



Факультет информационных технологий и прикладной математики
Кафедра вычислительной математики и программирования

Лабораторная работа №1 по курсу
«Операционные системы»

Студент:

Меджидли Махмуд Ибрагим оглы

Группа: М80-208Б-20

Преподаватель: Миронов Е.С.

Оценка: _____

Дата: 25.03.22

Задание

Цель работы — приобретение практических навыков диагностики работы программного обеспечения.

Strace

Strace показывает все системные вызовы программы, которые она отправляет к системе во время выполнения, а также их параметры и результат выполнения. При необходимости можно подключиться к уже запущенному процессу.

Strace имеет следующие(и не только) ключи

- **-i** — выводить указатель на инструкцию во время выполнения системного вызова
- **-o** — выводить всю информацию о системных вызовах не в стандартный поток ошибок, а в файл
- **-r** — выводить временную метку для каждого системного вызова
- **-T** — выводить длительность выполнения каждого системного вызова
- **-b** — если указанный системный вызов обнаружен, трассировка прекращается
- **-l** — позволяет блокировать реакцию нажатия Ctrl+C и Ctrl+Z
- **-f** — отслеживать дочерние процессы и создаваемые потоки

execve(...) - запускает программу

brk(...) - устанавливает конец сегмента данных в значение NULL

access(...) - проверяет права доступа к файлу, возвращает -1 как код ошибки

openat(...) - открывает файл, имеет в качестве возвращаемого значения файловый дескриптор

fstat(...) - собирает информацию из файла

mmap(...) - отображает файл на память

mprotect(...) - контролирует доступ к памяти

close(...) - закрывает файловый дескриптор

read(...) - считывает из файлового дескриптора

arch_prctl(...) - устанавливает специфичное для архитектуры значение ядра

munmap(...) - освобождает память, отведенную для отображения файла

write(...) - пишет в консоль

ftruncate(...) - увеличивает размер файла до n байтов

clone(...) - создает новый процесс

unlink(...) - удаляет файл

lseek(...) - устанавливает смещение для позиционирования операций чтения/записи

Лабораторная работа №2

```
execve("./main",
[ "./main" ],
0x7ffdeb114ff0
/* 58 vars */) =
0

brk(NULL) = 0x55fe005d5000

arch_prctl(0x3001 /* ARCH_??? */, 0x7ffdd97c2db0) = -1 EINVAL (Invalid argument)

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

fstat(3, {st_mode=S_IFREG|0644, st_size=60334, ...}) = 0

mmap(NULL, 60334, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7ff7852e6000

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\3\0>\0\1\0\0\0`\341\t\0\0\0\0"... , 832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=1956992, ...}) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7ff7852e4000

mmap(NULL, 1972224, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7ff785102000

mprotect(0x7ff785198000, 1290240, PROT_NONE) = 0

mmap(0x7ff785198000, 987136, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x96000) =
0x7ff785198000

mmap(0x7ff785289000, 299008, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x187000) =
0x7ff785289000

mmap(0x7ff7852d3000, 57344, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1d0000) =
0x7ff7852d3000

mmap(0x7ff7852e1000, 10240, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) =
0x7ff7852e1000
```

```

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\3\0>\0\1\0\0\0\3405\0\0\0\0\0"... , 832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=104984, ...}) = 0

mmap(NULL, 107592, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7ff7850e7000

mmap(0x7ff7850ea000, 73728, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x3000) =
0x7ff7850ea000

mmap(0x7ff7850fc000, 16384, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x15000) = 0x7ff7850fc000

mmap(0x7ff785100000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x18000) =
0x7ff785100000

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\3\0>\0\1\0\0\0\360A\2\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"... , 784, 64) = 784

pread64(3, "\4\0\0\0\20\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\3\0\0\0GNU\0\237\333t\347\262\27\3201\223\27*\202C\370T\177"... , 68, 880)
= 68

fstat(3, {st_mode=S_IFREG|0755, st_size=2029560, ...}) = 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"... , 784, 64) = 784

pread64(3, "\4\0\0\0\20\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\3\0\0\0GNU\0\237\333t\347\262\27\3201\223\27*\202C\370T\177"... , 68, 880)
= 68

mmap(NULL, 2037344, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7ff784ef5000

mmap(0x7ff784f17000, 1540096, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x22000) =
0x7ff784f17000

mmap(0x7ff78508f000, 319488, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x19a000) =
0x7ff78508f000

mmap(0x7ff7850dd000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1e7000) =
0x7ff7850dd000

mmap(0x7ff7850e3000, 13920, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) =
0x7ff7850e3000

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\3\0>\0\1\0\0\0\300\323\0\0\0\0\0"... , 832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=1369352, ...}) = 0

mmap(NULL, 1368336, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7ff784da6000

mmap(0x7ff784db3000, 684032, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xd000) =
0x7ff784db3000

mmap(0x7ff784e5a000, 626688, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xb4000) =
0x7ff784e5a000

mmap(0x7ff784ef3000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x14c000) =
0x7ff784ef3000

close(3) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7ff784da4000

arch_prctl(ARCH_SET_FS, 0x7ff784da5100) = 0

mprotect(0x7ff7850dd000, 16384, PROT_READ) = 0

mprotect(0x7ff784ef3000, 4096, PROT_READ) = 0

mprotect(0x7ff785100000, 4096, PROT_READ) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7ff784da2000

mprotect(0x7ff7852d3000, 45056, PROT_READ) = 0

mprotect(0x55fdfeae9000, 4096, PROT_READ) = 0

mprotect(0x7ff785322000, 4096, PROT_READ) = 0

munmap(0x7ff7852e6000, 60334) = 0

brk(NULL) = 0x55fe005d5000

brk(0x55fe005f6000) = 0x55fe005f6000

fstat(1, {st_mode=S_IFCHR|0620, st_rdev=makedev(0x88, 0), ...}) = 0

write(1, "Congrats, you are in parent proc"... , 92) = 92

write(1, "For first child: \n", 18) = 18

fstat(0, {st_mode=S_IFCHR|0620, st_rdev=makedev(0x88, 0), ...}) = 0

read(0, "f1\n", 1024) = 3

write(1, "For second child: \n", 19) = 19

read(0, "f2\n", 1024) = 3

pipe([3, 4]) = 0

pipe([5, 6]) = 0

```

```

clone(child_stack=NULL, flags=CLONE_CHILD_CLEARTID|CLONE_CHILD_SETTID|SIGCHLD,
child_tidptr=0x7ff784da53d0) = 4293

clone(child_stack=NULL, flags=CLONE_CHILD_CLEARTID|CLONE_CHILD_SETTID|SIGCHLD,
child_tidptr=0x7ff784da53d0) = 4294

write(1, "From parent: enter amount of str...", 37) = 37

read(0, "5\n", 1024) = 2

write(4, "\5\0\0\0", 4) = 4

write(6, "\5\0\0\0", 4) = 4

write(1, "Good, let's delete vowels in you...", 52) = 52

read(0, "Mahmud\n", 1024) = 7

write(4, "\6\0\0\0", 4) = 4

write(4, "Mahmud", 6) = 6

read(0, "Ilyas\n", 1024) = 6

write(4, "\5\0\0\0", 4) = 4

write(4, "Ilyas", 5) = 5

read(0, "BakiyaGetmekj\n", 1024) = 14

write(6, "\r\0\0\0", 4) = 4

write(6, "BakiyaGetmekj", 13) = 13

read(0, "Siqipkek\n", 1024) = 9

write(4, "\10\0\0\0", 4) = 4

write(4, "Siqipkek", 8) = 8

read(0, "KefElemek\n", 1024) = 10

write(4, "\t\0\0\0", 4) = 4

write(4, "KefElemek", 9) = 9

close(3) = 0

close(4) = 0

close(5) = 0

close(6) = 0

lseek(0, -1, SEEK_CUR) = -1 EPIPE (Illegal seek)

exit_group(0) = ?

```

+++ exited with 0 +++

Лабораторная работа №3

CE075DA2EB1ACBC17D34FED
0ACB4FC2C

AD39BCFEC8AC6C42CDD6BE0076B93A87

45C0B9BB0FE BE9882607DA0C5CAEB102

E59D4A07BA6B12A8569AA9A4BD44D8CC

F38D79B116F267BC881AE8EFE6E5C404

8C030D3BBDC72D7BF4043D823F56ECB

B5F7A0D3E6A3DABB61A039093FB2AACB

892FF3F723F0DACC9DB166BFCCFE239F

3342324B8DED3B44CD80E7427C2CCDDC

F9A88B7F7EAFE269EC53D67A4A4F5AA8

1709AFA699B50866BBB3C12FD864283D

258533F30C9FFB46E1A5F9215FE8764F

D6EDC42BC6AFBFE6A9A0881F33B19975

C24C7CC189A3D30DD1789FB1CE3C1C67

88E5DD795EE3242A19533D94D4C78FD

B309396673DB41B48D86EB5DF434AFDD

D0E02FA06ADFC65D8F8D09A19F41ED64

27346F509C6D00EF58240CB2C1646F4D

DD243FBCEB54B5B62A9ECAD1D32DD277

EDCA00ACDF9191497858B5FBD3322CDF

BD0BC0CEABEF5F8FC54753D0FAACCE4D

C37A1B5EE2404937DF4CDB8D46462B03

FFAAC49CF354FFECDD6E54F8D34BBBAA

3CD24755269D8782DC79306A9655842B

08EFED4DBABB1E66464E7CBB7F80EF5B

CD0EF182D1C65933F5EFA52BD842CF15
7ECE9EAA0688ADA8F2929FAF5BAC0B2F
FB181EAAFDEB91C8A0C0E4347FA2BCBE
B1FAF79B22F29B0ACAC2EDB8B88ECF4D
2F1FBB1D12F8DF58F41B88704DFEBF9D
1CFBC7A43D7B64CFFE216E903C804382
B7C09424BAD9B2E8ADBFF7A0331B9B5D
85F285E3C3F1C3F3F59BF2AEEEE40F8B
F582D7EE7BF5D3FCD9ADA73C2BF3B45D
BECDD52F18DB29B69F87CBCDBA13A4E69
C5B2D24E3A0AAF1AFA7B1DAA007F6EE2
E7BACCC59E027DBEEFCCA9E67CDCC81
0495DDAFC86C68D7EB2DCAA4471D1F31
8E4D45AF39D5D1CD4E80E07AAEFCD0FC
E98D7CDEA63F5D4D8211FE09E7D532EB
7A1DDFDABC9C011200A0D4BC4C0020C5
9CB6E6F57A32AEFD7F6F0AEDFD84990F
E58D0D4ACC9569758A6A47DEE66ADFFF
0E3CFE4DBF8B3918FD62F919C5168F7B
AF3F66DCBFB392EC0BD0F68DE442233D
47AEAF4532C527708D94FBE9E085C72C
6AD84D6B1DB28C06B6FBCF69B6CD2ED2
05DA8A1FFEEBEAD50D2856ECC3F6C6CF
4C1895FC7D2F3BD8C6E3DC8A6C46B038
E60AE6D52A1ED52B9D8DFAAF8E45D3A6
FD6BAE8A3CF82933CAA6F2FAB90A7A4
F8EA4B64FB3BE11C96B2DCB41F79B37E
A0C1FF5D742DE9A28BD6BF7688CC17C7
7D95DD32453AB8E8DB1FEDD1E047CF5F
0B49174CB3C9D5FBA7927DAC3FB8E8FF

