Contents

Preface vii
Intro 1
addboard 5
addtag 13
cancelcmdsync 17
console 21
dca 25
deleteboard 27
deletetag 33
disablecomponent 35
dsmd 41
dx 43
enablecomponent 45
esmd  51
flashupdate  53
fomd  59
frad  61
help  63
hpost  65
hwad  67
initcmdsync  69
kmd  73
mand  75
mld  77
moveboard  79
osd  87
pcd  89
poweroff  91
poweron  95
rcfgadm  99
reset  117
resetsc  119
runCmdSync 121
saveCmdSync 123
setbus 127
setDataSync 131
setDate 135
setDefaults 139
setFailover 143
setKeysSwitch 145
setOBPParams 149
setupPlatform 153
showBoards 157
showBus 167
showCmdSync 171
showComponent 173
showDataSync 179
showDate 183
showDevices 185
showEnvironment 191
showFailover 201
showkeyswitch 205
showlogs 207
showobpparams 211
showplatform 213
showxirstate 219
smsbackup 223
smsconfig 227
smsconnectsc 239
smsrestore 241
smsversion 243
ssd 247
tmd 249
Preface

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?” In general, man pages comprise a reference manual. They are not intended to be a tutorial.

Overview

The following contains a brief description of each section in the man pages and the information it references:

- Section 1 describes, in alphabetical order, commands available with the operating system.
- Section 1M describes, in alphabetical order, commands that are used chiefly for system maintenance and administration purposes.
- Section 2 describes all of the system calls. Most of these calls have one or more error returns. An error condition is indicated by an otherwise impossible returned value.
- Section 3 describes functions found in various libraries, other than those functions that directly invoke UNIX system primitives, which are described in Section 2.
- Section 4 outlines the formats of various files. The C structure declarations for the file formats are given where applicable.
- Section 5 contains miscellaneous documentation such as character-set tables.
- Section 6 contains available games and demos.
- Section 7 describes various special files that refer to specific hardware peripherals and device drivers. STREAMS software drivers, modules and the STREAMS-generic set of system calls are also described.
Section 9 provides reference information needed to write device drivers in the kernel operating systems environment. It describes two device driver interface specifications: the Device Driver Interface (DDI) and the Driver/Kernel Interface (DKI).

Section 9E describes the DDI/DKI, DDI-only, and DKI-only entry-point routines a developer may include in a device driver.

Section 9F describes the kernel functions available for use by device drivers.

Section 9S describes the data structures used by drivers to share information between the driver and the kernel.

Below is a generic format for man pages. The man pages of each manual section generally follow this order, but include only needed headings. For example, if there are no bugs to report, there is no BUGS section. See the intro pages 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.

**PROTOCOL**

This section occurs only in subsection 3R to indicate the protocol description file.

**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.

**IOCTL**

This section appears on pages in Section 7 only. Only the device class which supplies appropriate parameters to the ioctl(2) system call is called ioctl and generates its own heading. ioctl calls for a specific device are listed alphabetically (on the man page for that specific device). ioctl calls are used for a particular class of devices all of which have an io ending, such as mtio(7I)

**OPTIONS**

This lists the command options with a concise summary of what each option does. The options are listed literally and in the order 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.

**OUTPUT**

This section describes the output – standard output, standard error, or output files – generated by 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.
On failure, most functions place an error code in the global variable `errno` indicating why they failed. This section lists alphabetically all 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.

This section lists special rules, features and commands that require in-depth explanations. The subsections listed below are used to explain built-in functionality:
- Commands
- Modifiers
- Variables
- Expressions
- Input Grammar

This section provides examples of usage or of how to use a command or function. Wherever possible a complete example including command line entry and machine response is shown. Whenever an example is given, the prompt is shown as `example%` or if the user must be superuser, `example#`. Examples are followed by explanations, variable substitution rules, or returned values. Most examples illustrate concepts from the SYNOPSIS, DESCRIPTION, OPTIONS and USAGE sections.

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

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.

This section lists all filenames referred to by the man page, files of interest, and files created or required by commands. Each 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.

DIAGNOSTICS

This section lists diagnostic messages with a brief explanation of the condition causing the error.

WARNINGS

This section lists warnings about special conditions which could seriously affect your working conditions. This is not a list of diagnostics.

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.

BUGS

This section describes known bugs and wherever possible, suggests workarounds.
<table>
<thead>
<tr>
<th>NAME</th>
<th>Intro - Replace this with the name of the product to which the man pages belong.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION</td>
<td>Replace this text with a description of the man pages that are contained in your reference manual.</td>
</tr>
<tr>
<td>LIST OF COMMANDS</td>
<td>The following commands are supported:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>attributes</td>
<td>assign, connect and configure a board to a domain</td>
</tr>
<tr>
<td>addboard</td>
<td>assign, connect and configure a board to a domain</td>
</tr>
<tr>
<td>addtag</td>
<td>assign a domain name (tag) to a domain</td>
</tr>
<tr>
<td>cancelcmdsync</td>
<td>command synchronization commands</td>
</tr>
<tr>
<td>console</td>
<td>access the domain console</td>
</tr>
<tr>
<td>dca</td>
<td>domain configuration agent</td>
</tr>
<tr>
<td>deleteboard</td>
<td>unconfigure, disconnect and unassign a system board from a domain</td>
</tr>
<tr>
<td>deletetag</td>
<td>remove the domain tag name associated with the domain</td>
</tr>
<tr>
<td>disablecomponent</td>
<td>add the specified component to the specified blacklist file</td>
</tr>
<tr>
<td>dsmd</td>
<td>domain status monitoring daemon</td>
</tr>
<tr>
<td>dxs</td>
<td>domain X server</td>
</tr>
<tr>
<td>enablecomponent</td>
<td>remove the specified component from the specified blacklist</td>
</tr>
<tr>
<td>esmd</td>
<td>environmental status monitoring daemon</td>
</tr>
<tr>
<td>flashupdate</td>
<td>update the Flash PROMs located on the CPU boards, MaxCPU boards and system controllers (SC)</td>
</tr>
<tr>
<td>fomd</td>
<td>failover management daemon</td>
</tr>
<tr>
<td>frad</td>
<td>FRU access daemon</td>
</tr>
<tr>
<td>help</td>
<td>display help information for SMS commands</td>
</tr>
<tr>
<td>hpost</td>
<td>Sun Fire 15K power-on self-test (POST) control application</td>
</tr>
<tr>
<td>hwad</td>
<td>hardware access daemon</td>
</tr>
<tr>
<td>initcmdsync</td>
<td>command synchronization commands</td>
</tr>
<tr>
<td>kmd</td>
<td>SMS key management daemon</td>
</tr>
<tr>
<td>mand</td>
<td>management network daemon</td>
</tr>
<tr>
<td>mld</td>
<td>message logging daemon</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>moveboard</td>
<td>move a board from one domain to another</td>
</tr>
<tr>
<td>osd</td>
<td>OpenBoot PROM server daemon</td>
</tr>
<tr>
<td>pcd</td>
<td>platform configuration database daemon</td>
</tr>
<tr>
<td>poweroff</td>
<td>control power off</td>
</tr>
<tr>
<td>poweron</td>
<td>control power up</td>
</tr>
<tr>
<td>environ</td>
<td>remote configuration administration</td>
</tr>
<tr>
<td>rcfgadm</td>
<td>remote configuration administration</td>
</tr>
<tr>
<td>reset</td>
<td>send reset to all CPU ports of a specified domain</td>
</tr>
<tr>
<td>resetsc</td>
<td>reset the other system controller (SC)</td>
</tr>
<tr>
<td>runcmdsync</td>
<td>prepare a specified script for recovery after a failover</td>
</tr>
<tr>
<td>savecmdsync</td>
<td>command synchronization commands</td>
</tr>
<tr>
<td>setbus</td>
<td>perform dynamic bus reconfiguration on active expanders in a domain</td>
</tr>
<tr>
<td>setdatasync</td>
<td>modify the data propagation list used in data synchronization</td>
</tr>
<tr>
<td>setdate</td>
<td>set the date and time for the system controller (SC) or a domain</td>
</tr>
<tr>
<td>setdefaults</td>
<td>remove all instances of a previously active domain</td>
</tr>
<tr>
<td>setfailover</td>
<td>modify the state of the system controller (SC) failover mechanism</td>
</tr>
<tr>
<td>setkeyswitch</td>
<td>change the position of the virtual keyswitch</td>
</tr>
<tr>
<td>setobpparams</td>
<td>set up OpenBoot PROM variables for a domain</td>
</tr>
<tr>
<td>setupplatform</td>
<td>set up the available component list for domains</td>
</tr>
<tr>
<td>showboards</td>
<td>show the assignment information and status of the boards</td>
</tr>
<tr>
<td>showbus</td>
<td>display the bus configuration of expanders in active domains</td>
</tr>
<tr>
<td>showcmdsync</td>
<td>display the current command synchronization list</td>
</tr>
<tr>
<td>showcomponent</td>
<td>display the blacklist status for a component</td>
</tr>
<tr>
<td>showdatasync</td>
<td>display the status of system controller (SC) data synchronization for failover</td>
</tr>
<tr>
<td>showdate</td>
<td>display the date and time for the system controller (SC) or a domain</td>
</tr>
<tr>
<td>showdevices</td>
<td>display system board devices and resource usage information</td>
</tr>
<tr>
<td>showenvironment</td>
<td>display the environmental data</td>
</tr>
</tbody>
</table>
showfailover  manage or display system controller (SC) failover status
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 of the domains
showxirstate display CPU dump information after sending a reset pulse to the processors
smsbackup   back up the SMS environment
smsconfig   configures the SMS environment
smsconnectsc accesses a remote SC console
smsrestore   restore the SMS environment
smsversion   change the active version of SMS to another co-resident version of the SMS software
ssd          SMS startup daemon
tmd          task management daemon
**NAME**  
addboard - assign, connect and configure a board to a domain

**SYNOPSIS**  

**DESCRIPTION**  
addboard(1M) assigns, connects and configures a location to the domain domain_id|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, or 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 will power on the board and test 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, then goes on to the next board or after the last board, exits.
OPTIONS

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

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 will need to reboot the domain in order to use that board.

The possible transition states and their meaning 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 either by using setkeysswitch on or using the connect or configure options.

- **connect**
  Assigns the board to the logical domain (if it is not already). 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). 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.
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:

SB(0...17)
IO(0...17)

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

Group Privileges Required

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

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

Refer to Chapter 2 in the System Management Services (SMS) 1.2 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.

```bash
sc0:sms-user:> addboard -d C -c assign SB0 IO1 SB1 SB2
SB at SB0 assigned to domain: C
IO at IO1 assigned to domain: C
SB at SB1 assigned to domain: C
SB at 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.

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

```bash
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
SB at SB0 is blacklisted. Exiting.
```

**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 IO at 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 doesn’t exist
- 14 Invalid attribute
- 30 Invalid board ID type
- 31 Invalid permissions
### 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.

To remove a component from the ASR blacklist file, use `enablecomponent(1M)`.

### ATTRIBUTES

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

### SEE ALSO

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

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

SYNOPSIS
addtag -d domain_id | domain_tag [-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_id ID of a domain. Valid domain_ids are 'A'... 'R' and are case insensitive.
-d domain_tag Name assigned to a domain using addtag(1M).
new_tag New tag name assigned to a domain. See Extended Description for a description of invalid domain names.
-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
- 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 nodenames. 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 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1** Assigning the Tag `eng2` to Domain A With Prompts
```
sc0:~> addtag -d A eng2
```
If a tag for this domain exists you will be prompted.

**EXAMPLE 2** Assigning the Tag "eng2" to Domain A Using the `-y` Option
```
sc0:~> addtag -d A -y eng2
```
Prompts are displayed and 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:~> addtag -d A -n eng2
```
Prompts are displayed and automatically answered 'no.' This sets the tag for this domain unless it has already been done.

**EXAMPLE 4** Assigning the Tag `eng2` to Domain A Using the `-qy` Options
```
sc0:~> addtag -d A -qy eng2
```
You are not prompted.

**EXAMPLE 5** Assigning the Tag `eng2` to Domain A Using the `-qn` Options
```
sc0:~> 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:~> 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 will 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO `deletetag` (1M)
cancelcmdsync(1M)

NAME  cancelcmdsync - command synchronization commands

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 will be 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 is used only to mark specific points in a script from which processing can be resumed. If specific restart points are not needed, 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.
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:

```bash
# 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

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

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSoop</td>
</tr>
</tbody>
</table>

SEE ALSO

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

NOTES

An example of a user-defined script (with synchronization commands) is provided in the `/opt/SUNWSMS/examples/cmdsync` directory.
NAME
console - access the domain console

SYNOPSIS
console -d domain_id|domain_tag [ [-f] | [-l] | [-g] | [-r] ] [-e escapeChar]
console -h

DESCRIPTION
console(1M) creates a remote connection to the domain's 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 only be taken away 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_id ID for a domain. Valid domain_ids are 'A'..'R' and are case insensitive.
-d 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 below.
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 may issue this signal during a read-only or Unlocked Write session.

Note – To restore multiple-session mode, either release the lock (`~^`) or terminate the console session (`~.`).

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

Note – To restore multiple-session mode, either release the lock (`~^`) or terminate the console session (`~.`).

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

- `-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).
- `-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.
- `-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.
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 seen 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.

**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 ^j, then stty sane, then ^j.

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

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

**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_id | domain_tag [-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_id | ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive.

         | -d 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 hostname 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO addboard (1M), deleteboard (1M), moveboard (1M), refadm (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, or 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 is not
allowed to 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.

-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 then disconnects the
board before unassigning it.

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 will need to reboot the
domain in order to use that board.
The possible transition states and their meaning 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 (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 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 above.  
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. This is an intermediate state and does not have any standalone implementation at this time.

**unassign**  
Disconnects the board. See disconnect above.  
Unconfigures the board from the Solaris operating environment running on the domain. See unconfigure above.  
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.
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:

SB(0...17)
IO(0...17)

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

EXTENDED DESCRIPTION
Group Privileges Required

Users with platform administrator privileges can only perform the -c unassign option if the board(s) are in the assigned state. (That is, not active in a running domain.)
Users with domain administrator or configurator privileges can execute this command but only on their respective domains. To unassign a board, the board must be in the domain available component list.

