



Bug 2451615 (CVE-2026-4878) - CVE-2026-4878 libcap: libcap: Privilege escalation via TOCTOU race condition in cap_set_file()

Keywords:

Reported: 2026-03-26 06:56 UTC by OSIDB Bzimport

Status: NEW

Modified: 2026-04-17 05:48 UTC ([History](#))

Alias: CVE-2026-4878

CC List: 1 user ([show](#))

Deadline: 2026-04-06

Fixed In Version:

Product: Security Response

Clone Of:

Component: vulnerability

Environment:

Last Closed:

Embargoed:

Version: unspecified

Hardware: All

OS: Linux

Priority: high

Severity: high

Target Milestone: ---

Assignee: Product Security

QA Contact:

Docs Contact:

URL:

Whiteboard:

Depends On:

Blocks:

TreeView+ [depends on](#) / [blocked](#)

Attachments ([Terms of Use](#))

OSIDB Bzimport 2026-03-26 06:56:43 UTC

[Description](#)

A time-of-check-to-time-of-use (TOCTOU) race condition in libcap's `cap_set_file()` allows a local unprivileged user to redirect file capability updates to an attacker-controlled file and gain elevated privileges. The function first validates the target path with `lstat()` (which does not follow symlinks) and enforces that it is a regular, non-symlink file, but then applies or removes `security.capability` using `setxattr()` / `removexattr()`, which re-resolve the path and do follow symlinks. An attacker with write access to the parent directory can exploit the window between these calls by atomically swapping the validated regular file with a symlink or alternate file using `renameat2(RENAM_EXCHANGE)`. As a

result, capabilities can be injected into or stripped from an unintended executable, for example when a privileged process (such as setcap, package scripts, or container tooling) invokes `cap_set_file()` on an attacker-influenced path. This can be abused to grant capabilities like `CAP_SETUID` to an attacker's binary and escalate to root.

Note

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