

CS35L-Lab 8: Dynamic Linking

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1 CS35L-Lab 8: Dynamic Linking

1.1 Step 1

We first created a C source file in the SEASnet server that computes `cos(sqrt(3.0))` and then prints it using `printf`.

Here is the source code of the program:

```
In [32]: WORKING_DIR=~ /CS35L/assign8"
         SERVER_ADD="classtzh@lnxsrv06.seas.ucla.edu"

In [33]: ssh -X $SERVER_ADD "cd $WORKING_DIR && cat mathComp.c"

#include <stdio.h>
#include <math.h>

int main() {
    printf("%.17g\n", cos(sqrt(3.0)));
    return 0;
}
```

Now we can compile it.

```
In [34]: ssh -X $SERVER_ADD "cd $WORKING_DIR && gcc mathComp.c -o mathComp"
```

1.2 Step 2

We will then check the dynamic libraries this program uses in SEASnet server.

```
In [35]: ssh -X $SERVER_ADD "cd $WORKING_DIR && ldd ./mathComp"

linux-vdso.so.1 => (0x00007ffcbabc1000)
libc.so.6 => /lib64/libc.so.6 (0x00007fa12da7e000)
/lib64/ld-linux-x86-64.so.2 (0x0000562ded003000)
```

1.3 Step 3

In addition, we would like to see what system calls used by this program. `strace` will help us achieve this goal.

In [36]: `ssh -X $SERVER_ADD "cd $WORKING_DIR && strace ./mathComp"`

```
execve("./mathComp", ["/mathComp"], [/* 15 vars */]) = 0
brk(NULL) = 0x21f1000
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fe938af4000
access("/etc/ld.so.preload", R_OK) = -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=154224, ...}) = 0
mmap(NULL, 154224, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fe938ace000
close(3) = 0
open("/lib64/libc.so.6", O_RDONLY|O_CLOEXEC) = 3
read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\20\35\2\0\0\0\0\0"... , 832) = 832
fstat(3, {st_mode=S_IFREG|0755, st_size=2127336, ...}) = 0
mmap(NULL, 3940800, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fe938511000
mprotect(0x7fe9386c9000, 2097152, PROT_NONE) = 0
mmap(0x7fe9388c9000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1b...) = 0x7fe9388c9000
mmap(0x7fe9388cf000, 16832, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7fe9388cf000
close(3) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fe938acd000
mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fe938acb000
arch_prctl(ARCH_SET_FS, 0x7fe938acb740) = 0
mprotect(0x7fe9388c9000, 16384, PROT_READ) = 0
mprotect(0x600000, 4096, PROT_READ) = 0
mprotect(0x7fe938af5000, 4096, PROT_READ) = 0
munmap(0x7fe938ace000, 154224) = 0
-0.16055653857469052
fstat(1, {st_mode=S_IFIFO|0600, st_size=0, ...}) = 0
mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7fe938af3000
write(1, "-0.16055653857469052\n", 21) = 21
exit_group(0) = ?
+++ exited with 0 +++
```

Because we know that dynamic libraries have suffix `.so`, to get all the system calls related to the dynamic libraries, we can simply `grep .so` in the output of the `strace`.

In [39]: `ssh -X $SERVER_ADD "cd $WORKING_DIR && strace ./mathComp 2>&1 | grep .so"`

```
access("/etc/ld.so.preload", R_OK) = -1 ENOENT (No such file or directory)
open("/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3
open("/lib64/libc.so.6", O_RDONLY|O_CLOEXEC) = 3
```

Because both opened files are closed later, we will also count the `close` system call as part of the dynamic linking process.

```
In [40]: ssh -X $SERVER_ADD "cd $WORKING_DIR && strace ./mathComp 2>&1 | grep close"
```

```
close(3)                = 0
close(3)                = 0
```

These system calls are related to dynamic linking because the programs need to open and get access to the codes stored in these shared libraries in the runtime. When the programs do not need them anymore, it closes them.

