





**rtcheck.cpp:**

```
extern "C" void* malloc(size_t size)
{
    log_function_if_realtime_context(__func__);

    static auto real_malloc = (void* (*)(size_t))dlsym(RTLD_NEXT, "malloc");
    return real_malloc(size);
}
```

# CMakeLists.txt:

```
add_library(rtcheck SHARED  
            rtcheck/rtcheck.cpp  
)
```

```
target_link_libraries(example  
                        rtcheck  
)
```

```
static void* (*real_malloc)(size_t);

__attribute__((constructor))
void init()
{
    real_malloc = (void* (*)(size_t))
                  dlsym(RTLD_NEXT, "malloc");
}
```



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**rtchneck.crp**



void\*

real\_malloc(size);

(\*)(size\_t) dlsym(RTLD\_NEXT,

log\_function\_iter(\_func\_);



malloc(size\_t)

(void)\*



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rtcheck/rtcheck.cpp

add\_library(rtcheck

target\_link\_libraries(example

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**cmakeLists.txt**









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realloc(size\_t);



void





attribute ((constructor))



$(*) (size_t)$

void\*

dlsym(RTLD\_NEXT,





./example\_external(\_z14get\_tackraceB5cx11v+0xc)

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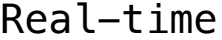
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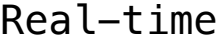






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./example\_extenal(\_z13get\_file\_size+0x38)



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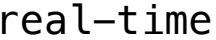




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/lib/arch64-linux-gnu/libstdc++.so.6(\_Znw+0x1c

A stylized, pixelated uppercase letter 'C' in black. The letter has a thick, blocky appearance with a slightly irregular, hand-drawn feel. It is composed of many small squares, giving it a digital or retro aesthetic. The letter is centered horizontally and vertically within its bounding box.A stylized, pixelated uppercase letter 'G' in black. The letter has a thick, blocky appearance with a slightly irregular, hand-drawn feel. It is composed of many small squares, giving it a digital or retro aesthetic. The letter is centered horizontally and vertically within its bounding box.A stylized, pixelated uppercase letter 'L' in black. The letter has a thick, blocky appearance with a slightly irregular, hand-drawn feel. It is composed of many small squares, giving it a digital or retro aesthetic. The letter is centered horizontally and vertically within its bounding box.A stylized, pixelated uppercase letter 'L' in black. The letter has a thick, blocky appearance with a slightly irregular, hand-drawn feel. It is composed of many small squares, giving it a digital or retro aesthetic. The letter is centered horizontally and vertically within its bounding box.



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lib/arch64-linux-gnu/libstdc++.so.6(\_ZNSt10filesystem7\_\_cxx11path14\_M\_spLit\_cmpEv+0x3a8)



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2024/example\_extensions/build\_unix-gnu/libt\_cheked.so(\_Z32log\_function\_if\_realtincontextPKc+0x58)

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example\_external(\_ZNS10filesystem7cxx114pathC2IA13\_S1\_ERKT\_NS1\_6formatE+0x84)



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./example\_external(\_z14get\_sta\_ktaceB5cx11v+0x3c)

2024/example\_external/build\_inx-gnu/libnt\_checked.so(malloc+0x18)

0x f f f 9 7 6 1 a 1 f 8 1



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/lib/arch64-linux-gnu/libstdc++.so.6(+0x17a44c

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impl\_extenal(\_ZNSt10unique\_ptrINS10filesystem7\_ex114path5\_List5\_ImplENS3\_13\_Impl\_deleteED1Ev+0x50)

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2024/example\_external/build\_inux-gnu/libt\_checked.so(\_Z32log\_function\_if\_realtincontextPKc+0x58)

2024/example\_external/build\_linux-gnu/libnt\_checked.so(free+0x18)

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./example\_external(\_z14do\_mal\_top\_freev+0x10)

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./example\_extenal(\_ZNSt10filesystem7\_ext14path5\_ListD2Ev+0x14)

./example\_extenal(\_z13get\_file\_size+0x50)



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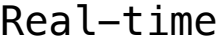
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./example\_extenal(\_z14get\_stacktraceB5cx11v+0x3c)

./example\_external(\_ZNSt10filesystem7\_\_cxx114pathD1Ev+0x18)

./example\_external(\_z14do\_malloc\_rev+0x1c)

2024/example\_external/build\_inx-gnu/libnt\_checked.so(malloc+0x18)



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`/examp1e_extenal(_ZNSt12VecTor_baseISt11_Mat11MatEm+0x28)`



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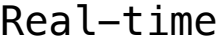
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./example\_external(\_ZN9gnu\_cxx13new\_allocator11basic\_stringbuf<char, std::char\_traits<char>, std::allocator<char>>E8a11oatEmPKv+0x60)

./example\_external(\_ZNSt16allocator\_traitsISAIEE8a11locateERS0\_m+0x50)

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./example\_external(\_ZNSt6vectorISt7reverseEm+0x80)



contex!

./example\_external(\_z14get\_sta\_ktaceB5cx11v+0xc)

./example\_extenal(\_z17do\_vetor\_reset\_vv+0x34)

realtime

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`example_external(_ZN9gnu_ext13new_alllocatE10deallocatEPim+0x28)`



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./example\_external(\_znst6vectorIiED1Ev+0x40)

./example\_external(\_znst12\_Vector\_baseIseIED1Ev+0x3c)

./example\_text12\_Vecor\_base13\_M\_data10c1ePim+0x30)

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example\_external(\_ZNSt16\_\_local\_ator\_traitsIE10deallocationPin+0x58)



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[oxff97be46e0]

[0xadaabc28c73c]

./example\_extenal(\_z17do\_vetor\_resv+0x3c)











