## 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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### Постановка задачи

#### Цель работы

Приобретение практических навыков диагностики работы программного обеспечения.

#### Задание

При выполнении лабораторных работ по курсу ОС необходимо продемонстрировать ключевые системные вызовы, которые в них используются и то, что их использование соответствует варианту ЛР. По итогам выполнения всех лабораторных работ отчет по данной ЛР должен содержать краткую сводку по исследованию написанных программ.

## Общий метод и алгоритм решения

#### **Strace**

Команда **strace** фиксирует все системные вызовы, совершаемые запущенной программой. В самом простом варианте **strace** запускает переданную программу (с ее аргументами) и выводит в стандартный поток ошибок зафиксированные системные вызовы. Давайте разберем опции утилиты, с помощью которых можно управлять ее поведением:

- -і выводить указатель на инструкцию во время выполнения системного вызова;
- **-k** выводить стек вызовов для отслеживаемого процесса после каждого системного вызова;
- -о выводить всю информацию о системных вызовах не в стандартный поток ошибок, а в файл;
- -q не выводить сообщения о подключении о отключении от процесса;
- -qq не выводить сообщения о завершении работы процесса;
- -r выводить временную метку для каждого системного вызова;
- -s указать максимальный размер выводимой строки, по умолчанию 32;
- -t выводить время суток для каждого вызова;
- -tt добавить микросекунды;
- -ttt добавить микросекунды и количество секунд после начала эпохи Unix;
- -Т выводить длительность выполнения системного вызова;
- -х выводить все не ASCI-строки в шестнадцатеричном виде;
- -хх выводить все строки в шестнадцатеричном виде;
- -у выводить пути для файловых дескрипторов;
- -уу выводить информацию о протоколе для файловых дескрипторов;
- -c подсчитывать количество ошибок, вызовов и время выполнения для каждого системного вызова;

- -О добавить определенное количество микросекунд к счетчику времени для каждого вызова;
- -S сортировать информацию выводимую при опции -c. Доступны поля time, calls, name и nothing. По умолчанию используется time;
- -w суммировать время между началом и завершением системного вызова;
- -е позволяет отфильтровать только нужные системные вызовы или события;
- -Р отслеживать только системные вызовы, которые касаются указанного пути;
- -v позволяет выводить дополнительную информацию, такую как версии окружения, статистику и так далее;
- -b если указанный системный вызов обнаружен, трассировка прекращается;
- -f отслеживать также дочерние процессы, если они будут созданы;
- -ff если задана опция -о, то для каждого дочернего процесса будет создан отдельный файл с именем имя\_файла.pid.
- -I позволяет блокировать реакцию на нажатия Ctrl+C и Ctrl+Z;
- -Е добавляет переменную окружения для запускаемой программы;
- -р указывает рід процесса, к которому следует подключиться;
- -и запустить программу, от имени указанного пользователя.

#### **Dtruss**

**Dtruss** - аналог **strace** для macOS. Принцип работы не отличается от **strace**, но присутствует необходимость в дополнительных правах (т. е. для работы нужно запускать с sudo). Разберем опции:

- -а печатать все детали;
- **-b bufsize** изменить размер буфера. Увеличьте это значение, если вы заметили ошибки удаления динамических переменных. По умолчанию стоит значение "4m" для 4 мегабайтов на CPU;
- -с печатать кол-во системных вызовов;
- -d печать относительных временных меток;
- -е печать прошедшего времени;
- -f отслеживать дочерний процесс после его создания;
- -п пате рассматривать процесс с именем пате;
- -W name ожидать процесс, который соответствует имени name;
- -о печатать время CPU;
- -8 печатать стек вызовов;
- -t syscall рассматривать только системный вызов syscall.

## Протокол работы программы

#### Dtrace (аналог strace):

fcntl(0x6, 0x32, 0x7FF7B3A09440)

 $= 0 \ 0$ 

#### Lab1

mishazhadnov@McB-airmi scr % sudo dtruss ./parent

dtrace: system integrity protection is on, some features will not be available

```
SYSCALL(args)
                     = return
munmap(0x111A3D000, 0x9C000)
munmap(0x111AD9000, 0x8000)
munmap(0x111AE1000, 0x4000)
                                      = 0.0
munmap(0x111AE5000, 0x4000)
                                      = 0.0
munmap(0x111AE9000, 0x54000)
                                      = 0.0
                                = 3 0
open(".\0", 0x100000, 0x0)
fcntl(0x3, 0x32, 0x7FF7B3A0A250)
                                          = 0.0
close(0x3)
                 = 0.0
fsgetpath(0x7FF7B3A0A260, 0x400, 0x7FF7B3A0A248)
                                                              = 580
fsgetpath(0x7FF7B3A0A260, 0x400, 0x7FF7B3A0A248)
                                                              = 140
csrctl(0x0, 0x7FF7B3A0A66C, 0x4)
__mac_syscall(0x7FF810C2E11B, 0x2, 0x7FF7B3A0A4E0)
                                                               = 0.0
csrctl(0x0, 0x7FF7B3A0A67C, 0x4)
__mac_syscall(0x7FF810C2B0A8, 0x5A, 0x7FF7B3A0A610)
                                                                = 0.0
dtrace: error on enabled probe ID 1741 (ID 571: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 571: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 571: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 571: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
open("/\0", 0x20100000, 0x0)
                                  = 30
openat(0x3, "System/Cryptexes/OS\0", 0x100000, 0x0)
                                                         = 4.0
dup(0x4, 0x0, 0x0)
                         = 5.0
fstatat64(0x4, 0x7FF7B3A093B1, 0x7FF7B3A097B0)
openat(0x4, "System/Library/dyld\\0", 0x100000, 0x0)
                                                        = 6.0
```

```
dup(0x6, 0x0, 0x0)
                          = 7.0
dup(0x5, 0x0, 0x0)
                          = 8.0
close(0x3)
                  = 0.0
close(0x5)
                  = 0.0
                 = 0.0
close(0x4)
close(0x6)
                  = 0.0
shared_region_check_np(0x7FF7B3A09D38, 0x0, 0x0)
                                                             = 0.0
fsgetpath(0x7FF7B3A0A290, 0x400, 0x7FF7B3A0A1C8)
                                                               = 830
fcntl(0x8, 0x32, 0x7FF7B3A0A290)
                                           =00
close(0x8)
                  = 0.0
close(0x7)
                  = 0.0
getfsstat64(0x0, 0x0, 0x2)
                                = 8.0
getfsstat64(0x10C4FBA10, 0x43C0, 0x2)
                                             = 8.0
getattrlist("\0", 0x7FF7B3A0A120, 0x7FF7B3A0A090)
                                                             = 0.0
fsgetpath(0x7FF7B3A09F10, 0x400, 0x7FF7B3A09EF8)
                                                               = 83.0
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/System/Library/dyld/dyld\_shared\_cache\_x86\_64h \ 0", 0x7FF7B3A0A378, 0x0)
                                                                                                                               = 0.0
stat64 ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab1/scr/parent \verb|\|0", 0x7FF7B3A099A0, 0x0|)
open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab1/scr/parent\\ \c 0", 0x0, 0x0)
                                                                                    = 3.0
mmap(0x0, 0x33C4, 0x1, 0x40002, 0x3, 0x0)
                                                   = 0x10C53A000 0
fcntl(0x3, 0x32, 0x7FF7B3A09AB0)
                                           = 0.0
close(0x3)
                  = 0.0
munmap(0x10C53A000, 0x33C4)
                                       = 0.0
stat64 ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab1/scr/parent\\ \ 0", 0x7FF7B3A09F00, 0x0)
                                                                                                    = 0.0
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B3A08F50, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib \verb|\|0", 0x7FF7B3A08F00, 0x0|)
stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B3A06B50, 0x0)
                                                                        = -1 2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdispatch.dylib \verb|\|0", 0x7FF7B3A06B00, 0x0|)
                                                                                                            = -1.2
stat64 ("/usr/lib/system/libdispatch.dylib \verb||0", 0x7FF7B3A06B50, 0x0|)
                                                                        = -12
open("/dev/dtracehelper\0", 0x2, 0x0)
                                         = 3.0
ioctl(0x3, 0x80086804, 0x7FF7B3A08B58)
                                               = 0.0
close(0x3)
mprotect(0x10C4F6000, 0x1000, 0x1)
```

```
shared_region_check_np(0xFFFFFFFFFFFFFFF, 0x0, 0x0)
                                                           = 0.0
mprotect(0x10C4F9000, 0x40000, 0x1)
                                         = 0.0
access("/AppleInternal/XBS/.isChrooted\0", 0x0, 0x0)
                                                      = -1 2
bsdthread_register(0x7FF810EF5BC4, 0x7FF810EF5BB0, 0x2000)
                                                                  = 1073742303 0
shm_open(0x7FF810DA0F5A, 0x0, 0x10D9F465)
                                                    = 3.0
fstat64(0x3, 0x7FF7B3A08DA0, 0x0)
                                         = 0.0
mmap(0x0, 0x3000, 0x1, 0x40001, 0x3, 0x0)
                                               = 0x10C53C000 0
close(0x3)
                = 0.0
ioctl(0x2, 0x4004667A, 0x7FF7B3A08E54)
                                            = 0.0
mprotect(0x10C544000, 0x1000, 0x0)
                                         =0~0
mprotect(0x10C54B000, 0x1000, 0x0)
                                         = 0.0
mprotect(0x10C54C000, 0x1000, 0x0)
                                         = 0.0
mprotect(0x10C553000, 0x1000, 0x0)
                                        = 0.0
mprotect(0x10C53F000, 0x98, 0x1)
                                       = 0.0
mprotect(0x10C53F000, 0x98, 0x3)
                                       = 0.0
mprotect(0x10C53F000, 0x98, 0x1)
                                       = 0.0
mprotect(0x10C554000, 0x1000, 0x1)
                                        = 0.0
mprotect(0x10C555000, 0x98, 0x1)
                                       = 0.0
mprotect(0x10C555000, 0x98, 0x3)
                                       = 0.0
mprotect(0x10C555000, 0x98, 0x1)
                                       = 0.0
mprotect(0x10C53F000, 0x98, 0x3)
                                       = 0.0
mprotect(0x10C53F000, 0x98, 0x1)
                                       = 0.0
mprotect(0x10C554000, 0x1000, 0x3)
                                        = 0 \ 0
mprotect(0x10C554000, 0x1000, 0x1)
                                         = 0 \ 0
mprotect(0x10C4F9000, 0x40000, 0x3)
                                         =00
mprotect(0x10C4F9000, 0x40000, 0x1)
                                         = 0.0
issetugid(0x0, 0x0, 0x0)
                             = 0.0
mprotect(0x10C4F9000, 0x40000, 0x3)
                                         = 0.0
getentropy(0x7FF7B3A08900, 0x20, 0x0)
                                          = 0 \ 0
mprotect(0x10C4F9000, 0x40000, 0x1)
                                         = 0.0
getpid(0x0, 0x0, 0x0)
                        = 9784 0
```

mprotect(0x10C4F9000, 0x40000, 0x3)

```
mprotect(0x10C4F9000, 0x40000, 0x1)
= 0.0
access("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab1/scr\0", 0x4, 0x0)
                                                                          = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab1/scr\0", 0x0, 0x0)
                                                                     = 3.0
fstat64(0x3, 0x7FADF2704500, 0x0)
                                       = 0.0
csrctl(0x0, 0x7FF7B3A0900C, 0x4)
                                      = -1 1
fgetattrlist(0x3, 0x7FF7B3A09020, 0x7FF7B3A09040)
                                                       = 0.0
__mac_syscall(0x7FF81B4B2719, 0x2, 0x7FF7B3A09040)
                                                          = 0.0
fcntl(0x3, 0x32, 0x7FF7B3A08CB0)
                                       = 0.0
close(0x3)
                = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab1/scr/Info.plist \verb|\|0", 0x0, 0x0|)
                                                                                 = -12
proc_info(0x2, 0x2638, 0xD)
                               = 64 0
csops_audittoken(0x2638, 0x10, 0x7FF7B3A08F90)
                                               = -1.22
dtrace: error on enabled probe ID 1741 (ID 571: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 571: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
csops(0x2638, 0x0, 0x7FF7B3A093F4)
                                         = 0.0
sysctlbyname(kern.system_version_compat, 0x1A, 0x0, 0x0, 0x7FF7B3A09424)
                                                                             = 0.0
mprotect(0x10C4F9000, 0x40000, 0x3)
                                        = 0.0
getrlimit(0x1008, 0x7FF7B3A09FE0, 0x0)
                                       = 0.0
fstat64(0x0, 0x7FF7B3A09FC8, 0x0)
                                       = 0.0
ioctl(0x0, 0x4004667A, 0x7FF7B3A0A014)
                                           = 0.0
dtrace: error on enabled probe ID 1714 (ID 959: syscall::read_nocancel:return): invalid kernel access in action #12 at DIF offset 68
test_ok.txt
2
0
dtrace: error on enabled probe ID 1714 (ID 959: syscall::read_nocancel:return): invalid kernel access in action #12 at DIF offset 68
open("test_ok.txt\0", 0x0, 0x0)
                               = 30
pipe(0x0, 0x0, 0x0) = 40
fork() = 9789 0
```

```
close(0x5)
                   = 0.0
wait4(0xFFFFFFFFFFFFFFFFF, 0x0, 0x0)
                                                 = 97890
dtrace: error on enabled probe ID 1713 (ID 173: syscall::read:return): invalid kernel access in action #12 at DIF offset 68
fstat64(0x1, 0x7FF7B3A0A388, 0x0)
                                               = 0.0
ioctl(0x1, 0x4004667A, 0x7FF7B3A0A3D4)
                                                   = 0.0
dtrace: error on enabled probe ID 1712 (ID 961: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1713 (ID 173: syscall::read:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 961: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1713 (ID 173: syscall::read:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 961: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1713 (ID 173: syscall::read:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 961: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1713 (ID 173: syscall::read:return): invalid kernel access in action #12 at DIF offset 68
```

= 237712920

#### Lab2

mishazhadnov@McB-airmi scr % sudo dtruss ./prog 3 <bad.txt

lseek(0x0, 0xFFFFFFFFFFFFF, 0x1)

dtrace: system integrity protection is on, some features will not be available

SYSCALL(args) = return

Type your array:

= 14.0

Array size was 68

munmap(0x11622E000, 0xA0000) = 0 0

munmap(0x1162CE000, 0x8000) = 0.0

munmap(0x1162D6000, 0x4000) = 0 0

munmap(0x1162DA000, 0x4000) = 0.0

munmap(0x1162DE000, 0x58000) = 0 0

 $open(".\0", 0x100000, 0x0) = 3 0$ 

fcntl(0x3, 0x32, 0x7FF7B822D290) = 0.0

close(0x3) = 0 0

fsgetpath(0x7FF7B822D2A0, 0x400, 0x7FF7B822D288) = 56 0

fsgetpath(0x7FF7B822D2A0, 0x400, 0x7FF7B822D288)

```
csrctl(0x0, 0x7FF7B822D6AC, 0x4)
                                            = -1 \ 1
__mac_syscall(0x7FF808646E3B, 0x2, 0x7FF7B822D510)
                                                                = 0.0
csrctl(0x0, 0x7FF7B822D6BC, 0x4)
                                            = -1 1
__mac_syscall(0x7FF808643DC6, 0x5A, 0x7FF7B822D650)
                                                                  = 0.0
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
open("/\0", 0x20100000, 0x0)
                                   = 30
openat(0x3, "System/Cryptexes/OS\0", 0x100000, 0x0)
                                                            =40
dup(0x4, 0x0, 0x0)
                          = 50
fstatat64(0x4, 0x7FF7B822C3F1, 0x7FF7B822C7F0)
                                                         = 0.0
open at (0x4, "System/Library/dyld \land 0", 0x100000, 0x0)
                                                           = 6.0
fcntl(0x6, 0x32, 0x7FF7B822C480)
                                           = 0.0
dup(0x6, 0x0, 0x0)
                          = 7.0
dup(0x5, 0x0, 0x0)
                          = 80
close(0x3)
                  = 0.0
close(0x5)
                  = 0.0
close(0x4)
                  = 0.0
close(0x6)
                  = 0.0
shared\_region\_check\_np(0x7FF7B822CD68,0x0,0x0)
                                                              = 0.0
fsgetpath(0x7FF7B822D2D0, 0x400, 0x7FF7B822D208)
                                                                = 830
fcntl(0x8, 0x32, 0x7FF7B822D2D0)
                                            = 0 \ 0
close(0x8)
                  = 0 \ 0
close(0x7)
                  = 0 \ 0
getfsstat64(0x0, 0x0, 0x2)
getfsstat64(0x108202AA0, 0x3B48, 0x2)
getattrlist("\0", 0x7FF7B822D210, 0x7FF7B822D180)
                                                             = 0.0
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/System/Library/dyld/dyld\_shared\_cache\_x86\_64h \land 0", 0x7FF7B822D548, 0x0)
                                                                                                                                = 0.0
dtrace: error on enabled probe ID 1690 (ID 845: syscall::stat64:return): invalid address (0x0) in action #11 at DIF offset 12
stat64("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab2/scr/prog\0", 0x7FF7B822C9E0, 0x0)
open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab2/scr/prog\0", 0x0, 0x0)
```

```
= 0x107CEA000 0
mmap(0x0, 0x15838, 0x1, 0x40002, 0x3, 0x0)
fcntl(0x3, 0x32, 0x7FF7B822CAF0)
                                                                                              = 0.0
close(0x3)
                                       = 0.0
munmap(0x107CEA000, 0x15838)
                                                                                       = 0.0
stat64 ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab2/scr/prog \verb||0", 0x7FF7B822CF40, 0x0||) = (1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-1.5) (-
                                                                                                                                                                                                                         = 0.0
open("/usr/local/opt/gcc/lib/gcc/current/libstdc++.6.dylib \verb|\|0",0x0,0x0|)
                                                                                                                                                                   = 3.0
fcntl(0x3, 0x32, 0x7FF7B822C390)
                                                                                             = 0.0
close(0x3)
                                       = 0.0
stat64("/usr/local/opt/gcc/lib/gcc/current/libstdc++.6.dylib\0", 0x7FF7B822BF50, 0x0)
                                                                                                                                                                                              = 0.0
stat64 ("/usr/local/opt/gcc/lib/gcc/current/libstdc++.6. dylib \verb|\|0", 0x7FF7B822B9B0, 0x0)
                                                                                                                                                                                              = 0 \ 0
open("/usr/local/opt/gcc/lib/gcc/current/libstdc++.6.dylib \verb|\|0",0x0,0x0|)
                                                                                                                                                                   = 3.0
mmap(0x0, 0x3C2770, 0x1, 0x40002, 0x3, 0x0)
                                                                                                                  = 0x108241000 0
fcntl(0x3, 0x32, 0x7FF7B822BAC0)
                                                                                               = 0.0
                                       = 0.0
close(0x3)
open("/usr/local/Cellar/gcc/13.2.0/lib/gcc/current/libstdc++.6.dylib \verb|\|0", 0x0, 0x0|)
                                                                                                                                                                                     = 30
fcntl(0x3, 0x62, 0x7FF7B822B778)
                                                                                             = 0.0
mmap(0x108604000, 0x1E4000, 0x5, 0x40012, 0x3, 0x0)
                                                                                                                                      = 0x108604000 0
mmap(0x1087E8000,\,0xC000,\,0x3,\,0x40012,\,0x3,\,0x1E4000)
                                                                                                                                          = 0x1087E8000 0
mmap(0x1087F4000, 0xC000, 0x3, 0x40012, 0x3, 0x1F0000)
                                                                                                                                         = 0x1087F4000 0
mmap(0x108804000, 0x1C8000, 0x1, 0x40012, 0x3, 0x1FC000)
                                                                                                                                                       = 0x108804000 0
close(0x3)
                                       = 0.0
munmap(0x108241000, 0x3C2770)
                                                                                      = 0.0
open("/usr/local/opt/gcc/lib/gcc/current/libgcc\_s.1.1.dylib \verb|\|0", 0x0, 0x0|)
                                                                                                                                                                   = 3 \ 0
fcntl(0x3, 0x32, 0x7FF7B822C390)
                                                                                             = 0 \ 0
close(0x3)
                                       = 0.0
stat64 ("/usr/local/opt/gcc/lib/gcc/current/libgcc\_s.1.1.dylib \verb|\|0", 0x7FF7B822BF50, 0x0|)
                                                                                                                                                                                              = 0.0
stat64 ("/usr/local/opt/gcc/lib/gcc/current/libgcc\_s.1.1.dylib \verb|\|0", 0x7FF7B822B9B0, 0x0|)
                                                                                                                                                                                               = 0.0
open("/usr/local/opt/gcc/lib/gcc/current/libgcc\_s.1.1.dylib \verb|\|0", 0x0, 0x0|)
                                                                                                                                                                   = 3.0
mmap(0x0, 0x2D310, 0x1, 0x40002, 0x3, 0x0)
                                                                                                                 = 0x108101000 0
fcntl(0x3, 0x32, 0x7FF7B822BAC0)
                                                                                               = 0 \ 0
close(0x3)
```

 $open("/usr/local/Cellar/gcc/13.2.0/lib/gcc/current/libgcc\_s.1.1.dylib \verb|\|0", 0x0, 0x0|)$ 

```
fcntl(0x3, 0x62, 0x7FF7B822B798)
                                            = 0.0
mmap(0x10812F000, 0x1C000, 0x5, 0x40012, 0x3, 0x4000)
                                                                = 0x10812F000 0
mmap(0x10814B000, 0x4000, 0x3, 0x40012, 0x3, 0x20000)
                                                                = 0x10814B0000
mmap(0x10814F000, 0xC000, 0x1, 0x40012, 0x3, 0x24000)
                                                                = 0x10814F0000
close(0x3)
                  = 0.0
munmap(0x108101000, 0x2D310)
                                        = 0.0
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B822BF50, 0x0)
                                                                   = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib \0", 0x7FF7B822BF00, 0x0)\\
                                                                                                       = -1.2
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B822BF50, 0x0)
                                                                   = -12
stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                 = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libobjc.A.dylib \verb|\|0", 0x7FF7B8229B50, 0x0|)
                                                                                                     = -1.2
stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                 = -12
stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B8229B40, 0x0)
                                                                                                                     = -1.2
stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                   = -12
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libxpc.dylib\0", 0x7FF7B8229B50, 0x0)
stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                   = -12
stat64 ("/usr/lib/system/libsystem\_trace.dylib \0", 0x7FF7B8229BA0, 0x0)
                                                                            = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_trace.dylib \0", 0x7FF7B8229B40, 0x0)
                                                                                                                    = -12
stat64("/usr/lib/system/libsystem_trace.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                           = -1.2
stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                          = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B8229B50, 0x0)
                                                                                                                   = -12
stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64 ("/usr/lib/system/libsystem\_malloc.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                             = -1 2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_malloc.dylib \verb|\|0", 0x7FF7B8229B40, 0x0|)
                                                                                                                     = -1 2
stat64 ("/usr/lib/system/libsystem\_malloc.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                             = -1.2
stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                         = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdispatch.dylib \verb|\|0", 0x7FF7B8229B50, 0x0|)
                                                                                                             = -1.2
stat64 ("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                          = -12
stat64("/usr/lib/system_libsystem_featureflags.dylib\0", 0x7FF7B8229BA0, 0x0)
```