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

**EXAMPLES**

**EXAMPLE 1** Unassigning a Board from a Domain

To unassign four boards from their domain, the user must have platform administrator privileges or domain administrator/configurator privileges and the boards must be in the domain available component list.

All boards are in the assigned state in the example domain.

```
sc0:金山-> deleteboard -c unassign SB0 IO1 SB1 SB2
```

**EXAMPLE 2** Unconfiguring a Board from a Domain

To unconfigure three boards from their domain, setting retries to five and timeout to three seconds.

```
sc0:金山-> deleteboard -r5 -t3 IO3 IO4 IO5
```

**EXIT STATUS**

The following exit values are returned:

<table>
<thead>
<tr>
<th>Exit Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Successful completion</td>
</tr>
<tr>
<td>1</td>
<td>No acknowledge</td>
</tr>
<tr>
<td>2</td>
<td>Not supported</td>
</tr>
<tr>
<td>3</td>
<td>Operation not supported</td>
</tr>
<tr>
<td>4</td>
<td>Invalid privileges</td>
</tr>
<tr>
<td>5</td>
<td>Busy</td>
</tr>
<tr>
<td>6</td>
<td>System Busy</td>
</tr>
<tr>
<td>7</td>
<td>Data error</td>
</tr>
<tr>
<td>8</td>
<td>Library error</td>
</tr>
<tr>
<td>9</td>
<td>No Library</td>
</tr>
<tr>
<td>10</td>
<td>Insufficient condition</td>
</tr>
<tr>
<td>11</td>
<td>Invalid</td>
</tr>
<tr>
<td>12</td>
<td>Error</td>
</tr>
</tbody>
</table>
ATTRIBUTES
See attributes (5) for descriptions of the following attributes:

<table>
<thead>
<tr>
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<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO addboard (1M), moveboard (1M)
NAME
deletetag - remove the domain tag name associated with the domain

SYNOPSIS
deletetag -d domain_id | domain_tag [-q] [-y] [-n]
deletetag -h

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

OPTIONS
The following options are supported.

-\id  \domain_id  ID of a domain. Valid domain_ids are 'A'...'R' and are case insensitive.

-\it  \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 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES

EXAMPLE 1  Deleting Tag "eng2" From the Domain to Which it was Assigned

sc0:~$> dele tetag -d eng2 -qy

You will not be 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:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO

adntag(1M)
disablecomponent(1M)

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

SYNOPSIS
disablecomponent [-d domain_id | domain_tag ] [-i "reason"] location [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 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 and one for platform boards; and the internal automatic system recovery (ASR) blacklist.

disablecomponent used without any option edits the platform blacklist file.

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

For more information on the use and editing of platform and domain blacklists refer to Chapter 7 in the System Management Services (SMS) 1.2 Administrator Guide.

OPTIONS
The following options are supported.

- `domain_id` ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive. Specifies the component to add to the domain blacklist.

- `domain_tag` Name assigned to a domain using addtag(1M). Specifies the component to add to the domain blacklist.

- `-h` Help. Displays usage descriptions.

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

- `"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.
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/bank/all_banks_on_that_proc`
- `board_loc/proc/bank/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/ABUS1` location indicates address bus 1 at CS0.

The following board_loc forms are accepted:

- `SB(0...17)`
- `IO(0...17)`
- `CS(0|1)`
- `EX(0...17)`
Processor locations indicate single processors or processor pairs.

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

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

The following proc forms are accepted:

\[ P(0\ldots3) \quad PP(0\mid1) \]

The following bank forms are accepted:

\[ B(0\mid1) \]

The following logical_bank forms are accepted:

\[ L(0\mid1) \]

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:

\[ PAR(0\mid1) \]

The hsPCI assemblies contain hot-swappable cassettes.

The following hsPCI forms are accepted:

\[ C(3\mid5)\ V(0\mid1) \]

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

The following bus forms are accepted:

\[ ABUS\mid DBUS\mid RBUS \ (0\mid1) \]
EXTENDED DESCRIPTION

Group Privileges Required

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

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES

EXAMPLE 1   Add CSB 0 and Processor 2 on System Board 1 to the Domain A Blacklist
<sc0:sms-user> disablecomponent -dA CS0 SB1/P2

EXAMPLE 2   Add 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   Add 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   Add All Banks on Processor 0 on System Board 1 to the Domain B Blacklist
<sc0:sms-user> disablecomponent -dB SB1/P0/B

EXAMPLE 5   Add All Banks on System Board 0 to the Domain D Blacklist
<sc0:sms-user> disablecomponent -dD SB0/B

EXAMPLE 6   Add Processor Pair 1 on System Board 3 to the Platform Blacklist
<sc0:sms-user> disablecomponent SB3/PP1

EXAMPLE 7   Add 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   Add Paroli Link 0 on wPCI Board 7 to the Platform Blacklist
<sc0:sms-user> disablecomponent IO7/PAR0
EXAMPLE 9  Add the Data Bus CS0 on EX9 to the Domain A Blacklist

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

EXAMPLE 10 Add 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 Add 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:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

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.

dsmd automatically recovers the domain and handles domain-related hardware errors. In the event of a domain hang, dsmd will reset(1M) the domain, collect CPU registers and hardware configuration dumps, and save them to two files.

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:
- 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 see the System Management Services (SMS) 1.2 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:

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</table>

SEE ALSO
dxs (1M), esmd (1M), hwad (1M), osd (1M), pcd (1M), reset (1M), setkeys (1M), sset (1M), ssd (1M)
NAME       dxs - domain X server

SYNOPSIS   dxs [-S] -d domain_id | domain_tag

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 allows one or more users running the console program
to access the domain's virtual console.

When the domain is up and 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 shutdown.

OPTIONS    The following options are supported.

- d domain_id  ID for a domain. Valid domain_ids are 'A'...'R' and are case
              insensitive.
- d domain_tag  Name assigned to a domain using addtag(1M).
- S              Disable console output logging. By default, logging is enabled and
                   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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO       addtag (1M), console (1M), ssd (1M)
enablecomponent - remove the specified component from the specified blacklist

enablecomponent [-a | -d domain_tag | domain_id] location [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 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 and 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 used without any option will edit 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 7 in the System Management Services (SMS) 1.2 Administrator Guide

options

The following options are supported.

-a Specifies the component to remove from the ASR blacklist.
-\(d\) domain_id ID for a domain. Valid domain_ids are 'A'..'R' and case insensitive. Specifies the component to remove from the domain blacklist.
-\(d\) domain_tag Name assigned to a domain using addtag(1M). Specifies the component to remove from the domain blacklist.
-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/bank/all_banks_on_that_proc`
- `board_loc/proc/bank/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/ABUS1` `location` indicates address bus 1 at CS0.

The following `board_loc` forms are accepted:

- `SB(0...17)`
- `IO(0...17)`
- `CS(0|1)`
- `EX(0...17)`
Processor locations indicate single processors or processor pairs.

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

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

The following proc forms are accepted:

\[ P(0...3) \quad PP(0|1) \]

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:

\[ C(3|5)V(0|1) \]

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

The following bus forms are accepted:

\[ ABUS|DBUS|RBUS \quad (0|1) \]
You must have platform administrator, domain administrator, domain configurator privileges to run this command. If you have platform privileges you may run this command for the platform components only. If you have domain privileges you may only run this command on the domain for which you have privileges.

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1**  Remove CSB0 from the ASR Blacklist

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

**EXAMPLE 2**  Remove 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**  Remove 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**  Remove All Banks on Processor 0 on System Board 1 from the Domain B Blacklist

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

**EXAMPLE 5**  Remove All Banks on System Board 0 from the Domain D Blacklist

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

**EXAMPLE 6**  Remove Processor Pair 0 on I/O Board 7 from the Platform Blacklist

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

**EXAMPLE 7**  Remove Processor 1 on System Board 3 from the Domain A Blacklist

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

**EXAMPLE 8**  Remove 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  Remove the Paroli Link 0 on wPCI Board 5 to the Platform Blacklist

    $ sms-user:~ > enablecomponent  IO5/PAR0

EXAMPLE 10  Remove the Address Bus CS0 on EX7 from the Domain A Blacklist

    $ sms-user:~ > enablecomponent -dA EX7/ABUS0

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.

/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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO  addboard(1M), disablecomponent(1M), esmd(1M), showcomponent(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
- 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 only sends notification 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 only sends notification if that client (hwad, pcd, dsmd 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` will remove the board from the domain and power 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 see the System Management Services (SMS) 1.2 Administrator Guide.

**EXIT STATUS**

The following exit values are returned:

- 0  Successful completion
- >0  An error occurred.

**FILES**

The following files are supported:

```
/var/opt/SUNWSMS/adm/platform/messages  Stores message files
```

**ATTRIBUTES**

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
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</tr>
</tbody>
</table>

**SEE ALSO**

`dsm` (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_id | domain_tag] [-f path] [-q] [-y] [-n]
flashupdate [-f path] [-y] [-n] location [location]...
flashupdate -h

**DESCRIPTION**
flashupdate(1M) updates the Flash PROM in the system controller (SC), and the Flash PROMs in a domain's CPU and MaxCPU boards, given the board location.

In order to update the Flash PROMs in the system controller, log in to the SC you wish to update and specify the Flash PROM to be updated. Each Flash PROM has a specific image file associated with it. Once you have finished updating the SC Flash PROMs you must shutdown and reset the SC. See example 7 below. You do not need to reset the SC after updating CPU Flash PROMs.

To update the CPU FPROMs, SMS must be running and the specified board must be powered on. This is not required to update the SC FPROMs. If any of the domain's CPU or MaxCPU boards have the virtual keyswitch setting in the secure position, the Flash PROM(s) will not be updated.

flashupdate displays both the current Flash PROM and the flash image file information prior to any updates.

**OPTIONS**
The following options are supported.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-d domain_id</td>
<td>ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive.</td>
</tr>
<tr>
<td>-d domain_tag</td>
<td>Name assigned to a domain using addtag(1M).</td>
</tr>
<tr>
<td>-f path</td>
<td>Name of the flash image file.</td>
</tr>
<tr>
<td>The path argument specifies the name of the image file used to update the Flash PROM given in the location argument.</td>
<td></td>
</tr>
<tr>
<td>-h</td>
<td>Help. Displays usage descriptions.</td>
</tr>
<tr>
<td><strong>Note</strong> – Use alone. Any option specified in addition to -h is ignored.</td>
<td></td>
</tr>
<tr>
<td>-n</td>
<td>Automatically answers “no” to all prompts. Prompts are displayed unless used with the -q option.</td>
</tr>
</tbody>
</table>
The following operands are supported:

location

Flash PROM location.

The Flash PROM location consists of the `board_loc/FlashPROM_id` separated by a forward slash.

The `FlashPROM_id` is specified only when you want to update a particular Flash PROM (FP0 or FP1) on a CPU board and the system controller (SC).

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

The following `board_loc` forms are accepted:

- `SB(0...17)`
- `IO(0...17)`
- `SC(0|1)`

The following `FlashPROM_id` forms are accepted:

- `FP(0|1)`

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 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

**EXAMPLES**

**EXAMPLE 1**

Updating Flash PROM 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 Flash PROM 1 in the System Controller 0

You must reset the SC after running this command.

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

**EXAMPLE 3**  Updating Flash PROM 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 Flash PROM 0 in the slot0 Board

SMS must be running and the SB0/FP0 board must be powered on.

```
sc0: sms-user: > flashupdate -f /opt/SUNWSMS/hostobjs/sgcpu.flash SB0/FP0
```

**EXAMPLE 5**  Updating Both Flash PROMs on CPU Board 17

SMS must be running and the SB17 board must be powered on.

```
sc0: sms-user: > flashupdate -f /opt/SUNWSMS/hostobjs/sgcpu.flash SB17
```

**EXAMPLE 6**  Updating Flash PROMs 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 7**  Resetting the SC After Updating the SC PROMs.

Switch to superuser and shutdown the SC

```
sc0: sms-user: > su -
```
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 15K cabinet and depress the Abort and then Reset buttons 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 flashupdate worked, type:

```
ok show-dropins
```

Note the version number of the Dropins (1.2)

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

```
ok boot new disk
```
Login in as a platform administrator and type:

```
sci:sms-user:~ $ flashupdate -f /opt/SUNWSMS/firmware SCOBPimg.di SC0/FP0
```

Current SC FPROM Information
-------------------------------
SC at SC0, FPROM 0:
Name: SCOBP-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

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 Flash PROM 0 on the SC.
- `/opt/SUNWSMS/firmware/SSCPOST.di` Used to update the Flash PROM 1 on the SC.
- `/opt/SUNWSMS/hostobjs/sgcpu.flash` Used to update the Flash PROMs on the CPU and MaxCPU boards.

ATTRIBUTES

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO `setkeysnotif(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 master and the standby 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

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 15K system. frad also provides the platform-dependent interface to the Sun Fire 15K 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO
ssd(1M)
NAME  help - display help information for SMS commands

SYNOPSIS  help [command_name]

- h

DESCRIPTION  If no argument is included, help 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.

  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:

command_name Specific command for which help displays the man page.

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

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES  EXAMPLE 1  Using Help

Displays all commands.

sc0:sms-user:~ $ help
addtag --d domain_id|domain_tag --new_tag [-q ] [-y | -n]
addboard --d domain_id|domain_tag [ -c function ] [ -r retry_count ] [-t timeout ]
[ -q ] [-y | -n ] location (location)
....
....
tmd [ -t number]

EXAMPLE 2  Using Help for a Command
Displays `man(1M)` page.

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

Maintenance Commands

```
addtag(1M)
```

**NAME**
addtag - assign a domain name (tag) to a domain

**SYNOPSIS**
addtag -d domain_id|domain_tag -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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

**SEE ALSO**
`man(1M)`
NAME  hpost - Sun Fire 15K 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 15K 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 non fatal hardware error states, and perform related Sun Fire 15K 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 SUNWSMS1p package.