1.4 Step 4

We will then investigate a dozen or so commands in /usr/bin directory.

```
In [43]: ssh -X $SERVER_ADD "cd $WORKING_DIR && ./lddBIn.sh"
```

```
which: no smbpasswd in (/u/eng/class/classtzh/miniconda3/bin:/usr/local/bin:/usr/bin)
/usr/bin/Mail:
```

```
linux-vdso.so.1 => (0x00007ffc2fd6d000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007f2820fd6000)
libsmime3.so => /lib64/libsmime3.so (0x00007f2820daf000)
libnss3.so => /lib64/libnss3.so (0x00007f2820a84000)
libssl3.so => /lib64/libssl3.so (0x00007f2820838000)
libnspr4.so => /lib64/libnspr4.so (0x00007f28205fa000)
libplc4.so => /lib64/libplc4.so (0x00007f28203f4000)
libc.so.6 => /lib64/libc.so.6 (0x00007f2820031000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007f281fd49000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007f281fb15000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007f281f911000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007f281f703000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f281f4fe000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007f281f2fa000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007f281f0e0000)
libnssutil3.so => /lib64/libnssutil3.so (0x00007f281eeb2000)
libplds4.so => /lib64/libplds4.so (0x00007f281ecae000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f281ea92000)
libz.so.1 => /lib64/libz.so.1 (0x00007f281e87b000)
librt.so.1 => /lib64/librt.so.1 (0x00007f281e673000)
/lib64/ld-linux-x86-64.so.2 (0x000055b52de0e000)
libselenium.so.1 => /lib64/libselinux.so.1 (0x00007f281e44b000)
libpcrc.so.1 => /lib64/libpcrc.so.1 (0x00007f281e1e9000)
```

```
/usr/bin/arch:
```

```
linux-vdso.so.1 => (0x00007ffe742ec000)
libc.so.6 => /lib64/libc.so.6 (0x00007fe6a597d000)
/lib64/ld-linux-x86-64.so.2 (0x000055c64fb42000)
```

```
/usr/bin/cd-drive:
```

```
linux-vdso.so.1 => (0x00007ffe446ad000)
libiso9660.so.9 => /lib64/libiso9660.so.9 (0x00007f5f04d30000)
libcdio.so.15 => /lib64/libcdio.so.15 (0x00007f5f04b07000)
```

```

libm.so.6 => /lib64/libm.so.6 (0x00007f5f04804000)
libc.so.6 => /lib64/libc.so.6 (0x00007f5f04441000)
/lib64/ld-linux-x86-64.so.2 (0x000055d0c08ee000)
/usr/bin/createlang:
linux-vdso.so.1 => (0x00007ffce4dc5000)
libpq.so.5 => /lib64/libpq.so.5 (0x00007f93f10b2000)
libc.so.6 => /lib64/libc.so.6 (0x00007f93f0cef000)
libssl.so.10 => /lib64/libssl.so.10 (0x00007f93f0a7c000)
libcrypto.so.10 => /lib64/libcrypto.so.10 (0x00007f93f061b000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007f93f0333000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007f93f012e000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007f93efee1000)
libldap_r-2.4.so.2 => /lib64/libldap_r-2.4.so.2 (0x00007f93efc84000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f93efa67000)
/lib64/ld-linux-x86-64.so.2 (0x000055b8356d0000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007f93ef834000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f93ef630000)
libz.so.1 => /lib64/libz.so.1 (0x00007f93ef419000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007f93ef20b000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007f93ef007000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007f93eedec000)
liblber-2.4.so.2 => /lib64/liblber-2.4.so.2 (0x00007f93eebdd000)
libsasl2.so.3 => /lib64/libsasl2.so.3 (0x00007f93ee9c0000)
libssl3.so => /lib64/libssl3.so (0x00007f93ee773000)
libsmime3.so => /lib64/libsmime3.so (0x00007f93ee54c000)
libnss3.so => /lib64/libnss3.so (0x00007f93ee222000)
libnssutil3.so => /lib64/libnssutil3.so (0x00007f93edff4000)
libplds4.so => /lib64/libplds4.so (0x00007f93eddf0000)
libplc4.so => /lib64/libplc4.so (0x00007f93edbeb000)
libnspr4.so => /lib64/libnspr4.so (0x00007f93ed9ac000)
libselinux.so.1 => /lib64/libselinux.so.1 (0x00007f93ed785000)
libcrypt.so.1 => /lib64/libcrypt.so.1 (0x00007f93ed54d000)
librt.so.1 => /lib64/librt.so.1 (0x00007f93ed345000)
libpcre.so.1 => /lib64/libpcre.so.1 (0x00007f93ed0e2000)
libfreebl3.so => /lib64/libfreebl3.so (0x00007f93ecedf000)
/usr/bin/dm_zdump:
not a dynamic executable
/usr/bin/expect:
linux-vdso.so.1 => (0x00007ffc22f75000)
libexpect5.45.so => /lib64/libexpect5.45.so (0x00007f182c844000)
libtcl8.5.so => /lib64/libtcl8.5.so (0x00007f182c51c000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f182c317000)
libm.so.6 => /lib64/libm.so.6 (0x00007f182c015000)
libc.so.6 => /lib64/libc.so.6 (0x00007f182bc52000)
libutil.so.1 => /lib64/libutil.so.1 (0x00007f182ba4e000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f182b832000)
/lib64/ld-linux-x86-64.so.2 (0x0000563a14b01000)
/usr/bin/gdk-pixbuf-query-loaders-64:

```

```

linux-vdso.so.1 => (0x00007ffff84c1000)
libgdk_pixbuf-2.0.so.0 => /lib64/libgdk_pixbuf-2.0.so.0 (0x00007fc68a9f1000)
libgmodule-2.0.so.0 => /lib64/libgmodule-2.0.so.0 (0x00007fc68a7ed000)
libgio-2.0.so.0 => /lib64/libgio-2.0.so.0 (0x00007fc68a458000)
libgobject-2.0.so.0 => /lib64/libgobject-2.0.so.0 (0x00007fc68a208000)
libglib-2.0.so.0 => /lib64/libglib-2.0.so.0 (0x00007fc689ef6000)
libpng15.so.15 => /lib64/libpng15.so.15 (0x00007fc689cca000)
libm.so.6 => /lib64/libm.so.6 (0x00007fc6899c8000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007fc6897ac000)
libc.so.6 => /lib64/libc.so.6 (0x00007fc6893e8000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007fc6891e4000)
libpcrc.so.1 => /lib64/libpcrc.so.1 (0x00007fc688f82000)
libffi.so.6 => /lib64/libffi.so.6 (0x00007fc688d79000)
libz.so.1 => /lib64/libz.so.1 (0x00007fc688b63000)
libselinux.so.1 => /lib64/libselinux.so.1 (0x00007fc68893c000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007fc688721000)
libmount.so.1 => /lib64/libmount.so.1 (0x00007fc6884df000)
/lib64/ld-linux-x86-64.so.2 (0x00005606b68d6000)
libblkid.so.1 => /lib64/libblkid.so.1 (0x00007fc68829f000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007fc68809a000)
/usr/bin/gpic:
linux-vdso.so.1 => (0x00007fff759db000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007f189b866000)
libm.so.6 => /lib64/libm.so.6 (0x00007f189b564000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f189b34d000)
libc.so.6 => /lib64/libc.so.6 (0x00007f189af8a000)
/lib64/ld-linux-x86-64.so.2 (0x0000561a67346000)
/usr/bin/gvfs-save:
linux-vdso.so.1 => (0x00007ffed97ee000)
libgmodule-2.0.so.0 => /lib64/libgmodule-2.0.so.0 (0x00007f3a3d02b000)
libgio-2.0.so.0 => /lib64/libgio-2.0.so.0 (0x00007f3a3cc97000)
libgobject-2.0.so.0 => /lib64/libgobject-2.0.so.0 (0x00007f3a3ca46000)
libglib-2.0.so.0 => /lib64/libglib-2.0.so.0 (0x00007f3a3c734000)
libutil.so.1 => /lib64/libutil.so.1 (0x00007f3a3c531000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f3a3c314000)
libc.so.6 => /lib64/libc.so.6 (0x00007f3a3bf51000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f3a3bd4d000)
libpcrc.so.1 => /lib64/libpcrc.so.1 (0x00007f3a3baea000)
libffi.so.6 => /lib64/libffi.so.6 (0x00007f3a3b8e2000)
libz.so.1 => /lib64/libz.so.1 (0x00007f3a3b6cc000)
libselinux.so.1 => /lib64/libselinux.so.1 (0x00007f3a3b4a4000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007f3a3b28a000)
libmount.so.1 => /lib64/libmount.so.1 (0x00007f3a3b048000)
/lib64/ld-linux-x86-64.so.2 (0x00005650e4d3e000)
libblkid.so.1 => /lib64/libblkid.so.1 (0x00007f3a3ae08000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007f3a3ac03000)
/usr/bin/infokey:
linux-vdso.so.1 => (0x00007ffec5fe2000)

