

Coverity



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The table below can be re-ordered, by clicking column headers.

Tool Version: 2017.07

Checker	Guideline
ALLOC_FREE_MISMATCH	MEM31-C. Free dynamically allocated memory when no longer needed
ALLOC_FREE_MISMATCH	CON30-C. Clean up thread-specific storage
ALLOC_FREE_MISMATCH (needs improvement)	WIN30-C. Properly pair allocation and deallocation functions
ARRAY_VS_SINGLETON	ARR30-C. Do not form or use out-of-bounds pointers or array subscripts
ARRAY_VS_SINGLETON	ARR37-C. Do not add or subtract an integer to a pointer to a non-array object
ASSERT_SIDE_EFFECT	MSC11-C. Incorporate diagnostic tests using assertions
ASSERT_SIDE_EFFECTS	PRE31-C. Avoid side effects in arguments to unsafe macros
BAD_ALLOC_ARITHMETIC	ARR38-C. Guarantee that library functions do not form invalid pointers
BAD_ALLOC_STRLLEN	ARR38-C. Guarantee that library functions do not form invalid pointers
BAD_ALLOC_STRLLEN	MEM35-C. Allocate sufficient memory for an object
BAD_CHECK_OF_WAIT_COND	CON41-C. Wrap functions that can fail spuriously in a loop
BAD_COMPARE	EXP16-C. Do not compare function pointers to constant values
BAD_FREE	MEM34-C. Only free memory allocated dynamically
BAD_SHIFT	INT32-C. Ensure that operations on signed integers do not result in overflow
BAD_SHIFT	INT34-C. Do not shift an expression by a negative number of bits or by greater than or equal to the number of bits that exist in the operand
BAD_SIZEOF	ARR38-C. Guarantee that library functions do not form invalid pointers
BAD_SIZEOF	ARR39-C. Do not add or subtract a scaled integer to a pointer
BUFFER_SIZE	ARR30-C. Do not form or use out-of-bounds pointers or array subscripts
BUFFER_SIZE	ARR38-C. Guarantee that library functions do not form invalid pointers
BUFFER_SIZE	STR31-C. Guarantee that storage for strings has sufficient space for character data and the null terminator
CHAR_IO	FIO34-C. Distinguish between characters read from a file and EOF or WEOF
CHECKED_RETURN	EXP34-C. Do not dereference null pointers
CHECKED_RETURN	POS54-C. Detect and handle POSIX library errors
CHECKED_RETURN	EXP12-C. Do not ignore values returned by functions
CONSTANT_EXPRESSION_RESULT	EXP46-C. Do not use a bitwise operator with a Boolean-like operand
DEADCODE	MSC07-C. Detect and remove dead code
DEADCODE	MSC12-C. Detect and remove code that has no effect or is never executed
DIVIDE_BY_ZERO	INT33-C. Ensure that division and remainder operations do not result in divide-by-zero errors
DONT_CALL	ENV33-C. Do not call system()
DONTCALL	MSC30-C. Do not use the rand() function for generating pseudorandom numbers
DONTCALL	POS33-C. Do not use vfork()
EVALUATION_ORDER	EXP30-C. Do not depend on the order of evaluation for side effects
EVALUATION_ORDER	EXP10-C. Do not depend on the order of evaluation of subexpressions or the order in which side effects take place
EVALUATION_ORDER (partial)	CON40-C. Do not refer to an atomic variable twice in an expression

