

曾俊宏

```
bash - ddmln@henri ~$ bash - henrybear32 ~$ bash - henrybear32 ~$
henrybear327@online_ide:~/workspace $ strace /bin/ls
execve("/bin/ls", ["/bin/ls"], [/var 73 vars */]) = 0
brk(0) = 0x9bc000
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871ab1000
access("/etc/ld.so.preload", R_OK) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/tls/x86_64/libselinux.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/tls/libselinux.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/x86_64/libselinux.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/libselinux.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=63055, ...}) = 0
mmap(NULL, 63055, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa1000
close(3) = 0
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
open("/lib/x86_64-linux-gnu/libselinux.so.1", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0-\0\1\0\0\0\0\0\0\0\0\0\0\0\0\0... 832) = 832
fstat(3, {st_mode=S_IFREG|0644, st_size=134296, ...}) = 0
mmap(NULL, 2238192, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fc87166e000
mprotect(0x7fc87166e000, 2093056, PROT_NONE) = 0
mmap(0x7fc87188d000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1f000) = 0x7fc87188d000
mmap(0x7fc87188f000, 5872, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7fc87188f000
close(3) = 0
open("~/c9/local/lib/tls/x86_64/libacl.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/tls/libacl.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/x86_64/libacl.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/libacl.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
open("/lib/x86_64-linux-gnu/libacl.so.1", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0-\0\1\0\0\0\0\0\0\0\0\0\0\0\0\0... 832) = 832
fstat(3, {st_mode=S_IFREG|0644, st_size=31168, ...}) = 0
mmap(NULL, 2126336, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fc871466000
mprotect(0x7fc871466000, 2093056, PROT_NONE) = 0
mmap(0x7fc87166c000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x6000) = 0x7fc87166c000
close(3) = 0
open("~/c9/local/lib/tls/x86_64/libc.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/tls/libc.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/x86_64/libc.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/libc.so.6", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
open("/lib/x86_64-linux-gnu/libc.so.6", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0-\0\1\0\0\0\0\0\0\0\0\0\0\0\0\0... 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=1840928, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871aa0000
mmap(NULL, 3949248, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fc8710a1000
mprotect(0x7fc87125c000, 2093056, PROT_NONE) = 0
mmap(0x7fc87145b000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1ba000) = 0x7fc87145b000
mmap(0x7fc871461000, 17088, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7fc871461000
close(3) = 0
open("~/c9/local/lib/tls/x86_64/libpcr.so.3", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/tls/libpcr.so.3", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/x86_64/libpcr.so.3", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/libpcr.so.3", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
open("/lib/x86_64-linux-gnu/libpcr.so.3", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0-\0\1\0\0\0\0\0\0\0\0\0\0\0\0\0... 832) = 832
fstat(3, {st_mode=S_IFREG|0644, st_size=252032, ...}) = 0
mmap(NULL, 2347200, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fc870e63000
mprotect(0x7fc870ea0000, 2093056, PROT_NONE) = 0
mmap(0x7fc87109f000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0xc000) = 0x7fc87109f000
close(3) = 0
open("~/c9/local/lib/tls/x86_64/libdl.so.2", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/tls/libdl.so.2", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/x86_64/libdl.so.2", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/libdl.so.2", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
open("/lib/x86_64-linux-gnu/libdl.so.2", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0-\0\1\0\0\0\0\0\0\0\0\0\0\0\0\0... 832) = 832
fstat(3, {st_mode=S_IFREG|0644, st_size=14664, ...}) = 0
mmap(NULL, 2109744, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fc870cf5000
mprotect(0x7fc870cc2000, 2093056, PROT_NONE) = 0
mmap(0x7fc870ee1000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x2000) = 0x7fc870ee1000
close(3) = 0
open("~/c9/local/lib/tls/x86_64/libattr.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/tls/libattr.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/x86_64/libattr.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("~/c9/local/lib/libattr.so.1", O_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
open("/lib/x86_64-linux-gnu/libattr.so.1", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\3\0-\0\1\0\0\0\0\0\0\0\0\0\0\0\0\0... 832) = 832
fstat(3, {st_mode=S_IFREG|0644, st_size=18624, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871a9f000
```

```

fstat(3, {st_mode=S_IFREG|0644, st_size=16024, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871a9f000
mmap(NULL, 2113760, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fc870a5a000
mprotect(0x7fc870a5e000, 2093056, PROT_NONE) = 0
mmap(0x7fc870c5d000, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x3000) = 0x7fc870c5d000
close(3) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871a9e000
mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871a9c000
arch_prctl(ARCH_SET_FS, 0x7fc871a9c840) = 0
mprotect(0x7fc87145b000, 16384, PROT_READ) = 0
mprotect(0x7fc870c5d000, 4096, PROT_READ) = 0
mprotect(0x7fc870e61000, 4096, PROT_READ) = 0
mprotect(0x7fc87109f000, 4096, PROT_READ) = 0
mprotect(0x7fc87166c000, 4096, PROT_READ) = 0
mprotect(0x7fc87188d000, 4096, PROT_READ) = 0
mprotect(0x619000, 4096, PROT_READ) = 0
mprotect(0x7fc871ab3000, 4096, PROT_READ) = 0
munmap(0x7fc871aa1000, 63055) = 0
statfs("/sys/fs/selinux", 0x7ffdd699c790) = -1 ENOENT (No such file or directory)
statfs("/selinux", 0x7ffdd699c790) = -1 ENOENT (No such file or directory)
brk(0) = 0x7fc000
brk(0x7fc000) = 0x7fc000
open("/proc/filesystems", 0_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=0, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871ab0000
read(3, "nodev\tsysfs\nnodev\trootfs\nnodev\ttr"... , 1024) = 346
read(3, "", 1024) = 0
close(3) = 0
munmap(0x7fc871ab0000, 4096) = 0
open("/usr/lib/locale/locale-archive", 0_RDONLY|O_CLOEXEC) = -1 ENOENT (No such file or directory)
open("/usr/share/locale/locale.alias", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=2570, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871ab0000
read(3, "# Locale name alias data base.\n"... , 4096) = 2570
read(3, "", 4096) = 0
close(3) = 0
munmap(0x7fc871ab0000, 4096) = 0
open("/usr/lib/locale/C.UTF-8/LC_IDENTIFICATION", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=168, ...}) = 0
mmap(NULL, 168, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871ab0000
close(3) = 0
open("/usr/lib/locale/x86_64-linux-gnu/gconv/gconv-modules.cache", 0_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=26258, ...}) = 0
mmap(NULL, 26258, PROT_READ, MAP_SHARED, 3, 0) = 0x7fc871aa9000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_MEASUREMENT", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=23, ...}) = 0
mmap(NULL, 23, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa8000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_TELEPHONE", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=47, ...}) = 0
mmap(NULL, 47, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa7000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_ADDRESS", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=131, ...}) = 0
mmap(NULL, 131, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa6000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_NAME", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=62, ...}) = 0
mmap(NULL, 62, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa5000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_PAPER", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=34, ...}) = 0
mmap(NULL, 34, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa4000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_MESSAGES", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFDIR|0755, st_size=4096, ...}) = 0
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_MESSAGES/SYS_LC_MESSAGES", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=48, ...}) = 0
mmap(NULL, 48, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa3000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_MONETARY", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=270, ...}) = 0
mmap(NULL, 270, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa2000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_COLLATE", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=1501202, ...}) = 0
mmap(NULL, 1501202, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc87192d000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_TIME", 0_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=2454, ...}) = 0