 $stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_featureflags.dylib \0", 0x7FF7B8229B40, 0x0)$ 

```
stat64("/usr/lib/system/libsystem featureflags.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                            = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_c.dylib \\ 0", 0x7FF7B8229B50, 0x0)
                                                                                                                = -12
stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                            = -1.2
stat64 ("/usr/lib/libc++.1.dylib \ 0", 0x7FF7B8229BA0, 0x0)
                                                                  = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1. dylib \verb|\|0", 0x7FF7B8229B50, 0x0|)
                                                                                                      = -1.2
stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                  = -1.2
stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                   = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++abi.dylib\0", 0x7FF7B8229B50, 0x0)
                                                                                                       = -12
stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                   = -12
stat64 ("/usr/lib/system/libdyld.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                    = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdyld.dylib\\0", 0x7FF7B8229B50, 0x0)
                                                                                                              = -12
stat64 ("/usr/lib/system/libdyld.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                     = -1.2
stat64 ("/usr/lib/system/libsystem\_info.dylib \verb|\0", 0x7FF7B8229BA0, 0x0)
                                                                             = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_info.dylib \0", 0x7FF7B8229B50, 0x0)
                                                                                                                      = -1.2
stat64 ("/usr/lib/system/libsystem_info.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                             = -12
stat64("/usr/lib/system/libsystem_darwin.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64 ("System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_darwin.dylib \0", 0x7FF7B8229B40, 0x0)
                                                                                                                       = -1.2
stat64("/usr/lib/system/libsystem_darwin.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                              = -1.2
stat64 ("/usr/lib/system/libsystem\_notify.dylib \0", 0x7FF7B8229BA0, 0x0)
                                                                             = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_notify.dylib\0", 0x7FF7B8229B40, 0x0)
                                                                                                                      = -1.2
stat64("/usr/lib/system/libsystem_notify.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                             = -1.2
stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                                            = -1 2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_network extension. dylib\0", 0x7FF7B8229B40, 0x0)
stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64("/usr/lib/system/libsystem_asl.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                            = -1 2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_asl.dylib \", 0x7FF7B8229B50, 0x0)
                                                                                                                     = -1.2
stat64 ("/usr/lib/system/libsystem\_asl.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                            = -1.2
stat64 ("/usr/lib/system/libsystem\_symptoms.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                                     = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_symptoms.dylib \0", 0x7FF7B8229B40, 0x0)
                                                                                                                         = -12
stat64("/usr/lib/system/libsystem_symptoms.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64 ("/usr/lib/system\_containermanager.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                                            = -12
```

```
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_containermanager.dylib \ (", 0x7FF7B8229B40, 0x0) \\
                                                                                                                                 = -1.2
stat64("/usr/lib/system/libsystem_containermanager.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                                             = -12
stat64("/usr/lib/system/libsystem_configuration.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                                      = -12
stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/lib/system_configuration.dylib/0", 0x7FF7B8229B40, 0x0) \\
                                                                                                                               = -1.2
stat64 ("/usr/lib/system\_configuration.dylib \verb||0"|, 0x7FF7B8229BA0, 0x0)
                                                                                      = -1.2
stat64("/usr/lib/system/libsystem_sandbox.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                                    = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_sandbox.dylib\\0", 0x7FF7B8229B40, 0x0)
                                                                                                                        = -1.2
stat64 ("/usr/lib/system_libsystem_sandbox.dylib \verb||0", 0x7FF7B8229BA0, 0x0|)
                                                                                    = -12
stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                            = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libquarantine.dylib \verb|\|0", 0x7FF7B8229B50, 0x0|)
                                                                                                                     = -12
stat64 ("/usr/lib/system/libquarantine.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                            = -1.2
stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                                     = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_coreservices.dylib \verb||0"|, 0x7FF7B8229B40, 0x0|)
                                                                                                                              = -1.2
stat64 ("/usr/lib/system/libsystem\_coreservices.dylib \verb||0", 0x7FF7B8229BA0, 0x0||)
                                                                                     = -1.2
stat64("/usr/lib/system/libsystem_m.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                             = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_m.dylib \verb|\|0", 0x7FF7B8229B50, 0x0|)
                                                                                                                 = -12
stat64("/usr/lib/system/libsystem_m.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                      = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libmacho.dylib\\ 0", 0x7FF7B8229B50, 0x0)
                                                                                                                = -12
stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                       = -1.2
stat64 ("/usr/lib/system/libcommonCrypto.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                                = -1.2
stat64 ("'System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B8229B40, 0x0)
                                                                                                                         = -1.2
stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libunwind.dylib \0", 0x7FF7B8229B50, 0x0)
stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                           = -1 2
stat64("/usr/lib/liboah.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                             = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/liboah.dylib \0", 0x7FF7B8229B50, 0x0)\\
                                                                                                      = -1.2
stat64("/usr/lib/liboah.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                             = -1.2
stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                           = -1 2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B8229B50, 0x0)
stat64 ("/usr/lib/system/libcopyfile.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
```

```
stat64("/usr/lib/system/libcompiler rt.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                            = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcompiler\_rt.dylib \0", 0x7FF7B8229B50, 0x0)
                                                                                                                     = -12
stat64("/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                            = -12
stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                                    = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/lib/system_collections.dylib/0", 0x7FF7B8229B40, 0x0) \\
                                                                                                                             = -1.2
stat64 ("/usr/lib/system/libsystem\_collections.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                                    = -1.2
stat64 ("/usr/lib/system/libsystem\_secinit.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                                  = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B8229B40, 0x0)
                                                                                                                      = -1.2
stat64("/usr/lib/system/libsystem secinit.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                                  = -12
stat64 ("/usr/lib/system/libremovefile.dylib \verb|\0", 0x7FF7B8229BA0, 0x0)
                                                                            = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libremovefile.dylib \verb|\|0", 0x7FF7B8229B50, 0x0|)
                                                                                                                     = -1.2
stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                            = -12
stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                           = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libkeymgr.dylib \0", 0x7FF7B8229B50, 0x0)
                                                                                                               = -1.2
stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                           = -12
stat64 ("/usr/lib/system/libsystem\_dnssd.dylib \verb|\|0", 0x7FF7B8229BA0, 0x0)
                                                                              = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_dnssd.dylib\0", 0x7FF7B8229B40, 0x0)
stat64 ("/usr/lib/system/libsystem\_dnssd.dylib \0", 0x7FF7B8229BA0, 0x0)
                                                                              = -12
stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                     = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcache.dylib \0", 0x7FF7B8229B50, 0x0)
                                                                                                              = -1.2
stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                     = -1.2
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B8229BA0, 0x0)
                                                                    = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7B8229B50, 0x0)
                                                                                                        = -12
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B8229BA0, 0x0)
stat64("/usr/lib/system/libsystem_darwindirectory.dylib\0", 0x7FF7B8229BA0, 0x0)
stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_darwindirectory.dylib\0", 0x7FF7B8229B40, 0x0)
                                                                                                                               = -1 2
stat64 ("/usr/lib/system_libsystem_darwindirectory.dylib \ 0", 0x7FF7B8229BA0, 0x0)
                                                                                           = -1.2
stat64("/usr/lib/libiconv.2.dylib\0", 0x7FF7B822BE70, 0x0)
                                                                  = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libiconv.2.dylib\0", 0x7FF7B822BE20, 0x0)
                                                                                                       = -1.2
stat64("/usr/lib/libiconv.2.dylib\0", 0x7FF7B822BE70, 0x0)
                                                                  = -12
stat64("/usr/lib/libcharset.1.dylib\0", 0x7FF7B8229AC0, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libcharset.1.dylib \verb|\|0", 0x7FF7B8229A70, 0x0|)
```

```
stat64("/usr/lib/libcharset.1.dylib\0", 0x7FF7B8229AC0, 0x0)
                                                                = -12
stat64("/usr/lib/libiconv.2.dylib\0", 0x7FF7B8229AC0, 0x0)
                                                                = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libiconv.2.dylib \verb|\|0", 0x7FF7B8229A70, 0x0|)
                                                                                                  = -12
stat64 ("/usr/lib/libiconv.2.dylib \verb|\|0", 0x7FF7B8229AC0, 0x0)
                                                                = -1.2
open("@rpath/libgcc\_s.1.1.dylib \verb|\|0", 0x0, 0x0)
                                                 = -1.2
open("@rpath\0", 0x100000, 0x0)
                                    = -1.2
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B822BE70, 0x0)
                                                                 = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7B822BE20, 0x0)
                                                                                                    = -12
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B822BE70, 0x0)
                                                                 = -12
open("/dev/dtracehelper\0", 0x2, 0x0)
                                         = 3 \ 0
ioctl(0x3, 0x80086804, 0x7FF7B822B9D8)
                                              = 0.0
                  = 0.0
close(0x3)
open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab2/scr/prog\\ \c ",0x0,0x0)
                                                                                  = 3.0
__mac_syscall(0x7FF808646E3B, 0x2, 0x7FF7B822B0B0)
                                                               = 0.0
map_with_linking_np(0x7FF7B822ABA0, 0x1, 0x7FF7B822ABD0)
                                                                         = -122
close(0x3)
                  = 0.0
mprotect(0x107CDA000, 0x4000, 0x1)
open("/usr/local/Cellar/gcc/13.2.0/lib/gcc/current/libstdc++.6.dylib \verb|\|0", 0x0, 0x0|)
                                                                                   = 3.0
__mac_syscall(0x7FF808646E3B, 0x2, 0x7FF7B822B0B0)
                                                               = 0.0
map\_with\_linking\_np(0x7FF7B8228210, 0x2, 0x7FF7B8228260)
                                                                      = -122
close(0x3)
                  = 0.0
mprotect(0x1087E8000, 0xC000, 0x1)
                                           = 0.0
shared_region_check_np(0xFFFFFFFFFFFFFFFF, 0x0, 0x0)
                                                               = 0.0
mprotect(0x108200000, 0x40000, 0x1)
access("/AppleInternal/XBS/.isChrooted\0", 0x0, 0x0)
bsdthread_register(0x7FF808939B9C, 0x7FF808939B88, 0x2000)
                                                                     = 1073742303 0
getpid(0x0, 0x0, 0x0)
                          = 19810
shm_open(0x7FF8087DCF42, 0x0, 0x87DB388)
                                                       = 3.0
fstat64(0x3, 0x7FF7B822C020, 0x0)
                                          = 0.0
mmap(0x0, 0x4000, 0x1, 0x40001, 0x3, 0x0)
                                                  = 0x107CEC000 0
close(0x3)
ioctl(0x2, 0x4004667A, 0x7FF7B822C0E4)
```

```
mprotect(0x107CF5000, 0x1000, 0x0)
                                          = 0.0
mprotect(0x107CFC000, 0x1000, 0x0)
                                          = 0.0
mprotect(0x108101000, 0x1000, 0x0)
                                         = 0.0
                                         = 0.0
mprotect(0x108108000, 0x1000, 0x0)
mprotect(0x107CF0000, 0x98, 0x1)
                                         = 0.0
mprotect(0x107CF0000, 0x98, 0x3)
                                         = 0.0
mprotect(0x107CF0000, 0x98, 0x1)
                                         = 0.0
mprotect(0x107CFD000, 0x1000, 0x1)
                                          = 0 \ 0
mprotect(0x108109000, 0x98, 0x1)
                                         = 0.0
mprotect(0x108109000, 0x98, 0x3)
                                         = 0.0
mprotect(0x108109000, 0x98, 0x1)
                                         = 0.0
mprotect(0x107CF0000, 0x98, 0x3)
                                         = 0.0
mprotect(0x107CF0000, 0x98, 0x1)
                                         = 0.0
mprotect(0x107CFD000, 0x1000, 0x3)
                                          = 0.0
mprotect(0x107CFD000, 0x1000, 0x1)
                                          = 0.0
mprotect(0x108200000, 0x40000, 0x3)
                                          = 0.0
mprotect(0x108200000, 0x40000, 0x1)
issetugid(0x0, 0x0, 0x0)
                              = 0.0
mprotect(0x108200000, 0x40000, 0x3)
                                          = 0.0
mprotect(0x108200000, 0x40000, 0x1)
                                          = 0.0
mprotect(0x108200000, 0x40000, 0x3)
                                          = 0.0
mprotect(0x108200000, 0x40000, 0x1)
                                          = 0.0
get attrlist ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab2/scr/prog \verb|\|0", 0x7FF7B822BFC0, 0x7FF7B822BFD8|)
                                                                                                                  = 0 \ 0
access("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab2/scr\0", 0x4, 0x0)
                                                                              = 0 \ 0
open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab2/scr\0", 0x0, 0x0)
                                                                          = 3 0
fstat64(0x3, 0x7FB6E8F04530, 0x0)
                                         = 0.0
csrctl(0x0, 0x7FF7B822C21C, 0x4)
                                         = -1.1
fgetattrlist(0x3, 0x7FF7B822C230, 0x7FF7B822C250)
                                                          = 0.0
__mac_syscall(0x7FF813CFA6A4, 0x2, 0x7FF7B822C250)
                                                              = 0.0
fcntl(0x3, 0x32, 0x7FF7B822BED0)
                                         = 0.0
close(0x3)
open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab2/scr/Info.plist \lor 0", 0x0, 0x0)
```

```
proc info(0x2, 0x7BD, 0xD)
                                    = 64 0
csops_audittoken(0x7BD, 0x10, 0x7FF7B822C220)
                                                        = -122
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
csops(0x7BD, 0x0, 0x7FF7B822C684)
                                              = 0.0
sysctlby name (kern. system\_version\_compat, 0x1A, 0x0, 0x0, 0x7FF7B822C6B4)
                                                                                      = 0.0
mprotect(0x108200000, 0x40000, 0x3)
                                             = 0.0
getrlimit(0x1008, 0x7FF7B822D420, 0x0)
                                              = 0.0
fstat64(0x1, 0x7FF7B822D408, 0x0)
                                            = 0.0
ioctl(0x1, 0x4004667A, 0x7FF7B822D454)
                                                = 0 \ 0
fstat64(0x0, 0x7FF7B822D048, 0x0)
                                            =00
dtrace: error on enabled probe ID 1714 (ID 961: syscall::read_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1714 (ID 961: syscall::read_nocancel:return): invalid kernel access in action #12 at DIF offset 68
bsdthread_create(0x107CD5694, 0x600001625200, 0x70000485B000)
                                                                          = 758702080
thread_selfid(0x0, 0x0, 0x0)
                                  = 5263210
bsdthread create(0x107CD5694, 0x600001625208, 0x7000048DE000)
                                                                          = 76406784 0
__disable_threadsignal(0x1, 0x0, 0x0)
bsdthread_create(0x107CD5694, 0x600001625210, 0x700004961000)
                                                                         = 769433600
thread_selfid(0x0, 0x0, 0x0)
                                 = 5263220
thread_selfid(0x0, 0x0, 0x0)
                                  = 5263230
__disable_threadsignal(0x1, 0x0, 0x0)
                                           = 0.0
__disable_threadsignal(0x1, 0x0, 0x0)
                                           = 0.0
ulock wake(0x1000002, 0x7000048DE034, 0x0)
                                                       = 0 \ 0
ulock_wait(0x1020002, 0x7000048DE034, 0x1B0B)
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
```

#### Lab3

 $mishazhadnov@McB-airmi\ scr\ \%\ sudo\ dtruss\ \text{-}f\ ./parent$ 

Password:

```
PID/THRD SYSCALL(args)
                                        = return
15678/0x9045d: fork()
                          = 0.0
15678/0x9045d: munmap(0x1084EE000, 0xA0000)
                                                      = 0.0
15678/0x9045d: munmap(0x10858E000, 0x8000)
                                                     = 0.0
15678/0x9045d: munmap(0x108596000, 0x4000)
                                                    = 0.0
15678/0x9045d: munmap(0x10859A000, 0x4000)
                                                     = 0.0
15678/0x9045d: munmap(0x10859E000, 0x58000)
15678/0x9045d: open(".\0", 0x100000, 0x0)
                                                = 3.0
15678/0x9045d: fcntl(0x3, 0x32, 0x7FF7BA113290)
                                                         = 0.0
15678/0x9045d: close(0x3)
                                 = 0.0
15678/0x9045d: fsgetpath(0x7FF7BA1132A0, 0x400, 0x7FF7BA113288)
                                                                            = 58.0
15678/0x9045d: fsgetpath(0x7FF7BA1132A0, 0x400, 0x7FF7BA113288)
                                                                            = 14.0
15678/0x9045d: csrctl(0x0, 0x7FF7BA1136AC, 0x4)
                                                          = -11
15678/0x9045d: __mac_syscall(0x7FF8040EFE3B, 0x2, 0x7FF7BA113510)
                                                                              = 0.0
15678/0x9045d: csrctl(0x0, 0x7FF7BA1136BC, 0x4)
15678/0x9045d: __mac_syscall(0x7FF8040ECDC6, 0x5A, 0x7FF7BA113650)
                                                                               = 0.0
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
15678/0x9045d: open("\\0", 0x20100000, 0x0)
                                                 = 30
15678/0x9045d: openat(0x3, "System/Cryptexes/OS\0", 0x100000, 0x0)
15678/0x9045d: dup(0x4, 0x0, 0x0)
15678/0x9045d: fstatat64(0x4, 0x7FF7BA1123F1, 0x7FF7BA1127F0)
15678/0x9045d:\ openat(0x4, "System/Library/dyld \land 0", 0x100000, 0x0)
                                                                       = 6.0
15678/0x9045d: fcntl(0x6, 0x32, 0x7FF7BA112480)
                                                         = 0.0
15678/0x9045d: dup(0x6, 0x0, 0x0)
                                         = 7.0
15678/0x9045d: dup(0x5, 0x0, 0x0)
                                        = 8.0
15678/0x9045d: close(0x3)
                                 = 0 \ 0
```

15678/0x9045d: close(0x5)

 $= 0 \ 0$ 

```
15678/0x9045d: close(0x4)
15678/0x9045d: close(0x6)
                                = 0.0
15678/0x9045d: shared_region_check_np(0x7FF7BA112D68, 0x0, 0x0)
                                                                        = 0 \ 0
15678/0x9045d: fsgetpath(0x7FF7BA1132D0, 0x400, 0x7FF7BA113208)
                                                                         = 83.0
15678/0x9045d: fcntl(0x8, 0x32, 0x7FF7BA1132D0)
                                                       = 0.0
15678/0x9045d: close(0x8)
                               = 0.0
15678/0x9045d: close(0x7)
                               = 0.0
15678/0x9045d: getfsstat64(0x0, 0x0, 0x2)
                                             = 7.0
15678/0x9045d: getfsstat64(0x106302AA0, 0x3B48, 0x2)
15678/0x9045d: getattrlist("\\0", 0x7FF7BA113210, 0x7FF7BA113180)
15678/0x9045d: \ stat64("/System/Volumes/Preboot/Cryptexes/OS/System/Library/dyld/dyld\_shared\_cache\_x86\_64h\\)0", 0x7FF7BA113548, 0x0)
                                                                                                                                 = 0.0
dtrace: error on enabled probe ID 1690 (ID 845: syscall::stat64:return): invalid address (0x0) in action #12 at DIF offset 12
= 0.0
15678/0x9045d: open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab3/scr/parent\0", 0x0, 0x0)
                                                                                             = 3.0
15678/0x9045d: mmap(0x0, 0x8468, 0x1, 0x40002, 0x3, 0x0)
                                                             = 0x106201000 0
15678/0x9045d: fcntl(0x3, 0x32, 0x7FF7BA112AF0)
                                                       = 0.0
15678/0x9045d: close(0x3)
15678/0x9045d: munmap(0x106201000, 0x8468)
                                                  = 0.0
15678/0x9045d: stat64("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab3/scr/parent\0", 0x7FF7BA112F40, 0x0)
                                                                                                            = 0.0
15678/0x9045d: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7BA111F50, 0x0)
                                                                            = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7BA111F00, 0x0)
                                                                                                             = -1.2
15678/0x9045d: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7BA111F50, 0x0)
                                                                            = -1.2
15678/0x9045d: stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                           = -1 2
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libobjc.A.dylib\0", 0x7FF7BA10FB50, 0x0)
15678/0x9045d: stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64 ("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_blocks.dylib\0",\ 0x7FF7BA10FB40,\ 0x0)
                                                                                                                           = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                      = -1.2
15678/0x9045d: stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                             = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libxpc.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                  = -12
15678/0x9045d: stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7BA10FBA0, 0x0)
```

 $15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_trace.dylib\0", 0x7FF7BA10FBA0, 0x0)$ 

```
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem trace.dylib\0", 0x7FF7BA10FB40, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libsystem_trace.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                          = -1.2
15678/0x9045d: stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -12
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                                 = -1.2
15678/0x9045d:\ stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_malloc.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                           = -1.2
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem malloc.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                   = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem malloc.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                           = -12
15678/0x9045d: stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                        = -12
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdispatch.dylib\0", 0x7FF7BA10FB50, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                        = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_featureflags.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                 = -1.2
15678/0x9045d:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_featureflags.dylib\0",\ 0x7FF7BA10FB40,\ 0x0)
                                                                                                                                     = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_featureflags.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -1.2
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem c.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                           = -12
15678/0x9045d: stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                  = -12
15678/0x9045d: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                = -1.2
15678/0x9045d: stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++abi.dylib \ 0",\ 0x7FF7BA10FB50,\ 0x0)
                                                                                                                   = -1.2
15678/0x9045d: stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                 = -12
15678/0x9045d: stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdyld.dylib\\ 0", 0x7FF7BA10FB50, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_info.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                          = -1.2
15678/0x9045d:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_info.dylib \", 0x7FF7BA10FB50, 0x0)
                                                                                                                                 = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_info.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                          = -12
15678/0x9045d: stat64("/usr/lib/system/libsystem_darwin.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                            = -1 2
15678/0x9045d:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_larwin.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                   = -12
15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_darwin.dylib\0", 0x7FF7BA10FBA0, 0x0)
```

