QUICK REFERENCE

# ConvexOS Tape System

Order No. DSW-391

First Edition, Rev. 1
December 1991

CONVEX

CONVEX COMPUTER CORPORATION

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Printed in the United States of America.

# Contents

# Preface

This reference describes how to use ConvexOS Tape System commands and utilities that do not require root privileges.

Command descriptions and examples are divided into sections according to function. To find the task you want to perform, find the appropriate section in "Contents," page iii. Look through the appropriate section for the command syntax and description you need.

## Using command descriptions

This reference uses these conventions in describing command syntax:

- If a command description instructs to *enter* a command, you need to press the **RETURN** key after typing the command.

  If a command description instructs to *type* a command, do *not* press the **RETURN** key after typing the command.

- Different fonts indicate how to use different parts of commands and utilities:

| | |
|---|---|
| `Courier` | Signifies command names, system output, and error messages |
| **`Courier bold`** | Type exactly as shown. |
| *Italic* | Substitute with the appropriate value. |
| **KEYCAP** | Press the indicated key. |

- Some special conventions are used to convey special conditions:

  **CTRL** The control key should be held down while pressing another key associated with it in a command syntax description. For example, in the command syntax description:

  **CTRL-d**

  you need to press the **CTRL** key and type **d** simultaneously.

[ ] Brackets indicate an optional part of a command description:

**tpunmount** [**-s** *link*]

"**-s** *link*" is optional. The brackets are not typed.

Also, options can be nested:

**tpmount** [**-s** *link* [*VSN,VSN,...*]]

where values for *VSN* can be listed with the -s option, which is also optional. Note that according to the syntax, values for *VSN* cannot be listed without the -s option.

... An ellipsis indicates a part of a syntax has been omitted or repeats. For example:

**tpmount -b ... +b ...**

indicates that information between the -b and +b switches has been omitted, as well as information after the +b switch.

**tpmount** [**-s** *link* [*VSN,VSN,...*]]

indicates that values for *VSN*, delimited with commas, can be repeated.

## Using example descriptions

With some command descriptions there are command examples. Command examples are in the following format:

Example: **tpmount -a /dev/rmt20 -s link1 **
**vol1,vol2,vol3**

Only the terms written in **courier bold** are to be entered as shown.

The backslash, which should not be typed, indicates that the example is continued on the next line. Do not press **RETURN** until the entire example is typed.

# Getting Information

The following sections describe how to obtain different types of tape system and tape content information.

## Displaying tape system configurations

`tpconfig show all`
Show all tape system configuration values.

`tpconfig show default`
Show default values for `tpmount`.

`tpconfig show drive` [*drive*]
Show information about a drive, where *drive* is the name of the drive you want to know about.

Example: **`tpconfig show dr mt:0`**

displays information about the tape drive mt:0. If you do not specify a tape drive, you receive information about all tape drives.

`tpconfig show labels`
Show defined label types.

`tpconfig show node` [*node*]
Show information about a specific node (tape device), where *node* is the path name of the node you want to know about.

Example: **`tpconfig show node /dev/rmt20`**

shows information about the /dev/rmt20 device. If you do not specify a node, you receive information about all nodes.

## Listing tape labels and attributes

`tplist` [*option...*]

List tape labels. The following options are available:

| | |
|---|---|
| `-d` | Display detailed printout of all tape labels. |
| `-f` | List only file labels. |
| `-r` | List raw labels. |
| `-s` *link* | Specify symbolic link. If you have more than one tape mounted, you need to specify *link*, the symbolic-link name of the tape device.<br><br>Example: **`tplist -s link1`** |
| `-v` | List only volume labels. |

## Displaying tape queue information

`tpqueue`

Display tape queue information, which includes information about the drive, tape device, the user, and the volume serial number (VSN).

`tpqueue -l`

Display tape queue information in long format, which includes information about the drive, tape and user devices, user, VSN, and the symbolic-link name.

# Mounting tapes

`tpmount -a` *device*

Link to the specified tape device, where *device* is one of the tape devices in /dev.

