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

$ man sg_map.8

SG_MAP(8) SG3_UTILS SG_MAP(8)

NAME

sg_map - displays mapping between Linux sg and other SCSI devices

SYNOPSIS

sg_map [-a] [-h] [-i] [-n] [-scd] [-sd] [-sr] [-st] [-V] [-x]

DESCRIPTION

Sometimes it is difficult to determine which SCSI device a sg device name (e.g. /dev/sg0) refers to. This command loops through the sg de? vices and finds the corresponding SCSI disk, cdrom or tape device name (if any). Scanners are an example of SCSI devices that have no alter? nate SCSI device name apart from their sg device name.

This utility is deprecated and has not been updated for years, only very obvious bugs will be fixed. Unless a very old version of Linux is being used (e.g. 2.4 series or earlier), then please use a utility like lsscsi(8) or the facilities offered by udev(8).

OPTIONS

-a assume the sg devices have alphabetical device names and loop through /dev/sga, /dev/sgb, etc. Default is numeric scan. Note

that sg device nodes with an alphabetical index have been depre?
cated since the Linux kernel 2.2 series.

-h print usage message then exit.

-i in addition do a standard INQUIRY and output vendor, product and revision strings for devices that are found.

-n assume the sg devices have numeric device names and loop through /dev/sg0, /dev/sg1, etc. Default is numeric scan

-scd display mappings to SCSI cdrom device names of the form /dev/scd0, /dev/scd1 etc

-sd display mappings to SCSI disk device names

-sr display mappings to SCSI cdrom device names of the form /dev/sr0, /dev/sr1 etc

-st display mappings to SCSI tape device names

-V print out version string then exit (without further ado).

-x after each active sg device name is displayed there are five digits: <host_number> <bus> <scsi_id> <lun> <scsi_type>

NOTES

If no options starting with "-s" are given then the mapping to all SCSI disk, cdrom and tape device names is shown.

If the device file system (devfs) is present a line noting this is out?
put. The "native" devfs scsi hierarchy makes the relationship between a sg device name and any corresponding disk, cdrom or tape device name easy to establish. This replaces the need for this command. However many applications will continue to look for Linux SCSI device names in their traditional places. [Devfs supplies a compatibility daemon called devfsd whose default configuration adds back the Linux device names in their traditional positions.

Quite often the mapping information can be derived by observing the output of the command: "cat /proc/scsi/scsi". However if devices have been added since boot this can be deceptive.

In the Linux kernel 2.6 series something close to the mapping shown by this utility can be found by analysing sysfs. The main difference is that sysfs analysis will show the mapping between sg nodes and other

SCSI device nodes in terms of major and minor numbers. While major 8, minor 16 will usually be /dev/sdb this is not necessarily so. Facili? ties associated with udev may assign major 8, minor 16 some other de? vice node name. This version of sg_map has been extended to cope with sparse disk device node names of the form "/dev/sd<str>" where <str> can be one of [a-z,aa-zz,aaa-zzz]. See the sg_map26 utility for a more precise way (i.e. less directory scanning) for mapping between sg de? vice names and higher level names; including finding user defined names.

This utility was written at a time when hotplugging of SCSI devices was not supported in Linux. It used a simple algorithm to scan sg device nodes in ascending numeric or alphabetical order, stopping after there were 5 consecutive errors.

In the Linux kernel 2.6 series, this utility uses sysfs to find which sg device nodes are active and only checks those. Hence there can be large "holes" in the numbering of sg device nodes (e.g. after an adapter has been removed) and still all active sg device nodes will be listed. This utility assumes that sg device nodes are named using the normal conventions and searches from /dev/sg0 to /dev/sg4095 inclusive.

EXAMPLES

My system has a SCSI disk, a cd writer and a dvd player:

```
$ sg_map
# Note: the devfs pseudo file system is present
/dev/sg0  /dev/sda
/dev/sg1  /dev/sr0
/dev/sg2  /dev/sr1
```

In order to find which sg device name corresponds to the disk:

```
$ sg_map -sd
# Note: the devfs pseudo file system is present
/dev/sg0  /dev/sda
/dev/sg1
/dev/sg2
```

The "-x" option gives the following output:

```
sg_map -x
# Note: the devfs pseudo file system is present
/dev/sg0  1 0 1 0  0  /dev/sda
/dev/sg1  2 0 4 0  5  /dev/sr0
/dev/sg2  2 0 6 0  5  /dev/sr1
```

When a SCSI scanner is added the output becomes:

```
$ sg_map
# Note: the devfs pseudo file system is present
/dev/sg0  /dev/sda
/dev/sg1  /dev/sr0
/dev/sg2  /dev/sr1
/dev/sg3
```

By process of elimination /dev/sg3 must be the scanner.

EXIT STATUS

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

AUTHOR

Written by Douglas Gilbert

REPORTING BUGS

Report bugs to <dgilbert at interlog dot com>.

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SEE ALSO

sg_map26(8) , scsi_info(8) , scsidev(8) , devfsd(8) , lsscsi(8) , udev(7)