# CWE Detail – CWE-588

## Description

Casting a non-structure type to a structure type and accessing a field can lead to memory access errors or data corruption.

## Extended Description

N/A

## Threat-Mapped Scoring

Score: 0.0

Priority: Unclassified

## Observed Examples (CVEs)

**•** CVE-2021-3510: JSON decoder accesses a C union using an invalid offset to an object

## Modes of Introduction

**•** Implementation: N/A

## Common Consequences

**•** Impact: Modify Memory — Notes: Adjacent variables in memory may be corrupted by assignments performed on fields after the cast.

**•** Impact: DoS: Crash, Exit, or Restart — Notes: Execution may end due to a memory access error.

## Potential Mitigations

**•** Requirements: The choice could be made to use a language that is not susceptible to these issues. (Effectiveness: N/A)

**•** Implementation: Review of type casting operations can identify locations where incompatible types are cast. (Effectiveness: N/A)

## Demonstrative Examples

**•** N/A