Example: **`tpmount -a /dev/rmt20`**

`tpmount -s` *link* [*VSN...*]

Specify the name of the symbolic link and the volume serial numbers, where *link* is the name you want to give the symbolic link to the tape device.

*VSN* is the volume serial number (or numbers, if mounting a tape set) and can only be used with labeled tapes. If you are mounting a tape set that is already labeled, the VSNs must match those on the existing label.

Examples: **`tpmount -s link1`**

```
tpmount -m label -s link1 \
vol1,vol2,vol3
```

`tpmount -b [...+b...]`

Bypass label access restrictions and processing. You must use this option to mount a labeled tape in block or character mode.

The `+b` option turns off label bypassing previously set on the same command line.

Example:
```
tpmount -b -a /dev/rmt20 \
-s link1 vol1,vol2,vol3 +b \
-m label -a /dev/rmt21 \
-s link2 vol1,vol2,vol3
```

`tpmount -B [...+B...]`

Place the `tpmount` request in the background.

The `+B` option turns off background processing previously set on the same command line.

Example:
```
tpmount -B -a /dev/rmt20 \
-s link1 +B -a /dev/rmt21 \
-s link2
```

`tpmount -c` *comment*

Send a comment to the tape operator, where *comment* is the comment you want to relay. This functions only if `opreq` queueing is enabled.

Example: **`tpmount -c "Please mount tape 5"`**

`tpmount -d` *density*

Specify tape density, where *density* is in bytes-per-inch (BPI).

Example: **`tpmount -d 6250`**

`tpmount -m label -f` *n*

Skip forward *n* number of files on the tape when it is first accessed. Valid only for labeled tape.

Example: **`tpmount -m label -f 2`**

`tpmount -l` *label_type*

Specify label type, where *label_type* is the label type of your tape. Currently, the only valid label types are `ansi` (the default) and `ibm`.

Example: **`tpmount -m label -l ibm`**

`tpmount -m` *mode*

Specify access mode, where *mode* can be any one of the following:

| | |
|---|---|
| `block` | Block mode |
| `char` | Character mode |
| `label` | Labeled mode |

Example: **`tpmount -m label`**

`tpmount -q [...+q...]`

The `-q` option enqueues the mount request. This option has no effect if `opreq` queueing is enabled.

The `+q` option reverses previously enabled queueing. Use with compound `tpmount` commands requesting simultaneous access to multiple devices.

Example:
```
tpmount -q -a /dev/rmt20 \
-s link1 vol1,vol2,vol3 +q \
-m label -a /dev/rmt21 \
-s link2 vol1,vol2,vol3
```

`tpmount -R [...+R...]`

The `-R` option sets tape access to read-only. It informs the tape operator that the write ring should be removed from the tape before it is placed on the tape drive.

The `+R` option reverses the `-R` option. Used with compound `tpmount` commands requesting simultaneous mounts.

Example:
```
tpmount -R -a /dev/rmt20 \
-s link1 +R -a /dev/rmt21 \
-s link2
```

`tpmount -r [...+r...]`

The `-r` option activates automatic rewinding of a tape upon closing it after reading from or writing to it. Do not use with labeled tape.

The `+r` option reverses the `-r` option, if you previously used it on the same command line.

Example:
```
tpmount -r -a /dev/rmt16 \
-s link1 +r -m label \
-a /dev/rmt21 -s link2 \
vol1,vol2,vol3
```

`tpmount -t` *drive_type*

Specify drive type, where *drive_type* is one of the drive types defined by your system manager. *drive_type* is the string left of the colon in the drive name. For example, if the drive name is mt:1, *drive_type* is "mt."

Example:
```
tpmount -m block -t mt
```

`tpmount -u`

Select internally buffered device (for tape cartridges only).

# Unmounting tapes

`tpunmount` [*options*]

Unmount a tape. The following options are available:

| | |
|---|---|
| `-k` | Keep tape drive online, if `opreq` queuing is not enabled. |
| `-s` *link* | Specify symbolic link. If you have more than one tape mounted, you need to specify *link*, the symbolic-link name of the tape device. |

Example: **`tpunmount -s link1`**

# Bringing a mount request to the foreground

`tpwait [-s` *link*]

Bring a mount request to foreground. If you have more than one tape mounted, you need to specify the symbolic link to the associated tape device. *link* is the symbolic-link name of the tape device.

