

CWE WEAKNESS IDS MAPPED TO CODESONAR® 6.2 C/C++ WARNING CLASSES

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INTRODUCTION

The Common Weakness Enumeration (CWE™) is a list of software weakness types. Creating the list is a community initiative aimed at creating specific and succinct definitions for each common weakness type.

Every CodeSonar 6.2 warning report includes the numbers of any CWE weakness IDs that are closely mapped to the warning's class. (The close mapping for a warning class is the set of categories—including CWE weakness IDs—that most closely match the class, if any).

You can configure CodeSonar to enable and disable warning classes mapped to specific CWE weakness IDs, or use build presets to enable all warning classes that are closely mapped to any CWE weakness IDs. In addition, you can use the CodeSonar search function to find warnings related to specific CWE weakness IDs.

CodeSonar 6.2 is using CWE v4.4 (released March 15, 2021).

For more information on Common Weakness Enumeration:

<https://cwe.mitre.org/data/index.html>

The remainder of this document comprises two tables:

- A table showing the close mapping between CodeSonar C and C++ warning classes and CWEweakness IDs.
- A table showing the broad mapping between CodeSonar C and C++ warning classes and CWE weakness IDs. The broad CWE mapping for a CodeSonar warning class combines CWEweakness IDs from four sources:
 1. The close CWE mapping for the class.
 2. Other CWE weakness IDs that are related to the class in a meaningful way, but noteligible for the close mapping.
 3. For all CWE weakness IDs from sources 1 and 2, all *ancestors* in the CWE hierarchy.
 4. For all CWE weakness IDs from sources 1 and 2, all *descendants* in the CWE hierarchy.

A separate document, [CWE Weakness IDs Mapped to CodeSonar® Java Warning Classes](#), lists the CodeSonar Java warning classes that are closely and broadly mapped to CWE weakness IDs.

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CWE CLOSE MAPPING: C/C++ (CODESONAR V6.2)

The following table lists the CodeSonar C/C++ warning classes that are closely mapped to CWEweakness IDs.

Category ID	Category Name	CodeSonar Class Name
CWE:14	Compiler Removal of Code to Clear Buffers	Use of memset
CWE:15	External Control of System or Configuration Setting	Tainted Configuration Setting
CWE:20	Improper Input Validation	Coercion Alters Value Cast Alters Value Tainted Buffer Access
CWE:22	Improper Limitation of a Pathname to a Restricted Directory ('Path Traversal')	Tainted Filename
CWE:73	External Control of File Name or Path	Tainted Filename
CWE:78	Improper Neutralization of Special Elements used in an OS Command ('OSCommand Injection')	Command Injection Untrusted Process Creation
CWE:88	Improper Neutralization of Argument Delimiters in a Command ('ArgumentInjection')	Command Injection
CWE:89	Improper Neutralization of Special Elements used in an SQL Command ('SQL Injection')	SQL Injection
CWE:90	Improper Neutralization of Special Elements used in an LDAP Query ('LDAPInjection')	LDAP Injection
CWE:99	Improper Control of Resource Identifiers ('Resource Injection')	Tainted Network Address Tainted Filename Untrusted Network Host Untrusted Network Port
CWE:114	Process Control	Command Injection Library Injection Untrusted Library Load
CWE:119	Improper Restriction of Operations within the Bounds of a Memory Buffer	Tainted Buffer Access Type Overrun Type Underrun High Risk Loop



CWE:120	Buffer Copy without Checking Size of Input ('Classic Buffer Overflow')	<ul style="list-style-type: none"> Use of getopt Use of getpass Use of gets Use of getwd Use of OemToAnsi Use of OemToChar Use of recvmsg Use of strcat Use of StrCatChainW Use of strchr Use of strcmp Use of strcoll Use of strcpy Use of strcspn Use of strlen Use of strpbrk Use of strrchr Use of strspn Use of strstr Use of strtok Use of strtrns Use of syslog Buffer Overrun
CWE:128	Wrap-around Error	<ul style="list-style-type: none"> Addition Overflow of Allocation Size Integer Overflow of Allocation Size Multiplication Overflow of Allocation Size Subtraction Underflow of Allocation Size Addition Overflow of Size Multiplication Overflow of Size Subtraction Underflow of Size
CWE:131	Incorrect Calculation of Buffer Size	<ul style="list-style-type: none"> Addition Overflow of Allocation Size Integer Overflow of Allocation Size Multiplication Overflow of Allocation Size Subtraction Underflow of Allocation Size Truncation of Allocation Size Tainted Allocation Size
CWE:134	Use of Externally-Controlled Format String	<ul style="list-style-type: none"> Use of FormatMessage Format String Injection Format String
CWE:136	Type Errors	<ul style="list-style-type: none"> Inappropriate Assignment Type Mismatched Operand Types



CWE:170	Improper Null Termination	No Space For Null Terminator Unterminated C String
CWE:190	Integer Overflow or Wraparound	Addition Overflow of Allocation Size Integer Overflow of Allocation Size Multiplication Overflow of Allocation Size Subtraction Underflow of Allocation Size Addition Overflow of Size Multiplication Overflow of Size Subtraction Underflow of Size
CWE:191	Integer Underflow (Wrap or Wraparound)	Subtraction Underflow of Allocation Size Subtraction Underflow of Size
CWE:192	Integer Coercion Error	Truncation of Allocation Size Coercion Alters Value Cast Alters Value Truncation of Size
CWE:197	Numeric Truncation Error	Truncation of Allocation Size Truncation of Size
CWE:200	Exposure of Sensitive Information to an Unauthorized Actor	Tainted Write
CWE:227	7PK - API Abuse	GlobalHandle on GMEM_FIXED Memory GlobalLock on GMEM_FIXED Memory GlobalUnlock on GMEM_FIXED Memory LocalHandle on LMEM_FIXED Memory LocalLock on LMEM_FIXED Memory LocalUnlock on LMEM_FIXED Memory Pool Mismatch Negative file descriptor Floating Point Domain Error Arctangent Domain Error Raises FE_INVALID Logarithm on Negative Value Undefined Power of Zero sqrt on Negative Value Argument Too High Argument Too Low Floating Point Range Error cosh on High Number cosh on Low Number Gamma on Zero Logarithm on Zero MAX_PATH Exceeded



