NAME

sg_copy_results − send SCSI RECEIVE COPY RESULTS command (XCOPY related)

SYNOPSIS

sg_copy_results [*−−failed*|*−−params*|*−−receive*|*−−status*] [*−−help*] [*−−hex*] [*−−list_id=ID*] [*−−readonly*] [*−−verbose*] [*−−version*] [*−−xfer_len=BTL*] *DEVICE*

DESCRIPTION

This utility is designed to query the status of the SCSI Extended Copy (XCOPY) facility (see SPC−3 revision 23 sections 6.3 and 6.17), present in some modern storage arrays. This utility sends a SCSI RECEIVE COPY RESULTS command to the given *DEVICE* and displays the response.

During the draft stages of SPC−4 the T10 committee has expanded the XCOPY command so that it now has two variants: "LID1" (for a List Identifier length of 1 byte) and "LID4" (for a List Identifier length of 4 bytes). This utility supports the older, LID1 variant which is also found in SPC−3 and earlier. While the LID1 variant in SPC−4 is command level (binary) compatible with XCOPY as defined in SPC−3, some of the command naming has changed. This utility uses the older, SPC−3 XCOPY names.

The command has four distinct modes of operation, distinguished by the service action field:

COPY STATUS [SPC−4: RECEIVE COPY STATUS(LID1)]
Displays the current status of the EXTENDED COPY command identified by the list id field.

RECEIVE DATA [SPC−4: RECEIVE COPY DATA(LID1)]
Return the held data read by the EXTENDED COPY command identified by the list id field. This option is only meaningful if the respective segment descriptor are supported.

OPERATING PARAMETERS [SPC−4: RECEIVE COPY OPERATING PARAMETERS]
Return copy manager operating parameters. This option is also useful to determine if the SCSI Extended Copy facility is supported.

FAILED SEGMENT DETAILS [SPC−4: RECEIVE COPY FAILURE DETAILS(LID1)]
Return copy target device sense data and other information about any failed segments.

OPTIONS

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

−f, **−−failed**
sets the service action field to FAILED SEGMENT DETAILS [4].

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

−H, **−−hex**
prints out the response buffer in hex.

−l, **−−list_id**=*ID*
sets the list identifier field to *ID* (default: 0).

−p, **−−params**
sets the service action field to OPERATING PARAMETERS [3]. This is the default.

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

−r, **−−receive**
sets the service action field to RECEIVE DATA [1].

−s, **−−status**
sets the service action field to COPY STATUS [0].

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

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

−x, **−−xfer_len=***BTL*
sets the allocation length field to *BTL*. It is the byte transfer length and is the maximum (byte) size of the response. *BTL* must be less than 10000 and defaults to 520.

NOTES

Decoding of *RECEIVE DATA* service action is not implemented.

In a similar way the functionality of sg_xcopy has been ported to the more general ddpt utility (and package), the functionality of this utility has been ported to the ddptctl utility.

EXAMPLES

Query the operating parameters for a device:

```
# sg_copy_results −p /dev/sdo
Receive copy results (report operating parameters):
  Supports no list identifier: no
  Maximum target descriptor count: 2
  Maximum segment descriptor count: 1
  Maximum descriptor list length: 92 bytes
  Maximum segment length: 33553920 bytes
  Inline data not supported
  Held data limit: 0 bytes
  Maximum stream device transfer size: 0 bytes
  Total concurrent copies: 0
  Maximum concurrent copies: 255
  Data segment granularity: 512 bytes
  Inline data granularity: 1 bytes
  Held data granularity: 1 bytes
  Implemented descriptor list:
    Segment descriptor 0x02: Copy from block device to block device
    Target descriptor 0xe4: Identification descriptor
```

EXIT STATUS

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

AUTHORS

Written by Douglas Gilbert.

REPORTING BUGS

Report bugs to <dgilbert at interlog dot com>.

COPYRIGHT

SEE ALSO

sg_xcopy(sg3_utils), ddpt,ddptctl(ddpt)