FORWARD_NULL	EXP34-C. Do not dereference null pointers
INTEGER_OVERFLOW	INT30-C. Ensure that unsigned integer operations do not wrap
LOCK	CON01-C. Acquire and release synchronization primitives in the same module, at the same level of abstraction
MISRA 2012 Rule 13.2	CON40-C. Do not refer to an atomic variable twice in an expression
MISRA C 2004 17.2	ARR36-C. Do not subtract or compare two pointers that do not refer to the same array
MISRA C 2004 17.3	ARR36-C. Do not subtract or compare two pointers that do not refer to the same array
MISRA C 2004 Rule 10.x (needs investigation)	FLP36-C. Preserve precision when converting integral values to floating-point type
MISRA C 2004 Rule 11.4	EXP36-C. Do not cast pointers into more strictly aligned pointer types
MISRA C 2004 Rule 11.5	EXP40-C. Do not modify constant objects
MISRA C 2004 Rule 12.3	EXP44-C. Do not rely on side effects in operands to sizeof, _Alignof, or _Generic
MISRA C 2004 Rule 13.4	FLP30-C. Do not use floating-point variables as loop counters
MISRA C 2004 Rule 15.0	DCL41-C. Do not declare variables inside a switch statement before the first case label
MISRA C 2004 Rule 20.1	DCL37-C. Do not declare or define a reserved identifier
MISRA C 2004 Rule 20.2	DCL37-C. Do not declare or define a reserved identifier
MISRA C 2012 18.2	ARR36-C. Do not subtract or compare two pointers that do not refer to the same array
MISRA C 2012 18.3	ARR36-C. Do not subtract or compare two pointers that do not refer to the same array
MISRA C 2012 Rule 8.1	DCL31-C. Declare identifiers before using them
MISRA C 2012 Rule 8.2	EXP37-C. Call functions with the correct number and type of arguments
MISRA C 2012 Rule 8.4	DCL40-C. Do not create incompatible declarations of the same function or object
MISRA C 2012 Rule 8.14	EXP43-C. Avoid undefined behavior when using restrict-qualified pointers
MISRA C 2012 Rule 10.1	STR34-C. Cast characters to unsigned char before converting to larger integer sizes
MISRA C 2012 Rule 10.2	STR34-C. Cast characters to unsigned char before converting to larger integer sizes
MISRA C 2012 Rule 10.3	STR34-C. Cast characters to unsigned char before converting to larger integer sizes
MISRA C 2012 Rule 10.4	STR34-C. Cast characters to unsigned char before converting to larger integer sizes
MISRA C 2012 Rule 11.1	EXP36-C. Do not cast pointers into more strictly aligned pointer types
MISRA C 2012 Rule 11.2	EXP36-C. Do not cast pointers into more strictly aligned pointer types
MISRA C 2012 Rule 11.5	EXP36-C. Do not cast pointers into more strictly aligned pointer types
MISRA C 2012 Rule 11.7	EXP36-C. Do not cast pointers into more strictly aligned pointer types
MISRA C 2012 Rule 11.8	EXP32-C. Do not access a volatile object through a nonvolatile reference
MISRA C 2012 Rule 14.1	FLP30-C. Do not use floating-point variables as loop counters
MISRA C 2012 Rule 16.1	DCL41-C. Do not declare variables inside a switch statement before the first case label
MISRA C 2012 Rule 17.3	EXP37-C. Call functions with the correct number and type of arguments
MISRA C 2012 Rule 21.1	DCL37-C. Do not declare or define a reserved identifier
MISRA C 2012 Rule 21.2	DCL37-C. Do not declare or define a reserved identifier
MISRA C 2012 Rule 21.5	CON37-C. Do not call signal() in a multithreaded program
MISRA C 2012 Rule 22.5	FIO38-C. Do not copy a FILE object
MISRA C 2012 Rule 22.8	ERR30-C. Set errno to zero before calling a library function known to set errno, and check errno only after the function returns a value indicating failure
MISRA C 2012 Rule 22.8	ERR32-C. Do not rely on indeterminate values of errno
MISRA C 2012 Rule 22.8	ERR33-C. Detect and handle standard library errors
MISRA C 2012 Rule 22.9	ERR30-C. Set errno to zero before calling a library function known to set errno, and check errno only after the function returns a value indicating failure
MISRA C 2012 Rule 22.9	ERR32-C. Do not rely on indeterminate values of errno
MISRA C 2012 Rule 22.9	ERR33-C. Detect and handle standard library errors
MISRA C 2012 Rule 22.10	ERR30-C. Set errno to zero before calling a library function known to set errno, and check errno only after the function returns a value indicating failure
MISRA C 2012 Rule 22.10	ERR32-C. Do not rely on indeterminate values of errno
MISRA C 2012 Rule 22.10	ERR33-C. Detect and handle standard library errors