CWE:242	Use of Inherently Dangerous Function	Use of gets Use of getwd Use of chroot Use of crypt Use of drem Use of gamma Use of longjmp Use of setjmp Use of mktemp Use of tmpfile Use of tmpnam Use of vfork
CWE:243	Creation of chroot Jail Without Changing Working Directory	Use of chroot
CWE:243	Creation of chroot Jail Without Changing Working Directory	chroot without chdir
CWE:252	Unchecked Return Value	Ignored Return Value
CWE:256	Unprotected Storage of Credentials	Plaintext Storage of Password
CWE:259	Use of Hard-coded Password	Hardcoded Authentication
CWE:269	Improper Privilege Management	Use of AddAccessAllowedAce Use of AddAccessDeniedAce
CWE:275	Permission Issues	Write to Read Only File
CWE:281	Improper Preservation of Permissions	Use of AddAccessAllowedAce Use of AddAccessDeniedAce
CWE:284	Improper Access Control	Null Security Descriptor
CWE:311	Missing Encryption of Sensitive Data	Plaintext Storage of Password Plaintext Transmission of Password
CWE:313	Cleartext Storage in a File or on Disk	Plaintext Storage of Password
CWE:316	Cleartext Storage of Sensitive Information in Memory	Plaintext Storage of Password
CWE:318	Cleartext Storage of Sensitive Information in Executable	Hardcoded Authentication Hardcoded Crypto Key Hardcoded Crypto Salt Plaintext Storage of Password
CWE:319	Cleartext Transmission of Sensitive Information	Plaintext Transmission of Password
CWE:321	Use of Hard-coded Cryptographic Key	Hardcoded Crypto Key
CWE:325	Missing Cryptographic Step	Encryption without Padding
CWE:326	Inadequate Encryption Strength	Use of crypt Weak Cryptography
CWE:327	Use of a Broken or Risky Cryptographic Algorithm	Use of crypt Use of rand Use of rand48 Function Use of random Weak Cryptography Use of Weak Cryptographic Algorithm

CWE:328	Reversible One-Way Hash	Use of crypt Weak Cryptography
CWE:330	Use of Insufficiently Random Values	Use of crypt Weak Cryptography
CWE:331	Insufficient Entropy	Encryption without Padding
CWE:332	Insufficient Entropy in PRNG	Use of rand Use of rand48 Function Use of random
CWE:334	Small Space of Random Values	Use of rand Use of rand48 Function Use of random
CWE:338	Use of Cryptographically Weak Pseudo-Random Number Generator (PRNG)	Use of crypt Use of rand Use of rand48 Function Use of random Weak Cryptography
CWE:362	Concurrent Execution using Shared Resource with Improper Synchronization('Race Condition')	Data Race
CWE:364	Signal Handler Race Condition	Data Race
CWE:366	Race Condition within a Thread	Data Race
CWE:367	Time-of-check Time-of-use (TOCTOU) Race Condition	File System Race Condition
CWE:369	Divide By Zero	Division By Zero Float Division By Zero
CWE:377	Insecure Temporary File	Use of GetTempFileName Use of mkstemp Use of tmpfile Use of tmpnam
CWE:390	Detection of Error Condition Without Action	Empty if Statement
CWE:391	Unchecked Error Condition	Ignored Return Value
CWE:394	Unexpected Status Code or Return Value	Ignored Return Value
CWE:398	7PK - Code Quality	Unused Value
CWE:400	Uncontrolled Resource Consumption	Excessive Stack Depth Potential Unbounded Loop
CWE:401	Missing Release of Memory after Effective Lifetime	Leak
CWE:410	Insufficient Resource Pool	Excessive Stack Depth
CWE:411	Resource Locking Problems	Try-lock that will never succeed
CWE:413	Improper Resource Locking	Data Race Missing Lock Acquisition
CWE:415	Double Free	Double Free
CWE:416	Use After Free	Use After Free
CWE:427	Uncontrolled Search Path Element	Tainted Environment Variable
CWE:452	Initialization and Cleanup Errors	Double Initialization

CWE:457	Use of Uninitialized Variable	Uninitialized Variable
CWE:459	Incomplete Cleanup	Leak
CWE:465	Pointer Issues	Misaligned Object Return Pointer to Freed High Risk Loop Pointer Before Beginning of Object Pointer Past End of Object
CWE:474	Use of Function with Inconsistent Implementations	Use of gamma
CWE:475	Undefined Behavior for Input to API	Overlapping Memory Regions
CWE:476	NULL Pointer Dereference	Null Pointer Dereference Unchecked Parameter Dereference
CWE:477	Use of Obsolete Function	Use of cuserid Use of drem Use of gamma Use of LoadModule Use of MoveFile Use of WinExec
CWE:478	Missing Default Case in Switch Statement	Missing default Assignment in Conditional Assignment Result in Expression
CWE:484	Omitted Break Statement in Switch	Missing break
CWE:485	7PK - Encapsulation	Scope Could Be File Static Scope Could Be Local Static
CWE:489	Active Debug Code	Leftover Debug Code
CWE:506	Embedded Malicious Code	Hardcoded DNS Name Untrusted Network Host
CWE:511	Logic/Time Bomb	Potential Timebomb
CWE:540	Inclusion of Sensitive Information in Source Code	Hardcoded Authentication Hardcoded Crypto Key
CWE:546	Suspicious Comment	Comment Suggests Code Unfinished
CWE:547	Use of Hard-coded, Security-relevant Constants	Hardcoded Authentication Hardcoded Crypto Key
CWE:557	Concurrency Issues	Deadlock Blocking in Critical Section
CWE:558	Use of getlogin() in Multithreaded Application	Use of getlogin



