Московский Авиационный Институт

(Национальный Исследовательский Университет)

Институт №8 “Компьютерные науки и прикладная математика”

Кафедра №806 “Вычислительная математика и программирование”

**Лабораторная работа №8 по курсу**

**«Операционные системы»**

Группа: М80-206Б-22

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Оценка: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Постановка задачи**

**Вариант 6.**

Необходимо продемонстрировать ключевые системные вызовы, которые в них используются и то, что их использование соответствует варианту ЛР.

**Общий метод и алгоритм решения**

Strace – удобный инструмент для диагностики и отладки. Она перехватывает и записывает системные вызовы, которые использует процесс. Каждая строчка в выводе содержит название системного вызова вместе с его аргументами и возвращаемым значением.

-E var=val

--env=var=val

Запустить команду со значением var=val в списке переменных окружения

-p pid

--attach=pid

Прикрепить команду к процессу с ID pid и начать отслеживать его

-f

--follow-forks

Отслеживать дочерние процессы, которые будут созданы в результате fork(2), vfork(2) и clone(2) системных вызовов

**Вывод в ЛР 1:**

[pid 8800] mprotect(0x7fedc2287000, 1576960, PROT\_NONE <unfinished ...>   
[pid 8799] <... mmap resumed>) = 0x7fc547236000   
[pid 8800] <... mprotect resumed>) = 0   
[pid 8799] mprotect(0x7fc5472d0000, 1576960, PROT\_NONE <unfinished ...>   
[pid 8800] mmap(0x7fedc2287000, 1118208, PROT\_READ|PROT\_EXEC,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4, 0x9a000 <unfinished ...>   
[pid 8799] <... mprotect resumed>) = 0   
[pid 8800] <... mmap resumed>) = 0x7fedc2287000   
[pid 8799] mmap(0x7fc5472d0000, 1118208, PROT\_READ|PROT\_EXEC,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9a000 <unfinished ...>   
[pid 8800] mmap(0x7fedc2398000, 454656, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4,   
0x1ab000 <unfinished ...>   
[pid 8799] <... mmap resumed>) = 0x7fc5472d0000   
[pid 8800] <... mmap resumed>) = 0x7fedc2398000   
[pid 8799] mmap(0x7fc5473e1000, 454656, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,   
0x1ab000 <unfinished ...>   
[pid 8800] mmap(0x7fedc2408000, 57344, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4, 0x21a000 <unfinished ...>   
[pid 8799] <... mmap resumed>) = 0x7fc5473e1000   
[pid 8800] <... mmap resumed>) = 0x7fedc2408000   
[pid 8799] mmap(0x7fc547451000, 57344, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21a000 <unfinished ...>   
[pid 8800] mmap(0x7fedc2416000, 10432, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>   
[pid 8799] <... mmap resumed>) = 0x7fc547451000   
[pid 8800] <... mmap resumed>) = 0x7fedc2416000   
[pid 8799] mmap(0x7fc54745f000, 10432, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>   
[pid 8800] close(4 <unfinished ...>   
[pid 8799] <... mmap resumed>) = 0x7fc54745f000   
[pid 8800] <... close resumed>) = 0   
[pid 8799] close(3 <unfinished ...>   
[pid 8800] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC <unfinished   
...>   
[pid 8799] <... close resumed>) = 0   
[pid 8800] <... openat resumed>) = 4   
[pid 8799] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC <unfinished   
...>   
[pid 8800] read(4, <unfinished ...>   
[pid 8799] <... openat resumed>) = 3   
[pid 8800] <... read   
resumed>"\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832   
[pid 8799] read(3, <unfinished ...>

[pid 8800] pread64(4, <unfinished ...>   
[pid 8799] <... read   
resumed>"\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832   
[pid 8800] <... pread64   
resumed>"\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784   
[pid 8799] pread64(3, <unfinished ...>   
[pid 8800] pread64(4, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48,   
848) = 48   
[pid 8799] <... pread64   
resumed>"\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784   
[pid 8800] pread64(4, <unfinished ...>   
[pid 8799] pread64(3, <unfinished ...>   
[pid 8800] <... pread64   
resumed>"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0i8\235HZ\227\223\333\350s\360\352,\223\340."..., 68, 896) = 68   
[pid 8799] <... pread64 resumed>"\4\0\0\0   
\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48   
[pid 8800] newfstatat(4, "", <unfinished ...>   
[pid 8799] pread64(3, <unfinished ...>   
[pid 8800] <... newfstatat resumed>{st\_mode=S\_IFREG|0644, st\_size=2216304, ...}, AT\_EMPTY\_PATH)   
= 0   
[pid 8799] <... pread64   
resumed>"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0i8\235HZ\227\223\333\350s\360\352,\223\340."..., 68, 896) = 68   
[pid 8800] pread64(4, <unfinished ...>   
[pid 8799] newfstatat(3, "", <unfinished ...>   
[pid 8800] <... pread64   
resumed>"\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784   
[pid 8799] <... newfstatat resumed>{st\_mode=S\_IFREG|0644, st\_size=2216304, ...}, AT\_EMPTY\_PATH)   
= 0   
[pid 8800] mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 4, 0 <unfinished ...>   
[pid 8799] pread64(3, <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1fc5000   
[pid 8799] <... pread64   
resumed>"\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784   
[pid 8800] mmap(0x7fedc1fed000, 1658880, PROT\_READ|PROT\_EXEC,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4, 0x28000 <unfinished ...>   
[pid 8799] mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1fed000   
[pid 8799] <... mmap resumed>) = 0x7fc54700e000   
[pid 8800] mmap(0x7fedc2182000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4,   
0x1bd000 <unfinished ...>   
[pid 8799] mmap(0x7fc547036000, 1658880, PROT\_READ|PROT\_EXEC,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc2182000   
[pid 8799] <... mmap resumed>) = 0x7fc547036000

[pid 8800] mmap(0x7fedc21da000, 24576, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4, 0x214000 <unfinished ...>   
[pid 8799] mmap(0x7fc5471cb000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,   
0x1bd000 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc21da000   
[pid 8799] <... mmap resumed>) = 0x7fc5471cb000   
[pid 8800] mmap(0x7fedc21e0000, 52816, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>   
[pid 8799] mmap(0x7fc547223000, 24576, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc21e0000   
[pid 8799] <... mmap resumed>) = 0x7fc547223000   
[pid 8800] close(4 <unfinished ...>   
[pid 8799] mmap(0x7fc547229000, 52816, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>   
[pid 8800] <... close resumed>) = 0   
[pid 8799] <... mmap resumed>) = 0x7fc547229000   
[pid 8800] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC <unfinished   
...>   
[pid 8799] close(3 <unfinished ...>   
[pid 8800] <... openat resumed>) = 4   
[pid 8799] <... close resumed>) = 0   
[pid 8800] read(4, <unfinished ...>   
[pid 8799] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC <unfinished   
...>   
[pid 8800] <... read   
resumed>"\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832   
[pid 8799] <... openat resumed>) = 3   
[pid 8800] newfstatat(4, "", <unfinished ...>   
[pid 8799] read(3, <unfinished ...>   
[pid 8800] <... newfstatat resumed>{st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH)   
= 0   
[pid 8799] <... read   
resumed>"\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832   
[pid 8800] mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 4, 0 <unfinished ...>   
[pid 8799] newfstatat(3, "", <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1ede000   
[pid 8799] <... newfstatat resumed>{st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH)   
= 0   
[pid 8800] mmap(0x7fedc1eec000, 507904, PROT\_READ|PROT\_EXEC,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4, 0xe000 <unfinished ...>   
[pid 8799] mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1eec000