```

```

libc.so.6 => /lib64/libc.so.6 (0x00007f884b4cc000)
/lib64/ld-linux-x86-64.so.2 (0x000056252fe4f000)
/usr/bin/kbuildsysoca4:
linux-vdso.so.1 => (0x00007ffe86364000)
libkdeinit4_kbuildsysoca4.so => /lib64/libkdeinit4_kbuildsysoca4.so (0x00007fb4901a1000)
libkdeui.so.5 => /lib64/libkdeui.so.5 (0x00007fb48fb36000)
libkdecore.so.5 => /lib64/libkdecore.so.5 (0x00007fb48f662000)
libQtDBus.so.4 => /lib64/libQtDBus.so.4 (0x00007fb48f3e4000)
libQtCore.so.4 => /lib64/libQtCore.so.4 (0x00007fb48eef9000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007fb48ecd000)
libQtGui.so.4 => /lib64/libQtGui.so.4 (0x00007fb48e001000)
libQtSvg.so.4 => /lib64/libQtSvg.so.4 (0x00007fb48dda9000)
libQtXml.so.4 => /lib64/libQtXml.so.4 (0x00007fb48db64000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007fb48d85c000)
libm.so.6 => /lib64/libm.so.6 (0x00007fb48d55a000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007fb48d343000)
libc.so.6 => /lib64/libc.so.6 (0x00007fb48cf80000)
libSM.so.6 => /lib64/libSM.so.6 (0x00007fb48cd78000)
libICE.so.6 => /lib64/libICE.so.6 (0x00007fb48cb5b000)
libX11.so.6 => /lib64/libX11.so.6 (0x00007fb48c81d000)
libXext.so.6 => /lib64/libXext.so.6 (0x00007fb48c60b000)
libXft.so.2 => /lib64/libXft.so.2 (0x00007fb48c3f4000)
libXau.so.6 => /lib64/libXau.so.6 (0x00007fb48c1f0000)
libXpm.so.4 => /lib64/libXpm.so.4 (0x00007fb48bfde000)
libqca.so.2 => /lib64/libqca.so.2 (0x00007fb48bcc5000)
libattica.so.0.4 => /lib64/libattica.so.0.4 (0x00007fb48b9cb000)
libQtNetwork.so.4 => /lib64/libQtNetwork.so.4 (0x00007fb48b685000)
libdbusmenu-qt.so.2 => /lib64/libdbusmenu-qt.so.2 (0x00007fb48b453000)
libXtst.so.6 => /lib64/libXtst.so.6 (0x00007fb48b24d000)
libXcursor.so.1 => /lib64/libXcursor.so.1 (0x00007fb48b042000)
libXfixes.so.3 => /lib64/libXfixes.so.3 (0x00007fb48ae3b000)
libXrender.so.1 => /lib64/libXrender.so.1 (0x00007fb48ac30000)
libz.so.1 => /lib64/libz.so.1 (0x00007fb48aa1a000)
libbz2.so.1 => /lib64/libbz2.so.1 (0x00007fb48a809000)
liblzma.so.5 => /lib64/liblzma.so.5 (0x00007fb48a5e3000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007fb48a3c9000)
libfam.so.0 => /lib64/libfam.so.0 (0x00007fb48a1c0000)
libdbus-1.so.3 => /lib64/libdbus-1.so.3 (0x00007fb489f78000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007fb489d74000)
libgthread-2.0.so.0 => /lib64/libgthread-2.0.so.0 (0x00007fb489b71000)
libglib-2.0.so.0 => /lib64/libglib-2.0.so.0 (0x00007fb48985f000)
librt.so.1 => /lib64/librt.so.1 (0x00007fb489657000)
/lib64/ld-linux-x86-64.so.2 (0x000055eb2e6c4000)
libpng15.so.15 => /lib64/libpng15.so.15 (0x00007fb48942b000)
libfreetype.so.6 => /lib64/libfreetype.so.6 (0x00007fb489185000)
libgobject-2.0.so.0 => /lib64/libgobject-2.0.so.0 (0x00007fb488f35000)
libXi.so.6 => /lib64/libXi.so.6 (0x00007fb488d24000)
libXrandr.so.2 => /lib64/libXrandr.so.2 (0x00007fb488b19000)