CWE:561	Dead Code	<ul style="list-style-type: none"> Unexercised Call Unexercised Computation Unexercised Conditional Unexercised Control Flow Unexercised Data Flow Unreachable Call Unreachable Catch Unreachable Computation Unreachable Conditional Unreachable Control Flow Unreachable Data Flow Unused Label Unused Macro Unused Parameter Unused Tag Unused Type
CWE:562	Return of Stack Variable Address	Return Pointer to Local
CWE:563	Assignment to Variable without Use	Unused Value
CWE:567	Unsynchronized Access to Shared Data in a Multithreaded Context	Data Race
CWE:570	Expression is Always False	Redundant Condition
CWE:571	Expression is Always True	Redundant Condition
CWE:573	Improper Following of Specification by Caller	<ul style="list-style-type: none"> Use After Free Division By Zero Buffer Overrun Buffer Underrun Null Pointer Dereference Tainted Buffer Access Type Overrun Type Underrun Pointer Before Beginning of Object Pointer Past End of Object
CWE:587	Assignment of a Fixed Address to a Pointer	Coercion: Integer Constant to Pointer
CWE:589	Call to Non-ubiquitous API	Use of drem
CWE:590	Free of Memory not on the Heap	<ul style="list-style-type: none"> Free Null Pointer Type Mismatch
CWE:605	Multiple Binds to the Same Port	Use of SO_REUSEADDR
CWE:610	Externally Controlled Reference to a Resource in Another Sphere	<ul style="list-style-type: none"> Tainted Network Address Tainted Filename Untrusted Network Host Untrusted Network Port
CWE:615	Inclusion of Sensitive Information in Source Code Comments	Commented-out Code



CWE:628	Function Call with Incorrectly Specified Arguments	Floating Point Domain Error Arctangent Domain Error Raises FE_INVALID Logarithm on Negative Value Undefined Power of Zero sqrt on Negative Value Argument Too High Argument Too Low Floating Point Range Error cosh on High Number cosh on Low Number Gamma on Zero Logarithm on Zero Format String Type Error
CWE:641	Improper Restriction of Names for Files and Other Resources	Tainted Network Address Tainted Filename
CWE:657	Violation of Secure Design Principles	Library Function Override
CWE:662	Improper Synchronization	Lock/Unlock Mismatch Blocking in Critical Section
CWE:664	Improper Control of a Resource Through its Lifetime	Misaligned Object
CWE:665	Improper Initialization	Uninitialized Variable Inconsistent Enumerator Initialization Initialization Cycle Missing Braces in Initialization Over-initialized Element Partially Uninitialized Aggregate Partially Uninitialized Array Unordered Initialization Unspecified Array Size with Designator Initialization Virtual Call in Constructor
CWE:666	Operation on Resource in Wrong Phase of Lifetime	Socket In Wrong State Use After Close
CWE:667	Improper Locking	Nested Locks Missing Lock Release Conflicting Lock Order Unknown Lock
CWE:672	Operation on a Resource after Expiration or Release	Use After Free Double Close Use After Close
CWE:674	Uncontrolled Recursion	Recursion
CWE:675	Duplicate Operations on Resource	Double Initialization Double Close



CWE:676	Use of Potentially Dangerous Function	<p>Use of abort Use of AddAccessAllowe-dAce Use of AddAccessDeniedAce Use of AfxParseURL Use of atof Use of atoi Use of atol Use of atoll Use of getopt Use of getpass Use of OemToAnsi Use of OemToChar Use of realpath Use of recvmsg Use of strcat Use of StrCatChainW Use of strchr Use of strcmp Use of strcoll Use of strcpy Use of strcspn Use of strlen Use of strpbrk Use of strrchr Use of strspn Use of strstr Use of strtok Use of strtrns Use of syslog Use of bsearch Use of catopen Use of chroot Use of CreateFile Use of CreateProcess Use of CreateThread Use of crypt Use of cuserid Use of exit Use of <fenv.h> Exception Handling Function Use of FormatMessage Use of getenv Use of getlogin Use of LoadModule Use of longjmp Use of memset Use of MoveFile Use of _exec Use of _spawn Use of AfxLoadLibrary Use of CoLoadLibrary Use of execlp Use of execvp</p>	<p>Use of LoadLibrary Use of popen Use of SHCreateProcessAsUs-erW Use of ShellExecute Use of system Use of qsort Use of rand Use of rand48 Function Use of random Use of setjmp Use of setuid Use of signal Use of <stdio.h> Input/Output Use of t_open Use of GetTempFileName Use of mkstemp Use of mktemp Use of tmpfile Use of tmpnam Use of <time.h> Time/DateFunction Use of ttyname Use of vfork Use of <wchar.h> Input/OutputWeak Cryptography Use of WinExec Use of <stdio.h> Input/OutputMacro Use of <wchar.h> Input/OutputMacro Use of <signal.h> Use of <tgmath.h> chroot without chdir</p>
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CWE:680	Integer Overflow to Buffer Overflow	Addition Overflow of Allocation Size Integer Overflow of Allocation Size Multiplication Overflow of Allocation Size Subtraction Underflow of Allocation Size Truncation of Allocation Size Addition Overflow of Size Multiplication Overflow of Size Subtraction Underflow of Size Truncation of Size
CWE:681	Incorrect Conversion between Numeric Types	Negative Character Value
CWE:682	Incorrect Calculation	Shift Amount Exceeds Bit Width Negative Shift Amount
CWE:686	Function Call With Incorrect Argument Type	GlobalHandle on GMEM_FIXED Memory GlobalLock on GMEM_FIXED Memory GlobalUnlock on GMEM_FIXED Memory LocalHandle on LMEM_FIXED Memory LocalLock on LMEM_FIXED Memory LocalUnlock on LMEM_FIXED Memory Type Mismatch Array Parameter Mismatch Implicit Function Declaration Negative Character Value
CWE:687	Function Call With Incorrectly Specified Argument Value	Array Parameter Mismatch Floating Point Domain Error Arctangent Domain Error Raises FE_INVALID Logarithm on Negative Value Undefined Power of Zero sqrt on Negative Value Argument Too High Argument Too Low Floating Point Range Error cosh on High Number cosh on Low Number Gamma on Zero Logarithm on Zero Format String Type Error Unreasonable Size Argument Function Call Has No Effect



