including DCUs.

EXTENDED
DESCRIPTION

Group Privileges
Required   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 Chapter 2, "SMS Security Options and Administrative Privileges" in the
System Management Services (SMS) 1.4 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:

domain_id   ID for a domain.

domain_tag   Name assigned to a domain using addtag(1M).

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 `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 a Sun Fire 15K 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 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 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 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 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

                    Current      SC0 Clock    SC1 Clock    Auto-Clock
Location  Pwr   Clock Source     Status       Status       Selection
--------  ---   ------------     ---------    ----------   -----------
CS0       On    SC0 Clock        Good         Good         Disabled
CS1       On    SCO 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
```

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

SEE ALSO   **addtag**(1M), **setupplatform**(1M), **showcodusage**(1M), **showplatform**(1M)

NAME	showbus - display the bus configuration of expanders in active domains

SYNOPSIS   **showbus** [−v]

                      showbus -h

DESCRIPTION   showbus(1M) displays the bus configuration of expanders in active domains. This
                      information defaults to displaying configuration by slot order EX0–EX17.

OPTIONS   The following options are supported:

-h   Help. Displays usage descriptions.

                      Note − 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.

**EXTENDED
DESCRIPTION**

**Group Privileges
Required**   You must have platform administrator, operator, or service privileges to display all
                      sets of communicating expanders (SOCX) in the system.

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

                      Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the
                      System Management Services (SMS) 1.4 Administrator Guide 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          IO1:  On/active
--------------
UNCONFIGURED
--------------
Domain: B - - OFF/Powered Off
  Location: EX12  SB12: Off/assigned      IO12: Off/assigned
Domain: C - - OFF/Powered Off
  Location: EX10  SB10: Off/assigned      IO10: Off/assigned
--------------
UNASSIGNED
--------------
  Location:  EX0   SB0:  On/unassigned    IO0: Off/unassigned
  Location:  EX2   SB2: Off/unassigned    IO2:  On/unassigned
  Location:  EX6   SB6: Off/unassigned    IO6:  On/unassigned
  Location:  EX9   SB9:  On/unassigned    IO0: Off/unassigned
  Location:  EX11  SB11: Off/unassigned   IO11: 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)

| NAME | showcmdsync - display the current command synchronization list |

SYNOPSIS

showcmdsync [-v]

showcmdsync -h

DESCRIPTION

showcmdsync 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.

The command synchronization list is displayed in the format *Descriptor, Identifier, Cmd*, where:

Descriptor   Specifies the command synchronization descriptor that represents a particular script.

Identifier   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.

Cmd   Indicates the name of the script to be restarted.

OPTIONS

The following options are supported:

-h   Help. Displays usage descriptions.

                Note – Use alone. Any option specified in addition to -h is ignored.

-v   Verbose. Displays all available command information.

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) 1.4 Administrator Guide* for more information.

EXAMPLES

EXAMPLE 1   Displaying a Command Synchronization List

```
sc0:sms-user:> showcmdsync
DESCRIPTOR     IDENTIFIER   CMD
        0              -1   c1 a1 a2
```

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 **cancelcmdsync**(1M), **initcmdsync**(1M), **runcmdsync**(1M), **savecmdsync**(1M)

| NAME | showcodlicense - display the current Capacity on Demand (COD) right-to-use (RTU) licenses stored in the COD license database |

SYNOPSIS **showcodlicense** [−r] [−v]

showcodlicense −h

DESCRIPTION `showcodlicense`(1M) displays COD license information stored in the COD license database.

OPTIONS The following options are supported:

−h   Help. Displays usage descriptions.

Note – Use alone. Any option specified in addition to −h is ignored.

−r   Displays the license information in the raw *license-signature* format, as stored in the COD license database.

−v   Verbose. Displays both the formatted license information and raw *license-signature* data.

EXTENDED DESCRIPTION The `showcodlicense` command displays the following COD information:

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.

Group Privileges Required You must have platform administrator or platform operator group privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES   The following examples show the COD license information displayed:

EXAMPLE 1   Displaying Formatted License Data

```
sc0:sms-user:> showcodlicense

                Lic                                       Tier
  Description   Ver   Expiration   Count   Status   Cls   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:RKQhd8zKNnTwvxT5DJlZNQ
```

EXAMPLE 3   Displaying Formatted and Raw License Data

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

                Lic                                       Tier
  Description   Ver   Expiration   Count   Status   Cls   Num   Req
  -----------   ---   ----------   -----   -------   ---   ---   ---
  PROC          01         NONE      16      GOOD     1     1     0
01:5014936C37048:03001:0201010100:16:00000000:RKQhd8zKNnTwvxT5DJlZNQ
```

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)

NAME showcodusage - display the current usage statistics for Capacity on Demand (COD) resources

SYNOPSIS **showcodusage** [-v] [-p resource|domains]

showcodusage -h

DESCRIPTION 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.

OPTIONS The following options are supported:

-h   Help. Displays usage descriptions.

                    Note – Use alone. Any option specified in addition to -h is ignored.

-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.

-p resource   Displays license usage by resource type.

-v   Verbose. Displays all available COD usage information, including COD RTU license use for both the system and its domains.

EXTENDED DESCRIPTION The showcodusage -p resource command displays the following COD usage information for the system:

Resource   Identifies the type of COD resources available (processors).

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.

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 -v option is specified:

                   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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)

NAME	showcomponent - display the blacklist status for a component
SYNOPSIS	**showcomponent** [-a｜-d *domain_indicator*] [-v] [*location*]...
	showcomponent -h
DESCRIPTION	showcomponent(1M) indicates whether the specified component is listed in the platform, domain, or ASR blacklist file.

If neither the -a nor the -d option is specified, showcomponent displays the platform blacklist. If no *location* is specified, showcomponent displays all components in the specified blacklist.

The *blacklist* 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.

For more information on the use and editing of platform and domain blacklists refer to Chapter 6, "Domain Control," in the *System Management Services (SMS) 1.4 Administrator Guide*.

OPTIONS   The following options are supported:

-a	Specifies the ASR blacklist.
-d *domain_indicator*	Specifies the domain using one of the following:
	domain_id – ID for a domain. Valid *domain_id*s 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.
-v	Verbose. Displays all available command information.

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

    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 15K, Sun Fire 12K

```
SB(0...17),  SB(0...8)
IO(0...17),  IO(0...8)
CS(0|1),     CS(0|1)
EX(0...17),  EX(0...8)
```

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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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
```

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)

NAME   showdatasync - display the status of system controller (SC) data synchronization for failover

SYNOPSIS   **showdatasync** [-l|-Q] [-v]

showdatasync -h

DESCRIPTION   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.

OPTIONS   The following options are supported:

-h   Help. Displays usage descriptions.

            Note – Use alone. Any option specified in addition to -h is ignored.

-l   Lists the files in the current data propagation list. For details on the information displayed see the EXTENDED DESCRIPTION section.

-Q   Lists the files queued for propagation. Each file name includes the absolute path to the file.

-v   Verbose. Displays all available command information.

EXTENDED DESCRIPTION   This section describes the information displayed by the showdatasync command.

If you do not specify an option with the showdatasync command, the following information is displayed:

```
File Propagation Status:
Active File:
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:

time	Indicates the last time that the file was propagated from the main SC to the spare.
interval	Specifies the interval, in minutes, between checks for file modification. The default interval is 60 minutes.
filename	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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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
```

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)

NAME	showdate - display the date and time for the system controller (SC) or a domain
SYNOPSIS	**showdate** [-d *domain_indicator*] [-u] [-v] **showdate** -h
DESCRIPTION	showdate (1M) displays the SC's current date and time. Optionally, showdate displays domain time of day.
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_id*s 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.

-u   Interprets and displays the time using Greenwich Mean Time (GMT). The default is the local time zone.

-v   Verbose. Displays all available command information.

EXTENDED DESCRIPTION

Group Privileges Required

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.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES   **EXAMPLE 1**   Showing the Current Local Date in Pacific Standard Time

```
sc0:sms-user:> showdate
System Controller: Sat Feb 2 15:23:21 PST 2002
```

EXAMPLE 2   Showing the Current Date Using GMT

```
sc0:sms-user:> showdate -u
System Controller: Sat Feb 2 23:23:21 GMT 2002
```

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)

NAME	showdevices - display system board devices and resource usage information
SYNOPSIS	**showdevices** [−v] [−p bydevice	byboard	query	force] *location*...
	showdevices [−v] [−p bydevice	byboard] −d *domain_indicator*
	showdevices −h
DESCRIPTION	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.
	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.
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_id*s 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 15K, Sun Fire 12K

                  SB(0...17), SB(0...8)

                  IO(0...17), IO(0...8)

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

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 Chapter 2, "SMS Security Options and Administrative Privileges" in the
System Management Services (SMS) 1.4 Administrator Guide for more information.

EXAMPLES

EXAMPLE 1   Displaying devices for System Board IO1

```
sc0:sms-user:> showdevices IO1
IO Devices
----------
domain location 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 Domain A

```
sc0:sms-user:> showdevices -v -d A
CPU
----
domain  location  id     state   speed  ecache
A       C1        40     online  400    4
A       C1        41     online  400    4
A       C1        42     online  400    4
A       C1        43     online  400    4
A       C2        55     online  400    4
A       C2        56     online  400    4
A       C2        57     online  400    4
A       C2        58     online  400    4

Memory
drain in progress:
-----------------
               board  perm   base     domain target  deleted  remaining
domain location mem MB mem MB address  mem MB board   mem MB    mem MB
A      C1       2048   723    0x600000 4096   C2      250       1500
A      C2       2048   0      0x200000 4096

IO Devices
---------
domain location  device resource          usage
A      IO1       sd0
A      IO1       sd1
A      IO1       sd2
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"
A      IO1       sd4
A      IO1       sd5
A      IO1       sd6
```

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.

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 communicating with pcd.
5	An error occurred communicating with a domain.
6	An error occurred handling device information.
7	An internal error such as failed memory allocation occurred.

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO   **addtag**(1M), **dca**(1M), **pcd**(1M)

NAME | showenvironment - display the environmental data

SYNOPSIS | **showenvironment** [-d *domain_indicator* [, *domain_indicator*]...]...
[-p temps | volts | currents | fans | powers [,temps | volts | currents | fans | powers]..]...
[-v]

showenvironment [-d *domain_indicator*[, *domain_indicator*]...]... [-p faults] [-v]

showenvironment -h

DESCRIPTION | showenvironment(1M) displays the environmental data (temperatures, voltages, and so on). If a domain *domain_id* or *domain_tag* is specified, environmental data relating to the domain is displayed, providing that the user has domain privileges for that domain. If a domain is not specified, all domain data permissible to the user is displayed.

Note – Only *domain configuration units* (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 (exb, csb) requires platform privileges. You can also specify individual reports for temperatures, voltages, currents, bulk power status, and fan tray status; or faults with the -p option. If the -p option is not present, all reports are shown.

