

NAME**cat** — concatenate files**SYNOPSIS****cat** [**-us**] [**-n|-b**] [**-TEv**] [**-teA**] [*file*]...**DESCRIPTION**

Copies each *file* (standard input stream if "-", the default), in order, to the standard output stream. In case of an input error, the file is skipped but processing continues.

OPTIONS

-u	Don't buffer output. Input is never buffered.
-s, --squeeze-blank	Replace runs of empty input lines with a single one.
-n, --number	Number lines from <i>l</i> , separating them from the <i>file</i> contents with a tab.
-b, --number-nonblank	Likewise, but don't number empty lines.
-T, --show-tabs	Replace tab characters with " ^I ".
-E, --show-ends	Prepend newlines with a dollar (" \$ ").
-v, --show-nonprinting	Replace non-printable bytes ($[0, 0x1F] \cup [0x7F, 0xFF] - \{0x09 \text{ (tab)}, 0x0A \text{ (newline)}\}$) with their corresponding " ^c " and " M-c " escapes (see STANDARDS, Escapes).
-t	-Tv
-e	-Ev
-A, --show-all	-TEv

EXIT STATUS

1 if a *file* couldn't be opened or read.

EXAMPLES

```
$ echo echoed | cat
echoed

$ echo abcdefg | split -b3
$ printf : | cat xaa - xab - xac
abc:defg
$ cat xaa - xab - xac # teletype input bolded
abcA
A
^DdefB
B
^Dg

$ cat form
Groceries for February:

        Bananas 3.5kg    $4.51
        Kiwis    2kg     $3.19    Call Siegfried to explain short!
        Bread           $20.21

$ cat -sbte form
1 Groceries for February:$
$
2 ^IBananas^I3.5kg^I$4.51$
3 ^IKiwis^I2kg^I$3.19^ICall Siegfried to explain short!$
4 ^IBread^I^I$20.21$
```

SEE ALSO

cp(1), dd(1), head(1), pr(1), tail(1), ascii(7)

STANDARDS

Conforms to IEEE Std 1003.1-2024 (“POSIX.1”); **-u** is the only flag specified by the standard. **-nb**, **-s**, **-tev** compatible with 4BSD. Remaining flags (**-TEA**) compatible with the GNU system.

Escapes

	0x0	0x1	0x2	0x3	0x4	0x5	0x6	0x7	0x8	0x9	0xA	0xB	0xC	0xD	0xE	0xF
0x00	^@	^A	^B	^C	^D	^E	^F	^G	^H	^I		^K	^L	^M	^N	^O
0x10	^P	^Q	^R	^S	^T	^U	^V	^W	^X	^Y	^Z	^[^\	^]	^^	^_
0x70																^?

Above **0x80**, the table repeats but with **M-** prepended (i.e. **0xC1** is **M-A** and **0x8A** — **M-^J**).

HISTORY

Appears in the first edition of the UNIX Programmer’s Manual as **cat(I)**:

NAME cat -- concatenate and print

SYNOPSIS cat file₁ ...

With the standard input stream used if no *files*, as present-day.

Version 3 AT&T UNIX adds the **-**-as-standard-input-stream behaviour. This can safely be considered fully-formed.

Version 7 AT&T UNIX sees a rewrite in C with `<stdio.h>`, and **-u** disabling buffering of the standard output stream (considering it feeds **getc()** directly into **putchar()** until end-of-file, this is a significant penalty, but is, regardless, most likely decidedly slower than the previous implementation, which mapped full-block **read(II)s** onto **write(II)s**). It also explicitly checks for, skips, and warns about one of the input files also being bound to the standard output stream.

3BSD uses a larger, *1024*-byte **BUFSIZ**, and hence output buffer.

4BSD introduces **-nb**, **-s**, and **-tve** — all as today.

4.3BSD sees a fast **read(2)/write(2)** path if no flags were specified.

Programmer’s Workbench (PWB/UNIX), instead, sees **-s**, silencing errors, and a re-write in terms of **read(2)/write(2)**. Oddly, AT&T System III UNIX inherits this **-s** into an Version 7 AT&T UNIX base.

AT&T System V Release 2 UNIX also sees **-tve**, except **-te** require **-v** to activate, **-t** also controls **0x12** (form feed), and **M-^J** (newline + high bit) is **M-^\$<newline>**. The former can be attributed to implementing according to the 4BSD manpage, which erroneously implies the **-v** requirement. The latter only to low QoI. Without **-v**, a block-wise **read(2)/write(2)** copy is performed.