[pid 8799] <... mmap resumed>) = 0x7fc546f27000   
[pid 8800] mmap(0x7fedc1f68000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4,   
0x8a000 <unfinished ...>   
[pid 8799] mmap(0x7fc546f35000, 507904, PROT\_READ|PROT\_EXEC,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1f68000   
[pid 8799] <... mmap resumed>) = 0x7fc546f35000   
[pid 8800] mmap(0x7fedc1fc3000, 8192, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4, 0xe4000 <unfinished ...>   
[pid 8799] mmap(0x7fc546fb1000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,   
0x8a000 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1fc3000   
[pid 8799] <... mmap resumed>) = 0x7fc546fb1000   
[pid 8800] close(4 <unfinished ...>   
[pid 8799] mmap(0x7fc54700c000, 8192, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000 <unfinished ...>   
[pid 8800] <... close resumed>) = 0   
[pid 8799] <... mmap resumed>) = 0x7fc54700c000   
[pid 8800] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC   
<unfinished ...>   
[pid 8799] close(3 <unfinished ...>   
[pid 8800] <... openat resumed>) = 4   
[pid 8799] <... close resumed>) = 0   
[pid 8800] read(4, <unfinished ...>   
[pid 8799] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC   
<unfinished ...>   
[pid 8800] <... read   
resumed>"\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832   
[pid 8799] <... openat resumed>) = 3   
[pid 8800] newfstatat(4, "", <unfinished ...>   
[pid 8799] read(3, <unfinished ...>   
[pid 8800] <... newfstatat resumed>{st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH)   
= 0   
[pid 8799] <... read   
resumed>"\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832   
[pid 8800] mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 4, 0 <unfinished ...>   
[pid 8799] newfstatat(3, "", <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1ebe000   
[pid 8799] <... newfstatat resumed>{st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH)   
= 0   
[pid 8800] mmap(0x7fedc1ec1000, 94208, PROT\_READ|PROT\_EXEC,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4, 0x3000 <unfinished ...>   
[pid 8799] mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 8800] <... mmap resumed>) = 0x7fedc1ec1000   
[pid 8799] <... mmap resumed>) = 0x7fc546f07000   
[pid 8800] mmap(0x7fedc1ed8000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4,   
0x1a000 <unfinished ...>   
[pid 8799] mmap(0x7fc546f0a000, 94208, PROT\_READ|PROT\_EXEC,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1ed8000   
[pid 8799] <... mmap resumed>) = 0x7fc546f0a000   
[pid 8800] mmap(0x7fedc1edc000, 8192, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 4, 0x1d000 <unfinished ...>   
[pid 8799] mmap(0x7fc546f21000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,   
0x1a000 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1edc000   
[pid 8799] <... mmap resumed>) = 0x7fc546f21000   
[pid 8800] close(4 <unfinished ...>   
[pid 8799] mmap(0x7fc546f25000, 8192, PROT\_READ|PROT\_WRITE,   
MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d000 <unfinished ...>   
[pid 8800] <... close resumed>) = 0   
[pid 8799] <... mmap resumed>) = 0x7fc546f25000   
[pid 8800] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished   
...>   
[pid 8799] close(3 <unfinished ...>   
[pid 8800] <... mmap resumed>) = 0x7fedc1ebc000   
[pid 8799] <... close resumed>) = 0   
[pid 8800] arch\_prctl(ARCH\_SET\_FS, 0x7fedc1ebd3c0 <unfinished ...>   
[pid 8799] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished   
...>   
[pid 8800] <... arch\_prctl resumed>) = 0   
[pid 8799] <... mmap resumed>) = 0x7fc546f05000   
[pid 8800] set\_tid\_address(0x7fedc1ebd690 <unfinished ...>   
[pid 8799] arch\_prctl(ARCH\_SET\_FS, 0x7fc546f063c0 <unfinished ...>   
[pid 8800] <... set\_tid\_address resumed>) = 8800   
[pid 8799] <... arch\_prctl resumed>) = 0   
[pid 8800] set\_robust\_list(0x7fedc1ebd6a0, 24 <unfinished ...>   
[pid 8799] set\_tid\_address(0x7fc546f06690 <unfinished ...>   
[pid 8800] <... set\_robust\_list resumed>) = 0   
[pid 8799] <... set\_tid\_address resumed>) = 8799   
[pid 8800] rseq(0x7fedc1ebdd60, 0x20, 0, 0x53053053 <unfinished ...>   
[pid 8799] set\_robust\_list(0x7fc546f066a0, 24 <unfinished ...>   
[pid 8800] <... rseq resumed>) = 0   
[pid 8799] <... set\_robust\_list resumed>) = 0

[pid 8800] mprotect(0x7fedc21da000, 16384, PROT\_READ <unfinished ...>   
[pid 8799] rseq(0x7fc546f06d60, 0x20, 0, 0x53053053 <unfinished ...>   
[pid 8800] <... mprotect resumed>) = 0   
[pid 8799] <... rseq resumed>) = 0   
[pid 8800] mprotect(0x7fedc1edc000, 4096, PROT\_READ <unfinished ...>   
[pid 8799] mprotect(0x7fc547223000, 16384, PROT\_READ <unfinished ...>   
[pid 8800] <... mprotect resumed>) = 0   
[pid 8799] <... mprotect resumed>) = 0   
[pid 8800] mprotect(0x7fedc1fc3000, 4096, PROT\_READ <unfinished ...>   
[pid 8799] mprotect(0x7fc546f25000, 4096, PROT\_READ <unfinished ...>   
[pid 8800] <... mprotect resumed>) = 0   
[pid 8799] <... mprotect resumed>) = 0   
[pid 8799] mprotect(0x7fc54700c000, 4096, PROT\_READ <unfinished ...>   
[pid 8800] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished   
...>   
[pid 8799] <... mprotect resumed>) = 0   
[pid 8800] <... mmap resumed>) = 0x7fedc1eba000   
[pid 8799] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) =   
0x7fc546f03000   
[pid 8800] mprotect(0x7fedc2408000, 45056, PROT\_READ) = 0   
[pid 8799] mprotect(0x7fc547451000, 45056, PROT\_READ <unfinished ...>   
[pid 8800] mprotect(0x55bb993f8000, 4096, PROT\_READ <unfinished ...>   
[pid 8799] <... mprotect resumed>) = 0   
[pid 8800] <... mprotect resumed>) = 0   
[pid 8799] mprotect(0x55eb2640c000, 4096, PROT\_READ <unfinished ...>   
[pid 8800] mprotect(0x7fedc2458000, 8192, PROT\_READ <unfinished ...>   
[pid 8799] <... mprotect resumed>) = 0   
[pid 8800] <... mprotect resumed>) = 0   
[pid 8799] mprotect(0x7fc5474a1000, 8192, PROT\_READ <unfinished ...>   
[pid 8800] prlimit64(0, RLIMIT\_STACK, NULL, <unfinished ...>   
[pid 8799] <... mprotect resumed>) = 0   
[pid 8800] <... prlimit64 resumed>{rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0   
[pid 8799] prlimit64(0, RLIMIT\_STACK, NULL, <unfinished ...>   
[pid 8800] munmap(0x7fedc2419000, 18023 <unfinished ...>   
[pid 8799] <... prlimit64 resumed>{rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0   
[pid 8800] <... munmap resumed>) = 0   
[pid 8799] munmap(0x7fc547462000, 18023 <unfinished ...>   
[pid 8800] getrandom( <unfinished ...>

[pid 8799] <... munmap resumed>) = 0   
[pid 8800] <... getrandom resumed>"\x37\x87\x0c\xa7\x1e\xb0\x4b\x66", 8, GRND\_NONBLOCK) = 8   
[pid 8799] getrandom( <unfinished ...>   
[pid 8800] brk(NULL <unfinished ...>   
[pid 8799] <... getrandom resumed>"\x15\xfa\xec\x38\x5a\xf7\x2a\xd0", 8, GRND\_NONBLOCK) = 8   
[pid 8800] <... brk resumed>) = 0x55bb9b29d000   
[pid 8799] brk(NULL <unfinished ...>   
[pid 8800] brk(0x55bb9b2be000 <unfinished ...>   
[pid 8799] <... brk resumed>) = 0x55eb27ff6000   
[pid 8800] <... brk resumed>) = 0x55bb9b2be000   
[pid 8799] brk(0x55eb28017000 <unfinished ...>   
[pid 8800] futex(0x7fedc241677c, FUTEX\_WAKE\_PRIVATE, 2147483647 <unfinished ...>   
[pid 8799] <... brk resumed>) = 0x55eb28017000   
[pid 8800] <... futex resumed>) = 0   
[pid 8799] futex(0x7fc54745f77c, FUTEX\_WAKE\_PRIVATE, 2147483647 <unfinished ...>   
[pid 8800] read(0, <unfinished ...>   
[pid 8799] <... futex resumed>) = 0   
[pid 8799] read(0, hello   
 <unfinished ...>   
[pid 8798] <... read resumed>"hello\n", 1024) = 6   
[pid 8798] write(4, "h", 1) = 1   
[pid 8800] <... read resumed>"h", 1) = 1   
[pid 8798] read(5, <unfinished ...>   
[pid 8800] write(1, "h", 1) = 1   
[pid 8799] <... read resumed>"h", 1) = 1   
[pid 8800] read(0, <unfinished ...>   
[pid 8799] write(1, "H", 1) = 1   
[pid 8798] <... read resumed>"H", 1) = 1   
[pid 8799] read(0, <unfinished ...>   
[pid 8798] newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...},   
AT\_EMPTY\_PATH) = 0   
[pid 8798] write(4, "e", 1) = 1   
[pid 8800] <... read resumed>"e", 1) = 1   
[pid 8798] read(5, <unfinished ...>   
[pid 8800] write(1, "e", 1) = 1   
[pid 8799] <... read resumed>"e", 1) = 1   
[pid 8800] read(0, <unfinished ...>   
[pid 8799] write(1, "E", 1 <unfinished ...>