= -1.2

```
15678/0x9045d: stat64("/usr/lib/system/libsystem notify.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_notify.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                                                                                                                                                                                       = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_notify.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                                               = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_letworkextension.dylib\0", 0x7FF7BA10FB40, 0x0) \\ = -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 
15678/0x9045d: stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                                               = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem asl.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                           = -1.2
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem asl.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                                                                                                                                                                                                    = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem asl.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_symptoms.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                               = -12
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/lib/system_symptoms.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                                                                                                                                                                                             = -1.2
15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_symptoms.dylib\0",\ 0x7FF7BA10FBA0,\ 0x0)
                                                                                                                                                                                                                               = -1.2
15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_containermanager.dylib\\ \ 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                                               = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_containermanager.dylib\0", 0x7FF7BA10FB40, 0x0) \\ = -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1.2 \\ -1
15678/0x9045d: stat64("/usr/lib/system/libsystem_containermanager.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                                               = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_configuration.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                               = -12
15678/0x9045d:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_longuration.dylib\0", 0x7FF7BA10FB40, 0x0)
15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_configuration.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                               = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_sandbox.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                             = -1.2
15678/0x9045d:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_sandbox.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                                                                                                                                                                                          = -1.2
15678/0x9045d:\ stat64("/usr/lib/system_libsystem\_sandbox.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                                            = -1.2
15678/0x9045d: stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                           = -1.2
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libquarantine.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                                                                                                                                                                                                    = -12
15678/0x9045d: stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_coreservices.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                                                                                                                                                                                               = -1 2
15678/0x9045d: stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_m.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                            = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_m.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                                                                                                                                                                                           = -1.2
15678/0x9045d:\ stat64("/usr/lib/system/libsystem\_m.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                                                                                                                             = -1 2
15678/0x9045d: stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libmacho.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                                                                                                                                                                                        = -12
```

```
15678/0x9045d: stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                    = -12
15678/0x9045d: stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                             = -1.2
15678/0x9045d:\ stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -1.2
15678/0x9045d:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libunwind.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                           = -1.2
15678/0x9045d: stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -1.2
15678/0x9045d: stat64("/usr/lib/liboah.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/liboah.dylib\0", 0x7FF7BA10FB50, 0x0)
15678/0x9045d: stat64("/usr/lib/liboah.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                        = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcopyfile.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                          = -1.2
15678/0x9045d: stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                        = -1.2
15678/0x9045d: stat64("/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -1.2
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                                 = -1.2
15678/0x9045d: stat64("/usr/lib/system/libcompiler rt.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -12
15678/0x9045d: stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_collections.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                    = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                 = -12
15678/0x9045d: stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                               = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_secinit.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                 = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                               = -1.2
15678/0x9045d: stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -1 2
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libremovefile.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                                 = -1.2
15678/0x9045d:\ stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -1 2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libkeymgr.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                           = -12
15678/0x9045d: stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                         = -1.2
15678/0x9045d: stat64("/usr/lib/system_libsystem_dnssd.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                           = -1.2
15678/0x9045d: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem dnssd.dylib\0", 0x7FF7BA10FB40, 0x0)
                                                                                                                                  = -12
15678/0x9045d: stat64("/usr/lib/system/libsystem_dnssd.dylib\0", 0x7FF7BA10FBA0, 0x0)
15678/0x9045d: stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7BA10FBA0, 0x0)
```

```
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcache.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                     = -12
15678/0x9045d: stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                = -12
15678/0x9045d: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                               = -1 2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7BA10FB50, 0x0)
                                                                                                                = -1.2
15678/0x9045d: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                               = -1.2
15678/0x9045d: stat64("/usr/lib/system/libsystem_darwindirectory.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                    = -1.2
15678/0x9045d:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_darwindirectory.dylib\0",\ 0x7FF7BA10FB40,\ 0x0) \\ = -1.2
15678/0x9045d: stat64("/usr/lib/system_libsystem_darwindirectory.dylib\0", 0x7FF7BA10FBA0, 0x0)
                                                                                                    = -12
15678/0x9045d: open("/dev/dtracehelper\0", 0x2, 0x0)
15678/0x9045d: ioctl(0x3, 0x80086804, 0x7FF7BA111B38)
15678/0x9045d: close(0x3)
                                = 0.0
15678/0x9045d: open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab3/scr/parent\0", 0x0, 0x0)
                                                                                               = 3.0
15678/0x9045d: __mac_syscall(0x7FF8040EFE3B, 0x2, 0x7FF7BA1110F0)
                                                                             = 0.0
15678/0x9045d: map with linking np(0x7FF7BA111040, 0x1, 0x7FF7BA111070)
15678/0x9045d: close(0x3)
                                = 0.0
15678/0x9045d: mprotect(0x105DF0000, 0x4000, 0x1)
                                                         = 0.0
15678/0x9045d:\ shared\_region\_check\_np(0xFFFFFFFFFFFFFFFF,0x0,0x0)
                                                                            = 0.0
15678/0x9045d: mprotect(0x106300000, 0x40000, 0x1)
                                                         = 0.0
15678/0x9045d: access("/AppleInternal/XBS/.isChrooted\0", 0x0, 0x0)
15678/0x9045d: bsdthread register(0x7FF8043E2B9C, 0x7FF8043E2B88, 0x2000)
                                                                                   = 1073742303 0
15678/0x9045d: getpid(0x0, 0x0, 0x0)
15678/0x9045d: shm_open(0x7FF804285F42, 0x0, 0x4284388)
                                                                  = 3.0
15678/0x9045d: fstat64(0x3, 0x7FF7BA112060, 0x0)
                                                        = 0.0
15678/0x9045d: mmap(0x0, 0x4000, 0x1, 0x40001, 0x3, 0x0)
                                                               = 0x105DFA0000
15678/0x9045d: close(0x3)
                                = 0.0
15678/0x9045d: ioctl(0x2, 0x4004667A, 0x7FF7BA112124)
                                                            = 0.0
15678/0x9045d: mprotect(0x106206000, 0x1000, 0x0)
                                                         = 0.0
15678/0x9045d: mprotect(0x10620D000, 0x1000, 0x0)
15678/0x9045d: mprotect(0x10620E000, 0x1000, 0x0)
                                                         = 0.0
```

```
15678/0x9045d: mprotect(0x106215000, 0x1000, 0x0)
                                                        = 0.0
15678/0x9045d: mprotect(0x106201000, 0x98, 0x1)
                                                       = 0.0
15678/0x9045d: mprotect(0x106201000, 0x98, 0x3)
                                                       = 0.0
15678/0x9045d: mprotect(0x106201000, 0x98, 0x1)
                                                       = 0.0
15678/0x9045d: mprotect(0x105DFE000, 0x1000, 0x1)
                                                        = 0.0
15678/0x9045d: mprotect(0x106216000, 0x98, 0x1)
                                                       = 0.0
                                                       = 0.0
15678/0x9045d: mprotect(0x106216000, 0x98, 0x3)
15678/0x9045d: mprotect(0x106216000, 0x98, 0x1)
                                                       = 0.0
15678/0x9045d: mprotect(0x106201000, 0x98, 0x3)
                                                       = 0.0
15678/0x9045d: mprotect(0x106201000, 0x98, 0x1)
                                                       = 0.0
15678/0x9045d: mprotect(0x105DFE000, 0x1000, 0x3)
                                                         = 0.0
15678/0x9045d: mprotect(0x105DFE000, 0x1000, 0x1)
                                                         = 0.0
15678/0x9045d: mprotect(0x106300000, 0x40000, 0x3)
                                                         = 0.0
15678/0x9045d: mprotect(0x106300000, 0x40000, 0x1)
                                                         = 0.0
15678/0x9045d: issetugid(0x0, 0x0, 0x0)
                                             = 0.0
15678/0x9045d: mprotect(0x106300000, 0x40000, 0x3)
                                                         = 0.0
15678/0x9045d: getentropy(0x7FF7BA111950, 0x20, 0x0)
                                                          = 0.0
15678/0x9045d: mprotect(0x106300000, 0x40000, 0x1)
                                                         = 0.0
15678/0x9045d: mprotect(0x106300000, 0x40000, 0x3)
                                                         = 0.0
15678/0x9045d: mprotect(0x106300000, 0x40000, 0x1)
                                                         = 0.0
15678/0x9045d: \ getattrlist("'Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab3/scr/parent'0", 0x7FF7BA112000, 0x7FF7BA112018)
                                                                                                                              = 0.0
15678/0x9045d: access("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab3/scr\0", 0x4, 0x0)
                                                                                           = 0.0
15678/0x9045d: open("/Users/mishazhadnov/Desktop/wD/OS labs 3t/lab3/scr\0", 0x0, 0x0)
                                                                                       = 3.0
15678/0x9045d: fstat64(0x3, 0x7F84BE704530, 0x0)
15678/0x9045d: csrctl(0x0, 0x7FF7BA11225C, 0x4)
15678/0x9045d: fgetattrlist(0x3, 0x7FF7BA112270, 0x7FF7BA112290)
                                                                        = 0.0
15678/0x9045d: __mac_syscall(0x7FF80F7A36A4, 0x2, 0x7FF7BA112290)
                                                                           = 0.0
15678/0x9045d: fcntl(0x3, 0x32, 0x7FF7BA111F10)
                                                       = 0.0
15678/0x9045d: close(0x3)
                                = 0.0
15678/0x9045d:\ open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab3/scr/Info.plist\\ 0", 0x0, 0x0)
                                                                                                   = -1 2
15678/0x9045d: proc_info(0x2, 0x3D3E, 0xD)
15678/0x9045d: csops_audittoken(0x3D3E, 0x10, 0x7FF7BA112260)
```

```
dtrace: error on enabled probe ID 1741 (ID 573; syscall::sysctl:return); invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
15678/0x9045d: csops(0x3D3E, 0x0, 0x7FF7BA1126C4)
                                                             = 0.0
15678/0x9045d: mprotect(0x106300000, 0x40000, 0x3)
                                                           = 0.0
15678/0x9045d: getrlimit(0x1008, 0x7FF7BA112FA0, 0x0)
                                                             = 0.0
15678/0x9045d: fstat64(0x0, 0x7FF7BA112F88, 0x0)
                                                           = 0.0
15678/0x9045d: ioctl(0x0, 0x4004667A, 0x7FF7BA112FD4)
                                                               = 0.0
test_ok.txt
(child)ftruncate: here is a problem
: Invalid argument
shm_open: here is a problem
: No such file or directory
dtrace: error on enabled probe ID 1714 (ID 961: syscall::read_nocancel:return): invalid kernel access in action #13 at DIF offset 68
15678/0x9045d: open("test_ok.txt\0", 0x0, 0x0)
15678/0x9045d: fstat64(0x3, 0x7FF7BA113690, 0x0)
                                                           = 0.0
15678/0x9045d: fork()
                          = 15683 0
15683/0x904f3: fork()
15683/0x904f3: thread_selfid(0x0, 0x0, 0x0)
                                                = 591091 0
15683/0x904f3: bsdthread_register(0x7FF8043E2B9C, 0x7FF8043E2B88, 0x2000)
                                                                                      = -1 22
15683/0x904f3: mprotect(0x106216000, 0x98, 0x3)
                                                         = 0.0
15683/0x904f3: mprotect(0x106216000, 0x98, 0x1)
                                                         = 0.0
15683/0x904f3: dup2(0x3, 0x0, 0x0)
                                          = 0.0
dtrace: error on enabled probe ID 1688 (ID 287: syscall::execve:return): invalid address (0x105deff20) in action #12 at DIF offset 12
15683/0x904f4: fork()
15683/0x904f4: mprotect(0x104451000, 0x8000, 0x1)
                                                           = 0 \ 0
15683/0x904f4: thread_selfid(0x0, 0x0, 0x0)
                                                = 591092 0
15683/0x904f4: shared_region_check_np(0x7FF7BC285900, 0x0, 0x0)
                                                                            = 0.0
15683/0x904f4: thread_selfid(0x0, 0x0, 0x0)
                                                = 5910920
15683/0x904f4: getpid(0x0, 0x0, 0x0)
                                          = 15683 0
15683/0x904f4: proc_info(0xF, 0x3D43, 0x0)
                                                  = 0.0
15683/0x904f4: munmap(0x1043B1000, 0xA0000)
```

= 0.0

15683/0x904f4: munmap(0x104451000, 0x8000)

```
15683/0x904f4: munmap(0x104459000, 0x4000)
15683/0x904f4: munmap(0x10445D000, 0x4000)
                                                     = 0.0
15683/0x904f4: munmap(0x104461000, 0x58000)
                                                    = 0.0
15683/0x904f4: open(".\0", 0x100000, 0x0)
                                               =40
15683/0x904f4: fcntl(0x4, 0x32, 0x7FF7BC285290)
                                                         = 0.0
15683/0x904f4: close(0x4)
                                 = 0.0
15683/0x904f4:\ fsgetpath (0x7FF7BC2852A0,\ 0x400,\ 0x7FF7BC285288)
                                                                            = 57.0
15683/0x904f4: fsgetpath(0x7FF7BC2852A0, 0x400, 0x7FF7BC285288)
                                                                            = 140
15683/0x904f4: csrctl(0x0, 0x7FF7BC2856AC, 0x4)
                                                         = -1 1
15683/0x904f4: __mac_syscall(0x7FF8040EFE3B, 0x2, 0x7FF7BC285510)
                                                                              = 0.0
15683/0x904f4: csrctl(0x0, 0x7FF7BC2856BC, 0x4)
                                                         = -11
15683/0x904f4: __mac_syscall(0x7FF8040ECDC6, 0x5A, 0x7FF7BC285650)
                                                                               = 0.0
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
15683/0x904f4: open("\0", 0x20100000, 0x0)
15683/0x904f4: openat(0x4, "System/Cryptexes/OS\0", 0x100000, 0x0)
                                                                         = 50
15683/0x904f4: dup(0x5, 0x0, 0x0)
                                        = 6.0
15683/0x904f4: fstatat64(0x5, 0x7FF7BC2843F1, 0x7FF7BC2847F0)
                                                                      = 0.0
15683/0x904f4: openat(0x5, "System/Library/dyld/\0", 0x100000, 0x0)
                                                                       = 7.0
15683/0x904f4: fcntl(0x7, 0x32, 0x7FF7BC284480)
                                                         = 0.0
15683/0x904f4: dup(0x7, 0x0, 0x0)
                                        = 8.0
15683/0x904f4: dup(0x6, 0x0, 0x0)
15683/0x904f4: close(0x4)
                                 = 0.0
15683/0x904f4: close(0x6)
                                 = 0 \ 0
15683/0x904f4: close(0x5)
                                 = 0.0
15683/0x904f4: close(0x7)
                                 = 0.0
15683/0x904f4: shared_region_check_np(0x7FF7BC284D68, 0x0, 0x0)
                                                                           = 0.0
15683/0x904f4: fsgetpath(0x7FF7BC2852D0, 0x400, 0x7FF7BC285208)
                                                                            = 83~0
15683/0x904f4: fcntl(0x9, 0x32, 0x7FF7BC2852D0)
                                                         = 0.0
```

15683/0x904f4: close(0x9)

```
15683/0x904f4: close(0x8)
15683/0x904f4: getfsstat64(0x0, 0x0, 0x2)
15683/0x904f4: getfsstat64(0x104202AA0, 0x3B48, 0x2)
15683/0x904f4: getattrlist("/\0", 0x7FF7BC285210, 0x7FF7BC285180)
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/System/Library/dyld/dyld\_shared\_eache\_x86\_64h\\)0", 0x7FF7BC285548, 0x0)
                                                                                                                                         = 0.0
dtrace: error on enabled probe ID 1690 (ID 845: syscall::stat64:return): invalid address (0x0) in action #12 at DIF offset 12
15683/0x904f4: stat64("/Users/mishazhadnov/Desktop/wD/OS labs 3t/lab3/scr/child\0", 0x7FF7BC2849E0, 0x0)
                                                                                                                  = 0.0
15683/0x904f4: open("/Users/mishazhadnov/Desktop/wD/OS labs 3t/lab3/scr/child\0", 0x0, 0x0)
15683/0x904f4: mmap(0x0, 0x8270, 0x1, 0x40002, 0x4, 0x0) = 0x103C86000 0
15683/0x904f4: fcntl(0x4, 0x32, 0x7FF7BC284AF0)
                                                          = 0.0
15683/0x904f4: close(0x4)
                                 = 0.0
15683/0x904f4: munmap(0x103C86000, 0x8270)
                                                      = 0.0
15683/0x904f4:\ stat64 ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab3/scr/child\\ \ 0", 0x7FF7BC284F40, 0x0)
                                                                                                                  = 0.0
15683/0x904f4: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7BC283F50, 0x0)
                                                                                = -1.2
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7BC283F00, 0x0)
                                                                                                                    = -1.2
15683/0x904f4: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7BC283F50, 0x0)
                                                                                = -12
15683/0x904f4: stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libobjc.A.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                  = -1.2
15683/0x904f4: stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                = -12
15683/0x904f4: stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                           = -1.2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_blocks.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                                  = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                 = -12
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libxpc.dylib\0", 0x7FF7BC281B50, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4:\ stat64("/usr/lib/system/libsystem\_trace.dylib\0",\ 0x7FF7BC281BA0,\ 0x0)
                                                                                          = -1 2
15683/0x904f4:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_trace.dylib\0",\ 0x7FF7BC281B40,\ 0x0)
                                                                                                                                 = -1.2
15683/0x904f4:\ stat64("/usr/lib/system/libsystem\_trace.dylib \verb|\|0", 0x7FF7BC281BA0, 0x0)
                                                                                          = -1.2
15683/0x904f4: stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                         = -1.2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcorecrypto.dylib\0",\ 0x7FF7BC281B50,\ 0x0)
                                                                                                                                = -12
15683/0x904f4: stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7BC281BA0, 0x0)
```

15683/0x904f4: stat64("/usr/lib/system/libsystem\_malloc.dylib\0", 0x7FF7BC281BA0, 0x0)

```
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem malloc.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                                  = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_malloc.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4:\ stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -12
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdispatch.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                          = -1.2
15683/0x904f4: stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_featureflags.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                = -1.2
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem featureflags.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                                    = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_featureflags.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                = -12
15683/0x904f4: stat64("/usr/lib/system/libsystem c.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -12
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_c.dylib\0", 0x7FF7BC281B50, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -1.2
15683/0x904f4: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                = -1.2
15683/0x904f4:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib \", 0x7FF7BC281B50, 0x0)
                                                                                                                  = -1.2
15683/0x904f4: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                               = -1.2
15683/0x904f4: stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                = -1.2
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++abi.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                  = -12
15683/0x904f4: stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                  = -1.2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdyld.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                        = -12
15683/0x904f4: stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                  = -1.2
15683/0x904f4:\ stat64("/usr/lib/system/libsystem_info.dylib\0",\ 0x7FF7BC281BA0,\ 0x0)
                                                                                         = -1.2
15683/0x904f4:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_info.dylib\\ 0", 0x7FF7BC281B50, 0x0)
                                                                                                                                 = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem info.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                         = -12
15683/0x904f4: stat64("/usr/lib/system/libsystem_darwin.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_darwin.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                                  = -12
15683/0x904f4:\ stat64("/usr/lib/system/libsystem\_darwin.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                           = -1 2
15683/0x904f4: stat64("/usr/lib/system/libsystem_notify.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                          = -1.2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/lib/system_notify.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                                 = -1.2
15683/0x904f4:\ stat64("/usr/lib/system_libsystem_notify.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                        = -12
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_letworkextension.dylib\0", 0x7FF7BC281B40, 0x0) = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7BC281BA0, 0x0)
```

```
15683/0x904f4: stat64("/usr/lib/system/libsystem asl.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                      = -1.2
15683/0x904f4:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_asl. dylib \0", 0x7FF7BC281B50, 0x0)
                                                                                                                           = -12
15683/0x904f4:\ stat64("/usr/lib/system/libsystem\_asl.dylib\0",\ 0x7FF7BC281BA0,\ 0x0)
                                                                                     = -12
15683/0x904f4: stat64("/usr/lib/system/libsystem_symptoms.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                              = -1.2
15683/0x904f4:\ stat 64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_symptoms.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                               = -1.2
15683/0x904f4:\ stat64("/usr/lib/system_libsystem_symptoms.dylib\0",\ 0x7FF7BC281BA0,\ 0x0)
                                                                                              = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_containermanager.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                    = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem containermanager.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                    = -1.2
15683/0x904f4:\ stat64("/usr/lib/system/libsystem\_configuration.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_configuration.dylib\0", 0x7FF7BC281B40, 0x0)
15683/0x904f4:\ stat64("/usr/lib/system/libsystem\_configuration.dylib\0",\ 0x7FF7BC281BA0,\ 0x0)
                                                                                              = -12
15683/0x904f4:\ stat64("/usr/lib/system_libsystem_sandbox.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                             = -1.2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_sandbox.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                              = -1.2
15683/0x904f4: stat64("/usr/lib/system_libsystem_sandbox.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                             = -1.2
15683/0x904f4: stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                     = -12
15683/0x904f4:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libquarantine.dylib\0", 0x7FF7BC281B50, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                     = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                             = -12
15683/0x904f4:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system\_coreservices.dylib\0",\ 0x7FF7BC281B40,\ 0x0)
                                                                                                                                = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libsystem_m.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                      = -12
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem m.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                       = -12
15683/0x904f4: stat64("/usr/lib/system/libsystem_m.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libmacho.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                      = -1 2
15683/0x904f4:\ stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                              = -1.2
15683/0x904f4: stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                         = -12
15683/0x904f4: stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libunwind.dylib\0", 0x7FF7BC281B50, 0x0)
```

```
15683/0x904f4: stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -1.2
15683/0x904f4: stat64("/usr/lib/liboah.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/liboah.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                 = -12
15683/0x904f4: stat64("/usr/lib/liboah.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                          = -1.2
15683/0x904f4: stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -1.2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcopyfile.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                           = -1.2
15683/0x904f4: stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -1.2
15683/0x904f4: stat64("/usr/lib/system/libcompiler rt.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                         = -12
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcompiler rt.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                                 = -12
15683/0x904f4: stat64("/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                         = -12
15683/0x904f4: stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                 = -1.2
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7BC281B40, 0x0)
15683/0x904f4:\ stat64("/usr/lib/system_libsystem\_collections.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                               = -1.2
15683/0x904f4: \ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/lib/system_secinit.dylib\0", 0x7FF7BC281B40, 0x0)
                                                                                                                                  = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                               = -12
15683/0x904f4: stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libremovefile.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                                = -12
15683/0x904f4: stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                         = -12
15683/0x904f4: stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -1.2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libkeymgr.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                           = -1.2
15683/0x904f4: stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                        = -1.2
15683/0x904f4: stat64("/usr/lib/system/libsystem dnssd.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                          = -1 2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_dnssd.dylib\0",\ 0x7FF7BC281B40,\ 0x0)
15683/0x904f4: stat64("/usr/lib/system/libsystem_dnssd.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                   = -1.2
15683/0x904f4:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcache.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                          = -1.2
15683/0x904f4:\ stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                  = -1.2
15683/0x904f4: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                  = -12
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7BC281B50, 0x0)
                                                                                                                    = -12
15683/0x904f4: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7BC281BA0, 0x0)
15683/0x904f4: stat64("/usr/lib/system_libsystem_darwindirectory.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                        = -12
```

```
15683/0x904f4: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem darwindirectory.dylib\0", 0x7FF7BC281B40, 0x0) = -1 2
15683/0x904f4: stat64("/usr/lib/system/libsystem_darwindirectory.dylib\0", 0x7FF7BC281BA0, 0x0)
                                                                                                  = -12
15683/0x904f4: open("/dev/dtracehelper\0", 0x2, 0x0)
15683/0x904f4: ioctl(0x4, 0x80086804, 0x7FF7BC283B38)
                                                           = 0.0
15683/0x904f4: close(0x4)
                                = 0.0
15683/0x904f4:\ open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab3/scr/child\\ \c 0x0,0x0)
                                                                                             =4.0
15683/0x904f4: __mac_syscall(0x7FF8040EFE3B, 0x2, 0x7FF7BC2830F0)
                                                                           = 0.0
15683/0x904f4: map_with_linking_np(0x7FF7BC2830A0, 0x1, 0x7FF7BC2830D0)
                                                                             = -1 22
15683/0x904f4: close(0x4)
                                = 0.0
15683/0x904f4: mprotect(0x103C7E000, 0x4000, 0x1)
                                                        =00
15683/0x904f4: shared_region_check_np(0xFFFFFFFFFFFFFFFF, 0x0, 0x0)
                                                                           = 0.0
15683/0x904f4: mprotect(0x104200000, 0x40000, 0x1)
                                                        = 0.0
15683/0x904f4:\ access("/AppleInternal/XBS/.isChrooted\0",\,0x0,\,0x0)
                                                                     = -1.2
15683/0x904f4: bsdthread_register(0x7FF8043E2B9C, 0x7FF8043E2B88, 0x2000)
                                                                                 = 10737423030
15683/0x904f4: getpid(0x0, 0x0, 0x0)
                                        = 156830
15683/0x904f4: shm_open(0x7FF804285F42, 0x0, 0x4284388)
                                                                 =40
15683/0x904f4: fstat64(0x4, 0x7FF7BC284060, 0x0)
                                                       = 0.0
15683/0x904f4: mmap(0x0, 0x4000, 0x1, 0x40001, 0x4, 0x0)
                                                               = 0x103C880000
15683/0x904f4: close(0x4)
                                = 0.0
15683/0x904f4: ioctl(0x2, 0x4004667A, 0x7FF7BC284124)
                                                           = 0.0
15683/0x904f4: mprotect(0x103C91000, 0x1000, 0x0)
                                                        = 0.0
15683/0x904f4: mprotect(0x103C98000, 0x1000, 0x0)
                                                        = 0.0
15683/0x904f4: mprotect(0x103C99000, 0x1000, 0x0)
                                                        = 0.0
15683/0x904f4: mprotect(0x103CA0000, 0x1000, 0x0)
                                                        = 0 \ 0
15683/0x904f4: mprotect(0x103C8C000, 0x98, 0x1)
                                                       = 0.0
15683/0x904f4: mprotect(0x103C8C000, 0x98, 0x3)
                                                       = 0 \ 0
15683/0x904f4: mprotect(0x103C8C000, 0x98, 0x1)
                                                       = 0.0
15683/0x904f4: mprotect(0x103CA1000, 0x1000, 0x1)
                                                        = 0.0
15683/0x904f4: mprotect(0x103CA2000, 0x98, 0x1)
                                                       = 0.0
15683/0x904f4: mprotect(0x103CA2000, 0x98, 0x3)
                                                       = 0.0
15683/0x904f4: mprotect(0x103CA2000, 0x98, 0x1)
                                                       = 0 \ 0
15683/0x904f4: mprotect(0x103C8C000, 0x98, 0x3)
                                                       = 0 \ 0
```

```
15683/0x904f4: mprotect(0x103C8C000, 0x98, 0x1)
                                                         =0.0
15683/0x904f4: mprotect(0x103CA1000, 0x1000, 0x3)
                                                          = 0.0
15683/0x904f4: mprotect(0x103CA1000, 0x1000, 0x1)
                                                          = 0.0
15683/0x904f4: mprotect(0x104200000, 0x40000, 0x3)
                                                          = 0.0
15683/0x904f4: mprotect(0x104200000, 0x40000, 0x1)
                                                          = 0.0
15683/0x904f4: issetugid(0x0, 0x0, 0x0)
                                              = 0.0
15683/0x904f4: mprotect(0x104200000, 0x40000, 0x3)
                                                          = 0.0
15683/0x904f4: getentropy(0x7FF7BC283950, 0x20, 0x0)
                                                            = 0.0
15683/0x904f4: mprotect(0x104200000, 0x40000, 0x1)
                                                          = 0 \ 0
15683/0x904f4: mprotect(0x104200000, 0x40000, 0x3)
                                                          = 0 \ 0
15683/0x904f4: mprotect(0x104200000, 0x40000, 0x1)
                                                          = 0.0
15683/0x904f4:\ getattrlist("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab3/scr/child\0", 0x7FF7BC284000, 0x7FF7BC284018)
                                                                                                                                = 0.0
15683/0x904f4:\ access ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab3/scr\\ \c 0",0x4,0x0)
                                                                                              = 0.0
15683/0x904f4: open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab3/scr\0", 0x0, 0x0)
                                                                                          = 4.0
15683/0x904f4: fstat64(0x4, 0x7F9BC8704530, 0x0)
                                                         = 0.0
15683/0x904f4: csrctl(0x0, 0x7FF7BC28425C, 0x4)
                                                         = -1 1
15683/0x904f4: fgetattrlist(0x4, 0x7FF7BC284270, 0x7FF7BC284290)
15683/0x904f4: __mac_syscall(0x7FF80F7A36A4, 0x2, 0x7FF7BC284290)
                                                                             = 0.0
15683/0x904f4: fcntl(0x4, 0x32, 0x7FF7BC283F10)
                                                         = 0.0
15683/0x904f4: close(0x4)
                                 = 0.0
15683/0x904f4: open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab3/scr/Info.plist\0", 0x0, 0x0)
                                                                                                     = -1.2
15683/0x904f4: proc_info(0x2, 0x3D43, 0xD)
15683/0x904f4: csops audittoken(0x3D43, 0x10, 0x7FF7BC284260)
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
15683/0x904f4: csops(0x3D43, 0x0, 0x7FF7BC2846C4)
                                                            = 0 \ 0
15683/0x904f4: mprotect(0x104200000, 0x40000, 0x3)
                                                          = 0.0
15683/0x904f4: shm_open(0x103C7DEF8, 0x202, 0x180)
                                                            = 4.0
15683/0x904f4: fstat64(0x0, 0x7FF7BC2856B8, 0x0)
                                                          = 0 \ 0
15683/0x904f4: ftruncate(0x4, 0x29, 0x0)
                                               = -1 22
15683/0x904f4: writev_nocancel(0x2, 0x7FF7BC284E20, 0x4)
                                                                  = 56 0
15683/0x904f4: shm_unlink(0x103C7DEF8, 0x0, 0x0)
```