Example: **`tpwait -s link1`**

# Labeling tapes

`tplabel` [*options*]

Label a tape with unrestricted access. The following options are also available:

| | |
|---|---|
| `-a` | Restrict tape access (for ASNI-labeled tapes only). |
| `-s` *link* | Specify symbolic link. If you have more than one tape mounted, you need to specify *link*, the symbolic-link name of the tape device. |

Example: **`tplabel -s link1`**

# Unlabeling tapes

## Caution

**When a tape label is removed, the information on that tape becomes inaccessible.**

`tpunlabel` [`-s` *link*]

Unlabel a tape or tape set. If you have more than one tape mounted, you need to specify the symbolic link to the associated tape device. *link* is the symbolic-link name of the tape device.

Example: **`tpunlabel -s link1`**

# Setting labeled-tape attributes

`tpattr -a` *access*

Set file accessibility for users other than the tape owner, where *access* is the type of accessibility you're setting. *access* can be any of the following:

| | |
|---|---|
| `r` | Other users have only read privileges. This is the default. |
| `w` | Other users have only write privileges. |
| `rw` | Other users have both read and write privileges. |
| `""` | Other users have no access privileges. |

Example: **`tpattr -a rw`**

If you have more than one tape mounted, you must use the `-s` option.

Example: **`tpattr -s link1 -a rw`**

`tpattr -b` *blocksize*

Define physical block size for the file, where *blocksize* is the block size in bytes. The default blocksize is 2048 bytes.

Example: **`tpattr -b 8192`**

If you have more than one tape mounted, you must use the `-s` option.

Example: **`tpattr -s link1 -b 8192`**

`tpattr -d` *delimiter*

Define logical record delimiter. *delimiter* can be one of the following:

| | |
|---|---|
| `blocknl` | Blocked newline, which is the default |
| `newline` | Newline character |
| `syscall` | System call |

Example: **`tpattr -d syscall`**

If you have more than one tape mounted, you must use the `-s` option.

Example: **`tpattr -s link1 -d syscall`**

`tpattr -e` *dd-mm-[yy]yy*

Set expiration date for the file, where *dd* is the day, *mm* is the month, and *[yy]yy* is the year.

Examples: **`tpattr -e 01-03-92`**

**`tpattr -e 01-03-1992`**

If you have more than one tape mounted, you must use the `-s` option.

Examples: **`tpattr -s link1 -e 01-03-92`**

**`tpattr -s link1 -e 01-03-1992`**

`tpattr -f` *format*

Specify record format. *format* can be one of the following:

| | |
|---|---|
| `F` | Fixed, which is the default |
| `D` | Decimal-based variable |
| `U` | Unformatted |

Example: **`tpattr -f U`**

If you have more than one tape mounted, you must use the `-s` option.

Example: **`tpattr -s link1 -f U`**

`tpattr -h` *header*

Write header information, where *header* is a string as long as 76 characters. If the string has any blanks in it, it must be enclosed in quotes.

Example: **`tpattr -h "This is a header."`**

If you have more than one tape mounted, you must use the `-s` option.

Example:
```
tpattr -s link1 -h "This is a \
header."
```

`tpattr -i` *identifier*

Specify an identifier for the file. *identifier* can be no longer than 17 characters. Alphabetic characters are stored and read in uppercase, even if they are specified as lowercase.

Example: **`tpattr -i file1`**

If you have more than one tape mounted, you must use the `-s` option.

Example: **`tpattr -s link1 -i file1`**

`tpattr -r` *record_size*

Specify logical record size, *record_size*, in bytes. The default record size is 128 bytes.

Example: **`tpattr -r 64000`**

If you have more than one tape mounted, you must use the `-s` option.

Example: **`tpattr -s link1 -r 64000`**

`tpattr -t` *trailer*

Write trailer information, where trailer is a string as long as 76 characters. If the string has any blanks in it, it must be enclosed in quotes.