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_id*s 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		Display 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 are within tolerance.
BAD	The difference between both companion component readings are 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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES

EXAMPLE 1   Displaying Environmental Data for All Domains on a Sun Fire 15K System.

```
  LOCATION         DEVICE   SENSOR           VALUE  UNIT  AGE        STATUS
  ----------       ------   -----------      -----  ----  ------     ------
  SC at SC0        max1617a RIO Temp         38.00  C     35.5  sec  OK
  SC at SC0        max1617a IOA Temp         32.00  C     35.5  sec  OK
  SC at SC0        pcf8591  PS0 Temp         46.49  C     35.5  sec  OK
```

```
SC at SC0        pcf8591   PS1 Temp        43.26    C    35.5   sec   OK
SC at SC0        sbbc      SBBC Temp       45.83    C    35.5   sec   OK
SC at SC0        cbh       CBH Temp        50.49    C    35.5   sec   OK
SCPER at SCPER0  max1617a  AMB 0 Temp      26.00    C    35.7   sec   OK
SCPER at SCPER0  max1617a  AMB 1 Temp      25.00    C    35.7   sec   OK
SCPER at SCPER0  max1617a  AMB 2 Temp      25.00    C    35.7   sec   OK
SC at SC0        pcf8591   1.5 VDC          1.48    V    37.1   sec   OK
SC at SC0        pcf8591   3.3 VDC          3.28    V    37.1   sec   OK
SC at SC0        pcf8591   3.3 VDC HK       3.28    V    37.1   sec   OK
SC at SC0        pcf8591   5.0 VDC          4.99    V    37.1   sec   OK
SC at SC0        pcf8591   +12.0 VDC       11.95    V    37.1   sec   OK
SC at SC0        pcf8591   -12.0 VDC      -12.01    V    37.1   sec   OK
SC at SC0        pcf8591   1.5 CVT0 VDC     1.48    A    37.1   sec   OK
SC at SC0        pcf8591   1.5 CVT1 VDC     1.48    A    37.1   sec   OK
SCPER at SCPER0  pcf8591   3.3 VDC HK       3.28    V    37.3   sec   OK
SCPER at SCPER0  pcf8591   5.0 VDC          5.02    V    37.3   sec   OK
SCPER at SCPER0  pcf8591   +12.0 VDC       12.10    V    37.3   sec   OK
SC at SC0        pcf8591   3.3 V_PS0        6.44    A    37.2   sec   OK
SC at SC0        pcf8591   3.3 V_PS1        5.71    A    37.2   sec   OK
SC at SC0        pcf8591   5.0 V_PS0        6.10    A    37.2   sec   OK
SC at SC0        pcf8591   5.0 V_PS1        6.22    A    37.2   sec   OK
SC at SC1        max1617a  RIO Temp        30.00    C    35.5   sec   OK
SC at SC1        max1617a  IOA Temp        25.00    C    35.5   sec   OK
SC at SC1        pcf8591   PS0 Temp        41.65    C    35.5   sec   OK
SC at SC1        pcf8591   PS1 Temp        33.58    C    35.5   sec   OK
SCPER at SCPER1  max1617a  AMB 0 Temp      18.00    C    35.7   sec   OK
SCPER at SCPER1  max1617a  AMB 1 Temp      18.00    C    35.7   sec   OK
SCPER at SCPER1  max1617a  AMB 2 Temp      18.00    C    35.7   sec   OK
SC at SC1        pcf8591   1.5 VDC          1.48    V    37.0   sec   OK
SC at SC1        pcf8591   3.3 VDC          3.28    V    37.0   sec   OK
SC at SC1        pcf8591   3.3 VDC HK       3.28    V    37.0   sec   OK
SC at SC1        pcf8591   5.0 VDC          4.99    V    37.0   sec   OK
SC at SC1        pcf8591   +12.0 VDC       11.95    V    37.0   sec   OK
SC at SC1        pcf8591   -12.0 VDC      -12.01    V    37.0   sec   OK
SC at SC1        pcf8591   1.5 CVT0 VDC     1.88    A    37.0   sec   OK
SC at SC1        pcf8591   1.5 CVT1 VDC     1.87    A    37.0   sec   OK
SCPER at SCPER1  pcf8591   3.3 VDC HK       3.28    V    37.3   sec   OK
SCPER at SCPER1  pcf8591   5.0 VDC          5.02    V    37.3   sec   OK
SCPER at SCPER1  pcf8591   +12.0 VDC       12.03    V    37.3   sec   OK
SC at SC1        pcf8591   3.3 V_PS0        6.15    A    37.0   sec   OK
SC at SC1        pcf8591   3.3 V_PS1        5.85    A    37.0   sec   OK
SC at SC1        pcf8591   5.0 V_PS0        5.98    A    37.0   sec   OK
SC at SC1        pcf8591   5.0 V_PS1        6.22    A    37.0   sec   OK
CSB at CS0       max1617a  AMB Top Temp    30.00    C    29.8   sec   OK
CSB at CS0       max1617a  AMB Bot Temp    31.00    C    29.8   sec   OK
CSB at CS0       sbbc      SBBC Temp       39.16    C    29.8   sec   OK
CSB at CS0       pcf8591   1.5 VDC          1.51    V    36.8   sec   OK
CSB at CS0       pcf8591   3.3 VDC          3.30    V    36.8   sec   OK
CSB at CS0       pcf8591   2.5 VDC          2.54    V    36.8   sec   OK
CSB at CS0       pcf8591   3.3 VDC HK       3.30    V    36.8   sec   OK
CSB at CS1       max1617a  AMB Top Temp    24.00    C    29.6   sec   OK
CSB at CS1       max1617a  AMB Bot Temp    26.00    C    29.6   sec   OK
CSB at CS1       sbbc      SBBC Temp       33.16    C    29.6   sec   OK
CSB at CS1       pcf8591   1.5 VDC          1.51    V    36.7   sec   OK
CSB at CS1       pcf8591   3.3 VDC          3.30    V    36.7   sec   OK
CSB at CS1       pcf8591   2.5 VDC          2.54    V    36.7   sec   OK
CSB at CS1       pcf8591   3.3 VDC HK       3.28    V    36.7   sec   OK
CP at CP0        dmx0      DMX0 Temp       33.91    C    32.3   sec   OK
CP at CP0        dmx1      DMX1 Temp       33.95    C    32.3   sec   OK
CP at CP0        dmx3      DMX3 Temp       29.92    C    32.3   sec   OK
CP at CP0        dmx5      DMX5 Temp       23.98    C    32.3   sec   OK
CP at CP0        amx0      AMX0 Temp       37.32    C    32.3   sec   OK
CP at CP0        amx1      AMX1 Temp       35.43    C    32.3   sec   OK
CP at CP0        rmx       RMX Temp        37.47    C    32.3   sec   OK
CP at CP0        darb      DARB Temp       31.85    C    32.3   sec   OK
CP at CP1        dmx0      DMX0 Temp       37.26    C    30.0   sec   OK
CP at CP1        dmx1      DMX1 Temp       37.26    C    30.0   sec   OK
```

```
CP at CP1        dmx3      DMX3 Temp       31.14    C    30.0   sec  OK
CP at CP1        dmx5      DMX5 Temp       29.12    C    30.0   sec  OK
CP at CP1        amx0      AMX0 Temp       36.60    C    30.0   sec  OK
CP at CP1        amx1      AMX1 Temp       38.77    C    30.0   sec  OK
CP at CP1        rmx       RMX Temp        36.73    C    30.0   sec  OK
CP at CP1        darb      DARB Temp       37.16    C    30.0   sec  OK
EXB at EX1       max1617a  AMB Top Temp    38.00    C    43.3   sec  OK
EXB at EX1       max1617   AMB Bot Temp    35.00    C    43.3   sec  OK
EXB at EX1       sbbc      SBBC Temp       50.49    C    43.3   sec  OK
EXB at EX1       axq       AXQ Temp        26.91    C    43.3   sec  OK
EXB at EX1       sdim      SDIM Temp       42.91    C    43.3   sec  OK
EXB at EX1       sdisc     SDISC Temp      48.83    C    43.3   sec  OK
EXB at EX1       sdise     SDISE Temp      38.67    C    43.3   sec  OK
EXB at EX1       pcf8591   1.5 VDC         1.51     V    36.5   sec  OK
EXB at EX1       pcf8591   3.3 VDC         3.30     V    36.5   sec  OK
EXB at EX1       pcf8591   2.5 VDC         2.51     V    36.5   sec  OK
EXB at EX1       pcf8591   3.3 VDC HK      3.30     V    36.5   sec  OK
CPU at SB1       max1617a  PROC 0 Temp     64.00    C    0.7    sec  OK
CPU at SB1       max1617a  PROC 1 Temp     69.00    C    0.7    sec  OK
CPU at SB1       max1617a  PROC 2 Temp     69.00    C    0.7    sec  OK
CPU at SB1       max1617a  PROC 3 Temp     67.00    C    0.7    sec  OK
CPU at SB1       sdc0      SDC0 Temp       69.82    C    0.7    sec  OK
CPU at SB1       ar0       AR0 Temp        63.16    C    0.7    sec  OK
CPU at SB1       dx0       DX0 Temp        66.49    C    0.7    sec  OK
CPU at SB1       dx1       DX1 Temp        64.49    C    0.7    sec  OK
CPU at SB1       dx2       DX2 Temp        62.49    C    0.7    sec  OK
CPU at SB1       dx3       DX3 Temp        56.49    C    0.7    sec  OK
CPU at SB1       sbbc0     SBBC0 Temp      60.49    C    0.7    sec  OK
CPU at SB1       sbbc1     SBBC1 Temp      69.82    C    0.7    sec  OK
CPU at SB1       pcf8591   1.5 VDC         1.51     V    37.3   sec  OK
CPU at SB1       pcf8591   3.3 VDC         3.30     V    37.3   sec  OK
CPU at SB1       pcf8591   Core 0 Volt     1.64     V    37.3   sec  OK
CPU at SB1       pcf8591   Core 1 Volt     1.65     V    37.3   sec  OK
CPU at SB1       pcf8591   Core 2 Volt     1.64     V    37.3   sec  OK
CPU at SB1       pcf8591   Core 3 Volt     1.64     V    37.3   sec  OK
HPCI at IO1      pcf8591   PS0 Temp        48.10    C    43.9   sec  OK
HPCI at IO1      pcf8591   PS1 Temp        35.19    C    43.9   sec  OK
HPCI at IO1      sdc       SDC0 Temp       69.16    C    43.9   sec  OK
HPCI at IO1      ar        AR0 Temp        63.16    C    43.9   sec  OK
HPCI at IO1      dx0       DX0 Temp        62.49    C    43.9   sec  OK
HPCI at IO1      dx1       DX1 Temp        55.83    C    43.9   sec  OK
HPCI at IO1      sbbc      SBBC Temp       41.16    C    43.9   sec  OK
HPCI at IO1      max1617a  IOA0 Temp       53.00    C    43.9   sec  OK
HPCI at IO1      max1617a  IOA1 Temp       53.00    C    43.9   sec  OK
HPCI at IO1      pcf8591   1.5 VDC         1.49     V    37.3   sec  OK
HPCI at IO1      pcf8591   3.3 VDC         3.30     V    37.3   sec  OK
HPCI at IO1      pcf8591   5.0 VDC         4.99     V    37.3   sec  OK
HPCI at IO1      pcf8591   +12.0 VDC       11.95    V    37.3   sec  OK
HPCI at IO1      pcf8591   -12.0 VDC       -11.92   V    37.3   sec  OK
HPCI at IO1      pcf8591   3.3 VDC HK      3.28     V    37.3   sec  OK
HPCI at IO1      pcf8591   1.5 CVT0 VDC    3.28     A    37.3   sec  OK
HPCI at IO1      pcf8591   1.5 CVT1 VDC    1.49     A    37.3   sec  OK
HPCI at IO1      pcf8591   3.3 V_PS0       10.25    A    37.3   sec  OK
HPCI at IO1      pcf8591   3.3 V_PS1       10.25    A    37.3   sec  OK
HPCI at IO1      pcf8591   5.0 V_PS0       3.41     A    37.3   sec  OK
HPCI at IO1      pcf8591   5.0 V_PS1       3.41     A    37.3   sec  OK
 Schizo0.0       max1617a  Schizo 0 Slot 0 N/A    N/A   N/A         PRESENCE
 Schizo1.0       max1617a  Schizo 1 Slot 0 N/A    N/A   N/A         PRESENCE
 Schizo0.1       max1617a  Schizo 0 Slot 1 N/A    N/A   N/A         PRESENCE
 Schizo1.1       max1617a  Schizo 1 Slot 1 N/A    N/A   N/A         PRESENCE
EXB at EX3       max1617a  AMB Top Temp    35.00    C    56.1   sec  OK
EXB at EX3       max1617   AMB Bot Temp    34.00    C    56.1   sec  OK
EXB at EX3       sbbc      SBBC Temp       47.83    C    56.1   sec  OK
EXB at EX3       axq       AXQ Temp        26.93    C    56.1   sec  OK
EXB at EX3       sdim      SDIM Temp       42.58    C    56.1   sec  OK
EXB at EX3       sdisc     SDISC Temp      42.52    C    56.1   sec  OK
EXB at EX3       sdise     SDISE Temp      36.69    C    56.1   sec  OK
```

```
 EXB  at EX3       pcf8591   1.5 VDC          1.51     V      37.0   sec  OK
 EXB  at EX3       pcf8591   3.3 VDC          3.30     V      37.0   sec  OK
 EXB  at EX3       pcf8591   2.5 VDC          2.51     V      37.0   sec  OK
