```
execve("./a.out", ["./a.out"], [/* 20 \text{ vars } */]) = 0
     application is run
brk(0)
                                        = 0x1db6000
access("/etc/ld.so.nohwcap", F OK)
                                       = -1 ENOENT (No such file or
directory)
     attempt to access nohwcap
mmap(NULL, 8192, PROT READ|PROT WRITE, MAP PRIVATE|MAP ANONYMOUS, -1, 0)
= 0x7f48a6366000
     Memory set aside
access("/etc/ld.so.preload", R OK) = -1 ENOENT (No such file or
directory)
     attempt to access preload
open("/etc/ld.so.cache", O RDONLY|O CLOEXEC) = 3
     opening cache; file descriptor 3 is opened
fstat(3, {st mode=S IFREG|0644, st size=40453, ...}) = 0
     info is gathered on file
mmap (NULL, 40453, PROT READ, MAP PRIVATE, 3, 0) = 0x7f48a635c000
     memory is set aside
close(3)
     file is closed
                                = 0
access("/etc/ld.so.nohwcap", F OK)
                                       = -1 ENOENT (No such file or
directory)
open("/lib/x86 64-linux-gnu/libc.so.6", O RDONLY|O CLOEXEC) = 3
     new file is opened
read(3,
"\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\200\30\2\0\0\0\0"...,
832) = 832
     data is read from file
fstat(3, {st mode=S IFREG|0755, st size=1811128, ...}) = 0
mmap(NULL, 3925176, PROT READ|PROT EXEC, MAP PRIVATE|MAP DENYWRITE, 3, 0)
= 0x7f48a5d87000
     memory is set aside
mprotect(0x7f48a5f3c000, 2093056, PROT NONE) = 0
mmap(0x7f48a613b000, 24576, PROT READ|PROT WRITE,
MAP PRIVATE | MAP FIXED | MAP DENYWRITE, 3, 0 \times 164000) = 0 \times 7648a613b000
mmap(0x7f48a6141000, 17592, PROT READ|PROT WRITE,
MAP PRIVATE | MAP FIXED | MAP ANONYMOUS, -1, 0) = 0x7f48a6141000
close(3)
mmap(NULL, 4096, PROT READ|PROT WRITE, MAP PRIVATE|MAP ANONYMOUS, -1, 0)
= 0x7f48a635b000
mmap(NULL, 4096, PROT READ|PROT WRITE, MAP PRIVATE|MAP ANONYMOUS, -1, 0)
= 0x7f48a635a000
```

```
mmap(NULL, 4096, PROT READ|PROT WRITE, MAP PRIVATE|MAP ANONYMOUS, -1, 0)
= 0x7f48a6359000
arch prctl(ARCH SET FS, 0x7f48a635a700) = 0
mprotect(0x7f48a613b000, 16384, PROT READ) = 0
mprotect(0x600000, 4096, PROT READ) = 0
mprotect(0x7f48a6368000, 4096, PROT READ) = 0
munmap(0x7f48a635c000, 40453)
    unmap allocated memory
brk(0)
                                    = 0x1db6000
                                    = 0x1dd7000
brk(0x1dd7000)
open("test.txt", O RDONLY)
                                    = 3
     open file and assign it fd 3
fstat(3, {st mode=S IFREG|0644, st size=73, \ldots}) = 0
mmap(NULL, 32768, PROT READ|PROT WRITE, MAP PRIVATE|MAP ANONYMOUS, -1, 0)
= 0x7f48a635e000
read(3, "Now is the time for all good\r\nme"..., 32768) = 73
     read entire contents of file
fstat(1, {st mode=S IFCHR|0620, st rdev=makedev(136, 1), ...}) = 0
mmap(NULL, 4096, PROT READ|PROT WRITE, MAP PRIVATE|MAP ANONYMOUS, -1, 0)
= 0x7f48a635d000
write(1, "Now is the time for all good\r\n", 30) = 30
write(1, "men to come to the aid of their\r"..., 33) = 33
read(3, "", 32768)
                                    = 0
close(3)
     close fd 3
munmap(0x7f48a635e000, 32768)
write(1, "university", 10)
                                   = 0
                                   = 10
exit group(0)
% time seconds usecs/call calls errors syscall
_____ _______
 68.76 0.000328 328 1
                                             execve
                       6
                                            mmap
 12.16 0.000058
                                 10
                        6 10
8 3
7 3
4 4
2 3
2 3
1 3
4 1
0 3
0 2
                                          3 access
 5.03 0.000024
4.19 0.000020
                                           open
 3.56 0.000017
                                             fstat
                        3
2
2
 2.31
        0.000011
                                             mprotect
 1.26 0.000006
                                             close
 1.05 0.000005
                                             read
 0.84 0.000004
                                             brk
                                      arch_prctl
write
munmap
 0.84
        0.000004
 0.00
0.00
0.00
0.000000
100.00 0.000477
                                 40 3 total
```