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*********************************************************
   11579 Wed Feb  5 01:53:17 2020
new/usr/src/man/man1/compress.1
12284 errors in compress(1) and pack(1) man pages
*********************************************************
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  47 .TH COMPRESS 1 "Feb 5, 2020"
  47 .TH COMPRESS 1 "Mar 13, 2008"
  48 .SH NAME
  49 compress, uncompress, zcat \- compress, uncompress files or display expanded
  50 files
  51 .SH SYNOPSIS
  52 .LP
  52 .nf
  53 \fBcompress\fR [\fB-fv/\fR] [\fB-b\fR \fIbits\fR] [\fIfile\fR]...
  54 .fi

  56 .LP
  57 .nf
  58 \fBcompress\fR \fB-c\fR [\fB-fv\fR] [\fB-b\fR \fIbits\fR] [\fIfile\fR]
  59 .fi
```

```
  61 .LP
  62 .nf
  63 \fBuncompress\fR [\fB-fv\fR] [\fB-c | -/\fR] [\fIfile\fR]...
  64 .fi

  66 .LP
  67 .nf
  68 \fBzcat\fR [\fIfile\fR]...
  69 .fi

  71 .SH DESCRIPTION
  72 .SS "compress"
  74 .sp
  75 .LP
  73 The \fBcompress\fR utility attempts to reduce the size of the named files by
  74 using adaptive Lempel-Ziv coding. Except when the output is to the standard
  75 output, each file is replaced by one with the extension \fB\&.Z\fR, while
  76 keeping the same ownership modes, change times and modification times, ACLs,
  77 and extended attributes. The compress utility also attempts to set the owner and
  78 group of \fIfile\fR\fB\&.Z\fR to the owner and group of file, but does not fail
  80 and extended attributes. The compress utility also attempt to set the owner and
  81 group of \fIfile\fR\fB\&.z\fR to the owner and group of file, but does not fail
  79 if this cannot be done. If appending the \fB\&.Z\fR to the file pathname would
  80 make the pathname exceed \fB1023\fR bytes, the command fails. If no files are
  81 specified, the standard input is compressed to the standard output.
  82 .sp
  83 .LP
  84 The amount of compression obtained depends on the size of the input, the number
  85 of \fIbits\fR per code, and the distribution of common substrings. Typically,
  86 text such as source code or English is reduced by 50\(mi60%. Compression is
  87 generally much better than that achieved by Huffman coding (as used in
  88 \fBpack\fR(1)) and it takes less time to compute. The \fIbits\fR parameter
  89 specified during compression is encoded within the compressed file, along with
  90 a magic number to ensure that neither decompression of random data nor
  91 recompression of compressed data is subsequently allowed.
  92 .SS "uncompress"
  96 .sp
  97 .LP
  93 The \fBuncompress\fR utility restores files to their original state after they
  94 have been compressed using the \fBcompress\fR utility. If no files are
  95 specified, the standard input is uncompressed to the standard output.
  96 .sp
  97 .LP
  98 This utility supports the uncompressing of any files produced by
  99 \fBcompress\fR. For files produced by \fBcompress\fR on other systems,
 100 \fBuncompress\fR supports 9- to 16-bit compression (see \fB-b\fR).
 101 .SS "zcat"
 107 .sp
 108 .LP
 102 The \fBzcat\fR utility writes to standard output the uncompressed form of files
 103 that have been compressed using \fBcompress\fR. It is the equivalent of
 104 \fBuncompress\fR \fB-c\fR. Input files are not affected.
 111 \fIuncompress\fR\fB-c\fR. Input files are not affected.
 105 .SH OPTIONS
 113 .sp
 114 .LP
 106 The following options are supported:
 107 .sp
 108 .ne 2
 109 .na
 110 \fB\fB-b\fR \fIbits\fR\fR
 111 .ad
 112 .RS 11n
 113 Sets the upper limit (in bits) for common substring codes. \fIbits\fR must be
 114 between 9 and 16 (16 is the default). Lowering the number of bits result in
```

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 115 larger, less compressed files.
 116 .RE

 118 .sp
 119 .ne 2
 120 .na
 121 \fB\fB-c\fR\fR
 122 .ad
 123 .RS 11n
 124 Writes to the standard output; no files are changed and no \fB\&.Z\fR files are
 125 created. The behavior of \fBzcat\fR is identical to that of '\fBuncompress\fR
 126 \fB-c\fR'.
 127 .RE

 129 .sp
 130 .ne 2
 131 .na
 132 \fB\fB-f\fR\fR
 133 .ad
 134 .RS 11n
 135 When compressing, forces compression of \fIfile\fR, even if it does not