CWE:688	Function Call With Incorrect Variable or Reference as Argument	<ul style="list-style-type: none"> Array Parameter Mismatch Floating Point Domain Error Arctangent Domain Error Raises FE_INVALID Logarithm on Negative Value Undefined Power of Zero sqrt on Negative Value Argument Too High Argument Too Low Floating Point Range Error cosh on High Number cosh on Low Number Gamma on Zero Logarithm on Zero Format String Type Error Unreasonable Size Argument Function Call Has No Effect
CWE:690	Unchecked Return Value to NULL Pointer Dereference	<ul style="list-style-type: none"> Null Pointer Dereference Null Test After Dereference
CWE:691	Insufficient Control Flow Management	<ul style="list-style-type: none"> Use of longjmp Use of setjmp
CWE:696	Incorrect Behavior Order	<ul style="list-style-type: none"> Use After Free Conflicting Lock Order Socket In Wrong State Use After Close Null Test After Dereference
CWE:703	Improper Check or Handling of Exceptional Conditions	<ul style="list-style-type: none"> Unreachable Catch



CWE:704	Incorrect Type Conversion or Cast	Coercion Alters Value Dangerous Function Cast Cast: Non-integer Arithmetic Type/Object Pointer Cast: Arithmetic Type/Void Pointer Cast Removes const Qualifier Cast Removes volatile Qualifier Conversion to Function Pointer Float Pointer Conversion Conversion from Function Pointer Conversion: Pointer to Incomplete Conversion: Pointer/Integer Cast: Object Pointers Conversion: Void Pointer to Object Pointer Risky Integer Promotion Cast Alters Value Varargs Function Cast Expression Value Widened by Assignment Inappropriate Cast Type Inappropriate Cast Type: Expression Expression Value Widened by Other Operand
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CWE:710	Improper Adherence to Coding Standards	<p> Dynamic Allocation After Initialization Use of longjmp Use of setjmp Use of <stdlib.h> Allocator/Deallocator Use of <stdlib.h> Allocator/Deallocator Macro Not All Warnings Are Enabled Warnings Not Treated As Errors Task Delay Function Lock/Unlock Mismatch Float Pointer Conversion Not Enough Assertions Recursion Too Many Parameters Function Too Long Non-distinct Identifiers: External Names Non-distinct Identifiers: Macro/Macro Non-distinct Identifiers: Macro/Other Non-distinct Identifiers: Nested Scope Non-distinct Identifiers: Same Scope Non-unique Identifiers: External Name Non-unique Identifiers: Internal Name Library Function Override Macro Name is C Keyword Non-unique Identifiers: Tag Non-unique Identifiers: TypedefMacro Uses -> Operator Macro Uses [] Operator Code Before #include Conditional Compilation Macro Defined in Function Body Macro Uses # Operator Macro Does Not End With } or) Macro Does Not Start With { or (No Matching #endif No Matching #if Macro Uses ## Operator## Follows # Operator Recursive Macro Macro Uses Unary * Operator Unbalanced Parenthesis Use of #undef Macro Undefined in Function Body Variadic Macro Nested Function Declaration Multiple Declarations of a Global Global Variable Declared with Different Types Multiple Declarations On Line Function Pointer Function Pointer Conversion Goto Statement Inconsistent Enumerator Initialization Multiple Statements On Line Pointer Type Inside Typedef Condition Contains Side Effects Too Many Dereferences Too Much Indirection in Declaration Basic Numerical Type Used Variable Could Be const </p>
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CWE:758	Reliance on Undefined, Unspecified, or Implementation-Defined Behavior	Use of abort Use of atof Use of atoi Use of atol Use of atoll Use of bsearch Use of exit Use of getenv Use of <stdio.h> Input/Output Use of <time.h> Time/Date Function Use of <wchar.h> Input/Output Use of <stdio.h> Input/Output Macro Use of <wchar.h> Input/Output Macro Shift Amount Exceeds Bit Width Negative Shift Amount Missing Return Value Uninitialized Variable Use of <signal.h> Use of <tgmath.h> Missing Return Statement
CWE:760	Use of a One-Way Hash with a Predictable Salt	Hardcoded Crypto Salt
CWE:761	Free of Pointer not at Start of Buffer	Misaligned Object Pool Mismatch Type Mismatch
CWE:762	Mismatched Memory Management Routines	Type Mismatch
CWE:763	Release of Invalid Pointer or Reference	Double Free Misaligned Object
CWE:764	Multiple Locks of a Critical Resource	Double Lock Locked Twice
CWE:765	Multiple Unlocks of a Critical Resource	Double Unlock
CWE:771	Missing Reference to Active Allocated Resource	Leak
CWE:772	Missing Release of Resource after Effective Lifetime	Leak
CWE:773	Missing Reference to Active File Descriptor or Handle	Leak
CWE:775	Missing Release of File Descriptor or Handle after Effective Lifetime	Leak
CWE:780	Use of RSA Algorithm without OAEP	Encryption without Padding
CWE:783	Operator Precedence Logic Error	Confusing Operator Overload
CWE:785	Use of Path Manipulation Function without Maximum-sized Buffer	Use of realpath
CWE:786	Access of Memory Location Before Start of Buffer	Buffer Underrun
CWE:788	Access of Memory Location After End of Buffer	Buffer Overrun
CWE:789	Memory Allocation with Excessive Size Value	Tainted Allocation Size
CWE:798	Use of Hard-coded Credentials	Hardcoded Authentication Hardcoded Crypto Key Hardcoded Crypto Salt
CWE:823	Use of Out-of-range Pointer Offset	Pointer Arithmetic



