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Security Advisory: CVE-2025-70100 - Divide By Zero in lwext4

When mounting or parsing a specially crafted EXT4 image that encodes a zero logical block size, lwext4 passes the invalid value into ext4_block_set_lb_size(), which performs arithmetic without validation and triggers a divide-by-

Summary: ext4_mount() reads the logical block size from the filesystem superblock and forwards it directly to ext4_block_set_lb_size() in ext4_blockdev.c. ext4_block_set_lb_size() uses lb_size in a division at line 127 without a prior zero-check, so a crafted image that encodes lb_size == 0 causes a Floating Point Exception. The process terminates immediately; under standard

SIGFPE is raised, under ASan the signal is intercepted and reported as FPE on address 0x55f254cc29e9.

CWE: CWE-369 - Divide By Zero

Affected Component:

```
src/ext4_blockdev.c:127
Function: ext4_block_set_lb_size()

src/ext4.c:421
Function: ext4_mount()
```

Affected

(Lightweight EXT4 filesystem library)

Affected Version: lwext4 1.0.0, commit 58bcf89a121b72d4fb66334f1693d3b30e4cb9c5. Affects versions based on or equivalent to the 2016-era codebase.

Attack Conditions: An attacker supplies a specially crafted or corrupted EXT4 image to any application that integrates lwext4 for mounting

. No elevated privileges are required; only local access (AV:L) to provide the malicious image is needed.

Impact: The divide-by-zero causes an immediate process crash, resulting in a denial of service. No evidence of code execution was observed.

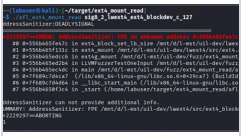
Fix / mitigation status: The issue is addressed in lwext4 v1.0.1, released by Aladdin-R-

upgrade to v1.0.1 or apply the corresponding patch.

References

- Issue: github.com/gkostka/lwext4/issu...
- PoC: github.com/sigdevel/pocs/blob/...
- Fix: github.com/Aladdin-R-D/lwext4/...

Credit Alexander A. Shvedov (@sigdevel) & Daniil Dulov



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#infosec

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