Example: **`tpattr -t "This is a trailer."`**

If you have more than one tape mounted, you must use the `-s` option.

Example:
```
tpattr -s link1 -t "This is a \
trailer."
```

# Tape movement commands

`mt [-f` *link*`] fsf` *n*
Forward space *n* number of files.

Example: **`mt fsf 2`**

If you have more than one tape mounted, you must use the `-f` option, where *link* is the symbolic-link to the tape device.

Example: **`mt -f link1 fsf 2`**

`mt [-f` *link*`] rew`
Rewind tape or tape set.

If you have more than one tape mounted, you must use the `-f` option, where *link* is the symbolic-link to the tape device.

Example: **`mt -f link1 rew`**

`mt [-f` *link*`] status`
Report tape status.

If you have more than one tape mounted, you must use the `-f` option, where *link* is the symbolic-link to the tape device.

Example: **`mt -f link1 status`**

`mt [-f` *link*`] offline`
Take tape offline. For unlabeled tape only; not permitted on labeled tape.

If you have more than one tape mounted, you must use the `-f` option, where *link* is the symbolic-link to the tape device.

Example: **`mt -f link1 offline`**

# Copying files to and from tape

Before attempting to use `cp` or `cat` on labeled tape, set the tape attributes as in the example below.

Example: **`tpattr -f U -b 64000`**

For more information refer to the section, "Setting labeled-tape attributes," on page 8.

## Copying files to tape

`cp` *filename link*

Copy a file to tape. *filename* is the name of the file, and *link* is the symbolic-link to the tape device.

Example: **`cp /tmp/foo /mnt/sunny/tape1`**

`cat` *filename* `>` *link*

Copy a file to tape, where *filename* is the name of the file and *link* is the symbolic-link to the tape device.

Example: **`cat /tmp/foo > /mnt/sunny/tape1`**

## Copying files from tape

`cp` *link filename*

Copy a file from tape, where *link* is the symbolic-link to the tape device and *filename* is the name you want to give the copied file.

If the file specified by *filename* already exists, it is overwritten. If the file specified by *filename* does not exist, it is created.

Example: **`cp /mnt/sunny/tape1 /tmp/foo`**

`cat` *link* `>` *filename*

Copy a file from tape to another file. *link* is the symbolic-link to the tape device, and *filename* is the name of the copied file.

If the file specified by *filename* already exists, it is overwritten. If the file specified by *filename* does not exist, it is created.

Example: **`cat /mnt/sunny/tape1 > /tmp/foo`**

# Creating a `tar` archive

Before attempting to use `tar` on labeled tape, set the tape attributes as in the example below.

Example: **`tpattr -b 8192 -f U`**

For more information refer to the section, "Setting labeled-tape attributes," on page 8.

## Syntax for creating a `tar` archive

When using `tar` with labeled tapes you must set blocking factor to 16 with the `-b` option. Refer to `tar -cb`, on this page.

`tar -c`[*options...*] [*args...*] [*filenames*] [`-C` *dir* [*filenames*]]

Create an archive on tape for files or directories. The `tar -c` command has the following components:

| | |
|---|---|
| *options* | All options follow `-c` without any delimiters. Arguments associated with options follow after all the options are listed. Arguments are in the same respective order as the options with which they are associated. These options are described on page 14. |
| *args* | List of arguments. Arguments follow the same respective order as the options with which they are associated. These arguments are described with their options on page 14. |
| *filenames* | List of file names and directories you want to archive, and regular expressions that match them. |
| `-C` *dir* | Change to the directory *dir*, and *filenames* is a list of file names and directories you want to archive from there. |

Examples:

```
tar -c directory1

tar -cbf 16 TAPE files1 -C \
/tmp files2
```

## Options for creating a `tar` archive

`b` *block*
Use a blocking factor, where *block* is the block size. Required when using labeled tapes.

Example: **`tar -cb 16 testfiles`**

`f` *link*
Specify the symbolic-link name of the tape device, where *link* is the name of the associated symbolic link. The `f` option is required if you have more than one tape mounted.

Example: **`tar -cf link1 testfiles`**

`h` Follow symbolic links.