[pid 8798] <... read resumed>"E", 1) = 1   
[pid 8799] <... write resumed>) = 1   
[pid 8798] write(4, "l", 1 <unfinished ...>   
[pid 8799] read(0, <unfinished ...>   
[pid 8798] <... write resumed>) = 1   
[pid 8800] <... read resumed>"l", 1) = 1   
[pid 8798] read(5, <unfinished ...>   
[pid 8800] write(1, "l", 1) = 1   
[pid 8799] <... read resumed>"l", 1) = 1   
[pid 8800] read(0, <unfinished ...>   
[pid 8799] write(1, "L", 1 <unfinished ...>   
[pid 8798] <... read resumed>"L", 1) = 1   
[pid 8799] <... write resumed>) = 1   
[pid 8798] write(4, "l", 1 <unfinished ...>   
[pid 8799] read(0, <unfinished ...>   
[pid 8798] <... write resumed>) = 1   
[pid 8800] <... read resumed>"l", 1) = 1   
[pid 8798] read(5, <unfinished ...>   
[pid 8800] write(1, "l", 1) = 1   
[pid 8799] <... read resumed>"l", 1) = 1   
[pid 8800] read(0, <unfinished ...>   
[pid 8799] write(1, "L", 1 <unfinished ...>   
[pid 8798] <... read resumed>"L", 1) = 1   
[pid 8799] <... write resumed>) = 1   
[pid 8798] write(4, "o", 1 <unfinished ...>   
[pid 8799] read(0, <unfinished ...>   
[pid 8798] <... write resumed>) = 1   
[pid 8800] <... read resumed>"o", 1) = 1   
[pid 8798] read(5, <unfinished ...>   
[pid 8800] write(1, "o", 1) = 1   
[pid 8799] <... read resumed>"o", 1) = 1   
[pid 8800] read(0, <unfinished ...>   
[pid 8799] write(1, "O", 1 <unfinished ...>   
[pid 8798] <... read resumed>"O", 1) = 1   
[pid 8799] <... write resumed>) = 1   
[pid 8798] write(4, "\n", 1 <unfinished ...>   
[pid 8799] read(0, <unfinished ...>

[pid 8798] <... write resumed>) = 1   
[pid 8800] <... read resumed>"\n", 1) = 1   
[pid 8798] read(5, <unfinished ...>   
[pid 8800] write(1, "\n", 1) = 1   
[pid 8799] <... read resumed>"\n", 1) = 1   
[pid 8800] read(0, <unfinished ...>   
[pid 8799] write(1, "\n", 1 <unfinished ...>   
[pid 8798] <... read resumed>"\n", 1) = 1   
[pid 8799] <... write resumed>) = 1   
[pid 8798] write(1, "HELLO\n", 6 <unfinished ...>   
HELLO   
[pid 8799] read(0, <unfinished ...>   
[pid 8798] <... write resumed>) = 6   
[pid 8798] read(0, "", 1024) = 0   
[pid 8798] close(4) = 0   
[pid 8800] <... read resumed>"", 1) = 0   
[pid 8798] close(5 <unfinished ...>   
[pid 8800] write(1, "\n", 1 <unfinished ...>   
[pid 8798] <... close resumed>) = 0   
[pid 8800] <... write resumed>) = 1   
[pid 8800] read(0, <unfinished ...>   
[pid 8799] <... read resumed>"\n", 1) = 1   
[pid 8798] exit\_group(0 <unfinished ...>   
[pid 8800] <... read resumed>"", 1) = 0   
[pid 8798] <... exit\_group resumed>) = ?   
[pid 8799] write(1, "\n", 1 <unfinished ...>   
[pid 8800] write(1, "\n", 1 <unfinished ...>   
[pid 8799] <... write resumed>) = -1 EPIPE (Broken pipe)   
[pid 8798] +++ exited with 0 +++   
[pid 8800] <... write resumed>) = 1   
[pid 8799] --- SIGPIPE {si\_signo=SIGPIPE, si\_code=SI\_USER, si\_pid=8799, si\_uid=1000} ---   
[pid 8800] read(0, "", 1) = 0   
[pid 8800] write(1, "\n", 1) = 1   
[pid 8799] +++ killed by SIGPIPE +++   
read(0, "", 1) = 0   
write(1, "\n", 1) = -1 EPIPE (Broken pipe)   
--- SIGPIPE {si\_signo=SIGPIPE, si\_code=SI\_USER, si\_pid=8800, si\_uid=1000} ---

+++ killed by SIGPIPE +++

**Вывод в ЛР 2:**

execve("./lab02\_exe", ["./lab02\_exe", "2"], 0x7ffe2ef2cd50 /\* 60 vars \*/) = 0

brk(NULL) = 0x55d36770e000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffc04b6c520) = -1 EINVAL (Недопустимый аргумент)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fdc0dc2d000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (Нет такого файла или каталога)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=75015, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 75015, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7fdc0dc1a000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=2260296, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 2275520, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fdc0d9ee000

mprotect(0x7fdc0da88000, 1576960, PROT\_NONE) = 0

mmap(0x7fdc0da88000, 1118208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9a000)

= 0x7fdc0da88000

mmap(0x7fdc0db99000, 454656, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1ab000) =

0x7fdc0db99000

mmap(0x7fdc0dc09000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21a000)

= 0x7fdc0dc09000

mmap(0x7fdc0dc17000, 10432, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) =

0x7fdc0dc17000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fdc0d9ce000

mmap(0x7fdc0d9d1000, 94208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) =

0x7fdc0d9d1000

mmap(0x7fdc0d9e8000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1a000) =

0x7fdc0d9e8000

mmap(0x7fdc0d9ec000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d000) =

0x7fdc0d9ec000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\244;\374\204(\337f#\315I\214\234\f\256\271\32"..., 68,

896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fdc0d7a6000

mmap(0x7fdc0d7ce000, 1658880, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000)

= 0x7fdc0d7ce000

mmap(0x7fdc0d963000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) =

0x7fdc0d963000

mmap(0x7fdc0d9bb000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000)

= 0x7fdc0d9bb000

mmap(0x7fdc0d9c1000, 52816, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) =

0x7fdc0d9c1000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fdc0d6bf000

mmap(0x7fdc0d6cd000, 507904, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) =

0x7fdc0d6cd000

mmap(0x7fdc0d749000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x8a000) =

0x7fdc0d749000

mmap(0x7fdc0d7a4000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000) =

0x7fdc0d7a4000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fdc0d6bd000

arch\_prctl(ARCH\_SET\_FS, 0x7fdc0d6be3c0) = 0

set\_tid\_address(0x7fdc0d6be690) = 20093

set\_robust\_list(0x7fdc0d6be6a0, 24) = 0

rseq(0x7fdc0d6bed60, 0x20, 0, 0x53053053) = 0

mprotect(0x7fdc0d9bb000, 16384, PROT\_READ) = 0

mprotect(0x7fdc0d7a4000, 4096, PROT\_READ) = 0

mprotect(0x7fdc0d9ec000, 4096, PROT\_READ) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fdc0d6bb000

mprotect(0x7fdc0dc09000, 45056, PROT\_READ) = 0

mprotect(0x55d366206000, 4096, PROT\_READ) = 0

mprotect(0x7fdc0dc67000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0

munmap(0x7fdc0dc1a000, 75015) = 0

getrandom("\x55\x9a\xa1\xc2\xd2\x35\xe5\xe7", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x55d36770e000

brk(0x55d36772f000) = 0x55d36772f000

futex(0x7fdc0dc1777c, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0), ...}, AT\_EMPTY\_PATH) = 0

write(1, "Enter the number of elements: ", 30Enter the number of elements: ) = 30

newfstatat(0, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0), ...}, AT\_EMPTY\_PATH) = 0

read(0, 5

"5\n", 1024) = 2

write(1, "Fill array: ", 12Fill array: ) = 12

read(0, 5 1 4 3 2

"5 1 4 3 2\n", 1024) = 10

rt\_sigaction(SIGRT\_1, {sa\_handler=0x7fdc0d837870, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_ONSTACK|