CWE:832	Unlock of a Resource that is not Locked	Double Unlock Missing Lock Acquisition
CWE:835	Loop with Unreachable Exit Condition ('Infinite Loop')	Potential Unbounded Loop
CWE:843	Access of Resource Using Incompatible Type ('Type Confusion')	GlobalHandle on GMEM_FIXED Memory GlobalLock on GMEM_FIXED Memory GlobalUnlock on GMEM_FIXED Memory LocalHandle on LMEM_FIXED Memory LocalLock on LMEM_FIXED Memory LocalUnlock on LMEM_FIXED Memory Type Mismatch
CWE:863	Incorrect Authorization	Use of cuserid Use of getlogin
CWE:870	CERT C++ Secure Coding Section 02 - Declarations and Initialization (DCL)	Ellipsis
CWE:908	Use of Uninitialized Resource	Uninitialized Variable
CWE:910	Use of Expired File Descriptor	Use After Close
CWE:1007	Insufficient Visual Distinction of Homoglyphs Presented to User	Typographically Ambiguous Identifiers
CWE:1037	Processor Optimization Removal or Modification of Security-critical Code	Use of memset
CWE:1041	Use of Redundant Code	Copy-Paste Error
CWE:1056	Invokable Control Element with Variadic Parameters	Ellipsis
CWE:1064	Invokable Control Element with Signature Containing an Excessive Number of Parameters	Too Many Parameters
CWE:1077	Floating Point Comparison with Incorrect Operator	Floating Point Equality
CWE:1079	Parent Class without Virtual Destructor Method	delete with Non-Virtual Destructor
CWE:1080	Source Code File with Excessive Number of Lines of Code	Function Too Long
CWE:1087	Class with Virtual Method without a Virtual Destructor	delete with Non-Virtual Destructor
CWE:1091	Use of Object without Invoking Destructor Method	Leak
CWE:1126	Declaration of Variable with Unnecessarily Wide Scope	Scope Could Be File Static Scope Could Be Local Static
CWE:1127	Compilation with Insufficient Warnings or Errors	Not All Warnings Are Enabled Warnings Not Treated As Errors
CWE:1155	SEI CERT C Coding Standard - Guidelines 01. Preprocessor (PRE)	Macro Uses # Operator Preprocessing Directives in Macro Argument Macro Does Not End With } or) Macro Does Not Start With { or (Macro Uses ## Operator ## Follows # Operator



CWE:1156	SEI CERT C Coding Standard - Guidelines 02. Declarations and Initialization(DCL)	Cast Removes const Qualifier Incomplete Function Prototype Typographically Ambiguous Identifiers Non-distinct Identifiers: External Names Non-distinct Identifiers: Macro/Macro Non-distinct Identifiers: Macro/Other Non-distinct Identifiers: Nested Scope Non-distinct Identifiers: Same Scope Non-unique Identifiers: External Name Non-unique Identifiers: Internal Name Library Function Override Non-unique Identifiers: Tag Non-unique Identifiers: Typedef Inconsistent Function Declarations Inconsistent Object Declarations Global Variable Declared with Different Types Multiple Declarations On Line Declaration of Reserved Name Ellipsis Pointer Type Inside Typedef Return Pointer to Local Scope Could Be File Static Scope Could Be Local Static Confusing Literal Suffix Octal Constant
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CWE:1157	SEI CERT C Coding Standard - Guidelines 03. Expressions (EXP)	<ul style="list-style-type: none"> Use of <stdarg.h> Feature Cast Removes const Qualifier Risky Integer Promotion Array Parameter Mismatch Ignored Return Value Null Pointer Dereference Uninitialized Variable Assignment in Conditional Empty Branch Statement Empty for Statement Empty if Statement Empty switch Statement Empty while Statement Missing Parentheses Pointer Arithmetic Condition Contains Side Effects Side Effects in sizeof Unchecked Parameter Dereference Assignment Result in Expression Inappropriate Operand Type Restrict Qualifier Used
CWE:1158	SEI CERT C Coding Standard - Guidelines 04. Integers (INT)	<ul style="list-style-type: none"> Subtraction Underflow of Allocation Size Truncation of Allocation Size Tainted Network Address Tainted Allocation Size Untrusted Network Host Untrusted Network Port Shift Amount Exceeds Bit Width Division By Zero Float Division By Zero Negative Shift Amount Coercion Alters Value Cast: Arithmetic Type/Void Pointer Coercion: Integer Constant to Pointer Conversion: Pointer/Integer Cast Alters Value Tainted Buffer Access Inconsistent Enumerator Initialization Expression Value Widened by Assignment Bit-field Signedness Not Explicit Inappropriate Operand Type Expression Value Widened by Other Operand Truncation of Size Negative Character Value