```

```

fstat(3, {st_mode=S_IFREG|0644, st_size=1501202, ...}) = 0
mmap(NULL, 1501202, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc87192d000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_TIME", O_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=2454, ...}) = 0
mmap(NULL, 2454, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871aa1000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_NUMERIC", O_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=50, ...}) = 0
mmap(NULL, 50, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc87192c000
close(3) = 0
open("/usr/lib/locale/C.UTF-8/LC_CTYPE", O_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=151984, ...}) = 0
mmap(NULL, 151984, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fc871906000
close(3) = 0
ioctl(1, SNDCTL_TMR_TIMEBASE or SNDRV_TIMER_IOCTL_NEXT_DEVICE or TCGETS, {B38400 opost isig icanon echo ...}) = 0
ioctl(1, TIOCGWINSZ, {ws_row=36, ws_col=135, ws_xpixel=0, ws_ypixel=0}) = 0
openat(AT_FDCWD, ".", O_RDONLY|O_NONBLOCK|O_DIRECTORY|O_CLOEXEC) = 3
getdents(3, /* 8 entries */, 32768) = 248
getdents(3, /* 0 entries */, 32768) = 0
close(3) = 0
fstat(1, {st_mode=S_IFCHR|0620, st_rdev=makedev(136, 3), ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fc871905000
write(1, "CCU-2017-Spring-SP Competitive-...", 66CCU-2017-Spring-SP Competitive-Programming frog nodejs week10
) = 66
close(1) = 0
munmap(0x7fc871905000, 4096) = 0
close(2) = 0
exit_group(0) = ?
+++ exited with 0 +++

```

Question 2: 拿掉 symbol table，觀察大小變化

```

124K -rwxr-xr-x 1 ubuntu ubuntu 124K Mar 29 01:18 ls
[ubuntu@18a721898ffa:~$ ls -lhs
total 124K
124K -rwxr-xr-x 1 ubuntu ubuntu 124K Mar 29 01:18 ls
[ubuntu@18a721898ffa:~$ strip ls
[ubuntu@18a721898ffa:~$ ls -lhs
total 124K
124K -rwxr-xr-x 1 ubuntu ubuntu 124K Mar 29 01:21 ls