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMS1p</td>
</tr>
</tbody>
</table>

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 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 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSoop</td>
</tr>
</tbody>
</table>

SEE ALSO
dsmd(1M), ssd(1M)
NAME
initcmdsync - command synchronization commands

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 will be 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 is used only to mark specific points in a script from which processing can be resumed. If specific restart points are not needed, 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.
initcmdsync(1M)  System Administration

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
#
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.
```

-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.
# 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
* 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 ))
  );;
* 2) do more things
  .
  .
  .
  savecmdsync -M $(( $goto_label + 1 )) $desc
goto_label=$(( $goto_label + 1 ))
  );;
* 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
You must have platform administrator, platform operator, platform service, domain administrator, or domain configurator privileges to run this command.

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

The following exit values are returned:

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

**Note** – The standard output for `initcmds` 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.

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

**SEE ALSO** `runcmds`(1M), `showcmds`(1M)

**NOTES** An example of a user-defined script (with synchronization commands) is provided in the /opt/SUNWSMS/examples/cmdsync directory.
NAME  kmd - SMS key management daemon

SYNOPSIS  kmd

DESCRIPTION  kmd(1M) manages the IPSec security associations (SAs) needed to secure 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. The fields are identified below.

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

The fields are defined as:

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, space. A space for the domain ID defines a policy which applies to all domains. A policy for a specific domain overrides a policy which applied to all domains.

**login**--- Login name. Values: Any valid login name. The default policies in the kmd_policy.cf file are shown below.

```
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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSr</td>
</tr>
<tr>
<td></td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

**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 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.
The following signals are used:

**SIGHUP**
Rereads the `MAN.cf` file and reconfigures the external community as well as the network fields in the `pcd`.

The following configuration file is required:

```
/etc/opt/SUNWSMS/config/MAN.cf
```
This file includes the domain-to-SC, 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.

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

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 only appears 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 output 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 case insensitive.

ATTRIBUTES

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO

ssd(1M)
NAME
moveboard - move a board from one domain to another

SYNOPSIS
moveboard -d domain_id | domain_tag [-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, then proceeds to assign, connect, and configure location to the domain domain_id | 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, or 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 will power on the board and test 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 continues. When using the connect or configure functions, moveboard displays an error message and exits.

OPTIONS
The following options are supported.

-c function Valid function values are assign, connect, and configure. This value is used to control the configuration state transition.

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 will need to reboot the domain in order to use that board.
The possible transition states and their meaning 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 either by using setkeyswitch on or using 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` above; 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 above; 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 above; 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_id  ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive. This is the domain to which the board is being moved.

-\(d\) domain_tag Name assigned to a domain using addtag(1M). This is the domain to which the board is being moved.
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:

\[ SB(0...17) \]
\[ IO(0...17) \]

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

**Group Privileges Required**

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

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

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 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
SB at 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
SB at SB4 assigned to domain: A
Warning: CPU at SB4 is blacklisted.
You will not be able to connect or configure it.
```

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

```
```
Note: the default function is to configure.

```
sc0:~> 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 IO17 to Domain R

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

```
sc0:~> moveboard -d R -c connect IO17
```

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

```
sc0:~> moveboard -d C -c connect SB0
SB at SB0 is blacklisted. Exiting.
sc0:~>
```

**EXIT STATUS**

The following exit values are returned:

<table>
<thead>
<tr>
<th>Exit Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Successful completion</td>
</tr>
<tr>
<td>1</td>
<td>No acknowledge</td>
</tr>
<tr>
<td>2</td>
<td>Not supported</td>
</tr>
<tr>
<td>3</td>
<td>Operation not supported</td>
</tr>
<tr>
<td>4</td>
<td>Invalid privileges</td>
</tr>
<tr>
<td>5</td>
<td>Busy</td>
</tr>
<tr>
<td>6</td>
<td>System Busy</td>
</tr>
<tr>
<td>7</td>
<td>Data error</td>
</tr>
<tr>
<td>8</td>
<td>Library error</td>
</tr>
</tbody>
</table>
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. To remove a component from the ASR blacklist file, use enablecomponent(1M).

ATTRIBUTES

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

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, NVRAM 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. There is one instance of osd on the system controller (SC) 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO  setkeyswitch (1M)
pcd - platform configuration database daemon

pcd

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 transparent to the user.

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

Platform data includes:

- Platform type
- Platform name
- Rack ID
- Cacheable Memory
- Address Slice
- Map System clock frequency
- System clock type
- SC IP address SC0 to SC1 IP address
- SC1 to SC0 IP address
- SC to SC IP netmask

Domain data includes:

- Domain ID/Tag
- OS version (not used)
- OS type (not used)
- Available component list
- Assigned board list
- Active board list
- Golden IOSRAM I/O board
- Virtual keyswitch setting
- Active Ethernet I/O board
- Domain creation time
- Domain dump state
- Domain bring up priority
- IP host address Host name
- Host netmask
- Host broadcast address
System board data includes:

- Expander Position
- Slot position
- Board type
- Board state
- Domain assignment of the board
- Available component list state
- Board test status
- Board test level
- Memory cleared state

**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:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
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<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

**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 there are active domains utilizing the component that is going to be powered off, a listing of those domains and a "Are you sure?" prompt will be given by default.

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.
The following operands are supported:

\[ \text{location} \quad \text{Component location separated by a space. Multiple location forms are not permitted.} \]

The following location forms are accepted:

\begin{itemize}
  \item SB(0...17)
  \item IO(0...17)
  \item CS(0|1)
  \item FT(0...7)
  \item FS(0...5)
  \item EX(0...17)
  \item SC(0|1) [only the spare SC can be powered off.]
\end{itemize}

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 \[ \text{location} \] operand and the \[ \text{location} \] must be a domain configuration unit (DCU) that is assigned to a domain for which you have domain privileges.

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

\textbf{EXAMPLES}

\textbf{EXAMPLE 1}  Powering Off a CPU Board at Expander Position 0

In this example, \texttt{poweroff} forces the board off by suppressing any stdout messages and answering 'yes' to all prompts.

\begin{verbatim}
sc0:sms-user:~ $ poweroff -qy SB0
\end{verbatim}

The following exit values are returned:

\begin{itemize}
  \item 0 \quad \text{Successful completion}
  \item >0 \quad \text{An error occurred.}
\end{itemize}
ATTRIBUTES

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

<table>
<thead>
<tr>
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<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO

poweron(1M)
poweron - control power up

poweron [-q] [-y] [-n] [location]

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).

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 will fail. 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 will fail.

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 will be prompted to continue. If not, poweron exits.

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:

SB(0...17)
IO(0...17)
CS(0|1)
FT(0...7)
PS(0...5)
EX(0...17)

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 in the System Management Services (SMS) 1.2 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:~user:~> poweron PS0

EXAMPLE 2  Powering On a CPU in the ASR Blacklist File

You must have platform administrator privileges. Otherwise, poweron exits with an error.

    sc0:~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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO  
esmd (1M), poweroff (1M)
NAME

rcfgadm - remote configuration administration

SYNOPSIS

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

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

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

rcfgadm -d domain_id | domain_tag [ -v ] [ -o hardware_options ] -t ap_id ...

rcfgadm -d domain_id | domain_tag [ -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 makes a distinction 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 are performed by calling hardware-specific libraries.

Configuration administration operates on an attachment point. Hardware resources located at attachment points can or cannot 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
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 non volatile record keeping.

An attachment point with an occupant in the configured state is in one of four conditions: unknown, ok, failing, 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, unknown, or 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 re-evaluated.

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

For example, an attachment point representing system board 6 would have a physical ap_id of /devices/pseudo/dr@0:SB6 while the logical ap_id is SB6.

Attachment points can also be created dynamically. A dynamic attachment point is named relative to a base attachment point which 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 generated by the corresponding hardware-specific library.

For example, consider a base attachment point, which represents a system board, with the physical ap_id /devices/pseudo/dr@0:SB16 and logical ap_id SB16. A cpu attached to this system board could be represented by a dynamic attachment point with logical ap_id SB16::cpu2 where SB16 is the base component and cpu2 is the hardware-specific dynamic component. Similarly the physical ap_id for this dynamic attachment point would be:

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

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

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

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

For each configuration administration operation, a service interruption can be required. If the requested operation requires a noticeable service interruption to interactive users, confirmation is requested before the operation is started. A prompt is output on the standard error output for confirmation on the standard
input. Confirmation can be overridden using the -y or -n options 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 Dynamic Reconfiguration User Guide for more information.

OPTIONS

The following options are supported.

-a Specifies that the -1 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.

Note – If the rcfadm 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 will need to reboot the domain in order to use that board.
The possible transition states and their meaning 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 since another domain might have assigned the board to itself.

- **connect**
  Performs hardware-specific operations to put the receptacle in 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 usable 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), 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. An attempt to override a condition and force a state change that would otherwise fail can be made by specifying the force option (-f). Hardware-specific safety and integrity checks can prevent the force option from having any effect.

-\texttt{-d domain\_id} \hspace{1cm} ID for a domain. Valid domain\_ids are 'A'...'R' and are case insensitive.

-\texttt{-d domain\_tag} \hspace{1cm} Name assigned to a domain using addtag(1M).

-\texttt{-f} \hspace{1cm} 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.

-\texttt{-h [ap\_id | ap\_type]} \hspace{1cm} Prints out 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. Attachment points can be filtered by using 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.

- **-o parsable**
  
  Return the information as a set of "name=value" pairs separated by the space character. All strings will be enclosed within double quotes. Any double quote and "\" characters in a string will be escaped with a "\". The parsable option is intended to be used in conjunction with the -s option of `cfgadm`.

- **-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 -l option is used. The `parsable` suboption specifies info is returned as a set of "name=value" pairs.

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

- **nopoweroff**
  
  Applies only when the -c disconnect option is used. The `nopoweroff` suboption specifies 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), 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 which 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 which can be interpreted in ways other than part of **rcfgadm** suboptions. For example, a command may 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 using a colon (:), as in **data-field: data-field: data-field**. A **data-field** is one 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. The order of sorting on a data-field can be reversed 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 must be specified with the `-r retry_count` option. The default value is zero, meaning the DR request is retried immediately.

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

The results of the test are used to update the condition of the specified occupant to either `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 only be set to `ok` upon normal completion of testing with no errors.

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

Performs hardware-specific functions.

List hardware-specific private functions using rcfadm
-\( h \) ap_id.

The following are valid hardware_function:

- assign ap_id
  Assign a board to a domain.
- unassign ap_id
  Unassign a board to 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*

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

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
EXTENDED DESCRIPTION

Group Privileges Required

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

The assign and unassign operations are private hardware-specific operations. Assign a board using rcfgadm -x assign ap_id. Unassign a board using rcfgadm -x unassign ap_id. The ap_ids for assign and unassign must be logical ap_ids specifying a board such as: SB0 or IO2.

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

You must have domain administrator or configurator privileges on the domain specified. Otherwise, you must have platform administrator privileges.

No privileges are required for listing operations.

ap_type

An ap_type is a partial form of a logical ap_id that can be ambiguous and not specify a particular attachment point. An ap_type is a substring of the portion of the logical ap_id up to, but not including, the colon (:) separator. For example, an ap_type of pci would show all attachment points whose logical ap_ids begin with pci. There are two ap_types shown here; static and dynamic.

Static ap_types:

HPCI
CPU
MCPU
pci-pci/hp

Dynamic ap_types:

cpu
mem
io
Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

**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
                io         connected     configured     ok
                io         connected     configured     ok
                io         connected     configured     ok
                io         connected     configured     ok
IO6             MCPU       disconnected  unconfigured   unknown
IO14            PCI        connected     configured     ok
                io         connected     configured     ok
                io         connected     configured     ok
                io         connected     configured     ok
                io         connected     configured     ok
SB4             CPU        disconnected  unconfigured   unknown
SB6             CPU        connected     configured     ok
                cpu        connected     configured     ok
                cpu        connected     configured     ok
                cpu        connected     configured     ok
                cpu        connected     configured     ok
                memory     connected     configured     ok
SB16            CPU        connected     configured     ok
SB16            CPU        connected     configured     ok
                cpu        connected     configured     ok
                cpu        connected     configured     ok
                memory     connected     configured     ok
```

**EXAMPLE 3**  Selective Listing Based on Attachment Point Attributes for Domain A
The following example lists all attachment points at location SB6, and type cpu. The argument to the \texttt{-s} option is quoted to protect it from the shell.

```
sc0:scs-user:~ $ rcfadm -d a -s match=partial,select="type(cpu)" -l 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:scs-user:~ $ rcfadm -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/dr0:SB16
```

**EXAMPLE 5** Force Option on Domain A

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

```
sc0:scs-user:~ $ rcfadm -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:scs-user:~ $ rcfadm -d a -c unconfigure IO14
```

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

The following example configures an occupant:

```
sc0:scs-user:~ $ rcfadm -d a -c configure SB6
```
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 doesn’t 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
ATTRIBUTES

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

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 cancelled
rcfgadm: Configuration operation invalid
rcfgadm: Configuration operation not supported
rcfgadm: Library error

36 Unable to get assigned board list
37 Get blacklist failed
38 Solaris not running
56 DR command synatax error
68 DR operation failed
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_id | domain_tag] [-d domain_id | domain_tag]...
reset [-q] [-y | -n] [-x]
reset -h

**DESCRIPTION**
reset(1M) allows 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 will receive an error if the virtual keyswitch is in the secure position. An optional confirmation prompt is given by default. Refer to Chapter 6 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

**OPTIONS**
The following options are supported.

- `-d domain_id` ID for a domain. Valid `domain_ids` are 'A'...'R' and are case insensitive.

- `-d 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.

- `-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 in the System Management Services (SMS) 1.2 Administrator Guide for more information.
EXAMPLES

EXAMPLE 1  Reset 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO

adddag (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 runs either from the main SC and resets the spare or 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 exits with 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 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

## EXAMPLES

### EXAMPLE 1  Resetting the Other SC Using Prompts

```bash
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

```bash
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

```bash
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

```bash
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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>
NAME  
runckmdsync - prepare a specified script for recovery after a failover

SYNOPSIS  
runckmdsync script_name [parameters]
runckmdsync -h

DESCRIPTION  
The runckmdsync(1M) command prepares the specified script for automatic synchronization (recovery) after a failover. runckmdsync 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 runckmdsync 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.

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 in the System Management Services (SMS) 1.2 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO

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

NAME
savecmdsync - command synchronization commands

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 will be 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 is used only to mark specific points in a script from which
processing can be resumed. If specific restart points are not needed, 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.
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:

