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RUSTSEC-2020-0148

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Multiple soundness issues in `Ptr`

Reported	December 10, 2020
Issued	March 26, 2021 (last modified: October 19, 2021)
Package	cgc (crates.io)
Type	Vulnerability
Categories	memory-corruption
Keywords	#memory-safety #aliasing #concurrency
Aliases	CVE-2020-36466 CVE-2020-36467 CVE-2020-36468

Details <https://github.com/playXE/cgc/issues/5>

CVSS Score 5.9 MEDIUM

CVSS Details	
Attack vector	Network
Attack complexity	High
Privileges required	None
User interaction	None
Scope	Unchanged
Confidentiality	None
Integrity	None
Availability	High

CVSS Vector [CVSS:3.1/AV:N/AC:H/PR:N/UI:N/S:U/C:N/I:N/A:H](#)

Patched no patched versions

Description

Affected versions of this crate have the following issues:

1. `Ptr` implements `Send` and `Sync` for all types, this can lead to data races by sending non-thread safe types across threads.
2. `Ptr::get` violates mutable alias rules by returning multiple mutable references to the same object.
3. `Ptr::write` uses non-atomic writes to the underlying pointer. This means that when used across threads it can lead to data races.