CWE:1159	SEI CERT C Coding Standard - Guidelines 05. Floating Point (FLP)	Float-typed Loop Counter Mismatched Operand Types Floating Point Domain Error Arctangent Domain Error Raises FE_INVALID Logarithm on Negative Value Undefined Power of Zero sqrt on Negative Value Argument Too High Argument Too Low Floating Point Range Error cosh on High Number cosh on Low Number Gamma on Zero Logarithm on Zero
CWE:1160	SEI CERT C Coding Standard - Guidelines 06. Arrays (ARR)	Buffer Overrun Buffer Underrun Tainted Buffer Access Type Overrun Type Underrun Declaration of Flexible Array Member Pointer Before Beginning of Object Pointer Past End of Object



CWE:1161	SEI CERT C Coding Standard - Guidelines 07. Characters and Strings (STR)	<ul style="list-style-type: none"> Use of OemToAnsi Use of OemToChar Use of strcat Use of StrCatChainW Use of strchr Use of strcmp Use of strcoll Use of strcpy Use of strcspn Use of strlen Use of strpbrk Use of strrchr Use of strspn Use of strstr Use of strtok Use of strtrns Command Injection Format String Injection LDAP Injection Library Injection SQL Injection Untrusted Library Load Untrusted Process Creation Buffer Overrun Type Overrun Non-const String Literal No Space For Null Terminator Unterminated C String Negative Character Value
CWE:1162	SEI CERT C Coding Standard - Guidelines 08. Memory Management (MEM)	<ul style="list-style-type: none"> Double Free Leak Addition Overflow of Allocation Size Integer Overflow of Allocation Size Multiplication Overflow of Allocation Size Use After Free



CWE:1163	SEI CERT C Coding Standard - Guidelines 09. Input Output (FIO)	Leak Use of CreateFile Use of GetTempFileName Use of mkstemp Use of mktemp Use of tmpfile Use of tmpnam Format String Injection File System Race Condition Tainted Filename Use After Close Format String
CWE:1164	Irrelevant Code	Try-lock that will never succeed Over-initialized Element Redundant Condition Useless Assignment Unused Variable Function Call Has No Effect
CWE:1165	SEI CERT C Coding Standard - Guidelines 10. Environment (ENV)	Use of system
CWE:1166	SEI CERT C Coding Standard - Guidelines 11. Signals (SIG)	Use of signal Data Race
CWE:1167	SEI CERT C Coding Standard - Guidelines 12. Error Handling (ERR)	Use of atof Use of atoi Use of atol Use of atoll Ignored Return Value
CWE:1168	SEI CERT C Coding Standard - Guidelines 13. Application Programming Inter-faces (API)	GlobalHandle on GMEM_FIXED Memory GlobalLock on GMEM_FIXED Memory GlobalUnlock on GMEM_FIXED Memory LocalHandle on LMEM_FIXED Memory LocalLock on LMEM_FIXED Memory LocalUnlock on LMEM_FIXED Memory Pool Mismatch Type Mismatch Coercion Alters Value Cast Alters Value Unchecked Parameter Dereference



CWE:1169	SEI CERT C Coding Standard - Guidelines 14. Concurrency (CON)	<ul style="list-style-type: none"> Use of rand Use of signal Use of tmpnam Use of ttyname Data Race Missing Lock Acquisition Missing Lock Release Conflicting Lock Order Blocking in Critical Section
CWE:1170	SEI CERT C Coding Standard - Guidelines 48. Miscellaneous (MSC)	<ul style="list-style-type: none"> Use of userid Use of drem Use of gamma Use of LoadModule Use of longjmp Use of memset Use of MoveFile Use of rand Use of setjmp Use of WinExec Not All Warnings Are Enabled Unexercised Call Unexercised Computation Unexercised Conditional Unexercised Control Flow Unexercised Data Flow Hardcoded Authentication Hardcoded DNS Name Hardcoded Crypto Key Hardcoded Crypto Salt Not Enough Assertions Empty Branch Statement Empty for Statement Empty if Statement Empty switch Statement Empty while Statement Potential Unbounded Loop Missing Return Statement Redundant Condition Missing break Misplaced case Useless Assignment Unreachable Call Unreachable Computation Unreachable Conditional Unreachable Control Flow Unreachable Data Flow Unused Label Unused Macro Unused Parameter Unused Tag Unused Type Unused Value Unused Variable Function Call Has No Effect Plaintext Storage of Password Plaintext Transmission of Password