```bash
# 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
# initcmdsyc command

initcmdsyc script_name parameters
# The marker point is stored in the goto_label variable.
# Keep executing this script until all cases have been
# processed or an error is detected.
while (( $goto_label != 0 )) ; do
# Each case should represent a synchronization point
# in the script.
    case $goto_label in
# Step 1: Do something
    1 )
            do_something
            .
            .
# Execute the 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 cancelcmdsyc to remove the script from the
# command synchronization list. Otherwise, the command will be restarted
# after the failover.
cancelcmdsyc $desc
**Group Privileges Required**

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

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

**SEE ALSO** `runcmdsync`(1M), `showcmdsync`(1M)

**NOTES**

An example of a user-defined script (with synchronization commands) is provided in the `/opt/SUNWSMS/examples/cmdsync` directory.
### NAME
setbus - perform dynamic bus reconfiguration on active expanders in a domain

### SYNOPSIS
```bash
setbus [-q] [-y | -n] [-c CS0 | CS1 | CS0,CS1 [-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 can allow you to swap out a CSB without having to power off the system.

### OPTIONS

**Note** – The `-y` and `-n` are optional arguments to the `setbus(1M)` command. If one of these optional arguments is not provided, `setbus` prompts the user with a confirmation message.

**Note** – If changing the configuration on the chosen expander will require changing the configuration on additional expanders, `setbus` displays the following message:

```
The expander board in position location communicates with expanders not already listed, and will be added to the list of boards to reconfigure.
```

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 CS0 | CS1 | CS0,CS1` 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.
OPERANDS

The following operands are supported:

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

Valid locations are:

EX0–EX17

EXAMPLES

EXAMPLE 1   Set All Buses on All Active Domains to Use CS0

```
sc0:sms-user:~ $ setbus -c CS0
```

EXAMPLE 2   Set All Buses on All Active Domains to Use Both CSBs

```
sc0:sms-user:~ $ setbus -c CS0,CS1
```

EXAMPLE 3   Set Address Bus on All Active Domains to Use CS0

```
sc0:sms-user:~ $ setbus -c CS0 -b a
```
EXAMPLE 4  Set Address and Data Buses on Active EX1 to Use CS1

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

EXIT STATUS  The following exit values are returned:

<table>
<thead>
<tr>
<th>Exit Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Successful completion</td>
</tr>
<tr>
<td>&gt;0</td>
<td>An error occurred.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO  showbus (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.

Note – Data synchronization uses the available disk space under the /var/opt/SUNWSMS directory to copy files from the main SC to the spare. If you have files to be copied that are larger than the /var/opt/SUNWSMS directory, those files cannot be propagated. For example, if the data synchronization backup file (ds_backup.cpio) gets larger than the available space in /var/opt/SUNWSMS, you must reduce the size of this backup file before data propagation can occur. The size of the sms_backup.cpio file gives you an indication of the size of the data synchronization backup file.

To create more disk space you can remove the following files:
- /var/opt/SUNWSMS/adm/platform/messages.x
- /var/opt/SUNWSMS/adm/domain_id/messages.x
- /var/opt/SUNWSMS/adm/domain_id/post/files

where x is the archive number of the file. Because these files are propagated from the new main SC to the spare after a failover, remove these files on both the main and spare SC.

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 is to 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 will not be 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.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backup</td>
<td>Backs up the main SC using smsbackup(1M), moves the backup data from the main to the spare SC, and restores the backup data on the spare SC. For more information, see smsbackup(1M).</td>
</tr>
<tr>
<td>cancel filename</td>
<td>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.</td>
</tr>
<tr>
<td>-h</td>
<td>Help. Displays usage descriptions.</td>
</tr>
<tr>
<td>-i interval</td>
<td>Indicates how often the specified file is to be checked for modifications. The default interval is 60 minutes. The interval can range from 1 to 1440 minutes (24 hours).</td>
</tr>
<tr>
<td>push filename</td>
<td>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.</td>
</tr>
<tr>
<td>schedule filename</td>
<td>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.</td>
</tr>
</tbody>
</table>

**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 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.
EXAMPLES

EXAMPLE 1  Propagate 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  Remove 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSOp</td>
</tr>
</tbody>
</table>

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_id | domain_tag] [-u]
[-q][mmdd]HHMM [mmddHHMM][cclyy][.SS]

DESCRIPTION
setdate(1M) allows the SC platform administrator to set the SC or optionally a
domain date and time values. Allows domain administrators to set the date and
time values for their domains. After setting the date and time, setdate(1M)
displays the current date and time.

OPTIONS
The following options are supported.

-`d domain_id` ID for a domain. Valid `domain_ids` are 'A'...'R' and are case
   insensitive.
   Sets the domain's time of day (TOD) when the domain's 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.

-`d domain_tag` Name assigned to a domain using addtag(1M).
   Sets the domain's time of day (TOD) when the domain's 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 setting 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).
**EXTENDED DESCRIPTION**

**Group Privileges**  
**Required**

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

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 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:

<table>
<thead>
<tr>
<th>Exit Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Successful completion</td>
</tr>
<tr>
<td>&gt;0</td>
<td>An error occurred</td>
</tr>
</tbody>
</table>

**ATTRIBUTES**

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>
SEE ALSO addtag(1M), setkeys(1M), showdate(1M)
NAME

setdefaults - remove all instances of a previously active domain

SYNOPSIS

setdefaults -d domain_id | domain_tag [-p] [-y]

setdefaults -h

DESCRIPTION

setdefaults(1M) removes all SMS instances of a previously active domain. 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.

Only one domain can be done at a time. The domain cannot be active and the virtual keyswitch must be set to off, otherwise, setdefaults exits with an error.

OPTIONS

The following options are supported.

-d domain_id  ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive.

-d 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  Preserve NVRAM and boot parameter data. By default, you are asked whether to remove the NVRAM and boot parameter data or not. If the -p option is used, you are not prompted and the data is preserved.

-y  Automatically answers “yes” to all prompts.

EXTENDED DESCRIPTION

Group Privileges Required

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

Refer to Chapter 2 in the System Management Services (SMS) 1.2 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

Last Modified 02 Jan 2002  SMS 1.2  139
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 cancelled the operation.

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 messages files are stored on the system at any one time; console.0 through console.9.
ATTRIBUTES
See attributes (5) for descriptions of the following attributes:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSoop</td>
</tr>
</tbody>
</table>

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 on` | `off` | `force`
- `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.

- **force** Forces a failover to the spare SC. The spare SC must be available.
- **-h** Help. Displays usage descriptions.

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

- **off** Disables the failover mechanism. This will prevent a failover until the mechanism is re-enabled.
- **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 re-enable failover only. If failover cannot be re-enabled, 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 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

### EXAMPLES

These commands produce no output when successful. An error message appears if the action could not be performed.

**EXAMPLE 1**  
Turn Failover On

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

**EXAMPLE 2**  
Turn Failover Off

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

**EXAMPLE 3**  
Force 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO
showfailover (1M)
setkeys{w}itch - change the position of the virtual keyswitch

**SYNOPSIS**

```
setkeys{w}itch -d domain_id | domain_tag [-q] [-y] [-n] on | standby | off | diag | secure
```

**DESCRIPTION**

setkeys{w}itch(1M) changes the position of the virtual keyswitch to the specified value. setkeys{w}itch is responsible for powering on or powering down 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 and setkeys{w}itch 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 showkeys{w}itch 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 setkeys{w}itch(1M) command. If one of these optional arguments is not provided, setkeys{w}itch prompts the user for confirmation when changing from the on, diag, or secure position to the off or standby position.

```
-d domain_id       ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive.
-d 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:

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, but upon the next reboot of the domain, post is not invoked with verbosity and the diag level is set to its default value.

From the secure position, on restores write permission to the domain.

standby

From the off position, standby powers on all boards assigned to the domain (if not already powered on).

From the on, diag, or secure position, standby optionally causes a confirmation prompt and the domain is gracefully shut down. The boards remain fully powered.

off

From the on, diag, or secure position, off optionally causes a confirmation prompt and all boards are put into low-power mode.

From the standby position, off puts all boards into low-power mode.

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 the verbosity and diag levels set to at least their defaults.

From the on position, diag results in nothing more than a position change, but upon the next reboot of the domain, post is invoked with the verbosity and diag levels set to at least their defaults.

From the secure position, diag restores write permission to the domain and upon the next reboot, post is invoked with the verbosity and diag levels set to at least their defaults.
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 described above).

From the diag position, secure removes write permission to the domain (as described above) and on the next reboot of the domain, post is invoked with the verbosity and diag levels set to at least their defaults.

EXTENDED DESCRIPTION

Group Privileges Required

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

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

EXAMPLES

**EXAMPLE 1**  Set 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:

<table>
<thead>
<tr>
<th>Exit Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Successful completion</td>
</tr>
<tr>
<td>&gt;0</td>
<td>An error occurred</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO

adtag (1M), esmd (1M), flashupdate (1M), pcd (1M), reset (1M), showkeysswitch (1M)
NAME  setobpparams - set up OpenBoot PROM variables for a domain

SYNOPSIS  setobpparams 

setobpparams -d domain_id | domain_tag=param=param... 

setobpparams -h

DESCRIPTION  setobpparams(1M) allows a domain administrator to set the virtual NVRAM and REBOOT variables passed to OpenBoot PROM by setkeys\switch(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 routine system administration. For more information refer to Chapter 4 in the System Management Services (SMS) 1.2 Administrator Guide.

OPTIONS  The following options are supported.

-d domain_id  ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive.

-d 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?
- auto-boot?
- fcode-debug?
- use-nvramrc?
- security-mode

Valid variable values for all but security mode are:
- true
- false

Valid variable values for security mode are:
- none
- command
- full

where:

- none - No password required (default)
- command - All commands except for boot(1M) and go require the password
- full - 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 shells require using single quotes around the variable values to prevent the ’?’ from being treated as a special character. See the examples below.
Refer to Chapter 2 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1** Setting OpenBoot PROM Variable `diag-switch` 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

**SEE ALSO**
`addtag (1M), setkeysset (1M), showobpparams (1M)`
NAME
setupplatform - set up the available component list for domains

SYNOPSIS
setupplatform [-d domain_id | domain_tag [ -a | -r ] location [location]...]
setupplatform [-d domain_id | domain_tag location [location]...]
setupplatform [-d domain_id | domain_tag - ]
setupplatform -h

DESCRIPTION
setupplatform(1M) sets up the available component list for domains. If a
domain_id | domain_tag is specified, a list of boards must be specified. An empty
board list can be specified as ‘—’. In the case where no domain_id | domain_tag is
specified, current values are displayed in the “[]” at the command prompt. If no
value is specified for a parameter, it will retain its current value.

OPTIONS
The following options are supported.

-a
Add the slot(s) to the available component list for the domain.

-d domain_id
ID for a domain. Valid domain_ids are 'A'...'R' and are case
insensitive.

-d 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.

-r
Remove the slots from the available component list for the
domain.

-
Clears the entire available component list.

OPERANDS
The following operands are supported:

location
Board location separated by a space.

The following location forms are accepted:

SB(0...17)
IO(0...17)

EXTENDED
DESCRIPTION
Group Privileges
Required
You must have platform administrator privileges to run this command.
Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

**EXAMPLES**

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

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

```
setplatform
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 []?
```
EXAMPLE 2  Set Up Available Component List for Domain engB to Boards at SB0, IO1, 

```bash
sc0:sms-user:> showplatform -p available
Available for domain DomainA:
  SB3 SB2
  IO5 IO4 IO3
Available for domain DomainB:
  None
  None
Available for domain DomainC:
  SB17 SB16 SB7 SB5
  IO8 IO7
Available for domain DomainD:
  SB9 SB8 SB4 SB2
  IO6 IO5 IO1
Available for domain DomainE:
  SB0
  IO0
Available for domain DomainF:
  None
  None
Available for domain DomainG:
  None
  None
Available for domain DomainH:
  None
  None
Available for domain DomainI:
  None
  None
Available for domain DomainJ:
  None
  None
Available for domain DomainK:
  None
  None
Available for domain DomainL:
  None
  None
Available for domain DomainM:
  None
  None
Available for domain DomainN:
  None
  None
Available for domain DomainO:
  None
  None
Available for domain DomainP:
  None
Available for domain DomainQ:
  None
Available for domain DomainR:
  None
```
EXAMPLE 3 Clear All Boards in engB Available Component List
sc0:sms-user:> setupplatform -d engB -

EXAMPLE 4 Add Boards at SB0 and IO2 to engB Available Component List
sc0:sms-user:> setupplatform -d engB -a SB0 IO2

EXAMPLE 5 Remove Boards at SB3 and IO3 From engB Available Component List
sc0:sms-user:> setupplatform -d engB -r SB3 IO3

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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO addtag(1M), showplatform(1M)
NAME  
showboards - show the assignment information and status of the boards

SYNOPSIS
showboards [-d domain_id | domain_tag] [-v ]
showboards -h

DESCRIPTION
showboards(1M) displays board assignments. If domain_id | domain_tag is specified, this command displays which boards are assigned or available to the given domain. If the -v option is used, showboards displays all components, including domain configuration units (DCUs) such as cpus, dpus, iobs, csbs and exbs, as well as the system controller (SC) are not DCUs.

OPTIONS
The following options are supported.

- d domain_id       ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive.
- d domain_tag      Name assigned to a domain using addtag(1M).
- h                 Help. Displays usage descriptions.
- 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 in the System Management Services (SMS) 1.2 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 | 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 | domain_tag` and the `-a` 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 | 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 which 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.