#### Lab4

mishazhadnov@McB-airmi build % sudo dtruss ./prog\_d

dtrace: system integrity protection is on, some features will not be available

```
SYSCALL(args)
                    = return
munmap(0x1118BC000, 0xA0000)
                                      = 0.0
munmap(0x11195C000, 0x8000)
                                    = 0.0
munmap(0x111964000, 0x4000)
                                    = 0.0
munmap(0x111968000, 0x4000)
                                    = 0.0
munmap(0x11196C000, 0x58000)
                                     = 0.0
open(".\0", 0x100000, 0x0)
                                = 3.0
fcntl(0x3, 0x32, 0x7FF7B253B290)
                                         = 0 \ 0
close(0x3)
                = 0.0
fsgetpath(0x7FF7B253B2A0, 0x400, 0x7FF7B253B288)
                                                            = 640
fsgetpath (0x7FF7B253B2A0,\,0x400,\,0x7FF7B253B288)
                                                            = 140
csrctl(0x0, 0x7FF7B253B6AC, 0x4)
                                         = -1 \ 1
Select the number of command:
0) Change contract
1) Call 'float SinIntegral(float A, float B, float e)'
2) Call 'void Sort(int* arr, int n)'
__mac_syscall(0x7FF815B08E3B, 0x2, 0x7FF7B253B510)
                                                             = 0.0
csrctl(0x0, 0x7FF7B253B6BC, 0x4)
```

\_\_mac\_syscall(0x7FF815B05DC6, 0x5A, 0x7FF7B253B650)

dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28 dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28 dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28 dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28

= 0.0

```
open("/\0", 0x20100000, 0x0)
                                  = 30
openat(0x3, "System/Cryptexes/OS\0", 0x100000, 0x0)
                                                           =40
dup(0x4, 0x0, 0x0)
                          = 50
fstatat64(0x4, 0x7FF7B253A3F1, 0x7FF7B253A7F0)
                                                        = 0.0
openat(0x4, "System/Library/dyld\land0", 0x100000, 0x0)
                                                         = 6.0
fcntl(0x6, 0x32, 0x7FF7B253A480)
                                          = 0.0
dup(0x6, 0x0, 0x0)
                          = 7.0
dup(0x5, 0x0, 0x0)
                          = 8.0
close(0x3)
                  = 0.0
close(0x5)
                  = 0.0
close(0x4)
                  = 0.0
                  = 0.0
close(0x6)
shared_region_check_np(0x7FF7B253AD68, 0x0, 0x0)
                                                             = 0.0
fsgetpath(0x7FF7B253B2D0, 0x400, 0x7FF7B253B208)
                                                              = 83.0
fcntl(0x8, 0x32, 0x7FF7B253B2D0)
                                           = 0.0
close(0x8)
                  = 0.0
close(0x7)
                  = 0.0
getfsstat64(0x0, 0x0, 0x2)
                                = 7.0
getfsstat64(0x10DF02AA0, 0x3B48, 0x2)
                                             = 7.0
getattrlist("\0", 0x7FF7B253B210, 0x7FF7B253B180)
                                                           = 0.0
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/System/Library/dyld/dyld\_shared\_cache\_x86\_64h \land 0", 0x7FF7B253B548, 0x0)
                                                                                                                              = 0.0
dtrace: error on enabled probe ID 1690 (ID 845: syscall::stat64:return): invalid address (0x0) in action #11 at DIF offset 12
stat64("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab4/src/build/prog_d\0", 0x7FF7B253A9E0, 0x0)
                                                                                                           = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab4/src/build/prog_d\0", 0x0, 0x0)
                                                                                          = 30
mmap(0x0, 0xC4A8, 0x1, 0x40002, 0x3, 0x0)
                                                   = 0x10D9D40000
fcntl(0x3, 0x32, 0x7FF7B253AAF0)
                                           = 0 \ 0
close(0x3)
                  = 0.0
munmap(0x10D9D4000, 0xC4A8)
                                        = 0 \ 0
stat64 ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab4/src/build/prog\_d \ 0", 0x7FF7B253AF40, 0x0)
                                                                                                           = 0 \ 0
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2539F50, 0x0)
                                                                = -1 2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7B2539F00, 0x0)
stat64 ("/usr/lib/libSystem.B.dylib \verb|\|0", 0x7FF7B2539F50, 0x0)
                                                                 = -1 2
```

```
stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                  = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libobjc.A.dylib \0", 0x7FF7B2537B50, 0x0)
stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                  = -12
stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                             = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B2537B40, 0x0)
                                                                                                                     = -1.2
stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                             = -1.2
stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                   = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libxpc.dylib\0", 0x7FF7B2537B50, 0x0)
                                                                                                            = -12
stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64("/usr/lib/system/libsystem_trace.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_ltrace.dylib \"0", 0x7FF7B2537B40, 0x0)
                                                                                                                    = -1 2
stat64 ("/usr/lib/system/libsystem\_trace.dylib \0", 0x7FF7B2537BA0, 0x0)
                                                                            = -12
stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                           = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B2537B50, 0x0)
                                                                                                                   = -1.2
stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                           = -1.2
stat64("/usr/lib/system/libsystem_malloc.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                             = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_malloc.dylib\0", 0x7FF7B2537B40, 0x0)
stat64 ("/usr/lib/system/libsystem\_malloc.dylib \verb|\0", 0x7FF7B2537BA0, 0x0)
                                                                             = -1.2
stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                          = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdispatch.dylib \normalfont{\columnwidth}{O"}, 0x7FF7B2537B50, 0x0)
stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                          = -1.2
stat64 ("/usr/lib/system/libsystem_featureflags.dylib \verb||0", 0x7FF7B2537BA0, 0x0|)
                                                                                   = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_featureflags.dylib \0", 0x7FF7B2537B40, 0x0)
                                                                                                                            = -12
stat64("/usr/lib/system_libsystem_featureflags.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                           = -12
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_c.dylib\0", 0x7FF7B2537B50, 0x0)
                                                                                                               = -1 2
stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                           = -1.2
stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                 = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib\0", 0x7FF7B2537B50, 0x0)
                                                                                                     = -1.2
stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                 = -12
stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7B2537BA0, 0x0)
```

 $stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++abi.dylib \verb|\|0", 0x7FF7B2537B50, 0x0|)$ 

```
stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                    = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdyld.dylib \0", 0x7FF7B2537B50, 0x0)
                                                                                                             = -12
stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                    = -1.2
stat64 ("/usr/lib/system/libsystem\_info.dylib \verb|\0", 0x7FF7B2537BA0, 0x0)
                                                                            = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_info.dylib \0", 0x7FF7B2537B50, 0x0)
                                                                                                                     = -1.2
stat64 ("/usr/lib/system/libsystem\_info.dylib \verb|\0", 0x7FF7B2537BA0, 0x0)
                                                                            = -1.2
stat64 ("/usr/lib/system_libsystem_darwin.dylib \0", 0x7FF7B2537BA0, 0x0)
                                                                              = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem darwin.dylib\0", 0x7FF7B2537B40, 0x0)
                                                                                                                       = -12
stat64("/usr/lib/system/libsystem_darwin.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                              = -12
stat64("/usr/lib/system/libsystem_notify.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                             = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_lotify.dylib\0", 0x7FF7B2537B40, 0x0)
                                                                                                                      = -12
stat64 ("/usr/lib/system_libsystem_notify.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0)
                                                                             = -1.2
stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                            = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_letworkextension.dylib\0", 0x7FF7B2537B40, 0x0)
                                                                                                                                = -1.2
stat64 ("/usr/lib/system/libsystem_network extension.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0|)
                                                                                            = -12
stat64("/usr/lib/system/libsystem_asl.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_asl.dylib \verb|\|0", 0x7FF7B2537B50, 0x0|)
                                                                                                                     = -1.2
stat64("/usr/lib/system/libsystem_asl.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                            = -12
stat64 ("/usr/lib/system/libsystem\_symptoms.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0|)
                                                                                     = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_symptoms.dylib \verb|\|0", 0x7FF7B2537B40, 0x0|)
                                                                                                                         = -1.2
stat64 ("/usr/lib/system/libsystem\_symptoms.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0)
                                                                                     = -1.2
stat64 ("/usr/lib/system_libsystem\_container manager. dylib \ 0", 0x7FF7B2537BA0, 0x0)
                                                                                            = -1 2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_containermanager.dylib\0", 0x7FF7B2537B40, 0x0)
stat64("/usr/lib/system/libsystem_containermanager.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                            = -1 2
stat64("/usr/lib/system/libsystem_configuration.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                     = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_configuration.dylib \0", 0x7FF7B2537B40, 0x0)
                                                                                                                              = -12
stat64 ("/usr/lib/system\_configuration.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0)
                                                                                     = -1.2
stat64("/usr/lib/system/libsystem_sandbox.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                    = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem\_sandbox.dylib \0", 0x7FF7B2537B40, 0x0)
                                                                                                                        = -12
stat64("/usr/lib/system/libsystem_sandbox.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7B2537BA0, 0x0)
```

```
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libquarantine.dylib\0", 0x7FF7B2537B50, 0x0)
stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                    = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_coreservices.dylib \verb|\|0", 0x7FF7B2537B40, 0x0|)
                                                                                                                             = -1.2
stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                    = -1.2
stat64("/usr/lib/system/libsystem_m.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                            = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_m.dylib \\ \ 0", 0x7FF7B2537B50, 0x0)
                                                                                                                = -1.2
stat64("/usr/lib/system/libsystem_m.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                            = -12
stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libmacho.dylib \verb|\|0",0x7FF7B2537B50,0x0|)
stat64 ("/usr/lib/system/libmacho.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0)
stat64 ("/usr/lib/system/libcommonCrypto.dylib \0", 0x7FF7B2537BA0, 0x0)
                                                                               = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B2537B40, 0x0) \\
                                                                                                                        = -1.2
stat64 ("/usr/lib/system/libcommonCrypto.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0)
                                                                               = -1.2
stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                           = -1.2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libunwind.dylib\0", 0x7FF7B2537B50, 0x0)
stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64("/usr/lib/liboah.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                            = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/liboah.dylib \ 0", 0x7FF7B2537B50, 0x0)
                                                                                                     = -12
stat64("/usr/lib/liboah.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                            = -1.2
stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                          = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcopyfile.dylib \verb|\|0", 0x7FF7B2537B50, 0x0|)
                                                                                                              = -1.2
stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                          = -12
stat64("/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcompiler\_rt.dylib \0", 0x7FF7B2537B50, 0x0)
stat64("/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                            = -1.2
stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                    = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_collections.dylib \verb||0", 0x7FF7B2537B40, 0x0|| )
                                                                                                                            = -1.2
stat64 ("/usr/lib/system\_collections.dylib \verb||0", 0x7FF7B2537BA0, 0x0|)
                                                                                    = -1.2
stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                  = -1 2
stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B2537B40, 0x0)
stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                  = -12
```

= -1.2

```
stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                           = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libremovefile.dylib \verb|\|0", 0x7FF7B2537B50, 0x0|)
                                                                                                                   = -12
stat64 ("/usr/lib/system/libremovefile.dylib \verb|\0", 0x7FF7B2537BA0, 0x0)
                                                                           = -12
stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                          = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libkeymgr.dylib \0", 0x7FF7B2537B50, 0x0)
                                                                                                             = -1.2
stat64 ("/usr/lib/system/libkeymgr.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0)
                                                                          = -1.2
stat64("/usr/lib/system/libsystem_dnssd.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                            = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_dnssd.dylib\0", 0x7FF7B2537B40, 0x0)
                                                                                                                     = -12
stat64("/usr/lib/system/libsystem dnssd.dylib\0", 0x7FF7B2537BA0, 0x0)
stat64 ("/usr/lib/system/libcache.dylib \verb|\|0", 0x7FF7B2537BA0, 0x0)
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcache.dylib \verb|\|0", 0x7FF7B2537B50, 0x0|) \\
                                                                                                            = -12
stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                    = -12
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                   = -1.2
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib \verb|\|0", 0x7FF7B2537B50, 0x0|)
                                                                                                      = -1.2
stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                   = -1.2
stat64("/usr/lib/system_libsystem_darwindirectory.dylib\0", 0x7FF7B2537BA0, 0x0)
                                                                                         = -12
stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_darwindirectory.dylib \verb||01|, 0x7FF7B2537B40, 0x0|)
stat64 ("/usr/lib/system_libsystem_darwindirectory.dylib \ 0", 0x7FF7B2537BA0, 0x0)
                                                                                         = -1.2
open("/dev/dtracehelper\0", 0x2, 0x0)
                                          = 3.0
ioctl(0x3, 0x80086804, 0x7FF7B2539B38)
                                               = 0.0
close(0x3)
                  = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab4/src/build/prog_d\0", 0x0, 0x0)
                                                                                             = 3.0
__mac_syscall(0x7FF815B08E3B, 0x2, 0x7FF7B25390F0)
                                                                = 0.0
map_with_linking_np(0x7FF7B2539090, 0x1, 0x7FF7B25390C0)
close(0x3)
                  = 0.0
mprotect(0x10D9C8000, 0x4000, 0x1)
                                             = 0 \ 0
shared_region_check_np(0xFFFFFFFFFFFFFFF, 0x0, 0x0)
                                                                = 0.0
mprotect(0x10DF00000, 0x40000, 0x1)
                                             = 0.0
access("/AppleInternal/XBS/.isChrooted\0", 0x0, 0x0)
                                                          = -1.2
bsdthread_register(0x7FF815DFBB9C, 0x7FF815DFBB88, 0x2000)
                                                                         = 1073742303 0
getpid(0x0, 0x0, 0x0)
                           = 53765 0
shm_open(0x7FF815C9EF42, 0x0, 0x15C9D388)
```

```
fstat64(0x3, 0x7FF7B253A060, 0x0)
                                         = 0.0
mmap(0x0, 0x4000, 0x1, 0x40001, 0x3, 0x0)
                                                = 0x10D9D60000
close(0x3)
                 = 0.0
ioctl(0x2, 0x4004667A, 0x7FF7B253A124)
                                            = 0.0
mprotect(0x10D9DF000, 0x1000, 0x0)
                                          = 0.0
mprotect(0x10D9E6000, 0x1000, 0x0)
                                          = 0.0
mprotect(0x10D9E7000, 0x1000, 0x0)
                                          = 0.0
mprotect(0x10D9EE000, 0x1000, 0x0)
                                          = 0.0
mprotect(0x10D9DA000, 0x98, 0x1)
                                         = 0.0
mprotect(0x10D9DA000, 0x98, 0x3)
                                         = 0.0
mprotect(0x10D9DA000, 0x98, 0x1)
                                         = 0.0
mprotect(0x10D9EF000, 0x1000, 0x1)
                                          = 0.0
mprotect(0x10D9F0000, 0x98, 0x1)
                                         = 0.0
mprotect(0x10D9F0000, 0x98, 0x3)
                                        = 0.0
mprotect(0x10D9F0000, 0x98, 0x1)
                                         = 0.0
mprotect(0x10D9DA000, 0x98, 0x3)
                                         = 0.0
mprotect(0x10D9DA000, 0x98, 0x1)
mprotect(0x10D9EF000, 0x1000, 0x3)
                                          =00
mprotect(0x10D9EF000, 0x1000, 0x1)
                                          = 0.0
mprotect(0x10DF00000, 0x40000, 0x3)
                                          = 0.0
mprotect(0x10DF00000, 0x40000, 0x1)
                                          = 0.0
issetugid(0x0, 0x0, 0x0)
                              = 0.0
mprotect(0x10DF00000, 0x40000, 0x3)
                                          = 0.0
getentropy(0x7FF7B2539950, 0x20, 0x0)
                                           = 0 \ 0
mprotect(0x10DF00000, 0x40000, 0x1)
                                          = 0 \ 0
mprotect(0x10DF00000, 0x40000, 0x3)
                                          = 0 \ 0
mprotect(0x10DF00000, 0x40000, 0x1)
                                          = 0.0
get attrlist ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab4/src/build/prog\_d\0", 0x7FF7B253A000, 0x7FF7B253A018)
                                                                                                                       = 0.0
access("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab4/src/build\0", 0x4, 0x0)
                                                                               = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab4/src/build\0", 0x0, 0x0)
                                                                               = 3 \ 0
fstat64(0x3, 0x7FA0E6F04530, 0x0)
```

csrctl(0x0, 0x7FF7B253A25C, 0x4)

= -1 1

```
fgetattrlist(0x3, 0x7FF7B253A270, 0x7FF7B253A290)
__mac_syscall(0x7FF8211BC6A4, 0x2, 0x7FF7B253A290)
                                                               = 0.0
fcntl(0x3, 0x32, 0x7FF7B2539F10)
                                          = 0.0
close(0x3)
                  = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab4/src/build/Info.plist\\ \c 0", 0x0, 0x0)
                                                                                         = -12
proc_info(0x2, 0xD205, 0xD)
                                   = 64.0
csops_audittoken(0xD205, 0x10, 0x7FF7B253A260)
                                                     = -1.22
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #10 at DIF offset 28
csops(0xD205, 0x0, 0x7FF7B253A6C4)
                                             = 0.0
mprotect(0x10DF00000, 0x40000, 0x3)
                                            = 0.0
open("liblib1_d.dylib\0", 0x0, 0x0)
                                       = 3.0
fcntl(0x3, 0x32, 0x7FF7B253A870)
                                          = 0.0
                 = 0.0
close(0x3)
stat64("liblib1_d.dylib\0", 0x7FF7B253A430, 0x0)
                                                        = 0.0
stat64("liblib1\_d.dylib\0", 0x7FF7B2539E90, 0x0)
                                                        = 0 \ 0
open("liblib1_d.dylib\0", 0x0, 0x0)
mmap(0x0, 0x8108, 0x1, 0x40002, 0x3, 0x0)
                                                 = 0x10D9F8000 0
fcntl(0x3, 0x32, 0x7FF7B2539FA0)
                                          = 0.0
close(0x3)
                 = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab4/src/build/liblib1\_d.dylib \0", 0x0, 0x0)
                                                                                                = 3.0
fcntl(0x3, 0x62, 0x7FF7B2539C78)
                                          = 0.0
mmap(0x10DA01000, 0x4000, 0x5, 0x40012, 0x3, 0x0)
                                                           = 0x10DA01000 0
mmap(0x10DA05000, 0x4000, 0x3, 0x40012, 0x3, 0x4000)
                                                              = 0x10DA050000
mmap(0x10DA09000, 0x4000, 0x1, 0x40012, 0x3, 0x8000)
                                                             = 0x10DA09000 0
close(0x3)
                  = 0.0
munmap(0x10D9F8000, 0x8108)
                                     = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab4/src/build/liblib1\_d.dylib\0", 0x0, 0x0)
                                                                                                = 3.0
                 = 0.0
close(0x3)
mprotect(0x10DA05000, 0x4000, 0x1)
                                            = 0 \ 0
getrlimit(0x1008, 0x7FF7B253B3F0, 0x0)
                                             = 0 \ 0
fstat64(0x1, 0x7FF7B253B3D8, 0x0)
                                           = 0 0
```

```
ioctl(0x1, 0x4004667A, 0x7FF7B253B424)
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
fstat64(0x0, 0x7FF7B253B578, 0x0)
                                           = 0.0
ioctl(0x0, 0x4004667A, 0x7FF7B253B5C4)
                                               = 0.0
0
Contract has been changed
Contract is second
dtrace: error on enabled probe ID 1714 (ID 961: syscall::read_nocancel:return): invalid kernel access in action #12 at DIF offset 68
munmap(0x10DA01000, 0xC000)
                                        = 0.0
open("liblib2_d.dylib\0", 0x0, 0x0)
                                        = 3.0
fcntl(0x3, 0x32, 0x7FF7B253A860)
                                           = 0.0
close(0x3)
                  = 0.0
stat64("liblib2\_d.dylib\0", 0x7FF7B253A420, 0x0)
                                                         = 0.0
stat64("liblib2_d.dylib\0", 0x7FF7B2539E80, 0x0)
open("liblib2_d.dylib\0", 0x0, 0x0)
                                        = 3.0
mmap(0x0, 0x8140, 0x1, 0x40002, 0x3, 0x0)
                                                  = 0x10D9F80000
fcntl(0x3, 0x32, 0x7FF7B2539F90)
                                          = 0.0
close(0x3)
                 = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab4/src/build/liblib2_d.dylib\0", 0x0, 0x0)
                                                                                                  = 3.0
fcntl(0x3, 0x62, 0x7FF7B2539C68)
                                          = 0 S labs 3t/lab4/src/build/prog d0
mmap(0x10DA01000, 0x4000, 0x5, 0x40012, 0x3, 0x0)
                                                             = 0x10DA01000 0
mmap(0x10DA05000, 0x4000, 0x3, 0x40012, 0x3, 0x4000)
                                                               = 0x10DA05000 0
mmap(0x10DA09000, 0x4000, 0x1, 0x40012, 0x3, 0x8000)
                                                               = 0x10DA090000
                  = 0.0
close(0x3)
munmap(0x10D9F8000, 0x8140)
                                      = 0.0
open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab4/src/build/liblib2\_d.dylib \0", 0x0, 0x0)
                                                                                                 = 3 P\$S\$\$0
close(0x3)
                  = 0.0
mprotect(0x10DA05000, 0x4000, 0x1)
```

dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

```
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #12 at DIF offset 68
```