 EXB  at EX3       pcf8591   3.3 VDC HK       3.28     V      37.0   sec  OK
 CPU  at SB3       max1617a  PROC 0 Temp     62.00     C       3.9   sec  OK
 CPU  at SB3       max1617a  PROC 1 Temp     67.00     C       3.9   sec  OK
 CPU  at SB3       max1617a  PROC 2 Temp     66.00     C       3.9   sec  OK
 CPU  at SB3       max1617a  PROC 3 Temp     65.00     C       3.9   sec  OK
 CPU  at SB3       sdc0      SDC0 Temp       74.49     C       3.9   sec  OK
 CPU  at SB3       ar0       AR0 Temp        60.49     C       3.9   sec  OK
 CPU  at SB3       dx0       DX0 Temp        65.16     C       3.9   sec  OK
 CPU  at SB3       dx1       DX1 Temp        55.83     C       3.9   sec  OK
 CPU  at SB3       dx2       DX2 Temp        61.82     C       3.9   sec  OK
 CPU  at SB3       dx3       DX3 Temp        55.83     C       3.9   sec  OK
 CPU  at SB3       sbbc0     SBBC0 Temp      59.83     C       3.9   sec  OK
 CPU  at SB3       sbbc1     SBBC1 Temp      56.49     C       3.9   sec  OK
 CPU  at SB3       pcf8591   1.5 VDC          1.51     V      37.6   sec  OK
 CPU  at SB3       pcf8591   3.3 VDC          3.32     V      37.6   sec  OK
 CPU  at SB3       pcf8591   Core 0 Volt      1.64     V      37.6   sec  OK
 CPU  at SB3       pcf8591   Core 1 Volt      1.64     V      37.6   sec  OK
 CPU  at SB3       pcf8591   Core 2 Volt      1.65     V      37.6   sec  OK
 CPU  at SB3       pcf8591   Core 3 Volt      1.63     V      37.6   sec  OK
 HPCI at IO3       pcf8591   PS0 Temp        43.26     C      56.5   sec  OK
 HPCI at IO3       pcf8591   PS1 Temp        38.42     C      56.5   sec  OK
 HPCI at IO3       sdc       SDC0 Temp       72.49     C      56.5   sec  OK
 HPCI at IO3       ar        AR0 Temp        63.82     C      56.5   sec  OK
 HPCI at IO3       dx0       DX0 Temp        63.16     C      56.5   sec  OK
 HPCI at IO3       dx1       DX1 Temp        61.16     C      56.5   sec  OK
 HPCI at IO3       sbbc      SBBC Temp       43.83     C      56.5   sec  OK
 HPCI at IO3       max1617a  IOA0 Temp       52.00     C      56.5   sec  OK
 HPCI at IO3       max1617a  IOA1 Temp       51.00     C      56.5   sec  OK
 HPCI at IO3       pcf8591   1.5 VDC          1.49     V      37.6   sec  OK
 HPCI at IO3       pcf8591   3.3 VDC          3.30     V      37.6   sec  OK
 HPCI at IO3       pcf8591   5.0 VDC          4.99     V      37.6   sec  OK
 HPCI at IO3       pcf8591   +12.0 VDC       12.03     V      37.6   sec  OK
 HPCI at IO3       pcf8591   -12.0 VDC      -12.01     V      37.6   sec  OK
 HPCI at IO3       pcf8591   3.3 VDC HK       3.28     V      37.6   sec  OK
 HPCI at IO3       pcf8591   1.5 CVT0 VDC     3.28     A      37.6   sec  OK
 HPCI at IO3       pcf8591   1.5 CVT1 VDC     1.49     A      37.6   sec  OK
 HPCI at IO3       pcf8591   3.3 V_PS0       10.54     A      37.7   sec  OK
 HPCI at IO3       pcf8591   3.3 V_PS1       10.54     A      37.7   sec  OK
 HPCI at IO3       pcf8591   5.0 V_PS0        3.41     A      37.7   sec  OK
 HPCI at IO3       pcf8591   5.0 V_PS1        3.41     A      37.7   sec  OK
  Schizo0.0        max1617a  Schizo 0 Slot 0  N/A      N/A    N/A         PRESENCE
  Schizo1.0        max1617a  Schizo 1 Slot 0  N/A      N/A    N/A         PRESENCE
  Schizo0.1        max1617a  Schizo 0 Slot 1  N/A      N/A    N/A         PRESENCE
  Schizo1.1        max1617a  Schizo 1 Slot 1  N/A      N/A    N/A         PRESENCE
 EXB  at EX5       max1617a  AMB Top Temp    35.00     C      48.0   sec  OK
 EXB  at EX5       max1617   AMB Bot Temp    33.00     C      48.0   sec  OK
 EXB  at EX5       sbbc      SBBC Temp       47.16     C      48.0   sec  OK
 EXB  at EX5       axq       AXQ Temp        26.84     C      48.0   sec  OK
 EXB  at EX5       sdim      SDIM Temp       30.59     C      48.0   sec  OK
 EXB  at EX5       sdisc     SDISC Temp      32.42     C      48.0   sec  OK
 EXB  at EX5       sdise     SDISE Temp      30.52     C      48.0   sec  OK
 EXB  at EX5       pcf8591   1.5 VDC          1.51     V      34.3   sec  OK
 EXB  at EX5       pcf8591   3.3 VDC          3.32     V      34.3   sec  OK
 EXB  at EX5       pcf8591   2.5 VDC          2.51     V      34.3   sec  OK
 EXB  at EX5       pcf8591   3.3 VDC HK       3.28     V      34.3   sec  OK
 CPU  at SB5       max1617a  PROC 0 Temp     69.00     C       7.9   sec  OK
 CPU  at SB5       max1617a  PROC 1 Temp     73.00     C       7.9   sec  OK
 CPU  at SB5       max1617a  PROC 2 Temp     75.00     C       7.9   sec  OK
 CPU  at SB5       max1617a  PROC 3 Temp     72.00     C       7.9   sec  OK
 CPU  at SB5       sdc0      SDC0 Temp       63.16     C       7.9   sec  OK
 CPU  at SB5       ar0       AR0 Temp        60.49     C       7.9   sec  OK
 CPU  at SB5       dx0       DX0 Temp        59.16     C       7.9   sec  OK
 CPU  at SB5       dx1       DX1 Temp        58.49     C       7.9   sec  OK
 CPU  at SB5       dx2       DX2 Temp        60.49     C       7.9   sec  OK
```

```
         CPU at SB5       dx3       DX3 Temp       53.16   C   7.9   sec  OK
         CPU at SB5       sbbc0     SBBC0 Temp     57.16   C   7.9   sec  OK
         CPU at SB5       sbbc1     SBBC1 Temp     59.16   C   7.9   sec  OK
         CPU at SB5       pcf8591   1.5 VDC        1.51    V   34.8  sec  OK
         CPU at SB5       pcf8591   3.3 VDC        3.32    V   34.8  sec  OK
         CPU at SB5       pcf8591   Core 0 Volt    1.64    V   34.8  sec  OK
         CPU at SB5       pcf8591   Core 1 Volt    1.66    V   34.8  sec  OK
         CPU at SB5       pcf8591   Core 2 Volt    1.63    V   34.8  sec  OK
         CPU at SB5       pcf8591   Core 3 Volt    1.64    V   34.8  sec  OK
         HPCI+ at IO5     pcf8591   D147#0_0       24.00   C   46.2  sec  OK
         HPCI+ at IO5     pcf8591   D147#0_1       25.00   C   46.2  sec  OK
         HPCI+ at IO5     pcf8591   D147#0_2       24.00   C   46.2  sec  OK
         HPCI+ at IO5     pcf8591   D147#1_0       22.00   C   46.2  sec  OK
         HPCI+ at IO5     pcf8591   D147#1_1       23.00   C   46.2  sec  OK
         HPCI+ at IO5     pcf8591   D147#1_2       25.00   C   46.2  sec  OK
         HPCI+ at IO5     max1617a  XMITS0 Temp    34.00   C   46.2  sec  OK
         HPCI+ at IO5     max1617a  XMITS1 Temp    27.00   C   46.2  sec  OK
         HPCI+ at IO5     sbbc      SBBC Temp      32.50   C   46.2  sec  OK
         HPCI+ at IO5     sdc       SDC0 Temp      48.49   C   46.2  sec  OK
         HPCI+ at IO5     ar        AR0 Temp       47.16   C   46.2  sec  OK
         HPCI+ at IO5     dx0       DX0 Temp       44.50   C   46.2  sec  OK
         HPCI+ at IO5     dx1       DX1 Temp       39.83   C   46.2  sec  OK
         HPCI+ at IO5     pcf8591   1.5 VDC1       1.54    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   2.5 VDC1       2.53    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   3.3 VDC1       3.35    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   5.0 VDC1       5.02    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   +12.0 VDC1     12.36   V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   -12.0 VDC1     -12.41  V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   3.3 VDC HK1    3.33    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   1.5 VDC1       1.54    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   2.5 VDC1       2.53    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   3.3 VDC1       3.35    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   5.0 VDC1       5.02    V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   +12.0 VDC1     12.36   V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   -12.0 VDC1     -12.41  V   13.0  sec  OK
         HPCI+ at IO5     pcf8591   3.3 VDC HK1    3.61    V   13.0  sec  OK
           XMITS0.0       max1617a  XMITS 0 Slot 0  N/A    N/A  N/A       PRESENCE
           XMITS1.0       max1617a  XMITS 1 Slot 0  N/A    N/A  N/A       PRESENCE
           XMITS0.1       max1617a  XMITS 0 Slot 1  N/A    N/A  N/A       PRESENCE
           XMITS1.1       max1617a  XMITS 1 Slot 1  N/A    N/A  N/A       PRESENCE
         EXB at EX7       max1617a  AMB Top Temp   34.00   C   37.2  sec  OK
         EXB at EX7       max1617   AMB Bot Temp   35.00   C   37.2  sec  OK
         EXB at EX7       sbbc      SBBC Temp      44.50   C   37.2  sec  OK
         EXB at EX7       axq       AXQ Temp       19.18   C   37.2  sec  OK
         EXB at EX7       sdim      SDIM Temp      34.42   C   37.2  sec  OK
         EXB at EX7       sdisc     SDISC Temp     40.32   C   37.2  sec  OK
         EXB at EX7       sdise     SDISE Temp     34.72   C   37.2  sec  OK
         EXB at EX7       pcf8591   1.5 VDC        1.51    V   36.3  sec  OK
         EXB at EX7       pcf8591   3.3 VDC        3.30    V   36.3  sec  OK
         EXB at EX7       pcf8591   2.5 VDC        2.49    V   36.3  sec  OK
         EXB at EX7       pcf8591   3.3 VDC HK     3.28    V   36.3  sec  OK
         CPU at SB7       max1617a  PROC 0 Temp    41.00   C   8.1   sec  OK
         CPU at SB7       max1617a  PROC 1 Temp    40.00   C   8.1   sec  OK
         CPU at SB7       max1617a  PROC 2 Temp    52.00   C   8.1   sec  OK
         CPU at SB7       max1617a  PROC 3 Temp    50.00   C   8.1   sec  OK
         CPU at SB7       sdc0      SDC0 Temp      61.82   C   8.1   sec  OK
         CPU at SB7       ar0       AR0 Temp       55.16   C   8.1   sec  OK
         CPU at SB7       dx0       DX0 Temp       58.49   C   8.1   sec  OK
         CPU at SB7       dx1       DX1 Temp       59.83   C   8.1   sec  OK
         CPU at SB7       dx2       DX2 Temp       56.49   C   8.1   sec  OK
         CPU at SB7       dx3       DX3 Temp       59.83   C   8.1   sec  OK
         CPU at SB7       sbbc0     SBBC0 Temp     61.82   C   8.1   sec  OK
         CPU at SB7       sbbc1     SBBC1 Temp     54.49   C   8.1   sec  OK
         CPU at SB7       pcf8591   1.5 VDC        1.51    V   37.2  sec  OK
         CPU at SB7       pcf8591   3.3 VDC        3.32    V   37.2  sec  OK
         CPU at SB7       pcf8591   Core 0 Volt    1.63    V   37.2  sec  OK
         CPU at SB7       pcf8591   Core 1 Volt    1.62    V   37.2  sec  OK
```

```
CPU at SB7       pcf8591   Core 2 Volt    1.62    V     37.2  sec  OK
CPU at SB7       pcf8591   Core 3 Volt    1.62    V     37.2  sec  OK
MCPU at IO7      max1617a  PROC 0 Temp    67.00   C      8.3  sec  OK
MCPU at IO7      max1617a  PROC 1 Temp    71.00   C      8.3  sec  OK
MCPU at IO7      sbbc0     SBBC0 Temp     41.83   C      8.3  sec  OK
MCPU at IO7      sdc0      SDC0 Temp      70.49   C      8.3  sec  OK
MCPU at IO7      ar0       AR0 Temp       63.82   C      8.3  sec  OK
MCPU at IO7      dx0       DX0  Temp      61.82   C      8.3  sec  OK
MCPU at IO7      dx1       DX1  Temp      59.83   C      8.3  sec  OK