### States in the Pwr Field

The Pwr field contains one of three 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 may be used at this point 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 contains one of six values:

- **Passed** = The board passed POST
- **Degraded** = The board is in a degraded mode
- **Failed** = The board failed POST
- **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
## EXAMPLE 1  Showboards for Platform Administrators

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

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

## EXAMPLE 2  Showboards for Platform Administrators for Domain B
The following example illustrates `showboards` output if you have platform administrator privileges and specify a domain. The output does not include boards which are assigned to other domains.

```
sc0:~ $ showboards -d b
```

<table>
<thead>
<tr>
<th>Location</th>
<th>Pwr</th>
<th>Type of Board</th>
<th>Board Status</th>
<th>Test Status</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB3</td>
<td>On</td>
<td>CPU</td>
<td>Active</td>
<td>Passed</td>
<td>engB</td>
</tr>
<tr>
<td>SB4</td>
<td>On</td>
<td>CPU</td>
<td>Active</td>
<td>Passed</td>
<td>engB</td>
</tr>
<tr>
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</table>

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

The following example illustrates `showboards` output if you have platform administrator privileges and use the `-v` option. The command shows all components.

```
sc0:~ $ showboards -v
```

<table>
<thead>
<tr>
<th>Location</th>
<th>Pwr</th>
<th>Type of Board</th>
<th>Board Status</th>
<th>Test Status</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
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<td>SC</td>
<td>Master</td>
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<td>PS</td>
<td>-</td>
<td>-</td>
<td>-</td>
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### EX Series

<table>
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### IO Series

| IO1/C3V0 | On | C3V | - | A |
| IO1/C5V0 | On | C5V | - | A |
| IO1/C3V1 | On | C3V | - | A |
| IO1/C5V1 | On | C5V | - | A |
| IO2/C3V0 | On | C3V | - | engB |
| IO2/C5V0 | On | C5V | - | engB |
| IO2/C3V1 | On | C3V | - | engB |
| IO2/C5V1 | On | C5V | - | engB |
| IO3/C3V0 | On | C3V | - | domainC |
| IO3/C3V1 | On | C3V | - | domainC |
| IO3/C5V0 | On | C5V | - | domainC |
| IO3/C5V1 | On | C5V | - | domainC |

| IO4/C3V0 | On | C3V | - | domainC |
| IO4/C5V0 | On | C5V | - | domainC |
| IO4/C3V1 | On | C3V | - | domainC |
| IO4/C5V1 | On | C5V | - | domainC |
| IO5/C3V0 | On | C3V | - | Isolated |
| IO5/C3V1 | On | C3V | - | Isolated |
| IO5/C5V0 | On | C5V | - | Isolated |
| IO5/C5V1 | On | C5V | - | Isolated |
| IO7/C3V0 | On | C3V | - | dmnJ |
| IO7/C3V1 | On | C3V | - | dmnJ |
| IO7/C5V0 | On | C5V | - | dmnJ |
| IO7/C5V1 | On | C5V | - | dmnJ |
| IO8/C3V0 | On | C3V | - | A |
| IO8/C3V1 | On | C3V | - | A |
| IO8/C5V0 | On | C5V | - | A |
| IO8/C5V1 | On | C5V | - | A |
| IO9/C3V0 | On | C3V | - | dmnJ |
| IO9/C3V1 | On | C3V | - | dmnJ |
| IO9/C5V0 | On | C5V | - | dmnJ |
| IO9/C5V1 | On | C5V | - | dmnJ |
| IO10/C3V0| On  | C3V  | -  | engB |
| IO10/C5V0| On  | C5V  | -  | engB |
| IO10/C3V1| On  | C3V  | -  | engB |
| IO10/C5V1| On  | C5V  | -  | engB |
| IO11/C3V0| On  | C3V  | -  | engB |
| IO11/C3V1| On  | C3V  | -  | engB |
| IO11/C5V0| On  | C5V  | -  | engB |
| IO11/C5V1| On  | C5V  | -  | engB |
| IO12/C3V0| On  | C3V  | -  | Isolated |
| IO12/C5V0| On  | C5V  | -  | Isolated |
| IO12/C3V1| On  | C3V  | -  | Isolated |

---

**Notes:**
- EX stands for Exchange Module.
- IO stands for Input/Output Module.
- C3V and C5V refer to the voltage levels of the modules.
- Engagement (eng) and domain (domain) are specified where applicable.
### EXAMPLE 4  Showboards for Domain Administrators With Privileges on Domains B, J, and R

The following example illustrates showboards output if you have domain privileges for domains B, J, and R. showboards displays information for those boards which are assigned or available to domains B, J, and R. Boards which
are assigned to other domains or do not appear in the available component list for domains B, J, or R are not displayed.

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

<table>
<thead>
<tr>
<th>Location</th>
<th>Pwr</th>
<th>Type of Board</th>
<th>Board Status</th>
<th>Test Status</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB3</td>
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<td>Active</td>
<td>Passed</td>
<td>engB</td>
</tr>
<tr>
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<td>CPU</td>
<td>Active</td>
<td>Passed</td>
<td>engB</td>
</tr>
<tr>
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<td>Passed</td>
<td>engB</td>
</tr>
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</tr>
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<td>dmnJ</td>
</tr>
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</tr>
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</tr>
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</tr>
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<td>On</td>
<td>HPCI</td>
<td>Active</td>
<td>Passed</td>
<td>engB</td>
</tr>
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<td>HPCI</td>
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<td>Assigned</td>
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</tr>
<tr>
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<td>Off</td>
<td>HPCI</td>
<td>Assigned</td>
<td>Failed</td>
<td>engB</td>
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<td></td>
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<td>dmnR</td>
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</tbody>
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```

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

<table>
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<th>Pwr</th>
<th>Type of Board</th>
<th>Board Status</th>
<th>Test Status</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB3</td>
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<td>Active</td>
<td>Passed</td>
<td>engB</td>
</tr>
<tr>
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<td>On</td>
<td>CPU</td>
<td>Active</td>
<td>Passed</td>
<td>engB</td>
</tr>
<tr>
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<td>Active</td>
<td>Passed</td>
<td>engB</td>
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<td>Failed</td>
<td>engB</td>
</tr>
</tbody>
</table>

**EXAMPLE 5** Showboards for Domain Administrators for Domain B

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

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

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<th>Type of Board</th>
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<th>Test Status</th>
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<td>Isolated</td>
</tr>
<tr>
<td>IO6</td>
<td></td>
<td>Empty Slot</td>
<td>Available</td>
<td>-</td>
<td>Isolated</td>
</tr>
<tr>
<td>IO10</td>
<td>Off</td>
<td>HPCI</td>
<td>Assigned</td>
<td>Unknown</td>
<td>engB</td>
</tr>
<tr>
<td>IO11</td>
<td>Off</td>
<td>HPCI</td>
<td>Assigned</td>
<td>Failed</td>
<td>engB</td>
</tr>
</tbody>
</table>

164
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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO addtag(1M), setupplatform(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 set 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 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES

EXAMPLE 1 Showbus Display 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.

### EXAMPLE 2
Display Showbus Information for All Domains Using `-v`

```
sc0:sms-user$> showbus
--------------
SOCX: 0x14010
--------------
Data:     CS0,CS1
Address:  CS0,CS1
Response: CS0,CS1
-------------
Domain:A keyswitch: ON
Location:EX4 SB4:active IO4 :active
Location:EX14  IO14:active
Location:EX16  IO16:active
--------------
SOCX: 0x00001
--------------
Data:     CS0
Address:  CS1
Response: CS0
-------------
Domain:B keyswitch: ON
Location:EX0 SB0:active IO0:active
UNCONFIGURED
-------------
Domain: A keyswitch: ON
Location:EX6 SB6:unknown
```
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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

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

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

EXAMPLES  **EXAMPLE 1**  Example Command Synchronization List

```
sc0:sns-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:

```
<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>
```

SEE ALSO *cancelcmdsync* (1M), *initcmdsync* (1M), *runcmdsync* (1M), *savecmdsync* (1M)
showcomponent(1M)

NAME

showcomponent - display the blacklist status for a component

SYNOPSIS

showcomponent [-a] [-d domain_tag | domain_id] [-v] [location]...

showcomponent -h

DESCRIPTION

showcomponent(1M) displays 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 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 and 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 7 in the System Management Services (SMS) 1.2 Administrator Guide.

OPTIONS

The following options are supported.

-a Specifies the ASR blacklist.

-d domain_id ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive. This option specifies the domain blacklist.

-d domain_tag Name assigned to a domain using addtag(1M). This option specifies the domain blacklist.

-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/bank/all_banks_on_that_proc
- board_loc/proc/bank/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/ABUS1 location indicates address bus 1 at CS0.

The following board_loc forms are accepted:

- SB(0...17)
- IO(0...17)
- CS(0|1)
- EX(0...17)
Processor locations indicate single processors or processor pairs. There are four possible processors on a CPU/Memory board. Processor pairs on that board are: procs 0 and 1, and procs 2 and 3.

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

The following proc forms are accepted:

\[ P(0...3) \quad PP(0|1) \]

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:

\[ C(3|5) V(0|1) \]

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

The following bus forms are accepted:

\[ ABUS|DBUS|RBUS \quad (0|1) \]
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 may only run this command on the domain for which you have privileges.

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES

**EXAMPLE 1**  Display Whether SB0 is ASR Blacklisted

```
sc0:sms-user:> showcomponent -a SB0
Component SB0 is disabled: #High Voltage
```

**EXAMPLE 2**  Display Whether 4 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 3**  Display 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 4**  Display 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 5**  Display All DomainB Blacklisted Components

```
sc0:sms-user:> showcomponent -dB
Component IO4/PP0 is disabled: #High temp
Component SB5 is disabled: <no reason given>
```

**EXAMPLE 6**  Display 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 file is used by this command.

<table>
<thead>
<tr>
<th>Path</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/etc/opt/SUNWSMS/config/asr/blacklist</td>
<td>List of components excluded by esmd.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Path</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/etc/opt/SUNWSMS/config/platform/blacklist</td>
<td>List of platform components excluded.</td>
</tr>
<tr>
<td>/etc/opt/SUNWSMS/config/domain_id/blacklist</td>
<td>List of domain components excluded.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

**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. See the EXTENDED DESCRIPTION section for details on the information displayed.

- 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 the data synchronization process is enabled and functioning normally.

■ Disabled indicates the data synchronization process has been disabled because SC failover was disabled.

■ Failed indicates the data synchronization process cannot currently propagate files to the spare SC even though an SC failure was detected.
If you specify the \texttt{-l} option with the \texttt{showdatasync} command, each entry in the data propagation list is displayed in the format \textit{Time Propagated, Interval, File}, where:

\begin{itemize}
  \item \textbf{Time Propagated} Indicates the last time that the file was propagated from the main SC to the spare.
  \item \textbf{Interval} Specifies the interval, in minutes, between checks for file modification. The default interval is 60 minutes.
  \item \textbf{File} Provides the absolute path and name of the propagated file.
\end{itemize}

\textbf{EXIT STATUS}\n
The following exit values are returned:

\begin{itemize}
  \item 0 Successful completion
  \item >0 An error occurred.
\end{itemize}
ATTRIBUTES

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO

setdatasync (1M)
NAME  
showdate - display the date and time for the system controller (SC) or a domain

SYNOPSIS  
showdate [-d domain_id|domain_tag] [-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_id`  ID for a domain. Valid `domain_ids` are ‘A’...'R' and are case insensitive.

- `d 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, 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 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES  

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

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

**EXAMPLE 2**  Showing the Current Date Using GMT

```
sc0:sms-user:> showdate -u
```
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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

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 [location]...
showdevices [-v] [-p bydevice|byboard|query|force] -d domain_id | domain_tag
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. Display the predicted impact of a system board DR operation by performing an offline query of managed resources. Unmanaged devices are not displayed by default, you must use the -v option.

showdevices gathers device information from one or more Sun Fire 15K domains. The command uses the dca(1M) as a proxy to gather the information from the domains.

OPTIONS  The following options are supported.

-d domain_id  ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive. Displays device and resource information for all configured boards in the domain.

-d domain_tag  Name assigned to a domain using addtag(1M). Displays device and resource information for all configured boards in the domain.

-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 — Query predicted result 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)).
showdevices(1M) System Administration

-\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:

\texttt{location} List of board locations separated by a space. Multiple location arguments are permitted.

The following location forms are accepted:

\texttt{SB(0...17)}

\texttt{IO(0...17)}

EXTENDED DESCRIPTION

The showdevice fields are:

domain Tag or identifier
board Board identifier

CPU:

\texttt{id} Processor id
\texttt{state} Processor state
\texttt{speed} CPU frequency in MHz
\texttt{ecache} CPU ecache size in MB

Memory:

\texttt{board mem} Board memory size in MB
\texttt{perm mem} Amount of non-relocatable memory on board in MB
\texttt{base address} Base physical address of memory on board
\texttt{domain mem} System memory size in MB
\texttt{board} Board identifier
If a memory drain is in progress, the following is available:

<table>
<thead>
<tr>
<th>target board</th>
<th>Target board identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>deleted</td>
<td>Amount of memory already deleted in MB</td>
</tr>
<tr>
<td>remaining</td>
<td>Amount of memory remaining to be deleted in MB</td>
</tr>
</tbody>
</table>

**I/O Devices:**

<table>
<thead>
<tr>
<th>device</th>
<th>I/O device instance name</th>
</tr>
</thead>
<tbody>
<tr>
<td>resource</td>
<td>Managed resource name</td>
</tr>
<tr>
<td>usage</td>
<td>Description of resource usage instance</td>
</tr>
<tr>
<td>query</td>
<td>Result of offline query of resources</td>
</tr>
</tbody>
</table>

**Group Privileges Required**

You must have domain administrator/CONFIGURATOR privileges on all boards specified to run this command.

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

### EXAMPLES

**EXAMPLE 1** Show devices for System Board IO1

```bash
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  Showdevices for Domain A

```
sc0:sms-user:> showdevices -v -d A
```

CPU

<table>
<thead>
<tr>
<th>domain</th>
<th>location</th>
<th>id</th>
<th>state</th>
<th>speed</th>
<th>ecache</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>C1</td>
<td>40</td>
<td>online</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>C1</td>
<td>41</td>
<td>online</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>C1</td>
<td>42</td>
<td>online</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>C1</td>
<td>43</td>
<td>online</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>C2</td>
<td>55</td>
<td>online</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>C2</td>
<td>56</td>
<td>online</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>C2</td>
<td>57</td>
<td>online</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>C2</td>
<td>58</td>
<td>online</td>
<td>400</td>
<td>4</td>
</tr>
</tbody>
</table>

Memory

```
drain in progress:
```

<table>
<thead>
<tr>
<th>domain</th>
<th>location</th>
<th>mem MB</th>
<th>mem MB</th>
<th>mem MB</th>
<th>mem MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>C1</td>
<td>2048</td>
<td>723</td>
<td>0x600000</td>
<td>4096</td>
</tr>
<tr>
<td>A</td>
<td>C2</td>
<td>2048</td>
<td>0</td>
<td>0x200000</td>
<td></td>
</tr>
</tbody>
</table>