```

```

libXinerama.so.1 => /lib64/libXinerama.so.1 (0x00007fb488916000)
libfontconfig.so.1 => /lib64/libfontconfig.so.1 (0x00007fb4886d8000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007fb4884d3000)
libxcb.so.1 => /lib64/libxcb.so.1 (0x00007fb4882aa000)
libssl.so.10 => /lib64/libssl.so.10 (0x00007fb488038000)
libcrypto.so.10 => /lib64/libcrypto.so.10 (0x00007fb487bd6000)
libpcres.so.1 => /lib64/libpcres.so.1 (0x00007fb487974000)
libffi.so.6 => /lib64/libffi.so.6 (0x00007fb48776b000)
libexpat.so.1 => /lib64/libexpat.so.1 (0x00007fb487541000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007fb4872f3000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007fb48700b000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007fb486e07000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007fb486bd3000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007fb4869c5000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007fb4867c1000)
libselenium.so.1 => /lib64/libselinux.so.1 (0x00007fb486599000)
/usr/bin/ksplashsimple:
linux-vdso.so.1 => (0x00007fff0bbbd000)
libSM.so.6 => /lib64/libSM.so.6 (0x00007fc101a1b000)
libICE.so.6 => /lib64/libICE.so.6 (0x00007fc1017ff000)
libX11.so.6 => /lib64/libX11.so.6 (0x00007fc1014c0000)
libXext.so.6 => /lib64/libXext.so.6 (0x00007fc1012ae000)
libXft.so.2 => /lib64/libXft.so.2 (0x00007fc101098000)
libXau.so.6 => /lib64/libXau.so.6 (0x00007fc100e93000)
libXdmcp.so.6 => /lib64/libXdmcp.so.6 (0x00007fc100c8d000)
libXpm.so.4 => /lib64/libXpm.so.4 (0x00007fc100a7b000)
libXinerama.so.1 => /lib64/libXinerama.so.1 (0x00007fc100877000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007fc10056f000)
libm.so.6 => /lib64/libm.so.6 (0x00007fc10026d000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007fc100056000)
libc.so.6 => /lib64/libc.so.6 (0x00007fc0ffc93000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007fc0ffa8e000)
libxcb.so.1 => /lib64/libxcb.so.1 (0x00007fc0ff865000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007fc0ff661000)
libfontconfig.so.1 => /lib64/libfontconfig.so.1 (0x00007fc0ff424000)
libfreetype.so.6 => /lib64/libfreetype.so.6 (0x00007fc0ff17d000)
libXrender.so.1 => /lib64/libXrender.so.1 (0x00007fc0fef72000)
/lib64/ld-linux-x86-64.so.2 (0x000055dc75894000)
libexpat.so.1 => /lib64/libexpat.so.1 (0x00007fc0fed47000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007fc0feb2b000)
/usr/bin/logname:
linux-vdso.so.1 => (0x00007fffd87e7000)
libc.so.6 => /lib64/libc.so.6 (0x00007fbb3c7e0000)
/lib64/ld-linux-x86-64.so.2 (0x000055610f55c9000)
/usr/bin/mkluatexfontdb:
not a dynamic executable
/usr/bin/nisdomainname:
linux-vdso.so.1 => (0x00007ffe3993a000)