 136 actually reduce the size of the file, or if the corresponding
 137 \fIfile\fR\fB\&.Z\fR file already exists.
 138 .sp
 139 If the \fB-f\fR option is not specified, and the process is not running in the
 140 background, prompts to verify whether an existing file should be overwritten.
 141 If the response is affirmative, the existing file is overwritten. When
 142 uncompressing, does not prompt for overwriting files. If the \fB-f\fR option is
 143 not specified, and the process is not running in the background, prompts to
 144 verify whether an existing file should be overwritten. If the standard input is
 145 not a terminal and \fB-f\fR is not specified, writes a diagnostic message to
 146 standard error and exits with a status greater than \fB0\fR.
 147 .RE

 149 .sp
 150 .ne 2
 151 .na
 152 \fB\fB-v\fR\fR
 153 .ad
 154 .RS 11n
 155 Verbose. Writes to standard error messages concerning the percentage reduction
 156 or expansion of each file.
 157 .RE

 159 .sp
 160 .ne 2
 161 .na
 162 \fB\fB-/\fR\fR
 163 .ad
 164 .RS 11n
 165 When compressing or decompressing, copies any extended system attributes
 166 associated with the source file to the target file and copies any extended
 167 system attributes associated with extended attributes of the source file to the
 168 corresponding extended attributes associated with the target file. If any
 169 extended system attributes cannot be copied, the original file is retained, a
 170 diagnostic is written to \fBstderr\fR, and the final exit status is
 171 \fBnon-zero\fR.
 172 .RE

 174 .SH OPERANDS
 184 .sp
 185 .LP
 175 The following operand is supported:
 176 .sp
 177 .ne 2
 178 .na
```

```
 179 \fB\fIfile\fR\fR
 180 .ad
 181 .RS 8n
 182 A path name of a file to be compressed by \fBcompress\fR, uncompressed by
 183 \fBuncompress\fR, or whose uncompressed form is written to standard out by
 184 \fBzcat\fR. If \fIfile\fR is \fB\(mi\fR, or if no \fIfile\fR is specified, the
 185 standard input is used.
 186 .RE

 188 .SH USAGE
 200 .sp
 201 .LP
 189 See \fBlargefile\fR(5) for the description of the behavior of \fBcompress\fR,
 190 \fBuncompress\fR, and \fBzcat\fR when encountering files greater than or equal
 191 to 2 Gbyte (2^31 bytes).
 204 to 2 Gbyte ( 2^31 bytes).
 192 .SH ENVIRONMENT VARIABLES
 206 .sp
 207 .LP
 193 See \fBenviron\fR(5) for descriptions of the following environment variables
 194 that affect the execution of \fBcompress\fR, \fBuncompress\fR, and \fBzcat\fR:
 195 \fBLANG\fR, \fBLC_ALL\fR, \fBLC_COLLATE\fR, \fBLC_CTYPE\fR, \fBLC_MESSAGES\fR,
 196 and \fBNLSPATH\fR.
 197 .sp
 198 .LP
 199 Affirmative responses are processed using the extended regular expression
 200 defined for the \fByesexpr\fR keyword in the \fBLC_MESSAGES\fR category of the
 201 user's locale. The locale specified in the \fBLC_COLLATE\fR category defines
 202 the behavior of ranges, equivalence classes, and multi-character collating
 203 elements used in the expression defined for \fByesexpr\fR. The locale specified
 204 in \fBLC_CTYPE\fR determines the locale for interpretation of sequences of
 205 bytes of text data a characters, the behavior of character classes used in the
 206 expression defined for the \fByesexpr\fR. See \fBlocale\fR(5).
 207 .SH EXIT STATUS
 223 .sp
 224 .LP
 208 The following error values are returned:
 209 .sp
 210 .ne 2
 211 .na
 212 \fB\fB0\fR\fR
 213 .ad
 214 .RS 6n
 215 Successful completion.
 216 .RE

 218 .sp
 219 .ne 2
 220 .na
 221 \fB\fB1\fR\fR
 222 .ad
 223 .RS 6n
 224 An error occurred.
 225 .RE

 227 .sp
 228 .ne 2
 229 .na
 230 \fB\fB2\fR\fR
 231 .ad
 232 .RS 6n
 233 One or more files were not compressed because they would have increased in size
 234 (and the \fB-f\fR option was not specified).
 235 .RE

 237 .sp
```

```
   238 .ne 2
   239 .na
   240 \fB\fB>2\fR\fR
   241 .ad
   242 .RS 6n
   243 An error occurred.
   244 .RE

   246 .SH ATTRIBUTES
   264 .sp
   265 .LP
   247 See \fBattributes\fR(5) for descriptions of the following attributes:
   248 .sp

   250 .sp
   251 .TS
   252 box;
   253 c | c
   254 l | l .
   255 ATTRIBUTE TYPE  ATTRIBUTE VALUE
   256 _