SA\_RESTART|SA\_SIGINFO, sa\_restorer=0x7fdc0d7e8520}, NULL, 8) = 0

rt\_sigprocmask(SIG\_UNBLOCK, [RTMIN RT\_1], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7fdc0ceba000

mprotect(0x7fdc0cebb000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|

CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fdc0d6ba910, parent\_tid=0x7fdc0d6ba910,

exit\_signal=0, stack=0x7fdc0ceba000, stack\_size=0x7fff00, tls=0x7fdc0d6ba640}strace: Process 20112

attached

=> {parent\_tid=[20112]}, 88) = 20112

[pid 20093] rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

[pid 20112] rseq(0x7fdc0d6bafe0, 0x20, 0, 0x53053053 <unfinished ...>

[pid 20093] mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0

<unfinished ...>

[pid 20112] <... rseq resumed>) = 0

[pid 20093] <... mmap resumed>) = 0x7fdc0c6b9000

[pid 20093] mprotect(0x7fdc0c6ba000, 8388608, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 20112] set\_robust\_list(0x7fdc0d6ba920, 24 <unfinished ...>

[pid 20093] <... mprotect resumed>) = 0

[pid 20093] rt\_sigprocmask(SIG\_BLOCK, ~[], <unfinished ...>

[pid 20112] <... set\_robust\_list resumed>) = 0

[pid 20093] <... rt\_sigprocmask resumed>[], 8) = 0

[pid 20112] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 20093] clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|

CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fdc0ceb9910,

parent\_tid=0x7fdc0ceb9910, exit\_signal=0, stack=0x7fdc0c6b9000, stack\_size=0x7fff00, tls=0x7fdc0ceb9640}

<unfinished ...>

[pid 20112] <... rt\_sigprocmask resumed>NULL, 8) = 0

strace: Process 20113 attached

[pid 20112] rt\_sigprocmask(SIG\_BLOCK, ~[RT\_1], <unfinished ...>

[pid 20093] <... clone3 resumed> => {parent\_tid=[20113]}, 88) = 20113

[pid 20113] rseq(0x7fdc0ceb9fe0, 0x20, 0, 0x53053053 <unfinished ...>

[pid 20093] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 20112] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 20093] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 20113] <... rseq resumed>) = 0

[pid 20093] futex(0x7fdc0d6ba910, FUTEX\_WAIT\_BITSET|FUTEX\_CLOCK\_REALTIME, 20112, NULL,

FUTEX\_BITSET\_MATCH\_ANY <unfinished ...>

[pid 20112] madvise(0x7fdc0ceba000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 20113] set\_robust\_list(0x7fdc0ceb9920, 24 <unfinished ...>

[pid 20112] <... madvise resumed>) = 0

[pid 20113] <... set\_robust\_list resumed>) = 0

[pid 20112] exit(0 <unfinished ...>

[pid 20113] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 20112] <... exit resumed>) = ?

[pid 20113] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 20093] <... futex resumed>) = 0

[pid 20113] rt\_sigprocmask(SIG\_BLOCK, ~[RT\_1], <unfinished ...>

[pid 20112] +++ exited with 0 +++

[pid 20093] futex(0x7fdc0ceb9910, FUTEX\_WAIT\_BITSET|FUTEX\_CLOCK\_REALTIME, 20113, NULL,

FUTEX\_BITSET\_MATCH\_ANY <unfinished ...>

[pid 20113] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 20113] madvise(0x7fdc0c6b9000, 8368128, MADV\_DONTNEED) = 0

[pid 20113] exit(0) = ?

[pid 20113] +++ exited with 0 +++

<... futex resumed>) = 0

write(1, "Result: 0.00226607 s\n", 21Result: 0.00226607 s

) = 21

write(1, "1 2 3 4 5 \n", 111 2 3 4 5

) = 11

lseek(0, -1, SEEK\_CUR) = -1 ESPIPE (Недопустимая операция смещения)

exit\_group(0) = ?

+++ exited with 0 +++

**Вывод в ЛР 3:**

execve("./main", ["./main", "lab03"], 0x7ffc50e86500 /\* 60 vars \*/) = 0

brk(NULL) = 0x55c538910000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffe48644000) = -1 EINVAL (Недопустимый аргумент)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f7fd090a000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (Нет такого файла или каталога)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=75015, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 75015, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f7fd08f7000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=2260296, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 2275520, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f7fd06cb000

mprotect(0x7f7fd0765000, 1576960, PROT\_NONE) = 0

mmap(0x7f7fd0765000, 1118208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9a000) = 0x7f7fd0765000

mmap(0x7f7fd0876000, 454656, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1ab000) = 0x7f7fd0876000

mmap(0x7f7fd08e6000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21a000) = 0x7f7fd08e6000

mmap(0x7f7fd08f4000, 10432, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f7fd08f4000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f7fd06ab000

mmap(0x7f7fd06ae000, 94208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f7fd06ae000

mmap(0x7f7fd06c5000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1a000) = 0x7f7fd06c5000

mmap(0x7f7fd06c9000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d000) = 0x7f7fd06c9000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\244;\374\204(\337f#\315I\214\234\f\256\271\32"..., 68, 896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f7fd0483000

mmap(0x7f7fd04ab000, 1658880, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f7fd04ab000

mmap(0x7f7fd0640000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7f7fd0640000

mmap(0x7f7fd0698000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7f7fd0698000

mmap(0x7f7fd069e000, 52816, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f7fd069e000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f7fd039c000

mmap(0x7f7fd03aa000, 507904, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) = 0x7f7fd03aa000

mmap(0x7f7fd0426000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x8a000) = 0x7f7fd0426000

mmap(0x7f7fd0481000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000) = 0x7f7fd0481000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f7fd039a000

arch\_prctl(ARCH\_SET\_FS, 0x7f7fd039b3c0) = 0

set\_tid\_address(0x7f7fd039b690) = 63112

set\_robust\_list(0x7f7fd039b6a0, 24) = 0

rseq(0x7f7fd039bd60, 0x20, 0, 0x53053053) = 0

mprotect(0x7f7fd0698000, 16384, PROT\_READ) = 0

mprotect(0x7f7fd0481000, 4096, PROT\_READ) = 0

mprotect(0x7f7fd06c9000, 4096, PROT\_READ) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f7fd0398000

mprotect(0x7f7fd08e6000, 45056, PROT\_READ) = 0

mprotect(0x55c537481000, 4096, PROT\_READ) = 0

mprotect(0x7f7fd0944000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0

munmap(0x7f7fd08f7000, 75015) = 0

getrandom("\xa4\xfc\xd8\x1a\x15\x3a\xe4\x0e", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x55c538910000

brk(0x55c538931000) = 0x55c538931000

futex(0x7f7fd08f477c, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

**openat**(AT\_FDCWD, "/dev/shm/lab03", O\_RDWR|O\_CREAT|O\_NOFOLLOW|O\_CLOEXEC, 0600) = 3

**ftruncate**(3, 10000) = 0

**mmap**(NULL, 10000, PROT\_READ|PROT\_WRITE, MAP\_SHARED, 3, 0) = 0x7f7fd0907000

newfstatat(0, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0), ...}, AT\_EMPTY\_PATH) = 0

read(0, hello world!

"hello world!\n", 1024) = 13

read(0, "", 1024) = 0

clone(child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD, child\_tidptr=0x7f7fd039b690) = 63551

strace: Process 63551 attached

[pid 63112] wait4(-1, <unfinished ...>

[pid 63551] set\_robust\_list(0x7f7fd039b6a0, 24) = 0

[pid 63551] execve("../build/child1", ["../build/child1", "lab03"], 0x7ffe486441e0 /\* 60 vars \*/) = 0

[pid 63551] brk(NULL) = 0x55d2a276f000

[pid 63551] arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffe06ab4540) = -1 EINVAL (Недопустимый аргумент)

[pid 63551] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fce44e28000

[pid 63551] access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (Нет такого файла или каталога)

[pid 63551] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63551] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=75015, ...}, AT\_EMPTY\_PATH) = 0

[pid 63551] mmap(NULL, 75015, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7fce44e15000

[pid 63551] close(3) = 0

[pid 63551] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63551] read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

[pid 63551] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=2260296, ...}, AT\_EMPTY\_PATH) = 0

[pid 63551] mmap(NULL, 2275520, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fce44be9000

[pid 63551] mprotect(0x7fce44c83000, 1576960, PROT\_NONE) = 0

[pid 63551] mmap(0x7fce44c83000, 1118208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9a000) = 0x7fce44c83000

[pid 63551] mmap(0x7fce44d94000, 454656, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1ab000) = 0x7fce44d94000

[pid 63551] mmap(0x7fce44e04000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21a000) = 0x7fce44e04000

[pid 63551] mmap(0x7fce44e12000, 10432, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fce44e12000