Type values of A, B and e (with space between): dtrace: error on enabled probe ID 1714 (ID 961: syscall::read\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

Result is 1.414966

1

 $0\ 2\ 0.1$ 

dtrace: error on enabled probe ID 1714 (ID 961: syscall::read\_nocancel:return): invalid kernel access in action #12 at DIF offset 68 dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68 dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

Contract has been changed

munmap(0x10DA01000, 0xC000)

Contract is first

0

dtrace: error on enabled probe ID 1714 (ID 961: syscall::read\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

```
open("liblib1_d.dylib\0", 0x0, 0x0) = 3 ◆◆j0
```

fcntl(0x3, 0x32, 0x7FF7B253A860) = 0.0

close(0x3) = 0 0

 $stat64("liblib1\_d.dylib\0", 0x7FF7B253A420, 0x0) \hspace{1.5cm} = 0 \hspace{1mm} 0$ 

 $stat64("liblib1\_d.dylib\0", 0x7FF7B2539E80, 0x0) \hspace{1.5cm} = 0 \hspace{1.5cm} stat640$ 

= 0.0

 $open("liblib1_d.dylib\0", 0x0, 0x0) = 3 stat640$ 

mmap(0x0, 0x8108, 0x1, 0x40002, 0x3, 0x0) = 0x10D9F8000 0

fcntl(0x3, 0x32, 0x7FF7B2539F90) = 0 0

close(0x3) = 0 0

 $open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab4/src/build/liblib1\_d.dylib\0", 0x0, 0x0) \\ = 3.0$ 

fcntl(0x3, 0x62, 0x7FF7B2539C68) = 0.0

mmap(0x10DA01000, 0x4000, 0x5, 0x40012, 0x3, 0x0) = 0x10DA01000 0

 $mmap(0x10DA05000,\,0x4000,\,0x3,\,0x40012,\,0x3,\,0x4000) \\ \hspace*{0.2in} = 0x10DA05000\,\,0$ 

 $mmap(0x10DA09000,\,0x4000,\,0x1,\,0x40012,\,0x3,\,0x8000) \\ \hspace*{0.2in} = 0x10DA09000\,\,0$ 

munmap(0x10D9F8000, 0x8108) = 0 Preboot/Cryptexes/OS/usr/lib/system/libsystem\_blocks.dylib0

```
open("/Users/mishazhadnov/Desktop/wD/OS labs 3t/lab4/src/build/liblib1 d.dylib\0", 0x0, 0x0) = 3 0
```

close(0x3) = 0 0

mprotect(0x10DA05000, 0x4000, 0x1) = 0.0

dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68 dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

Type values of A, B and e (with space between): dtrace: error on enabled probe ID 1714 (ID 961: syscall::read\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

Result is 1.369502

0.2.0.1

1

dtrace: error on enabled probe ID 1714 (ID 961: syscall::read\_nocancel:return): invalid kernel access in action #12 at DIF offset 68 dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68 dtrace: error on enabled probe ID 1712 (ID 963: syscall::write\_nocancel:return): invalid kernel access in action #12 at DIF offset 68 dtrace: error on enabled probe ID 1714 (ID 961: syscall::read\_nocancel:return): invalid kernel access in action #12 at DIF offset 68

## Lab5-7

mishazhadnov@McB-airmi build % sudo dtruss -f ./client

dtrace: system integrity protection is on, some features will not be available

```
PID/THRD SYSCALL(args) = return
```

84911/0x7129df: fork() = 0 0

84911/0x7129df: munmap(0x1189CD000, 0xA0000) = 0.0

84911/0x7129df: munmap(0x118A6D000, 0x8000) = 0 0

84911/0x7129df: munmap(0x118A75000, 0x4000) = 0 0

84911/0x7129df: munmap(0x118A79000, 0x4000) = 0 0

84911/0x7129df: munmap(0x118A7D000, 0x58000) = 0 0

84911/0x7129df: open(".\0", 0x100000, 0x0) = 3 0

84911/0x7129df: fcntl(0x3, 0x32, 0x7FF7B2EC7280) = 0 0

84911/0x7129df: close(0x3) = 0.0

84911/0x7129df: fsgetpath(0x7FF7B2EC7290, 0x400, 0x7FF7B2EC7278) = 62 0

84911/0x7129df: fsgetpath(0x7FF7B2EC7290, 0x400, 0x7FF7B2EC7278) = 14 0

84911/0x7129df: csrctl(0x0, 0x7FF7B2EC769C, 0x4) = -1 1

```
84911/0x7129df: mac syscall(0x7FF815B08E3B, 0x2, 0x7FF7B2EC7500)
84911/0x7129df: csrctl(0x0, 0x7FF7B2EC76AC, 0x4)
                                                        = -1 1
84911/0x7129df: __mac_syscall(0x7FF815B05DC6, 0x5A, 0x7FF7B2EC7640)
                                                                            = 0.0
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
84911/0x7129df: open("\0", 0x20100000, 0x0)
                                               = 3.0
84911/0x7129df: openat(0x3, "System/Cryptexes/OS\0", 0x100000, 0x0)
84911/0x7129df: dup(0x4, 0x0, 0x0)
                                       = 50
84911/0x7129df: fstatat64(0x4, 0x7FF7B2EC63E1, 0x7FF7B2EC67E0)
                                                                    = 0.0
84911/0x7129df: openat(0x4, "System/Library/dyld\land0", 0x100000, 0x0)
                                                                     = 6.0
84911/0x7129df: fcntl(0x6, 0x32, 0x7FF7B2EC6470)
                                                       = 0.0
84911/0x7129df: dup(0x6, 0x0, 0x0)
                                       = 7.0
84911/0x7129df: dup(0x5, 0x0, 0x0)
                                       = 8.0
84911/0x7129df: close(0x3)
                               = 0.0
84911/0x7129df: close(0x5)
                                = 0.0
84911/0x7129df: close(0x4)
                                = 0.0
84911/0x7129df: close(0x6)
                                = 0.0
84911/0x7129df: shared_region_check_np(0x7FF7B2EC6D58, 0x0, 0x0)
                                                                        = 0.0
84911/0x7129df: fsgetpath(0x7FF7B2EC72C0, 0x400, 0x7FF7B2EC71F8)
                                                                         = 83.0
84911/0x7129df: fcntl(0x8, 0x32, 0x7FF7B2EC72C0)
                                                       = 0.0
84911/0x7129df: close(0x8)
                               = 0 \ 0
84911/0x7129df: close(0x7)
84911/0x7129df: getfsstat64(0x0, 0x0, 0x2)
84911/0x7129df: getfsstat64(0x10D602AA0, 0x3B48, 0x2)
84911/0x7129df: getattrlist("\\0", 0x7FF7B2EC7200, 0x7FF7B2EC7170)
                                                                       = 0.0
dtrace: error on enabled probe ID 1690 (ID 845: syscall::stat64:return): invalid address (0x0) in action #12 at DIF offset 12
84911/0x7129df:\ stat64("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/client\\0",\ 0x7FF7B2EC69D0,\ 0x0)
                                                                                                              = 0 \ 0
84911/0x7129df: open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab5-7/build/client\0", 0x0, 0x0)
                                                                                                  = 3 0
84911/0x7129df: mmap(0x0, 0x25418, 0x1, 0x40002, 0x3, 0x0)
                                                              = 0x10D064000 0
```

```
84911/0x7129df: fcntl(0x3, 0x32, 0x7FF7B2EC6AE0)
84911/0x7129df: close(0x3)
                                 = 0.0
84911/0x7129df: munmap(0x10D064000, 0x25418)
84911/0x7129df: stat64("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab5-7/build/client\0", 0x7FF7B2EC6F30, 0x0)
                                                                                                                  = 0.0
84911/0x7129df:\ open("/usr/local/opt/zeromq/lib/libzmq.5.dylib\0",\ 0x0,\ 0x0)
                                                                             = 3.0
84911/0x7129df: fcntl(0x3, 0x32, 0x7FF7B2EC6380)
                                                         = 0.0
84911/0x7129df: close(0x3)
                                 = 0.0
84911/0x7129df: stat64("/usr/local/opt/zeromq/lib/libzmq.5.dylib\0", 0x7FF7B2EC5F40, 0x0)
                                                                                             = 0.0
84911/0x7129df: stat64("/usr/local/opt/zeromq/lib/libzmq.5.dylib\0", 0x7FF7B2EC59A0, 0x0)
84911/0x7129df:\ open("/usr/local/opt/zeromq/lib/libzmq.5.dylib\0",\ 0x0,\ 0x0)
84911/0x7129df: mmap(0x0, 0x91C08, 0x1, 0x40002, 0x3, 0x0)
                                                                  = 0x10D064000 0
84911/0x7129df: fcntl(0x3, 0x32, 0x7FF7B2EC5AB0)
                                                          = 0.0
84911/0x7129df: close(0x3)
                                 = 0.0
84911/0x7129df:\ open("/usr/local/Cellar/zeromq/4.3.5\_1/lib/libzmq.5.dylib\0", 0x0, 0x0)
                                                                                          = 3.0
84911/0x7129df: fcntl(0x3, 0x62, 0x7FF7B2EC5768)
                                                          = 0.0
84911/0x7129df: mmap(0x10D501000, 0x54000, 0x5, 0x40012, 0x3, 0x0)
                                                                           = 0x10D5010000
84911/0x7129df: mmap(0x10D555000, 0x8000, 0x3, 0x40012, 0x3, 0x54000)
                                                                             = 0x10D555000 0
84911/0x7129df: mmap(0x10D55D000, 0x4000, 0x3, 0x40012, 0x3, 0x5C000)
                                                                             = 0x10D55D0000
84911/0x7129df: mmap(0x10D561000, 0x34000, 0x1, 0x40012, 0x3, 0x60000)
                                                                             = 0x10D5610000
84911/0x7129df: close(0x3)
                                 = 0.0
84911/0x7129df: munmap(0x10D064000, 0x91C08)
84911/0x7129df: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC5F40, 0x0)
                                                                              = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC5EF0, 0x0)
                                                                                                                = -12
84911/0x7129df: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC5F40, 0x0)
84911/0x7129df: stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                              = -1 2
84911/0x7129df:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libobjc.A.dylib\0", 0x7FF7B2EC3B40, 0x0)
84911/0x7129df: stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                              = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                             = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                             = -1 2
84911/0x7129df: stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7B2EC3B90, 0x0)
```

 $84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libxpc.dylib\0", 0x7FF7B2EC3B40, 0x0)$ 

```
84911/0x7129df: stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libsystem_trace.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_trace.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                  = -12
84911/0x7129df: stat64("/usr/lib/system/libsystem_trace.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                          = -1.2
84911/0x7129df: stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                                 = -1.2
84911/0x7129df: stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem malloc.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                = -12
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem malloc.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                   = -12
84911/0x7129df:\ stat64("/usr/lib/system/libsystem_malloc.dylib\0",\ 0x7FF7B2EC3B90,\ 0x0)
                                                                                                = -12
84911/0x7129df: stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                        = -1.2
84911/0x7129df:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdispatch.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                            = -12
84911/0x7129df: stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_featureflags.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                 = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_featureflags.dylib\0", 0x7FF7B2EC3B30, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libsystem featureflags.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/usr/lib/system_libsystem_c.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_c.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                            = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                   = -1.2
84911/0x7129df: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                = -12
84911/0x7129df: stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                 = -1 2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++abi.dylib\0", 0x7FF7B2EC3B40, 0x0)
84911/0x7129df: stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                 = -12
84911/0x7129df: stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                  = -1.2
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdyld.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                          = -1.2
84911/0x7129df: stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libsystem_info.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                          = -12
84911/0x7129df:\ stat 64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_info.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                                  = -12
84911/0x7129df: stat64("/usr/lib/system/libsystem_info.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libsystem_darwin.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                 = -12
```

```
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem darwin.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                   = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_darwin.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                = -12
84911/0x7129df: stat64("/usr/lib/system/libsystem notify.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                               = -12
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_notify.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                  = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_notify.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                               = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                         = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7B2EC3B30, 0x0) = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem networkextension.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                         = -12
84911/0x7129df: stat64("/usr/lib/system/libsystem asl.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_asl.dylib \0", 0x7FF7B2EC3B40, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libsystem_asl.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_symptoms.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                  = -1.2
84911/0x7129df:\ stat64("System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_symptoms.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                     = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_symptoms.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                  = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_containermanager.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                         = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem containermanager.dylib\0", 0x7FF7B2EC3B30, 0x0) = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_containermanager.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libsystem_configuration.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                  = -1.2
84911/0x7129df:\ stat64("System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_configuration.dylib\0", 0x7FF7B2EC3B30, 0x0) \\ = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_configuration.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                 = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_sandbox.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_sandbox.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                    = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem sandbox.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                = -12
84911/0x7129df: stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libquarantine.dylib\0", 0x7FF7B2EC3B40, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df:\ stat64("/usr/lib/system/libsystem\_coreservices.dylib \verb|\0", 0x7FF7B2EC3B90, 0x0|)
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/coreservices.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                      = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libsystem_m.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                          = -12
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_m.dylib\0", 0x7FF7B2EC3B40, 0x0)
84911/0x7129df:\ stat64("/usr/lib/system/libsystem\_m.dylib \verb|\|0",0x7FF7B2EC3B90,0x0|)
```

```
84911/0x7129df: stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libmacho.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                            = -1.2
84911/0x7129df: stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                        = -12
84911/0x7129df: stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                            = -1.2
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                    = -1.2
84911/0x7129df:\ stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                            = -1.2
84911/0x7129df: stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libunwind.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                            = -1.2
84911/0x7129df: stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1 2
84911/0x7129df: stat64("/usr/lib/liboah.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/liboah.dylib\0", 0x7FF7B2EC3B40, 0x0)
84911/0x7129df: stat64("/usr/lib/liboah.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df:\ stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                        = -1.2
84911/0x7129df:\ stat 64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                           = -1.2
84911/0x7129df: stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                        = -1.2
84911/0x7129df: stat64("/usr/lib/system/libcompiler rt.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -12
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7B2EC3B40, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                 = -12
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_collections.dylib/0",\ 0x7FF7B2EC3B30,\ 0x0)
                                                                                                                                     = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                = -1.2
84911/0x7129df: stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                               = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem secinit.dylib\0", 0x7FF7B2EC3B30, 0x0)
                                                                                                                                  = -12
84911/0x7129df: stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libremove file.dylib \0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                                 = -1 2
84911/0x7129df: stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -12
84911/0x7129df: stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                         = -1.2
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libkeymgr.dylib\0", 0x7FF7B2EC3B40, 0x0)
                                                                                                                            = -12
84911/0x7129df: stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                       = -12
84911/0x7129df: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0",\ 0x7FF7B2EC3B40,\ 0x0)
```

```
84911/0x7129df: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC3B90, 0x0)
84911/0x7129df: stat64("/usr/lib/system/libsystem_darwindirectory.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                       = -12
84911/0x7129df: \ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_darwindirectory.dylib\0", 0x7FF7B2EC3B30, 0x0) \\ = -1.2 (1.5)
84911/0x7129df:\ stat64("/usr/lib/system/libsystem\_darwindirectory.dylib\0", 0x7FF7B2EC3B90, 0x0)
                                                                                                       = -1.2
84911/0x7129df: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC5F40, 0x0)
                                                                                 = -12
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC5EF0, 0x0)
                                                                                                                         = -1.2
84911/0x7129df: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC5F40, 0x0)
                                                                                 = -1.2
84911/0x7129df: open("/usr/local/opt/libsodium/lib/libsodium.26.dylib\0", 0x0, 0x0)
                                                                                     = 3.0
84911/0x7129df: fcntl(0x3, 0x32, 0x7FF7B2EC62A0)
84911/0x7129df: close(0x3)
                                  = 0 \ 0
84911/0x7129df: stat64("/usr/local/opt/libsodium/lib/libsodium.26.dylib\0", 0x7FF7B2EC5E60, 0x0)
                                                                                                      = 0.0
84911/0x7129df:\ stat 64 ("/usr/local/opt/libsodium/lib/libsodium.26.dylib \ 0",\ 0x7FF7B2EC58C0,\ 0x0)
                                                                                                      = 0.0
84911/0x7129df:\ open("/usr/local/opt/libsodium/lib/libsodium.26.dylib\0",\ 0x0,\ 0x0)
                                                                                     = 3.0
84911/0x7129df: mmap(0x0, 0x76C48, 0x1, 0x40002, 0x3, 0x0)
                                                                   = 0x10D0640000
84911/0x7129df: fcntl(0x3, 0x32, 0x7FF7B2EC59D0)
                                                           = 0.0
84911/0x7129df: close(0x3)
                                  = 0 \ 0
84911/0x7129df:\ open("/usr/local/Cellar/libsodium/1.0.19/lib/libsodium.26.dylib\0",\ 0x0,\ 0x0)
84911/0x7129df: fcntl(0x3, 0x62, 0x7FF7B2EC5688)
                                                           = 0.0
84911/0x7129df: mmap(0x10D641000, 0x60000, 0x5, 0x40012, 0x3, 0x0)
                                                                            = 0x10D6410000
84911/0x7129df: mmap(0x10D6A1000, 0x4000, 0x3, 0x40012, 0x3, 0x60000)
                                                                               = 0x10D6A10000
84911/0x7129df: mmap(0x10D6A5000, 0x4000, 0x3, 0x40012, 0x3, 0x64000)
                                                                               = 0x10D6A5000 0
84911/0x7129df: mmap(0x10D6A9000, 0x10000, 0x1, 0x40012, 0x3, 0x68000)
                                                                               = 0x10D6A90000
84911/0x7129df: close(0x3)
                                  = 0.0
84911/0x7129df: munmap(0x10D064000, 0x76C48)
84911/0x7129df: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC5E60, 0x0)
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib \ 0",\ 0x7FF7B2EC5E10,\ 0x0)
                                                                                                                         = -1 2
84911/0x7129df: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC5E60, 0x0)
                                                                                 = -12
84911/0x7129df: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC5E60, 0x0)
                                                                                = -12
84911/0x7129df: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC5E10, 0x0)
                                                                                                                  = -1.2
84911/0x7129df: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B2EC5E60, 0x0)
                                                                                = -1 2
84911/0x7129df: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC5D80, 0x0)
84911/0x7129df:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0",\ 0x7FF7B2EC5D30,\ 0x0)
```

```
84911/0x7129df: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B2EC5D80, 0x0)
                                                                             = -12
84911/0x7129df: open("/dev/dtracehelper\0", 0x2, 0x0)
84911/0x7129df: ioctl(0x3, 0x80086804, 0x7FF7B2EC5A78) = 0 0
84911/0x7129df: close(0x3)
                                = 0.0
84911/0x7129df:\ open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/client\\ \ 0x0,\ 0x0)
                                                                                                  = 3.0
84911/0x7129df: __mac_syscall(0x7FF815B08E3B, 0x2, 0x7FF7B2EC50C0)
                                                                           = 0.0
84911/0x7129df: map_with_linking_np(0x7FF7B2EC4B50, 0x1, 0x7FF7B2EC4B80)
                                                                             = -1 22
84911/0x7129df: close(0x3)
                               = 0.0
84911/0x7129df: mprotect(0x10D048000, 0x4000, 0x1)
84911/0x7129df: mprotect(0x10D555000, 0x8000, 0x1)
                                                        = 0.0
84911/0x7129df:\ open("/usr/local/Cellar/libsodium/1.0.19/lib/libsodium.26.dylib\0",\ 0x0,\ 0x0)
                                                                                       = 3.0
84911/0x7129df: __mac_syscall(0x7FF815B08E3B, 0x2, 0x7FF7B2EC50C0)
                                                                           = 0.0
84911/0x7129df: map_with_linking_np(0x7FF7B2EC4F80, 0x1, 0x7FF7B2EC4FB0)
                                                                             = -1 22
84911/0x7129df: close(0x3)
                               = 0.0
84911/0x7129df: mprotect(0x10D6A1000, 0x4000, 0x1)
84911/0x7129df: shared_region_check_np(0xFFFFFFFFFFFFFFFF, 0x0, 0x0)
                                                                          = 0.0
84911/0x7129df: mprotect(0x10D600000, 0x40000, 0x1)
84911/0x7129df:\ access("/AppleInternal/XBS/.isChrooted\0", 0x0, 0x0)
                                                                     = -1.2
84911/0x7129df: bsdthread_register(0x7FF815DFBB9C, 0x7FF815DFBB88, 0x2000)
                                                                                  = 1073742303 0
84911/0x7129df: getpid(0x0, 0x0, 0x0)
                                       = 849110
84911/0x7129df: shm_open(0x7FF815C9EF42, 0x0, 0x15C9D388)
                                                                   = 3.0
84911/0x7129df: fstat64(0x3, 0x7FF7B2EC6030, 0x0)
                                                       = 0.0
84911/0x7129df: mmap(0x0, 0x4000, 0x1, 0x40001, 0x3, 0x0)
                                                              = 0x10D0660000
84911/0x7129df: close(0x3)
84911/0x7129df: ioctl(0x2, 0x4004667A, 0x7FF7B2EC60F4)
                                                           = 0 \ 0
84911/0x7129df: mprotect(0x10D06F000, 0x1000, 0x0)
                                                        = 0 \ 0
84911/0x7129df: mprotect(0x10D076000, 0x1000, 0x0)
                                                        = 0.0
84911/0x7129df: mprotect(0x10D077000, 0x1000, 0x0)
                                                        = 0.0
84911/0x7129df: mprotect(0x10D07E000, 0x1000, 0x0)
                                                        = 0.0
84911/0x7129df: mprotect(0x10D06A000, 0x98, 0x1)
                                                       = 0.0
84911/0x7129df: mprotect(0x10D06A000, 0x98, 0x3)
                                                       = 0.0
84911/0x7129df: mprotect(0x10D06A000, 0x98, 0x1)
                                                       = 0.0
```

```
84911/0x7129df: mprotect(0x10D07F000, 0x1000, 0x1)
                                                          = 0.0
84911/0x7129df: mprotect(0x10D080000, 0x98, 0x1)
                                                         = 0.0
84911/0x7129df: mprotect(0x10D080000, 0x98, 0x3)
                                                         = 0.0
84911/0x7129df: mprotect(0x10D080000, 0x98, 0x1)
                                                         = 0.0
84911/0x7129df: mprotect(0x10D06A000, 0x98, 0x3)
                                                         = 0.0
84911/0x7129df: mprotect(0x10D06A000, 0x98, 0x1)
                                                         = 0.0
84911/0x7129df: mprotect(0x10D07F000, 0x1000, 0x3)
                                                          = 0.0
84911/0x7129df: mprotect(0x10D07F000, 0x1000, 0x1)
                                                          = 0.0
84911/0x7129df: mprotect(0x10D600000, 0x40000, 0x3)
                                                          =0.0
84911/0x7129df: mprotect(0x10D600000, 0x40000, 0x1)
                                                          =0.0
84911/0x7129df: issetugid(0x0, 0x0, 0x0)
                                              = 0.0
84911/0x7129df: mprotect(0x10D600000, 0x40000, 0x3)
                                                          = 0.0
84911/0x7129df: getentropy(0x7FF7B2EC58C0, 0x20, 0x0)
                                                            = 0.0
84911/0x7129df: mprotect(0x10D600000, 0x40000, 0x1)
                                                          = 0.0
84911/0x7129df: mprotect(0x10D600000, 0x40000, 0x3)
                                                          = 0.0
84911/0x7129df: mprotect(0x10D600000, 0x40000, 0x1)
                                                          =0.0
84911/0x7129df:\ getattrlist("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/client\0", 0x7FF7B2EC5FD0, 0x7FF7B2EC5FE8)
84911/0x7129df: access("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab5-7/build\0", 0x4, 0x0)
                                                                                                = 0.0
84911/0x7129df: open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab5-7/build\0", 0x0, 0x0)
                                                                                               = 3.0
84911/0x7129df: fstat64(0x3, 0x7FE2E77042E0, 0x0)
                                                         = 0.0
84911/0x7129df: csrctl(0x0, 0x7FF7B2EC622C, 0x4)
                                                         = -1 1
84911/0x7129df: fgetattrlist(0x3, 0x7FF7B2EC6240, 0x7FF7B2EC6260)
                                                                          = 0.0
84911/0x7129df: mac syscall(0x7FF8211BC6A4, 0x2, 0x7FF7B2EC6260)
                                                                             = 0.0
84911/0x7129df: fcntl(0x3, 0x32, 0x7FF7B2EC5EE0)
84911/0x7129df: close(0x3)
                                 = 0 \ 0
84911/0x7129df:\ open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/Info.plist\\\0",0x0,0x0)
84911/0x7129df: proc_info(0x2, 0x14BAF, 0xD)
                                                  = 64.0
84911/0x7129df: csops_audittoken(0x14BAF, 0x10, 0x7FF7B2EC6230)
                                                                          = -1.22
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
84911/0x7129df: csops(0x14BAF, 0x0, 0x7FF7B2EC6694)
84911/0x7129df: mprotect(0x10D600000, 0x40000, 0x3)
                                                          = 0.0
```

```
84911/0x7129df: socketpair(0x1, 0x1, 0x0)
                                                = 0 \ 0
84911/0x7129df: fcntl(0x3, 0x2, 0x1)
                                         = 0.0
84911/0x7129df: fcntl(0x4, 0x2, 0x1)
                                         = 0.0
84911/0x7129df: fcntl(0x3, 0x3, 0x0)
                                         = 2.0
84911/0x7129df: fcntl(0x3, 0x4, 0x6)
                                        = 0.0
84911/0x7129df: fcntl(0x4, 0x3, 0x0)
                                         = 2.0
84911/0x7129df: fcntl(0x4, 0x4, 0x6)
                                         = 0.0
84911/0x7129df: open("/dev/urandom\0", 0x0, 0x0)
                                                        = 50
84911/0x7129df: fstat64(0x5, 0x7FF7B2EC7100, 0x0)
                                                         = 0.0
84911/0x7129df: fcntl(0x5, 0x1, 0x0)
                                         = 0.0
84911/0x7129df: fcntl(0x5, 0x2, 0x1)
                                        = 0.0
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1713 (ID 175: syscall::read:return): invalid kernel access in action #13 at DIF offset 68
84911/0x7129df: socketpair(0x1, 0x1, 0x0)
                                                = 0.0
84911/0x7129df: fcntl(0x6, 0x2, 0x1)
                                        = 0.0
84911/0x7129df: fcntl(0x7, 0x2, 0x1)
                                        = 0.0
84911/0x7129df: fcntl(0x6, 0x3, 0x0)
84911/0x7129df: fcntl(0x6, 0x4, 0x6)
                                         = 0.0
84911/0x7129df: fcntl(0x7, 0x3, 0x0)
                                        = 2.0
84911/0x7129df: fcntl(0x7, 0x4, 0x6)
                                         = 0.0
84911/0x7129df: kqueue(0x0, 0x0, 0x0)
                                          = 8.0
84911/0x7129df: kevent(0x8, 0x7FF7B2EC7140, 0x1)
                                                           = 0.0
84911/0x7129df: bsdthread create(0x10D536590, 0x600000E04040, 0x700003AC3000)
                                                                                       = 61616128 0
84911/0x7129e8: fork()
84911/0x7129e8: thread_selfid(0x0, 0x0, 0x0)
                                                = 7416296 0
84911/0x7129df: socketpair(0x1, 0x1, 0x0)
                                                = 0 \ 0
84911/0x7129df: fcntl(0x9, 0x2, 0x1)
                                        = 0.0
84911/0x7129e8: __pthread_sigmask(0x1, 0x700003AC2F94, 0x0)
                                                                     = 0.0
84911/0x7129df: fcntl(0xA, 0x2, 0x1)
                                         = 0.0
84911/0x7129df: fcntl(0x9, 0x3, 0x0)
                                        = 20
84911/0x7129e8: proc_info(0x5, 0x14BAF, 0x2)
84911/0x7129df: fcntl(0x9, 0x4, 0x6)
```

```
84911/0x7129df: fcntl(0xA, 0x3, 0x0)
                                    = 20
84911/0x7129df: fcntl(0xA, 0x4, 0x6) = 0 0
84911/0x7129df: kqueue(0x0, 0x0, 0x0)
                                     = 11 0
84911/0x7129df: kevent(0xB, 0x7FF7B2EC7140, 0x1)
                                                        = 0.0
84911/0x7129df: bsdthread_create(0x10D536590, 0x600000E04100, 0x700003B46000)
                                                                                  =621527040
84911/0x7129e9: fork() = 0 0
84911/0x7129e9: thread_selfid(0x0, 0x0, 0x0) = 74162970
84911/0x7129e9: __pthread_sigmask(0x1, 0x700003B45F94, 0x0)
                                                                = 0 \ 0
84911/0x7129df: socketpair(0x1, 0x1, 0x0)
                                            = 0 \ 0
84911/0x7129e9: proc_info(0x5, 0x14BAF, 0x2) = 0 0
84911/0x7129df: fcntl(0xC, 0x2, 0x1)
                                    = 0.0
84911/0x7129df: fcntl(0xD, 0x2, 0x1)
                                      = 0.0
84911/0x7129df: fcntl(0xC, 0x3, 0x0)
                                      = 2.0
84911/0x7129df: fcntl(0xC, 0x4, 0x6)
                                      = 0.0
84911/0x7129df: fcntl(0xD, 0x3, 0x0)
                                      = 20
84911/0x7129df: fcntl(0xD, 0x4, 0x6)
                                    = 0 \ 0
84911/0x7129df: socketpair(0x1, 0x1, 0x0) = 0 0
84911/0x7129df: fcntl(0xE, 0x2, 0x1)
                                       = 0.0
84911/0x7129df: fcntl(0xF, 0x2, 0x1)
                                      = 0.0
84911/0x7129df: fcntl(0xE, 0x3, 0x0)
                                       = 2.0
84911/0x7129df: fcntl(0xE, 0x4, 0x6)
                                       = 0.0
84911/0x7129df: fcntl(0xF, 0x3, 0x0)
                                      = 2.0
84911/0x7129df: fcntl(0xF, 0x4, 0x6)
                                      = 0 \ 0
84911/0x7129df: socketpair(0x1, 0x1, 0x0)
                                            = 0 0
84911/0x7129df: fcntl(0x10, 0x2, 0x1)
                                       = 0.0
84911/0x7129df: fcntl(0x11, 0x2, 0x1)
                                       = 0.0
84911/0x7129df: fcntl(0x10, 0x3, 0x0)
                                    = 20
84911/0x7129df: fcntl(0x10, 0x4, 0x6)
                                       = 0 \ 0
84911/0x7129df: fcntl(0x11, 0x3, 0x0)
                                       = 20
84911/0x7129df: fcntl(0x11, 0x4, 0x6)
                                       = 0.0
84911/0x7129df: getrlimit(0x1008, 0x7FF7B2EC7000, 0x0)
                                                         = 0 \ 0
```

