CVE-2022-36086

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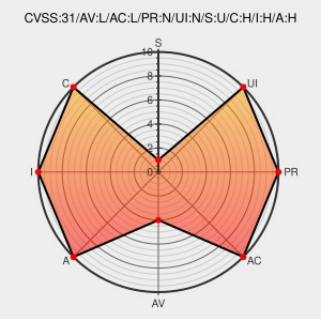
CVE-2022-36086 - advisory for GHSA-xg8p-34w2-j49j

Source: Mitre | Source: NIST | CVE.ORG | Print: PDF



Certain versions of Linked-list-allocator from Rust-osdev contain the following vulnerability:

linked_list_allocator is an allocator usable for no_std systems. Prior to version 0.10.2, the heap initialization methods were missing a minimum size check for the given heap size argument. This could lead to out-of-bound writes when a heap was initialized with a size smaller than `3 * size_of::<usize>` because of metadata write operations. This vulnerability impacts all the initialization functions on the `Heap` and `LockedHeap` types, including `Heap::new`, `Heap::init`, `Heap::init_from_slice`, and `LockedHeap::new`. It also affects multiple uses of the `Heap::extend` method. Version 0.10.2 contains a patch for the issue. As a workaround, ensure that the heap is only initialized with a size larger than `3 * size_of::<usize>` and that the `Heap::extend` method is only called with sizes larger than `2 * size_of::<usize>()`. Also, ensure that the total heap size is (and stays) a multiple of `2 * size_of::<usize>()`.

CVE-2022-36086 has been assigned by security-advisories@github.com to track the vulnerability - currently rated as CRITICAL severity.

Affected Vendor/Software: **rust-osdev** - **linked-list-allocator** version **< 0.10.2**

CVSS3 Score: 9.8 - CRITICAL

Attack Vector	Attack Complexity	Privileges Required	User Interaction
NETWORK	LOW	NONE	NONE
Scope	**Confidentiality Impact**	**Integrity Impact**	**Availability Impact**
UNCHANGED	HIGH	HIGH	HIGH

CVE References

Description	Tags	Link
Out-of-bound writes possible on `Heap` initialization and	github.com	CONFIRM github.com/rust-osdev/linked-list-

`Heap::extend` · Advisory · rust-osdev/linked-list-allocator · GitHub	text/html	allocator/security/advisories/GHSA-xg8p-34w2-j49j
Merge pull request from GHSA-xg8p-34w2-j49j · rust-osdev/linked-list-allocator@013b075 · GitHub	github.com text/html	MISC github.com/rust-osdev/linked-list-allocator/commit/013b0758643943e8df5b17bbb495460ff47e8bbf

There are currently no QIDs associated with this CVE

Known Affected Configurations (CPE V2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Application	Rust-osdev	Linked-list-allocator	All	All	All	All

cpe:2.3:a:rust-osdev:linked-list-allocator:*:*:*:*:*:rust:*:*:

No vendor comments have been submitted for this CVE

Social Mentions

Source	Title	Posted (UTC)
@CVEreport	CVE-2022-36086 : linked_list_allocator is an allocator usable for no_std systems. Prior to version 0.10.2, the heap… twitter.com/i/web/status/1…	2022-09-07 22:57:43
/r/netcve	CVE-2022-36086	2022-09-07 23:38:17

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