`l` Report all unresolved symbolic links.

`v` Use verbose mode.

`w` Wait for confirmation before archiving each file.

`B` Force blocking to 20 blocks per record.

`I` Put tape drive in 100 ips mode. The default is 50 ips.

# Extracting files from a `tar` archive

Before attempting to use `tar` on labeled tape, set the tape attributes as in the example below.

Example: **`tpattr -b 8192 -f U`**

For more information refer to the section "Setting labeled-tape attributes," on page 8.

## Syntax for extracting files from a `tar` archive

`tar -x`[*options*] [*args*] [*filenames*]

Extract files or directories from a tar archive. The `tar -x` command has the following components:

*options* — All options follow `-x` without any delimiters. Arguments associated with options follow after all the options are listed. Arguments are in the same respective order as the options with which they are associated. These options are described on page 16.

*args* — List of arguments. Arguments follow the same respective order as the options with which they are associated. These arguments are described with their options on page 16.

*filenames* — List of file names and directories you want to extract. If you do not provide `tar` with file names or directories, it extracts the entire contents of the archive.

Examples:

```
tar -x

tar -xf /mnt/sunny/TAPE \
directory1
```

## Options for extracting files from a `tar` archive

`f` *link*
Specify symbolic-link name of the tape device, where *link* is the name of the associated symbolic link.

Example: **`tar -xf link1 testfiles`**

`m` Set modification time of files and directories to the time of their extraction.

`o` Set user and group ownerships of the file to those of the user doing the extraction.

`p` Restore original file protections (ignoring current mask).

`v` Use verbose mode, where file names are displayed upon extraction.

`w` Wait for confirmation before extracting each file.

`B` Force blocking to 20 blocks per record.

`I` Put tape drive in 100 ips mode. The default is 50 ips.

# Listing files in a `tar` archive

Before attempting to use `tar` on labeled tape, set the tape attributes as in the example below.

Example: **`tpattr -b 8192 -f U`**

For more information refer to the section "Setting labeled-tape attributes," on page 8.

## Syntax for listing files in a `tar` archive

`tar -t`[*options...*] [*args*]

Display table of contents of a tar archive. The `tar -t` command has the following components:

*options* — All options follow `-t` without any delimiters. Arguments associated with options follow after all the options are listed. Arguments are in the same respective order as the options with which they are associated.

*args* — List of arguments. Arguments follow the same respective order as the options with which they are associated.

Examples: **`tar -t`**

**`tar -tf /mnt/sunny/TAPE`**

## Options for listing files in a `tar` archive

`B` Force input and output blocking to 20 blocks per record. This is so that `tar` can work across communications channels where the blocking may not be maintained.

`I` Put tape drive in 100 ips mode. The default is 50 ips.

`f` *link*

Specify symbolic-link name of the tape device, where *link* is the name of the associated symbolic link.

Example: **`tar -tf /mnt/sunny/TAPE`**

`v` Use verbose mode, which includes permission bits, owner and group IDs, and size, with the table of contents.

# Creating a `cpio` archive

Before attempting to use `cpio` on labeled tape, set the tape attributes as in the example below.

Example: **`tpattr -f U`**

For more information refer to the section "Setting labeled-tape attributes," on page 8.

## Syntax for creating a `cpio` archive

*command* | `cpio -o`[*options...*] > *link*

Archive files and directories to tape, where *command* is any command whose output is a list of file names, and *link* is the symbolic-link name of the tape device.

Example: **`ls | cpio -oav > /mnt/sunny/tape1`**

## Options for creating a `cpio` archive

`a` Reset access time of the files accessed.

`c` Write header information in ASCII.

`v` Use verbose mode, where file names are displayed as they are processed.

`B` Set blocking to 5120 bytes per record.

# Extracting files from a `cpio` archive

Before attempting to use `cpio` on labeled tape, set the tape attributes as in the example below.

Example: **`tpattr -f U`**

For more information refer to the section "Setting labeled-tape attributes," on page 8.