MCPU at IO7      dx2       DX2  Temp      53.83   C      8.3  sec  OK
MCPU at IO7      dx3       DX3  Temp      49.83   C      8.3  sec  OK
MCPU at IO7      pcf8591   1.5 VDC        1.48    V     36.7  sec  OK
MCPU at IO7      pcf8591   3.3 VDC        3.28    V     36.7  sec  OK
MCPU at IO7      pcf8591   3.3 VDC HK     3.28    V     36.7  sec  OK
MCPU at IO7      pcf8591   Core 0 Volt    1.63    V     36.7  sec  OK
MCPU at IO7      pcf8591   Core 1 Volt    1.63    V     36.7  sec  OK
WPCI at IO8      max1617a  IOA0 Temp      42.00   C     51.8  sec  OK
WPCI at IO8      dx0       DX0 Temp       61.82   C     51.8  sec  OK
WPCI at IO8      dx1       DX1 Temp       55.83   C     51.8  sec  OK
WPCI at IO8      sdc       SDC Temp       62.49   C     51.8  sec  OK
WPCI at IO8      sbbc      SBBC Temp      38.50   C     51.8  sec  OK
WPCI at IO8      ar        AR Temp        65.16   C     51.8  sec  OK
WPCI at IO8      wci       WCI0 Temp      21.11   C     51.8  sec  OK
WPCI at IO8      wci       WCI1 Temp      21.11   C     51.8  sec  OK
WPCI at IO8      pcf8591   +12 VDC        12.03   V     12.6  sec  OK
WPCI at IO8      pcf8591   -12 VDC       -11.92   V     12.6  sec  OK
WPCI at IO8      pcf8591   3.3 HK         3.26    V     12.6  sec  OK
WPCI at IO8      pcf8591   3.3 VDC        3.30    V     12.6  sec  OK
WPCI at IO8      pcf8591   1.5 VDC        1.49    V     12.6  sec  OK
WPCI at IO8      pcf8591   2.5 VDC        2.49    V     12.6  sec  OK
WPCI at IO8      pcf8591   5.0 VDC        5.02    V     12.6  sec  OK
WPCI at IO8      pcf8591   1.5 VDC PAR0   1.52    V     12.6  sec  OK
WPCI at IO8      pcf8591   1.5 VDC PAR1   1.51    V     12.6  sec  OK
WPCI at IO8      pcf8591   3.3 VDC PAR0   3.28    V     12.6  sec  OK
WPCI at IO8      pcf8591   3.3 VDC PAR1   3.28    V     12.6  sec  OK
  Schizo0.0      max1617a  Schizo 0 Slot 0 N/A   N/A   N/A      PRESENCE
  Schizo0.1      max1617a  Schizo 0 Slot 1 N/A   N/A   N/A      PRESENCE
EXB at EX10      max1617a  AMB Top Temp   31.00   C     49.0  sec  OK
EXB at EX10      max1617   AMB Bot Temp   28.00   C     49.0  sec  OK
EXB at EX10      sbbc      SBBC Temp      51.83   C     49.0  sec  OK
EXB at EX10      axq       AXQ Temp       26.87   C     49.0  sec  OK
EXB at EX10      sdim      SDIM Temp      32.56   C     49.0  sec  OK
EXB at EX10      sdisc     SDISC Temp     40.21   C     49.0  sec  OK
EXB at EX10      sdise     SDISE Temp     30.64   C     49.0  sec  OK
EXB at EX10      pcf8591   1.5 VDC        1.51    V     36.3  sec  OK
EXB at EX10      pcf8591   3.3 VDC        3.30    V     36.3  sec  OK
EXB at EX10      pcf8591   2.5 VDC        2.51    V     36.3  sec  OK
EXB at EX10      pcf8591   3.3 VDC HK     3.30    V     36.3  sec  OK
CPU at SB10      max1617a  PROC 0 Temp    37.00   C      6.0  sec  OK
CPU at SB10      max1617a  PROC 1 Temp    40.00   C      6.0  sec  OK
CPU at SB10      max1617a  PROC 2 Temp    40.00   C      6.0  sec  OK
CPU at SB10      max1617a  PROC 3 Temp    38.00   C      6.0  sec  OK
CPU at SB10      sdc0      SDC0 Temp      61.16   C      6.0  sec  OK
CPU at SB10      ar0       AR0 Temp       61.16   C      6.0  sec  OK
CPU at SB10      dx0       DX0 Temp       55.16   C      6.0  sec  OK
CPU at SB10      dx1       DX1 Temp       56.49   C      6.0  sec  OK
CPU at SB10      dx2       DX2 Temp       55.83   C      6.0  sec  OK
CPU at SB10      dx3       DX3 Temp       51.16   C      6.0  sec  OK
CPU at SB10      sbbc0     SBBC0 Temp     53.16   C      6.0  sec  OK
CPU at SB10      sbbc1     SBBC1 Temp     55.16   C      6.0  sec  OK
CPU at SB10      pcf8591   1.5 VDC        1.51    V     36.8  sec  OK
CPU at SB10      pcf8591   3.3 VDC        3.30    V     36.8  sec  OK
CPU at SB10      pcf8591   Core 0 Volt    1.62    V     36.8  sec  OK
CPU at SB10      pcf8591   Core 1 Volt    1.62    V     36.8  sec  OK
CPU at SB10      pcf8591   Core 2 Volt    1.61    V     36.8  sec  OK
CPU at SB10      pcf8591   Core 3 Volt    1.62    V     36.8  sec  OK
HPCI at IO10     pcf8591   PS0 Temp       41.65   C     49.4  sec  OK
```

```
HPCI at IO10    pcf8591   PS1 Temp        28.74   C   49.4  sec  OK
HPCI at IO10    sdc       SDC0 Temp       69.16   C   49.4  sec  OK
HPCI at IO10    ar        AR0 Temp        61.82   C   49.4  sec  OK
HPCI at IO10    dx0       DX0 Temp        58.49   C   49.4  sec  OK
HPCI at IO10    dx1       DX1 Temp        47.16   C   49.4  sec  OK
HPCI at IO10    sbbc      SBBC Temp       35.16   C   49.4  sec  OK
HPCI at IO10    max1617a  IOA0 Temp       51.00   C   49.4  sec  OK
HPCI at IO10    max1617a  IOA1 Temp       47.00   C   49.4  sec  OK
HPCI at IO10    pcf8591   1.5 VDC         1.49    V   36.8  sec  OK
HPCI at IO10    pcf8591   3.3 VDC         3.28    V   36.8  sec  OK
HPCI at IO10    pcf8591   5.0 VDC         5.02    V   36.8  sec  OK
HPCI at IO10    pcf8591   +12.0 VDC       12.03   V   36.8  sec  OK
HPCI at IO10    pcf8591   -12.0 VDC       -12.01  V   36.8  sec  OK
HPCI at IO10    pcf8591   3.3 VDC HK      3.28    V   36.8  sec  OK
HPCI at IO10    pcf8591   1.5 CVT0 VDC    3.28    A   36.8  sec  OK
HPCI at IO10    pcf8591   1.5 CVT1 VDC    1.23    A   36.8  sec  OK
HPCI at IO10    pcf8591   3.3 V_PS0       10.40   A   36.9  sec  OK
HPCI at IO10    pcf8591   3.3 V_PS1       10.40   A   36.9  sec  OK
HPCI at IO10    pcf8591   5.0 V_PS0       3.54    A   36.9  sec  OK
HPCI at IO10    pcf8591   5.0 V_PS1       3.54    A   36.9  sec  OK
 Schizo0.0      max1617a  Schizo 0 Slot 0 N/A    N/A N/A       PRESENCE
 Schizo1.0      max1617a  Schizo 1 Slot 0 N/A    N/A N/A       PRESENCE
 Schizo0.1      max1617a  Schizo 0 Slot 1 N/A    N/A N/A       PRESENCE
 Schizo1.1      max1617a  Schizo 1 Slot 1 N/A    N/A N/A       PRESENCE
EXB at EX12     max1617a  AMB Top Temp    28.00   C   61.1  sec  OK
EXB at EX12     max1617   AMB Bot Temp    26.00   C   61.1  sec  OK
EXB at EX12     sbbc      SBBC Temp       55.16   C   61.1  sec  OK
EXB at EX12     axq       AXQ Temp        -4.33   C   61.1  sec  OK
EXB at EX12     sdim      SDIM Temp       21.09   C   61.1  sec  OK
EXB at EX12     sdisc     SDISC Temp      50.86   C   61.1  sec  OK
EXB at EX12     sdise     SDISE Temp      40.83   C   61.1  sec  OK
EXB at EX12     pcf8591   1.5 VDC         1.50    V   36.9  sec  OK
EXB at EX12     pcf8591   3.3 VDC         3.28    V   36.9  sec  OK
EXB at EX12     pcf8591   2.5 VDC         2.51    V   36.9  sec  OK
EXB at EX12     pcf8591   3.3 VDC HK      3.26    V   36.9  sec  OK
CPU at SB12     max1617a  PROC 0 Temp     60.00   C   6.8   sec  OK
CPU at SB12     max1617a  PROC 1 Temp     62.00   C   6.8   sec  OK
CPU at SB12     max1617a  PROC 2 Temp     62.00   C   6.8   sec  OK
CPU at SB12     max1617a  PROC 3 Temp     62.00   C   6.8   sec  OK
CPU at SB12     sdc0      SDC0 Temp       59.83   C   6.8   sec  OK
CPU at SB12     ar0       AR0 Temp        53.83   C   6.8   sec  OK
CPU at SB12     dx0       DX0 Temp        52.49   C   6.8   sec  OK
CPU at SB12     dx1       DX1 Temp        49.83   C   6.8   sec  OK
CPU at SB12     dx2       DX2 Temp        51.16   C   6.8   sec  OK
CPU at SB12     dx3       DX3 Temp        42.50   C   6.8   sec  OK
CPU at SB12     sbbc0     SBBC0 Temp      44.50   C   6.8   sec  OK
CPU at SB12     sbbc1     SBBC1 Temp      61.82   C   6.8   sec  OK
CPU at SB12     pcf8591   1.5 VDC         1.51    V   37.2  sec  OK
CPU at SB12     pcf8591   3.3 VDC         3.34    V   37.2  sec  OK
CPU at SB12     pcf8591   Core 0 Volt     1.65    V   37.2  sec  OK
CPU at SB12     pcf8591   Core 1 Volt     1.65    V   37.2  sec  OK
CPU at SB12     pcf8591   Core 2 Volt     1.63    V   37.2  sec  OK
CPU at SB12     pcf8591   Core 3 Volt     1.64    V   37.2  sec  OK
HPCI at IO12    --        --              --      --  --         OFF
EXB at EX16     max1617a  AMB Top Temp    32.00   C   38.0  sec  OK
EXB at EX16     max1617   AMB Bot Temp    32.00   C   38.0  sec  OK
EXB at EX16     sbbc      SBBC Temp       42.50   C   38.0  sec  OK
EXB at EX16     axq       AXQ Temp        13.40   C   38.0  sec  OK
EXB at EX16     sdim      SDIM Temp       34.72   C   38.0  sec  OK
EXB at EX16     sdisc     SDISC Temp      40.54   C   38.0  sec  OK
EXB at EX16     sdise     SDISE Temp      36.65   C   38.0  sec  OK
EXB at EX16     pcf8591   1.5 VDC         1.51    V   36.9  sec  OK
EXB at EX16     pcf8591   3.3 VDC         3.30    V   36.9  sec  OK
EXB at EX16     pcf8591   2.5 VDC         2.51    V   36.9  sec  OK
EXB at EX16     pcf8591   3.3 VDC HK      3.30    V   36.9  sec  OK
CPU at SB16     max1617a  PROC 0 Temp     39.00   C   7.1   sec  OK
CPU at SB16     max1617a  PROC 1 Temp     38.00   C   7.1   sec  OK
```

```
CPU at SB16     max1617a  PROC 2 Temp       43.00   C    7.1   sec  OK
CPU at SB16     max1617a  PROC 3 Temp       44.00   C    7.1   sec  OK
CPU at SB16     sdc0      SDC0 Temp         61.16   C    7.1   sec  OK
CPU at SB16     ar0       AR0 Temp          53.83   C    7.1   sec  OK
CPU at SB16     dx0       DX0 Temp          53.83   C    7.1   sec  OK
CPU at SB16     dx1       DX1 Temp          53.16   C    7.1   sec  OK
CPU at SB16     dx2       DX2 Temp          59.16   C    7.1   sec  OK
CPU at SB16     dx3       DX3 Temp          51.16   C    7.1   sec  OK
CPU at SB16     sbbc0     SBBC0 Temp        53.16   C    7.1   sec  OK
CPU at SB16     sbbc1     SBBC1 Temp        57.83   C    7.1   sec  OK
CPU at SB16     pcf8591   1.5 VDC            1.51   V   37.3   sec  OK
CPU at SB16     pcf8591   3.3 VDC            3.30   V   37.3   sec  OK
CPU at SB16     pcf8591   Core 0 Volt        1.62   V   37.3   sec  OK
CPU at SB16     pcf8591   Core 1 Volt        1.63   V   37.3   sec  OK
CPU at SB16     pcf8591   Core 2 Volt        1.61   V   37.3   sec  OK
CPU at SB16     pcf8591   Core 3 Volt        1.62   V   37.3   sec  OK
MCPU at IO16    max1617a  PROC 0 Temp       36.00   C    7.2   sec  OK
MCPU at IO16    max1617a  PROC 1 Temp       36.00   C    7.2   sec  OK
MCPU at IO16    sbbc0     SBBC0 Temp        33.83   C    7.2   sec  OK
MCPU at IO16    sdc0      SDC0 Temp         60.49   C    7.2   sec  OK
MCPU at IO16    ar0       AR0 Temp          55.83   C    7.2   sec  OK
MCPU at IO16    dx0       DX0  Temp         50.49   C    7.2   sec  OK
MCPU at IO16    dx1       DX1  Temp         53.83   C    7.2   sec  OK
MCPU at IO16    dx2       DX2  Temp         50.49   C    7.2   sec  OK
MCPU at IO16    dx3       DX3  Temp         43.83   C    7.2   sec  OK
MCPU at IO16    pcf8591   1.5 VDC            1.49   V   37.3   sec  OK
MCPU at IO16    pcf8591   3.3 VDC            3.30   V   37.3   sec  OK
MCPU at IO16    pcf8591   3.3 VDC HK         3.28   V   37.3   sec  OK
MCPU at IO16    pcf8591   Core 0 Volt        1.61   V   37.3   sec  OK
MCPU at IO16    pcf8591   Core 1 Volt        1.61   V   37.3   sec  OK
```