A9FF23D592B6E7B0AE A9AC3C795CFDFA
FDD4F799C9ADC6DF48E2502D2E0FB45D
BE5847459E6FBD599EE779D17AEE7A46
FEB06FB8512AA58C636EC0C958B04EE7
F7EC3E9A03AB23E2BDCD0C94E852038E
CE64B70F50AF10D3FF17C5DDF0FB3F65
E7E4A65B7D60F7E560F6E3B1B1C46B73
1D9D9D1BBC7CCF08FFE9B3DEA3DC6A29
F4BC0BAA6BCD8DFC7F0F58C44F5D6D6A
A4FF7EA53E287EBAD235DCF995EDD695
344FE1E4AC6FDF2EFBCCFCA85937AD83
D0B02B5CBDC81AFC52D9BFEC5DDFCC8C
D07135AFC83D0C833682A6334C8A28E5
EF316AF79C08AC3ECD96D9E36A93DF8D
D14E7B58F26D16E6CFB4223EB300F97
FE6AD3E04CDF24A43AC24D6293D7CEFB
2A36C16AFEDCBE2F0ADABFCC8FCBAE5A
EFEDF8E7924B68EB067F5CEECC15EEFB1
EACA71DEF172DA56F6502D176FDC6BBA
7237A1ED87D3D0329D91CAA14D719805
F5CC2D9CCDF5B8F7C230B35EEA8ECD0
E5570DCCE3F CDC5A1E7DC4D6AECEEA48
D6BA3B3D0996B3EEB6FF00D3EFBC37DD
AACE168F63C9C9E8335A848D000B2866
9E31DFF9FFD6D7CBCCAAE6AEDB6FB6D5
BBEC9445E7176ABECC7A58B4AB92B8DC
A5B4A4ACCD5BE2B1E50FDC2DA357ADF3
A1F0869F74BEEBF047AF33D3BA0547CB
117ABA2BED021DAC5CA6A63BF7ABE37E
C0B2E5A6EE8C7AAC5503874B0D8C855E

```

F5CD9376ED2C5ACEBCCF1411A713BE85

F814A7CA15E2D90FB32D9E44EA90CB40

CA5D6E1C2479C266B9319CC7BB012A11

CB96A25B428E3B777CD8C4BBCE7376A3

3D5AD159EEEFBEBB43BB586033D70FBA

DFC1A10FB314B8181DDEB7F0DD31CDAD

EDEAF0A6AFF0C27339C2A8224EC98A1E

0F1BD22098FDAD7CB556E5EFEBBC6A3BE

3BFE1BE62B6107EACEC3D852C90E9DCD

0D2DBF674A28FFD1D8BDD3EF2C7969A4

0587B4FEA7FBB0427EACC0B3B09FBFBB

475BF583ED85F0B9CCB74095A7FD24E

23B9CF53FFB0697C3181B9D44DD8B90DD

51A4F20613DBFEADB1BA3C92E69F8DCC

BC1810FEB774B6DC65DE67BC126E7790

x7f066be3a000, 4096, PROT_READ) = 0

munmap(0x7f066bdfe000, 60334) = 0

set_tid_address(0x7f066bbe4a10) = 4194

set_robust_list(0x7f066bbe4a20, 24) = 0

rt_sigaction(SIGRTMIN, {sa_handler=0x7f066bddfbf0, sa_mask=[], sa_flags=SA_RESTORER|SA_SIGINFO,
sa_restorer=0x7f066bded3c0}, NULL, 8) = 0

rt_sigaction(SIGRT_1, {sa_handler=0x7f066bddfc90, sa_mask=[],
sa_flags=SA_RESTORER|SA_RESTART|SA_SIGINFO, sa_restorer=0x7f066bded3c0}, NULL, 8) = 0

rt_sigprocmask(SIG_UNBLOCK, [RTMIN RT_1], NULL, 8) = 0

prlimit64(0, RLIMIT_STACK, NULL, {rlim_cur=8192*1024, rlim_max=RLIM64_INFINITY}) = 0

brk(NULL) = 0x55a4f520d000

brk(0x55a4f522e000) = 0x55a4f522e000

openat(AT_FDCWD, "file.txt", O_RDWR|O_CREAT, 0666) = 3

write(3, "CE075DA2EB1ACBC17D34FED0ACB4FC2C", 32) = 32

write(3, "\n", 1) = 1

```

```

write(3, "AD39BCFEC8AC6C42CDD6BE0076B93A87", 32) = 32

write(3, "\n", 1) = 1

write(3, "45C0B9BB0FEBE9882607DA0C5CAEB102", 32) = 32

write(3, "\n", 1) = 1

write(3, "E59D4A07BA6B12A8569AA9A4BD44D8CC", 32) = 32

write(3, "\n", 1) = 1

write(3, "F38D79B116F267BC881AE8EFE6E5C404", 32) = 32

write(3, "\n", 1) = 1

write(3, "8C030D3BB CDC72D7BF4043D823F56ECB", 32) = 32

write(3, "\n", 1) = 1

write(3, "B5F7A0D3E6A3DABB61A039093FB2AACB", 32) = 32

write(3, "\n", 1) = 1

write(3, "892FF3F723F0DACC9DB166BFCCFE239F", 32) = 32

write(3, "\n", 1) = 1

write(3, "3342324B8DED3B44CD80E7427C2CCDDC", 32) = 32

write(3, "\n", 1) = 1

write(3, "F9A88B7F7EAFE269EC53D67A4A4F5AA8", 32) = 32

write(3, "\n", 1) = 1

write(3, "1709AFA699B50866BBB3C12FD864283D", 32) = 32

write(3, "\n", 1) = 1

write(3, "258533F30C9FFB46E1A5F9215FE8764F", 32) = 32

write(3, "\n", 1) = 1

write(3, "D6EDC42BC6AFBFE6A9A0881F33B19975", 32) = 32

write(3, "\n", 1) = 1

write(3, "C24C7CC189A3D30DD1789FB1CE3C1C67", 32) = 32

write(3, "\n", 1) = 1

write(3, "88E5DD795EE3242A195333D94D4C78FD", 32) = 32

write(3, "\n", 1) = 1

write(3, "B309396673DB41B48D86EB5DF434AFDD", 32) = 32

write(3, "\n", 1) = 1

```

```

write(3, "D0E02FA06ADFC65D8F8D09A19F41ED64", 32) = 32

write(3, "\n", 1) = 1

write(3, "27346F509C6D00EF58240CB2C1646F4D", 32) = 32

write(3, "\n", 1) = 1

write(3, "DD243FBC EB54B5B62A9ECAD1D32DD277", 32) = 32

write(3, "\n", 1) = 1

write(3, "E DCA00ACDF9191497858B5F BD3322CDF", 32) = 32

write(3, "\n", 1) = 1

write(3, "BD0BC0CEABEF5F8FC54753D0FAACCE4D", 32) = 32

write(3, "\n", 1) = 1

write(3, "C37A1B5EE2404937DF4CDB8D46462B03", 32) = 32

write(3, "\n", 1) = 1

write(3, "F FAAC49CF354FFEC CD6E54F8D34BBBAA", 32) = 32

write(3, "\n", 1) = 1

write(3, "3CD24755269D8782DC79306A9655842B", 32) = 32

write(3, "\n", 1) = 1

write(3, "08EFED4DBABB1E66464E7CB B7F80EF5B", 32) = 32

write(3, "\n", 1) = 1

write(3, "CD0EF182D1C65933F5EFA52BD842CF15", 32) = 32

write(3, "\n", 1) = 1

write(3, "7ECE9EAA0688ADA8F2929FAF5BAC0B2F", 32) = 32

write(3, "\n", 1) = 1

write(3, "FB181EAAFDEB91C8A0C0E4347FA2BCBE", 32) = 32

write(3, "\n", 1) = 1

write(3, "B1FAF79B22F29B0ACAC2EDB8B88ECF4D", 32) = 32

write(3, "\n", 1) = 1

write(3, "2F1FBB1D12F8DF58F41B88704DFEBF9D", 32) = 32

write(3, "\n", 1) = 1

write(3, "1CFBC7A43D7B64CF FE216E903C804382", 32) = 32

write(3, "\n", 1) = 1

```

```

write(3, "B7C09424BAD9B2E8ADBFF7A0331B9B5D", 32) = 32

write(3, "\n", 1) = 1

write(3, "85F285E3C3F1C3F3F59BF2AEEEE40F8B", 32) = 32

write(3, "\n", 1) = 1

write(3, "F582D7EE7BF5D3FCD9ADA73C2BF3B45D", 32) = 32

write(3, "\n", 1) = 1

write(3, "B ECD52F18DB29B69F87CBCDBA13A4E69", 32) = 32

write(3, "\n", 1) = 1

write(3, "C5B2D24E3A0AAF1AFA7B1DAA007F6EE2", 32) = 32

write(3, "\n", 1) = 1

write(3, "E7BACCC59E027DBEEFCCA9E67CDCC81", 32) = 32

write(3, "\n", 1) = 1

write(3, "0495DDAFC86C68D7EB2DCAA4471D1F31", 32) = 32

write(3, "\n", 1) = 1

write(3, "8E4D45AF39D5D1CD4E80E07AAEFCD0FC", 32) = 32

write(3, "\n", 1) = 1

write(3, "E98D7CDEA63F5D4D8211FE09E7D532EB", 32) = 32

write(3, "\n", 1) = 1

write(3, "7A1DDFDABC9C011200A0D4BC4C0020C5", 32) = 32

write(3, "\n", 1) = 1

write(3, "9CB6E6F57A32AEFD7F6F0AEDFD84990F", 32) = 32

write(3, "\n", 1) = 1

write(3, "E58D0D4ACC9569758A6A47DEE66ADFFF", 32) = 32

write(3, "\n", 1) = 1

write(3, "0E3CFE4DBF8B3918FD62F919C5168F7B", 32) = 32

write(3, "\n", 1) = 1

write(3, "AF3F66DCBFB392EC08D0F68DE442233D", 32) = 32

write(3, "\n", 1) = 1

write(3, "47AEAF4532C527708D94FBE9E085C72C", 32) = 32

write(3, "\n", 1) = 1

```

```

write(3, "6AD84D6B1DB28C06B6B6BCF69B6CD2ED2", 32) = 32

write(3, "\n", 1) = 1

write(3, "05DA8A1FFEEBEAD50D2856ECC3F6C6CF", 32) = 32

write(3, "\n", 1) = 1

write(3, "4C1895FC7D2F3BDBC6E3DC8A6C46B038", 32) = 32

write(3, "\n", 1) = 1

write(3, "E60AE6D52A1ED52B9D8DFAAF8E45D3A6", 32) = 32

write(3, "\n", 1) = 1

write(3, "FD6BAE8A3CFF82933CAA6F2FAB90A7A4", 32) = 32

write(3, "\n", 1) = 1

write(3, "F8EA4B64FB3BE11C96B2DCB41F79B37E", 32) = 32

write(3, "\n", 1) = 1

write(3, "A0C1FF5D742DE9A28BD6BF7688CC17C7", 32) = 32

write(3, "\n", 1) = 1

write(3, "7D95DD32453AB8E8DB1FEDD1E047CF5F", 32) = 32

write(3, "\n", 1) = 1

write(3, "0B49174CB3C9D5FBA7927DAC3FB8E8FF", 32) = 32

write(3, "\n", 1) = 1

write(3, "A9FF23D592B6E7B0AEA9AC3C795CFDFA", 32) = 32

write(3, "\n", 1) = 1

write(3, "FDD4F799C9ADC6DF48E2502D2E0FB45D", 32) = 32

write(3, "\n", 1) = 1

write(3, "BE5847459E6FBD599EE779D17AEE7A46", 32) = 32

write(3, "\n", 1) = 1

write(3, "FEB06FB8512AA58C636EC0C958B04EE7", 32) = 32

write(3, "\n", 1) = 1

write(3, "F7EC3E9A03AB23E2BDCD0C94E852038E", 32) = 32

write(3, "\n", 1) = 1

write(3, "CE64B70F50AF10D3FF17C5DDF0FB3F65", 32) = 32

write(3, "\n", 1) = 1

```

```

write(3, "E7E4A65B7D60F7E560F6E3B1B1C46B73", 32) = 32

write(3, "\n", 1) = 1

write(3, "1D9D9D1B8C7CCF08FFE9B3DEA3DC6A29", 32) = 32

write(3, "\n", 1) = 1

write(3, "F4BC0BAA6BCDBDFC7F0F58C44F5D6D6A", 32) = 32

write(3, "\n", 1) = 1

write(3, "A4FF7EA53E287EBAD235DCF995EDD695", 32) = 32

write(3, "\n", 1) = 1

write(3, "344FE1E4AC6FDF2EFBCCFCA85937AD83", 32) = 32

write(3, "\n", 1) = 1

write(3, "D0B02B5CBDC81AFC52D9BFEC5DDFCC8C", 32) = 32

write(3, "\n", 1) = 1

write(3, "D07135AFC83D0C833682A6334C8A28E5", 32) = 32

write(3, "\n", 1) = 1

write(3, "EF316AF79C08AC3ECD96D9E36A93DF8D", 32) = 32

write(3, "\n", 1) = 1

write(3, "D14E7B58F26D16E6CFCB4223EB300F97", 32) = 32

write(3, "\n", 1) = 1

write(3, "FE6AD3E04CDF24A43AC24D6293D7CEFB", 32) = 32

write(3, "\n", 1) = 1

write(3, "2A36C16AFEDCBE2F0ADABFCC8FCBAE5A", 32) = 32

write(3, "\n", 1) = 1

write(3, "EFEDF8E7924B6BEB067F5CEE15EEFB1", 32) = 32

write(3, "\n", 1) = 1

write(3, "EACA71DEF172DA56F6502D176FDC6BBA", 32) = 32

write(3, "\n", 1) = 1

write(3, "7237A1ED87D3D0329D91CAA14D719805", 32) = 32

write(3, "\n", 1) = 1

write(3, "F5CC2D9CCDFF5BF7C230B35EEA8ECDFF0", 32) = 32

write(3, "\n", 1) = 1