## Syntax for extracting files from a `cpio` archive

`cpio -i`[*options...*] [*pattern*] < *link*

Extract files from a tape archive, where *pattern* is any simple regular expression that matches the files you want to extract, and *link* is the symbolic-link name of the tape device associated with your tape.

Example: **`cpio -i *.c < /mnt/sunny/tape1`**

## Options for extracting files from a `cpio` archive

`a` Reset access time of the files accessed.

`c` Write header information in ASCII.

`d` Create directories as needed during extraction.

`f` Extract files from a tape archive that do not match the pattern specified by *pattern*.

`m` Retain modification times of the files.

`r` Rename files. `cpio` prompts for a name change for each file that's extracted. If you do not want to change the name of the file, press **RETURN** without typing anything.

`u` Unconditionally extract files from a tape archive. Older files rewrite newer files because modification times are not checked.

`v` Use verbose mode, where file names are displayed as they are processed.

`B` Set blocking to 5120 bytes per record.

# Listing files in a `cpio` archive

Before attempting to use `cpio` on labeled tape, set the tape attributes as in the example below.

Example: **`tpattr -f U`**

For more information refer to the section "Setting labeled-tape attributes," on page 8.

`cpio -it <` *link*

Display table of contents of the archive. *link* is the symbolic-link name of the tape device associated with your tape.

Example: **`cpio -it < /mnt/sunny/tape1`**

# Tape system error messages

This section alphabetically lists and descibes some of the error messages you may receive when encountering problems while using the tape system. Error messages may be sent by the tape system to your terminal screen or to a log file in the form:

*command*: *error_message*

Where *command* is the command you were using when the error occurred, and *error_message* is the reason the error occurred.

Each error message entry suggests a possible solution. This solution is provided for the most common occurrences and may not be valid in all situations.

**A** `ambiguous request`

The tape system cannot distinguish the tape and drive on which to take action. Use the appropriate option for the utility you are using to specify the symbolic-link name of the device.

**C** `can't create symbolic link`

You may not have write permissions for the directory from which you have invoked `tpmount`, or a file exists with same name as the requested symbolic link to the tape device.

You either need to change to a directory that you can write to or change the permissions of the current working directory, or specify a unique symbolic-link name with the `tpmount -s` option.

`can't establish connection with label \ daemon`

The label daemon for the label type you have requested is probably dead. Contact the system manager.

`can't get current working directory`

The directory you are currently in has been deleted. Change to another directory to issue your mount request.

**D** `device is opened by another process`

The device you have attempted to deallocate is currently in use by a process. You must wait until the process closes the tape device to deallocate it.

E

`empty request`

You have not specified a tape in your `tpmount` library call.

`EOT seen`

The utility you are using has encountered the end of the tape. If there is still more tape, this indicates there is a bad spot on it. Data after the bad spot cannot be retrieved.

F

`file exists`

The symbolic link displayed with this error message exists, so it cannot be created as you've specified in your mount request.

Specify a unique symbolic-link name with the `tpmount -s` option.

I

`internal tape system error`

There is currently an internal problem with the tape system. Contact the system manager.

`invalid drive name specified`

You have specified a drive name in your `tpmount` request that is not defined for your system.

Use the `tpconfig show drives` command to list defined drive.

`invalid drive type`

You have specified a drive type in your `tpmount` request that is not defined for your system.

To display defined drives, enter:

```
tpconfig show drives
```

`invalid label type`

You have specified a label in your tpmount request that is not defined for your system.

Use the `tpconfig show labels` command to list defined label types. Contact your system manager if you need to bypass a tape label.

`invalid path to symbolic link`

The path you have specified to your symbolic link is not a valid path. One or more of the directories in the path do not exist.

Reissue your mount request after determining a proper path for the symbolic link.

**M**

`magnetic vsn doesn't match visual vsn`

The VSN or VSNs you have specified in your mount request do not match the VSN or VSNs on the tape.

If you do not know the proper VSN or VSNs for the tape, and you are the owner, remount the tape in unlabeled mode and bypass the label with the `tpmount -b` option. View the first file on the tape, which contains a field listing the proper VSNs. If you are not the owner of the tape, contact your system manager for assistance.

If you are using a tape set, you need to list all the VSNs in the set with the `tpmount -s` option.