= 0.0

84911/0x7129df: fstat64(0x0, 0x7FF7B2EC6FE8, 0x0)

```
84911/0x7129df: ioctl(0x0, 0x4004667A, 0x7FF7B2EC7034)
create 13
OK: 84926
dtrace: error on enabled probe ID 1714 (ID 961: syscall::read_nocancel:return): invalid kernel access in action #13 at DIF offset 68
84911/0x7129df: poll(0x7FF7B2EC6AE0, 0x1, 0x0)
                                                    = 0.0
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
84911/0x7129df: shm_open(0x7FF8194560E0, 0x0, 0x0)
84911/0x7129df: mmap(0x0, 0x1000, 0x1, 0x40001, 0x12, 0x0)
                                                                = 0x10D0880000
84911/0x7129df: close_nocancel(0x12)
84911/0x7129df: socket(0x2, 0x1, 0x6)
                                        = 180
84911/0x7129df: fcntl(0x12, 0x2, 0x1)
                                        = 0.0
84911/0x7129df: setsockopt(0x12, 0xFFFF, 0x1022)
                                                     = 0.0
84911/0x7129df: fcntl(0x12, 0x2, 0x1)
                                        = 0.0
84911/0x7129df: setsockopt(0x12, 0xFFFF, 0x4) = 0 0
84911/0x7129df: bind(0x12, 0x7FE2E7808CC0, 0x10)
                                                         = 0.0
84911/0x7129df: listen(0x12, 0x64, 0x0)
84911/0x7129df: getsockname(0x12, 0x7FF7B2EC6AE8, 0x7FF7B2EC6A8C)
                                                                              = 0.0
84911/0x7129df: getsockname(0x12, 0x7FF7B2EC6B28, 0x7FF7B2EC6ACC)
                                                                              = 0.0
84911/0x7129df: sendto(0x9, 0x7FF7B2EC6A97, 0x1)
                                                         = 1.0
84911/0x7129df: sendto(0xC, 0x7FF7B2EC6A97, 0x1)
                                                         = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                         = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
84911/0x7129e9: kevent(0xB, 0x700003B43E10, 0x1)
                                                         = 0.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                   = 0.0
84911/0x7129df: fork()
                          = 849260
84926/0x712c6d: fork()
                         = 0.0
84926/0x712c6d: thread_selfid(0x0, 0x0, 0x0)
                                               = 7416941 sodium.26.dylib0
84926/0x712c6d: bsdthread_register(0x7FF815DFBB9C, 0x7FF815DFBB88, 0x2000)
                                                                                     = -1 22
84926/0x712c6d: mprotect(0x10D080000, 0x98, 0x3)
```

 $= 0 \ 0$ 

84926/0x712c6d: mprotect(0x10D080000, 0x98, 0x1)

```
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0x0)
84911/0x7129df: recvfrom(0xD, 0x7FF7B2EC6FA7, 0x1)
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0x0) = 0.0
dtrace: error on enabled probe ID 1688 (ID 287: syscall::execve:return): invalid address (0x10d047b89) in action #12 at DIF offset 12
84926/0x712c6e: fork()
                          = 0 ,b��0
84926/0x712c6e: mprotect(0x1159DC000, 0x8000, 0x1)
                                                          = 0 @b��0
84926/0x712c6e: thread selfid(0x0, 0x0, 0x0)
                                                = 74169420
84926/0x712c6e: shared_region_check_np(0x7FF7B9B588D0, 0x0, 0x0)
                                                                           = 0.20
84926/0x712c6e: thread selfid(0x0, 0x0, 0x0)
                                                = 7416942 S labs 3t/lab5-7/build/client0
84926/0x712c6e: getpid(0x0, 0x0, 0x0)
                                      = 84926 lient0
84926/0x712c6e: proc_info(0xF, 0x14BBE, 0x0)
                                                  = 0.0
84926/0x712c6e: munmap(0x11593C000, 0xA0000)
                                                      = 0.0
                                                      = 0.0
84926/0x712c6e: munmap(0x1159DC000, 0x8000)
84926/0x712c6e: munmap(0x1159E4000, 0x4000)
                                                     = 0.0
84926/0x712c6e: munmap(0x1159E8000, 0x4000)
                                                     = 0.0
84926/0x712c6e: munmap(0x1159EC000, 0x58000)
                                                      = 0.0
84926/0x712c6e: open(".\0", 0x100000, 0x0)
84926/0x712c6e: fcntl(0x3, 0x32, 0x7FF7B9B58260)
                                                         = 0.0
84926/0x712c6e: close(0x3)
                                 = 0.0
84926/0x712c6e: fsgetpath(0x7FF7B9B58270, 0x400, 0x7FF7B9B58258)
                                                                            = 62.0
84926/0x712c6e: fsgetpath(0x7FF7B9B58270, 0x400, 0x7FF7B9B58258)
                                                                            = 14.0
84926/0x712c6e: csrctl(0x0, 0x7FF7B9B5867C, 0x4)
                                                         = -11
84926/0x712c6e: __mac_syscall(0x7FF815B08E3B, 0x2, 0x7FF7B9B584E0)
                                                                              = 0.0
84926/0x712c6e: csrctl(0x0, 0x7FF7B9B5868C, 0x4)
84926/0x712c6e: __mac_syscall(0x7FF815B05DC6, 0x5A, 0x7FF7B9B58620)
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
84926/0x712c6e: open("\0", 0x20100000, 0x0)
                                                 = 3.0
84926/0x712c6e: openat(0x3, "System/Cryptexes/OS\0", 0x100000, 0x0)
84926/0x712c6e: dup(0x4, 0x0, 0x0)
                                         = 50
```

```
84926/0x712c6e: fstatat64(0x4, 0x7FF7B9B573C1, 0x7FF7B9B577C0)
84926/0x712c6e: openat(0x4, "System/Library/dyld/\0", 0x100000, 0x0)
84926/0x712c6e: fcntl(0x6, 0x32, 0x7FF7B9B57450)
                                                           = 0 \ 0
84926/0x712c6e: dup(0x6, 0x0, 0x0)
                                          = 7.0
84926/0x712c6e: dup(0x5, 0x0, 0x0)
                                          = 8.0
84926/0x712c6e: close(0x3)
                                  = 0.0
84926/0x712c6e: close(0x5)
                                  = 0.0
84926/0x712c6e: close(0x4)
                                  = 0.0
84926/0x712c6e: close(0x6)
                                  = 0.0
84926/0x712c6e: shared_region_check_np(0x7FF7B9B57D38, 0x0, 0x0)
                                                                             = 0 \ 0
84926/0x712c6e: fsgetpath(0x7FF7B9B582A0, 0x400, 0x7FF7B9B581D8)
                                                                              = 83~0
84926/0x712c6e: fcntl(0x8, 0x32, 0x7FF7B9B582A0)
                                                           = 0.0
84926/0x712c6e: close(0x8)
                                  = 0.0
84926/0x712c6e: close(0x7)
                                  = 0.0
84926/0x712c6e: getfsstat64(0x0, 0x0, 0x2)
                                                = 7.0
84926/0x712c6e: getfsstat64(0x106902AA0, 0x3B48, 0x2)
84926/0x712c6e: getattrlist("\0", 0x7FF7B9B581E0, 0x7FF7B9B58150)
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/System/Library/dyld/dyld\_shared\_cache\_x86\_64h\\ \ 0", 0x7FF7B9B58518, 0x0)
dtrace: error on enabled probe ID 1690 (ID 845: syscall::stat64:return): invalid address (0x0) in action #12 at DIF offset 12
84926/0x712c6e:\ stat64 ("Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/server\\ \ 0",0x7FF7B9B579B0,0x0)
                                                                                                                     = 0.0
84926/0x712c6e: open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/server\\ \c 0x0,0x0)
                                                                                                         = 3.0
84926/0x712c6e: mmap(0x0, 0x1E9E8, 0x1, 0x40002, 0x3, 0x0)
                                                                   = 0x1063CB0000
84926/0x712c6e: fcntl(0x3, 0x32, 0x7FF7B9B57AC0)
                                                           = 0 \ 0
84926/0x712c6e: close(0x3)
84926/0x712c6e: munmap(0x1063CB000, 0x1E9E8)
                                                        = 0 \ 0
84926/0x712c6e:\ stat 64 ("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/server\\ \ 0",\ 0x7FF7B9B57F10,\ 0x0)
                                                                                                                     = 0.0
84926/0x712c6e: open("/usr/local/opt/zeromq/lib/libzmq.5.dylib\0", 0x0, 0x0)
                                                                              = 3.0
84926/0x712c6e: fcntl(0x3, 0x32, 0x7FF7B9B57360)
                                                          = 0.0
84926/0x712c6e: close(0x3)
                                  = 0.0
84926/0x712c6e:\ stat64("/usr/local/opt/zeromq/lib/libzmq.5.dylib\0",\ 0x7FF7B9B56F20,\ 0x0)
                                                                                               = 0 \ 0
84926/0x712c6e: stat64("/usr/local/opt/zeromq/lib/libzmq.5.dylib\0", 0x7FF7B9B56980, 0x0)
                                                                                               = 0 \ 0
84926/0x712c6e:\ open("/usr/local/opt/zeromq/lib/libzmq.5.dylib\0",\ 0x0,\ 0x0)
```

```
84926/0x712c6e: mmap(0x0, 0x91C08, 0x1, 0x40002, 0x3, 0x0)
                                                                    = 0x106801000 0
84926/0x712c6e: fcntl(0x3, 0x32, 0x7FF7B9B56A90)
                                                            = 0.0
84926/0x712c6e: close(0x3)
                                  = 0.0
84926/0x712c6e: open("/usr/local/Cellar/zeromq/4.3.5_1/lib/libzmq.5.dylib\0", 0x0, 0x0)
                                                                                             = 3.0
84926/0x712c6e: fcntl(0x3, 0x62, 0x7FF7B9B56748)
                                                           = 0.0
84926/0x712c6e: mmap(0x106941000, 0x54000, 0x5, 0x40012, 0x3, 0x0)
                                                                             = 0 \times 106941000 0
84926/0x712c6e: mmap(0x106995000, 0x8000, 0x3, 0x40012, 0x3, 0x54000)
                                                                               = 0 \times 106995000 0
84926/0x712c6e: mmap(0x10699D000, 0x4000, 0x3, 0x40012, 0x3, 0x5C000)
                                                                                = 0x10699D0000
84926/0x712c6e: mmap(0x1069A1000, 0x34000, 0x1, 0x40012, 0x3, 0x60000)
                                                                                = 0x1069A10000
84926/0x712c6e: close(0x3)
                                  = 0.0
84926/0x712c6e: munmap(0x106801000, 0x91C08)
                                                       = 0.0
84926/0x712c6e: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B9B56F20, 0x0)
                                                                                = -12
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib\0", 0x7FF7B9B56ED0, 0x0)
                                                                                                                    = -1.2
84926/0x712c6e: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B9B56F20, 0x0)
                                                                                = -1.2
84926/0x712c6e: stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libobjc.A.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                    = -12
84926/0x712c6e: stat64("/usr/lib/libobjc.A.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                = -1 \text{ close2}
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_blocks.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                   = -1
al/opt/zeromq/lib/libzmq.5.dylib2
84926/0x712c6e:\ stat64("/usr/lib/system/libsystem\_blocks.dylib\\0", 0x7FF7B9B54B70, 0x0)
                                                                                                = -1 al/opt/zeromq/lib/libzmq.5.dylib2
84926/0x712c6e: stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                  = -1 al/opt/zeromq/lib/libzmq.5.dylib2
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libxpc.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                          = -1 2
84926/0x712c6e: stat64("/usr/lib/system/libxpc.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libsystem_trace.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                          = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem trace.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                  = -1 2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_trace.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                                 = -1 2
84926/0x712c6e: stat64("/usr/lib/system/libcorecrypto.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                          = -1.2
84926/0x712c6e:\ stat 64 ("/usr/lib/system/libsystem\_malloc.dylib \0", 0x7FF7B9B54B70, 0x0)
                                                                                                = -1.2
84926/0x712c6e:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_malloc.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                    = -12
```

```
84926/0x712c6e: stat64("/usr/lib/system/libsystem malloc.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                        = -12
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/lib/dispatch.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                          = -12
84926/0x712c6e: stat64("/usr/lib/system/libdispatch.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                       = -1.2
84926/0x712c6e:\ stat64 ("/usr/lib/system_featureflags.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                = -1.2
84926/0x712c6e: stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/lib/system_featureflags.dylib/0", 0x7FF7B9B54B10, 0x0) \\
                                                                                                                                    = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem featureflags.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_c.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                        = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem c.dylib\0", 0x7FF7B9B54B20, 0x0)
84926/0x712c6e: stat64("/usr/lib/system_libsystem_c.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                        = -12
84926/0x712c6e: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                               = -12
84926/0x712c6e:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib\0",\ 0x7FF7B9B54B20,\ 0x0)
                                                                                                                  = -1.2
84926/0x712c6e: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                               = -1.2
84926/0x712c6e: stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                = -1.2
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++abi.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                   = -1.2
84926/0x712c6e: stat64("/usr/lib/libc++abi.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                = -1 2
84926/0x712c6e: stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libdyld.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                         = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libdyld.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                  = -12
                                                                                         = -12
84926/0x712c6e:\ stat64("/usr/lib/system_info.dylib\0",0x7FF7B9B54B70,0x0)
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_info.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                                 = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_info.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                         = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem\_darwin.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                               = -1 2
84926/0x712c6e:\ stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_larwin.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                   = -1.2
84926/0x712c6e:\ stat64("/usr/lib/system/libsystem\_darwin.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libsystem_notify.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                              = -1 2
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_lotify.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                 = -1.2
84926/0x712c6e:\ stat 64 ("/usr/lib/system/libsystem\_notify.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                              = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                        = -12
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_network extension.dylib\0", 0x7FF7B9B54B10, 0x0) \\ = -1.2 (-1.5)
84926/0x712c6e: stat64("/usr/lib/system/libsystem_networkextension.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e:\ stat64("/usr/lib/system/libsystem\_asl.dylib\0",\ 0x7FF7B9B54B70,\ 0x0)
```