CWE:1171	SEI CERT C Coding Standard - Guidelines 50. POSIX (POS)	Use of chroot Use of vfork Data Race Conflicting Lock Order Blocking in Critical Section chroot without chdir
CWE:1172	SEI CERT C Coding Standard - Guidelines 51. Microsoft Windows (WIN)	Use of CreateProcess Use of CreateThread Use of AfxLoadLibrary Use of CoLoadLibrary Use of LoadLibrary
CWE:1211	Authentication Errors	Hardcoded Authentication Hardcoded Crypto Key Hardcoded Crypto Salt
CWE:1215	Data Validation Issues	Command Injection Format String Injection LDAP Injection Library Injection SQL Injection Tainted Network Address Tainted Configuration Setting Tainted Environment Variable Tainted Filename Tainted Allocation Size Tainted Write
CWE:1226	Complexity Issues	Too Many Parameters Too Many Dereferences Too Much Indirection in Declaration
CWE:1295	Debug Messages Revealing Unnecessary Information	Leftover Debug Code



CWE IDS BROADLY MAPPED TO ONE OR MORE CODESONAR C/C++ WARNING CLASSES(CODESONAR V6.2)

The following table lists the CWE IDs that are broadly mapped to one or more CodeSonar C/C++warning classes.

CWE:2	CWE:117	CWE:226	CWE:321	CWE:392	CWE:475	CWE:569	CWE:671
CWE:14	CWE:118	CWE:227	CWE:323	CWE:394	CWE:476	CWE:570	CWE:672
CWE:15	CWE:119	CWE:228	CWE:325	CWE:395	CWE:477	CWE:571	CWE:673
CWE:19	CWE:120	CWE:229	CWE:326	CWE:396	CWE:478	CWE:572	CWE:674
CWE:20	CWE:121	CWE:230	CWE:327	CWE:397	CWE:479	CWE:573	CWE:675
CWE:22	CWE:122	CWE:231	CWE:328	CWE:398	CWE:480	CWE:581	CWE:676
CWE:23	CWE:123	CWE:232	CWE:330	CWE:399	CWE:481	CWE:585	CWE:680
CWE:24	CWE:124	CWE:237	CWE:331	CWE:400	CWE:483	CWE:587	CWE:681
CWE:25	CWE:125	CWE:238	CWE:332	CWE:401	CWE:484	CWE:588	CWE:682
CWE:26	CWE:126	CWE:239	CWE:334	CWE:404	CWE:485	CWE:589	CWE:683
CWE:27	CWE:127	CWE:240	CWE:335	CWE:405	CWE:489	CWE:590	CWE:684
CWE:28	CWE:128	CWE:241	CWE:338	CWE:410	CWE:491	CWE:595	CWE:685
CWE:29	CWE:129	CWE:242	CWE:339	CWE:411	CWE:497	CWE:597	CWE:686
CWE:30	CWE:130	CWE:243	CWE:340	CWE:412	CWE:501	CWE:601	CWE:687
CWE:31	CWE:131	CWE:251	CWE:341	CWE:413	CWE:502	CWE:605	CWE:688
CWE:32	CWE:133	CWE:252	CWE:342	CWE:414	CWE:506	CWE:607	CWE:690
CWE:33	CWE:134	CWE:253	CWE:343	CWE:415	CWE:507	CWE:609	CWE:691
CWE:34	CWE:135	CWE:254	CWE:344	CWE:416	CWE:508	CWE:610	CWE:693
CWE:35	CWE:136	CWE:255	CWE:350	CWE:417	CWE:510	CWE:611	CWE:695
CWE:36	CWE:137	CWE:256	CWE:355	CWE:426	CWE:511	CWE:614	CWE:696
CWE:37	CWE:138	CWE:259	CWE:359	CWE:427	CWE:514	CWE:615	CWE:697
CWE:38	CWE:147	CWE:265	CWE:361	CWE:429	CWE:515	CWE:624	CWE:699
CWE:39	CWE:170	CWE:266	CWE:362	CWE:435	CWE:522	CWE:626	CWE:700
CWE:40	CWE:188	CWE:269	CWE:363	CWE:436	CWE:523	CWE:628	CWE:703
CWE:73	CWE:189	CWE:274	CWE:364	CWE:438	CWE:529	CWE:629	CWE:704
CWE:74	CWE:190	CWE:275	CWE:365	CWE:440	CWE:530	CWE:635	CWE:705
CWE:77	CWE:191	CWE:280	CWE:366	CWE:451	CWE:532	CWE:641	CWE:706
CWE:78	CWE:192	CWE:281	CWE:367	CWE:452	CWE:538	CWE:642	CWE:707
CWE:79	CWE:193	CWE:284	CWE:368	CWE:453	CWE:540	CWE:643	CWE:710
CWE:88	CWE:194	CWE:285	CWE:369	CWE:454	CWE:543	CWE:651	CWE:711
CWE:89	CWE:195	CWE:287	CWE:371	CWE:456	CWE:546	CWE:657	CWE:712
CWE:90	CWE:196	CWE:290	CWE:377	CWE:457	CWE:547	CWE:662	CWE:713
CWE:91	CWE:197	CWE:310	CWE:378	CWE:459	CWE:550	CWE:663	CWE:714
CWE:93	CWE:199	CWE:311	CWE:379	CWE:465	CWE:552	CWE:664	CWE:715
CWE:94	CWE:200	CWE:312	CWE:386	CWE:466	CWE:557	CWE:665	CWE:717
CWE:95	CWE:201	CWE:313	CWE:387	CWE:468	CWE:558	CWE:666	CWE:718
CWE:99	CWE:203	CWE:316	CWE:388	CWE:469	CWE:561	CWE:667	CWE:719
CWE:113	CWE:209	CWE:318	CWE:389	CWE:470	CWE:562	CWE:668	CWE:720
CWE:114	CWE:212	CWE:319	CWE:390	CWE:471	CWE:563	CWE:669	CWE:721
CWE:116	CWE:221	CWE:320	CWE:391	CWE:474	CWE:567	CWE:670	CWE:722