`mount not yet complete`

You have entered a command before your tape has been mounted.

If you placed your mount request in the background with the `tpmount -B` option, use the `tpwait` command to bring it to the foreground.

If you haven't placed your mount request in the background, wait until the mount is complete.

`mount request failed`

You have passed a null pointer as an option in your `tpmount` library request.

`mount request failed - tape is labeled`

You have probably tried to mount a labeled tape with a block device or tried to mount a labeled tape in character or block mode without bypassing the label.

To display character devices you should use with labeled tapes, enter:

```
tpconfig show nodes | egrep \
'rmt.*rewind.*Char'
```

To bypass a tape label (if you are the owner of the tape or have superuser privileges only) mount the labeled tape with the `tpmount -b` option. Otherwise, mount the labeled tape in labeled mode with the `tpmount -m` option.

N

`no authorization`

The drive you have selected is not controlled, or you have attempted to unmount a tape without proper authorization. You either need to select a controlled tape drive or unmount the tape as the appropriate user, respectively.

For help in selecting a proper drive that is controlled, enter:

```
tpconfig show drives | grep Cont
```

To display a list of tape devices that have been allocated locally and by whom, enter:

```
tpqueue -l
```

`no drives meet the required speed density and type`

You have specified attributes that do not correspond to a defined device. For help in selecting a proper device enter:

```
tpconfig show nodes
```

`no entry in password file`

You are not authorized to execute the command you have issued. Contact your system manager.

`no input`

You have attempted to use `tar -t` to list files in an archive on a tape that is at EOT.

Reposition the tape using `mt` commands.

`no matching drives are available at this time`

You have specified attributes that correspond to a defined device that is currently in use.

To display a list of tape devices that have been allocated locally and by whom, enter:

```
tpqueue -l
```

For help in selecting a proper device enter

```
tpconfig show nodes
```

`no such request`

You have issued a tape command that is invalid either for the type of tape you have mounted or for the current situation.

`no such file or directory`

The file you are trying to read from an archive doesn't exist.

Use a command to list the files on the labeled tape, if using a labeled tape, or use a command to list the files in the archive, if trying to access an archive. If you are trying to read from disk, list the directory you are trying to read from.

`no such tape`

You have requested a tape to be mounted that is not currently included in the tape library. Contact your system manager or tape operator to have the proper tape entered.

**Q** `queueing is disabled - please specify \ device with tpmount -a option`

A device cannot be selected for you by the tape operator. You must select your own device with the `tpmount` option `-a`. For help in selecting a proper device enter:

```
tpconfig show nodes
```

**R** `Read error`

The utility you are using cannot read from the tape. This is probably because you do not have the proper device mounted, or you have not selected the proper tape attributes (if you are using a labeled tape).

**S** `server didn't respond`

`tpdeamon` has not responded to your request due to network problems. This message is accompanied by an RPC (remote procedure call) error message.

**T** `tape cannot be labeled`

You have attempted to label a tape not mounted in labeled mode.

First, be certain the correct tape is on the tape drive. If it is the correct tape, unmount it, remount it in labeled mode, and then label it. Any information that is on a tape at the time of labeling is no longer accessible after labeling.

`tape cannot be unlabeled`

You have attempted to unlabel a tape not mounted in labeled mode.

First, be certain the correct tape is on the tape drive. If it is the correct tape, unmount it, remount it in

labeled mode, and then unlabel it. Any information that is on a tape at the time of labeling is no longer accessible after labeling.

`tape change in progress`

The tape operator is changing the tapes. Wait until the change operation is complete to continue.

`tape forward error`

When using the `tar -t` command to view files in an archive, this message means that the tape is at EOT. This happens when listing files in the last archive on a tape.

`tape device must be no-rewind for labeled tapes`

You have requested a rewind device for a labeled tape, which are not compatible.

Select a device that is no-rewind. For help in selecting a proper no-rewind device, enter the following:

```
tpconfig show nodes | grep No
```

`tape drive is not on-line or not ready`

The tape drive is probably not online yet; or, you have issued a mount request for a labeled tape without an operator, and the tape has not yet been placed on the drive.

