NAME

sg_get_lba_status − send SCSI GET LBA STATUS(16 or 32) command

SYNOPSIS

sg_get_lba_status [*−−16*] [*−−32*] [*−−brief*] [*−−element-id=EI*] [*−−help*] [*−−hex*] [*−−lba=LBA*] [*−−maxlen=LEN*] [*−−raw*] [*−−readonly*] [*−−report−type=RT*] [*−−scan-len=SL*] [*−−verbose*] [*−−version*] *DEVICE*

DESCRIPTION

Send the SCSI GET LBA STATUS(16) or GET LBA STATUS(32) command to the *DEVICE* and output the response. The 16 byte command variant was introduced in (draft) SBC−3 revision 20 and devices that support logical block provisioning should support this command. The GET LBA STATUS(32) command was added in (draft) SBC−4 revision 14.

The default action is to decode the response into one LBA status descriptor per line output to stdout. The descriptor LBA is output in hex (prefixed by '0x') and the number of blocks is output in decimal followed by the provisioning status and additional status in decimal. The provisioning status can be in the range 0 to 15 of which only 0 (mapped or unknown), 1 (unmapped), 2 (anchored), 3 (mapped) and 4 (unknown) are used currently. The amount of output can be reduced by the *−−brief* option.

OPTIONS

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

−S, **−−16**
: send SCSI GET LBA STATUS(16) command which is the 16 byte variant. In the absence of the *−−16* or the *−−32* options the SCSI GET LBA STATUS(16) command is sent. If both *−−16* and the *−−32* options are given then the GET LBA STATUS(16) command is sent.

−T, **−−32**
: send SCSI GET LBA STATUS(32) command which is the 32 byte variant. When given together with the *−−16* option then this option is ignored (so the GET LBA STATUS(16) command is sent).

−b, **−−brief**
: when use once then one LBA status descriptor per line is output to stdout. Each line has this format: "0x<descriptor_LBA> 0x<blocks> <provisioning_status> <additional_status>". So the descriptor's starting LBA and number of blocks are output in hex while the provisioning status and additional status are in decimal. When used twice (e.g. '−bb' or '−−brief −−brief') then the provisioning status of the given *LBA* (or LBA 0 if the *−−lba* option is not given) is output to stdout. A check is made that the given *LBA* lies in the range of the first returned LBA status descriptor (as it should according to SBC−3 revision 20) and warnings are sent to stderr if it doesn't.

−e, **−−element−id**=*EI*
: where *EI* is the element identifier of the physical element for which the LBAs shall be reported based on the value in the report type field (i.e. *RT*). This option is only active with the SCSI GET LBA STATUS(32) command (i.e. it is ignored if the GET LBA STATUS(16) command is sent).
Valid element identifiers are non−zero. The default value of *EI* is 0 which means in the context that no element identifier is specified.

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

−H, **−−hex**
: output response to this command in ASCII hex.

−l, **−−lba**=*LBA*
: where *LBA* is the starting Logical Block Address (LBA) to check the provisioning status for. Note that the *DEVICE* chooses how many following blocks that it will return provisioning status for.

−m, **−−maxlen**=*LEN*
: where *LEN* is the (maximum) response length in bytes. It is placed in the cdb's "allocation length" field. If not given then 24 is used. 24 is enough space for the response header and one LBA status

descriptor. *LEN* should be 8 plus a multiple of 16 (e.g. 24, 40, and 56 are suitable).

−r, **−−raw**
output response in binary (to stdout).

−R, **−−readonly**
open the *DEVICE* read−only (e.g. in Unix with the O_RDONLY flag). The default is to open it read−write.

−t, **−−report−type**=*RT*
where *RT* is 0 for report all LBAs; 1 for report LBAs using non−zero provisioning status; 2 for report LBAs that are mapped; 3 for report LBAs that are de−allocated; 4 for report LBAs that are anchored; 16 for report LBAs that may return an unrecovered error. The REPORT TYPE field was added to the GET LBA STATUS cdb in sbc4r12.
Since the REPORT TYPE field is newer than the command, the response contains the RTP bit to indicate whether or not the *DEVICE* acts on the REPORT TYE field (set when it does act on it, clear otherwise).

−s, **−−scan−len**=*SL*
where *SL* is the scan length which is the maximum number of contiguous logical blocks to be scanned for logical blocks that meet the given report type (i.e. *RT*). This option is only active with the SCSI GET LBA STATUS(32) command (i.e. it is ignored if the GET LBA STATUS(16) command is sent).
The default value of *SL* is 0 which should be interpreted by the *DEVICE* as there is no limits to the number of LBAs that shall be scanned.

−v, **−−verbose**
increase the level of verbosity, (i.e. debug output). Additional output caused by this option is sent to stderr.

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

NOTES

In SBC−3 revision 25 the calculation associated with the Parameter Data Length field in the response was modified. Prior to that the byte offset was 8 and in revision 25 it was changed to 4.

For a discussion of logical block provisioning see section 4.7 of sbc4r14.pdf at http://www.t10.org (or the corresponding section of a later draft).

EXIT STATUS

The exit status of sg_get_lba_status 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_write_same(8), sg_unmap(8)