NAME

sg_sat_read_gplog − use ATA READ LOG EXT command via a SCSI to ATA Translation (SAT) layer

SYNOPSIS

sg_sat_read_gplog [−−*ck_cond*] [−−*count*=*CO*] [−−*dma*] [−−*help*] [−−*hex*] [−−*len*={16|12}] [−−*log*=LA] [−−*page*=PN] [−−*readonly*] [−−*verbose*] [−−*version*] *DEVICE*

DESCRIPTION

This utility sends an ATA READ LOG EXT or an ATA READ LOG DMA EXT command to the *DEVICE*. This command is used to read the general purpose log of (S)ATA disks (not ATAPI devices such as DVD driver). Rather than send the READ LOG (DMA) EXT command directly to the device it is sent via a SCSI transport which is assumed to contain a SCSI to ATA Translation (SAT) Layer (SATL). The SATL may be in an operating system driver, in host bus adapter (HBA) firmware or in some external enclosure.

This utility does not currently attempt to decode the response from the ATA disk, rather it outputs the response in ASCII hexadecimal grouped in 16 bit words. Following ATA conventions those words are decoded little endian (note that SCSI commands use a big endian representation). In the future this utility may attempt to decode some log pages, perhaps using the −−*decode* option.

The SAT−2 standard (SAT ANSI INCITS 465-2010, prior draft: sat2r09.pdf at www.t10.org) defines two SCSI "ATA PASS−THROUGH" commands: one using a 16 byte "cdb" and the other with a 12 byte cdb. This utility defaults to using the 16 byte cdb variant.

OPTIONS

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

−C, **−−ck_cond**

sets the CK_COND bit in the ATA PASS−THROUGH SCSI cdb. The default setting is clear (i.e. 0). When set the SATL should yield a sense buffer containing a ATA Result descriptor irrespective of whether the ATA command succeeded or failed. When clear the SATL should only yield a sense buffer containing a ATA Result descriptor if the ATA command failed.

−c, **−−count**=*CO*

the number *CO* is placed in the "count" field in the ATA READ LOG EXT command. This specified the number of 512−byte blocks of data to be read from the specified log.

−d, **−−dma**

use the ATA READ LOG DMA EXT command instead of ATA READ LOG EXT command. Some devices require this to return valid log data.

−h, **−−help**

outputs the usage message summarizing command line options then exits. Ignores *DEVICE* if given.

−H, **−−hex**

when given once, the response is output in ASCII hexadecimal bytes. When given twice, then the response is grouped into 16 bit words using ATA conventions (i.e. little endian); this is the default output (i.e. when this option is not given). When given thrice (i.e. '−HHH') the output is in hex, grouped in 16 bit words (without a leading offset and trailing ASCII on each line), in a format that is acceptable for 'hdparm −−Istdin' to process.

−L, **−−log**=*LA*

the number *LA* is known as the "log address" in the ATA standards and is placed in bits 7:0 of the "lba" field of the ATA READ LOG (DMA) EXT command. This specifies the log to be returned (See ATA−ACS for a detailed list of available log addresses). The default value placed in the "lba field is 0, returning the directory of available logs. The maximum value allowed for *LOG* is 0xff.

−p, **−−page**=*PN*

the number *PN* is the page number (within the log address) and is placed in bits 32:16 of the "lba" field of the ATA READ LOG (DMA) EXT command. The default value placed in the "lba" field is 0. The maximum value allowed for *LOG* is 0xffff.

−l, **−−len**={16|12}
this is the length of the SCSI cdb used for the ATA PASS−THROUGH commands. The argument can either be 16 or 12. The default is 16. Some SCSI transports cannot convey SCSI commands longer than 12 bytes.

−r, **−−readonly**
causes the *DEVICE* to be opened with the read−only flag (O_RDONLY in Unix). The default action is to open *DEVICE* with the read−write flag (O_RDWR in Unix). In some cases sending power management commands to ATA disks are defeated by OS actions on the close() if the *DEVICE* was opened with the read−write flag (e.g. the OS might think it needs to flush something to disk).

−v, **−−verbose**
increases the level or verbosity.

−V, **−−version**
print out version string

NOTES

Prior to Linux kernel 2.6.29 USB mass storage limited sense data to 18 bytes which made the **−−ck_cond** option yield strange (truncated) results.

EXIT STATUS

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

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REPORTING BUGS

Report bugs to <dgilbert at interlog dot com>.

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SEE ALSO

sg_sat_identify(sg3_utils), sg_inq(sg3_utils), sdparm(sdparm), hdparm(hdparm)