CWE:723	CWE:772	CWE:845	CWE:893	CWE:960	CWE:1008	CWE:1131	CWE:1181
CWE:724	CWE:773	CWE:846	CWE:894	CWE:961	CWE:1009	CWE:1132	CWE:1182
CWE:725	CWE:775	CWE:847	CWE:895	CWE:962	CWE:1010	CWE:1133	CWE:1186
CWE:726	CWE:780	CWE:848	CWE:896	CWE:963	CWE:1011	CWE:1134	CWE:1188
CWE:727	CWE:783	CWE:849	CWE:897	CWE:964	CWE:1012	CWE:1135	CWE:1194
CWE:728	CWE:785	CWE:850	CWE:898	CWE:966	CWE:1013		CWE:1200
CWE:729	CWE:786	CWE:851	CWE:899	CWE:967	CWE:1015	CWE:1136	CWE:1202
CWE:730	CWE:787	CWE:852	CWE:900	CWE:968	CWE:1016	CWE:1137	CWE:1204
CWE:731	CWE:788	CWE:853	CWE:901	CWE:969	CWE:1019	CWE:1139	CWE:1205
CWE:732	CWE:789	CWE:854	CWE:902	CWE:970	CWE:1020	CWE:1140	CWE:1207
CWE:733	CWE:798	CWE:855	CWE:903	CWE:971	CWE:1023	CWE:1141	CWE:1208
CWE:734	CWE:800	CWE:857	CWE:904	CWE:972	CWE:1024	CWE:1142	CWE:1210
CWE:735	CWE:801	CWE:858	CWE:905	CWE:973	CWE:1025	CWE:1143	CWE:1211
CWE:736	CWE:802	CWE:859	CWE:906	CWE:974	CWE:1026	CWE:1144	CWE:1213
CWE:737	CWE:803	CWE:860	CWE:907	CWE:975	CWE:1027	CWE:1145	CWE:1215
CWE:738	CWE:805	CWE:861	CWE:908	CWE:976	CWE:1028	CWE:1147	CWE:1218
CWE:739	CWE:806	CWE:863	CWE:909	CWE:977	CWE:1029	CWE:1148	CWE:1219
CWE:740	CWE:807	CWE:864	CWE:910	CWE:978	CWE:1030	CWE:1149	CWE:1226
CWE:741	CWE:808	CWE:865	CWE:913	CWE:979	CWE:1031	CWE:1150	CWE:1227
CWE:742	CWE:809	CWE:866	CWE:915	CWE:980	CWE:1032	CWE:1152	CWE:1228
CWE:743	CWE:810	CWE:867	CWE:916	CWE:981	CWE:1033	CWE:1154	CWE:1229
CWE:744	CWE:811	CWE:868	CWE:922	CWE:982	CWE:1034	CWE:1155	CWE:1230
CWE:745	CWE:812	CWE:870	CWE:923	CWE:983	CWE:1037	CWE:1156	CWE:1237
CWE:746	CWE:813	CWE:871	CWE:928	CWE:984	CWE:1038	CWE:1157	CWE:1238
CWE:747	CWE:815	CWE:872	CWE:929	CWE:985	CWE:1041	CWE:1158	CWE:1284
CWE:748	CWE:816	CWE:873	CWE:930	CWE:986	CWE:1056	CWE:1159	CWE:1285
CWE:749	CWE:817	CWE:874	CWE:931	CWE:987	CWE:1061	CWE:1160	CWE:1295
CWE:750	CWE:818	CWE:875	CWE:932	CWE:988	CWE:1064	CWE:1161	CWE:1305
CWE:751	CWE:819	CWE:876	CWE:933	CWE:989	CWE:1071	CWE:1162	CWE:1306
CWE:752	CWE:820	CWE:877	CWE:934	CWE:990	CWE:1075	CWE:1163	CWE:1307
CWE:753	CWE:821	CWE:878	CWE:935	CWE:991	CWE:1076	CWE:1164	CWE:1308
CWE:754	CWE:822	CWE:879	CWE:938	CWE:992	CWE:1077	CWE:1165	CWE:1309
CWE:755	CWE:823	CWE:880	CWE:943	CWE:993	CWE:1078	CWE:1166	CWE:1340
CWE:757	CWE:824	CWE:882	CWE:944	CWE:994	CWE:1079	CWE:1167	CWE:1350
CWE:758	CWE:825	CWE:883	CWE:945	CWE:995	CWE:1080	CWE:1168	
CWE:760	CWE:826	CWE:884	CWE:946	CWE:997	CWE:1087	CWE:1169	
CWE:761	CWE:828	CWE:885	CWE:947	CWE:998	CWE:1091	CWE:1170	
CWE:762	CWE:832	CWE:886	CWE:949	CWE:1000	CWE:1105	CWE:1171	
CWE:763	CWE:833	CWE:887	CWE:950	CWE:1001	CWE:1120	CWE:1172	
CWE:764	CWE:834	CWE:888	CWE:954	CWE:1002	CWE:1126	CWE:1176	
CWE:765	CWE:835	CWE:889	CWE:956	CWE:1003	CWE:1127	CWE:1177	
CWE:768	CWE:840	CWE:890	CWE:957	CWE:1005	CWE:1128	CWE:1178	
CWE:770	CWE:843	CWE:891	CWE:958	CWE:1006	CWE:1129	CWE:1179	
CWE:771	CWE:844	CWE:892	CWE:959	CWE:1007	CWE:1130	CWE:1180	

