

- Secrets
- ABAP
- Apex
- C**
- C++
- CloudFormation
- COBOL
- C#
- CSS
- Flex
- Go
- HTML
- Java
- JavaScript
- Kotlin
- Kubernetes
- Objective C
- PHP
- PL/I
- PL/SQL
- Python
- RPG
- Ruby
- Scala
- Swift
- Terraform
- Text
- TypeScript
- T-SQL
- VB.NET
- VB6
- XML



C static code analysis

Unique rules to find Bugs, Vulnerabilities, Security Hotspots, and Code Smells in your C code

All rules **311**

Vulnerability **13**

Bug **74**

Security Hotspot **18**

Code Smell **206**

Quick Fix **14**

Tags

Search by name...



"memset" should not be used to delete sensitive data

Vulnerability

POSIX functions should not be called with arguments that trigger buffer overflows

Vulnerability

XML parsers should not be vulnerable to XXE attacks

Vulnerability

Function-like macros should not be invoked without all of their arguments

Bug

The address of an automatic object should not be assigned to another object that may persist after the first object has ceased to exist

Bug

"pthread_mutex_t" should be unlocked in the reverse order they were locked

Bug

"pthread_mutex_t" should be properly initialized and destroyed

Bug

"pthread_mutex_t" should not be consecutively locked or unlocked twice

Bug

Functions with "noreturn" attribute should not return

Bug

"memcpy" should only be called with pointers to trivially copyable types with no padding

Bug

"volatile" should not be used to qualify objects for which the meaning is not defined

Analyze your code

Bug Critical

`volatile` can be used to qualify many objects in C and C++, but only a few of the possible places have a well-defined meaning (global variables and local variables for instance). There is no well-defined meaning to the use of `volatile` to qualify a function return type or a function parameter. Furthermore, for structured bindings, the `volatile` qualifier appertains to the decomposed object which cannot be referred to. Since C++20, these uses are deprecated, but even before you should not use `volatile` in those places.

This rule raises an issue for a `volatile` qualified function return type, function parameter, and structured binding (available in C++ since C++17).

Noncompliant Code Example

```
int volatile f(int volatile i); // Noncompliant, both for the  
  
void g() {  
    auto volatile [a, b] = getPair(); // Noncompliant  
}
```

Available In:

sonarlint | sonarcloud | sonarqube Developer Edition

© 2008-2022 SonarSource S.A., Switzerland. All content is copyright protected. SONAR, SONARSOURCE, SONARLINT, SONARQUBE and SONARCLOUD are trademarks of SonarSource S.A. All other trademarks and copyrights are the property of their respective owners. All rights are expressly reserved.
[Privacy Policy](#)

Stack allocated memory and non-owned memory should not be freed

 Bug

Closed resources should not be accessed

 Bug

Dynamically allocated memory should be released

 Bug

Freed memory should not be used