MISRA_CAST	INT31-C. Ensure that integer conversions do not result in lost or misinterpreted data
MISRA_CAST (needs verification)	FLP34-C. Ensure that floating-point conversions are within range of the new type
MISSING_BREAK	MSC17-C. Finish every set of statements associated with a case label with a break statement
MISSING_LOCK	CON32-C. Prevent data races when accessing bit-fields from multiple threads
MISSING_LOCK (partial)	CON43-C. Do not allow data races in multithreaded code
MISSING_RETURN	MSC37-C. Ensure that control never reaches the end of a non-void function
NEGATIVE_RETURNS	INT31-C. Ensure that integer conversions do not result in lost or misinterpreted data
NEGATIVE_RETURNS	ARR30-C. Do not form or use out-of-bounds pointers or array subscripts
NO_EFFECT	MSC12-C. Detect and remove code that has no effect or is never executed
NULL_RETURNS	EXP34-C. Do not dereference null pointers
OPEN_ARGS	FIO03-C. Do not make assumptions about fopen() and file creation
ORDER_REVERSAL	CON35-C. Avoid deadlock by locking in a predefined order
OVERFLOW_BEFORE_WIDEN	INT18-C. Evaluate integer expressions in a larger size before comparing or assigning to that size
OVERRUN	ARR30-C. Do not form or use out-of-bounds pointers or array subscripts
OVERRUN	STR31-C. Guarantee that storage for strings has sufficient space for character data and the null terminator
PW	EXP40-C. Do not modify constant objects
PW	STR30-C. Do not attempt to modify string literals
PW	STR38-C. Do not confuse narrow and wide character strings and functions
PW	FIO47-C. Use valid format strings
PW.LINKAGE_CONFLICT	DCL36-C. Do not declare an identifier with conflicting linkage classifications
PW.POINTER_CONVERSION_LOSES_BITS	INT36-C. Converting a pointer to integer or integer to pointer
READLINK	POS30-C. Use the readlink() function properly
RESOURCE_LEAK	MEM31-C. Free dynamically allocated memory when no longer needed
RESOURCE_LEAK	MEM00-C. Allocate and free memory in the same module, at the same level of abstraction
RESOURCE_LEAK (partial)	FIO42-C. Close files when they are no longer needed
RETURN_LOCAL	DCL30-C. Declare objects with appropriate storage durations
REVERSE_INULL	EXP34-C. Do not dereference null pointers
REVERSE_NEGATIVE	INT31-C. Ensure that integer conversions do not result in lost or misinterpreted data
REVERSE_NEGATIVE	ARR32-C. Ensure size arguments for variable length arrays are in a valid range
SECURE_TEMP	FIO21-C. Do not create temporary files in shared directories
SIZECHECK (deprecated)	MEM35-C. Allocate sufficient memory for an object
STACK_USE	MEM05-C. Avoid large stack allocations
STRING_NULL	STR32-C. Do not pass a non-null-terminated character sequence to a library function that expects a string
STRING_OVERFLOW	STR31-C. Guarantee that storage for strings has sufficient space for character data and the null terminator
STRING_SIZE	STR31-C. Guarantee that storage for strings has sufficient space for character data and the null terminator
TAINTED_SCALAR	INT32-C. Ensure that operations on signed integers do not result in overflow
TAINTED_STRING	FIO30-C. Exclude user input from format strings
TAINTED_STRING	STR02-C. Sanitize data passed to complex subsystems
TOCTOU	FIO45-C. Avoid TOCTOU race conditions while accessing files
TOCTOU	POS35-C. Avoid race conditions while checking for the existence of a symbolic link
TOCTOU	FIO01-C. Be careful using functions that use file names for identification
UNINIT	EXP33-C. Do not read uninitialized memory
UNREACHABLE	MSC07-C. Detect and remove dead code
UNREACHABLE	MSC12-C. Detect and remove code that has no effect or is never executed
UNUSED_VALUE	MSC13-C. Detect and remove unused values
USE_AFTER_FREE	MEM30-C. Do not access freed memory

USE_AFTER_FREE	FIO46-C. Do not access a closed file
USE_AFTER_FREE	MEM01-C. Store a new value in pointers immediately after free()
Various concurrency checkers	POS49-C. When data must be accessed by multiple threads, provide a mutex and guarantee no adjacent data is also accessed
VOLATILE_ATOMIcity (possible)	CON40-C. Do not refer to an atomic variable twice in an expression