[pid 63551] close(3) = 0

[pid 63551] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63551] read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

[pid 63551] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH) = 0

[pid 63551] mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fce44bc9000

[pid 63551] mmap(0x7fce44bcc000, 94208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7fce44bcc000

[pid 63551] mmap(0x7fce44be3000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1a000) = 0x7fce44be3000

[pid 63551] mmap(0x7fce44be7000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d000) = 0x7fce44be7000

[pid 63551] close(3) = 0

[pid 63551] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63551] read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

[pid 63551] pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

[pid 63551] pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

[pid 63551] pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\244;\374\204(\337f#\315I\214\234\f\256\271\32"..., 68, 896) = 68

[pid 63551] newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

[pid 63551] pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

[pid 63551] mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fce449a1000

[pid 63551] mmap(0x7fce449c9000, 1658880, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7fce449c9000

[pid 63551] mmap(0x7fce44b5e000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7fce44b5e000

[pid 63551] mmap(0x7fce44bb6000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7fce44bb6000

[pid 63551] mmap(0x7fce44bbc000, 52816, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fce44bbc000

[pid 63551] close(3) = 0

[pid 63551] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63551] read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

[pid 63551] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH) = 0

[pid 63551] mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fce448ba000

[pid 63551] mmap(0x7fce448c8000, 507904, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) = 0x7fce448c8000

[pid 63551] mmap(0x7fce44944000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x8a000) = 0x7fce44944000

[pid 63551] mmap(0x7fce4499f000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000) = 0x7fce4499f000

[pid 63551] close(3) = 0

[pid 63551] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fce448b8000

[pid 63551] arch\_prctl(ARCH\_SET\_FS, 0x7fce448b93c0) = 0

[pid 63551] set\_tid\_address(0x7fce448b9690) = 63551

[pid 63551] set\_robust\_list(0x7fce448b96a0, 24) = 0

[pid 63551] rseq(0x7fce448b9d60, 0x20, 0, 0x53053053) = 0

[pid 63551] mprotect(0x7fce44bb6000, 16384, PROT\_READ) = 0

[pid 63551] mprotect(0x7fce4499f000, 4096, PROT\_READ) = 0

[pid 63551] mprotect(0x7fce44be7000, 4096, PROT\_READ) = 0

[pid 63551] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fce448b6000

[pid 63551] mprotect(0x7fce44e04000, 45056, PROT\_READ) = 0

[pid 63551] mprotect(0x55d2a0a10000, 4096, PROT\_READ) = 0

[pid 63551] mprotect(0x7fce44e62000, 8192, PROT\_READ) = 0

[pid 63551] prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0

[pid 63551] munmap(0x7fce44e15000, 75015) = 0

[pid 63551] getrandom("\xfe\xeb\x94\x2f\xb9\x4d\xe2\x70", 8, GRND\_NONBLOCK) = 8

[pid 63551] brk(NULL) = 0x55d2a276f000

[pid 63551] brk(0x55d2a2790000) = 0x55d2a2790000

[pid 63551] futex(0x7fce44e1277c, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

[pid 63551] **openat**(AT\_FDCWD, "/dev/shm/lab03", O\_RDWR|O\_CREAT|O\_NOFOLLOW|O\_CLOEXEC, 0600) = 3

[pid 63551] **ftruncate**(3, 10000) = 0

[pid 63551] **mmap**(NULL, 10000, PROT\_READ|PROT\_WRITE, MAP\_SHARED, 3, 0) = 0x7fce44e25000

[pid 63551] clone(child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLDstrace: Process 63555 attached

, child\_tidptr=0x7fce448b9690) = 63555

[pid 63555] set\_robust\_list(0x7fce448b96a0, 24 <unfinished ...>

[pid 63551] wait4(-1, <unfinished ...>

[pid 63555] <... set\_robust\_list resumed>) = 0

[pid 63555] execve("../build/child2", ["../build/child2", "lab03"], 0x7ffe06ab4720 /\* 60 vars \*/) = 0

[pid 63555] brk(NULL) = 0x557a9a8e4000

[pid 63555] arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffc81545220) = -1 EINVAL (Недопустимый аргумент)

[pid 63555] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f01070c7000

[pid 63555] access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (Нет такого файла или каталога)

[pid 63555] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63555] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=75015, ...}, AT\_EMPTY\_PATH) = 0

[pid 63555] mmap(NULL, 75015, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f01070b4000

[pid 63555] close(3) = 0

[pid 63555] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63555] read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

[pid 63555] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=2260296, ...}, AT\_EMPTY\_PATH) = 0

[pid 63555] mmap(NULL, 2275520, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0106e88000

[pid 63555] mprotect(0x7f0106f22000, 1576960, PROT\_NONE) = 0

[pid 63555] mmap(0x7f0106f22000, 1118208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9a000) = 0x7f0106f22000

[pid 63555] mmap(0x7f0107033000, 454656, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1ab000) = 0x7f0107033000

[pid 63555] mmap(0x7f01070a3000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21a000) = 0x7f01070a3000

[pid 63555] mmap(0x7f01070b1000, 10432, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f01070b1000

[pid 63555] close(3) = 0

[pid 63555] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63555] read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

[pid 63555] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH) = 0

[pid 63555] mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0106e68000

[pid 63555] mmap(0x7f0106e6b000, 94208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f0106e6b000

[pid 63555] mmap(0x7f0106e82000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1a000) = 0x7f0106e82000

[pid 63555] mmap(0x7f0106e86000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d000) = 0x7f0106e86000

[pid 63555] close(3) = 0

[pid 63555] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63555] read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

[pid 63555] pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

[pid 63555] pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

[pid 63555] pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\244;\374\204(\337f#\315I\214\234\f\256\271\32"..., 68, 896) = 68

[pid 63555] newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

[pid 63555] pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

[pid 63555] mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0106c40000

[pid 63555] mmap(0x7f0106c68000, 1658880, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f0106c68000

[pid 63555] mmap(0x7f0106dfd000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7f0106dfd000

[pid 63555] mmap(0x7f0106e55000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7f0106e55000

[pid 63555] mmap(0x7f0106e5b000, 52816, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f0106e5b000

[pid 63555] close(3) = 0

[pid 63555] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

[pid 63555] read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

[pid 63555] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH) = 0

[pid 63555] mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0106b59000

[pid 63555] mmap(0x7f0106b67000, 507904, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) = 0x7f0106b67000

[pid 63555] mmap(0x7f0106be3000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x8a000) = 0x7f0106be3000

[pid 63555] mmap(0x7f0106c3e000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000) = 0x7f0106c3e000

[pid 63555] close(3) = 0

[pid 63555] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f0106b57000

[pid 63555] arch\_prctl(ARCH\_SET\_FS, 0x7f0106b583c0) = 0

[pid 63555] set\_tid\_address(0x7f0106b58690) = 63555

[pid 63555] set\_robust\_list(0x7f0106b586a0, 24) = 0

[pid 63555] rseq(0x7f0106b58d60, 0x20, 0, 0x53053053) = 0

[pid 63555] mprotect(0x7f0106e55000, 16384, PROT\_READ) = 0

[pid 63555] mprotect(0x7f0106c3e000, 4096, PROT\_READ) = 0

[pid 63555] mprotect(0x7f0106e86000, 4096, PROT\_READ) = 0

[pid 63555] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f0106b55000

[pid 63555] mprotect(0x7f01070a3000, 45056, PROT\_READ) = 0

[pid 63555] mprotect(0x557a9a071000, 4096, PROT\_READ) = 0

[pid 63555] mprotect(0x7f0107101000, 8192, PROT\_READ) = 0

[pid 63555] prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0

[pid 63555] munmap(0x7f01070b4000, 75015) = 0

[pid 63555] getrandom("\x1b\x6d\x35\x51\xe3\x1e\xd0\x5d", 8, GRND\_NONBLOCK) = 8

[pid 63555] brk(NULL) = 0x557a9a8e4000

[pid 63555] brk(0x557a9a905000) = 0x557a9a905000

[pid 63555] futex(0x7f01070b177c, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

[pid 63555] **openat**(AT\_FDCWD, "/dev/shm/lab03", O\_RDWR|O\_CREAT|O\_NOFOLLOW|O\_CLOEXEC, 0600) = 3

[pid 63555] **ftruncate**(3, 10000) = 0

[pid 63555] **mmap**(NULL, 10000, PROT\_READ|PROT\_WRITE, MAP\_SHARED, 3, 0) = 0x7f01070c4000

[pid 63555] **munmap**(0x7f01070c4000, 10000) = 0

[pid 63555] exit\_group(0) = ?