```

Question 3: 觀察 ls 用到的函式庫

```
henrybear327@online_ide:~/workspace/lsls $ objdump -R ls
```

```
ls:      file format elf64-x86-64
```

DYNAMIC RELOCATION RECORDS

OFFSET	TYPE	VALUE
0000000000619ff8	R_X86_64_GLOB_DAT	__gmon_start__
000000000061a600	R_X86_64_COPY	__progname
000000000061a610	R_X86_64_COPY	stdout
000000000061a620	R_X86_64_COPY	optind
000000000061a640	R_X86_64_COPY	optarg
000000000061a648	R_X86_64_COPY	__progname_full
000000000061a650	R_X86_64_COPY	stderr
000000000061a018	R_X86_64_JUMP_SLOT	__ctype_toupper_loc
000000000061a020	R_X86_64_JUMP_SLOT	__uflow
000000000061a028	R_X86_64_JUMP_SLOT	getenv
000000000061a030	R_X86_64_JUMP_SLOT	sigprocmask
000000000061a038	R_X86_64_JUMP_SLOT	raise
000000000061a040	R_X86_64_JUMP_SLOT	free
000000000061a048	R_X86_64_JUMP_SLOT	localtime
000000000061a050	R_X86_64_JUMP_SLOT	__mempcpy_chk
000000000061a058	R_X86_64_JUMP_SLOT	abort
000000000061a060	R_X86_64_JUMP_SLOT	__errno_location
000000000061a068	R_X86_64_JUMP_SLOT	strncmp
000000000061a070	R_X86_64_JUMP_SLOT	_exit
000000000061a078	R_X86_64_JUMP_SLOT	strcpy
000000000061a080	R_X86_64_JUMP_SLOT	__fpending
000000000061a088	R_X86_64_JUMP_SLOT	isatty
000000000061a090	R_X86_64_JUMP_SLOT	sigaction
000000000061a098	R_X86_64_JUMP_SLOT	iswcntrl
000000000061a0a0	R_X86_64_JUMP_SLOT	wcswidth
000000000061a0a8	R_X86_64_JUMP_SLOT	localeconv
000000000061a0b0	R_X86_64_JUMP_SLOT	mbstowcs
000000000061a0b8	R_X86_64_JUMP_SLOT	readlink
000000000061a0c0	R_X86_64_JUMP_SLOT	clock_gettime
000000000061a0c8	R_X86_64_JUMP_SLOT	textdomain
000000000061a0d0	R_X86_64_JUMP_SLOT	fclose
000000000061a0d8	R_X86_64_JUMP_SLOT	opendir
000000000061a0e0	R_X86_64_JUMP_SLOT	getpwuid
000000000061a0e8	R_X86_64_JUMP_SLOT	bindtextdomain
000000000061a0f0	R_X86_64_JUMP_SLOT	stpcpy