   257 CSI      Enabled
   258 _
   259 Interface Stability     Committed
   260 _
   261 Standard        See \fBstandards\fR(5).
   262 .TE

   264 .SH SEE ALSO
   284 .sp
   285 .LP
   265 \fBln\fR(1), \fBpack\fR(1), \fBfgetattr\fR(3C), \fBfsetattr\fR(3C),
   266 \fBattributes\fR(5), \fBenviron\fR(5), \fBlargefile\fR(5), \fBlocale\fR(5),
   267 \fBstandards\fR(5)
   268 .SH DIAGNOSTICS
   290 .sp
   269 .ne 2
   270 .na
   271 \fBUsage: \fBcompress [-fv/] [-b\fR \fImaxbits\fR\fB]\fR [\fIfile\fR\|.\|.\|. ]\
   293 \fBUsage: \fBcompress [-fv/] [-b\fR \fIbits\fR] [\fIfile\fR\|.\|.\|. ]\fR
   272 .ad
   273 .br
   274 .na
   275 \fB\fBcompress c [-fv] [-b\fR \fImaxbits\fR\fB]\fR [\fIfile\fR]\fR
   297 \fB\fBcompress c [-fv] [-b\fR \fIbits\fR] [\fIfile\fR\|.\|.\|. ]\fR
   276 .ad
   277 .sp .6
   278 .RS 4n
   279 Invalid options were specified on the command line.
   280 .RE

   282 .sp
   283 .ne 2
   284 .na
   285 \fBUsage: \fBuncompress [-fv] [-c | -/] [\fR\fIfile\fR\fB]...\fR\fR
   286 .ad
   287 .sp .6
   288 .RS 4n
   289 Invalid options were specified on the command line.
   290 .RE

   292 .sp
   293 .ne 2
   294 .na
   295 \fBMissing maxbits\fR
   296 .ad
```

```
   297 .sp .6
   298 .RS 4n
   299 Maxbits must follow \fB-b\fR, or invalid maxbits, not a numeric value.
   300 .RE

   302 .sp
   303 .ne 2
   304 .na
   305 \fB\fIfile\fR: not in compressed format\fR
   306 .ad
   307 .sp .6
   308 .RS 4n
   309 The file specified to \fBuncompress\fR has not been compressed.
   310 .RE

   312 .sp
   313 .ne 2
   314 .na
   315 \fB\fIfile\fR: compressed with \fIxx\fRbits, can only handle \fIyy\fRbits\fR
   316 .ad
   317 .sp .6
   318 .RS 4n
   319 \fBfile\fR was compressed by a program that could deal with more \fIbits\fR
   320 than the compress code on this machine. Recompress the file with smaller
   321 \fIbits\fR.
   322 .RE

   324 .sp
   325 .ne 2
   326 .na
   327 \fB\fIfile\fR: already has .\|Z suffix -- no change\fR
   328 .ad
   329 .sp .6
   330 .RS 4n
   331 The file is assumed to be already compressed. Rename the file and try again.
   332 .RE

   334 .sp
   335 .ne 2
   336 .na
   337 \fB\fIfile\fR already exists; do you wish to overwrite (yes or no)?\fR
   359 \fB\fIfile\fR: already exists; do you wish to overwrite (y or n)?\fR
   338 .ad
   339 .sp .6
   340 .RS 4n
   341 Respond \fBy\fR if you want the output file to be replaced; \fBn\fR if not.
   342 .RE

   344 .sp
   345 .ne 2
   346 .na
   347 \fBuncompress: corrupt input\fR
   348 .ad
   349 .sp .6
   350 .RS 4n
   351 A \fBSIGSEGV\fR violation was detected, which usually means that the input file
   352 is corrupted.
   353 .RE

   355 .sp
   356 .ne 2
   357 .na
   358 \fBCompression:\fIxx.xx\fR\fB%\fR\fR
   359 .ad
   360 .sp .6
   361 .RS 4n
```

```
362 Percentage of the input saved by compression. (Relevant only for \fB-v\fR.)
363 .RE

365 .sp
366 .ne 2
367 .na
368 \fB- - not a regular file: unchanged\fR
369 .ad
370 .sp .6
371 .RS 4n
372 When the input file is not a regular file, (such as a directory), it is left
373 unaltered.
374 .RE

376 .sp
377 .ne 2
378 .na
379 \fB- - has \fIxx\fR other links: unchanged\fR
380 .ad
381 .sp .6
382 .RS 4n
383 The input file has links; it is left unchanged. See \fBln\fR(1) for more
384 information.
385 .RE

387 .sp
388 .ne 2
389 .na
390 \fB- - file unchanged\fR
391 .ad
392 .sp .6
393 .RS 4n
394 No savings are achieved by compression. The input remains uncompressed.
395 .RE

397 .sp
398 .ne 2
399 .na
400 \fB- -filename too long to tack on .Z\fR
401 .ad
402 .sp .6
403 .RS 4n
404 The path name is too long to append the \fB\&.Z\fR suffix.
405 .RE

407 .sp
408 .ne 2
409 .na
410 \fB- -cannot preserve extended attributes. file unchanged\fR
411 .ad
412 .sp .6
413 .RS 4n
414 Extended system attributes could not be copied.
415 .RE

417 .SH NOTES
440 .sp
441 .LP
418 Although compressed files are compatible between machines with large memory,
419 \fB-b\fR 12 should be used for file transfer to architectures with a small
420 process data space (64KB or less).
421 .sp
422 .LP
423 \fBcompress\fR should be more flexible about the existence of the \fB\&.\|Z\fR
424 suffix.
```

