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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'sg_stream_ctl.8' command

$ man sg_stream_ctl.8

SG_STREAM_CTL(8) SG3_UTILS SG_STREAM_CTL(8)

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 (Sep?

tember 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 ulti?

mately 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 CON? TROL command (cdb). It is a two bit field so has 4 variants: 0 and 3 are reserved; 1 opens are 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 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 operat? ing system opens the given DEVICE. This may not work since oper? ating 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 "nor? mal" 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 me? dia 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)