

NAME

pack — compress files

SYNOPSIS

pack [-] name ...

DESCRIPTION

Pack attempts to store the specified files in a compressed form. Wherever possible (and useful), each input file *name* is replaced by a packed file *name.z* with the same access modes, access and modified dates, and owner as those of *name*. If *pack* is successful, *name* will be removed. Packed files can be restored to their original form using *unpack(1)* or *pcat(1)*.

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 *name* will cause the internal flag to be set and reset.

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 12 characters;
- the file has links;
- the file is a directory;
- the file cannot be opened;
- no disk storage blocks will be saved by packing;
- a file called *name.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 12 characters to allow space for the appended .z extension. Directories cannot (and should not) be compressed.

SEE ALSO

pcat(1), *unpack(1)*.