```

```

write(3, "E5570DCC E3FCDC5A1E7DC4D6AECEEA48", 32) = 32

write(3, "\n", 1) = 1

write(3, "D6BA3B3D0996B3EEB6FF00D3EFBC37DD", 32) = 32

write(3, "\n", 1) = 1

write(3, "AACE168F63C9C9E8335A848D000B2866", 32) = 32

write(3, "\n", 1) = 1

write(3, "9E31DFF9FFD6D7CBCCAAE6AEDB6FB6D5", 32) = 32

write(3, "\n", 1) = 1

write(3, "BBEC9445E7176ABECC7A58B4AB92B8DC", 32) = 32

write(3, "\n", 1) = 1

write(3, "A5B4A4ACD5BE2B1E50FDC2DA357ADF3", 32) = 32

write(3, "\n", 1) = 1

write(3, "A1F0869F74BEEBF047AF33D3BA0547CB", 32) = 32

write(3, "\n", 1) = 1

write(3, "117ABA2BED021DAC5CA6A63BF7ABE37E", 32) = 32

write(3, "\n", 1) = 1

write(3, "C0B2E5A6EE8C7AAC5503874B0D8C855E", 32) = 32

write(3, "\n", 1) = 1

write(3, "F5CD9376ED2C5ACEBCCF1411A713BE85", 32) = 32

write(3, "\n", 1) = 1

write(3, "F814A7CA15E2D90FB32D9E44EA90CB40", 32) = 32

write(3, "\n", 1) = 1

write(3, "CA5D6E1C2479C266B9319CC7BB012A11", 32) = 32

write(3, "\n", 1) = 1

write(3, "CB96A25B428E3B777CD8C4BBCE7376A3", 32) = 32

write(3, "\n", 1) = 1

write(3, "3D5AD159EEEFBE8B43BB586033D70FBA", 32) = 32

write(3, "\n", 1) = 1

write(3, "DFC1A10FB314B8181DDEB7F0DD31CDAD", 32) = 32

write(3, "\n", 1) = 1

```



```

write(3, "EDEF0A6AFF0C27339C2A8224EC98A1E", 32) = 32

write(3, "\n", 1) = 1

write(3, "0F1BD22098FDAD7CB556E5EFEB6A3BE", 32) = 32

write(3, "\n", 1) = 1

write(3, "3BFE1BE62B6107EACEC3D852C90E9DCD", 32) = 32

write(3, "\n", 1) = 1

write(3, "0D2DBF674A28FFD1D8BDD3EF2C7969A4", 32) = 32

write(3, "\n", 1) = 1

write(3, "0587B4FEA7FBB0427EACC0B3B09FBFB", 32) = 32

write(3, "\n", 1) = 1

write(3, "475BF583ED85F0B9CCCB74095A7FD24E", 32) = 32

write(3, "\n", 1) = 1

write(3, "23B9CF53FFB0697C3181B9D44DDB90DD", 32) = 32

write(3, "\n", 1) = 1

write(3, "51A4F20613DBFEADB1BA3C92E69F8DCC", 32) = 32

write(3, "\n", 1) = 1

write(3, "BC1810FEB774B6DC65DE67BC126E7790", 32) = 32

write(3, "\n", 1) = 1

close(3) = 0

openat(AT_FDCWD, "file.txt", O_RDWR|O_CREAT, 0666) = 3

lseek(3, 0, SEEK_END) = 13985

close(3) = 0

mmap(NULL, 8392704, PROT_NONE, MAP_PRIVATE|MAP_ANONYMOUS|MAP_STACK, -1, 0) = 0x7f066b3e3000

mprotect(0x7f066b3e4000, 8388608, PROT_READ|PROT_WRITE) = 0

clone(child_stack=0x7f066bbe2fb0,
flags=CLONE_VM|CLONE_FS|CLONE_FILES|CLONE_SIGHAND|CLONE_THREAD|CLONE_SYSVSEM|CLONE_SETTLS|CLONE_P
ARENT_SETTID|CLONE_CHILD_CLEARTID, parent_tid=[4195], tls=0x7f066bbe3700,
child_tidptr=0x7f066bbe39d0) = 4195

futex(0x7f066bbe39d0, FUTEX_WAIT, 4195, NULL) = 0

fstat(1, {st_mode=S_IFCHR|0620, st_rdev=makedev(0x88, 0), ...}) = 0

write(1, "DEC: \n", 6) = 6

```

```

write(1, "96295804718621291502983630607899"... , 39) = 39

write(1, "Time taken by program is : 0.007"... , 49) = 49

exit_group(0) = ?

+++ exited with 0 +++

```

Лабораторная работа №4

mmap – memory map – отражение в память, флаг MAP_SHARED показывает, что память разделяемая

```

execve("./main",
[ "./main" ],
0x7ffd2f418c90 /* 62
vars */) = 0

brk(NULL) = 0x55b3669f2000

access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)

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

fstat(3, {st_mode=S_IFREG|0644, st_size=77171, ...}) = 0

mmap(NULL, 77171, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fb38e7a6000

close(3) = 0

access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)

openat(AT_FDCWD, "/usr/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\3\0>\0\1\0\0\0\220\304\10\0\0\0\0"... , 832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=1594864, ...}) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fb38e7a4000

mmap(NULL, 3702848, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fb38e209000

mprotect(0x7fb38e382000, 2097152, PROT_NONE) = 0

mmap(0x7fb38e582000, 49152, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x179000) = 0x7fb38e582000

```

```

mmap(0x7fb38e58e000, 12352, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) =
0x7fb38e58e000

close(3) = 0

access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)

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\3\0>\0\1\0\0\0\300*\0\0\0\0\0"... , 832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=96616, ...}) = 0

mmap(NULL, 2192432, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fb38dff1000

mprotect(0x7fb38e008000, 2093056, PROT_NONE) = 0

mmap(0x7fb38e207000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x16000) = 0x7fb38e207000

close(3) = 0

access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)

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\3\0>\0\1\0\0\0\260\34\2\0\0\0\0"... , 832) = 832

fstat(3, {st_mode=S_IFREG|0755, st_size=2030544, ...}) = 0

mmap(NULL, 4131552, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fb38dc00000

mprotect(0x7fb38dde7000, 2097152, PROT_NONE) = 0

mmap(0x7fb38dfe7000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x1e7000) = 0x7fb38dfe7000

mmap(0x7fb38dfed000, 15072, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) =
0x7fb38dfed000

close(3) = 0

access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)

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\3\0>\0\1\0\0\0\200\272\0\0\0\0\0"... , 832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=1700792, ...}) = 0

mmap(NULL, 3789144, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fb38d862000

mprotect(0x7fb38d9ff000, 2093056, PROT_NONE) = 0

mmap(0x7fb38dbfe000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x19c000) = 0x7fb38dbfe000

close(3) = 0

```

```

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fb38e7a2000

arch_prctl(ARCH_SET_FS, 0x7fb38e7a2d80) = 0

mprotect(0x7fb38dfe7000, 16384, PROT_READ) = 0

mprotect(0x7fb38dbfe000, 4096, PROT_READ) = 0

mprotect(0x7fb38e207000, 4096, PROT_READ) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fb38e7a0000

mprotect(0x7fb38e582000, 40960, PROT_READ) = 0

mprotect(0x55b3657eb000, 4096, PROT_READ) = 0

mprotect(0x7fb38e7b9000, 4096, PROT_READ) = 0

munmap(0x7fb38e7a6000, 77171) = 0

brk(NULL) = 0x55b3669f2000

brk(0x55b366a13000) = 0x55b366a13000

fstat(1, {st_mode=S_IFCHR|0620, st_rdev=makedev(136, 0), ...}) = 0

write(1, "Congrats, you are in parent proc"... , 70) = 70

fstat(0, {st_mode=S_IFCHR|0620, st_rdev=makedev(136, 0), ...}) = 0

read(0, "5\n", 1024) = 2

write(1, "Enter name of file for first chi"... , 37) = 37

read(0, "ch1.txt\n", 1024) = 8

write(1, "For second child: \n", 19) = 19

read(0, "ch2.txt\n", 1024) = 8

openat(AT_FDCWD, "f1.txt", O_RDWR|O_CREAT, 0777) = 3

openat(AT_FDCWD, "f2.txt", O_RDWR|O_CREAT, 0777) = 4

mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_SHARED, 3, 0) = 0x7fb38e7b8000

mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_SHARED, 4, 0) = 0x7fb38e7b7000

write(1, "Good. Please enter your strings:"... , 34) = 34

read(0, "mahmud\n", 1024) = 6

ftruncate(3, 6) = 0

read(0, "amamamamamamamam\n", 1024) = 19

ftruncate(4, 19) = 0

```

```

read(0, "maksim\n", 1024) = 7

ftruncate(3, 13) = 0

read(0, "ajajhahjabjabjab\n", 1024) = 17

ftruncate(4, 36) = 0

read(0, "soiosdiodosidpsisdpsid\n", 1024) = 23

ftruncate(4, 59) = 0

clone(child_stack=NULL, flags=CLONE_CHILD_CLEARTID|CLONE_CHILD_SETTID|SIGCHLD,
child_tidptr=0x7fb38e7a3050) = 2249

clone(child_stack=NULL, flags=CLONE_CHILD_CLEARTID|CLONE_CHILD_SETTID|SIGCHLD,
child_tidptr=0x7fb38e7a3050) = 2250

munmap(0x7fb38e7b8000, 4096) = 0

munmap(0x7fb38e7b7000, 4096) = 0

--- SIGCHLD {si_signo=SIGCHLD, si_code=CLD_EXITED, si_pid=2249, si_uid=1000, si_status=0,
si_etime=0, si_stime=0} ---

close(3) = 0

close(4) = 0

unlink("f1.txt") = -1 ETXTBSY (Text file busy)

--- SIGCHLD {si_signo=SIGCHLD, si_code=CLD_EXITED, si_pid=2250, si_uid=1000, si_status=0,
si_etime=0, si_stime=0} ---

unlink("f2.txt") = 0

lseek(0, -1, SEEK_CUR) = -1 ESPIPE (Illegal seek)

exit_group(0) = ?

+++ exited with 0 +++

```

Лабораторная работа №5

openat — открытие файла, в моём случае - библиотеки

```

execve("./main1.
1",
["./main1.1"],
0x7ffcac23ef00
/* 58 vars */) =
0

```

```

brk(NULL) = 0x56267f464000

arch_prctl(0x3001 /* ARCH_??? */, 0x7ffc33773670) = -1 EINVAL (Invalid
argument)

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

openat(AT_FDCWD, "./tls/x86_64/x86_64/libfunctions1.so",
O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)

openat(AT_FDCWD, "./tls/x86_64/libfunctions1.so", O_RDONLY|O_CLOEXEC) = -
1 ENOENT (No such file or directory)

openat(AT_FDCWD, "./tls/x86_64/libfunctions1.so", O_RDONLY|O_CLOEXEC) = -
1 ENOENT (No such file or directory)

openat(AT_FDCWD, "./tls/libfunctions1.so", O_RDONLY|O_CLOEXEC) = -1
ENOENT (No such file or directory)

openat(AT_FDCWD, "./x86_64/x86_64/libfunctions1.so", O_RDONLY|O_CLOEXEC)
= -1 ENOENT (No such file or directory)

openat(AT_FDCWD, "./x86_64/libfunctions1.so", O_RDONLY|O_CLOEXEC) = -1
ENOENT (No such file or directory)

openat(AT_FDCWD, "./x86_64/libfunctions1.so", O_RDONLY|O_CLOEXEC) = -1
ENOENT (No such file or directory)

openat(AT_FDCWD, "./libfunctions1.so", O_RDONLY|O_CLOEXEC) = 3

read(3,
"\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0`\20\0\0\0\0\0\0"... , 832)
= 832

fstat(3, {st_mode=S_IFREG|0775, st_size=15912, ...}) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0)
= 0x7ffa5c7f3000

getcwd("/home/max/Downloads/OS-main/os_lab5/src", 128) = 40