FANTRAY	POWER	SPEED	FAN0	FAN1	FAN2	FAN3	FAN4	FAN5	FAN6
FT0	ON	HIGH	OK	OK	OK	OK	OK	OK	OK
FT1	ON	HIGH	OK	OK	OK	OK	OK	OK	OK
FT2	ON	HIGH	OK	OK	OK	OK	OK	OK	OK
FT3	ON	HIGH	OK	OK	OK	OK	OK	OK	OK
FT4	ON	HIGH	OK	OK	OK	OK	OK	OK	OK
FT6	ON	HIGH	OK	OK	OK	OK	OK	OK	OK
FT7	ON	HIGH	OK	OK	OK	OK	OK	OK	OK

POWER	UNIT	AC0	AC1	DC0	DC1	FAN0	FAN1
PS0	FAIL	FAIL	FAIL	ON	ON	OK	OK
PS1	FAIL	OK	OK	ON	ON	OK	OK
PS2	OK	OK	OK	ON	ON	OK	OK
PS4	OK	OK	OK	ON	ON	OK	OK
PS5	OK	OK	OK	ON	ON	OK	OK

POWER	VALUE	UNIT	STATUS
PS0			
Current0	0.39	A	N/A
Current1	0.39	A	N/A
48VDC	0.39	V	N/A
PS1			
Current0	8.36	A	N/A
Current1	5.97	A	N/A
48VDC	48.60	V	N/A
PS2			
Current0	8.36	A	N/A
Current1	6.77	A	N/A
48VDC	48.80	V	N/A
PS4			
Current0	7.57	A	N/A
Current1	7.17	A	N/A
48VDC	50.00	V	N/A

```
           PS5
             Current0        6.77       A        N/A
             Current1        7.17       A        N/A
             48VDC          49.40       V        N/A
```

EXAMPLE 2   Reporting Temperature on Domain A

This example assumes that Domain A contains MCPUs at IO7 and IO16.

```
sc0:sms-user:> showenvironment -p temps -d a
LOCATION       DEVICE      SENSOR         VALUE    UNIT    AGE        STATUS
---------      --------    -----------    -------  ------  ---------  ------
MCPU at IO7    max1617a    PROC 1 Temp    71.00    C         8.0      sec  OK
...                                                ...                     ...
MCPU at IO16   max1617a    DX0 Temp       50.49    C         8.0      sec  OK
...                                                ...                     ...
```

EXIT STATUS   The following exit values are returned:

0   Successful completion.

1   An invalid domain used.

2   An invalid command-line option used.

3   Invalid permission.

4   An internal error occurred.

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO   **addtag**(1M)

NAME	showfailover - display system controller (SC) failover status or role
SYNOPSIS	**showfailover** [-r] [-v]
	showfailover -h
DESCRIPTION	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:

```
  SC Failover Status: state
```

The failover mechanism can be in one of four states: ACTIVATING, ACTIVE, DISABLED, or FAILED. See the EXTENDED DESCRIPTION section.

OPTIONS	The following options are supported:

-h	Help. Displays usage descriptions.
	Note – Use alone. Any option specified in addition to -h is ignored.
-r	Displays the SC's role as either MAIN, SPARE, or UNKNOWN.
-v	Verbose. Displays all available command information.

EXTENDED DESCRIPTION	The failover mechanism states are as follows:

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.
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, setfailover off).

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.
S-SC SMS DAEMON	At least one SMS daemon could not be started/ restarted on the spare SC.
S-SC INCOMPATIBLE SMS VERSION	The spare SC is running a different version of SMS software. Both SCs must be running the same version.
I2 NETWORK/HASRAMS DOWN	Both interfaces for communication between the SCs are down. The main cannot tell what version of SMS is running on the spare nor what its state is. It declares the spare SC down and logs a message to that effect. Dependent services, including file propagation, are unavailable.

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

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the
System Management Services (SMS) 1.4 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-sc1:
    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)

NAME	showkeyswitch - display the position of the virtual keyswitch
SYNOPSIS	**showkeyswitch** −d *domain_indicator* [−v]
	showkeyswitch −h
DESCRIPTION	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).
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_id*s 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.

−v   Verbose. Displays all available command information.

