Rocky Enterprise Linux 9.2 Manual Pages on command 'sg_seek.8'

$ man sg_seek.8

SG_SEEK(8)   SG3_UTILS   SG_SEEK(8)

NAME

    sg_seek - send SCSI SEEK, PRE-FETCH(10) or PRE-FETCH(16) command

SYNOPSIS

    sg_seek   [--10] [--count=NC] [--grpnum=GN] [--help] [--immed]

    [--lba=LBA] [--num-blocks=NUM] [--pre-fetch] [--readonly] [--skip=SB]

    [--time] [--verbose] [--version] [--wrap-offset=WO] DEVICE

DESCRIPTION

    Sends a SCSI SEEK(10), PRE-FETCH(10) or PRE-FETCH(16) command to the

    DEVICE. The SEEK command has been obsolete since SBC-2 (2005) but still

    is supported on some hard disks and even some SSDs (solid state disks).

    The PRE-FETCH command can be viewed as SEEK's modern replacement.   In?

    stead of talking about moving the disk heads to the track containing

    the sort after LBA, it talks about bringing the sort after LBA (and a

    given number of blocks) into the disk's cache. Also the PRE-FETCH com?

    mands have an IMMED field.

    The PRE-FETCH commands can report "real" errors but usually they will

    report one of two "good" statuses. To do this they return the rarely

used CONDITION MET status. If the number of blocks does actually fit in the cache (when IMMED=0) or there is enough room in the cache when the command arrives (when IMMED=1) then a CONDITION MET status is returned. If the requested number of blocks did not fit (IMMED=0) or would not fit (IMMED=1) then status GOOD is returned. So if a disk has a large cache and PRE-FETCH is used sparingly then the command is more likely to return CONDITION MET than GOOD. This presents some SCSI sub-systems with problems as due to its rareness they mishandle CONDITION MET and treat it as an error (see NOTES section below).

OPTIONS

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

-T, --10

use a 10 byte cdb command, either SEEK(10) or PRE-FETCH(10) com?
mand. In the absence of the --pre-fetch option, the SEEK(10)
command is used. If the --pre-fetch option is given without this
option then a PRE-FETCH(16) command is used.

-c, --count=NC

NC is the number of commands (one of SEEK(10), PRE-FETCH(10) or
PRE-FETCH(16)) that will be executed. The default value is 1. If
an error occurs it is noted and the program continues until NC
is exhausted. If NC is 0 then options are checked and the DE?
VICE is opened but no commands are sent.

-g, --grpnum=GN

GN is the group number, a value between 0 and 63 (in hex: 0x3f).
The default value is 0. This option is ignored if the selected
command is SEEK(10).

-h, --help

output the usage message then exit.

-i, --immed

this option only applies to PRE-FETCH(10) and PRE-FETCH(16),
setting the IMMED bit. Without this option, the DEVICE returns
after it has completed transferring all, or part of, the re?
quested blocks into the cache. If this option is given the DE?

VICE returns after it has done sanity checks on the cdb (e.g.
making sure the LBA is greater than the number of available
blocks) and before it does the transfer into the cache.

Note that even when this option is given, the return status from
the PRE-FETCH commands is still either CONDITION MET status (if
the cache seems to have enough free space for the transfer) or a
GOOD status (if the cache does not seem to have enough free
space).

-l, --lba=LBA

LBA is the starting logical block address that is placed in the
command descriptor block (cdb) of the selected command. Note
that the LBA field in SEEK(10) and PRE-FETCH(10) is a 32 bit
quantity, while with PRE-FETCH(16) it is a 64 bit quantity. The
default value is 0 .

-n, --num-blocks=NUM

NUM is the number of blocks, starting at and including LBA, to
place in the DEVICE's cache. The SEEK(10) command does not use
the NUM value. For PRE-FETCH(10) NUM is a 16 bit quantity, while
for PRE-FETCH(16) it is a 32 bit quantity. The default value is
1 . If NUM is 0 then the DEVICE will attempt to transfer all
blocks from the given LBA to the end of the medium.

-p, --pre-fetch

this option selects either PRE-FETCH(10) or PRE-FETCH(16) com?
mands. With the --10 also given, the PRE-FETCH(10) command is
selected; without that option PRE-FETCH(16) is selected. The de?
fault (in the absence of this and other 'selecting' options) the
SEEK(10) command is selected.

-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 is
a logical read or write operation so they take a risk averse
stance and require read-write type DEVICE opens irrespective of

what is performed by the pass-through.

-s, --skip=SB

SB is the number of logical block addresses to skip, between re?

peated commands when NC is greater than 1. The default value of

SB is 1 . SB may be set to 0 so that all NC PRE-FETCH commands

use the same LBA.

-t, --time

if given the elapsed time to execute NC commands is recorded.

This is printed out before this utility exits. If NC is greater

than 1 then the the "per command" time is also printed.

-v, --verbose

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

-V, --version

print the version string and then exit.

-w, --wrap-offset=WO

WO is the number of blocks, relative to LBA, that when exceeded,

set the next command's logical block address back to LBA.

Whether this "reset-to-LBA" action occurs depends on the values

NC and SB.

NOTES

Prior to Linux kernel 4.17 the CONDITION MET status was logged as an

error. Recent versions of FreeBSD handle the CONDITION MET status

properly.

If either the --count=NC or --verbose option is given then a summary

line like the following is output:

Command count=5, number of condition_mets=3, number of goods=2

before the utility exits.

EXIT STATUS

The exit status of sg_seek is 0 (GOOD) or 25 (CONDITION_MET) when this

utility is successful. If multiple commands are executed (e.g. when NC

is greater than 1) then the result of the last executed SEEK or

PRE-FETCH command sets the exit status. 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(sg3_utils); sdparm(sdparm)

sg3_utils-1.43   September 2018   SG_SEEK(8)