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 `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 initialized and destroyed

🐛 Bug

"pthread_mutex_t" should not be consecutively locked or unlocked twice

---

Function names should comply with a naming convention

Analyze your code

🔵 Code Smell   ✅ Minor ❓   🏷 convention

Shared naming conventions allow teams to collaborate efficiently. This rule checks that all function names match a provided regular expression.

Noncompliant Code Example

With default provided regular expression: `^[a-z][a-zA-Z0-9]*$`:

```
void DoSomething (void);
```

Compliant Solution

```
void doSomething (void);
```

Available In:

sonarlint | sonarcloud | sonarqube Developer Edition

🐞 Bug

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

🐞 Bug

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

🐞 Bug

A pointer to a virtual base class shall only be cast to a pointer to a derived class by means of dynamic_cast

🐞 Bug

Functions with "noreturn" attribute should not return

🐞 Bug

RAII objects should not be temporary

🐞 Bug

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

🐞 Bug

"memcpy", "memmove", and "memset" should only be called with pointers to trivially copyable types

🐞 Bug

"std::auto_ptr" should not be used

🐞 Bug

Destructors should be "noexcept"

🐞 Bug