[pid 63555] +++ exited with 0 +++

[pid 63551] <... wait4 resumed>NULL, 0, NULL) = 63555

[pid 63551] --- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=63555, si\_uid=1000, si\_status=0, si\_utime=0, si\_stime=0} ---

[pid 63551] **munmap**(0x7fce44e25000, 10000) = 0

[pid 63551] exit\_group(0) = ?

[pid 63551] +++ exited with 0 +++

<... wait4 resumed>NULL, 0, NULL) = 63551

--- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=63551, si\_uid=1000, si\_status=0, si\_utime=0, si\_stime=1} ---

newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0), ...}, AT\_EMPTY\_PATH) = 0

write(1, "HELLO\_WORLD!\n", 13HELLO\_WORLD!

) = 13

**unlink**("/dev/shm/lab03") = 0

**munmap**(0x7f7fd0907000, 10000) = 0

exit\_group(0) = ?

+++ exited with 0 +++

**Вывод в ЛР 4:**

execve("./main1\_impl1", ["./main1\_impl1"], 0x7ffc10d8ab30 /\* 36 vars \*/) = 0

brk(NULL) = 0x55d755744000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffcfc54f2e0) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f643c9b3000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/glibc-hwcaps/x86-64-v3/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/glibc-hwcaps/x86-64-v3", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/glibc-hwcaps/x86-64-v2/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/glibc-hwcaps/x86-64-v2", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/tls/x86\_64/x86\_64/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/tls/x86\_64/x86\_64", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/tls/x86\_64/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/tls/x86\_64", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/tls/x86\_64/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/tls/x86\_64", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/tls/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/tls", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/x86\_64/x86\_64/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/x86\_64/x86\_64", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/x86\_64/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/x86\_64", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/x86\_64/liblib1.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/x86\_64", 0x7ffcfc54e500, 0) = -1 ENOENT (No such file or directory)

**openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/liblib1.so", O\_RDONLY|O\_CLOEXEC) = 3**

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=15592, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 16432, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f643c9ae000

mmap(0x7f643c9af000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f643c9af000

mmap(0x7f643c9b0000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f643c9b0000

mmap(0x7f643c9b1000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f643c9b1000

close(3) = 0

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/libc.so.6", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=25087, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 25087, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f643c9a7000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0 =\340\2563\265?\356\25x\261\27\313A#\350"..., 68, 896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f643c77f000

mmap(0x7f643c7a7000, 1658880, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f643c7a7000

mmap(0x7f643c93c000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7f643c93c000

mmap(0x7f643c994000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7f643c994000

mmap(0x7f643c99a000, 52816, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f643c99a000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f643c698000

mmap(0x7f643c6a6000, 507904, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) = 0x7f643c6a6000

mmap(0x7f643c722000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x8a000) = 0x7f643c722000

mmap(0x7f643c77d000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000) = 0x7f643c77d000

close(3) = 0

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f643c695000

arch\_prctl(ARCH\_SET\_FS, 0x7f643c695740) = 0

set\_tid\_address(0x7f643c695a10) = 16131

set\_robust\_list(0x7f643c695a20, 24) = 0

rseq(0x7f643c6960e0, 0x20, 0, 0x53053053) = 0

mprotect(0x7f643c994000, 16384, PROT\_READ) = 0

mprotect(0x7f643c77d000, 4096, PROT\_READ) = 0

mprotect(0x7f643c9b1000, 4096, PROT\_READ) = 0

mprotect(0x55d7544a7000, 4096, PROT\_READ) = 0

mprotect(0x7f643c9ed000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0

munmap(0x7f643c9a7000, 25087) = 0

newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...}, AT\_EMPTY\_PATH) = 0

getrandom("\x27\xd9\x17\xca\x4f\x48\xee\x55", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x55d755744000

brk(0x55d755765000) = 0x55d755765000

write(1, "Test program 1. \n", 17Test program 1.

) = 17

write(1, "For help enter 'h' \n", 20For help enter 'h'

) = 20

newfstatat(0, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...}, AT\_EMPTY\_PATH) = 0

write(1, "> ", 2> ) = 2

read(0, q

"q\n", 1024) = 2

lseek(0, -1, SEEK\_CUR) = -1 ESPIPE (Illegal seek)

exit\_group(0) = ?

+++ exited with 0 +++

**Вторая программа**

execve("./main2", ["./main2"], 0x7fff828656a0 /\* 36 vars \*/) = 0

brk(NULL) = 0x5607d3d01000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffe44d13960) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f981eebf000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=25023, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 25023, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f981eeb8000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0 =\340\2563\265?\356\25x\261\27\313A#\350"..., 68, 896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f981ec90000

mmap(0x7f981ecb8000, 1658880, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f981ecb8000

mmap(0x7f981ee4d000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7f981ee4d000

mmap(0x7f981eea5000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7f981eea5000

mmap(0x7f981eeab000, 52816, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f981eeab000

close(3) = 0

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f981ec8d000

arch\_prctl(ARCH\_SET\_FS, 0x7f981ec8d740) = 0

set\_tid\_address(0x7f981ec8da10) = 7005

set\_robust\_list(0x7f981ec8da20, 24) = 0

rseq(0x7f981ec8e0e0, 0x20, 0, 0x53053053) = 0

mprotect(0x7f981eea5000, 16384, PROT\_READ) = 0

mprotect(0x5607d1f4b000, 4096, PROT\_READ) = 0

mprotect(0x7f981eef9000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0

munmap(0x7f981eeb8000, 25023) = 0

getrandom("\x0f\x39\xd2\xf2\xcb\xdd\x9d\x6a", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x5607d3d01000

brk(0x5607d3d22000) = 0x5607d3d22000

**openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/liblib1.so", O\_RDONLY|O\_CLOEXEC) = 3**

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=15536, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 16432, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f981eeba000

mmap(0x7f981eebb000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f981eebb000

mmap(0x7f981eebc000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f981eebc000

mmap(0x7f981eebd000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f981eebd000

close(3) = 0

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=25023, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 25023, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f981ec86000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f981eb9f000

mmap(0x7f981ebad000, 507904, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) = 0x7f981ebad000

mmap(0x7f981ec29000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x8a000) = 0x7f981ec29000

mmap(0x7f981ec84000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000) = 0x7f981ec84000

close(3) = 0

mprotect(0x7f981ec84000, 4096, PROT\_READ) = 0

mprotect(0x7f981eebd000, 4096, PROT\_READ) = 0

munmap(0x7f981ec86000, 25023) = 0

openat(AT\_FDCWD, "/home/cat\_mood/programming/mai-os-labs/lab04/build/liblib2.so", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=15608, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 16432, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f981ec88000

mmap(0x7f981ec89000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f981ec89000

mmap(0x7f981ec8a000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f981ec8a000

mmap(0x7f981ec8b000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f981ec8b000

close(3) = 0

mprotect(0x7f981ec8b000, 4096, PROT\_READ) = 0

newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...}, AT\_EMPTY\_PATH) = 0

write(1, "Test program 1. \n", 17Test program 1.

) = 17

write(1, "For help enter 'h' \n", 20For help enter 'h'

) = 20

newfstatat(0, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...}, AT\_EMPTY\_PATH) = 0

write(1, "> ", 2> ) = 2

read(0, 0

"0\n", 1024) = 2

write(1, "Implementation changed. Current "..., 37Implementation changed. Current is 1

) = 37

write(1, "> ", 2> ) = 2

read(0, q

"q\n", 1024) = 2

munmap(0x7f981eeba000, 16432) = 0

munmap(0x7f981ec88000, 16432) = 0

munmap(0x7f981eb9f000, 942344) = 0

lseek(0, -1, SEEK\_CUR) = -1 ESPIPE (Illegal seek)

exit\_group(0) = ?