EXTENDED DESCRIPTION

Group Privileges Required

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

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES   **EXAMPLE 1**   Displaying the Keyswitch Status for Domain A

```
sc0:sms-user:> showkeyswitch -d A
Virtual keyswitch position: ON
```

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), **pcd**(1M)

NAME	showlogs - display message log files or the event logs.
SYNOPSIS	**showlogs** [-F] [-f *filename*] [-d *domain_indicator*] [-p m|c|s] [-v]
	showlogs [-F] [-f *filename*] [-d *domain_indicator*] [-E] [-p e [*event_class*|list|ereport|ena0x*yyy*|uuid*yyy*|*event_code*] [*number*]]
	showlogs -h

DESCRIPTION

showlogs(1M) displays the following:

- Message logs, console logs, or syslog for the platform for 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.
- Portions of the event log, depending on the options specified.

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_id*s are A–R and are not case sensitive.
	domain_tag – Name assigned to a domain using addtag(1M).
	If you specify a domain with the -p e options, the event logs only for that domain are displayed.
-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.
-f *filename*	Places the output of the showlogs command into a specified file.
-E	Formats and condenses the event log information displayed when specified with the -p e options.
-h	Help. Displays usage descriptions.
	Note – Use alone. Any option specified in addition to -h is ignored.

-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*yyy*|
                                        uuid*yyy*|*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`*yyy* – Displays the error event in the event log that matches the Error Numeric Association (ENA) hex value specified, where *yyy* 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`*yyy* – Displays the list event in the event log that matches the Universal Unique Identifier (UUID) value specified, where *yyy* 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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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 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 07 13:51:49 agent    {received software termination signal)
Sep  7 13:51:49 sms2 agent[6629]: [ID 985882 daemon.alert] syslog
Sep 07 13:51:49 agent  *** terminating execution ***
Sep  7 13:51:50 sms2 platform[22481]: [ID 345917 daemon.alert] syslog
Sep 07 13:51:50 platform       *** terminating execution ***
Sep  7 14:49:07 sms2 platform[4309]: [ID 745356 daemon.alert] syslog
Sep 07 14:49:07 platform    general parsing error
Sep  7 14:49:07 sms2 platform[4309]: [ID 334248 daemon.alert] syslog
Sep 07 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 07 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: Fri Jun  6 17:20:15 MDT 2003
DE:
    scheme: diag-engine
    authority:
                product-id: SF15000
                chassis-id: 301AFFFFF
                domain-id: D
    name: sms-de
    version: 1.4
uuid: 0x147e965ebb5ec
code: SF15000-8000-A1
list-sz: 1
fault-events:
                version: 1
                class: fault.board.io.proc
                fault-diag-time: Fri Jun  6 17:20:15 MDT 2003
                DE:
                    scheme: diag-engine
                    authority:
                                product-id: SF15000
                                chassis-id: 301AFFFFF
                                domain-id: D
                    name: sms-de
                    version: 1.4
                ENA-list-sz: 4
                ENA-list: 0x62a6680600000002
                        0x636a74de00000402
                        0x6400cd9800000802
                        0x64be80d400000c02
                FRU:
                    scheme: sf-hc
                    part: 5015396
                    serial: 445883
                    authority:
                                product-id: SF15000
                                chassis-id: 301AFFFFF
                                domain-id: D
                    component: IO15
                resource:
                        scheme: sf-hc
                        part: 5015396
                        serial: 445883
```

```
                                              authority:
                                                        product-id: SF15000
                                                        chassis-id: 301AFFFFF
                                                        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: 1.4
Timestamp: Fri Jun  6 17:20:15 MDT 2003
Code: SF15000-8000-A1

Number of fault events:  1
Fault Event Class: fault.board.io.proc
Fault Event Timestamp: Fri Jun  6 17:20:15 MDT 2003
Domain ID affected by the failure: D
Diagnosis Engine Name: sms-de
Diagnosis Engine Version: 1.4

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: 1.4
Timestamp: Fri Jun  6 17:20:15 MDT 2003
Code: SF15000-8000-A1

Number of fault events:  1
Fault Event Class: fault.board.io.proc
Fault Event Timestamp: Fri Jun  6 17:20:15 MDT 2003
Domain ID affected by the failure: D
Diagnosis Engine Name: sms-de
Diagnosis Engine Version: 1.4

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: 1.4
Timestamp: Fri Jun  6 13:21:20 MDT 2003
Code: SF15000-8000-A1

Number of fault events:  1
Fault Event Class: fault.board.io.proc
```

```
Fault Event Timestamp: Fri Jun  6 13:21:20 MDT 2003
Domain ID affected by the failure: D
Diagnosis Engine Name: sms-de
Diagnosis Engine Version: 1.4

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: 1.4
Timestamp: Fri Jun  6 13:15:18 MDT 2003
Code: SF15000-8000-A1

Number of fault events:  1
Fault Event Class: fault.board.io.proc
Fault Event Timestamp: Fri Jun  6 13:15:18 MDT 2003
Domain ID affected by the failure: D
Diagnosis Engine Name: sms-de
Diagnosis Engine Version: 1.4

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: 1.4
Timestamp: Thu Jun  5 12:28:12 MDT 2003
Code: SF15000-8000-H7

Number of fault events:  1
Fault Event Class: fault.board.sb.proc
Fault Event Timestamp: Thu Jun  5 12:28:12 MDT 2003
Domain ID affected by the failure: B
Diagnosis Engine Name: sms-de
Diagnosis Engine Version: 1.4

Indicted resource component: sb12/p0
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/events/eventlog   Stores all the hardware-
                                                related error and fault
                                                events

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO   **tail**(1)

NAME | showobpparams - display OpenBoot PROM bring up parameters for a domain

SYNOPSIS | **showobpparams** -d *domain_indicator* [-v]

showobpparams -h

DESCRIPTION | 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 *domain_id* or *domain_tag* is required.

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_id*s 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.

-v   Verbose. Displays all available command information.

EXTENDED DESCRIPTION

Group Privileges Required | You must have domain administrator or domain configurator privileges for the specified domain to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | **EXAMPLE 1**   Displaying OpenBoot PROM Parameters for Domain A

```
sc0:sms-user:> showobpparams -d a
auto-boot?=false
diag-switch?=true
fcode-debug?=false
use-nvramrc?=false
security-mode=none
```

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), **setobpparams**(1M)

NAME   showplatform - display the board available component list, the domain state for each domain, and Capacity on Demand (COD) information.

SYNOPSIS   **showplatform** [-d *domain_indicator*] [-p *report*] [-v]

                showplatform -h

DESCRIPTION showplatform(1M) displays the 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 *domain_id* or *domain_tag* is specified, only the information for that domain is displayed. If domain_indicator 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.

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_id*s 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*	Display specific reports.
	Valid reports are:

	domains	List output is grouped by domain state.
	available	List output is grouped by domain available component list.
	ethernet	List output is grouped by domain Ethernet addresses.
	cod	Capacity on Demand information is displayed.
	csn	The chassis serial number of the Sun Fire high-end system is displayed.

-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, or for
                             Ethernet addresses, it indicates that the domain
                             idprom image file does not exist. You need to
                             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   The OpenBoot PROM is in sync callback to the
to OS   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   The domain was shut down due to an
Halt   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 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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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 Infor-
mation for All Domains on a Sun Fire 15K System

The output shown is what you would see if you had platform privileges.

```
sc0:sms-user:> showplatform

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

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

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           eng1               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          eng1          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 communicating with the platform configuration daemon (pcd(1M)).
6	An error occurred communicating with the hardware access daemon (hwad(1M)).
7	An error occurred communicating with the task management daemon (tmd(1M)).
8	An internal error occurred.
9	An error occurred 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

SEE ALSO   **addcodlicense**(1M), **addtag**(1M), **hwad**(1M), **pcd**(1M), **setupplatform**(1M), **tmd**(1M)

NAME	showxirstate - display CPU dump information after a reset pulse has been sent to the processors

SYNOPSIS

showxirstate -d *domain_indicator* [-v]

showxirstate -f *filename* [-v]

showxirstate -h

DESCRIPTION

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.

If a *domain_indicator* or *filename* is not specified, showxirstate returns an error.

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_id*s are A–R and are not case sensitive.
	domain_tag – Name assigned to a domain using addtag(1M).
-f *filename*	Name of the file containing a previously generated xir_dump. The default is /var/opt/SUNWSMS/adm/ *domain_id*/dump and cannot be changed.
-h	Help. Displays usage descriptions.
	Note – Use alone. Any option specified in addition to -h is ignored.
-v	Verbose. Displays all available command information.

EXTENDED DESCRIPTION

Group Privileges Required

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.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

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  0x0000000000  00000000.00000000    00000000.00000000
0x00  0x0000000000  00000000.00000000    00000000.00000000
0x00  0x0000000000  00000000.00000000    00000000.00000000
0x00  0x0000000000  00000000.00000000    00000000.00000000
0x00  0x0000000000  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

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

tl: 73
tt     tstate        tpc                    tnpc

0x00   0x0000000000  00000000.00000000   00000000.00000000
0x00   0x0000000000  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)

NAME	smsbackup - back up the SMS environment

SYNOPSIS   **smsbackup** *directory_name*

               smsbackup -h

DESCRIPTION smsbackup(1M) creates a cpio(1) archive of files that maintain the operational environment of SMS. To create a complete and accurate backup, turn off SMS before running smsbackup. For information about manually starting and stopping SMS refer to the *System Management Services (SMS) 1.4 Installation Guide* .

Whenever changes are made to the SMS environment—for example, by shutting down a domain— you must run smsbackup again to maintain a current backup file for the system controller.

The name of the backup file is sms_backup.*X.X*.cpio, where *X.X* represents the active version from which the backup was taken.

Restore SMS backup files using the smsrestore(1M) command.

If any errors occur, smsbackup writes error messages to /var/sadm/system/ logs/smsbackup if /var/sadm/system/logs exists and /var/tmp if it does not exist.

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:

directory_name   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 *directory_name* is specified, a backup file is created in /var/tmp. The *directory_name* does not require the absolute path name for the file.

                     The *directory_name* specified must be mounted as a UFS file system. Specifying a TMPFS file system, such as /tmp, causes smsbackup to fail. If you are not certain that your *directory_name* is mounted as a UFS file system, type:

                     /usr/bin/df -F ufs *directory_name*

                     A UFS file system returns directory information. Any other type of file system returns a warning.

EXTENDED DESCRIPTION	
Group Privileges Required	You must have superuser privileges to run this command.
	Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)

NAME	smsconfig - configures the SMS environment
SYNOPSIS	**smsconfig** -m
	smsconfig -m I1 [*domain_id*	sc	netmask]
	smsconfig -m I2 [sc0	sc1	netmask]
	smsconfig -m L
	smsconfig -g
	smsconfig -a -u *username* -G *platform_role* platform
	smsconfig -r -u *username* -G *platform_role* platform
	smsconfig -a -u *username* -G *domain_role* *domain_id*
	smsconfig -r -u *username* -G *domain_role* *domain_id*
	smsconfig -l *domain_id*
	smsconfig -l platform
	smsconfig -s *security_option*
	smsconfig -v
	smsconfig -h

DESCRIPTION smsconfig(1M) configures the SMS environment in a three areas: network management, security, and user group privileges.

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 *interface* designations within that network. By default, smsconfig steps through the configuration of both internal networks and the external community network.

Note – Once you have configured or changed the configuration of the MAN network you *must* reboot the system controller (SC) in order for the changes to take effect.

To configure an individual network, append the *net_id* to the command line. Management network *net_id*s are designated I1, I2, and L. Configure a single *interface* within an enterprise network by specifying both the desired *interface* and its *net_id*. 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.

For security purposes, SMS disables forwarding, broadcast, and multicast by setting the appropriate ndd utility variables upon startup.

The Sun Fire high end systems also enables you to further secure the SC allowing you to use smsconfig -s ssh as part of the Security Toolkit SC hardening process. To harden the SC, follow the procedures found in the following Sun BluePrints Online articles available at:
`http://www.sun.com/security/blueprints`

- *Securing Sun Fire 12K and 15K System Controller: Updated for SMS 1.4*
- *Securing Sun Fire 12K and 15K Domains: Updated for SMS 1.4*

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) 1.4 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.
-mI2	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 *security_option*	This option is used to configure the SMS software to use the security feature. The feature to configure is specified by *security_option*

The following are valid values for *security_option*:

ssh	Instructs SMS to use ssh-based commands in place of the default rsh-based commands for communicating with the remote SC. All of the ssh-based commands must reside in /usr/bin. If they are not found in /usr/bin, smsconfig exits and logs an error.
	NOTE: Ensure the Secure Shell is configured properly on both SCs before enabling the SMS software to use it. If ssh is not configured, smsconfig displays and logs an error then exits. Refer to the ssh and scp man pages for more information.
	rsh(1) is the default remote shell in SMS software. When Secure Shell has not been configured properly, SMS attempts to use the default remote shell. Therefore we strongly recommended that you keep rsh enabled until smsconfig -s ssh successfully configures the SMS software. Once Secure Shell is configured you can disable rsh by hardening the SC. Refer to the Online Blueprints documentation and the security section of the *System Management Services (SMS) 1.4 Installation Guide* for more information.
rsh	Reconfigures SMS to use rsh-based commands.

-u *username*	Indicates user login name.
-v	Displays remote shell configuration.

OPERANDS | The following operands are supported:

domain_id   ID for a domain. Valid *domain_id*s are A–R and are not case sensitive.

domain_role   Valid *domain_role*s are:

                     admn

                     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_role*s are:

                     admn

                     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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | **EXAMPLE 1**   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. An IPv6 network example differs slightly.

Caution— The IP addresses shown in the following examples are examples only. Refer to your *Sun Fire 15K/12K 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 was 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) 1.4 Installation Guide* .

Once you have configured the MAN network, you *must* reboot the SC.

