## NAME

pack, pcat, unpack – compress and expand files

## SYNOPSIS

**pack** [ **−f** ] [ **−** ] *file* . . .

**pcat** *file* . . .

**unpack** *file* . . .

## AVAILABILITY

SUNWesu

## DESCRIPTION

### pack

The **pack** command attempts to store the specified files in a compressed form. Wherever possible (and useful), each input file *file* is replaced by a packed file *file***.z** with the same access modes, access and modified dates, and owner as those of *file*. If **pack** is successful, *file* will be removed.

The amount of compression obtained depends on the size of the input file and the character frequency distribution. Because a decoding tree forms the first part of each **.z** file, it is usually not worthwhile to pack files smaller than three blocks, unless the character frequency distribution is very skewed, which may occur with printer plots or pictures.

Typically, text files are reduced to 60-75% of their original size. Load modules, which use a larger character set and have a more uniform distribution of characters, show little compression, the packed versions being about 90% of the original size.

**pack** returns a value that is the number of files that it failed to compress.

No packing will occur if:

- the file appears to be already packed
- the file name has more than **{NAME_MAX} - 2** bytes
- the file has links
- the file is a directory
- the file cannot be opened
- the file is empty
- no disk storage blocks will be saved by packing
- a file called *file***.z** already exists
- the **.z** file cannot be created
- an I/O error occurred during processing.

The last segment of the file name must contain no more than **{NAME_MAX} - 2** bytes to allow space for the appended **.z** extension. Directories cannot be compressed.

### pcat

The **pcat** command does for packed files what **cat**(1) does for ordinary files, except that **pcat** cannot be used as a filter. The specified files are unpacked and written to the standard output.

**pcat** returns the number of files it was unable to unpack. Failure may occur if:

- the file cannot be opened;
- the file does not appear to be the output of **pack**.

**unpack** The **unpack** command expands files created by **pack**. For each *file* specified in the command, a search is made for a file called *file***.z** (or just *file*, if *file* ends in **.z**). If this file appears to be a packed file, it is replaced by its expanded version. The new file has the **.z** suffix stripped from its name, and has the same access modes, access and modification dates, and owner as those of the packed file.

**unpack** returns a value that is the number of files it was unable to unpack. Failure may occur for the same reasons that it may in **pcat**, as well as for the following:

- a file with the ''unpacked'' name already exists;
- the unpacked file cannot be created.
- the filename (excluding of the **.z** extension) has more than **{NAME_MAX}** bytes

## OPTIONS

The following options are supported by **pack**:

**–f** Forces packing of *file*. This is useful for causing an entire directory to be packed even if some of the files will not benefit. Packed files can be restored to their original form using **unpack** or **pcat**.

## OPERANDS

The following operands are supported:

*file* A path name of a file to be packed, unpacked, or pcated; *file* can include or omit the **.z** suffix.

– **pack** uses Huffman (minimum redundancy) codes on a byte-by-byte basis. If the – argument is used, an internal flag is set that causes the number of times each byte is used, its relative frequency, and the code for the byte to be printed on the standard output. Additional occurrences of – in place of *file* will cause the internal flag to be set and reset.

## EXAMPLES

To view a packed file named **file.z** use:

```
example% pcat file.z
```

or just:

```
example% pcat file
```

To make an unpacked copy, say **nnn**, of a packed file named **file.z** (without destroying **file.z**) use the command:

```
example% pcat file >nnn
```

## ENVIRONMENT

See **environ**(5) for descriptions of the following environment variables that affect the execution of **pack**, **pcat**, and **unpack**: **LC_CTYPE**, **LC_MESSAGES**, and **NLSPATH**.

## EXIT STATUS

The following exit values are returned:

**0** Successful completion.

**>0** An error occurred. The number of files the command failed to pack/unpack is returned.

**SEE ALSO** **cat**(1), **compress**(1), **zcat**(1), **environ**(5)