NAME

cmp - compare two files

SYNOPSIS

cmp [**-l** | **-s** | **-x**] [**-bhz**] [**--ignore-initial**=*num1*[:num2]] [**--bytes**=*num*] *file1 file2* [*skip1* [*skip2*]]

DESCRIPTION

The **cmp** utility compares two files of any type and writes the results to the standard output. By default, **cmp** is silent if the files are the same; if they differ, the byte and line number at which the first difference occurred is reported.

Bytes and lines are numbered beginning with one.

The following options are available:

-b, **--print-bytes**
> Print each byte when a difference is found.

-h   Do not follow symbolic links.

-i *num1*[:num2], **--ignore-initial**=*num1*[:num2]
> Skip *num1* bytes from *file1*, and optionally skip *num2* bytes from *file2*. If *num2* is not specified, then *num1* is applied for both *file1* and *file2*.

-l, **--verbose**
> Print the byte number (decimal) and the differing byte values (octal) for each difference.

-n *num*, **--bytes**=num
> Only compare up to *num* bytes.

-s, **--silent**, **--quiet**
> Print nothing for differing files; return exit status only.

-x   Like **-l** but prints in hexadecimal and using zero as index for the first byte in the files.

-z   For regular files compare file sizes first, and fail the comparison if they are not equal.

The optional arguments *skip1* and *skip2* are the byte offsets from the beginning of *file1* and *file2*, respectively, where the comparison will begin. The offset is decimal by default, but may be expressed as a hexadecimal or octal value by preceding it with a leading ''0x'' or ''0''.

skip1 and *skip2* may also be specified with SI size suffixes.

EXIT STATUS

The **cmp** utility exits with one of the following values:

0   The files are identical.

1   The files are different; this includes the case where one file is identical to the first part of the other. In the latter case, if the **-s** option has not been specified, **cmp** writes to standard error that EOF was reached in the shorter file (before any differences were found).

>1   An error occurred.

EXAMPLES

Assuming a file named *example.txt* with the following contents:

    a
    b
    c

Compare stdin with *example.txt*:

    $ echo -e "a\nb\nc" | cmp - example.txt

Same as above but introducing a change in the third byte of stdin. Show the byte number (decimal) and differing byte (octal):

    $ echo -e "a\nR\nc" | cmp -l - example.txt
       3 122 142

Compare file sizes of *example.txt* and */boot/loader.conf* and return 1 if they are not equal. Note that **-z** can only be used with regular files:

    $ cmp -z example.txt /boot/loader.conf
    example.txt /boot/loader.conf differ: size

Compare stdin with *example.txt* omitting the first 4 bytes from stdin and the first 2 bytes from *example.txt*:

    $ echo -e "a\nR\nb\nc" | cmp - example.txt 4 2

SEE ALSO

diff(1), diff3(1)

STANDARDS

The **cmp** utility is expected to be IEEE Std 1003.2 ("POSIX.2") compatible. The **-b**, **-h**, **-i**, **-n**, **-x**, and **-z** options are extensions to the standard. *skip1* and *skip2* arguments are extensions to the standard.

HISTORY

A **cmp** command appeared in Version 1 AT&T UNIX.

BUGS

The phrase "SI size suffixes" above refers to the traditional power of two convention, as described in expand_number(3).