```

```

libnsl.so.1 => /lib64/libnsl.so.1 (0x00007f181648a000)
libc.so.6 => /lib64/libc.so.6 (0x00007f18160c7000)
/lib64/ld-linux-x86-64.so.2 (0x00005581d0104000)
/usr/bin/oprofiled:
linux-vdso.so.1 => (0x00007ffe63094000)
libpopt.so.0 => /lib64/libpopt.so.0 (0x00007f9c09828000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f9c09624000)
libc.so.6 => /lib64/libc.so.6 (0x00007f9c09260000)
/lib64/ld-linux-x86-64.so.2 (0x000055c5c9d00000)
/usr/bin/pamtotga:
linux-vdso.so.1 => (0x00007ffefcb8d000)
libnetpbm.so.11 => /lib64/libnetpbm.so.11 (0x00007fc0b4011000)
libm.so.6 => /lib64/libm.so.6 (0x00007fc0b3d0f000)
libc.so.6 => /lib64/libc.so.6 (0x00007fc0b394b000)
/lib64/ld-linux-x86-64.so.2 (0x0000564bf78ee000)
/usr/bin/pdfjadetex:
linux-vdso.so.1 => (0x00007ffdde9b2000)
libpng15.so.15 => /lib64/libpng15.so.15 (0x00007f6df0f11000)
libz.so.1 => /lib64/libz.so.1 (0x00007f6df0cfb000)
libpoppler.so.46 => /lib64/libpoppler.so.46 (0x00007f6df086b000)
libkpathsea.so.6 => /lib64/libkpathsea.so.6 (0x00007f6df0652000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007f6df034a000)
libm.so.6 => /lib64/libm.so.6 (0x00007f6df0047000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f6defe31000)
libc.so.6 => /lib64/libc.so.6 (0x00007f6defa6e000)
liblcms2.so.2 => /lib64/liblcms2.so.2 (0x00007f6def813000)
libtiff.so.5 => /lib64/libtiff.so.5 (0x00007f6def59f000)
libjpeg.so.62 => /lib64/libjpeg.so.62 (0x00007f6def34a000)
libopenjpeg.so.1 => /lib64/libopenjpeg.so.1 (0x00007f6def125000)
libfontconfig.so.1 => /lib64/libfontconfig.so.1 (0x00007f6deeee8000)
libfreetype.so.6 => /lib64/libfreetype.so.6 (0x00007f6deec42000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f6deea25000)
/lib64/ld-linux-x86-64.so.2 (0x000055e41b8b9000)
libjbig.so.2.0 => /lib64/libjbig.so.2.0 (0x00007f6dee819000)
libexpat.so.1 => /lib64/libexpat.so.1 (0x00007f6dee5ee000)
/usr/bin/pktogf:
linux-vdso.so.1 => (0x00007fff248c6000)
libkpathsea.so.6 => /lib64/libkpathsea.so.6 (0x00007f4fb4ee6000)
libm.so.6 => /lib64/libm.so.6 (0x00007f4fb4be4000)
libc.so.6 => /lib64/libc.so.6 (0x00007f4fb4820000)
/lib64/ld-linux-x86-64.so.2 (0x00005606ae854000)
/usr/bin/pnmtops:
linux-vdso.so.1 => (0x00007fff7c5fa000)
libnetpbm.so.11 => /lib64/libnetpbm.so.11 (0x00007fe9db661000)
libz.so.1 => /lib64/libz.so.1 (0x00007fe9db44b000)
libm.so.6 => /lib64/libm.so.6 (0x00007fe9db148000)
libc.so.6 => /lib64/libc.so.6 (0x00007fe9dad85000)
/lib64/ld-linux-x86-64.so.2 (0x000056453298e000)

```


/usr/bin/procan:

```
linux-vdso.so.1 => (0x00007ffc655d6000)
libwrap.so.0 => /lib64/libwrap.so.0 (0x00007efd55cc4000)
librt.so.1 => /lib64/librt.so.1 (0x00007efd55abc000)
libutil.so.1 => /lib64/libutil.so.1 (0x00007efd558b8000)
libreadline.so.6 => /lib64/libreadline.so.6 (0x00007efd55672000)
libssl.so.10 => /lib64/libssl.so.10 (0x00007efd55400000)
libcrypto.so.10 => /lib64/libcrypto.so.10 (0x00007efd54f9e000)
libc.so.6 => /lib64/libc.so.6 (0x00007efd54bdb000)
libnsl.so.1 => /lib64/libnsl.so.1 (0x00007efd549c2000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007efd547a5000)
libtinfo.so.5 => /lib64/libtinfo.so.5 (0x00007efd5457b000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007efd5432e000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007efd54045000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007efd53e41000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007efd53c0e000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007efd53a09000)
libz.so.1 => /lib64/libz.so.1 (0x00007efd537f3000)
/lib64/ld-linux-x86-64.so.2 (0x0000560dd56d4000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007efd535e5000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007efd533e0000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007efd531c6000)
libselenium.so.1 => /lib64/libselinux.so.1 (0x00007efd52f9e000)
libpcrc.so.1 => /lib64/libpcrc.so.1 (0x00007efd52d3c000)
```