+++ exited with 0 +++

**Вывод в ЛР 5-7:**

execve("./lab5-7\_exe", ["./lab5-7\_exe"], 0x7ffda5c591e0 /\* 27 vars \*/) = 0

brk(NULL) = 0x562f286dd000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffe5d1aae50) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f3ded59b000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=32515, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 32515, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f3ded593000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=583920, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 585912, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3ded503000

mmap(0x7f3ded51b000, 364544, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7f3ded51b000

mmap(0x7f3ded574000, 90112, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x71000) = 0x7f3ded574000

mmap(0x7f3ded58a000, 36864, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x86000) = 0x7f3ded58a000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=2260296, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 2275520, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3ded2d7000

mprotect(0x7f3ded371000, 1576960, PROT\_NONE) = 0

mmap(0x7f3ded371000, 1118208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9a000) = 0x7f3ded371000

mmap(0x7f3ded482000, 454656, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1ab000) = 0x7f3ded482000

mmap(0x7f3ded4f2000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21a000) = 0x7f3ded4f2000

mmap(0x7f3ded500000, 10432, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f3ded500000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3ded2b7000

mmap(0x7f3ded2ba000, 94208, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f3ded2ba000

mmap(0x7f3ded2d1000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1a000) = 0x7f3ded2d1000

mmap(0x7f3ded2d5000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d000) = 0x7f3ded2d5000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0 =\340\2563\265?\356\25x\261\27\313A#\350"..., 68, 896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3ded08f000

mmap(0x7f3ded0b7000, 1658880, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f3ded0b7000

mmap(0x7f3ded24c000, 360448, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7f3ded24c000

mmap(0x7f3ded2a4000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7f3ded2a4000

mmap(0x7f3ded2aa000, 52816, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f3ded2aa000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libunwind.so.8", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=63744, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 109264, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3ded074000

mmap(0x7f3ded076000, 40960, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f3ded076000

mmap(0x7f3ded080000, 12288, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xc000) = 0x7f3ded080000

mmap(0x7f3ded083000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) = 0x7f3ded083000

mmap(0x7f3ded085000, 39632, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f3ded085000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libsodium.so.23", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=355040, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 357440, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3ded01c000

mprotect(0x7f3ded028000, 303104, PROT\_NONE) = 0

mmap(0x7f3ded028000, 229376, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xc000) = 0x7f3ded028000

mmap(0x7f3ded060000, 69632, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x44000) = 0x7f3ded060000

mmap(0x7f3ded072000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x55000) = 0x7f3ded072000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f3ded01a000

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libpgm-5.3.so.0", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\340L\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=310264, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 329808, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decfc9000

mmap(0x7f3decfcd000, 172032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7f3decfcd000

mmap(0x7f3decff7000, 118784, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2e000) = 0x7f3decff7000

mmap(0x7f3ded014000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4a000) = 0x7f3ded014000

mmap(0x7f3ded016000, 14416, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f3ded016000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libnorm.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0 \255\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=497824, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 1223168, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3dece9e000

mprotect(0x7f3decea8000, 446464, PROT\_NONE) = 0

mmap(0x7f3decea8000, 286720, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xa000) = 0x7f3decea8000

mmap(0x7f3deceee000, 155648, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x50000) = 0x7f3deceee000

mmap(0x7f3decf15000, 16384, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x76000) = 0x7f3decf15000

mmap(0x7f3decf19000, 719360, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f3decf19000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgssapi\_krb5.so.2", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=338648, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 340960, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3dece4a000

mprotect(0x7f3dece55000, 282624, PROT\_NONE) = 0

mmap(0x7f3dece55000, 229376, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb000) = 0x7f3dece55000

mmap(0x7f3dece8d000, 49152, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x43000) = 0x7f3dece8d000

mmap(0x7f3dece9a000, 16384, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4f000) = 0x7f3dece9a000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decd63000

mmap(0x7f3decd71000, 507904, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) = 0x7f3decd71000

mmap(0x7f3decded000, 372736, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x8a000) = 0x7f3decded000

mmap(0x7f3dece48000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000) = 0x7f3dece48000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/liblzma.so.5", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=170456, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 172296, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decd38000

mmap(0x7f3decd3b000, 110592, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f3decd3b000

mmap(0x7f3decd56000, 45056, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e000) = 0x7f3decd56000

mmap(0x7f3decd61000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f3decd61000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libpthread.so.0", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=21448, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f3decd36000

mmap(NULL, 16424, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decd31000

mmap(0x7f3decd32000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f3decd32000

mmap(0x7f3decd33000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f3decd33000

mmap(0x7f3decd34000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f3decd34000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libkrb5.so.3", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=827936, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 830576, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decc66000

mprotect(0x7f3decc87000, 634880, PROT\_NONE) = 0

mmap(0x7f3decc87000, 380928, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21000) = 0x7f3decc87000

mmap(0x7f3decce4000, 249856, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x7e000) = 0x7f3decce4000

mmap(0x7f3decd22000, 61440, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xbb000) = 0x7f3decd22000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libk5crypto.so.3", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=182864, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 188472, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decc37000

mprotect(0x7f3decc3b000, 163840, PROT\_NONE) = 0

mmap(0x7f3decc3b000, 110592, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7f3decc3b000

mmap(0x7f3decc56000, 49152, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1f000) = 0x7f3decc56000

mmap(0x7f3decc63000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2b000) = 0x7f3decc63000

mmap(0x7f3decc65000, 56, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f3decc65000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libcom\_err.so.2", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=18504, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 20552, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decc31000

mmap(0x7f3decc33000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f3decc33000

mmap(0x7f3decc34000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f3decc34000

mmap(0x7f3decc35000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f3decc35000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libkrb5support.so.0", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=52016, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 54224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decc23000

mprotect(0x7f3decc26000, 36864, PROT\_NONE) = 0

mmap(0x7f3decc26000, 24576, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f3decc26000

mmap(0x7f3decc2c000, 8192, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9000) = 0x7f3decc2c000

mmap(0x7f3decc2f000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb000) = 0x7f3decc2f000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libkeyutils.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=22600, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f3decc21000

mmap(NULL, 24592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decc1a000

mmap(0x7f3decc1c000, 8192, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f3decc1c000

mmap(0x7f3decc1e000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7f3decc1e000

mmap(0x7f3decc1f000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7f3decc1f000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libresolv.so.2", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=68552, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 80456, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f3decc06000

mmap(0x7f3decc09000, 40960, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f3decc09000

mmap(0x7f3decc13000, 12288, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000) = 0x7f3decc13000

mmap(0x7f3decc16000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xf000) = 0x7f3decc16000

mmap(0x7f3decc18000, 6728, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f3decc18000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f3decc04000

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f3decc01000

arch\_prctl(ARCH\_SET\_FS, 0x7f3decc019c0) = 0

set\_tid\_address(0x7f3decc01c90) = 13203

set\_robust\_list(0x7f3decc01ca0, 24) = 0

rseq(0x7f3decc02360, 0x20, 0, 0x53053053) = 0

mprotect(0x7f3ded2a4000, 16384, PROT\_READ) = 0

mprotect(0x7f3decc16000, 4096, PROT\_READ) = 0

mprotect(0x7f3decc1f000, 4096, PROT\_READ) = 0

mprotect(0x7f3decc2f000, 4096, PROT\_READ) = 0

mprotect(0x7f3decc35000, 4096, PROT\_READ) = 0

mprotect(0x7f3decc63000, 4096, PROT\_READ) = 0

mprotect(0x7f3decd22000, 53248, PROT\_READ) = 0

mprotect(0x7f3decd34000, 4096, PROT\_READ) = 0

mprotect(0x7f3decd61000, 4096, PROT\_READ) = 0

mprotect(0x7f3dece48000, 4096, PROT\_READ) = 0

mprotect(0x7f3dece9a000, 8192, PROT\_READ) = 0

mprotect(0x7f3ded2d5000, 4096, PROT\_READ) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f3decbff000

mprotect(0x7f3ded4f2000, 45056, PROT\_READ) = 0

mprotect(0x7f3decf15000, 12288, PROT\_READ) = 0

mprotect(0x7f3ded014000, 4096, PROT\_READ) = 0

mprotect(0x7f3ded072000, 4096, PROT\_READ) = 0

mprotect(0x7f3ded083000, 4096, PROT\_READ) = 0

mprotect(0x7f3ded58a000, 32768, PROT\_READ) = 0

mprotect(0x562f26c92000, 4096, PROT\_READ) = 0

mprotect(0x7f3ded5d5000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0

munmap(0x7f3ded593000, 32515) = 0

getrandom("\xc7\x7b\x4f\x88\xaa\xce\xa4\xba", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x562f286dd000

brk(0x562f286fe000) = 0x562f286fe000

futex(0x7f3ded50077c, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

openat(AT\_FDCWD, "/sys/devices/system/cpu/online", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "0-15\n", 1024) = 5

close(3) = 0

openat(AT\_FDCWD, "/sys/devices/system/cpu", O\_RDONLY|O\_NONBLOCK|O\_CLOEXEC|O\_DIRECTORY) = 3

newfstatat(3, "", {st\_mode=S\_IFDIR|0755, st\_size=0, ...}, AT\_EMPTY\_PATH) = 0

getdents64(3, 0x562f286eeee0 /\* 31 entries \*/, 32768) = 896

getdents64(3, 0x562f286eeee0 /\* 0 entries \*/, 32768) = 0

close(3) = 0

getpid() = 13203

sched\_getaffinity(13203, 128, [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]) = 32

newfstatat(AT\_FDCWD, "/etc/nsswitch.conf", {st\_mode=S\_IFREG|0644, st\_size=510, ...}, 0) = 0

newfstatat(AT\_FDCWD, "/", {st\_mode=S\_IFDIR|0755, st\_size=4096, ...}, 0) = 0

openat(AT\_FDCWD, "/etc/nsswitch.conf", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=510, ...}, AT\_EMPTY\_PATH) = 0

read(3, "# /etc/nsswitch.conf\n#\n# Example"..., 4096) = 510

read(3, "", 4096) = 0

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=510, ...}, AT\_EMPTY\_PATH) = 0

close(3) = 0

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=32515, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 32515, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f3ded593000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v3/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v3", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v2/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v2", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/x86\_64/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/x86\_64/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/x86\_64/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/x86\_64/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu", {st\_mode=S\_IFDIR|0755, st\_size=36864, ...}, 0) = 0