```

```

mmap(NULL, 16432, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7ffa5c7ee000

mmap(0x7ffa5c7ef000, 4096, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1000) = 0x7ffa5c7ef000

mmap(0x7ffa5c7f0000, 4096, PROT_READ,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x2000) = 0x7ffa5c7f0000

mmap(0x7ffa5c7f1000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x2000) = 0x7ffa5c7f1000

close(3) = 0

openat(AT_FDCWD, "./tls/x86_64/x86_64/libc.so.6", O_RDONLY|O_CLOEXEC) = -
1 ENOENT (No such file or directory)

openat(AT_FDCWD, "./tls/x86_64/libc.so.6", O_RDONLY|O_CLOEXEC) = -1
ENOENT (No such file or directory)

openat(AT_FDCWD, "./tls/x86_64/libc.so.6", O_RDONLY|O_CLOEXEC) = -1
ENOENT (No such file or directory)

openat(AT_FDCWD, "./tls/libc.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No
such file or directory)

openat(AT_FDCWD, "./x86_64/x86_64/libc.so.6", O_RDONLY|O_CLOEXEC) = -1
ENOENT (No such file or directory)

openat(AT_FDCWD, "./x86_64/libc.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT
(No such file or directory)

openat(AT_FDCWD, "./x86_64/libc.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT
(No such file or directory)

openat(AT_FDCWD, "./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

fstat(3, {st_mode=S_IFREG|0644, st_size=61856, ...}) = 0

mmap(NULL, 61856, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7ffa5c7de000

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\3\0>\0\1\0\0\0\360A\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\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0", 32,
848) = 32

pread64(3,
"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\237\333t\347\262\27\3201\223\27*\202C\370
T\177"... , 68, 880) = 68

fstat(3, {st_mode=S_IFREG|0755, st_size=2029560, ...}) = 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

pread64(3,
"\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0", 32,
848) = 32

pread64(3,
"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\237\333t\347\262\27\3201\223\27*\202C\370
T\177"... , 68, 880) = 68

mmap(NULL, 2037344, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7ffa5c5ec000

mmap(0x7ffa5c60e000, 1540096, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x22000) = 0x7ffa5c60e000

mmap(0x7ffa5c786000, 319488, PROT_READ,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x19a000) = 0x7ffa5c786000

mmap(0x7ffa5c7d4000, 24576, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1e7000) = 0x7ffa5c7d4000

mmap(0x7ffa5c7da000, 13920, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7ffa5c7da000

close(3) = 0

mmap(NULL, 12288, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0)

```



```

= 0x7ffa5c5e9000

arch_prctl(ARCH_SET_FS, 0x7ffa5c5e9740) = 0

mprotect(0x7ffa5c7d4000, 16384, PROT_READ) = 0

mprotect(0x7ffa5c7f1000, 4096, PROT_READ) = 0

mprotect(0x56267e027000, 4096, PROT_READ) = 0

mprotect(0x7ffa5c822000, 4096, PROT_READ) = 0

munmap(0x7ffa5c7de000, 61856)          = 0

fstat(0, {st_mode=S_IFCHR|0620, st_rdev=makedev(0x88, 0), ...}) = 0

brk(NULL)                             = 0x56267f464000

brk(0x56267f485000)                   = 0x56267f485000

read(0, "1 3 7\n", 1024)              = 6

fstat(1, {st_mode=S_IFCHR|0620, st_rdev=makedev(0x88, 0), ...}) = 0

write(1, "3\n", 2)                    = 2

read(0, "1 7 3\n", 1024)              = 6

write(1, "3\n", 2)                    = 2

read(0, "2 43 71\n", 1024)            = 8

write(1, "1\n", 2)                    = 2

read(0, "2 44 1089\n", 1024)          = 10

write(1, "11\n", 3)                   = 3

read(0, "", 1024)                     = 0

exit_group(0)                         = ?

+++ exited with 0 +++

```

Лабораторная работа №6-8

```

execve("./
server",
["./server

```

```

"],
0x7fff5301
b930 /* 58
vars */) =
0

```

```

brk(NULL) = 0x55e0da7e1000

arch_prctl(0x3001 /* ARCH_??? */, 0x7fff6f0a5b20) = -1 EINVAL (Invalid
argument)

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

fstat(3, {st_mode=S_IFREG|0644, st_size=61856, ...}) = 0

mmap(NULL, 61856, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f45da0b9000

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\3\0>\0\1\0\0\0`z\1\0\0\0\0"... , 832)
= 832

fstat(3, {st_mode=S_IFREG|0644, st_size=675776, ...}) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f45da0b7000

mmap(NULL, 678128, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45da011000

mmap(0x7f45da027000, 430080, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x16000) = 0x7f45da027000

mmap(0x7f45da090000, 126976, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x7f000) = 0x7f45da090000

mmap(0x7f45da0af000, 32768, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x9d000) = 0x7f45da0af000

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\3\0>\0\1\0\0\0`\341\t\0\0\0\0"... ,
832) = 832

```

```

fstat(3, {st_mode=S_IFREG|0644, st_size=1956992, ...}) = 0

mmap(NULL, 1972224, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f45d9e2f000

mprotect(0x7f45d9ec5000, 1290240, PROT_NONE) = 0

mmap(0x7f45d9ec5000, 987136, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x96000) = 0x7f45d9ec5000

mmap(0x7f45d9fb6000, 299008, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x187000) = 0x7f45d9fb6000

mmap(0x7f45da000000, 57344, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1d0000) = 0x7f45da000000

mmap(0x7f45da00e000, 10240, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f45da00e000

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\3\0>\0\1\0\0\0\3405\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=104984, ...}) = 0

mmap(NULL, 107592, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d9e14000

mmap(0x7f45d9e17000, 73728, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x3000) = 0x7f45d9e17000

mmap(0x7f45d9e29000, 16384, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x15000) = 0x7f45d9e29000

mmap(0x7f45d9e2d000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x18000) = 0x7f45d9e2d000

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\3\0>\0\1\0\0\0\360A\2\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\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0",
32, 848) = 32

pread64(3,
"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\237\333t\347\262\27\3201\223\27*\202C\370T\177"
..., 68, 880) = 68

fstat(3, {st_mode=S_IFREG|0755, st_size=2029560, ...}) = 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"...,
784, 64) = 784

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0",
32, 848) = 32

pread64(3,
"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\237\333t\347\262\27\3201\223\27*\202C\370T\177"
..., 68, 880) = 68

mmap(NULL, 2037344, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f45d9c22000

mmap(0x7f45d9c44000, 1540096, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x22000) = 0x7f45d9c44000

mmap(0x7f45d9dbc000, 319488, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x19a000) = 0x7f45d9dbc000

mmap(0x7f45d9e0a000, 24576, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1e7000) = 0x7f45d9e0a000

mmap(0x7f45d9e10000, 13920, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f45d9e10000

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\3\0>\0\1\0\0\0\200\302\0\0\0\0\0"..., 832) =
832

fstat(3, {st_mode=S_IFREG|0644, st_size=355016, ...}) = 0

mmap(NULL, 357384, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d9bca000

mmap(0x7f45d9bd6000, 229376, PROT_READ|PROT_EXEC,

```

```

MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xc000) = 0x7f45d9bd6000

mmap(0x7f45d9c0e000, 73728, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x44000) = 0x7f45d9c0e000

mmap(0x7f45d9c20000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x55000) = 0x7f45d9c20000

close(3)                                = 0

openat(AT_FDCWD, "/lib/x86_64-linux-gnu/libpgm-5.2.so.0", O_RDONLY|O_CLOEXEC) =
3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\240L\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=302056, ...}) = 0

mmap(NULL, 321584, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d9b7b000

mmap(0x7f45d9b7f000, 163840, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x4000) = 0x7f45d9b7f000

mmap(0x7f45d9ba7000, 118784, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x2c000) = 0x7f45d9ba7000

mmap(0x7f45d9bc4000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x48000) = 0x7f45d9bc4000

mmap(0x7f45d9bc6000, 14384, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f45d9bc6000

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\3\0>\0\1\0\0\0\257\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=690344, ...}) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f45d9b79000

mmap(NULL, 1420000, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f45d9a1e000

mmap(0x7f45d9a28000, 421888, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xa000) = 0x7f45d9a28000

```

```

mmap(0x7f45d9a8f000, 217088, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x71000) = 0x7f45d9a8f000

mmap(0x7f45d9ac4000, 16384, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xa5000) = 0x7f45d9ac4000

mmap(0x7f45d9ac8000, 723680, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f45d9ac8000

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\3\0>\0\1\0\0\0P\321\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=309712, ...}) = 0

mmap(NULL, 312128, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d99d1000

mmap(0x7f45d99dc000, 204800, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xb000) = 0x7f45d99dc000

mmap(0x7f45d9a0e000, 49152, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x3d000) = 0x7f45d9a0e000

mmap(0x7f45d9a1a000, 16384, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x48000) = 0x7f45d9a1a000

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\3\0>\0\1\0\0\0\220q\0\0\0\0\0"... ,
832) = 832

pread64(3,
"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\360\2300%\360\340\363'\246\332u/\364\377\246u".
.., 68, 824) = 68

fstat(3, {st_mode=S_IFREG|0755, st_size=157224, ...}) = 0

pread64(3,
"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\360\2300%\360\340\363'\246\332u/\364\377\246u".
.., 68, 824) = 68

mmap(NULL, 140408, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d99ae000

```

```

mmap(0x7f45d99b4000, 69632, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x6000) = 0x7f45d99b4000

mmap(0x7f45d99c5000, 24576, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x17000) = 0x7f45d99c5000

mmap(0x7f45d99cb000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1c000) = 0x7f45d99cb000

mmap(0x7f45d99cd000, 13432, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f45d99cd000

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\3\0>\0\1\0\0\0\300\323\0\0\0\0\0"... , 832) =
832

fstat(3, {st_mode=S_IFREG|0644, st_size=1369352, ...}) = 0

mmap(NULL, 1368336, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) =
0x7f45d985f000

mmap(0x7f45d986c000, 684032, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xd000) = 0x7f45d986c000

mmap(0x7f45d9913000, 626688, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0xb4000) = 0x7f45d9913000

mmap(0x7f45d99ac000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x14c000) = 0x7f45d99ac000

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\3\0>\0\1\0\0\0 ?\2\0\0\0\0\0"... , 832)
= 832

fstat(3, {st_mode=S_IFREG|0644, st_size=902016, ...}) = 0

mmap(NULL, 904640, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d9782000

mprotect(0x7f45d97a4000, 700416, PROT_NONE) = 0

mmap(0x7f45d97a4000, 397312, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x22000) = 0x7f45d97a4000

```

```

mmap(0x7f45d9805000, 299008, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x83000) = 0x7f45d9805000

mmap(0x7f45d984f000, 65536, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xcc000) = 0x7f45d984f000

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\3\0>\0\1\0\0\0\240D\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=191040, ...}) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f45d9780000

mmap(NULL, 196696, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d974f000

mprotect(0x7f45d9753000, 172032, PROT_NONE) = 0

mmap(0x7f45d9753000, 114688, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x4000) = 0x7f45d9753000

mmap(0x7f45d976f000, 53248, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x20000) = 0x7f45d976f000

mmap(0x7f45d977d000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x2d000) = 0x7f45d977d000

mmap(0x7f45d977f000, 88, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f45d977f000

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\3\0>\0\1\0\0\0\200$\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=22600, ...}) = 0

mmap(NULL, 24744, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d9748000

mmap(0x7f45d974a000, 8192, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x2000) = 0x7f45d974a000

