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C++ static code analysis

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

All rules **578**

Vulnerability **13**

Bug **111**

Security Hotspot **18**

Code Smell **436**

Quick Fix **68**

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

Assigning to an optional should directly target the optional

Bug

Result of the standard remove algorithms should not be ignored

Bug

"std::scoped_lock" should be created with constructor arguments

Bug

Objects should not be sliced

Bug

Immediately dangling references should not be created

Bug

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

Bug

"pthread_mutex_t" should be properly

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

Analyze your code

Bug Blocker symbolic-execution based-on-misra cert

If the address of an automatic object is assigned to another automatic object of larger scope, or to a static object, or returned from a function then the object containing the address may exist beyond the time when the original object ceases to exist (and its address becomes invalid).

Noncompliant Code Example

```
int* f(void) {
    int local_auto;
    return &local_auto; // Noncompliant, returning address of a
}
```

See

- MISRA C:2004, 17.6
- MISRA C++:2008, 7-5-2
- MISRA C:2012, 18.6
- [CERT, DCL30-C](#) - Declare objects with appropriate storage durations

Available in:

sonarlint sonarcloud sonarqube Developer Edition

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initialized and destroyed

 Bug

"pthread_mutex_t" should not be
consecutively locked or unlocked
twice

 Bug

"std::move" and "std::forward" should
not be confused

 Bug

A call to "wait()" on a
"std::condition_variable" should have a