```
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 15K/12K 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 [platadmn]? 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 posses 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 posses domain control and status, and
console access privileges (for the respective domain), but does not
posses platform wide control or platform resource allocation privileges.

Enter the name of the Domain A Administrator group [dmnaadmn]? [Return]

Enter the name of the Domain B Administrator group [dmnbadmn]? [Return]
Enter the name of the Domain C Administrator group [dmncadmn]? [Return]
Enter the name of the Domain D Administrator group [dmndadmn]? [Return]
Enter the name of the Domain E Administrator group [dmneadmn]? [Return]
Enter the name of the Domain F Administrator group [dmnfadmn]? [Return]
Enter the name of the Domain G Administrator group [dmngadmn]? [Return]
Enter the name of the Domain H Administrator group [dmnhadmn]? [Return]
Enter the name of the Domain I Administrator group [dmniadmn]? [Return]
Enter the name of the Domain J Administrator group [dmnjadmn]? [Return]
Enter the name of the Domain K Administrator group [dmnkadmn]? [Return]
Enter the name of the Domain L Administrator group [dmnladmn]? [Return]
Enter the name of the Domain M Administrator group [dmnmadmn]? [Return]
Enter the name of the Domain N Administrator group [dmnnadmn]? [Return]
Enter the name of the Domain O Administrator group [dmnoadmn]? [Return]
Enter the name of the Domain P Administrator group [dmnpadmn]? [Return]
Enter the name of the Domain Q Administrator group [dmnqadmn]? [Return]
Enter the name of the Domain R Administrator group [dmnradmn]? [Return]

The Domain Reconfiguration group posses 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   Configuring SMS to Use Secure Shell

Ensure ssh is enabled, otherwise when running this command you will receive an
error message and smsconfig will exit.

```
sc0: # smsconfig -s ssh
Enabling ssh...
Password/passphrase authentication can be ignored.
System will use ssh
Tue Oct 12 13:21:06 PST 2002
smsconfig complete.
```

EXAMPLE 7   Configuring SMS to Use rsh

```
sc0: # smsconfig -s rsh
System will use rsh
Tue Oct 12 13:25:06 PST 2002
smsconfig complete.
```

EXAMPLE 8   Displaying the Remote Shell

```
sc0: # smsconfig -v
Remote Shell
============
Remote Shell              /usr/bin/rsh
Tue Oct 12 13:27:10 PST 2002
smsconfig complete.
```

EXAMPLE 9   Adding a User to the Domain Administrator Group and Configuring Ac-
                 cess 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 10 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 11 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 12 Displaying Users With Access to the Domain C Directories

```
sc0: # smsconfig -l C
fdjones
shea
```

EXAMPLE 13 Displaying Users With Access to the Platform Directories

```
sc0: # smsconfig -l platform
fdjones
jtd
```

EXAMPLE 14 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 15 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 16 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.
```

```
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), **rsh**(1), **scp**(1), **ssh**(1)

NAME	smsconnectsc - accesses a remote SC console

SYNOPSIS

smsconnectsc [-y|n]

smsconnectsc -h

DESCRIPTION

smsconnectsc creates a remote tip console session from a local SC in order to reach a hung remote SC console.

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.

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:

~.

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.

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.

-y   Automatically answers "yes" to all prompts.

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 Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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)

NAME	smsinstall - install the SMS environment
SYNOPSIS	**smsinstall** *directory_name*
	smsinstall -p
	smsinstall -h
DESCRIPTION	smsinstall(1M) installs SMS packages on the main or spare SMS system controllers. Refer to the *System Management Services (SMS) 1.4 Installation Guide* for instructions on how to install SMS using this command.
	If you are not running smsinstall from the Product directory you must use the absolute path.
	If any errors occur, smsinstall writes error messages to /var/sadm/system/logs/smsinstall.
OPTIONS	The following option is supported

-h   Help. Displays usage descriptions.

                 Note – Use alone. Any option specified in addition to -h is ignored.

-p   Performs post-package add actions only. For use after a Web Start installation.

OPERANDS   The following operands are supported:

directory_name   Name of the directory which contains the SMS packages.

                     If you are installing from the Web, the path to the Product directory, *directory_name*, is: /*download_directory*/System_Management_Services_1_3/Product where *download_directory* is the location where you downloaded the files from the Web.

                     If you are installing from CD-ROM, the path to the Product directory, *directory_name* is /cdrom/cdrom0/System_Management_Services_1_3/Product.

EXTENDED
DESCRIPTION

Group Privileges   You must have superuser privileges to run this command.
Required

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES | **EXAMPLE 1**   Installing SMS From CDROM or Web

```
sc#:sms-user:> smsinstall download_directory

Installing SMS packages.   Please wait. . .
pkgadd -n -d "/cdrom/cdrom0/System_Management_Services_1.3/Product" -a
/tmp/smsinstall.admin.24501 SUNWSMSr SUNWSMSop SUNWSMSdf SUNWSMSjh
SUNWSMSlp
SUNWSMSmn SUNWSMSob SUNWSMSod SUNWSMSpd SUNWSMSpo SUNWSMSpp SUNWSMSsu
SUNWscdvr.u SUNWufrx.u SUNWufu
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
205 blocks

Installation of <SUNWSMSr> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
61279 blocks

Installation of <SUNWSMSop> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
32 blocks

Installation of <SUNWSMSdf> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
2704 blocks

Installation of <SUNWSMSjh> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
5097 blocks

Installation of <SUNWSMSlp> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
1696 blocks

Installation of <SUNWSMSmn> was successful.
Copyright 2002 Sun Microsystems, Inc. All rights reserved.
576 blocks

Installation of <SUNWSMSob> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
1025 blocks

Installation of <SUNWSMSod> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
1025 blocks

Installation of <SUNWSMSpd> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
14763 blocks

Installation of <SUNWSMSpo> was successful.

Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.

Installation of <SUNWSMSpp> was successful.

Copyright 2002 Sun Microsystems, Inc.  All rights reserved.
```

```
     Use is subject to license terms.
     5 blocks

     Installation of <SUNWSMSsu> was successful.
     Copyright 2002 Sun Microsystems, Inc. All rights reserved.
     479 blocks

     Installation of <SUNWscdvr> was successful.
     Copyright 2002 Sun Microsystems, Inc. All rights reserved.
     33 blocks

     Reboot client to install driver.
     type=ddi_pseudo;name=flashprom  uflash\N0
     Installation of <SUNWufrx> was successful.
     Copyright 2002 Sun Microsystems, Inc. All rights reserved.
     13 blocks

     Installation of <SUNWufu> was successful.

     Verifying that all SMS packages are installed
     ...............OK
     Checking that all installed SMS packages are correct
     pkgchk -n SUNWSMSr SUNWSMSop SUNWSMSdf SUNWSMSjh SUNWSMSlp SUNWSMSmn
     SUNWSMSob
     SUNWSMSod SUNWSMSpd SUNWSMSpo SUNWSMSpp SUNWSMSsu SUNWscdvr SUNWufrx
     SUNWufu
     OK

     Setting up /etc/init.d/sms run control script for SMS 1.3
     New SMS version 1.3 is active

     Attempting to restart daemon picld
     /etc/init.d/picld stop
     /etc/init.d/picld start

     smsinstall complete.  Log file is /var/sadm/system/logs/smsinstall.
```

EXAMPLE 2   Installing SMS After Web Start

```
     sc0:sms-user:> smsinstall -p download_directory
     Verifying that all SMS packages are installed
     ...............OK
     Checking that all installed SMS packages are correct
     pkgchk -n SUNWSMSr SUNWSMSop SUNWSMSdf SUNWSMSjh SUNWSMSlp SUNWSMSmn
     SUNWSMSob
     SUNWSMSod SUNWSMSpd SUNWSMSpo SUNWSMSpp SUNWSMSsu SUNWscdvr SUNWufrx
     SUNWufu
     OK
     Setting up /etc/init.d/sms run control script for SMS 1.3
     New SMS version 1.3 is active
     Attempting to restart daemon picld
     /etc/init.d/picld stop
     /etc/init.d/picld start
     smsinstall complete.  Log file is /var/sadm/system/logs/smsinstall.
```

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/smsinstall   smsinstall log file

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

Attribute Types	Attribute Values
Availability	SUNWSMSop
Interface Stability	Evolving

SEE ALSO | **smsconfig**(1M)**smsupgrade**(1M)

System Management Services (SMS) 1.4 Installation Guide

NAME	smsrestore - restore the SMS environment
SYNOPSIS	**smsrestore** *filename*
	smsrestore -h
DESCRIPTION	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.

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 *System Management Services (SMS) 1.4 Installation Guide* .

If any errors occur, smsrestore writes error messages to /var/sadm/system/ logs/smsrestore.

Note – 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.

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:

filename	Name of the backup file that was created by smsbackup(1M). If the specified file is not in the current directory, the *filename* must contain the full path name for the file. This file can reside anywhere on the system, connected network, or tape device. If no *filename* is specified, you receive an error message.

EXTENDED DESCRIPTION

Group Privileges Required	You must have superuser privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES	**EXAMPLE 1** Restoring SMS

```
sc# smsrestore sms_backup.1.0.cpio
```

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)

NAME | smsupgrade - upgrades the SMS software to the current version

SYNOPSIS | **smsupgrade** [-b] [-r] *directory_name*

smsupgrade -p

smsupgrade -h

DESCRIPTION | smsupgrade(1M) upgrades SMS software on the main or spare SMS system controllers. Refer to the *System Management Services (SMS) 1.4 Installation Guide* for instructions on how to upgrade SMS using this command.