```



```

mmap(0x7f45d974c000, 4096, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x4000) = 0x7f45d974c000

mmap(0x7f45d974d000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x4000) = 0x7f45d974d000

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\3\0>\0\1\0\0\0\3605\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=56096, ...}) = 0

mmap(NULL, 58344, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d9739000

mmap(0x7f45d973c000, 28672, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x3000) = 0x7f45d973c000

mmap(0x7f45d9743000, 12288, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0xa000) = 0x7f45d9743000

mmap(0x7f45d9746000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xc000) = 0x7f45d9746000

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\3\0>\0\1\0\0\0\0@\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=22600, ...}) = 0

mmap(NULL, 24592, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d9732000

mmap(0x7f45d9734000, 8192, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x2000) = 0x7f45d9734000

mmap(0x7f45d9736000, 4096, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x4000) = 0x7f45d9736000

mmap(0x7f45d9737000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x4000) = 0x7f45d9737000

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 G\0\0\0\0\0"... , 832)
= 832

fstat(3, {st_mode=S_IFREG|0644, st_size=101320, ...}) = 0

mmap(NULL, 113280, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d9716000

mmap(0x7f45d971a000, 65536, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x4000) = 0x7f45d971a000

mmap(0x7f45d972a000, 16384, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x14000) = 0x7f45d972a000

mmap(0x7f45d972e000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x17000) = 0x7f45d972e000

mmap(0x7f45d9730000, 6784, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f45d9730000

close(3)                                = 0

openat(AT_FDCWD, "/lib/x86_64-linux-gnu/libdl.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 \22\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=18816, ...}) = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f45d9714000

mmap(NULL, 20752, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d970e000

mmap(0x7f45d970f000, 8192, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1000) = 0x7f45d970f000

mmap(0x7f45d9711000, 4096, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0x3000) = 0x7f45d9711000

mmap(0x7f45d9712000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x3000) = 0x7f45d9712000

close(3)                                = 0

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f45d970c000

```

```

mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) =
0x7f45d970a000

arch_prctl(ARCH_SET_FS, 0x7f45d970d600) = 0

mprotect(0x7f45d9e0a000, 16384, PROT_READ) = 0

mprotect(0x7f45d9712000, 4096, PROT_READ) = 0

mprotect(0x7f45d972e000, 4096, PROT_READ) = 0

mprotect(0x7f45d9737000, 4096, PROT_READ) = 0

mprotect(0x7f45d9746000, 4096, PROT_READ) = 0

mprotect(0x7f45d99cb000, 4096, PROT_READ) = 0

mprotect(0x7f45d974d000, 4096, PROT_READ) = 0

mprotect(0x7f45d977d000, 4096, PROT_READ) = 0

mprotect(0x7f45d984f000, 57344, PROT_READ) = 0

mprotect(0x7f45d99ac000, 4096, PROT_READ) = 0

mprotect(0x7f45d9a1a000, 8192, PROT_READ) = 0

mprotect(0x7f45d9e2d000, 4096, PROT_READ) = 0

mprotect(0x7f45da000000, 45056, PROT_READ) = 0

mprotect(0x7f45d9ac4000, 12288, PROT_READ) = 0

mprotect(0x7f45d9bc4000, 4096, PROT_READ) = 0

mprotect(0x7f45d9c20000, 4096, PROT_READ) = 0

mprotect(0x7f45da0af000, 28672, PROT_READ) = 0

mprotect(0x55e0d9616000, 4096, PROT_READ) = 0

mprotect(0x7f45da0f6000, 4096, PROT_READ) = 0

munmap(0x7f45da0b9000, 61856)          = 0

set_tid_address(0x7f45d970d8d0)       = 4967

set_robust_list(0x7f45d970d8e0, 24)   = 0

rt_sigaction(SIGRTMIN, {sa_handler=0x7f45d99b4bf0, sa_mask=[],
sa_flags=SA_RESTORER|SA_SIGINFO, sa_restorer=0x7f45d99c23c0}, NULL, 8) = 0

```

```

rt_sigaction(SIGRT_1, {sa_handler=0x7f45d99b4c90, sa_mask=[],
sa_flags=SA_RESTORER|SA_RESTART|SA_SIGINFO, sa_restorer=0x7f45d99c23c0}, NULL,
8) = 0

rt_sigprocmask(SIG_UNBLOCK, [RTMIN RT_1], NULL, 8) = 0

prlimit64(0, RLIMIT_STACK, NULL, {rlim_cur=8192*1024,
rlim_max=RLIM64_INFINITY}) = 0

brk(NULL) = 0x55e0da7e1000

brk(0x55e0da802000) = 0x55e0da802000

futex(0x7f45da00e6bc, FUTEX_WAKE_PRIVATE, 2147483647) = 0

futex(0x7f45da00e6c8, FUTEX_WAKE_PRIVATE, 2147483647) = 0

openat(AT_FDCWD, "/sys/devices/system/cpu/online", O_RDONLY|O_CLOEXEC) = 3

read(3, "\n", 8192) = 2

close(3) = 0

openat(AT_FDCWD, "/sys/devices/system/cpu",
O_RDONLY|O_NONBLOCK|O_CLOEXEC|O_DIRECTORY) = 3

fstat(3, {st_mode=S_IFDIR|0755, st_size=0, ...}) = 0

getdents64(3, /* 17 entries */, 32768) = 520

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

close(3) = 0

getpid() = 4967

sched_getaffinity(4967, 128, [0]) = 8

openat(AT_FDCWD, "/etc/nsswitch.conf", O_RDONLY|O_CLOEXEC) = 3

fstat(3, {st_mode=S_IFREG|0644, st_size=542, ...}) = 0

read(3, "# /etc/nsswitch.conf\n#\n# Example"... , 4096) = 542

read(3, "", 4096) = 0

close(3) = 0

openat(AT_FDCWD, "/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3

fstat(3, {st_mode=S_IFREG|0644, st_size=61856, ...}) = 0

```

```

mmap(NULL, 61856, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f45da0b9000

close(3)                                = 0

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)

stat("/lib/x86_64-linux-gnu/tls/x86_64/x86_64", 0x7fff6f0a2d00) = -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)

stat("/lib/x86_64-linux-gnu/tls/x86_64", 0x7fff6f0a2d00) = -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)

stat("/lib/x86_64-linux-gnu/tls/x86_64", 0x7fff6f0a2d00) = -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)

stat("/lib/x86_64-linux-gnu/tls", 0x7fff6f0a2d00) = -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)

stat("/lib/x86_64-linux-gnu/x86_64/x86_64", 0x7fff6f0a2d00) = -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)

stat("/lib/x86_64-linux-gnu/x86_64", 0x7fff6f0a2d00) = -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)

stat("/lib/x86_64-linux-gnu/x86_64", 0x7fff6f0a2d00) = -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)

```

```

stat("/lib/x86_64-linux-gnu", {st_mode=S_IFDIR|0755, st_size=69632, ...}) = 0

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)

stat("/usr/lib/x86_64-linux-gnu/tls/x86_64/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64-linux-gnu/tls/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64-linux-gnu/tls", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64-linux-gnu/x86_64/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64-linux-gnu/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64-linux-gnu/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64-linux-gnu", {st_mode=S_IFDIR|0755, st_size=69632, ...}) =

```

0

```
openat(AT_FDCWD, "/lib/tls/x86_64/x86_64/libnss_db.so.2", O_RDONLY|O_CLOEXEC) =  
-1 ENOENT (No such file or directory)
```

```
stat("/lib/tls/x86_64/x86_64", 0x7fff6f0a2d00) = -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)
```

```
stat("/lib/tls/x86_64", 0x7fff6f0a2d00) = -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)
```

```
stat("/lib/tls/x86_64", 0x7fff6f0a2d00) = -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)
```

```
stat("/lib/tls", 0x7fff6f0a2d00) = -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)
```

```
stat("/lib/x86_64/x86_64", 0x7fff6f0a2d00) = -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)
```

```
stat("/lib/x86_64", 0x7fff6f0a2d00) = -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)
```

```
stat("/lib/x86_64", 0x7fff6f0a2d00) = -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)
```

```
stat("/lib", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
```

```
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)
```

```
stat("/usr/lib/tls/x86_64/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/tls/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/tls/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/tls", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib/x86_64", 0x7fff6f0a2d00) = -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)

stat("/usr/lib", {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0

munmap(0x7f45da0b9000, 61856) = 0

openat(AT_FDCWD, "/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3

fstat(3, {st_mode=S_IFREG|0644, st_size=61856, ...}) = 0

mmap(NULL, 61856, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f45da0b9000

close(3) = 0

openat(AT_FDCWD, "/lib/x86_64-linux-gnu/libnss_files.so.2", O_RDONLY|O_CLOEXEC)

```



```

= 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\3005\0\0\0\0\0"... ,
832) = 832

fstat(3, {st_mode=S_IFREG|0644, st_size=51832, ...}) = 0

mmap(NULL, 79672, PROT_READ, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f45d96f6000

mmap(0x7f45d96f9000, 28672, PROT_READ|PROT_EXEC,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x3000) = 0x7f45d96f9000

mmap(0x7f45d9700000, 8192, PROT_READ, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3,
0xa000) = 0x7f45d9700000

mmap(0x7f45d9702000, 8192, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xb000) = 0x7f45d9702000

mmap(0x7f45d9704000, 22328, PROT_READ|PROT_WRITE,
MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f45d9704000

close(3) = 0

mprotect(0x7f45d9702000, 4096, PROT_READ) = 0

munmap(0x7f45da0b9000, 61856) = 0

openat(AT_FDCWD, "/etc/protocols", O_RDONLY|O_CLOEXEC) = 3

lseek(3, 0, SEEK_CUR) = 0

fstat(3, {st_mode=S_IFREG|0644, st_size=2932, ...}) = 0

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

lseek(3, 0, SEEK_CUR) = 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

```

```

getrandom("\x6b\x24\x08\xdc\x9c\x2c\xcf\x9c\x8d\xe8\x57\xd0\x1a\xee\x1b\x89",
16, 0) = 16

getrandom("\x48\x2e\xbf\xc7\x93\xd7\x9f\x89\xd6\xc3\xb2\xc9\x45\xb2\x55\x60",
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

epoll_create1(EPoll_CLOEXEC) = 5

epoll_ctl(5, EPOLL_CTL_ADD, 4, {0, {u32=3665771872, u64=94424226807136}}) = 0

epoll_ctl(5, EPOLL_CTL_MOD, 4, {EPOLLIN, {u32=3665771872, u64=94424226807136}})
= 0

mmap(NULL, 8392704, PROT_NONE, MAP_PRIVATE|MAP_ANONYMOUS|MAP_STACK, -1, 0) =
0x7f45d8ef5000

mprotect(0x7f45d8ef6000, 8388608, PROT_READ|PROT_WRITE) = 0

clone(child_stack=0x7f45d96f4d30,
flags=CLONE_VM|CLONE_FS|CLONE_FILES|CLONE_SIGHAND|CLONE_THREAD|CLONE_SYSVSEM|CL
ONE_SETTLS|CLONE_PARENT_SETTID|CLONE_CHILD_CLEARTID, parent_tid=[4968],
tls=0x7f45d96f5700, child_tidptr=0x7f45d96f59d0) = 4968

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

epoll_create1(EPoll_CLOEXEC) = 7

epoll_ctl(7, EPOLL_CTL_ADD, 6, {0, {u32=3665789536, u64=94424226824800}}) = 0

epoll_ctl(7, EPOLL_CTL_MOD, 6, {EPOLLIN, {u32=3665789536, u64=94424226824800}})
= 0

```

```

mmap(NULL, 8392704, PROT_NONE, MAP_PRIVATE|MAP_ANONYMOUS|MAP_STACK, -1, 0) =
0x7f45d86f4000

mprotect(0x7f45d86f5000, 8388608, PROT_READ|PROT_WRITE) = 0

clone(child_stack=0x7f45d8ef3d30,
flags=CLONE_VM|CLONE_FS|CLONE_FILES|CLONE_SIGHAND|CLONE_THREAD|CLONE_SYSVSEM|CL
ONE_SETTLS|CLONE_PARENT_SETTID|CLONE_CHILD_CLEARTID, parent_tid=[4969],
tls=0x7f45d8ef4700, child_tidptr=0x7f45d8ef49d0) = 4969

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

fstat(1, {st_mode=S_IFCHR|0620, st_rdev=makedev(0x88, 0), ...}) = 0

write(1, "Enter command\n", 14) = 14

fstat(0, {st_mode=S_IFCHR|0620, st_rdev=makedev(0x88, 0), ...}) = 0

read(0, "create 2\n", 1024) = 9

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

socket(AF_NETLINK, SOCK_RAW|SOCK_CLOEXEC, NETLINK_ROUTE) = 9

bind(9, {sa_family=AF_NETLINK, nl_pid=0, nl_groups=00000000}, 12) = 0

getsockname(9, {sa_family=AF_NETLINK, nl_pid=4967, nl_groups=00000000}, [12]) =
0

sendto(9, {{len=20, type=RTM_GETLINK, flags=NLM_F_REQUEST|NLM_F_DUMP,
seq=1648280643, pid=0}, {ifi_family=AF_UNSPEC, ...}}, 20, 0,
{sa_family=AF_NETLINK, nl_pid=0, nl_groups=00000000}, 12) = 20

recvmsg(9, {msg_name={sa_family=AF_NETLINK, nl_pid=0, nl_groups=00000000},
msg_namelen=12, msg_iov=[{iov_base=[{len=1324, type=RTM_NEWLINK,
flags=NLM_F_MULTI, seq=1648280643, pid=4967}, {ifi_family=AF_UNSPEC,
ifi_type=ARPHRD_LOOPBACK, ifi_index=if_nametoindex("lo"),
ifi_flags=IFF_UP|IFF_LOOPBACK|IFF_RUNNING|IFF_LOWER_UP, ifi_change=0},
[{nla_len=7, nla_type=IFLA_IFNAME}, "lo"], [{nla_len=8, nla_type=IFLA_TXQLEN},
1000}, {nla_len=5, nla_type=IFLA_OPERSTATE}, 0}, {nla_len=5,
nla_type=IFLA_LINKMODE}, 0}, {nla_len=8, nla_type=IFLA_MTU}, 65536},