****
**   8684 Wed Feb 5 01:53:18 2020**
new/usr/src/man/man1/pack.1
12284 errors in compress(1) and pack(1) man pages
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  47 .TH PACK 1 "Feb 5, 2020"
  47 .TH PACK 1 "Mar 13, 2008"
  48 .SH NAME
  49 pack, pcat, unpack \- compress and expand files
  50 .SH SYNOPSIS
  51 .LP
  51 .nf
  52 \fBpack\fR [\fB-f/\fR] [\fB-\fR] \fIfile\fR...
  53 .fi
  55 .LP
  56 .nf
  57 \fBpcat\fR \fIfile\fR...
  58 .fi
```

```
  60 .LP
  61 .nf
  62 \fBunpack\fR [\fB-/\fR] \fIfile\fR...
  63 .fi
  65 .SH DESCRIPTION
  66 .SS "pack"
  68 .sp
  69 .LP
  67 The \fBpack\fR command attempts to store the specified files in a compressed
  68 form. Wherever possible (and useful), each input file \fBfile\fR is replaced by
  69 a packed file \fBfile\fR\fB\&.z\fR with the same access modes, access and
  70 modified dates, and owner as those of \fBfile\fR. If \fBpack\fR is successful,
  71 \fBfile\fR is removed.
  72 .sp
  73 .LP
  74 The amount of compression obtained depends on the size of the input file and
  75 the character frequency distribution. Because a decoding tree forms the first
  76 part of each \fB\&.z\fR file, it is usually not worthwhile to pack files
  77 smaller than three blocks, unless the character frequency distribution is very
  78 skewed, which can occur with printer plots or pictures.
  79 .sp
  80 .LP
  81 Typically, text files are reduced to 60-75% of their original size. Load
  82 modules, which use a larger character set and have a more uniform distribution
  83 of characters, show little compression, the packed versions being about 90% of
  84 the original size.
  85 .sp
  86 .LP
  87 The \fBpack\fR utility returns a value that is the number of files that it
  88 failed to compress. If that number exceeds \fB255\fR, \fB255\fR is returned.
  89 .sp
  90 .LP
  91 No packing occurs if:
  92 .RS +4
  93 .TP
  94 .ie t \(bu
  95 .el o
  96 the file appears to be already packed
  97 .RE
  98 .RS +4
  99 .TP
 100 .ie t \(bu
 101 .el o
 102 the file name is too long to add the \fB\&.z\fR suffix
 103 .RE
 104 .RS +4
 105 .TP
 106 .ie t \(bu
 107 .el o
 108 the file has links
 109 .RE
 110 .RS +4
 111 .TP
 112 .ie t \(bu
 113 .el o
 114 the file is a directory
 115 .RE
 116 .RS +4
 117 .TP
 118 .ie t \(bu
 119 .el o
 120 the file cannot be opened
 121 .RE
 122 .RS +4
 123 .TP
```

