

**NAME****pathchk** — validate filenames**SYNOPSIS****pathchk** [**-Pp**] *path*...**DESCRIPTION**Checks for validity and/or portability of *paths*:

- total length,
- length of individual components,
- character set, and
- searchability.

Failed paths and components are listed in the standard error stream alongside the failed predicate.

With **-p**, each *path* is considered as if on an abstract base-line POSIX system:

- maximum length of `_POSIX_PATH_MAX` (**256**),
- maximum component length of `_POSIX_NAME_MAX` (**14**),
- the portable filename character set: `[A-Za-z0-9._-]+`.

Otherwise, it resides on the current system:

- maximum length of `PATH_MAX` (most likely **4096**),
- maximum component length of `pathconf(_PC_NAME_MAX)` for the parent directory, if exists, or `_POSIX_NAME_MAX`,
- alphabet verified indirectly by `lstat(2)`, which should return `EINVAL`,
- searchability verified by `lstat(2)`, which returns `EACCES` if any component was unsearchable.

**OPTIONS**

- P**                      Additionally reject empty *paths* and components starting with `"-"`s.
- p**                      Check for the POSIX system (see above).
- portability -Pp**

**EXIT STATUS****1** if any *path* failed any check.**EXAMPLES**

Check whether a directory tree can be safely transferred to any conformant system:

```
$ find . -exec pathchk -Pp {} +
# Broken and reduced to fit the page
pathchk: ./POSIX/POSIX.1-202x_d1.pdf: POSIX.1-202x_d1.pdf: too long (19 > 14)
pathchk: ./POSIX/IEEE P1003.2 Draft 11.2-September 1991.txt: ...:
too long (44 > 14)
pathchk: ./POSIX/IEEE P1003.2 Draft 11.2-September 1991.txt: ...:
non-portable characters: -
pathchk: ./BSD/UNIX_Users_Manual_Release_3_Jun80.pdf: ...: too long (37 > 14)
pathchk: ./BSD/PWB UNIX User's Manual, Edition 1.0.pdf: ...: too long (39 > 14)
pathchk: ./BSD/PWB UNIX User's Manual, Edition 1.0.pdf: ...:
non-portable characters: ' ,
pathchk: ./Документация по ДЕМОС 2.10.tbz2: ...: too long (50 > 14)
pathchk: ./Документация по ДЕМОС 2.10.tbz2: ...:
non-portable characters: Документация по ДЕМОС
pathchk: ./fips180-2withchangenotice.pdf: ...: too long (29 > 14)
```

**SEE ALSO**`pathconf(3)`

## STANDARDS

Conforms to IEEE Std 1003.1-2024 (“POSIX.1”); **--portability** is an extension, originating from the GNU system.

## HISTORY

Created in IEEE Std 1003.2-1992 (“POSIX.2”) with only **-p**, to, alongside `sh(1)` `noclobber` (**set -C**), replace the need for the proposed `mktemp(1)`, **validfnam**, and similar utilities, quoting pairing **pathchk** with a loop over `"$TMPDIR/application_abbreviation$.suffix"` as sufficient, instead.

IEEE Std 1003.1-2008 (“POSIX.1”) adds **-P**, noting that the **-Pp** needs to be used to ensure “full file-name portability” across all systems, with the split being retained for compatibility.

## BUGS

`PATH_MAX`, well, isn’t — it’s defined to **4096** on all modern systems for compatibility, but longer paths are, usually, perfectly legal, just not necessarily usable as a syscall argument. Keep this in mind.