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84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/lib/system asl.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                                  = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_asl.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e:\ stat64("/usr/lib/system_libsystem_symptoms.dylib\0",\ 0x7FF7B9B54B70,\ 0x0)
                                                                                                   = -12
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_libsystem_symptoms.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                      = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_symptoms.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                   = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_containermanager.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                          = -1.2
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_containermanager.dylib\0", 0x7FF7B9B54B10, 0x0) = -1.2 (1.2)
84926/0x712c6e: stat64("/usr/lib/system/libsystem containermanager.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                          = -12
84926/0x712c6e: stat64("/usr/lib/system/libsystem configuration.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: \ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system_configuration.dylib/0", 0x7FF7B9B54B10, 0x0) \\ = -1.2 (1.5)
84926/0x712c6e: stat64("/usr/lib/system/libsystem_configuration.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                   = -1.2
84926/0x712c6e:\ stat64("/usr/lib/system/libsystem\_sandbox.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                                  = -12
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_sandbox.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                     = -1.2
84926/0x712c6e:\ stat64 ("/usr/lib/system/libsystem\_sandbox.dylib \verb|\|0", 0x7FF7B9B54B70, 0x0)
                                                                                                 = -1.2
84926/0x712c6e:\ stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                          = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libquarantine.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                                  = -12
84926/0x712c6e: stat64("/usr/lib/system/libquarantine.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e:\ stat64("/usr/lib/system/libsystem\_coreservices.dylib\\ \ 0",\ 0x7FF7B9B54B70,\ 0x0)
                                                                                                  = -1.2
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_coreservices.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                       = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_coreservices.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libsystem_m.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                          = -1.2
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_m.dylib \", 0x7FF7B9B54B20, 0x0)
                                                                                                                              = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem m.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                          = -12
84926/0x712c6e: stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                         = -1.2
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libmacho.dylib\0", 0x7FF7B9B54B20, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libmacho.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                         = -1.2
84926/0x712c6e:\ stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                             = -1.2
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                                     = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libcommonCrypto.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                              = -1 2
84926/0x712c6e: stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                         = -12
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libunwind.dylib\0", 0x7FF7B9B54B20, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libunwind.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                         = -12
```

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84926/0x712c6e: stat64("/usr/lib/liboah.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/liboah.dylib\0", 0x7FF7B9B54B20, 0x0)
84926/0x712c6e: stat64("/usr/lib/liboah.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                    = -1.2
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                      = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libcopyfile.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                    = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libcompiler rt.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                     = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcompiler_rt.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                           = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libcompiler rt.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                             = -12
84926/0x712c6e:\ stat64("System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem\_collections.dylib/0",\ 0x7FF7B9B54B10,\ 0x0)
                                                                                                                               = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_collections.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                             = -12
84926/0x712c6e: stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                           = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                             = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_secinit.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                           = -12
84926/0x712c6e: stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                     = -12
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libremovefile.dylib\0", 0x7FF7B9B54B20, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libremovefile.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                     = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                     = -12
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libkeymgr.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                      = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libkeymgr.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                     = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_dnssd.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                       = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libsystem dnssd.dylib\0", 0x7FF7B9B54B10, 0x0)
                                                                                                                             = -1.2
84926/0x712c6e: stat64("/usr/lib/system/libsystem_dnssd.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                    = -1 2
84926/0x712c6e:\ stat 64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/system/libcache.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                     = -1 2
84926/0x712c6e:\ stat64("/usr/lib/system/libcache.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                                    = -1.2
84926/0x712c6e: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B54B70, 0x0)
                                                                              = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B54B20, 0x0)
                                                                                                                    = -1.2
84926/0x712c6e: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/system/libsystem_darwindirectory.dylib\0", 0x7FF7B9B54B70, 0x0)
```

```
84926/0x712c6e: stat64("/usr/lib/system/libsystem darwindirectory.dylib\0", 0x7FF7B9B54B70, 0x0)
84926/0x712c6e: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56F20, 0x0)
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56ED0, 0x0)
                                                                                                                       = -12
84926/0x712c6e: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56F20, 0x0)
                                                                                = -1.2
84926/0x712c6e:\ open("/usr/local/opt/libsodium/lib/libsodium.26.dylib\0", 0x0, 0x0)
                                                                                    = 3.0
84926/0x712c6e: fcntl(0x3, 0x32, 0x7FF7B9B57280)
                                                          84926/0x712c6e: close(0x3)
                                 = 0.0
84926/0x712c6e: stat64("/usr/local/opt/libsodium/lib/libsodium.26.dylib\0", 0x7FF7B9B56E40, 0x0)
                                                                                                     = 0.0
84926/0x712c6e: stat64("/usr/local/opt/libsodium/lib/libsodium.26.dylib\0", 0x7FF7B9B568A0, 0x0)
                                                                                                     =0.0
84926/0x712c6e: open("/usr/local/opt/libsodium/lib/libsodium.26.dylib\0", 0x0, 0x0)
                                                                                    = 30
84926/0x712c6e: mmap(0x0, 0x76C48, 0x1, 0x40002, 0x3, 0x0)
                                                                  = 0x106801000 0
84926/0x712c6e: fcntl(0x3, 0x32, 0x7FF7B9B569B0)
                                                          = 0.0
84926/0x712c6e: close(0x3)
                                  = 0.0
84926/0x712c6e:\ open("/usr/local/Cellar/libsodium/1.0.19/lib/libsodium.26.dylib\0", 0x0, 0x0)
                                                                                            = 3.0
84926/0x712c6e: fcntl(0x3, 0x62, 0x7FF7B9B56668)
                                                          = 0.0
84926/0x712c6e: mmap(0x106878000, 0x60000, 0x5, 0x40012, 0x3, 0x0)
                                                                           = 0x106878000 0
84926/0x712c6e: mmap(0x1068D8000, 0x4000, 0x3, 0x40012, 0x3, 0x60000)
                                                                             = 0x1068D80000
84926/0x712c6e: mmap(0x1068DC000, 0x4000, 0x3, 0x40012, 0x3, 0x64000)
                                                                              = 0x1068DC0000
84926/0x712c6e: mmap(0x1068E0000, 0x10000, 0x1, 0x40012, 0x3, 0x68000)
                                                                             = 0x1068E00000
84926/0x712c6e: close(0x3)
                                  = 0.0
84926/0x712c6e: munmap(0x106801000, 0x76C48)
84926/0x712c6e: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56E40, 0x0)
                                                                                = -1.2
84926/0x712c6e: stat64("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56DF0, 0x0)
                                                                                                                       = -1 2
84926/0x712c6e: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56E40, 0x0)
                                                                                = -1.2
84926/0x712c6e: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B9B56E40, 0x0)
                                                                              = -1 2
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libc++.1.dylib \", 0x7FF7B9B56DF0, 0x0)
                                                                                                                 = -1 @q��2
84926/0x712c6e: stat64("/usr/lib/libc++.1.dylib\0", 0x7FF7B9B56E40, 0x0)
                                                                              = -1.2
84926/0x712c6e: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56D60, 0x0)
                                                                                = -12
84926/0x712c6e:\ stat64 ("/System/Volumes/Preboot/Cryptexes/OS/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56D10, 0x0)
                                                                                                                       = -1.2
84926/0x712c6e: stat64("/usr/lib/libSystem.B.dylib\0", 0x7FF7B9B56D60, 0x0)
                                                                                = -1 2
84926/0x712c6e: open("/dev/dtracehelper\0", 0x2, 0x0)
84926/0x712c6e: ioctl(0x3, 0x80086804, 0x7FF7B9B56A58)
```

```
84926/0x712c6e: close(0x3)
84926/0x712c6e:\ open("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/server\\ \setminus 0",\ 0x0,\ 0x0)
84926/0x712c6e: __mac_syscall(0x7FF815B08E3B, 0x2, 0x7FF7B9B560A0)
                                                                             = 0.0
84926/0x712c6e: map_with_linking_np(0x7FF7B9B55B30, 0x1, 0x7FF7B9B55B60)
                                                                                 = -1.22
                                = 0.0
84926/0x712c6e: close(0x3)
84926/0x712c6e: mprotect(0x1063B3000, 0x4000, 0x1)
                                                         = 0.0
84926/0x712c6e: mprotect(0x106995000, 0x8000, 0x1)
                                                         = 0.0
84926/0x712c6e: open("/usr/local/Cellar/libsodium/1.0.19/lib/libsodium.26.dylib\0", 0x0, 0x0)
                                                                                         = 3.0
84926/0x712c6e: __mac_syscall(0x7FF815B08E3B, 0x2, 0x7FF7B9B560A0)
84926/0x712c6e: map_with_linking_np(0x7FF7B9B55F60, 0x1, 0x7FF7B9B55F90)
                                                                                   = -122
84926/0x712c6e: close(0x3)
                                = 0.0
84926/0x712c6e: mprotect(0x1068D8000, 0x4000, 0x1)
                                                         = 0.0
84926/0x712c6e: shared_region_check_np(0xFFFFFFFFFFFFFFFFF, 0x0, 0x0)
                                                                            = 0.0
84926/0x712c6e: mprotect(0x106900000, 0x40000, 0x1)
                                                         = 0.0
84926/0x712c6e: access("/AppleInternal/XBS/.isChrooted\0", 0x0, 0x0)
84926/0x712c6e: bsdthread_register(0x7FF815DFBB9C, 0x7FF815DFBB88, 0x2000)
                                                                                  = 1073742303 0
84926/0x712c6e: getpid(0x0, 0x0, 0x0)
84926/0x712c6e: shm_open(0x7FF815C9EF42, 0x0, 0x15C9D388)
                                                                    = 3.0
84926/0x712c6e: fstat64(0x3, 0x7FF7B9B57010, 0x0)
                                                        = 0.0
84926/0x712c6e: mmap(0x0, 0x4000, 0x1, 0x40001, 0x3, 0x0)
                                                               = 0x1063CD0000
84926/0x712c6e: close(0x3)
                                = 0.0
84926/0x712c6e: ioctl(0x2, 0x4004667A, 0x7FF7B9B570D4)
                                                            = 0.0
84926/0x712c6e: mprotect(0x1063D6000, 0x1000, 0x0)
                                                         = 0.0
84926/0x712c6e: mprotect(0x1063DD000, 0x1000, 0x0)
                                                          = 0 \ 0
84926/0x712c6e: mprotect(0x1063DE000, 0x1000, 0x0)
                                                         = 0 \ 0
84926/0x712c6e: mprotect(0x1063E5000, 0x1000, 0x0)
                                                         = 0.0
84926/0x712c6e: mprotect(0x1063D1000, 0x98, 0x1)
                                                        = 0.0
84926/0x712c6e: mprotect(0x1063D1000, 0x98, 0x3)
                                                        = 0.0
84926/0x712c6e: mprotect(0x1063D1000, 0x98, 0x1)
                                                        = 0.0
84926/0x712c6e: mprotect(0x1063E6000, 0x1000, 0x1)
                                                        = 0 \ 0
84926/0x712c6e: mprotect(0x1063E7000, 0x98, 0x1)
                                                        = 0 \ 0
84926/0x712c6e: mprotect(0x1063E7000, 0x98, 0x3)
                                                        = 0 \ 0
```

= 30

```
84926/0x712c6e: mprotect(0x1063E7000, 0x98, 0x1)
                                                         = 0.0
84926/0x712c6e: mprotect(0x1063D1000, 0x98, 0x3)
                                                         = 0.0
84926/0x712c6e: mprotect(0x1063D1000, 0x98, 0x1)
                                                          = 0 \ 0
84926/0x712c6e: mprotect(0x1063E6000, 0x1000, 0x3)
                                                          = 0.0
84926/0x712c6e: mprotect(0x1063E6000, 0x1000, 0x1)
                                                          = 0.0
84926/0x712c6e: mprotect(0x106900000, 0x40000, 0x3)
                                                           = 0.0
84926/0x712c6e: mprotect(0x106900000, 0x40000, 0x1)
                                                           = 0.0
84926/0x712c6e: issetugid(0x0, 0x0, 0x0)
                                               = 0.0
84926/0x712c6e: mprotect(0x106900000, 0x40000, 0x3)
                                                           = 0.0
84926/0x712c6e: getentropy(0x7FF7B9B568A0, 0x20, 0x0)
                                                             =0.0
84926/0x712c6e: mprotect(0x106900000, 0x40000, 0x1)
                                                           = 0.0
84926/0x712c6e: mprotect(0x106900000, 0x40000, 0x3)
                                                           = 0.0
84926/0x712c6e: mprotect(0x106900000, 0x40000, 0x1)
                                                           = 0.0
84926/0x712c6e:\ getattrlist("/Users/mishazhadnov/Desktop/wD/OS\_labs\_3t/lab5-7/build/server\\ \setminus 0", 0x7FF7B9B56FB0, 0x7FF7B9B56FC8)
                                                                                                                                     = 0.0
84926/0x712c6e: access("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab5-7/build\0", 0x4, 0x0)
                                                                                                 = 0.0
84926/0x712c6e: open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab5-7/build\0", 0x0, 0x0)
                                                                                                 = 3 \ 0
84926/0x712c6e: fstat64(0x3, 0x7F7E6A704530, 0x0)
84926/0x712c6e: csrctl(0x0, 0x7FF7B9B5720C, 0x4)
                                                         = -1 1
84926/0x712c6e: fgetattrlist(0x3, 0x7FF7B9B57220, 0x7FF7B9B57240)
                                                                          = 0.0
84926/0x712c6e: __mac_syscall(0x7FF8211BC6A4, 0x2, 0x7FF7B9B57240)
                                                                              = 0.0
84926/0x712c6e: fcntl(0x3, 0x32, 0x7FF7B9B56EC0)
                                                          = 0.0
84926/0x712c6e: close(0x3)
                                 = 0 \ 0
84926/0x712c6e: open("/Users/mishazhadnov/Desktop/wD/OS_labs_3t/lab5-7/build/Info.plist\0", 0x0, 0x0)
                                                                                                        = -1 2
84926/0x712c6e: proc_info(0x2, 0x14BBE, 0xD)
84926/0x712c6e: csops_audittoken(0x14BBE, 0x10, 0x7FF7B9B57210)
                                                                           = -1 22
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
84926/0x712c6e: csops(0x14BBE, 0x0, 0x7FF7B9B57674)
                                                             = 0.0
84926/0x712c6e: mprotect(0x106900000, 0x40000, 0x3)
                                                           = 0.0
84926/0x712c6e: socketpair(0x1, 0x1, 0x0)
                                               = 0.0
84926/0x712c6e: fcntl(0x3, 0x2, 0x1)
84926/0x712c6e: fcntl(0x4, 0x2, 0x1)
```

```
84926/0x712c6e: fcntl(0x3, 0x3, 0x0)
                                       = 20
84926/0x712c6e: fcntl(0x3, 0x4, 0x6)
                                        = 0 \ 0
84926/0x712c6e: fcntl(0x4, 0x3, 0x0)
                                        = 20
84926/0x712c6e: fcntl(0x4, 0x4, 0x6)
                                        = 0.0
84926/0x712c6e: open("/dev/urandom\0", 0x0, 0x0)
                                                     = 50
84926/0x712c6e: fstat64(0x5, 0x7FF7B9B58190, 0x0)
                                                        = 0.0
84926/0x712c6e: fcntl(0x5, 0x1, 0x0)
                                       = 0.0
                                    = 0 \ 0
84926/0x712c6e: fcntl(0x5, 0x2, 0x1)
dtrace: error on enabled probe ID 1741 (ID 573: syscall::sysctl:return): invalid kernel access in action #11 at DIF offset 28
dtrace: error on enabled probe ID 1713 (ID 175: syscall::read:return): invalid kernel access in action #13 at DIF offset 68
84926/0x712c6e: socketpair(0x1, 0x1, 0x0)
                                              = 0.0
84926/0x712c6e: fcntl(0x6, 0x2, 0x1)
                                        = 0.0
84926/0x712c6e: fcntl(0x7, 0x2, 0x1)
                                        = 0.0
84926/0x712c6e: fcntl(0x6, 0x3, 0x0)
                                        = 2.0
84926/0x712c6e: fcntl(0x6, 0x4, 0x6)
                                        = 0.0
84926/0x712c6e: fcntl(0x7, 0x3, 0x0)
                                       = 20
84926/0x712c6e: fcntl(0x7, 0x4, 0x6)
84926/0x712c6e: kqueue(0x0, 0x0, 0x0)
                                         = 8.0
84926/0x712c6e: kevent(0x8, 0x7FF7B9B581D0, 0x1)
                                                         = 0.0
84926/0x712c6e: bsdthread_create(0x106976590, 0x600003CB0040, 0x70000E6E7000)
                                                                                  = 242118656 0
                                              = 0.0
84926/0x712c6e: socketpair(0x1, 0x1, 0x0)
84926/0x712c6e: fcntl(0x9, 0x2, 0x1)
                                       = 0.0
84926/0x712c6e: fcntl(0xA, 0x2, 0x1)
                                        = 0.0
84926/0x712c6e: fcntl(0x9, 0x3, 0x0)
                                        = 20
84926/0x712c6e: fcntl(0x9, 0x4, 0x6)
                                        = 0.0
84926/0x712c70: fork() = 0 0
84926/0x712c6e: fcntl(0xA, 0x3, 0x0)
                                        = 2.0
84926/0x712c70: thread_selfid(0x0, 0x0, 0x0) = 74169440
                                        = 0.0
84926/0x712c6e: fcntl(0xA, 0x4, 0x6)
84926/0x712c6e: kqueue(0x0, 0x0, 0x0)
                                       = 11 0
84926/0x712c70: __pthread_sigmask(0x1, 0x70000E6E6F94, 0x0)
```

84926/0x712c6e: kevent(0xB, 0x7FF7B9B581D0, 0x1)

```
84926/0x712c70: proc info(0x5, 0x14BBE, 0x2)
                                                  = 0 \operatorname{stat} 640
84926/0x712c6e: bsdthread_create(0x106976590, 0x600003CB0100, 0x70000E76A000)
84926/0x712c71: fork() = 0 0
84926/0x712c71:\ thread\_selfid(0x0,\,0x0,\,0x0) \\ \hspace*{0.2in} = 7416945\ tem/libcompiler\_rt.dylib0
84926/0x712c71: __pthread_sigmask(0x1, 0x70000E769F94, 0x0)
                                                                  = 0.0
84926/0x712c6e: socketpair(0x1, 0x1, 0x0)
                                               = 0.0
84926/0x712c71: proc_info(0x5, 0x14BBE, 0x2) = 0 0
84926/0x712c6e: fcntl(0xC, 0x2, 0x1)
                                        = 0.0
                                     = 0 \ 0
84926/0x712c6e: fcntl(0xD, 0x2, 0x1)
84926/0x712c6e: fcntl(0xC, 0x3, 0x0)
                                        = 20
84926/0x712c6e: fcntl(0xC, 0x4, 0x6)
                                        = 0.0
84926/0x712c6e: fcntl(0xD, 0x3, 0x0)
                                        = 20
                                     = 0 \ 0
84926/0x712c6e: fcntl(0xD, 0x4, 0x6)
84926/0x712c6e: socketpair(0x1, 0x1, 0x0) = 0 0
84926/0x712c6e: fcntl(0xE, 0x2, 0x1)
                                        = 0 \ 0
84926/0x712c6e: fcntl(0xF, 0x2, 0x1)
                                       = 0.0
84926/0x712c6e: fcntl(0xE, 0x3, 0x0)
84926/0x712c6e: fcntl(0xE, 0x4, 0x6)
                                        = 0.0
84926/0x712c6e: fcntl(0xF, 0x3, 0x0)
                                       = 20
84926/0x712c6e: fcntl(0xF, 0x4, 0x6)
                                        = 0.0
                                             = 0.0
84926/0x712c6e: socketpair(0x1, 0x1, 0x0)
84926/0x712c6e: fcntl(0x10, 0x2, 0x1)
                                        = 0.0
84926/0x712c6e: fcntl(0x11, 0x2, 0x1)
                                     = 0 \ 0
84926/0x712c6e: fcntl(0x10, 0x3, 0x0)
                                        = 20
84926/0x712c6e: fcntl(0x10, 0x4, 0x6)
                                        = 0 \ 0
84926/0x712c6e: fcntl(0x11, 0x3, 0x0)
                                        = 20
84926/0x712c6e: fcntl(0x11, 0x4, 0x6)
                                        = 0.0
84926/0x712c6e: poll(0x7FF7B9B577E0, 0x1, 0x0)
84926/0x712c6e: sendto(0x9, 0x7FF7B9B57797, 0x1)
                                                         = 1.0
84926/0x712c6e: sendto(0x10, 0x7FF7B9B57797, 0x1)
                                                         = 10
84926/0x712c71: kevent(0xB, 0x0, 0x0)
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
```

= 242655232 0

```
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                    = 10
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                         = 1.0
84926/0x712c6e: recvfrom(0x11, 0x7FF7B9B58167, 0x1)
                                                         = 10
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0)
                                               = 0.0
84926/0x712c71: shm_open(0x7FF8194560E0, 0x0, 0x0)
                                                         = 18.0
84926/0x712c71: mmap(0x0, 0x1000, 0x1, 0x40001, 0x12, 0x0)
                                                               = 0x1063EF0000
84926/0x712c71: close_nocancel(0x12)
                                        = 0.0
84926/0x712c71: socket(0x2, 0x1, 0x6)
                                        = 180
84926/0x712c71: fcntl(0x12, 0x2, 0x1)
                                       = 0.0
84926/0x712c71: setsockopt(0x12, 0xFFFF, 0x1022)
                                                      = 0 \ 0
84926/0x712c71: fcntl(0x12, 0x3, 0x0)
                                       = 20
84926/0x712c71: fcntl(0x12, 0x4, 0x6)
                                       = 0.0
84926/0x712c71: connect(0x12, 0x600001CB01C0, 0x10)
                                                         = -136
84926/0x712c71: kevent(0xB, 0x70000E767DB0, 0x1)
                                                        = 0.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                 = 0.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                        = 10
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 10
84911/0x7129e9: accept(0x12, 0x700003B43E10, 0x700003B43E0C)
                                                                  = 190
84911/0x7129e9: fcntl(0x13, 0x2, 0x1)
                                    = 0.0
84911/0x7129e9: setsockopt(0x13, 0xFFFF, 0x1022)
                                                     = 0.0
84911/0x7129e9: setsockopt(0x13, 0x6, 0x1)
                                             = 0.0
84926/0x712c71: kevent(0xB, 0x70000E767E70, 0x1)
                                                       = 0.0
84911/0x7129e9: getsockname(0x13, 0x700003B43DD8, 0x700003B43D7C)
                                                                           = 0 \ 0
84926/0x712c71: getsockopt(0x12, 0xFFFF, 0x1007)
84926/0x712c71: setsockopt(0x12, 0x6, 0x1)
                                              = 0.0
84926/0x712c71: getsockname(0x12, 0x70000E767E58, 0x70000E767DFC)
                                                                          = 0 \ 0
84911/0x7129e9: getpeername(0x13, 0x700003B43DD8, 0x700003B43D7C)
                                                                          = 0.0
84926/0x712c71: getpeername(0x12, 0x70000E767D70, 0x70000E76793C)
                                                                         = 0.0
84926/0x712c71: fcntl(0x12, 0x3, 0x0)
                                     = 6.0
84926/0x712c71: fcntl(0x12, 0x4, 0x6)
                                     = 0 \ 0
84911/0x7129e9: getpeername(0x13, 0x700003B43D80, 0x700003B4394C)
                                                                          = 0 0
84911/0x7129e9: fcntl(0x13, 0x3, 0x0)
                                       = 20
```

```
84926/0x712c71: sendto(0x9, 0x70000E767D97, 0x1)
                                                       = 10
84911/0x7129e9: fcntl(0x13, 0x4, 0x6)
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                     = 1.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                 = 1.0
84911/0x7129e9: sendto(0x9, 0x700003B43D97, 0x1)
                                                       = 1.0
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                        = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                       = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                 = 1.0
84926/0x712c71: kevent(0xB, 0x70000E767DF0, 0x1)
                                                       = 0.0
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                        = 1 \ 0
84926/0x712c71: kevent(0xB, 0x70000E767DF0, 0x1)
                                                       = 0.0
84926/0x712c71: recvfrom(0x12, 0x7F7E6C008800, 0xC)
                                                         = -135
84911/0x7129e9: kevent(0xB, 0x700003B43DF0, 0x1)
                                                       = 0.0
84911/0x7129e9: kevent(0xB, 0x700003B43DF0, 0x1)
                                                       = 0.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                 = 0 dylib0
84911/0x7129e9: recvfrom(0x13, 0x7FE2E9808800, 0xC)
                                                         = -135
84926/0x712c71: kevent(0xB, 0x0, 0x0)
84926/0x712c71: sendto(0x12, 0x7F7E6C008840, 0xA)
                                                        = 100
84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)
                                                       = 0.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                 = 0.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                       = 2.0
84911/0x7129e9: sendto(0x13, 0x7FE2E9808840, 0xA)
                                                       = 100
84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)
                                                       = 0.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
84911/0x7129e9: recvfrom(0x13, 0x7FE2E9808800, 0xC)
                                                         = 10 \ 0
84911/0x7129e9: kevent(0xB, 0x700003B43E20, 0x1)
                                                       = 0.0
84926/0x712c71: recvfrom(0x12, 0x7F7E6C008800, 0xC)
                                                         = 100
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980880A, 0x2)
                                                         = -135
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84926/0x712c71: kevent(0xB, 0x70000E767E20, 0x1)
                                                       = 0 \ 0
84926/0x712c71: recvfrom(0x12, 0x7F7E6C00880A, 0x2)
                                                         = -1 35
84911/0x7129e9: sendto(0x13, 0x7FE2E980884A, 0x1)
                                                        = 10
```