```

```

{{nla_len=8, nla_type=IFLA_MIN_MTU}, 0}, {{nla_len=8, nla_type=IFLA_MAX_MTU},
0}, {{nla_len=8, nla_type=IFLA_GROUP}, 0}, {{nla_len=8,
nla_type=IFLA_PROMISCUITY}, 0}, {{nla_len=8, nla_type=IFLA_NUM_TX_QUEUES}, 1},
{{nla_len=8, nla_type=IFLA_GSO_MAX_SEGS}, 65535}, {{nla_len=8,
nla_type=IFLA_GSO_MAX_SIZE}, 65536}, {{nla_len=8, nla_type=IFLA_NUM_RX_QUEUES},
1}, {{nla_len=5, nla_type=IFLA_CARRIER}, 1}, {{nla_len=12,
nla_type=IFLA_QDISC}, "noqueue"}, {{nla_len=8, nla_type=IFLA_CARRIER_CHANGES},
0}, {{nla_len=8, nla_type=IFLA_CARRIER_UP_COUNT}, 0}, {{nla_len=8,
nla_type=IFLA_CARRIER_DOWN_COUNT}, 0}, {{nla_len=5, nla_type=IFLA_PROTO_DOWN},
0}, {{nla_len=36, nla_type=IFLA_MAP}, {mem_start=0, mem_end=0, base_addr=0,
irq=0, dma=0, port=0}}, {{nla_len=10, nla_type=IFLA_ADDRESS},
"\x00\x00\x00\x00\x00\x00"}, {{nla_len=10, nla_type=IFLA_BROADCAST},
"\x00\x00\x00\x00\x00\x00"}, {{nla_len=196, nla_type=IFLA_STATS64},
{rx_packets=1793, tx_packets=1793, rx_bytes=151519, tx_bytes=151519,
rx_errors=0, tx_errors=0, rx_dropped=0, tx_dropped=0, multicast=0,
collisions=0, rx_length_errors=0, rx_over_errors=0, rx_crc_errors=0,
rx_frame_errors=0, rx_fifo_errors=0, rx_missed_errors=0, tx_aborted_errors=0,
tx_carrier_errors=0, tx_fifo_errors=0, tx_heartbeat_errors=0,
tx_window_errors=0, rx_compressed=0, tx_compressed=0, rx_nohandler=0}},
{{nla_len=100, nla_type=IFLA_STATS}, {rx_packets=1793, tx_packets=1793,
rx_bytes=151519, tx_bytes=151519, rx_errors=0, tx_errors=0, rx_dropped=0,
tx_dropped=0, multicast=0, collisions=0, rx_length_errors=0, rx_over_errors=0,
rx_crc_errors=0, rx_frame_errors=0, rx_fifo_errors=0, rx_missed_errors=0,
tx_aborted_errors=0, tx_carrier_errors=0, tx_fifo_errors=0,
tx_heartbeat_errors=0, tx_window_errors=0, rx_compressed=0, tx_compressed=0,
rx_nohandler=0}}, {{nla_len=12, nla_type=IFLA_XDP}, {{nla_len=5,
nla_type=IFLA_XDP_ATTACHED}, XDP_ATTACHED_NONE}}, {{nla_len=768,
nla_type=IFLA_AF_SPEC}, [{{nla_len=136, nla_type=AF_INET}, {{nla_len=132,
nla_type=IFLA_INET_CONF}, [[IPV4_DEVCONF_FORWARDING-1] = 0,
[IPV4_DEVCONF_MC_FORWARDING-1] = 0, [IPV4_DEVCONF_PROXY_ARP-1] = 0,
[IPV4_DEVCONF_ACCEPT_REDIRECTS-1] = 1, [IPV4_DEVCONF_SECURE_REDIRECTS-1] = 1,
[IPV4_DEVCONF_SEND_REDIRECTS-1] = 1, [IPV4_DEVCONF_SHARED_MEDIA-1] = 1,
[IPV4_DEVCONF_RP_FILTER-1] = 0, [IPV4_DEVCONF_ACCEPT_SOURCE_ROUTE-1] = 1,
[IPV4_DEVCONF_BOOTP_RELAY-1] = 0, [IPV4_DEVCONF_LOG_MARTIANS-1] = 0,
[IPV4_DEVCONF_TAG-1] = 0, [IPV4_DEVCONF_ARPFILTER-1] = 0,
[IPV4_DEVCONF_MEDIUM_ID-1] = 0, [IPV4_DEVCONF_NOXFRM-1] = 1,
[IPV4_DEVCONF_NOPOLICY-1] = 1, [IPV4_DEVCONF_FORCE_IGMP_VERSION-1] = 0,
[IPV4_DEVCONF_ARP_ANNOUNCE-1] = 0, [IPV4_DEVCONF_ARP_IGNORE-1] = 0,
[IPV4_DEVCONF_PROMOTE_SECONDARIES-1] = 1, [IPV4_DEVCONF_ARP_ACCEPT-1] = 0,
[IPV4_DEVCONF_ARP_NOTIFY-1] = 0, [IPV4_DEVCONF_ACCEPT_LOCAL-1] = 0,
[IPV4_DEVCONF_SRC_VMARK-1] = 0, [IPV4_DEVCONF_PROXY_ARP_PVLAN-1] = 0,
[IPV4_DEVCONF_ROUTE_LOCALNET-1] = 0,
[IPV4_DEVCONF_IGMPV2_UNSOLICITED_REPORT_INTERVAL-1] = 10000,
[IPV4_DEVCONF_IGMPV3_UNSOLICITED_REPORT_INTERVAL-1] = 1000,

```

```

[IPV4_DEVCONF_IGNORE_ROUTES_WITH_LINKDOWN-1] = 0,
[IPV4_DEVCONF_DROP_UNICAST_IN_L2_MULTICAST-1] = 0,
[IPV4_DEVCONF_DROP_GRATUITOUS_ARP-1] = 0, [IPV4_DEVCONF_BC_FORWARDING-1] =
0]], {{nla_len=628, nla_type=AF_INET6}, [{nla_len=8,
nla_type=IFLA_INET6_FLAGS}, IF_READY}, {{nla_len=20,
nla_type=IFLA_INET6_CACHEINFO}, {max_reasm_len=65535, tstamp=886,
reachable_time=37704, retrans_time=1000}}, {{nla_len=216,
nla_type=IFLA_INET6_CONF}, [[DEVCONF_FORWARDING] = 0, [DEVCONF_HOPLIMIT] = 64,
[DEVCONF_MTU6] = 65536, [DEVCONF_ACCEPT_RA] = 1, [DEVCONF_ACCEPT_REDIRECTS] =
1, [DEVCONF_AUTOCONF] = 1, [DEVCONF_DAD_TRANSMITS] = 1, [DEVCONF_RTR_SOLICITS]
= -1, [DEVCONF_RTR_SOLICIT_INTERVAL] = 4000, [DEVCONF_RTR_SOLICIT_DELAY] =
1000, [DEVCONF_USE_TEMPADDR] = -1, [DEVCONF_TEMP_VALID_LFT] = 604800,
[DEVCONF_TEMP_PREFERRED_LFT] = 86400, [DEVCONF_REGEN_MAX_RETRY] = 3,
[DEVCONF_MAX_DESYNC_FACTOR] = 600, [DEVCONF_MAX_ADDRESSES] = 16,
[DEVCONF_FORCE_MLD_VERSION] = 0, [DEVCONF_ACCEPT_RA_DEFRTR] = 1,
[DEVCONF_ACCEPT_RA_PINFO] = 1, [DEVCONF_ACCEPT_RA_RTR_PREF] = 1,
[DEVCONF_RTR_PROBE_INTERVAL] = 60000, [DEVCONF_ACCEPT_RA_RT_INFO_MAX_PLEN] = 0,
[DEVCONF_PROXY_NDP] = 0, [DEVCONF_OPTIMISTIC_DAD] = 0,
[DEVCONF_ACCEPT_SOURCE_ROUTE] = 0, [DEVCONF_MC_FORWARDING] = 0,
[DEVCONF_DISABLE_IPV6] = 0, [DEVCONF_ACCEPT_DAD] = -1, [DEVCONF_FORCE_TLLAO] =
0, [DEVCONF_NDISC_NOTIFY] = 0, [DEVCONF_MLDV1_UNSOLICITED_REPORT_INTERVAL] =
10000, [DEVCONF_MLDV2_UNSOLICITED_REPORT_INTERVAL] = 1000, ...]],
{{nla_len=300, nla_type=IFLA_INET6_STATS}, [[IPSTATS_MIB_NUM] = 37,
[IPSTATS_MIB_INPKTS] = 4, [IPSTATS_MIB_INOCTETS] = 292,
[IPSTATS_MIB_INDELIVERS] = 4, [IPSTATS_MIB_OUTFORWDATAGRAMS] = 0,
[IPSTATS_MIB_OUTPKTS] = 4, [IPSTATS_MIB_OUTOCTETS] = 292,
[IPSTATS_MIB_INHDRERRORS] = 0, [IPSTATS_MIB_INTOOBIGERRORS] = 0,
[IPSTATS_MIB_INNOROUTES] = 0, [IPSTATS_MIB_INADDRERRORS] = 0,
[IPSTATS_MIB_INUNKNOWNPROTOS] = 0, [IPSTATS_MIB_INTRUNCATEDPKTS] = 0,
[IPSTATS_MIB_INDISCARDS] = 0, [IPSTATS_MIB_OUTDISCARDS] = 0,
[IPSTATS_MIB_OUTNOROUTES] = 0, [IPSTATS_MIB_REASMTIMEOUT] = 0,
[IPSTATS_MIB_REASMREQDS] = 0, [IPSTATS_MIB_REASMOKS] = 0,
[IPSTATS_MIB_REASMFAILS] = 0, [IPSTATS_MIB_FRAGOKS] = 0,
[IPSTATS_MIB_FRAGFAILS] = 0, [IPSTATS_MIB_FRAGCREATES] = 0,
[IPSTATS_MIB_INMCASTPKTS] = 0, [IPSTATS_MIB_OUTMCASTPKTS] = 2,
[IPSTATS_MIB_INBCASTPKTS] = 0, [IPSTATS_MIB_OUTBCASTPKTS] = 0,
[IPSTATS_MIB_INMCASTOCTETS] = 0, [IPSTATS_MIB_OUTMCASTOCTETS] = 152,
[IPSTATS_MIB_INBCASTOCTETS] = 0, [IPSTATS_MIB_OUTBCASTOCTETS] = 0,
[IPSTATS_MIB_CSUMERRORS] = 0, ...]], {{nla_len=52,
nla_type=IFLA_INET6_ICMP6STATS}, [[ICMP6_MIB_NUM] = 6, [ICMP6_MIB_INMSGs] = 2,
[ICMP6_MIB_INERRORS] = 0, [ICMP6_MIB_OUTMSGs] = 2, [ICMP6_MIB_OUTERRORS] = 0,
[ICMP6_MIB_CSUMERRORS] = 0]], {{nla_len=20, nla_type=IFLA_INET6_TOKEN},
inet_pton(AF_INET6, ":::")), {{nla_len=5, nla_type=IFLA_INET6_ADDR_GEN_MODE},
IN6_ADDR_GEN_MODE_EUI64}}]]]], {{len=1344, type=RTM_NEWLINK,