/usr/bin/regtree:

```
linux-vdso.so.1 => (0x00007ffc825d1000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f173fbc0000)
libcmdline-credentials-samba4.so => /usr/lib64/samba/libcmdline-credentials-samba4.so
libsamba-util.so.0 => /lib64/libsamba-util.so.0 (0x00007f173f746000)
libsamba-credentials.so.0 => /lib64/libsamba-credentials.so.0 (0x00007f173f533000)
libregistry-samba4.so => /usr/lib64/samba/libregistry-samba4.so (0x00007f173f30f000)
libsamba-hostconfig.so.0 => /lib64/libsamba-hostconfig.so.0 (0x00007f173f0e4000)
libsamba-debug-samba4.so => /usr/lib64/samba/libsamba-debug-samba4.so (0x00007f173eede000)
libsamba-errors.so.1 => /lib64/libsamba-errors.so.1 (0x00007f173eb9b000)
libevents-samba4.so => /usr/lib64/samba/libevents-samba4.so (0x00007f173e999000)
libtalloc.so.2 => /lib64/libtalloc.so.2 (0x00007f173e789000)
libpopt.so.0 => /lib64/libpopt.so.0 (0x00007f173e57e000)
libc.so.6 => /lib64/libc.so.6 (0x00007f173e1bb000)
/lib64/ld-linux-x86-64.so.2 (0x00005603626bf000)
libtime-basic-samba4.so => /usr/lib64/samba/libtime-basic-samba4.so (0x00007f173dfb9000)
libgenrand-samba4.so => /usr/lib64/samba/libgenrand-samba4.so (0x00007f173ddb6000)
libreplace-samba4.so => /usr/lib64/samba/libreplace-samba4.so (0x00007f173dbb3000)
libsocket-blocking-samba4.so => /usr/lib64/samba/libsocket-blocking-samba4.so (0x00007f173dbb3000)
librt.so.1 => /lib64/librt.so.1 (0x00007f173d7a8000)
libsystemd-daemon.so.0 => /lib64/libsystemd-daemon.so.0 (0x00007f173d7a1000)
libtevent.so.0 => /lib64/libtevent.so.0 (0x00007f173d591000)
libsamdb-common-samba4.so => /usr/lib64/samba/libsamdb-common-samba4.so (0x00007f173d3d3000)
libdbwrap-samba4.so => /usr/lib64/samba/libdbwrap-samba4.so (0x00007f173d15a000)
```

```

libcliauth-samba4.so => /usr/lib64/samba/libcliauth-samba4.so (0x00007f173cf46000)
libndr.so.0 => /lib64/libndr.so.0 (0x00007f173cd2e000)
libldb-samba-samba4.so => /usr/lib64/samba/libldb-samba-samba4.so (0x00007f173cb01000)
libauthkrb5-samba4.so => /usr/lib64/samba/libauthkrb5-samba4.so (0x00007f173c8f4000)
libutil-tdb-samba4.so => /usr/lib64/samba/libutil-tdb-samba4.so (0x00007f173c6ef000)
libkrb5samba-samba4.so => /usr/lib64/samba/libkrb5samba-samba4.so (0x00007f173c4e3000)
libsamba-security-samba4.so => /usr/lib64/samba/libsamba-security-samba4.so (0x00007f173c2d2000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007f173bfdb000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007f173bdd7000)
libldb.so.1 => /lib64/libldb.so.1 (0x00007f173bba8000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007f173b95a000)
libdcercpc.so.0 => /lib64/libdcercpc.so.0 (0x00007f173b728000)
libutil-reg-samba4.so => /usr/lib64/samba/libutil-reg-samba4.so (0x00007f173b524000)
libdcercpc-samba-samba4.so => /usr/lib64/samba/libdcercpc-samba-samba4.so (0x00007f173b312000)
libndr-standard.so.0 => /lib64/libndr-standard.so.0 (0x00007f173ac60000)
libsys-rw-samba4.so => /usr/lib64/samba/libsys-rw-samba4.so (0x00007f173aa5d000)
libserver-role-samba4.so => /usr/lib64/samba/libserver-role-samba4.so (0x00007f173a859000)
libsystemd-journal.so.0 => /lib64/libsystemd-journal.so.0 (0x00007f173a83a000)
libcrypt.so.1 => /lib64/libcrypt.so.1 (0x00007f173a602000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f173a3fe000)
libcap.so.2 => /lib64/libcap.so.2 (0x00007f173a1f8000)
libm.so.6 => /lib64/libm.so.6 (0x00007f1739ef6000)
libdw.so.1 => /lib64/libdw.so.1 (0x00007f1739caf000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f1739a99000)
libflag-mapping-samba4.so => /usr/lib64/samba/libflag-mapping-samba4.so (0x00007f1739882000)
libcli-ldap-common-samba4.so => /usr/lib64/samba/libcli-ldap-common-samba4.so (0x00007f173966c000)
libndr-samba-samba4.so => /usr/lib64/samba/libndr-samba-samba4.so (0x00007f1739358000)
libsamba-sockets-samba4.so => /usr/lib64/samba/libsamba-sockets-samba4.so (0x00007f1739142000)
libtevent-util.so.0 => /lib64/libtevent-util.so.0 (0x00007f1738f3b000)
libtdb-wrap-samba4.so => /usr/lib64/samba/libtdb-wrap-samba4.so (0x00007f1738d38000)
libtdb.so.1 => /lib64/libtdb.so.1 (0x00007f1738b21000)
libasn1util-samba4.so => /usr/lib64/samba/libasn1util-samba4.so (0x00007f173891b000)
libndr-krb5pac.so.0 => /lib64/libndr-krb5pac.so.0 (0x00007f173870c000)
libauth-sam-reply-samba4.so => /usr/lib64/samba/libauth-sam-reply-samba4.so (0x00007f1738500000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007f17382d4000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007f17380c5000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007f1737ec1000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007f1737ca7000)
libsmbclient-raw-samba4.so => /usr/lib64/samba/libsmbclient-raw-samba4.so (0x00007f1737a93000)
libndr-nbt.so.0 => /lib64/libndr-nbt.so.0 (0x00007f1737859000)
libdcercpc-binding.so.0 => /lib64/libdcercpc-binding.so.0 (0x00007f1737637000)
libgensec-samba4.so => /usr/lib64/samba/libgensec-samba4.so (0x00007f173740e000)
libhttp-samba4.so => /usr/lib64/samba/libhttp-samba4.so (0x00007f1737207000)
libcli-cldap-samba4.so => /usr/lib64/samba/libcli-cldap-samba4.so (0x00007f1736ffe000)
libcli-smb-common-samba4.so => /usr/lib64/samba/libcli-smb-common-samba4.so (0x00007f1736bbb000)
libcli-ldap-samba4.so => /usr/lib64/samba/libcli-ldap-samba4.so (0x00007f1736bbb000)
libiov-buf-samba4.so => /usr/lib64/samba/libiov-buf-samba4.so (0x00007f17369b8000)
libselinux.so.1 => /lib64/libselinux.so.1 (0x00007f1736791000)

