

## Heap-buffer-overflow in mobi\_search\_links\_kf7 in bfabiszewski/libmobi

0



Valid

Reported on Apr 30th 2022

### Description

heap-buffer-overflow /home/ubuntu/libmobi-public/src/parse\_rawml.c:110 in mobi\_search\_links\_kf7

### Environment

```
Distributor ID: Ubuntu
Description:    Ubuntu 20.04 LTS
Release:        20.04
Codename:       focal
mobitool build: Apr 29 2022 20:52:30 (gcc 9.3.0)
libmobi: 0.10
```

### Build

```
export CC=gcc CXX=g++ CFLAGS="-fsanitize=address -static-libasan" CXXFLAGS=
autogen.sh && ./configure && make
```



### POC

```
./mobitool -e -o ./tmp/ ./poc5
```

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```
==1028892==ERROR: AddressSanitizer: heap-buffer-overflow on address 0x62500000748f thread T0
READ of size 1 at 0x62500000748f thread T0
```

```
#0 0x5631f27052e3 in mobi_search_links_kf7 /home/ubuntu/libmobi-public/
#1 0x5631f27052e3 in mobi_search_links_kf7 /home/ubuntu/libmobi-public/
#2 0x5631f2714a31 in mobi_reconstruct_links_kf7 /home/ubuntu/libmobi-public/
#3 0x5631f27180d0 in mobi_reconstruct_links /home/ubuntu/libmobi-public/
#4 0x5631f27180d0 in mobi_parse_rawml_opt /home/ubuntu/libmobi-public/src/
#5 0x5631f27180d0 in mobi_parse_rawml /home/ubuntu/libmobi-public/src/
#6 0x5631f25bbe00 in loadfilename /home/ubuntu/libmobi-public/tools/mobitool.c:
#7 0x5631f25bbe00 in main /home/ubuntu/libmobi-public/tools/mobitool.c:
#8 0x7f5bf47900b2 in __libc_start_main (/lib/x86_64-linux-gnu/libc.so.6)
#9 0x5631f25c76fd in _start (/home/ubuntu/libmobi-public/tools/mobitool)
```

0x62500000748f is located 0 bytes to the right of 9103-byte region [0x625000007480,0x62500000748f) allocated by thread T0 here:

```
#0 0x5631f26b2748 in malloc (/home/ubuntu/libmobi-public/tools/mobitool)
#1 0x5631f270cfc0 in mobi_reconstruct_parts /home/ubuntu/libmobi-public/
```

SUMMARY: AddressSanitizer: heap-buffer-overflow /home/ubuntu/libmobi-public/tools/mobitool.c:1028892:10 Shadow bytes around the buggy address:

```
0x0c4a7fff8e40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0x0c4a7fff8e50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0x0c4a7fff8e60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0x0c4a7fff8e70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0x0c4a7fff8e80: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
=>0x0c4a7fff8e90: 00[07]fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa
0x0c4a7fff8ea0: fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa
0x0c4a7fff8eb0: fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa
0x0c4a7fff8ec0: fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa
0x0c4a7fff8ed0: fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa
0x0c4a7fff8ee0: fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa fa
```

Shadow byte legend (one shadow byte represents 8 application bytes):

```
Addressable: 00
Partially addressable: 01 02 03 04 05 06 07
Heap left redzone: fa
Freed heap region: fd
Stack left redzone: f1
```

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```
Stack mid redzone:      f2
Stack right redzone:    f3
Stack after return:     f5

Stack use after scope:  f8
Global redzone:         f9
Global init order:      f6
Poisoned by user:       f7
Container overflow:     fc
Array cookie:           ac
Intra object redzone:   bb
ASan internal:          fe
Left alloca redzone:    ca
Right alloca redzone:   cb
Shadow gap:             cc
==1028892==ABORTING
```



## Impact

The bug causes the program reads data past the end of the intended buffer. Typically, this can allow attackers to read sensitive information from other memory locations or cause a crash.

## Occurrences

 parse\_rawml.c L110

### CVE

CVE-2022-1908

(Published)

### Vulnerability Type

CWE-126: Buffer Over-read

### Severity

Low (3.6)

### Registry

Other

### Affected Version

0.10

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Visibility

Public

Status

Fixed

Found by

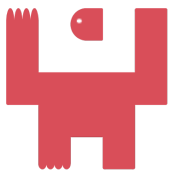


**cnitlrt**

@cnitlrt

master ▼

Fixed by



**Bartek Fabiszewski**

@bfabiszewski

unranked ▼

This report was seen 483 times.

We are processing your report and will contact the **bfabiszewski/libmobi** team within 24 hours.  
7 months ago

We have contacted a member of the **bfabiszewski/libmobi** team and are waiting to hear back  
7 months ago

**Bartek Fabiszewski** modified the Severity from High (8.5) to Low (3.6) 7 months ago

**Bartek** 7 months ago

Maintainer

Thanks!

The researcher has received a minor penalty to their credibility for miscalculating the severity: -1

**Bartek Fabiszewski** validated this vulnerability 7 months ago

**cnitlrt** has been awarded the disclosure bounty ✓

The fix bounty is now up for grabs

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The researcher's credibility has increased: +7

**Bartek Fabiszewski** marked this as fixed in **0.11** with commit **1e0378** 7 months ago

**Bartek Fabiszewski** has been awarded the fix bounty 

This vulnerability will not receive a CVE 

`parse_rawml.c#L110` has been validated 



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