```

```

flags=NLM_F_MULTI, seq=1648280643, pid=4967}, {ifi_family=AF_UNSPEC,
ifi_type=ARPHRD_ETHER, ifi_index=if_nametoindex("enp0s3"),
ifi_flags=IFF_UP|IFF_BROADCAST|IFF_RUNNING|IFF_MULTICAST|IFF_LOWER_UP,
ifi_change=0}, [{nla_len=11, nla_type=IFLA_IFNAME}, "enp0s3"}, {{nla_len=8,
nla_type=IFLA_TXQLEN}, 1000}, {{nla_len=5, nla_type=IFLA_OPERSTATE}, 6},
{{nla_len=5, nla_type=IFLA_LINKMODE}, 0}, {{nla_len=8, nla_type=IFLA_MTU},
1500}, {{nla_len=8, nla_type=IFLA_MIN_MTU}, 46}, {{nla_len=8,
nla_type=IFLA_MAX_MTU}, 16110}, {{nla_len=8, nla_type=IFLA_GROUP}, 0},
{{nla_len=8, nla_type=IFLA_PROMISCUITY}, 0}, {{nla_len=8,
nla_type=IFLA_NUM_TX_QUEUES}, 1}, {{nla_len=8, nla_type=IFLA_GSO_MAX_SEGS},
65535}, {{nla_len=8, nla_type=IFLA_GSO_MAX_SIZE}, 65536}, {{nla_len=8,
nla_type=IFLA_NUM_RX_QUEUES}, 1}, {{nla_len=5, nla_type=IFLA_CARRIER}, 1},
{{nla_len=13, nla_type=IFLA_QDISC}, "fq_codel"}, {{nla_len=8,
nla_type=IFLA_CARRIER_CHANGES}, 2}, {{nla_len=8,
nla_type=IFLA_CARRIER_UP_COUNT}, 1}, {{nla_len=8,
nla_type=IFLA_CARRIER_DOWN_COUNT}, 1}, {{nla_len=5, nla_type=IFLA_PROTO_DOWN},
0}, {{nla_len=36, nla_type=IFLA_MAP}, {mem_start=0, mem_end=0, base_addr=0,
irq=0, dma=0, port=0}}, {{nla_len=10, nla_type=IFLA_ADDRESS},
"\x08\x00\x27\x54\xe5\x76"}, {{nla_len=10, nla_type=IFLA_BROADCAST},
"\xff\xff\xff\xff\xff\xff"}, {{nla_len=196, nla_type=IFLA_STATS64},
{rx_packets=17911, tx_packets=6518, rx_bytes=20550095, tx_bytes=1504818,
rx_errors=0, tx_errors=0, rx_dropped=0, tx_dropped=0, multicast=0,
collisions=0, rx_length_errors=0, rx_over_errors=0, rx_crc_errors=0,
rx_frame_errors=0, rx_fifo_errors=0, rx_missed_errors=0, tx_aborted_errors=0,
tx_carrier_errors=0, tx_fifo_errors=0, tx_heartbeat_errors=0,
tx_window_errors=0, rx_compressed=0, tx_compressed=0, rx_nohandler=0}},
{{nla_len=100, nla_type=IFLA_STATS}, {rx_packets=17911, tx_packets=6518,
rx_bytes=20550095, tx_bytes=1504818, rx_errors=0, tx_errors=0, rx_dropped=0,
tx_dropped=0, multicast=0, collisions=0, rx_length_errors=0, rx_over_errors=0,
rx_crc_errors=0, rx_frame_errors=0, rx_fifo_errors=0, rx_missed_errors=0,
tx_aborted_errors=0, tx_carrier_errors=0, tx_fifo_errors=0,
tx_heartbeat_errors=0, tx_window_errors=0, rx_compressed=0, tx_compressed=0,
rx_nohandler=0}}, {{nla_len=12, nla_type=IFLA_XDP}, {{nla_len=5,
nla_type=IFLA_XDP_ATTACHED}, XDP_ATTACHED_NONE}}, {{nla_len=10, nla_type=0x36
/* IFLA_??? */}, "\x08\x00\x27\x54\xe5\x76"}, {{nla_len=768,
nla_type=IFLA_AF_SPEC}, [{nla_len=136, nla_type=AF_INET}, {{nla_len=132,
nla_type=IFLA_INET_CONF}, [[IPV4_DEVCONF_FORWARDING-1] = 0,
[IPV4_DEVCONF_MC_FORWARDING-1] = 0, [IPV4_DEVCONF_PROXY_ARP-1] = 0,
[IPV4_DEVCONF_ACCEPT_REDIRECTS-1] = 1, [IPV4_DEVCONF_SECURE_REDIRECTS-1] = 1,
[IPV4_DEVCONF_SEND_REDIRECTS-1] = 1, [IPV4_DEVCONF_SHARED_MEDIA-1] = 1,
[IPV4_DEVCONF_RP_FILTER-1] = 2, [IPV4_DEVCONF_ACCEPT_SOURCE_ROUTE-1] = 1,
[IPV4_DEVCONF_BOOTP_RELAY-1] = 0, [IPV4_DEVCONF_LOG_MARTIANS-1] = 0,
[IPV4_DEVCONF_TAG-1] = 0, [IPV4_DEVCONF_ARPFILTER-1] = 0,
[IPV4_DEVCONF_MEDIUM_ID-1] = 0, [IPV4_DEVCONF_NOXFRM-1] = 0,

```

```

[IPV4_DEVCONF_NOPOLICY-1] = 0, [IPV4_DEVCONF_FORCE_IGMP_VERSION-1] = 0,
[IPV4_DEVCONF_ARP_ANNOUNCE-1] = 0, [IPV4_DEVCONF_ARP_IGNORE-1] = 0,
[IPV4_DEVCONF_PROMOTE_SECONDARIES-1] = 1, [IPV4_DEVCONF_ARP_ACCEPT-1] = 0,
[IPV4_DEVCONF_ARP_NOTIFY-1] = 0, [IPV4_DEVCONF_ACCEPT_LOCAL-1] = 0,
[IPV4_DEVCONF_SRC_VMARK-1] = 0, [IPV4_DEVCONF_PROXY_ARP_PVLAN-1] = 0,
[IPV4_DEVCONF_ROUTE_LOCALNET-1] = 0,
[IPV4_DEVCONF_IGMPV2_UNSOLICITED_REPORT_INTERVAL-1] = 10000,
[IPV4_DEVCONF_IGMPV3_UNSOLICITED_REPORT_INTERVAL-1] = 1000,
[IPV4_DEVCONF_IGNORE_ROUTES_WITH_LINKDOWN-1] = 0,
[IPV4_DEVCONF_DROP_UNICAST_IN_L2_MULTICAST-1] = 0,
[IPV4_DEVCONF_DROP_GRATUITOUS_ARP-1] = 0, [IPV4_DEVCONF_BC_FORWARDING-1] =
0]], {{nla_len=628, nla_type=AF_INET6}, [{nla_len=8,
nla_type=IFLA_INET6_FLAGS}, IF_READY}, {{nla_len=20,
nla_type=IFLA_INET6_CACHEINFO}, {max_reasm_len=65535, tstamp=3672,
reachable_time=29388, retrans_time=1000}}, {{nla_len=216,
nla_type=IFLA_INET6_CONF}, [[DEVCONF_FORWARDING] = 0, [DEVCONF_HOPLIMIT] = 64,
[DEVCONF_MTU6] = 1500, [DEVCONF_ACCEPT_RA] = 0, [DEVCONF_ACCEPT_REDIRECTS] = 1,
[DEVCONF_AUTOCONF] = 1, [DEVCONF_DAD_TRANSMITS] = 1, [DEVCONF_RTR_SOLICITS] = -
1, [DEVCONF_RTR_SOLICIT_INTERVAL] = 4000, [DEVCONF_RTR_SOLICIT_DELAY] = 1000,
[DEVCONF_USE_TEMPADDR] = 2, [DEVCONF_TEMP_VALID_LFT] = 604800,
[DEVCONF_TEMP_PREFERRED_LFT] = 86400, [DEVCONF_REGEN_MAX_RETRY] = 3,
[DEVCONF_MAX_DESYNC_FACTOR] = 600, [DEVCONF_MAX_ADDRESSES] = 16,
[DEVCONF_FORCE_MLD_VERSION] = 0, [DEVCONF_ACCEPT_RA_DEFRTR] = 1,
[DEVCONF_ACCEPT_RA_PINFO] = 1, [DEVCONF_ACCEPT_RA_RTR_PREF] = 1,
[DEVCONF_RTR_PROBE_INTERVAL] = 60000, [DEVCONF_ACCEPT_RA_RT_INFO_MAX_PLEN] = 0,
[DEVCONF_PROXY_NDP] = 0, [DEVCONF_OPTIMISTIC_DAD] = 0,
[DEVCONF_ACCEPT_SOURCE_ROUTE] = 0, [DEVCONF_MC_FORWARDING] = 0,
[DEVCONF_DISABLE_IPV6] = 0, [DEVCONF_ACCEPT_DAD] = 1, [DEVCONF_FORCE_TLLAO] =
0, [DEVCONF_NDISC_NOTIFY] = 0, [DEVCONF_MLDV1_UNSOLICITED_REPORT_INTERVAL] =
10000, [DEVCONF_MLDV2_UNSOLICITED_REPORT_INTERVAL] = 1000, ...]],
{{nla_len=300, nla_type=IFLA_INET6_STATS}, [[IPSTATS_MIB_NUM] = 37,
[IPSTATS_MIB_INPKTS] = 21, [IPSTATS_MIB_INOCTETS] = 1996,
[IPSTATS_MIB_INDELIVERS] = 21, [IPSTATS_MIB_OUTFORWDATAGRAMS] = 0,
[IPSTATS_MIB_OUTPKTS] = 31, [IPSTATS_MIB_OUTOCTETS] = 2788,
[IPSTATS_MIB_INHDRERRORS] = 0, [IPSTATS_MIB_INTOOBIGERRORS] = 0,
[IPSTATS_MIB_INNOROUTES] = 0, [IPSTATS_MIB_INADDRERRORS] = 0,
[IPSTATS_MIB_INUNKNOWNPROTOS] = 0, [IPSTATS_MIB_INTRUNCATEDPKTS] = 0,
[IPSTATS_MIB_INDISCARDS] = 0, [IPSTATS_MIB_OUTDISCARDS] = 0,
[IPSTATS_MIB_OUTNOROUTES] = 0, [IPSTATS_MIB_REASMTIMEOUT] = 0,
[IPSTATS_MIB_REASMREQDS] = 0, [IPSTATS_MIB_REASMOKS] = 0,
[IPSTATS_MIB_REASMFAILS] = 0, [IPSTATS_MIB_FRAGOKS] = 0,
[IPSTATS_MIB_FRAGFAILS] = 0, [IPSTATS_MIB_FRAGCREATES] = 0,
[IPSTATS_MIB_INMCASTPKTS] = 21, [IPSTATS_MIB_OUTMCASTPKTS] = 31,
[IPSTATS_MIB_INBCASTPKTS] = 0, [IPSTATS_MIB_OUTBCASTPKTS] = 0,

