LAB: STATIC ANALYSIS TOOL(CPPCHECK)

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ANALYSIS TOOL: cppcheck

LANGUAGE: C++

GITHUB REPOSITORY: https://github.com/rajkosto/TegraRcmSmash

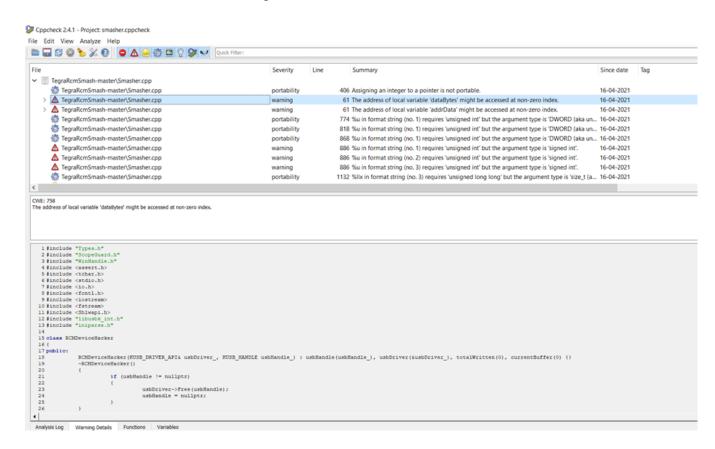
GITHUB CODE: https://github.com/rajkosto/TegraRcmSmash
REFERENCE: https://github.com/rajkosto/TegraRcmSmash

STEP 1: Installing cppcheck on Windows: http://cppcheck.sourceforge.net/

STEP 2: Analyzing the code from the Github Repository with cppcheck.

STEP 3: Checking errors

- Errors
- Warnings
- Style warnings
- Portability warnings
- Performance warnings



Cppcheck 2.4.1 - Project: smasher.cppcheck

File Edit View Analyze Help

```
Severity
                                                                                                                                                                                                Since date
   > A TegraRcmSmash-master\Smasher.cpp
                                                                                                         61 The address of local variable 'dataBytes' might be accessed at non-zero index.
                                                                                                                                                                                                16-04-2021
                                                                                 warning
    > A TegraRcmSmash-master\Smasher.cpp
                                                                                                         61 The address of local variable 'addrData' might be accessed at non-zero index.
                                                                                                                                                                                                16-04-2021
                                                                                 warning
       TegraRcmSmash-master\Smasher.cpp
                                                                                 portability
                                                                                                        774 %u in format string (no. 1) requires 'unsigned int' but the argument type is 'DWORD (aka un... 16-04-2021
       TegraRcmSmash-master\Smasher.cpp
                                                                                 portability
                                                                                                        818 %u in format string (no. 1) requires 'unsigned int' but the argument type is 'DWORD (aka un... 16-04-2021
       TegraRcmSmash-master\Smasher.cpp
                                                                                 portability
                                                                                                        868 %u in format string (no. 1) requires 'unsigned int' but the argument type is 'DWORD (aka un... 16-04-2021
       ▲ TegraRcmSmash-master\Smasher.cpp
                                                                                 warning
                                                                                                        886 %u in format string (no. 1) requires 'unsigned int' but the argument type is 'signed int'.
                                                                                                                                                                                                16-04-2021
       ▲ TegraRcmSmash-master\Smasher.cpp
                                                                                 warning
                                                                                                        886 %u in format string (no. 2) requires 'unsigned int' but the argument type is 'signed int'.
                                                                                                                                                                                                16-04-2021
                                                                                                                                                                                                16-04-2021
       ▲ TegraRcmSmash-master\Smasher.cpp
                                                                                 warning
                                                                                                        886 %u in format string (no. 3) requires 'unsigned int' but the argument type is 'signed int'.
       TegraRcmSmash-master\Smasher.cop
                                                                                                       1132 %Ilx in format string (no. 3) requires 'unsigned long long' but the argument type is 'size_t (a... 16-04-2021
                                                                                 portability
    > GaraRcmSmash-master\Smasher.cpp
                                                                                                       1141 Local variable 'copyData' shadows outer variable
                                                                                                                                                                                                16-04-2021
                                                                                 style
       TegraRcmSmash-master\Smasher.cpp
                                                                                                        712 Consider using std::find_if algorithm instead of a raw loop.
                                                                                                                                                                                                16-04-2021
                                                                                 style
```

CWE: 686
%u in format string (no. 2) requires 'unsigned int' but the argument type is 'signed int'.

```
RCMDeviceHacker rcmDev(Usb, handle); handle = nullptr;
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                                  libusbk::version_t usbkVersion;
memset(susbkVersion, 0, sizeof(usbkVersion));
const auto versRetVal = rcmDev.getDriverVersion(usbkVersion);
if (versRetVal <= 0)
                                                ftprintf(stderr, TEXT("Failed to get libusbK driver version for device with win32 error %d\n"), -versRetVal);
                                  else if (usbkVersion.major != 3 || usbkVersion.minor != 0 || usbkVersion.micro != 7)
                                             _tprintf(TEXT("The opened device isn't using the correct libusbK driver version (expected: %u.%u.%u got: %u.%u.%u)\n"),
3, 0, 7, usbkVersion.major, usbkVersion.major, usbkVersion.micro);
_tprintf(TEXT("Please run Zadig and install the libusbK (%3.0.7.0) driver for this device(n"));
                                                _ftprintf(stderr, TEXT("Failed to open USB device handle because of wrong driver version installed\n"));
return -6;
                                  u8 didBuf[0x10];
memmet(didBuf, 0, sizeof(didBuf));
const auto didRetVal = ccmDev.readDeviceId(didBuf, sizeof(didBuf));
if (didRetVal >= int(sizeof(didBuf)))
```