84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)	= 0 0
84926/0x712c71: kevent(0xB, 0x0, 0x0) = 1 0	
84926/0x712c71: sendto(0x12, 0x7F7E6C00884A, 0x1)	= 1 0
84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)	= 0 0
84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0	
84926/0x712c71: kevent(0xB, 0x0, 0x0) = 1 0	
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980880A, 0x2)	= 1 0
84926/0x712c71: recvfrom(0x12, 0x7F7E6C00880A, 0x2)	= 1 0
84911/0x7129e9: kevent(0xB, 0x700003B43E20, 0x1)	= 0 0
84926/0x712c71: kevent(0xB, 0x70000E767E20, 0x1)	= 0 0
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980880B, 0x35)	= -1 35
84926/0x712c71: recvfrom(0x12, 0x7F7E6C00880B, 0x35)	= -1 35
84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0	
84926/0x712c71: kevent(0xB, 0x0, 0x0) = 1 0	
84911/0x7129e9: sendto(0x13, 0x7FE2E980884B, 0x35)	= 53 0
84926/0x712c71: sendto(0x12, 0x7F7E6C00884B, 0x35)	= 53 0
84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)	= 0 0
84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)	= 0 ***0
84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0	
84926/0x712c71: kevent(0xB, 0x0, 0x0) = 1 0	
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980880B, 0x35)	= 53 0
84926/0x712c71: recvfrom(0x12, 0x7F7E6C00880B, 0x35)	
, , ,	= 53 0
84911/0x7129e9: kevent(0xB, 0x700003B43E80, 0x1)	= 53 0 = 0 0
84911/0x7129e9: kevent(0xB, 0x700003B43E80, 0x1)	= 0 0
84911/0x7129e9: kevent(0xB, 0x700003B43E80, 0x1) 84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)	= 0 0
84911/0x7129e9: kevent(0xB, 0x700003B43E80, 0x1) 84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000) 84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0	= 0 0
84911/0x7129e9: kevent(0xB, 0x700003B43E80, 0x1)  84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)  84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0  84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0x28)	= 0 0
84911/0x7129e9: kevent(0xB, 0x700003B43E80, 0x1)  84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)  84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0  84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0x28)  84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0	= 0 0 = -1 35 = 40 0
84911/0x7129e9: kevent(0xB, 0x700003B43E80, 0x1)  84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)  84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0  84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0x28)  84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0  84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)	= 0 0 = -1 35 = 40 0
84911/0x7129e9: kevent(0xB, 0x700003B43E80, 0x1)  84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)  84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0  84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0x28)  84911/0x7129e9: kevent(0xB, 0x0, 0x0) = 1 0  84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)  84926/0x712c71: kevent(0xB, 0x70000E767E80, 0x1)	= 0 0 = -1 35 = 40 0 = 0 0 = 0 0

```
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                    = 10
84926/0x712c71: sendto(0x12, 0x7F7E6C808200, 0x1B)
                                                        = 27.0
84926/0x712c6e: recvfrom(0x11, 0x7FF7B9B58167, 0x1)
                                                        = 10
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 1 Cryptexes/OS/usr/lib/libSystem.B.dylib0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                        = 1 ****(1)
84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)
                                                       = 0 Cryptexes/OS/usr/lib/libSystem.B.dylib0
84926/0x712c6e: sendto(0x9, 0x7FF7B9B57F97, 0x1)
                                                       = 1.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)
                                                          = 270
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                        = 1.0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0) = 0.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                 = 0.0
84911/0x7129e9: sendto(0xC, 0x700003B43C97, 0x1)
                                                       = 1.0
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0xBB8)
                                                        = 1.0
84911/0x7129df: recvfrom(0xD, 0x7FF7B2EC6FA7, 0x1)
                                                         = 1.0
84911/0x7129e9: kevent(0xB, 0x700003B43E60, 0x1)
84911/0x7129e9: kevent(0xB, 0x700003B43E50, 0x1)
                                                       = 0.0
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0x0)
                                                  = 0.0
84911/0x7129df: sendto(0x9, 0x7FF7B2EC6F17, 0x1)
                                                       = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                 = 1.0
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                        = 10
84911/0x7129e9: kevent(0xB, 0x700003B43E10, 0x1)
84911/0x7129e9: sendto(0xC, 0x700003B43CD7, 0x1)
                                                        = 10
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                     = 1 \ 0
84911/0x7129df: recvfrom(0xD, 0x7FF7B2EC6FA7, 0x1)
                                                         = 1.0
84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0x7)
                                                       = 7.0
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0x0)
                                                  = 0.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                        = 10
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                 = 0 0
```

84911/0x7129e9: kevent(0xB, 0x0, 0x0)

```
84926/0x712c71: recvfrom(0x12, 0x7F7E6C008A08, 0x2000)
84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)
                                                       = 0.0
84926/0x712c71: sendto(0x10, 0x70000E767E17, 0x1)
                                                       = 10
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                   = 1.0
84926/0x712c6e: recvfrom(0x11, 0x7FF7B9B58167, 0x1)
                                                         = 1 em.B.dylib0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0)
                                                 = 0.0
84926/0x712c6e: sendto(0x9, 0x7FF7B9B580D7, 0x1)
                                                       = 1.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                 = 1.0
84926/0x712c6e: poll(0x7FF7B9B581A0, 0x1, 0x0) = 0.0
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                        = 10
84926/0x712c71: kevent(0xB, 0x70000E767E10, 0x1)
                                                       = 0.0
84926/0x712c71: sendto(0x10, 0x70000E767CD7, 0x1)
                                                        = 1.0
84926/0x712c71: sendto(0x12, 0x7F7E6C808200, 0x9)
                                                       = 9.0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                   = 10
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
84926/0x712c6e: recvfrom(0x11, 0x7FF7B9B58167, 0x1)
                                                        = 1.0
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)
                                                          = 9.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84911/0x7129e9: sendto(0xC, 0x700003B43E17, 0x1)
                                                       = 1.0
84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)
                                                       = 0.0
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0xFFFFFFFFFFFFFF)
                                                                    = 1 \ 0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0)
84911/0x7129df: recvfrom(0xD, 0x7FF7B2EC6FA7, 0x1)
                                                         = 1.0
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0x0)
                                                  = 0.0
84911/0x7129df: sendto(0x9, 0x7FF7B2EC6ED7, 0x1)
                                                        = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                 = 1.0
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                        = 1 \ 0
84911/0x7129df: fstat64(0x1, 0x7FF7B2EC6FE8, 0x0)
                                                       = 0 \ 0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
```

```
dtrace: error on enabled probe ID 1712 (ID 963: syscall::write_nocancel:return): invalid kernel access in action #13 at DIF offset 68
exec 13 myVal 10
OK:13
dtrace: error on enabled probe ID 1714 (ID 961: syscall::read_nocancel:return): invalid kernel access in action #13 at DIF offset 68
                                                    = 0 S_labs_3t/lab5-7/build/client0
84911/0x7129df: poll(0x7FF7B2EC6DE0, 0x1, 0x0)
84911/0x7129df: sendto(0x9, 0x7FF7B2EC6D17, 0x1)
                                                         = 1 lient0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                         = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                          = 1 \ 0
84911/0x7129e9: kevent(0xB, 0x700003B43E10, 0x1)
                                                         = 0.0
84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0xB)
                                                         = 11.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                   = 0.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                         = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                         = 1.0
84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)
                                                         = 0.0
84926/0x712c71: recvfrom(0x12, 0x7F7E6C008A08, 0x2000)
                                                             = 11 \ 0
84926/0x712c71: sendto(0x10, 0x70000E767E17, 0x1)
                                                         = 1.0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                      = 1.0
84926/0x712c6e: recvfrom(0x11, 0x7FF7B9B58167, 0x1)
                                                          = 1.0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0) = 0.0
84926/0x712c6e: poll(0x7FF7B9B581A0, 0x1, 0x0)
                                                    = 0.0
84926/0x712c6e: sendto(0x9, 0x7FF7B9B58157, 0x1)
                                                         = 10
84926/0x712c71: kevent(0xB, 0x0, 0x0)
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                          = 10
84926/0x712c71: kevent(0xB, 0x70000E767E10, 0x1)
                                                         = 0 \ 0
84926/0x712c71: sendto(0x12, 0x7F7E6C808200, 0x9)
                                                         = 9.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                   = 0.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                          = 1.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
```

84911/0x7129df: ioctl(0x1, 0x4004667A, 0x7FF7B2EC7034)

84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)

```
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)
84911/0x7129e9: sendto(0xC, 0x700003B43E17, 0x1)
                                                    = 1.0
= 1.0
84911/0x7129df: recvfrom(0xD, 0x7FF7B2EC6DA7, 0x1)
                                                       = 1.0
84911/0x7129df: poll(0x7FF7B2EC6DA0, 0x1, 0x0)
                                               = 0.0
84911/0x7129df: sendto(0x9, 0x7FF7B2EC6E17, 0x1)
                                                    = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                      = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                               = 1.0
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                     = 10
84911/0x7129e9: kevent(0xB, 0x700003B43E10, 0x1)
                                                     = 0.0
84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0x12)
                                                     = 180
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                      = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                               = 0.0
84926/0x712c71: recvfrom(0x12, 0x7F7E6C008A08, 0x2000)
                                                        = 180
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                      = 1.0
84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)
                                                    = 0.0
84926/0x712c71: sendto(0x10, 0x70000E767E17, 0x1)
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                = 1.0
84926/0x712c6e: recvfrom(0x11, 0x7FF7B9B58167, 0x1)
                                                      = 1.0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0) = 0 0
84926/0x712c6e: sendto(0x9, 0x7FF7B9B58157, 0x1)
                                                  = 1.0
84926/0x712c71: kevent(0xB, 0x0, 0x0) = \frac{1}{\text{build/Info.plist0}}
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0) = 1 0
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                      = 1 0
84926/0x712c71: kevent(0xB, 0x70000E767E10, 0x1)
                                                     =0
                                  0
84926/0x712c71: sendto(0x12, 0x7F7E6C808200, 0x9)
                                                     = 90
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                      = 1.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                               = 0.0
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)
                                                       = 90
84926/0x712c71: kevent(0xB, 0x0, 0x0)
84911/0x7129e9: sendto(0xC, 0x700003B43E17, 0x1)
```

```
84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)
84911/0x7129df: recvfrom(0xD, 0x7FF7B2EC6EA7, 0x1)
                                                     = 1.0
84911/0x7129df: poll(0x7FF7B2EC6EA0, 0x1, 0x0) = 0 0
kill
dtrace: error on enabled probe ID 1714 (ID 961: syscall::read_nocancel:return): invalid kernel access in action #13 at DIF offset 68
84911/0x7129df: poll(0x7FF7B2EC6F20, 0x1, 0x0)
84911/0x7129df: sendto(0x9, 0x7FF7B2EC6E57, 0x1)
                                                   = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                    = 10
84911/0x7129e9: kevent(0xB, 0x700003B43E10, 0x1)
                                                   = 0.0
84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0xB)
                                                   = 11.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                              = 0.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                     = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                     = 10
84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)
84926/0x712c71: recvfrom(0x12, 0x7F7E6C008A08, 0x2000)
                                                    = 11 0
84926/0x712c71: sendto(0x10, 0x70000E767E17, 0x1)
                                                   = 1.0
= 1.0
84926/0x712c6e: recvfrom(0x11, 0x7FF7B9B58167, 0x1)
                                                    = 1.0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0)
                                             = 0.0
84926/0x712c6e: poll(0x7FF7B9B581A0, 0x1, 0x0)
                                              = 0.0
84926/0x712c6e: sendto(0x9, 0x7FF7B9B58157, 0x1)
84926/0x712c71: kevent(0xB, 0x0, 0x0)
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                    = 1.0
84926/0x712c71: kevent(0xB, 0x70000E767E10, 0x1)
                                                   = 0.10
84926/0x712c71: sendto(0x12, 0x7F7E6C808200, 0x9)
                                                   = 90
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                              = 0.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
```

84926/0x712c71: kevent(0xB, 0x0, 0x0)

 $= 1 \ 0$ 

```
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)
                                                          = 90
84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)
                                                       = 0.0
84911/0x7129e9: sendto(0xC, 0x700003B43E17, 0x1)
                                                       = 10
84911/0x7129df: poll(0x7FF7B2EC6EE0, 0x1, 0xFFFFFFFFFFFFFF)
                                                                    = 1.0
84911/0x7129df: recvfrom(0xD, 0x7FF7B2EC6EE7, 0x1)
                                                         = 1.0
84911/0x7129df: poll(0x7FF7B2EC6EE0, 0x1, 0x0)
                                                  = 0.0
84911/0x7129df: sendto(0x9, 0x7FF7B2EC6F57, 0x1)
                                                       = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                        = 1 \ 0
84911/0x7129e9: kevent(0xB, 0x700003B43E10, 0x1)
                                                       = 0.0
84911/0x7129e9: sendto(0x13, 0x7FE2E9809000, 0xA)
                                                       = 100
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                 = 0.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84911/0x7129e9: kevent(0xB, 0x700003B43EC0, 0x1)
                                                       = 0.0
84926/0x712c71: recvfrom(0x12, 0x7F7E6C008A08, 0x2000)
                                                           = 100
84926/0x712c71: sendto(0x10, 0x70000E767E17, 0x1)
                                                       = 1.0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                   = 1.0
84926/0x712c6e: recvfrom(0x11, 0x7FF7B9B58167, 0x1)
                                                        = 1.0
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0)
                                                 = 0.0
84926/0x712c6e: sendto(0x9, 0x7FF7B9B58157, 0x1)
                                                       = 1.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                        = 10
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
84926/0x712c6e: poll(0x7FF7B9B58160, 0x1, 0x0)
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                        = 10
84926/0x712c71: kevent(0xB, 0x70000E767E10, 0x1)
                                                       = 0.0
84926/0x712c6e: sendto(0x6, 0x7FF7B9B58297, 0x1)
                                                       = 1.0
84926/0x712c71: sendto(0x12, 0x7F7E6C808200, 0x6)
                                                       = 6.0
84926/0x712c70: kevent(0x8, 0x0, 0x0)
                                       = 10
84926/0x712c71: sendto(0x10, 0x70000E767D97, 0x1)
                                                       = 10
84926/0x712c70: poll(0x70000E6E4E20, 0x1, 0x0)
```

```
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
84926/0x712c70: recvfrom(0x7, 0x70000E6E4E27, 0x1)
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)
                                                       = 6.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                 = 0.0
84926/0x712c70: kevent(0x8, 0x70000E6E4DE0, 0x1)
                                                       = 0.0
84911/0x7129e9: sendto(0xC, 0x700003B43E17, 0x1)
                                                       = 1.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
                                       = 1.0
84911/0x7129df: poll(0x7FF7B2EC6FE0, 0x1, 0xFFFFFFFFFFFFFF)
                                                                    = 1.0
84926/0x712c71: kevent(0xB, 0x70000E767EC0, 0x1)
                                                      = 0.0
84926/0x712c70: poll(0x70000E6E4E20, 0x1, 0x0)
                                                = 0.0
84926/0x712c70: kevent(0x8, 0x0, 0x0)
                                       = 1.0
84911/0x7129df: recvfrom(0xD, 0x7FF7B2EC6FE7, 0x1)
                                                        = 1.0
84926/0x712c70: poll(0x70000E6E4DE0, 0x1, 0x0) = 1 0
84926/0x712c70: recvfrom(0x11, 0x70000E6E4DE7, 0x1)
                                                        = 1.0
84911/0x7129df: poll(0x7FF7B2EC6FE0, 0x1, 0x0) = 0 0
84926/0x712c70: sendto(0x9, 0x70000E6E4CD7, 0x1)
                                                       = 1.0
84926/0x712c71: kevent(0xB, 0x0, 0x0)
84911/0x7129df: poll(0x7FF7B2EC6FA0, 0x1, 0x0)
                                                 = 0.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                 = 1.0
84926/0x712c70: poll(0x70000E6E4DE0, 0x1, 0x0)
                                                 = 0.0
84911/0x7129df: sendto(0x9, 0x7FF7B2EC6FD7, 0x1)
                                                       = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                       = 1.0
84926/0x712c71: recvfrom(0xA, 0x70000E767E27, 0x1)
                                                        = 10
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
84926/0x712c71: sendto(0x10, 0x70000E767C97, 0x1)
                                                       = 1.0
84911/0x7129df: sendto(0x6, 0x7FF7B2EC7117, 0x1)
                                                       = 1 \ 0
84926/0x712c70: kevent(0x8, 0x0, 0x0)
                                       = 1.0
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                        = 1.0
84926/0x712c71: kevent(0xB, 0x70000E767CA0, 0x1)
                                                       = 0.0
84911/0x7129e8: kevent(0x8, 0x0, 0x0)
                                       = 1.0
84926/0x712c70: poll(0x70000E6E4DE0, 0x1, 0x0)
84911/0x7129e9: kevent(0xB, 0x700003B43DF0, 0x1)
```

```
84911/0x7129e8: poll(0x700003AC0E20, 0x1, 0x0)
84911/0x7129df: sendto(0xC, 0x7FF7B2EC7057, 0x1)
                                                        = 1.0
84926/0x712c71: close(0x12)
                                = 0.0
84926/0x712c70: recvfrom(0x11, 0x70000E6E4DE7, 0x1)
                                                         = 1.0
84911/0x7129df: sendto(0xE, 0x7FF7B2EC7057, 0x1)
                                                        = 1.0
84911/0x7129e8: recvfrom(0x7, 0x700003AC0E27, 0x1)
                                                         = 1.0
84911/0x7129df: sendto(0x10, 0x7FF7B2EC7057, 0x1)
                                                        = 1.0
84911/0x7129e9: close(0x12)
                                = 0.0
84911/0x7129e8: kevent(0x8, 0x700003AC0DE0, 0x1)
                                                        = 0.0
84926/0x712c70: poll(0x70000E6E4DE0, 0x1, 0x0)
                                                  = 0.0
84911/0x7129e8: kevent(0x8, 0x700003AC0DE0, 0x1)
                                                        = 0.0
84911/0x7129e9: kevent(0xB, 0x700003B43E10, 0x1)
                                                        = 0.0
84926/0x712c71: poll(0x70000E767E20, 0x1, 0x0)
                                                  = 0.0
84926/0x712c70: kevent(0x8, 0x70000E6E4E90, 0x1)
                                                        = 0.0
84911/0x7129e8: kevent(0x8, 0x700003AC0DA0, 0x1)
                                                        = 0.0
84911/0x7129e9: kevent(0xB, 0x700003B43E00, 0x1)
                                                        = 0.0
84911/0x7129e8: close(0x10)
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                  = 0.0
84911/0x7129e8: close(0x11)
                                = 0.0
84926/0x712c70: sendto(0x6, 0x70000E6E4E17, 0x1)
                                                        = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84926/0x712c70: close(0x10)
                                = 0.0
84911/0x7129e8: kevent(0x8, 0x700003AC0DE0, 0x1)
                                                        = 0.0
84911/0x7129e9: recvfrom(0x13, 0x7FE2E980B008, 0x2000)
                                                           = 0 \ 0
84926/0x712c70: close(0x11)
                                = 0 \ 0
84911/0x7129e8: kevent(0x8, 0x700003AC0DA0, 0x1)
                                                        = 0 \ 0
84911/0x7129e9: kevent(0xB, 0x700003B43DE0, 0x1)
                                                        = 0.0
84911/0x7129e8: close(0xE)
                                = 0.0
84926/0x712c70: kevent(0x8, 0x0, 0x0)
                                        = 1.0
84911/0x7129e8: close(0xF)
                                = 0 \ 0
84911/0x7129e9: close(0x13)
84926/0x712c70: poll(0x70000E6E4E20, 0x1, 0x0)
```

```
84911/0x7129e8: poll(0x700003AC0E20, 0x1, 0x0)
84926/0x712c70: recvfrom(0x7, 0x70000E6E4E27, 0x1)
                                                        = 1.0
84911/0x7129e8: kevent(0x8, 0x0, 0x0)
                                        = 1.0
84911/0x7129e8: poll(0x700003AC0DE0, 0x1, 0x0) = 1 0
84911/0x7129e8: recvfrom(0xD, 0x700003AC0DE7, 0x1)
                                                         = 1.0
84926/0x712c70: poll(0x70000E6E4E20, 0x1, 0x0)
                                                 = 0.0
84911/0x7129e8: sendto(0x9, 0x700003AC0CD7, 0x1)
                                                       = 1.0
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
                                        = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                 = 1.0
84911/0x7129e8: poll(0x700003AC0DE0, 0x1, 0x0)
                                                  = 0.0
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                        = 1 \ 0
84911/0x7129e9: sendto(0xC, 0x700003B43D97, 0x1)
                                                       = 1.0
84911/0x7129e8: kevent(0x8, 0x0, 0x0)
                                        = 1.0
84911/0x7129e8: poll(0x700003AC0DE0, 0x1, 0x0)
                                                  = 1.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                 = 0.0
84911/0x7129e8: recvfrom(0xD, 0x700003AC0DE7, 0x1)
                                                         = 10
84911/0x7129e8: poll(0x700003AC0DE0, 0x1, 0x0)
84911/0x7129e8: kevent(0x8, 0x700003AC0E90, 0x1)
                                                       = 0.0
84911/0x7129e8: sendto(0x6, 0x700003AC0DD7, 0x1)
                                                        = 1.0
84911/0x7129e8: close(0xC)
                                = 0.0
84911/0x7129e8: close(0xD)
                                = 0.0
84911/0x7129e8: kevent(0x8, 0x0, 0x0)
                                        = 1.0
84911/0x7129e8: poll(0x700003AC0E20, 0x1, 0x0)
84911/0x7129e8: recvfrom(0x7, 0x700003AC0E27, 0x1)
84911/0x7129e8: sendto(0x3, 0x700003AC0D97, 0x1)
                                                       = 10
84911/0x7129e8: kevent(0x8, 0x700003AC0DF0, 0x1)
                                                        = 0 \ 0
84911/0x7129df: poll(0x7FF7B2EC70E0, 0x1, 0xFFFFFFFFFFFFFFF)
                                                                    = 1.0
84911/0x7129e8: poll(0x700003AC0E20, 0x1, 0x0) = 0 0
84911/0x7129e8: __disable_threadsignal(0x1, 0x0, 0x0)
                                                     = 0.0
84911/0x7129df: recvfrom(0x4, 0x7FF7B2EC70E7, 0x1)
                                                        = 10
84911/0x7129df: sendto(0x9, 0x7FF7B2EC7017, 0x1)
84911/0x7129e9: kevent(0xB, 0x0, 0x0)
```

```
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
84911/0x7129e9: recvfrom(0xA, 0x700003B43E27, 0x1)
                                                           = 1 \ 0
84911/0x7129e9: kevent(0xB, 0x700003B43DE0, 0x1)
                                                          = 0.0
84911/0x7129e9: poll(0x700003B43E20, 0x1, 0x0)
                                                   = 0.0
84911/0x7129e9: \ \_\_disable\_threadsignal(0x1, 0x0, 0x0)
                                                        = 0.0
84911/0x7129e9: ulock_wake(0x1000002, 0x700003B46034, 0x0)
                                                                   = 0 \ 0
84911/0x7129df: ulock_wait(0x1020002, 0x700003B46034, 0x90B)
                                                                    = 0.0
84911/0x7129df: close(0xB)
                                 = 0.0
84911/0x7129df: close(0x9)
84911/0x7129df: close(0xA)
                                 = 0.0
84911/0x7129df: close(0x8)
                                 = 0 \ 0
84911/0x7129df: close(0x6)
                                 = 0 \ 0
84911/0x7129df: close(0x7)
                                 = 0.0
84911/0x7129df: close(0x5)
                                 = 0.0
84911/0x7129df: close(0x3)
                                 = 0 \ 0
84911/0x7129df: close(0x4)
84911/0x7129df: lseek(0x0, 0xFFFFFFFFFFFFFF, 0x1)
                                                           = 20657735 0
```

## Вывод

В результате выполнения лабораторной работы я понял важность отслеживания системных вызовов при отладке программы.