000000000061a0f8	R_X86_64_JUMP_SLOT	dcgettext
000000000061a100	R_X86_64_JUMP_SLOT	__ctype_get_mb_cur_max
000000000061a108	R_X86_64_JUMP_SLOT	strlen
000000000061a110	R_X86_64_JUMP_SLOT	__lxstat
000000000061a118	R_X86_64_JUMP_SLOT	__stack_chk_fail
000000000061a120	R_X86_64_JUMP_SLOT	getopt_long
000000000061a128	R_X86_64_JUMP_SLOT	mbrtowc
000000000061a130	R_X86_64_JUMP_SLOT	strchr
000000000061a138	R_X86_64_JUMP_SLOT	getgrgid
000000000061a140	R_X86_64_JUMP_SLOT	_obstack_begin
000000000061a148	R_X86_64_JUMP_SLOT	__overflow
000000000061a150	R_X86_64_JUMP_SLOT	strrchr
000000000061a158	R_X86_64_JUMP_SLOT	fgetfilecon
000000000061a160	R_X86_64_JUMP_SLOT	lseek
000000000061a168	R_X86_64_JUMP_SLOT	gettimeofday
000000000061a170	R_X86_64_JUMP_SLOT	__assert_fail
000000000061a178	R_X86_64_JUMP_SLOT	__strtoul_internal
000000000061a180	R_X86_64_JUMP_SLOT	fnmatch
000000000061a188	R_X86_64_JUMP_SLOT	memset
000000000061a190	R_X86_64_JUMP_SLOT	acl_get_tag_type
000000000061a198	R_X86_64_JUMP_SLOT	fscanf
000000000061a1a0	R_X86_64_JUMP_SLOT	ioctl
000000000061a1a8	R_X86_64_JUMP_SLOT	close
000000000061a1b0	R_X86_64_JUMP_SLOT	acl_extended_file
000000000061a1b8	R_X86_64_JUMP_SLOT	closedir
000000000061a1c0	R_X86_64_JUMP_SLOT	__libc_start_main
000000000061a1c8	R_X86_64_JUMP_SLOT	memcmp
000000000061a1d0	R_X86_64_JUMP_SLOT	_setjmp
000000000061a1d8	R_X86_64_JUMP_SLOT	fputs_unlocked
000000000061a1e0	R_X86_64_JUMP_SLOT	calloc
000000000061a1e8	R_X86_64_JUMP_SLOT	lgetfilecon
000000000061a1f0	R_X86_64_JUMP_SLOT	strcmp
000000000061a1f8	R_X86_64_JUMP_SLOT	signal
000000000061a200	R_X86_64_JUMP_SLOT	dirfd
000000000061a208	R_X86_64_JUMP_SLOT	getpwnam
000000000061a210	R_X86_64_JUMP_SLOT	__memcpy_chk
000000000061a218	R_X86_64_JUMP_SLOT	sigemptyset
000000000061a220	R_X86_64_JUMP_SLOT	__gmon_start__
000000000061a228	R_X86_64_JUMP_SLOT	memcpy
000000000061a230	R_X86_64_JUMP_SLOT	getgrnam

```

0000000000061a238 R_X86_64_JUMP_SLOT getgrnam
0000000000061a238 R_X86_64_JUMP_SLOT getfilecon
0000000000061a240 R_X86_64_JUMP_SLOT fileno
0000000000061a248 R_X86_64_JUMP_SLOT tcgetpgrp
0000000000061a250 R_X86_64_JUMP_SLOT __xstat
0000000000061a258 R_X86_64_JUMP_SLOT readdir
0000000000061a260 R_X86_64_JUMP_SLOT wcwidth
0000000000061a268 R_X86_64_JUMP_SLOT malloc
0000000000061a270 R_X86_64_JUMP_SLOT fflush
0000000000061a278 R_X86_64_JUMP_SLOT nl_langinfo
0000000000061a280 R_X86_64_JUMP_SLOT ungetc
0000000000061a288 R_X86_64_JUMP_SLOT __fxstat
0000000000061a290 R_X86_64_JUMP_SLOT strcoll
0000000000061a298 R_X86_64_JUMP_SLOT mktime
0000000000061a2a0 R_X86_64_JUMP_SLOT __freading
0000000000061a2a8 R_X86_64_JUMP_SLOT fwrite_unlocked
0000000000061a2b0 R_X86_64_JUMP_SLOT acl_get_entry
0000000000061a2b8 R_X86_64_JUMP_SLOT realloc
0000000000061a2c0 R_X86_64_JUMP_SLOT stpncpy
0000000000061a2c8 R_X86_64_JUMP_SLOT fdopen
0000000000061a2d0 R_X86_64_JUMP_SLOT setlocale
0000000000061a2d8 R_X86_64_JUMP_SLOT _obstack_newchunk
0000000000061a2e0 R_X86_64_JUMP_SLOT __printf_chk
0000000000061a2e8 R_X86_64_JUMP_SLOT strftime
0000000000061a2f0 R_X86_64_JUMP_SLOT memcpy
0000000000061a2f8 R_X86_64_JUMP_SLOT memmove
0000000000061a300 R_X86_64_JUMP_SLOT error
0000000000061a308 R_X86_64_JUMP_SLOT open
0000000000061a310 R_X86_64_JUMP_SLOT fseeko
0000000000061a318 R_X86_64_JUMP_SLOT strtoul
0000000000061a320 R_X86_64_JUMP_SLOT __cxa_atexit
0000000000061a328 R_X86_64_JUMP_SLOT wcstombs
0000000000061a330 R_X86_64_JUMP_SLOT freecon
0000000000061a338 R_X86_64_JUMP_SLOT sigismember
0000000000061a340 R_X86_64_JUMP_SLOT exit
0000000000061a348 R_X86_64_JUMP_SLOT fwrite
0000000000061a350 R_X86_64_JUMP_SLOT __fprintf_chk
0000000000061a358 R_X86_64_JUMP_SLOT fflush_unlocked
0000000000061a360 R_X86_64_JUMP_SLOT mbsinit
0000000000061a368 R_X86_64_JUMP_SLOT iswprint
0000000000061a370 R_X86_64_JUMP_SLOT sigaddset
0000000000061a378 R_X86_64_JUMP_SLOT strstr
0000000000061a380 R_X86_64_JUMP_SLOT __ctype_tolower_loc
0000000000061a388 R_X86_64_JUMP_SLOT __ctype_b_loc
0000000000061a390 R_X86_64_JUMP_SLOT __sprintf_chk

```