For 9-track tape drives, the online button on the tape drive probably needs to be pressed. For cartridge tapes, ensure the tape has been inserted properly.

If you are using labeled tapes, you need to place the tape on the drive, and put drive needs to be online, before issuing a mount request.

`tape is already in use`

You have specified a tape that is already in use.

To display a list of tape devices that have been allocated locally and by whom, enter:

```
tpqueue -l
```

`tape is already labeled`

You have attempted to label a tape that is already labeled.

First, be certain the correct tape is on the tape drive. If it is the correct tape, use `tpunlabel` to unlabel it and then relabel it. Any information that is on a tape at the time of labeling is no longer accessible after labeling.

`tape is already unlabeled`

You have attempted to unlabel a tape that is not labeled, but is mounted in labeled mode.

`tape is mounted read only`

The tape you have mounted as read-and-write is physically set for reading only.

The tape should be unmounted, taken from the drive, and have its write authorization affixed. You can then remount it with read and write permissions.

`tape is mounted read/write`

The tape you have mounted as read-only is physically set for reading and writing.

The tape should be unmounted, taken from the drive, and have its write authorization removed. You can then remount it as read-only.

`tape is not known to tape system`

You have requested a tape that is not currently in the tape library. Contact your tape operator or your system manager to enter the proper tape.

`tape is not labeled; use tplabel to label tape`

You have mounted an unlabeled tape in labeled mode.

First, be certain you have mounted the correct tape. Once you label a tape, any information on it is lost. If you get this message, you must label the tape in order to use it further.

`tape mount canceled by operator`

There is a problem with your tape, tape drive, or request. This message may be followed by a comment from a tape operator. If not, contact them.

`tape must be mounted as labeled to use this command`

You have attempted to use labeled-tape utilities on an unlabeled tape.

First, be certain the correct tape is on the tape drive. If the correct tape is on the tape drive, you need to unmount the tape, remount it in labeled mode, and label it before using labeled-tape utilities. Any information that is on a tape at the time of labeling is no longer accessible after labeling.

U `unable to connect to server`

There is a problem connecting to your server. Contact your system manager.

`unable to set attributes`

You have attempted to set attributes on a tape that is not labeled. You must label the tape first with the `tplabel` command. Any information that is on an unlabeled tape at the time of its labeling is not accessible after it is labeled.

W `Warning: tape is not labeled; use tplabel to label tape`

You have mounted an unlabeled tape in labeled mode.

First, be certain you have mounted the correct tape. Once you label a tape, any information on it is lost. If you get this message, you must label the tape in order to use it further.

`Write error`

The utility you are using cannot read from the tape. This is probably because you do not have the proper device mounted, or you have not selected the proper tape attributes (if you are using a labeled tape).

# Finding additional information

To find information on the following topics, consult the associated documentation:

| Topic | Associated documentation |
|---|---|
| Archiving to tape | *ConvexOS Tape System User's Guide* (DSW-018), and *tar(1)* and *cpio(1)* from *ConvexOS Man Pages for Users* (DSW-331) |
| ConvexOS tape system concepts and usage | *ConvexOS Tape System User's Guide* (DSW-395) |
| Configuring the ConvexOS tape system | *Managing ConvexOS: Configuration Guide* (DSW-030) |
| Copying files to and from tape | *cat(1)* and *cp(1)* from *ConvexOS Man Pages for Users* (DSW-331) |
| Dumping and restoring file systems | *Managing ConvexOS: Operations Guide* (DSW-031), and *ConvexOS* `dump` *and* `restore` *Quick Reference* (DSW-392) |
| Labeling tapes | *ConvexOS Tape System User's Guide* (DSW-018) |
| Regular expressions | *CONVEX* `vi` *Quick Reference* (DSW-019),and *ed(1)* from *ConvexOS Man Pages for Users* (DSW-331) |
| Symbolic links | *symlink(2)* from *ConvexOS Man Pages for Programmers* (DSW-332) |
| Tape sets | *ConvexOS Tape System User's Guide* (DSW-018) |

Document number: 710-017130-002