IO Devices

```
 A    I01   sd0
 A    I01   sd1
 A    I01   sd2
 A    I01   sd3   /dev/dsk/c0t3d0s0 mounted filesystem "/"
 A    I01   sd3   /dev/dsk/c0t3s0s1 dump device (swap)
 A    I01   sd3   /dev/dsk/c0t3s0s1 swap area
 A    I01   sd3   /dev/dsk/c0t3d0s3 mounted filesystem "/var"
 A    I01   sd3   /var/run mounted filesystem "/var/run"
 A    I01   sd4
 A    I01   sd5
 A    I01   sd6
```

EXAMPLE 3  Display Offline Query Result for System Board I01

```
sc0:sms-user:> showdevices -p query I01
```

Location I01 - Domain A

```
 IO Devices
```

<table>
<thead>
<tr>
<th>device</th>
<th>resource</th>
<th>query</th>
<th>usage/reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>sd3</td>
<td>/dev/dsk/c0t3d0s0</td>
<td>fail</td>
<td>mounted filesystem &quot;/&quot;</td>
</tr>
<tr>
<td>sd3</td>
<td>/dev/dsk/c0t3s0s1</td>
<td>fail</td>
<td>dump device (swap)</td>
</tr>
<tr>
<td>sd3</td>
<td>/dev/dsk/c0t3s0s1</td>
<td>fail</td>
<td>swap area</td>
</tr>
<tr>
<td>sd3</td>
<td>/dev/dsk/c0t3d0s3</td>
<td>fail</td>
<td>mounted filesystem &quot;/var&quot;</td>
</tr>
<tr>
<td>sd3</td>
<td>/var/run</td>
<td>-</td>
<td>mounted filesystem &quot;/var/run&quot;</td>
</tr>
</tbody>
</table>

The query field shows the predicted result of removing the resource. The failure of the mounted filesystem "/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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
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</table>

SEE ALSO addtag (1M), dca (1M), pcd (1M)
**NAME**  
showenvironment - display the environmental data

**SYNOPSIS**  
```
showenvironment [-d domain_id | domain_tag]... [-p temps | volts | currents | fans | powers | faults]... [-v ]
showenvironment -h
```

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

**Note** – Only domain configuration units (DCUs) (for example, CPU, 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, faults and fan tray status with the `-p` option. If the `-p` option is not present, all reports are shown.

**OPTIONS**  
The following options are supported.

- `-d domain_id`  
  ID for a domain. Valid `domain_ids` are 'A'...'R' and are case insensitive.

- `-d domain_tag`  
  Domain name assigned to the domain using `addtag` (1M).

- `-h`  
  Help. Displays usage descriptions.

**Note** – Use alone. Any option specified in addition to `-h` is ignored.
EXTENDED DESCRIPTION

The Unit field contains one of three measurements:

<table>
<thead>
<tr>
<th>C</th>
<th>Celsius</th>
</tr>
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<tbody>
<tr>
<td>V</td>
<td>Volts</td>
</tr>
<tr>
<td>A</td>
<td>Amperes</td>
</tr>
</tbody>
</table>

The Status field can contain one of 16 states.

Temperature Readings:

<table>
<thead>
<tr>
<th>OVERLIMIT</th>
<th>Overlimit</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH_CRIT</td>
<td>High critical</td>
</tr>
<tr>
<td>HIGH_WARN</td>
<td>High warning</td>
</tr>
<tr>
<td>LOW_CRIT</td>
<td>Low critical</td>
</tr>
<tr>
<td>LOW_WARN</td>
<td>Low warning</td>
</tr>
<tr>
<td>OK</td>
<td>Optimum</td>
</tr>
<tr>
<td>INVALID</td>
<td>Reading failure</td>
</tr>
</tbody>
</table>

-p Display specific reports. Multiple report arguments are separated by commas.

Valid arguments for -p 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.
- faults — List output is of all component readings not within the optimum thresholds.

**Note** — The faults argument may not be used in conjunction with any other report argument.

-v Verbose. Displays all available command information.
Voltage Readings:

HIGH_MAX  High maximum
LOW_MIN  Low minimum
OK  Acceptable
INVALID  Reading failure

Current Readings:

OK  Both companion component readings are within 10% of each other
BAD  Both companion component readings are not within 10% of each other
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 will be displayed. Otherwise, you must have platform administrator, operator or service privileges.

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES

EXAMPLE 1  Example showenvironment Display for All Domains

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

```
LOCATION DEVICE SENSOR VALUE UNIT AGE STATUS
---------- -------- ----------- ------- ----- ------- ----- -------
SC at SC0  max1617  RIO Temp  31.00  C  23.4 sec  OK
```
<table>
<thead>
<tr>
<th>Location</th>
<th>Device</th>
<th>Measurement</th>
<th>Value</th>
<th>Temp</th>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC at SC0</td>
<td>max1617</td>
<td>PCIB Temp</td>
<td>26.00</td>
<td>C</td>
<td>23.4 sec</td>
</tr>
<tr>
<td>SC at SC0</td>
<td>pcf8591</td>
<td>PS0 Temp</td>
<td>40.03</td>
<td>C</td>
<td>23.4 sec</td>
</tr>
<tr>
<td>SC at SC0</td>
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<td>PS1 Temp</td>
<td>31.97</td>
<td>C</td>
<td>23.4 sec</td>
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<td>SBBC Temp</td>
<td>40.50</td>
<td>C</td>
<td>23.4 sec</td>
</tr>
<tr>
<td>SC at SC0</td>
<td>cbh</td>
<td>CBH Temp</td>
<td>45.16</td>
<td>C</td>
<td>23.4 sec</td>
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<td>max1617</td>
<td>AMB 0 Temp</td>
<td>22.00</td>
<td>C</td>
<td>24.1 sec</td>
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<td>pcf8591</td>
<td>3.3 VDC</td>
<td>3.26</td>
<td>V</td>
<td>24.7 sec</td>
</tr>
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<td>SC at SC0</td>
<td>pcf8591</td>
<td>3.3 VDC HK</td>
<td>3.28</td>
<td>V</td>
<td>24.7 sec</td>
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<td>pcf8591</td>
<td>5.0 VDC</td>
<td>5.01</td>
<td>V</td>
<td>24.7 sec</td>
</tr>
<tr>
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<td>V</td>
<td>24.7 sec</td>
</tr>
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<td>-12.01</td>
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<tr>
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<td>1.5 CVT0 VDC</td>
<td>1.59</td>
<td>V</td>
<td>24.7 sec</td>
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<td>24.7 sec</td>
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<td>C</td>
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<td>V</td>
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<td>V</td>
<td>57.8 sec</td>
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<tr>
<td>WPCI at IO8</td>
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<td>61.16</td>
<td>C</td>
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<td>DX1 Temp</td>
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<td>C</td>
<td>39.9 sec</td>
</tr>
<tr>
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<td>AR Temp</td>
<td>65.82</td>
<td>C</td>
<td>39.9 sec</td>
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</tbody>
</table>
showenvironment(1M)

Last Modified 02 Jan 2002

SMS 1.2

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<th>Details</th>
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<td>pcfl8591 PS1 Temp 31.97 C 23.4 sec OK</td>
</tr>
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<td>SC at SC0</td>
<td>sbbc SBBC Temp 40.50 C 23.4 sec OK</td>
</tr>
<tr>
<td>SC at SC0</td>
<td>cbh CBH Temp 45.16 C 23.4 sec OK</td>
</tr>
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<td></td>
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CPU at SB6  pcf8591 Core 0 Volt 1.72  V  56.0 sec  OK
CPU at SB6  pcf8591 Core 1 Volt 1.13  V  56.0 sec  HIGH_MAX
CPU at SB6  pcf8591 Core 2 Volt 1.14  V  56.0 sec  HIGH_MAX
CPU at SB6  pcf8591 Core 3 Volt 1.13  V  56.0 sec  LOW_MIN
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EXB at EX12  max1617  AMB Bot Temp 24.00  C  27.1 sec  OK
EXB at EX12  sbbc  SBBC Temp 35.16  C  27.1 sec  OK
EXB at EX12  axq  AXQ Temp 27.01  C  27.1 sec  OK
EXB at EX12  sdim  SDIM Temp 24.62  C  27.1 sec  OK
EXB at EX12  sdise  SDISE Temp 24.59  C  27.1 sec  OK
EXB at EX12  pcf8591  1.5 VDC 1.51  V  55.3 sec  OK
EXB at EX12  pcf8591  3.3 VDC 3.28  V  55.3 sec  OK
EXB at EX12  pcf8591  2.5 VDC 2.47  V  55.3 sec  OK
EXB at EX12  pcf8591 HK 3.26  V  55.3 sec  OK
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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
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PS1       FAIL  OK  ON  ON  ON  OK  OK  OK  OK
PS2       OK  OK  ON  ON  ON  OK  OK  OK  OK
PS4       OK  OK  ON  ON  ON  OK  OK  OK  OK
PS5       OK  OK  ON  ON  ON  OK  OK  OK  OK
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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
CP at CP0  dmx0  DMX0 Temp  19.62  C  21.7 sec  OK
CP at CP0  dmx1  DMX1 Temp  20.54  C  21.7 sec  OK
CP at CP0  dmx3  DMX3 Temp  16.44  C  21.7 sec  OK
CP at CP0  dmx5  DMX5 Temp  22.39  C  21.7 sec  OK
CP at CP0  amx0  AMX0 Temp  25.22  C  21.7 sec  OK
CP at CP0  amx1  AMX1 Temp  27.14  C  21.7 sec  OK
CP at CP0  rmx  RMX Temp  20.54  C  21.7 sec  OK
CP at CP0  darb  DARB Temp  25.70  C  21.7 sec  OK
CP at CP1  dmx0  DMX0 Temp  17.41  C  21.3 sec  OK
CP at CP1  dmx1  DMX1 Temp  33.03  C  21.3 sec  OK
## EXAMPLE 2  Reporting Temperature on Domain A

This example assumes that domain a contains MCPUs at IO6 and IO2.

```plaintext
<table>
<thead>
<tr>
<th>LOCATION</th>
<th>DEVICE</th>
<th>SENSOR</th>
<th>VALUE</th>
<th>UNIT</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>IO6</td>
<td>max1617</td>
<td>PROC 1 Temp</td>
<td>35.00</td>
<td>C</td>
<td>8.0 sec</td>
</tr>
<tr>
<td></td>
<td>dx0</td>
<td>DX0 Temp</td>
<td>36.50</td>
<td>C</td>
<td>8.0 sec</td>
</tr>
</tbody>
</table>
```

This example assumes that domain a contains MCPUs at IO6 and IO2.
EXIT STATUS

The following exit values are returned:

<table>
<thead>
<tr>
<th>Exit Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Successful completion</td>
</tr>
<tr>
<td>1</td>
<td>An invalid domain used.</td>
</tr>
<tr>
<td>2</td>
<td>An invalid command line option used.</td>
</tr>
<tr>
<td>3</td>
<td>Invalid permission.</td>
</tr>
<tr>
<td>4</td>
<td>An internal error occurred.</td>
</tr>
</tbody>
</table>

ATTRIBUTES

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO addtag(1M)
NAME | showfailover - manage or display system controller (SC) failover status

SYNOPSIS | showfailover [-r] [-v]

DESCRIPTION | showfailover(1M) provides the ability 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: state

The failover mechanisms can be in one of three states: ACTIVE, DISABLED, and FAILED. See the EXTENDED DESCRIPTION below.

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 described as follows:

ACTIVE | Identifies the failover mechanism as being enabled and functioning normally.

DISABLED | Identifies that the failover mechanism has been disabled due to the occurrence of a failover or an operator request (for example, setfailover off).

FAILED | Identifies that the failover mechanism has detected a failure that prevents a failover from being possible.

In addition, showfailover displays the state of each of the network interface links monitored by the failover processes. The display format is:

network if device name: [GOOD|FAILED]

A failure string is returned describing the failure condition. Each failure string has a code associated with it. The following codes and associated failure strings are defined:
showfailover(1M)  System Administration

Group Privileges  Required

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

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

EXAMPLES  

**EXAMPLE 1  Failover Status Shows Everything is OK**

```
sc0:sms-user:~> showfailover
SC Failover: ACTIVE
hme0: GOOD
hme1: GOOD
hme2: GOOD
```

**EXAMPLE 2  The Spare SC System is Full**

```
sc0:sms-user:~> showfailover
SC Failover: FAILED
S-SC DISK FULL
hme0: GOOD
hme1: GOOD
hme2: GOOD
```
EXAMPLE 3 Displays the SC Role

```
s0:/sms-user:~> showfailover -r
SC: SPARE
```

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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO setfailover(1M)
NAME  
showkeyswitch - display the position of the virtual keyswitch

SYNOPSIS  
showkeyswitch -d domain_id|domain_tag [-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_id  ID for a domain. Valid domain_ids are 'A'...'R' and are case insensitive.
- -d domain_tag  Name assigned to a domain using addtag(1M).
- -h  Help. Displays usage descriptions.
- -v  Verbose. Displays all available command information.

EXTENDED DESCRIPTION  
Group Privileges  
Required  
You must have platform administrator, platform operator or platform service privileges, or domain administrators or configurators privileges for the specified domain to run this command.

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES  
EXAMPLE 1  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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO addtag (1M), setkeys (1M), pcd (1M)
NAME  
showlogs - display message log files

SYNOPSIS  
showlogs [-F] [-f filename] [-d domain_id | domain_tag] [-p m | c | s] [-v ]

showlogs -h

DESCRIPTION  
showlogs(1M) displays platform or domain log files. The default is the platform message log. You must have platform group privileges to run the default, otherwise you will receive an error message. Depending on your privileges, you can display the message logs, console logs, or syslog for the platform or a specified domain.

OPTIONS  
The following options are supported.

- F  
Outputs only lines which have been appended to the log file since the showlogs command was executed. Similar to the `tail -f` command. Output will continue until interrupted by Control -c.

- d domain_id | domain_tag  
Outputs the message log file for the specified domain instead of the platform log. You must have domain privileges to use this option.

- f filename  
Places the output of the showlogs command into a specified file.

- h  
Help. Displays usage descriptions.