```

```
[IPSTATS_MIB_INMCASTOCTETS] = 1996, [IPSTATS_MIB_OUTMCASTOCTETS] = 2788,
[IPSTATS_MIB_INBCASTOCTETS] = 0, [IPSTATS_MIB_OUTBCASTOCTETS] = 0,
[IPSTATS_MIB_CSUMERRORS] = 0, ...]], {{nla_len=52,
nla_type=IFLA_INET6_ICMP6STATS}}, [[ICMP6_MIB_NUM] = 6, [ICMP6_MIB_INMSGs] = 0,
[ICMP6_MIB_INERRORS] = 0, [ICMP6_MIB_OUTMSGs] = 10, [ICMP6_MIB_OUTERRORS] = 0,
[ICMP6_MIB_CSUMERRORS] = 0]], {{nla_len=20, nla_type=IFLA_INET6_TOKEN}},
inet_pton(AF_INET6, ":::")), {{nla_len=5, nla_type=IFLA_INET6_ADDR_GEN_MODE}},
IN6_ADDR_GEN_MODE_NONE}}]]]]], iov_len=4096]], msg_iovlen=1, msg_controllen=0,
msg_flags=0}, 0) = 2668
```

```
recvmsg(9, {msg_name={sa_family=AF_NETLINK, nl_pid=0, nl_groups=00000000},
msg_namelen=12, msg_iov=[{iov_base={{len=20, type=NLMMSG_DONE,
flags=NLM_F_MULTII, seq=1648280643, pid=4967}}, 0}, iov_len=4096}], msg_iovlen=1,
msg_controllen=0, msg_flags=0}, 0) = 20
```

```
sendto(9, {{len=20, type=RTM_GETADDR, flags=NLM_F_REQUEST|NLM_F_DUMP,
seq=1648280644, pid=0}, {ifa_family=AF_UNSPEC, ...}}, 20, 0,
{sa_family=AF_NETLINK, nl_pid=0, nl_groups=00000000}, 12) = 20
```

```
recvmsg(9, {msg_name={sa_family=AF_NETLINK, nl_pid=0, nl_groups=00000000},
msg_namelen=12, msg_iov=[{iov_base={{len=76, type=RTM_NEWADDR,
flags=NLM_F_MULTII, seq=1648280644, pid=4967}, {ifa_family=AF_INET,
ifa_prefixlen=8, ifa_flags=IFA_F_PERMANENT, ifa_scope=RT_SCOPE_HOST,
ifa_index=if_nametoindex("lo")}, {{nla_len=8, nla_type=IFA_ADDRESS}},
inet_addr("127.0.0.1")}, {{nla_len=8, nla_type=IFA_LOCAL}},
inet_addr("127.0.0.1")}, {{nla_len=7, nla_type=IFA_LABEL}, "lo"}, {{nla_len=8,
nla_type=IFA_FLAGS}, IFA_F_PERMANENT}, {{nla_len=20, nla_type=IFA_CACHEINFO},
{ifa_preferred=4294967295, ifa_valid=4294967295, cstamp=886, tstamp=886}}]],
{{len=88, type=RTM_NEWADDR, flags=NLM_F_MULTII, seq=1648280644, pid=4967},
{ifa_family=AF_INET, ifa_prefixlen=24, ifa_flags=0,
ifa_scope=RT_SCOPE_UNIVERSE, ifa_index=if_nametoindex("enp0s3")}, {{nla_len=8,
nla_type=IFA_ADDRESS}, inet_addr("10.0.2.15")}, {{nla_len=8,
nla_type=IFA_LOCAL}, inet_addr("10.0.2.15")}, {{nla_len=8,
nla_type=IFA_BROADCAST}, inet_addr("10.0.2.255")}, {{nla_len=11,
nla_type=IFA_LABEL}, "enp0s3"}, {{nla_len=8, nla_type=IFA_FLAGS},
IFA_F_NOPREFIXROUTE}, {{nla_len=20, nla_type=IFA_CACHEINFO},
{ifa_preferred=80833, ifa_valid=80833, cstamp=3688, tstamp=188721}}]]],
iov_len=4096]], msg_iovlen=1, msg_controllen=0, msg_flags=0}, 0) = 164
```

```
recvmsg(9, {msg_name={sa_family=AF_NETLINK, nl_pid=0, nl_groups=00000000},
msg_namelen=12, msg_iov=[{iov_base={{len=72, type=RTM_NEWADDR,
flags=NLM_F_MULTII, seq=1648280644, pid=4967}, {ifa_family=AF_INET6,
ifa_prefixlen=128, ifa_flags=IFA_F_PERMANENT, ifa_scope=RT_SCOPE_HOST,
ifa_index=if_nametoindex("lo")}, {{nla_len=20, nla_type=IFA_ADDRESS},
inet_pton(AF_INET6, ":::1")}, {{nla_len=20, nla_type=IFA_CACHEINFO},
```



```

{ifa_prefered=4294967295, ifa_valid=4294967295, cstamp=886, tstamp=886}},
{{nla_len=8, nla_type=IFA_FLAGS}, IFA_F_PERMANENT}}], {{len=72,
type=RTM_NEWADDR, flags=NLM_F_MULTI, seq=1648280644, pid=4967},
{ifa_family=AF_INET6, ifa_prefixlen=64, ifa_flags=IFA_F_PERMANENT,
ifa_scope=RT_SCOPE_LINK, ifa_index=if_nametoindex("enp0s3")}, [{nla_len=20,
nla_type=IFA_ADDRESS}, inet_pton(AF_INET6, "fe80::bcb3:688:1bd1:6e2d")},
{{nla_len=20, nla_type=IFA_CACHEINFO}, {ifa_prefered=4294967295,
ifa_valid=4294967295, cstamp=3680, tstamp=3881}}, {{nla_len=8,
nla_type=IFA_FLAGS}, IFA_F_PERMANENT|IFA_F_NOPREFIXROUTE}}]], iov_len=4096}},
msg_iovlen=1, msg_controllen=0, msg_flags=0}, 0) = 144

recvmsg(9, {msg_name={sa_family=AF_NETLINK, nl_pid=0, nl_groups=00000000},
msg_namelen=12, msg_iov=[{iov_base={{len=20, type=NLMMSG_DONE,
flags=NLM_F_MULTI, seq=1648280644, pid=4967}, 0}, iov_len=4096}], msg_iovlen=1,
msg_controllen=0, msg_flags=0}, 0) = 20

close(9) = 0

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(3002),
sin_addr=inet_addr("127.0.0.1")}, 16) = 0

listen(9, 100) = 0

getsockname(9, {sa_family=AF_INET, sin_port=htons(3002),
sin_addr=inet_addr("127.0.0.1")}, [128->16]) = 0

getsockname(9, {sa_family=AF_INET, sin_port=htons(3002),
sin_addr=inet_addr("127.0.0.1")}, [128->16]) = 0

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

write(8, "\1\0\0\0\0\0\0\0", 8) = 8

clone(child_stack=NULL, flags=CLONE_CHILD_CLEARTID|CLONE_CHILD_SETTID|SIGCHLD,
child_tidptr=0x7f45d970d8d0) = 4971

poll([{fd=8, events=POLLIN}], 1, 3000) = 1 ([{fd=8, revents=POLLIN}])

read(8, "\1\0\0\0\0\0\0\0", 8) = 8

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

poll([{fd=8, events=POLLIN}], 1, 3000) = 1 ([{fd=8, revents=POLLIN}])

```

```

read(8, "\1\0\0\0\0\0\0\0", 8)          = 8

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

poll([{fd=8, events=POLLIN}], 1, 2995)    = 1 ([{fd=8, revents=POLLIN}])

read(8, "\1\0\0\0\0\0\0\0", 8)          = 8

write(6, "\1\0\0\0\0\0\0\0", 8)          = 8

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

poll([{fd=8, events=POLLIN}], 1, 2995)    = 1 ([{fd=8, revents=POLLIN}])

read(8, "\1\0\0\0\0\0\0\0", 8)          = 8

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

write(6, "\1\0\0\0\0\0\0\0", 8)          = 8

write(1, "OK: 4971\n", 9)                = 9

write(1, "Enter command\n", 14)          = 14

read(0, "create 1\n", 1024)              = 9

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

write(6, "\1\0\0\0\0\0\0\0", 8)          = 8

poll([{fd=8, events=POLLIN}], 1, 3000)    = 1 ([{fd=8, revents=POLLIN}])

read(8, "\1\0\0\0\0\0\0\0", 8)          = 8

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

poll([{fd=8, events=POLLIN}], 1, 3000)    = 1 ([{fd=8, revents=POLLIN}])

read(8, "\1\0\0\0\0\0\0\0", 8)          = 8

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

write(1, "OK: 4978\n", 9)                = 9

write(1, "Enter command\n", 14)          = 14

read(0, "create 4\n", 1024)              = 9

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

write(6, "\1\0\0\0\0\0\0\0", 8)          = 8

```

```

poll([{fd=8, events=POLLIN}], 1, 3000) = 1 ([{fd=8, revents=POLLIN}])
read(8, "\1\0\0\0\0\0\0\0", 8)      = 8
poll([{fd=8, events=POLLIN}], 1, 0)   = 0 (Timeout)
write(1, "OK: 4985\n", 9)             = 9
write(1, "Enter command\n", 14)       = 14
read(0, "create 3\n", 1024)           = 9
poll([{fd=8, events=POLLIN}], 1, 0)   = 0 (Timeout)
write(6, "\1\0\0\0\0\0\0\0", 8)      = 8
poll([{fd=8, events=POLLIN}], 1, 3000) = 1 ([{fd=8, revents=POLLIN}])
read(8, "\1\0\0\0\0\0\0\0", 8)      = 8
poll([{fd=8, events=POLLIN}], 1, 0)   = 0 (Timeout)
write(1, "OK: 4992\n", 9)             = 9
write(1, "Enter command\n", 14)       = 14
read(0, "create 5\n", 1024)           = 9
poll([{fd=8, events=POLLIN}], 1, 0)   = 0 (Timeout)
write(6, "\1\0\0\0\0\0\0\0", 8)      = 8
poll([{fd=8, events=POLLIN}], 1, 3000) = 1 ([{fd=8, revents=POLLIN}])
read(8, "\1\0\0\0\0\0\0\0", 8)      = 8
poll([{fd=8, events=POLLIN}], 1, 0)   = 0 (Timeout)
write(1, "OK: 4999\n", 9)             = 9
write(1, "Enter command\n", 14)       = 14
read(0, "exec 5 start\n", 1024)       = 13
poll([{fd=8, events=POLLIN}], 1, 0)   = 0 (Timeout)
write(6, "\1\0\0\0\0\0\0\0", 8)      = 8
poll([{fd=8, events=POLLIN}], 1, 3000) = 1 ([{fd=8, revents=POLLIN}])
read(8, "\1\0\0\0\0\0\0\0", 8)      = 8

```

```

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

write(1, "OK:5: 0\n", 8)                  = 8

write(1, "Enter command\n", 14)           = 14

read(0, "exec 2 start\n", 1024)           = 13

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

write(6, "\1\0\0\0\0\0\0\0", 8)          = 8

write(1, "OK:2: 0\n", 8)                  = 8

write(1, "Enter command\n", 14)           = 14

read(0, "exec 2 stop\n", 1024)            = 12

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

write(6, "\1\0\0\0\0\0\0\0", 8)          = 8

write(1, "OK:2\n", 5)                     = 5

write(1, "Enter command\n", 14)           = 14

read(0, "exec 5 stop\n", 1024)            = 12

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

write(6, "\1\0\0\0\0\0\0\0", 8)          = 8

poll([{fd=8, events=POLLIN}], 1, 3000)   = 1 ([{fd=8, revents=POLLIN}])

read(8, "\1\0\0\0\0\0\0\0", 8)           = 8

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

write(1, "OK:5\n", 5)                     = 5

write(1, "Enter command\n", 14)           = 14

read(0, "exec 2 time\n", 1024)            = 12

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

write(6, "\1\0\0\0\0\0\0\0", 8)          = 8

write(1, "OK:2: 6128\n", 11)              = 11

write(1, "Enter command\n", 14)           = 14

```

```

read(0, "exec 3 time\n", 1024)          = 12

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

write(6, "\1\0\0\0\0\0\0\0", 8)         = 8

write(1, "OK:3: 0\n", 8)                 = 8

write(1, "Enter command\n", 14)          = 14

read(0, "kill 4\n", 1024)                = 7

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

write(6, "\1\0\0\0\0\0\0\0", 8)         = 8

write(1, "Ok: 4\n", 6)                   = 6

write(1, "Enter command\n", 14)          = 14

read(0, "exec 5 start\n", 1024)          = 13

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

write(6, "\1\0\0\0\0\0\0\0", 8)         = 8

write(1, "Error:id: Not found\n", 20)    = 20

write(1, "Enter command\n", 14)          = 14

read(0, "create 2\n", 1024)              = 9

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

write(6, "\1\0\0\0\0\0\0\0", 8)         = 8

write(1, "Error: Already exists\n", 22)  = 22

write(1, "Enter command\n", 14)          = 14

read(0, 0x55e0da7f99b0, 1024)            = ? ERESTARTSYS (To be restarted if
SA_RESTART is set)

--- SIGINT {si_signo=SIGINT, si_code=SI_KERNEL} ---

+++ killed by SIGINT +++

```

Вывод

Я познакомился с работой утилиты `strace`, часто пользовался флагом `-f`, который позволяет следить за всеми процессами, это очень помогает при работе с синхронизацией процессов. Также утилита может быть дополнением к отладчику, чтобы следить не только за изменением переменных, но и за системными вызовами. Уверен, эта утилита ещё не раз пригодится мне в учёбе.