

Subject: armv5l/linux: apps crash from huge mmap2() calls

Hi,

relevant part of Clock strace without -DflagUSEMALLOC:

```

fstat64(7, {st_mode=S_IFREG|0644, st_size=0, ...}) = 0
fstat64(7, {st_mode=S_IFREG|0644, st_size=0, ...}) = 0
mmap2(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x40
b9c000
read(7, "", 4096) = 0
close(7) = 0
munmap(0x40b9c000, 4096) = 0
readlink("/proc/506/exe", "/usr/bin/Clock", 4096) = 14
mkdir("/root/.Clock", 0755) = 0
unlink("/root/.Clock/Clock.1970-01-01-00-03-28.buglog.old") = -1 ENOENT (No such
file or directory)
rename("/root/.Clock/Clock.1970-01-01-00-03-28.buglog", "/root/.Clock/Clock.1970
-01-01-00-03-28.buglog.old") = -1 ENOENT (No such file or directory)
open("/root/.Clock/Clock.1970-01-01-00-03-28.buglog", O_RDWR|O_CREAT|O_TRUNC, 06
44) = 7
gettimeofday({208, 899242}, NULL) = 0
write(7, "* /usr/bin/Clock 01.01.1970 00:0"... , 49) = 49
write(7, "\r\n", 2) = 2
write(7, "PANIC: Out of memory\n", 21) = 21
write(2, "Out of memory", 13) = 13
write(2, "\n", 1) = 1
rt_sigprocmask(SIG_UNBLOCK, [ABRT], NULL, = 0
tgkill(506, 506, SIGABRT) = 0
--- SIGABRT (Aborted) @ 0 (0) ---
+++ killed by SIGABRT +++

```

relevant part of Clock strace with -DflagUSEMALLOC:

```

_llseek(10, 86016, [86016], SEEK_SET) = 0
close(7) = 0
munmap(0x40b7b000, 4096) = 0
write(3, "u\0\1\0", 4) = 4
read(3, "\1 Q\0\10\0\0\0\0\20\0\0\36%\22\10\340\301\33\10@\25\343"... , 32) = 32
read(3, "\1\2\3\4\5\6\7\10\fn\vf\fr\16\17\20\21\22\23\24\25\26"... , 32) = 32
write(3, "\20\0\6\0\16\0\0\0_NET_SUPPORTED\0\0", 24) = 24
read(3, "\1\R\0\0\0\0\0\rl\1\0\0\36%\22\10\340\301\33\10@\25\343"... , 32) = 32
write(3, "\24\0\6\0\246\1\0\0\rl\1\0\0\0\0\0\0\0\0\0\233\377\0\0"... , 24) = 24
read(3, 0xb9c000, 32) = -1 EAGAIN (Resource temporarily unavail
able)
poll([{fd=3, events=POLLIN, revents=POLLIN}], 1, -1) = 1
read(3, "\1 S\0B\0\0\0\4\0\0\0\0\0\0\0B\0\0\0\36%\22\10\340\301"... , 32) = 32
read(3, "\rl\1\0\0;\1\0\0<\1\0\0=\1\0\0>\1\0\0?\1\0\0007\1\0\0A\1"... , 264) = 264
mmap2(NULL, 44306432, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS,
-1, 0) =
0x40b7f000
munmap(0x40b7f000, 44306432) = 0

```

```

mmap2(NULL, 69210112, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS,
-1, 0) =
-1 ENOMEM (Cannot allocate memory)
brk(0x4498000) = 0x298000
mmap2(NULL, 69341184, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS,
-1, 0) =
-1 ENOMEM (Cannot allocate memory)
mmap2(NULL, 2097152, PROT_NONE,
MAP_PRIVATE|MAP_ANONYMOUS|MAP_NORESERVE, -1, 0)
= 0x48fa1000
munmap(0x48fa1000, 389120) = 0
munmap(0x49100000, 659456) = 0
mprotect(0x49000000, 135168, PROT_READ|PROT_WRITE) = 0
mmap2(NULL, 69210112, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS,
-1, 0) =
-1 ENOMEM (Cannot allocate memory)
write(2, "terminate called after throwing "..., 48) = 48
write(2, "std::bad_alloc", 14) = 14
write(2, "\\n", 2) = 2
write(2, " what(): ", 11) = 11
write(2, "std::bad_alloc", 14) = 14
write(2, "\\n", 1) = 1
rt_sigprocmask(SIG_UNBLOCK, [ABRT], NULL, = 0
tgkill(411, 411, SIGABRT) = 0
--- SIGABRT (Aborted) @ 0 (0) ---
+++ killed by SIGABRT +++

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Note that if we enable swap on the board we can get these applications to start.

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