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

- p m | c | s  
Specifies display of either the platform (m)essage log or domain (c)onsole log or domain (s)yslog.

m — Displaying the platform message log requires platform group privileges. This is the showlogs default.

c — Displaying the domain console log requires the -d option and domain privileges for that domain.

s — Displaying the domain syslog requires domain privileges for that domain. Syslogs forwarded to the system controller (SC) from non-domain systems are stored in /var/opt/SUNWSMS/adm/anonymous.

- v  
Verbose. Displays all available command information.
EXTENDED DESCRIPTION

Group Privileges

Required

If you have platform administrator, operator, or service privileges, you can display the platform messages log file.

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 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES

EXAMPLE 1  Output 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  Output 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  Output 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.cc 193]  DOMAIN_UP A event has been sent to DXS, rc = 0.....

EXAMPLE 4  Output 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  Output 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  07 13:51:49 sms2 agent[6629]: [ID 985882 daemon.alert] syslog
Sep  07 13:51:49 agent *** terminating execution ***
Sep  07 13:51:50 sms2 platform[22481]: [ID 345917 daemon.alert] syslog
Sep  07 13:51:50 platform *** terminating execution ***
Sep  07 14:49:07 sms2 platform[4309]: [ID 745356 daemon.alert] syslog
Sep  07 14:49:07 platform general parsing error
Sep  07 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  07 14:49:07 sms2 platform[4309]: [ID 449452 daemon.alert] syslog
Sep  07 14:49:07 platform couldn't load file ...
```

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..

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO  `tail(1)`
showobpparams(1M)

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

SYNOPSIS
showobpparams -d domain_id | domain_tag [-v ]
showobpparams -h

DESCRIPTION
showobpparams(1M) allows 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_id  ID for a domain. Valid domain_ids are ‘A’...'R' and are case insensitive.
- d 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 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES

EXAMPLE 1  Displaying OpenBoot PROM Parameters for Domain A

sc0:sm-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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO addtag (1M), setkeyswitch (1M), setobpparams (1M)
NAME  showplatform - display the board available component list and domain state for each of the domains

SYNOPSIS  showplatform [-d domain_id | domain_tag] [-p domains | available | ethernet ] [-v ]
            showplatform -h

DESCRIPTION  Show the available component list, domain state and Ethernet address for domains.
If a domain_id | domain_tag is specified, only the information for that domain is displayed. If no domain and -p are specified, the available component list, domain states and ethernet addresses for all domains for which you have privileges are displayed.

OPTIONS  The following options are supported.

- d domain_id  ID for a domain. Valid domain_ids are 'A'..'R' and are case insensitive.
- d domain_tag  Domain 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.
   Valid arguments for -p 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.
- 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 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 exited.
- OBP Failed — The domain OpenBoot PROM failed.
- OBP in sync Callback to OS — The OpenBoot PROM is in sync callback to the Solaris software.
- Exiting OBP — The OpenBoot PROM has exited.
- In OBP Error Reset — The domain is in OpenBoot PROM due to an error reset condition.
- Solaris Halted, in OBP — Solaris software is halted and the domain is in OpenBoot PROM.
- OBP Debugging — The OpenBoot PROM is being used as a debugger.
- Environmental Domain Halt — The domain was shut down due to an environmental emergency.
- Booting Solaris Failed — OpenBoot PROM running, boot attempt failed.
- Loading Solaris Failed — OpenBoot PROM running, loading attempt 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, panic flow has started.
- Solaris Panic Debug — Solaris software panicked, and is entering debugger mode.
- Solaris Panic Continue — Exited debugger mode and continuing panic flow.
- Solaris Panic Dump — Panic dump has started.
- Solaris Halt — Solaris software is halted.
- Solaris Panic Exit — Solaris software 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.
If you have platform administrator, operator, or service privileges, `showplatform` displays 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 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

**EXAMPLES**

**EXAMPLE 1**  Show the Available Component List and Domain State Information for All Domains

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.

```
  sc0:sms-user:~> showplatform
  Available Component List for Domains:
  -------------------------------
  Available for domain newA:
    SB0 SB1 SB2 SB7 SB8 SB9
    IO1 IO3 IO6
  Available for domain engB:
    No System boards
    No IO boards
  Available for domain domainC:
    No System boards
    IO8 IO10 IO2 IO3 IO4
  Available for domain engl:
    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 Configurations:

<table>
<thead>
<tr>
<th>DomainID</th>
<th>Domain Tag</th>
<th>Solaris Nodename</th>
<th>Domain Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>newA</td>
<td></td>
<td>Powered Off</td>
</tr>
<tr>
<td>B</td>
<td>engB</td>
<td>sun15-b</td>
<td>Keyswitch Standby</td>
</tr>
<tr>
<td>C</td>
<td>domainC</td>
<td>sun15-c</td>
<td>Running OBP</td>
</tr>
<tr>
<td>D</td>
<td>-</td>
<td>sun15-d</td>
<td>Running Solaris</td>
</tr>
<tr>
<td>E</td>
<td>eng1</td>
<td>sun15-e</td>
<td>Running Solaris</td>
</tr>
<tr>
<td>F</td>
<td>domainF</td>
<td>sun15-f</td>
<td>Running Solaris</td>
</tr>
<tr>
<td>G</td>
<td>dmnG</td>
<td>sun15-g</td>
<td>Running Solaris</td>
</tr>
<tr>
<td>H</td>
<td>-</td>
<td>sun15-g</td>
<td>Solaris Quiesced</td>
</tr>
<tr>
<td>I</td>
<td>-</td>
<td>-</td>
<td>Powered Off</td>
</tr>
<tr>
<td>J</td>
<td>dmnJ</td>
<td>-</td>
<td>Powered Off</td>
</tr>
<tr>
<td>K</td>
<td>-</td>
<td>sun15-k</td>
<td>Booting Solaris</td>
</tr>
<tr>
<td>L</td>
<td>-</td>
<td>-</td>
<td>Powered Off</td>
</tr>
<tr>
<td>M</td>
<td>-</td>
<td>-</td>
<td>Powered Off</td>
</tr>
<tr>
<td>N</td>
<td>-</td>
<td>sun15-n</td>
<td>Keyswitch Standby</td>
</tr>
<tr>
<td>O</td>
<td>-</td>
<td>-</td>
<td>Powered Off</td>
</tr>
<tr>
<td>P</td>
<td>-</td>
<td>sun15-p</td>
<td>Running Solaris</td>
</tr>
<tr>
<td>Q</td>
<td>-</td>
<td>sun15-q</td>
<td>Running Solaris</td>
</tr>
<tr>
<td>R</td>
<td>dmnR</td>
<td>sun15-r</td>
<td>Running Solaris</td>
</tr>
</tbody>
</table>

Domain Ethernet Addresses:

<table>
<thead>
<tr>
<th>Domain ID</th>
<th>Domain Tag</th>
<th>Ethernet Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>newA</td>
<td>8:0:20:b8:79:e4</td>
</tr>
<tr>
<td>B</td>
<td>engB</td>
<td>8:0:20:b4:30:8c</td>
</tr>
<tr>
<td>C</td>
<td>domainC</td>
<td>8:0:20:b7:30:b0</td>
</tr>
<tr>
<td>D</td>
<td>-</td>
<td>8:0:20:b8:2d:b0</td>
</tr>
<tr>
<td>E</td>
<td>eng1</td>
<td>8:0:20:f1:b7:0</td>
</tr>
<tr>
<td>F</td>
<td>domainF</td>
<td>8:0:20:be:f8:a4</td>
</tr>
<tr>
<td>G</td>
<td>dmnG</td>
<td>8:0:20:f8:29:c8</td>
</tr>
<tr>
<td>H</td>
<td>-</td>
<td>8:0:20:f3:5f:14</td>
</tr>
<tr>
<td>I</td>
<td>-</td>
<td>8:0:20:be:f5:d0</td>
</tr>
<tr>
<td>J</td>
<td>dmnJ</td>
<td>UNKNOWN</td>
</tr>
<tr>
<td>K</td>
<td>-</td>
<td>8:0:20:f1:ae:88</td>
</tr>
<tr>
<td>L</td>
<td>-</td>
<td>8:0:20:b7:5d:30</td>
</tr>
<tr>
<td>M</td>
<td>-</td>
<td>8:0:20:f1:b8:8</td>
</tr>
<tr>
<td>N</td>
<td>-</td>
<td>8:0:20:f3:5f:74</td>
</tr>
<tr>
<td>O</td>
<td>-</td>
<td>8:0:20:f1:b8:8</td>
</tr>
<tr>
<td>P</td>
<td>-</td>
<td>8:0:20:b8:88:64</td>
</tr>
<tr>
<td>Q</td>
<td>-</td>
<td>8:0:20:f1:b7:ec</td>
</tr>
<tr>
<td>R</td>
<td>dmnR</td>
<td>8:0:20:f1:b7:10</td>
</tr>
</tbody>
</table>
EXAMPLE 2  Show Available Component List and Domain State for Domain engB

```
sc0:~$ showplatform -d engB
Available Component List for Domains:

-------------------------------------
Available for domain engB:
SB4 SB5 SB6
I04 I05

Domain Configurations:
-------------------------------------
DomainID Domain Tag    Solaris Nodename    Domain Status
B          engB           sun15-b             Keyswitch Standby

Domain Ethernet Addresses:
-------------------------------------
Domain ID   Domain Tag        Ethernet Address
B           engB              8:0:20:b4:30:8c
```

EXAMPLE 3  Showplatform for Domain Administrators

The following example shows 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, E and dmnJ.

```
sc0:~$ showplatform
Available Component List for Domains:

-------------------------------------
Available for domain engB:
SB1 SB2 SB3 SB4 SB5 SB6
I01 I02 I03 I04 I05 I06 I07
Available for domain C:
SB1 SB2 SB3 SB4 SB5 SB6
I01 I02 I03 I04 I05 I06 I07
Available for domain E:

SB1 SB2 SB3 SB4 SB5 SB6
I01 I02 I03 I04 I05 I06 I07

Domain Configurations:
-------------------------------------
DomainID   Domain Tag    Solaris Nodename     Domain Status
B          engB           sun15-b             Keyswitch Standby
C          domainC        sun15-c             Running OBP
E          engl           sun15-e             Running Solaris

Domain Ethernet Addresses:
-------------------------------------
Domain ID   Domain Tag        Ethernet Address
B           engB              8:0:20:b4:30:8c
C           domainC           8:0:20:b7:30:b0
E           engl              8:0:20:f1:b7:0
```
EXAMPLE 4  Show 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  Show 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

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.

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO  addtag(1M), hwad(1M), pcd(1M), setupplatform(1M), tmd(1M)
NAME
showxirstate - display CPU dump information after sending a reset pulse to the processors

SYNOPSIS
showxirstate
-d domain_id | domain_tag | -f filename [ -v ]
showxirstate -h

DESCRIPTION
showxirstate(1M) displays CPU dump information after sending a reset pulse 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.

If domain_id | domain_tag or filename is not specified, showxirstate returns an error.

OPTIONS
The following options are supported.

-d domain_id ID for a domain. Valid domain_ids are ‘A’...’R’ and are case insensitive.
-d domain_tag Name assigned to a domain using addtag(1M).
-f filename Name of the file containing a previously generated xir_dump. You must provide the absolute path to the file. 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 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES
EXAMPLE 1 Displaying Dump Information for Domain A With 1 CPU

sc0:sms-user: > showxirstate -d A
Location: SB4/P0
XIR Magic XIR Version 00415645 Buglevel 00000000
XIR Save Total Size 0x58495253 bytes
<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ver</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>tba</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>pil</td>
<td>0x0</td>
</tr>
<tr>
<td>y</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>afsr</td>
<td>00000000.00000000 afar : 00000000.00000000</td>
</tr>
<tr>
<td>pcontext</td>
<td>00000000.00000000 scontext: 00000000.00000000</td>
</tr>
<tr>
<td>dcu</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>dcr</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>pcr</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>gsr</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>softint</td>
<td>0x0000</td>
</tr>
<tr>
<td>pa_watch</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>va_watch</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>instbp</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>tick</td>
<td>00000000.00000000 tick_cmpr: 00000000.00000000</td>
</tr>
<tr>
<td>stick</td>
<td>00000000.00000000 stick_cmpr: 00000000.00000000</td>
</tr>
<tr>
<td>tstate</td>
<td>0x00 0x0000000000 00000000.00000000 00000000.00000000</td>
</tr>
<tr>
<td>tpc</td>
<td>0x00 0x0000000000 00000000.00000000 00000000.00000000</td>
</tr>
<tr>
<td>tpc</td>
<td>0x00 0x0000000000 00000000.00000000 00000000.00000000</td>
</tr>
<tr>
<td>tpc</td>
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</tr>
<tr>
<td>tpc</td>
<td>0x00 0x0000000000 00000000.00000000 00000000.00000000</td>
</tr>
</tbody>
</table>

Globals:

<table>
<thead>
<tr>
<th>R</th>
<th>Normal</th>
<th>Alternate</th>
<th>Interrupt</th>
<th>MMU</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

wstate: 0x00
cansave: 0 cleanwin: 0
canrestore: 0 otherwin: 0

Register Windows:
Window 0
<table>
<thead>
<tr>
<th>R Locals</th>
<th>Ins</th>
</tr>
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<tbody>
<tr>
<td>0 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>1 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>2 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>3 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>4 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>5 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>6 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>7 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
</tbody>
</table>

Window 1
<table>
<thead>
<tr>
<th>R Locals</th>
<th>Ins</th>
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<tbody>
<tr>
<td>0 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>1 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>2 00000000.00000000 00000000.00000000 00000000.00000000</td>
<td></td>
</tr>
<tr>
<td>Window 2</td>
<td>R Locals</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
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</tr>
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</tr>
<tr>
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</tr>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
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<th>R Locals</th>
<th>Ins</th>
</tr>
</thead>
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<tr>
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<td>00000000.00000000</td>
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<table>
<thead>
<tr>
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<th>Ins</th>
</tr>
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<td>2</td>
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<table>
<thead>
<tr>
<th>Window 5</th>
<th>R Locals</th>
<th>Ins</th>
</tr>
</thead>
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<tr>
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<td>2</td>
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<tr>
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<td>00000000.00000000</td>
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<td>6</td>
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<td>00000000.00000000</td>
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<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Window 6</th>
<th>R Locals</th>
<th>Ins</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<td>00000000.00000000</td>
<td>00000000.00000000</td>
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<tr>
<td>2</td>
<td>00000000.00000000</td>
<td>00000000.00000000</td>
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<tr>
<td>3</td>
<td>00000000.00000000</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>4</td>
<td>00000000.00000000</td>
<td>00000000.00000000</td>
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<tr>
<td>5</td>
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<td>00000000.00000000</td>
</tr>
<tr>
<td>6</td>
<td>00000000.00000000</td>
<td>00000000.00000000</td>
</tr>
<tr>
<td>7</td>
<td>00000000.00000000</td>
<td>00000000.00000000</td>
</tr>
</tbody>
</table>

| Window 7 |
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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNSMSop</td>
</tr>
</tbody>
</table>

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. In order to create a complete and accurate backup, turn off SMS before running smsbackup. For information on manually starting and stopping SMS refer to the System Management Services (SMS) 1.2 Installation Guide and Release Notes.