```
   124 .ie t \(bu
   125 .el o
   126 the file is empty
   127 .RE
   128 .RS +4
   129 .TP
   130 .ie t \(bu
   131 .el o
   132 no disk storage blocks are saved by packing
   133 .RE
   134 .RS +4
   135 .TP
   136 .ie t \(bu
   137 .el o
   138 a file called \fBfile\fR\fB\&.z\fR already exists
   139 .RE
   140 .RS +4
   141 .TP
   142 .ie t \(bu
   143 .el o
   144 the \fB\&.z\fR file cannot be created
   145 .RE
   146 .RS +4
   147 .TP
   148 .ie t \(bu
   149 .el o
   150 an I/O error occurred during processing.
   151 .RE
   152 .sp
   153 .LP
   154 The last segment of the file name must be short enough to allow space for the
   155 appended \fB\&.z\fR extension. Directories cannot be compressed.
   158 appended \fB\&.z\fRextension. Directories cannot be compressed.
   156 .SS "pcat"
   160 .sp
   161 .LP
   157 The \fBpcat\fR command does for packed files what \fBcat\fR(1) does for
   158 ordinary files, except that \fBpcat\fR cannot be used as a filter. The
   159 specified files are unpacked and written to the standard output.
   160 .sp
   161 .LP
   162 \fBpcat\fR returns the number of files it was unable to unpack. Failure can
   163 occur if:
   164 .RS +4
   165 .TP
   166 .ie t \(bu
   167 .el o
   168 the file cannot be opened;
   169 .RE
   170 .RS +4
   171 .TP
   172 .ie t \(bu
   173 .el o
   174 the file does not appear to be the output of \fBpack\fR.
   175 .RE
   176 .SS "unpack"
   182 .sp
   183 .LP
   177 The \fBunpack\fR command expands files created by \fBpack\fR. For each
   178 \fBfile\fR specified in the command, a search is made for a file called
   179 \fBfile\fR\fB\&.z\fR (or just \fBfile\fR, if \fBfile\fR ends in \fB\&.z\fR). If
   180 this file appears to be a packed file, it is replaced by its expanded version.
   181 The new file has the \fB\&.z\fR suffix stripped from its name, and has the same
   182 access modes, access and modification dates, and owner as those of the packed
   183 file.
   184 .sp
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   185 .LP
   186 \fBunpack\fR returns a value that is the number of files it was unable to
   187 unpack. Failure can occur for the same reasons that it can in \fBpcat\fR, as
   188 well as for the following:
   189 .RS +4
   190 .TP
   191 .ie t \(bu
   192 .el o
   193 a file with the unpacked name already exists;
   194 .RE
   195 .RS +4
   196 .TP
   197 .ie t \(bu
   198 .el o
   199 the unpacked file cannot be created.
   200 .RE
   201 .SH OPTIONS
   209 .sp
   210 .LP
   202 The following options are supported by \fBpack\fR:
   203 .sp
   204 .ne 2
   205 .na
   206 \fB\fB-f\fR\fR
   207 .ad
   208 .RS 6n
   209 Forces packing of \fBfile\fR. This is useful for causing an entire directory to
   210 be packed even if some of the files do not benefit. Packed files can be
   211 restored to their original form using \fBunpack\fR or \fBpcat\fR.
   212 .RE
   214 .sp
   215 .LP
   216 The following options are supported by \fBpack\fR and \fBunpack\fR:
   217 .sp
   218 .ne 2
   219 .na
   220 \fB\fB-/\fR\fR
   221 .ad
   222 .RS 6n
   223 When packing or unpacking, copies any ACL and extended system attributes
   224 associated with the source file to the target file. If an ACL or extended
   225 system attributes cannot be copied, the original file is retained, a diagnostic
   226 message is written to \fBstderr\fR, and the final exit status is
   227 \fBnon-zero\fR.
   228 .RE
   230 .SH OPERANDS
   240 .sp
   241 .LP
   231 The following operands are supported:
   232 .sp
   233 .ne 2
   234 .na
   235 \fB\fBfile\fR\fR
   236 .ad
   237 .RS 8n
   238 A path name of a file to be packed, unpacked, or pcated; \fBfile\fR can include
   239 or omit the \fB\&.z\fR suffix.
   240 .RE
   242 .sp
   243 .ne 2
   244 .na
   245 \fB\fB\(mi\fR\fR
   246 .ad
```

