

NAME

`sg_timestamp` – report or set timestamp on SCSI device

SYNOPSIS

`sg_timestamp` [`--elapsed`] [`--help`] [`--hex`] [`--milliseconds=MS`] [`--no-timestamp`] [`--origin`] [`--raw`] [`--readonly`] [`--seconds=SECS`] [`--srep`] [`--verbose`] [`--version`] *DEVICE*

DESCRIPTION

Sends a SCSI REPORT TIMESTAMP or SET TIMESTAMP command to the *DEVICE*. These commands are found in the SPC-5 draft standard revision 7 ([spc5r07.pdf](#)).

If either the `--milliseconds=MS` or `--seconds=SECS` option is given (and both can't be given) then the SET TIMESTAMP command is sent; otherwise the REPORT TIMESTAMP command is sent.

The timestamp is sent and received from the *DEVICE* as the number of milliseconds since the epoch of 1970-01-01 00:00:00 UTC and is held in a 48 bit unsigned integer. That same epoch is used by Unix machines, but they usually hold the number of seconds since that epoch. The Unix date command and especially its "+%s" format is useful in converting to and from timestamps and more humanly readable forms. See the EXAMPLES section below.

OPTIONS

Arguments to long options are mandatory for short options as well.

-e, --elapsed

assume the timestamp in the REPORT TIMESTAMP is an elapsed time from an event such as a power cycle or hard reset and format the output as '`<n> days hh:mm:ss.xxx`' where hh is hours (00 to 23 inclusive); mm is minutes (00 to 59 inclusive); ss is seconds (00 to 59 inclusive) and xxx is milliseconds (000 to 999 inclusive). If the number of days is 0 then '0 days' is not output unless this option is given two or more times.

-h, --help

output the usage message then exit.

-H, --hex

output the response to REPORT TIMESTAMP in ASCII hexadecimal on stderr. The response is not decoded.

-m, --milliseconds=MS

where *MS* is the number of milliseconds since 1970-01-01 00:00:00 UTC to set in the *DEVICE* with the SCSI SET TIMESTAMP command.

-N, --no-timestamp

when REPORT TIMESTAMP is called this option suppress the output of the timestamp value (in either seconds or milliseconds). This may be useful in uncluttering the output when trying to decode the timestamp origin (see the `--origin` option).

-o, --origin

the REPORT TIMESTAMP returned parameter data contains a "timestamp origin" field. When this option is given, that field is decoded and printed out before the timestamp value is output. The default action (i.e. when the option is not given) is not to print out this decoded field.

T10 defines this field as "the most recent event that initialized the returned device clock". The value 0 indicates a power up of hard reset initialized the clock; 2 indicates a SET TIMESTAMP initialized the clock while 3 indicates some other method initialized the clock.

When used once a descriptive string is output (in a line before the timestamp value). When used twice the value of the TIMESTAMP ORIGIN field is output (in decimal, a value between 0 and 7 inclusive). When used thrice a line of the form 'TIMESTAMP_ORIGIN=<value>' is output.

-r, --raw

output the SCSI REPORT TIMESTAMP response (i.e. the data-out buffer) in binary (to stdout). Note that the `--origin` and `--srep` options are ignored when this option is given. Also all error and verbose messages are output to stderr.

- R, --readonly**
open the *DEVICE* read-only. The default action is to open the *DEVICE* read-write.
- s, --seconds=SECS**
where *SECS* is the number of seconds since 1970-01-01 00:00:00 UTC to set in the *DEVICE* with the SCSI SET TIMESTAMP command. *SECS* is multiplied by 1000 before being used in the SET TIMESTAMP command.
- S, --srep**
report the number of seconds since 1970-01-01 00:00:00 UTC. This is done by dividing by 1000 the value returned by the SCSI REPORT TIMESTAMP command.
- v, --verbose**
increase the level of verbosity, (i.e. debug output).
- V, --version**
print the version string and then exit.

EXIT STATUS

The exit status of `sg_timestamp` is 0 when it is successful. Otherwise see the `sg3_utils(8)` man page.

NOTES

The TCMOS and the SCSIP bits in the Control extension mode page (see `sdparm`) modify the actions of the timestamp held by a *DEVICE*.

Currently only the "Utilization usage rate based on date and time" parameters within the Utilization log page (`sbc4r09.pdf`) use timestamps. See the `sg_logs` utility. Vendor specific commands and pages may also be using timestamps.

EXAMPLES

On Unix machines (e.g. Linux, FreeBSD and Solaris) the `date` command is useful when working with timestamps.

To fetch the timestamp from a *DEVICE* and display it in a humanly readable form the following could be used:

```
# sg_timestamp -S /dev/sdb
1448993950
# date --date=@1448993950
Tue Dec 1 13:19:10 EST 2015
# date -R --date="@1448993950"
Tue, 01 Dec 2015 13:19:10 -0500
```

The latter two date commands show different forms of the same date (i.e. 1448993950 seconds since 1970-01-01 00:00:00 UTC). The `sg_timestamp` and `date` commands can be combined using backquotes:

```
# date -R --date=@`sg_timestamp -S /dev/sdc`
Wed, 16 Dec 2015 20:12:59 -0500
```

To set the timestamp on the *DEVICE* to now (approximately) the following could be used:

```
# date +%s
1448993955
# sg_timestamp --seconds=1448993955 /dev/sdb
```

Those two command lines could be combined into one by using backquotes:

```
# sg_timestamp --seconds=`date +%s` /dev/sdb
```

AUTHORS

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REPORTING BUGS

Report bugs to <dgilbert at interlog dot com>.

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SEE ALSO

sdparm(sdparm), sg_logs(sg3_utils)