NAME

sg_read_long − send a SCSI READ LONG command

SYNOPSIS

sg_read_long [*−−16*] [*−−correct*] [*−−help*] [*−−lba=LBA*] [*−−out=OF*] [*−−pblock*] [*−−readonly*] [*−−verbose*] [*−−version*] [*−−xfer_len=BTL*] *DEVICE*

DESCRIPTION

Send SCSI READ LONG command to *DEVICE*. The read buffer is output in hex and ASCII to stdout or placed in a file. Note that the data returned includes the logical block data (typically 512 bytes for a disk) plus ECC information (whose format is proprietary) plus optionally other proprietary data. Note that the logical block data may be encoded or encrypted.

In SBC−4 revision 7 the SCSI READ LONG (10 and 16 byte) commands were made obsolete. In the same revision all uses of SCSI WRITE LONG (10 and 16 byte) commands were made obsolete apart from the case in which the WR_UNCOR bit is set.

OPTIONS

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

−S, **−−16**
: uses a SCSI READ LONG(16) command. The default action is to use a SCSI READ LONG(10) command. The READ LONG(10) command has a 32 bit field for the lba while READ LONG(16) has a 64 bit field.

−c, **−−correct**
: sets the 'CORRCT' bit in the SCSI READ LONG command. When set the data is corrected by the ECC before being transferred back to this utility. The default is to leave the 'CORRCT' bit clear in which case the data is not corrected.

−h, **−−help**
: output the usage message then exit.

−l, **−−lba**=*LBA*
: where *LBA* is the logical block address of the sector to read. Assumed to be in decimal unless prefixed with '0x' (or has a trailing 'h'). Defaults to lba 0. If the lba is larger than can fit in 32 bits then the *−−16* option should be used.

−o, **−−out**=*OF*
: instead of outputting ASCII hex to stdout, send it in binary to the file called *OF*. If '−' is given for *OF* then the (binary) output is sent to stdout. Note that all informative and error output is sent to stderr.

−p, **−−pblock**
: sets the 'PBLOCK' bit in the SCSI READ LONG command. When set the physical block (plus ECC data) containing the requested logical block address is read. The default is to leave the 'PBLOCK' bit clear in which case the logical block (plus any ECC data) is read.

−r, **−−readonly**
: opens the DEVICE read−only rather than read−write which is the default. The Linux sg driver needs read−write access for the SCSI READ LONG command but other access methods may require read−only access.

−v, **−−verbose**
: increase the level of verbosity, (i.e. debug output).

−V, **−−version**
: print the version string and then exit.

−x, **−−xfer_len**=*BTL*
: where *BTL* is the byte transfer length (default to 520). If the given value (or the default) does not match the "long" block size of the device, the appropriate *BTL* is deduced from the error response and printed (to stderr). The idea is that the user will retry this utility with the correct transfer

length.

NOTES

If a defective block is found and its contents, if any, has been retrieved then "sg_reassign" could be used to map out the defective block. Associated with such an action the number of elements in the "grown" defect list could be monitored (with "sg_reassign −−grown") as the disk could be nearing the end of its useful lifetime.

Various numeric arguments (e.g. *LBA*) may include multiplicative suffixes or be given in hexadecimal. See the "NUMERIC ARGUMENTS" section in the sg3_utils(8) man page.

As a data point, Fujitsu uses a 54 byte ECC (per block) which is capable of correcting up to a single burst error or 216 bits "on the fly". [Information obtained from MAV20xxrc product manual.]

EXIT STATUS

The exit status of sg_read_long 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_reassign, sg_write_long, sg_dd