```
247 .RS 8n
248 \fBpack\fR uses Huffman (minimum redundancy) codes on a byte-by-byte basis. If
249 the \fB\(mi\fR argument is used, an internal flag is set that causes the number
250 of times each byte is used, its relative frequency, and the code for the byte
251 to be printed on the standard output. Additional occurrences of \fB\(mi\fR in
252 place of \fBfile\fR causes the internal flag to be set and reset.
253 .RE

255 .SH USAGE
267 .sp
268 .LP
256 See \fBlargefile\fR(5) for the description of the behavior of \fBpack\fR,
257 \fBpcat\fR, and \fBunpack\fR when encountering files greater than or equal to 2
258 Gbyte (2^31 bytes).
271 Gbyte ( 2^31 bytes).
259 .SH EXAMPLES
273 .LP
260 \fBExample 1 \fRViewing a Packed File
261 .sp
262 .LP
263 To view a packed file named \fBfile.z\fR use:

265 .sp
266 .LP
267 \fBexample%\fR \fBpcat\fR \fBfile.z\fR

269 .sp
270 .LP
271 or just:

273 .sp
274 .LP
275 \fBexample%\fR \fBpcat\fR \fBfile\fR

277 .LP
278 \fBExample 2 \fRMaking an Unpacked Copy:
292 \fBExample 2 \fRMaking and Unpacked Copy:
279 .sp
280 .LP
281 To make an unpacked copy, say \fBnnn\fR, of a packed file named \fBfile.z\fR
282 (without destroying \fBfile.z\fR) use the command:

284 .sp
285 .LP
286 \fBexample%\fR \fBpcat\fR \fBfile\fR \fB>nnn\fR

288 .SH ENVIRONMENT VARIABLES
303 .sp
304 .LP
289 See \fBenviron\fR(5) for descriptions of the following environment variables
290 that affect the execution of \fBpack\fR, \fBpcat\fR, and \fBunpack\fR:
291 \fBLC_CTYPE\fR, \fBLC_MESSAGES\fR, and \fBNLSPATH\fR.
292 .SH EXIT STATUS
309 .sp
310 .LP
293 The following exit values are returned:
294 .sp
295 .ne 2
296 .na
297 \fB\fB0\fR\fR
298 .ad
299 .RS 6n
300 Successful completion.
301 .RE

303 .sp
```

```
304 .ne 2
305 .na
306 \fB\fB>0\fR\fR
307 .ad
308 .RS 6n
309 An error occurred. The number of files the command failed to pack/unpack is
310 returned. If the number of failures exceeds \fB255\fR, then \fB255\fR is
311 returned.
312 .RE

314 .SH ATTRIBUTES
333 .sp
334 .LP
315 See \fBattributes\fR(5) for descriptions of the following attributes:
316 .sp

318 .sp
319 .TS
320 box;
321 c | c
322 l | l .
323 ATTRIBUTE TYPE   ATTRIBUTE VALUE
324 _
325 CSI      Enabled
326 .TE

328 .SH SEE ALSO
349 .sp
350 .LP
329 \fBcat\fR(1), \fBcompress\fR(1), \fBzcat\fR(1), \fBfgetattr\fR(3C),
330 \fBfsetattr\fR(3C), \fBattributes\fR(5), \fBenviron\fR(5), \fBlargefile\fR(5)
```