Whenever changes are made to the SMS environment, for example by shutting down a domain, you must run smsbackup again in order 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.

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 on as a UFS filesystem. Specifying a TMPFS file system, such as `/tmp`, will cause `smsbackup` to fail. If you are not certain that your `directory_name` is mounted as a UFS filesystem, type:

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

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

EXTENDED DESCRIPTION

Group Privileges

Required

You must have superuser privileges to run this command.

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

EXAMPLES

**EXAMPLE 1**  Backing Up SMS to `/var/opt/SUNW SMS/bkup`

```
sc0:sms-user:> smsbackup /var/opt/SUNWSMS/bkup
```

**EXAMPLE 2**  Backing Up SMS to a Tape Device 0

```
sc0:sms-user:> smsbackup /dev/rmt/0
```

**EXAMPLE 3**  Backing Up SMS to a 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 filesystem.

ABORT:

EXIT STATUS

The following exit values are returned:

- `0`: Successful completion
- `>0`: An error occurred.
The following file is used by this command:

/var/sadm/system/logs/smsbackup

smsbackup log file

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

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

Include any notes here.
NAME
smsconfig - configures the SMS environment

SYNOPSIS
smsconfig -m
smsconfig -m I1 [ domain_id | sc]
smsconfig -m I2 [sc0|sc1]
smsconfig -m L [sc]
smsconfig -g
smsconfig -a | -r -u username -G admn|oper|svc platform
smsconfig -a | -r -u username -G admn|rcfg domain_id
smsconfig -l domain_id | platform
smsconfig -h

DESCRIPTION
smsconfig(1M) configures and modifies the 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 all three internal enterprise networks.

Note – Once you have configured or changed the configuration of the the MAN network you must reboot the 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_ids 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 variables upon startup.

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 allows you to customize those groups using the -g option. For more information refer to the System Management Services (SMS) 1.2 Installation Guide and Release Notes.

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. 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 the platform directories. You must specify a valid `username`, SMS group and if applicable, a `domain_id`.

- `G admn|rcfg`
  Indicates an SMS domain administrator or reconfigurator. All groups are case insensitive.

- `G admn|oper|svc`
  Indicates an SMS platform administrator, operator or service personnel. All groups are case insensitive.

- `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 case insensitive. A domain can be excluded from the I1 network configuration by using the word `NONE` as the `net_id`. This applies to the I1 network only.

- `m I2`
  Configures all interfaces for enterprise network I2. Network designation is case insensitive.

- `m L`
  Configures all interfaces for the external community network. Network designation is case insensitive.

- `r`
  Removes a user from an SMS group and denies read, write and execute access for a domain or the platform directories. You must specify a valid `username`, SMS group and if applicable, a `domain_id`.

- `u username`
  Indicates user login name.

OPERANDS

The following operands are supported:

- `domain_id`
  ID for a domain. Valid `domain_ids` are 'A'...'R' and are case insensitive.
### Extended Description

**Group Privileges**

**Required**

You must have superuser privileges to run this command.

Refer to Chapter 2 in the *System Management Services (SMS) 1.2 Administrator Guide* for more information.

### Examples

**Example 1**  
Initial Setup

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. There will be no prompts for netmasks and `/etc/ipnodes` will be modified in addition to `/etc/hosts`.

IP addresses on the external network for failover, hme0 and eri1 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. A domain can be excluded from the I1 network configuration by using the word `NONE` as the `net_id`. For more information refer to the *System Management Services (SMS) 1.2 Installation Guide and Release Notes*.

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
Enter NICs associated with community C1 [hme0 eri1]: [Return]

Enter Logical/Floating IP hostname for community C1 [sun15-sc-C1]: [Return]
Enter IPMP IP address for sun15-sc-C1: 10.1.1.50
Enter Netmask for community C1: 255.255.255.0
Enter IPMP hostname for community C1 failover address [sun15-sc0-C1-failover]: [Return]
```
Enter IPMP IP address for sun15-sc0-C1-failover: 10.1.1.51

Enter IPMP hostname for hme0 [sun15-sc0-hme0]: [Return]
Enter IPMP IP address for sun15-sc0-hme0: 10.1.1.52

Enter IPMP hostname for eri1 [sun15-sc0-eri1]: [Return]
Enter IPMP IP address for sun15-sc0-eri1: 10.1.1.53

<table>
<thead>
<tr>
<th>Hostname</th>
<th>IP Address (platform=sun15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sun15-sc-C1</td>
<td>10.1.1.50</td>
</tr>
<tr>
<td>sun15-sc0-C1-failover</td>
<td>10.1.1.51</td>
</tr>
<tr>
<td>sun15-sc0-hme0</td>
<td>10.1.1.52</td>
</tr>
<tr>
<td>sun15-sc0-eri1</td>
<td>10.1.1.53</td>
</tr>
</tbody>
</table>

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]

<table>
<thead>
<tr>
<th>Hostname</th>
<th>IP Address(platform=sun15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>netmask-i1</td>
<td>255.255.255.224</td>
</tr>
<tr>
<td>sun15-sc-i1</td>
<td>10.2.1.1</td>
</tr>
<tr>
<td>sun15-a</td>
<td>10.2.1.2</td>
</tr>
<tr>
<td>sun15-b</td>
<td>10.2.1.3</td>
</tr>
<tr>
<td>sun15-c</td>
<td>10.2.1.4</td>
</tr>
<tr>
<td>sun15-d</td>
<td>10.2.1.5</td>
</tr>
<tr>
<td>sun15-e</td>
<td>10.2.1.6</td>
</tr>
<tr>
<td>sun15-f</td>
<td>10.2.1.7</td>
</tr>
<tr>
<td>sun15-g</td>
<td>10.2.1.8</td>
</tr>
<tr>
<td>sun15-h</td>
<td>10.2.1.9</td>
</tr>
<tr>
<td>sun15-i</td>
<td>10.2.1.10</td>
</tr>
<tr>
<td>sun15-j</td>
<td>10.2.1.11</td>
</tr>
<tr>
<td>sun15-k</td>
<td>10.2.1.12</td>
</tr>
<tr>
<td>sun15-l</td>
<td>10.2.1.13</td>
</tr>
<tr>
<td>sun15-m</td>
<td>10.2.1.14</td>
</tr>
<tr>
<td>sun15-n</td>
<td>10.2.1.15</td>
</tr>
<tr>
<td>sun15-o</td>
<td>10.2.1.16</td>
</tr>
<tr>
<td>sun15-p</td>
<td>10.2.1.17</td>
</tr>
<tr>
<td>sun15-q</td>
<td>10.2.1.18</td>
</tr>
<tr>
<td>sun15-r</td>
<td>10.2.1.19</td>
</tr>
</tbody>
</table>

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]

<table>
<thead>
<tr>
<th>Hostname</th>
<th>IP Address(platform=sun15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>netmask-i2</td>
<td>255.255.255.252</td>
</tr>
<tr>
<td>sun15-sc0-i2</td>
<td>10.3.1.1</td>
</tr>
<tr>
<td>sun15-scl-12</td>
<td>10.3.1.2</td>
</tr>
</tbody>
</table>

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: 10.2.1.20  sun15-sc-i1 #smsconfig-entry#
ADD: 10.2.1.50  sun15-sc-C1 #smsconfig-entry#
ADD: 10.2.1.51  sun15-sc0-C1-failover #smsconfig-entry#
ADD: 10.2.1.52  sun15-sc0-hme0 #smsconfig-entry#
ADD: 10.2.1.53  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.
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-scl-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-scl-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-scl-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-ii
I could not automatically determine the IP address of domainB-ii.

Please enter the IP address of domainB-ii: 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-ii IP Address: 10.2.1.20

Do you want to accept these settings? [y,n] y

Creating /.rhosts to facillitate 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-ii #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

sc0: # smsconfig -m I1 D

Enter the MAN hostname for DB-I1 [ sun15-b ]: domainB-ii
I could not automatically determine the IP address of domainB-ii.

Please enter the IP address of domainB-ii: NONE

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-ii IP Address: NONE

Do you want to accept these settings? [y,n] y

Creating /.rhosts to facillitate 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: NONE domainB-ii #smsconfig-entry#
-------------

Update the hosts file, "/etc/hosts", with these changes? [y,n] y

Hosts file "/etc/hosts" has been updated.

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 [dmmoadmn]? [Return]
Enter the name of the Domain P Administrator group [dmmpadmn]? [Return]
Enter the name of the Domain Q Administrator group [dmnpadmn]? [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 power control 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]
EXAMPLE 6  Adding a User to the Domain Administrator Group and Configuring Access to the Domain B Directories

You must specify a valid username and valid SMS group and domain.

```
s0: # smsconfig -a -u fdjones -G admn B
fdjones has been added to the dmnBadmn group.
All privileges to domain B have been applied.
```

EXAMPLE 7  Adding a User to the Domain Configurator Group and Configuring Access to the Domain C Directories

You must specify a valid username and valid SMS group and domain.

```
s0: # smsconfig -a -u fdjones -G rcfg C
fdjones has been added to the dmnCrcfg group.
All privileges to domain C have been applied.
```

EXAMPLE 8  Configuring Access to the Platform Directories

You must specify a valid username and valid SMS group and the platform.

```
s0: # smsconfig -a -u jtd -G svc platform
jtd has been added to the platsvc group.
All privileges to the platform have been applied.
```
EXAMPLE 9  Displaying Users with Access to the Domain C Directories

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

EXAMPLE 10  Displaying Users with Access to the Platform Directories

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

EXAMPLE 11  Removing User Access to the Domain C Directories

You must specify a valid username and valid SMS group. If a user belongs to more
than one group with access to a domain, they 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 12  Configuring Using an Invalid Groupname

You must specify a valid SMS group.

```
sc0: # smsconfig -a -u fdjones -G staff D
ERROR: group staff does not exist
ABORTING.
```

EXAMPLE 13  Mixing Groups and Designations.

You must specify groupnames 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO

mand (1M)
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 which 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 will fail and the session will most likely hang. To exit, type: ~.

When you finish, there are several ways to end the session depending on whether you logged into the local SC using telnet or rlogin. See the EXTENDED DESCRIPTION section below.

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 are telnetted in to the local SC this will disconnect the tip session and you will remain logged in to the local SC.

If you rlogged in to the local SC, this will disconnect the tip session and also disconnect your rlogin session.

Note – The tilde will not echo to the screen until after the period is pressed.
- ~. Disconnect tip session.
  ~. only works with with rlogin. If you are telnetted in to the local SC you will recieve the error message: ~.: Command not found
  If you are rlogged in to the local SC this will disconnect the tip session and you will remain logged in to the local SC.

Note – The first tilde will not echo to the screen. The second will not echo until after the period is pressed.

rlogin also processes tilde-escape sequences whenever a tilde is seen 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 ^j, then stty sane, then ^j.

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

Refer to Chapter 2 in the System Management Services (SMS) 1.2 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO  rlogin(1M), rlogin(1M), tip(1M)
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 wish, afterwards. For information on manually starting and stopping SMS refer to the System Management Services (SMS) 1.2 Installation Guide and Release Notes.

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 will receive an error.

EXTENDED DESCRIPTION  

Group Privileges Required

You must have superuser privileges to run this command.

Refer to Chapter 2 in the System Management Services (SMS) 1.2 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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSop</td>
</tr>
</tbody>
</table>

SEE ALSO  smsbackup (1M)
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.

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 needed to activate 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:
■ Turn off failover and stop SMS before running smsrestore.
■ 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.
■ Otherwise, you can start SMS and turn on failover. For information on manually starting and stopping SMS refer to the System Management Services (SMS) 1.2 Installation Guide and Release Notes.

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

You must have superuser privileges to run this command.

Refer to Chapter 2 in the System Management Services (SMS) 1.2 Administrator Guide for more information.

EXAMPLES

EXAMPLE 1  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.
SMS must be stopped prior to switching versions.

```
scl# smsversion
smsversion: Active SMS version 1.1
smsversion: SMS version 1.1 installed
smsversion: SMS version 1.2 installed
Please select from one of the following installed SMS versions.
1) 1.1
2) 1.2
3) Exit
Select version: 2
You have selected SMS Version 1.2

Is this correct? [y,n] y
smsversion: Upgrading SMS from 1.1> to 1.2>.
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.1.1.cpio
smsversion: Switching to target version 1.2>.
smsversion: New Version 1.2> Active
smsversion: Active SMS version 1.2>
To use the previous SMS configuration settings type:
smsrestore /var/tmp/sms_backup.1.1.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

Use of the command-line argument to downgrade SMS versions.

```
scl# smsversion 1.1
smsversion: Active SMS version 1.2>
You have requested SMS Version 1.1

Is this correct? [y,n] y
smsversion: Downgrading SMS from 1.2> to 1.1>.
smsversion: SMS version 1.1 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.1.2.cpio
smsversion: Switching to target version 1.1>.
smsversion: New Version 1.1> Active
smsversion: Active SMS version 1.1>
To restore previous the SMS configuration setting type:
smsrestore /var/tmp/sms_backup.1.2.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:

<table>
<thead>
<tr>
<th>Attribute Types</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>SUNWSMSOp</td>
</tr>
</tbody>
</table>

**SEE ALSO**

`smsbackup`(1M), `smsrestore`(1M)
NAME ssd - SMS startup daemon

SYNOPSIS ssd [-f startup_file]

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:

<table>
<thead>
<tr>
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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 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.

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SEE ALSO

ssd(1M)