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v3/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v3", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v2/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v2", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/x86\_64/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/x86\_64/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/x86\_64/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/x86\_64/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu", {st\_mode=S\_IFDIR|0755, st\_size=36864, ...}, 0) = 0

openat(AT\_FDCWD, "/lib/glibc-hwcaps/x86-64-v3/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/glibc-hwcaps/x86-64-v3", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/glibc-hwcaps/x86-64-v2/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/glibc-hwcaps/x86-64-v2", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/tls/x86\_64/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/tls/x86\_64/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/tls/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/tls/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/tls/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/tls", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib", {st\_mode=S\_IFDIR|0755, st\_size=12288, ...}, 0) = 0

openat(AT\_FDCWD, "/usr/lib/glibc-hwcaps/x86-64-v3/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/glibc-hwcaps/x86-64-v3", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/glibc-hwcaps/x86-64-v2/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/glibc-hwcaps/x86-64-v2", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/tls/x86\_64/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/tls/x86\_64/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/tls/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/tls/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/tls/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/tls", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64", 0x7ffe5d1a7e50, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib", {st\_mode=S\_IFDIR|0755, st\_size=12288, ...}, 0) = 0

munmap(0x7f3ded593000, 32515) = 0

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=32515, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 32515, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f3ded593000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libnss\_db-2.35.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/libnss\_db-2.35.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/libnss\_db-2.35.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/libnss\_db-2.35.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

munmap(0x7f3ded593000, 32515) = 0

openat(AT\_FDCWD, "/etc/protocols", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=2932, ...}, AT\_EMPTY\_PATH) = 0

lseek(3, 0, SEEK\_SET) = 0

read(3, "# Internet (IP) protocols\n#\n# Up"..., 4096) = 2932

read(3, "", 4096) = 0

close(3) = 0

eventfd2(0, EFD\_CLOEXEC) = 3

fcntl(3, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(3, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(3, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(3, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 13203

getpid() = 13203

getrandom("\x6c\x5c\xe2\x32\x30\xe6\xf2\x1b\xdc\x2d\xac\xd8\x40\xe0\x20\x73", 16, 0) = 16

getrandom("\xfb\x4c\x41\xdf\x15\xf6\x1d\x18\x9b\x44\x17\x2f\xd9\x93\xd8\x6b", 16, 0) = 16

eventfd2(0, EFD\_CLOEXEC) = 4

fcntl(4, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(4, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(4, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(4, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 13203

epoll\_create1(EPOLL\_CLOEXEC) = 5

epoll\_ctl(5, EPOLL\_CTL\_ADD, 4, {events=0, data={u32=678359648, u64=94760541811296}}) = 0

epoll\_ctl(5, EPOLL\_CTL\_MOD, 4, {events=EPOLLIN, data={u32=678359648, u64=94760541811296}}) = 0

getpid() = 13203

rt\_sigaction(SIGRT\_1, {sa\_handler=0x7f3ded120870, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_ONSTACK|SA\_RESTART|SA\_SIGINFO, sa\_restorer=0x7f3ded0d1520}, NULL, 8) = 0

rt\_sigprocmask(SIG\_UNBLOCK, [RTMIN RT\_1], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7f3dec3fe000

mprotect(0x7f3dec3ff000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7f3decbfe910, parent\_tid=0x7f3decbfe910, exit\_signal=0, stack=0x7f3dec3fe000, stack\_size=0x7ffc80, tls=0x7f3decbfe640} => {parent\_tid=[13204]}, 88) = 13204

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

eventfd2(0, EFD\_CLOEXEC) = 6

fcntl(6, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(6, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(6, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(6, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 13203

epoll\_create1(EPOLL\_CLOEXEC) = 7

epoll\_ctl(7, EPOLL\_CTL\_ADD, 6, {events=0, data={u32=678363568, u64=94760541815216}}) = 0

epoll\_ctl(7, EPOLL\_CTL\_MOD, 6, {events=EPOLLIN, data={u32=678363568, u64=94760541815216}}) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7f3debbfd000

mprotect(0x7f3debbfe000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7f3dec3fd910, parent\_tid=0x7f3dec3fd910, exit\_signal=0, stack=0x7f3debbfd000, stack\_size=0x7ffc80, tls=0x7f3dec3fd640} => {parent\_tid=[13205]}, 88) = 13205

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

eventfd2(0, EFD\_CLOEXEC) = 8

fcntl(8, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(8, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(8, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(8, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 13203

newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0), ...}, AT\_EMPTY\_PATH) = 0

write(1, "Starting Control Node\n", 22Starting Control Node

) = 22

write(1, "> ", 2> ) = 2

newfstatat(0, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0), ...}, AT\_EMPTY\_PATH) = 0

read(0, create 1

"create 1\n", 1024) = 9

clone(child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD, child\_tidptr=0x7f3decc01c90) = 13218

getpid() = 13203

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

**socket(AF\_INET, SOCK\_STREAM|SOCK\_CLOEXEC, IPPROTO\_TCP) = 9**

**setsockopt(9, SOL\_SOCKET, SO\_REUSEADDR, [1], 4) = 0**

**bind(9, {sa\_family=AF\_INET, sin\_port=htons(5001), sin\_addr=inet\_addr("0.0.0.0")}, 16) = 0**

**listen(9, 100) = 0**

**getsockname(9, {sa\_family=AF\_INET, sin\_port=htons(5001), sin\_addr=inet\_addr("0.0.0.0")}, [128 => 16]) = 0**

**getsockname(9, {sa\_family=AF\_INET, sin\_port=htons(5001), sin\_addr=inet\_addr("0.0.0.0")}, [128 => 16]) = 0**

getpid() = 13203

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 13203

write(8, "\1\0\0\0\0\0\0\0", 8) = 8

write(1, "Ok: 13218\n", 10Ok: 13218

) = 10

write(1, "> ", 2> ) = 2

read(0, pingall

"pingall\n", 1024) = 8

getpid() = 13203

**poll([{fd=8, events=POLLIN}], 1, 0) = 1 ([{fd=8, revents=POLLIN}])**

getpid() = 13203

**read(8, "\1\0\0\0\0\0\0\0", 8) = 8**

getpid() = 13203

**poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)**

getpid() = 13203

**write(6, "\1\0\0\0\0\0\0\0", 8) = 8**

getpid() = 13203

**poll([{fd=8, events=POLLIN}], 1, -1) = 1 ([{fd=8, revents=POLLIN}])**

getpid() = 13203

**read(8, "\1\0\0\0\0\0\0\0", 8) = 8**

getpid() = 13203

**poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)**

getpid() = 13203

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

write(1, "Ok: -1\n", 7Ok: -1

) = 7

write(1, "> ", 2> ) = 2

read(0, q

"q\n", 1024) = 2

getpid() = 13203

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 13203

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 13203

write(4, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 13203

getpid() = 13203

write(8, "\1\0\0\0\0\0\0\0", 8) = 8

futex(0x562f286ef388, FUTEX\_WAKE\_PRIVATE, 1) = 1

getpid() = 13203

--- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=13218, si\_uid=1000, si\_status=0, si\_utime=0, si\_stime=0} ---

poll([{fd=3, events=POLLIN}], 1, -1) = 1 ([{fd=3, revents=POLLIN}])

getpid() = 13203

read(3, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 13203

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

close(7) = 0

close(6) = 0

close(5) = 0

close(4) = 0

close(3) = 0

lseek(0, -1, SEEK\_CUR) = -1 ESPIPE (Illegal seek)

exit\_group(0) = ?

+++ exited with 0 +++

**Вывод**

В ходе лабораторной работы я получил опыт работы с утилитой strace. Также я использовал эту утилиту при отладке моих лабораторных работ, что принесло большую практическую пользу.