

**NAME**

`sg_stream_ctl` – send SCSI STREAM CONTROL or GET STREAM STATUS command

**SYNOPSIS**

**sg\_stream\_ctl** [*--brief*] [*--close*] [*--ctl=CTL*] [*--get*] [*--help*] [*--id=SID*] [*--maxlen=LEN*] [*--open*] [*--readonly*] [*--verbose*] [*--version*] *DEVICE*

**DESCRIPTION**

Sends a SCSI STREAM CONTROL or GET STREAM STATUS command to the *DEVICE*. These commands, together with WRITE STREAM(16 and 32) and several fields in the Block Limits Extension VPD page [0xb7] support the streams concept. The stream commands were added in SBC-4 draft 8 (September 2015).

Both STREAM CONTROL and GET STREAM STATUS commands expect data from the *DEVICE* (referred to as 'data-in'). In the case of STREAM CONTROL only the 'open' (*STR\_CTL*<--0x1) actually needs the data-in as it contains the "Assigned stream id" if the open was successful. The assigned stream id should be used by subsequent WRITE STREAM commands and ultimately by the STREAM CONTROL close (*STR\_CTL*<--0x2). Valid stream ids are between 1 and 65535 inclusive.

**OPTIONS**

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

**-b, --brief**

this option reduces the output of the GET STREAM STATUS command to just one number (in decimal) per line sent to stdout. Those numbers are the currently open stream ids. If an error occurs then -1 is sent to stdout and error related messages are sent to stderr. The default is to print more words (and fields) from the GET STREAM STATUS response.

**-c, --close**

selects the STREAM CONTROL command and sets *STR\_CTL*<--0x2 (i.e. 'close'). The *--id=SID* option should also be given because it defaults to 0 which is not a valid stream id.

**-C, --ctl=CTL**

*CTL* is the value placed in the *STR\_CTL* field of the STREAM CONTROL command (cdb). It is a two bit field so has 4 variants: 0 and 3 are reserved; 1 opens a new stream and 2 closes the given stream id. '*--ctl=1*' is equivalent to '*--open*' while '*--ctl=2*' is equivalent to '*--close*'.

**-g, --get**

selects the GET STREAM STATUS command. If the *--id=SID* option is also given the response starts lists open stream ids from and including *SID*. If the *--id=SID* option is not given (or *SID* is 0) then all open stream id will be returned in the response (data-in) as long as the allocation length (defaults to 248 bytes which can be overridden by the *--maxlen=LEN* option) is long enough. This is the default action of this utility (i.e. GET STREAM STATUS command) if no "selecting" options are given.

**-h, --help**

output the usage message then exit.

**-i, --id=SID**

*SID* is a stream id, a value between 1 and 65535. It is used by STREAM CONTROL (close) to identify the stream to close. It is used by the GET STREAM STATUS command as the starting stream id (from and including); so stream ids that are less than *SID* will not appear in the response.

**-m, --maxlen=LEN**

*LEN* is the maximum length the response can be. It becomes the ALLOCATION LENGTH field in both commands. The default (in the absence of this option) is 8 bytes for STREAM CONTROL and 248 bytes for GET STREAM STATUS.

**-o, --open**

selects the STREAM CONTROL command and sets *STR\_CTL*<--0x1 (i.e. 'open'). If the *--id=SID* option is given then it is ignored. The user should observe the response as the "Assigned stream id" is printed on stdout if the open is successful, if not '-1' is sent to stdout and

error messages are sent to stderr. If the *--brief* option is also given then the only thing sent to stdout is a number of the assigned stream id (1 to 65535 inclusive) or '-1' if there is an error.

**-r, --readonly**

this option sets a 'read-only' flag when the underlying operating system opens the given *DEVICE*. This may not work since operating systems can not easily determine whether a pass-through command is a logical read or write operation on the media (or its metadata) so they take a risk averse stance and require read-write type permissions on the *DEVICE* open irrespective of what is performed by the pass-through.

**-v, --verbose**

increase the level of verbosity, (i.e. debug output).

**-V, --version**

print the version string and then exit.

## NOTES

There are no special read commands for streams. This implies that "normal" READs (6, 10, 12, 16 or 32) can be used. Note that when a stream is closed, all resources associated with that stream id are removed, apart from the data in the written LBAs. To make sure the reading back data is not delayed too much by error recovery (in the presence of media errors) the user may set the RECOVERY TIME LIMIT field (RTL, units for non-zero values: milliseconds) in the 'Read-write error recovery' mode page. This can be done with the sdparm utility.

The SCSI WRITE STREAM (16 and 32) commands can be found in the sg\_write\_x utility in this package.

## EXIT STATUS

The exit status of sg\_stream\_ctl is 0 when it is successful. Otherwise see the sg3\_utils(8) man page.

## AUTHORS

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## REPORTING BUGS

Report bugs to <dgilbert at interlog dot com>.

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## SEE ALSO

sg\_vpd, sg\_write\_x(sg3\_utils); sdparm(sdparm)