If you are not running smsupgrade from the Product directory you must use the absolute path.

If any errors occur, smsupgrade writes error messages to /var/sadm/system/ logs/smsupgrade.

OPTIONS | The following option is supported

-b   Neither smsbackup(1M) nor smsrestore(1M) are performed.

                The default is to run smsbackup to directory /var/tmp before upgrading SMS.

-h   Help. Displays usage descriptions.

                Note – Use alone. Any option specified in addition to -h is ignored.

-p   Performs post-package add actions only; it does not perform smsbackup or smsrestore. For use after a Web Start installation.

-r   smsrestore(1M) is *not* performed after the upgrade

                The default is to run smsrestore from directory /var/tmp after upgrading SMS.

OPERANDS   The following operands are supported:

directory_name   Name of the directory which contains the SMS packages.

If you are installing from the Web, the path to the Product
directory, *directory_name*, is /*download_directory*/
System_Management_Services_1_3/Product; where
download_directory is the location where you downloaded the
files from the Web.

If you are installing from CD-ROM, the path to the Product
directory, *directory_name* is /cdrom/cdrom0/
System_Management_Services_1_3/Product.

EXTENDED
DESCRIPTION

Group Privileges   You must have superuser privileges to run this command.
Required

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the
System Management Services (SMS) 1.4 Administrator Guide for more information.

EXAMPLES   **EXAMPLE 1**   Upgrading SMS From CDROM or Web

```
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.1.3.cpio before
upgrade.  Please wait. . .
smsbackup /var/tmp
smsbackup: Backup configuration file created: /var/tmp/
sms_backup.1.3.cpio
SMS backup complete.

Installing SMS packages.  Please wait. . .
pkgadd -n -d "/cdrom/cdrom0/
System_Management_Services_1.3/Product" -a
/tmp/smsinstall.admin.26021 SUNWSMSr SUNWSMSop SUNWSMSdf
SUNWSMSjh SUNWSMSlp
SUNWSMSmn SUNWSMSob SUNWSMSod SUNWSMSpd SUNWSMSpo
SUNWSMSpp SUNWSMSsu
SUNWscdvr.u SUNWufrx.u SUNWufu

Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
205 blocks

Installation of <SUNWSMSr> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
```

```
61279 blocks

Installation of <SUNWSMSop> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
32 blocks

Installation of <SUNWSMSdf> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
2704 blocks

Installation of <SUNWSMSjh> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
5097 blocks

Installation of <SUNWSMSlp> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
1696 blocks

Installation of <SUNWSMSmn> was successful.
Copyright 2002 Sun Microsystems, Inc. All rights reserved.
576 blocks

Installation of <SUNWSMSob> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
1025 blocks

Installation of <SUNWSMSod> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
1025 blocks

Installation of <SUNWSMSpd> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
14763 blocks

Installation of <SUNWSMSpo> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.

Installation of <SUNWSMSpp> was successful.
Copyright 2002 Sun Microsystems, Inc.  All rights
reserved.
Use is subject to license terms.
5 blocks

Installation of <SUNWSMSsu> was successful.
Copyright 2002 Sun Microsystems, Inc. All rights reserved.
479 blocks

Installation of <SUNWscdvr> was successful.
Copyright 2002 Sun Microsystems, Inc. All rights reserved.
33 blocks
```

```
Reboot client to install driver.
type=ddi_pseudo;name=flashprom  uflash\N0

Installation of <SUNWufrx> was successful.
Copyright 2002 Sun Microsystems, Inc. All rights reserved.
13 blocks

Installation of <SUNWufu> was successful.

Verifying that all SMS packages are installed
...............OK
Checking that all installed SMS packages are correct
pkgchk -n SUNWSMSr SUNWSMSop SUNWSMSdf SUNWSMSjh SUNWSMSlp
SUNWSMSmn SUNWSMSob
SUNWSMSod SUNWSMSpd SUNWSMSpo SUNWSMSpp SUNWSMSsu
SUNWscdvr SUNWufrx SUNWufu
OK
Setting up /etc/init.d/sms run control script for SMS 1.3
New SMS version 1.3 is active
Restoring SMS from /var/tmp/sms_backup.1.3.cpio after
upgrade.  Please wait. . .
smsrestore /var/tmp/sms_backup.1.3.cpio

Attempting to start daemon picld
/etc/init.d/picld start

smsupgrade complete.  Log file is /var/sadm/system/logs/
smsupgrade.
#
```

EXAMPLE 2   Installing SMS After Web Start

```
sc0:sms-user:> smsupgrade -p directory_name
Verifying that all SMS packages are installed
...............OK
Checking that all installed SMS packages are correct
pkgchk -n SUNWSMSr SUNWSMSop SUNWSMSdf SUNWSMSjh SUNWSMSlp SUNWSMSmn
SUNWSMSob
SUNWSMSod SUNWSMSpd SUNWSMSpo SUNWSMSpp SUNWSMSsu SUNWscdvr SUNWufrx
SUNWufu
OK
Setting up /etc/init.d/sms run control script for SMS 1.3
New SMS version 1.3 is active
Attempting to restart daemon picld
/etc/init.d/picld stop
/etc/init.d/picld start
smsinstall complete.  Log file is /var/sadm/system/logs/smsinstall.
```

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/smsupgrade   smsupgrade log file

/var/temp/sms_backup.1.3.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) 1.4 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.

Note – SMS 1.1 and SMS 1.3 are not consecutive releases and you cannot switch from one to the other using smsversion. You must do a fresh installation. Refer to the *System Management Services (SMS) 1.4 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 lose 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 /opt/SUNWSMS/ <SMS_version>/firmware directory. Use flashupdate(1M) to reflash the PROMs after you have switched versions. Refer to the flashupdate man page, Chapter 11 of the *System Management Services (SMS) 1.4 Administrator Guide* and the *System Management Services (SMS) 1.4 Installation Guide* 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 one of 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 now.

■ Start SMS and turn on failover. For information about manually starting and stopping SMS refer to the *System Management Services (SMS) 1.4 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 operands are supported:

version_number   Release number of the target SMS version

EXTENDED DESCRIPTION

Group Privileges Required

You must have superuser privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 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# smsversion -t
1.2
```

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 prior to switching versions.

```
sc# smsversion
smsversion: Active SMS version  1.2
smsversion: SMS version 1.2 installed
smsversion: SMS version 1.3 installed
Please select from one of the following installed SMS versions.
1) 1.2
2) 1.3
3) Exit
Select version: 2
You have selected SMS Version 1.3

Is this correct? [y,n] y

smsversion: Upgrading SMS from 1.2> to 1.3>.
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.1.2.cpio
smsversion: Switching to target version 1.3>.
smsversion: New Version 1.3> Active
smsversion: Active SMS version  1.3 >
To use the previous SMS configuration settings type:
smsrestore /var/tmp/sms_backup.1.2.cpio

NOTE: When switching to another SMS version,
the user must choose (via use of smsrestore) to restore the
configuration settings from the previously active version.
```

EXAMPLE 3   Downgrading SMS Versions

```
sc# smsversion 1.2
smsversion: Active SMS version  1.3 >
You have requested SMS Version 1.2

Is this correct? [y,n] y
smsversion: Downgrading SMS from 1.3> to 1.2>.
smsversion: SMS version 1.2 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.1.3.cpio
smsversion: Switching to target version 1.2>.
smsversion: New Version 1.2> Active
smsversion: Active SMS version  1.2 >
To restore previous the SMS configuration setting type:
smsrestore /var/tmp/sms_backup.1.3.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/smsversion   smsversion log file

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

Attribute Types	Attribute Values
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

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

SYNOPSIS | **testemail** −c *event_class_list* −d *domain_ID* [−i *resource_indictment_list*]

testemail −h

DESCRIPTION | testemail(1M) enables you to generate test events and verify that they are logged in the SMS platform message log file and reported by email to designated recipients. This command also enables you to verify any changes made to the email control file (event_email.cf), which identifies the recipients of the event email.

You specify the test events to be generated, the domain affected by the events, and optionally a list of components that are associated (indicted) with each event listed.

OPTIONS | The following options are supported:

−c
event_class_list | A list of one or more fault event classes to be generated and reported by the test email, for example: fault.test.email

Use a comma to separate each event class listed. The valid fault classes are described in the file /etc/opt/SUNWSMS/SMS/config/SF15000.dict .

−d *domain_id* | Specifies the one-character ID of the domain affected by the specified event classes. Valid *domain_id*s are A–R and must be specified as upper-case characters.

−h | Help. Displays usage descriptions.

Note – Use alone. Any option specified in addition to −h is ignored.

-i *indictment_ resource_list*	A list of one or more components that map to each event class specified. Use a comma to separate each component in the list. The components listed correspond to each fault event specified. However, for test purposes the components specified do not actually have to be faulty.

Valid component values 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*

where

system_board	SB(0...17) for Sun Fire 15K systems
	SB(0...8) for Sun Fire 12K systems
io_board	IO(0...17) for Sun Fire 15K systems
	IO(0...8) for Sun Fire 12K systems
expander_board	EX(0...17) for Sun Fire 15K systems
	EX(0...8) for Sun Fire 12K systems
port or processors for system_boards	P(0...3)

physical bank	B(0|1)	
dimm	D(0...3)	
logical dimm	L(0|1)	
io_bus	I(0|1)	
ecache	E(0|1)	
centerplane	CP(0|1)	
centerplane support	CS(0|1)	
bus	ABUS|DBUS|RBUS(0|1)	
system_controller	SC(0|1)	
system_controller _peripheral	SCPER(0|1)	
fan tray	FT(0...7)	
power supply	PS(0...5)	

EXTENDED DESCRIPTION

Test Results The results of the email test includes the following:

- Event messages in the platform messages log that reflect the test fault with event code, with a text string that indicates the test should be ignored
- Email that notifies designated recipients of the events generated

Group Privileges Required You must have platform administrator or platform service privileges to run this command.

Refer to Chapter 2, "SMS Security Options and Administrative Privileges" in the *System Management Services (SMS) 1.4 Administrator Guide* for more information.

EXAMPLES EXAMPLE 1   Generating Test Fault Events for Expander and I/O Boards

```
sc0:sms-user:> testemail -c fault.board.ex.l1l2, fault.board.io.l1l2
-dD -i EX7,IO8
```

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`   Controls email
                                                  notifications

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

Attribute Types	Attribute Values
Availability	SUNWSMSop

SEE ALSO   **erd**(1M)

NAME	tmd - task management daemon

SYNOPSIS   **tmd** [-t *number*]

DESCRIPTION   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.

This daemon is started automatically by ssd(1M). Do *not* start it manually from the command line.

OPTIONS   The following option is supported:

-t *number*   This option allows the number of concurrent invocations to be throttled. The value must be a positive number, greater than or equal to one.

Caution– Changing the default value can adversely affect system functionality. Do *not* adjust this parameter unless instructed by a Sun service representative to do so.

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   **ssd**(1M)

NAME   wcapp - wPCI application daemon

SYNOPSIS   **wcapp**

DESCRIPTION   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.

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.

This daemon is automatically started by ssd(1M). Do *not* start it manually from the command line.

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   **ssd**(1M)