```

```

liblzma.so.5 => /lib64/liblzma.so.5 (0x00007f173656a000)
libgcrypt.so.11 => /lib64/libgcrypt.so.11 (0x00007f17362e9000)
libgpg-error.so.0 => /lib64/libgpg-error.so.0 (0x00007f17360e4000)
libfreebl3.so => /lib64/libfreebl3.so (0x00007f1735ee0000)
libattr.so.1 => /lib64/libattr.so.1 (0x00007f1735cdb000)
libelf.so.1 => /lib64/libelf.so.1 (0x00007f1735ac3000)
libz.so.1 => /lib64/libz.so.1 (0x00007f17358ac000)
libbz2.so.1 => /lib64/libbz2.so.1 (0x00007f173569c000)
libinterfaces-samba4.so => /usr/lib64/samba/libinterfaces-samba4.so (0x00007f1735498000)
libsmb-transport-samba4.so => /usr/lib64/samba/libsmb-transport-samba4.so (0x00007f1735300000)
libwbclient.so.0 => /lib64/libwbclient.so.0 (0x00007f1735082000)
libsamba-modules-samba4.so => /usr/lib64/samba/libsamba-modules-samba4.so (0x00007f1734f00000)
libsamdb.so.0 => /lib64/libsamdb.so.0 (0x00007f1734c67000)
libaddns-samba4.so => /usr/lib64/samba/libaddns-samba4.so (0x00007f1734a5c000)
libcli-nbt-samba4.so => /usr/lib64/samba/libcli-nbt-samba4.so (0x00007f1734851000)
libnetif-samba4.so => /usr/lib64/samba/libnetif-samba4.so (0x00007f173464b000)
libpcrc.so.1 => /lib64/libpcrc.so.1 (0x00007f17343e9000)
libwinbind-client-samba4.so => /usr/lib64/samba/libwinbind-client-samba4.so (0x00007f17341e6000)
/usr/bin/sar:
linux-vdso.so.1 => (0x00007ffd50574000)
libc.so.6 => /lib64/libc.so.6 (0x00007ff1db665000)
/lib64/ld-linux-x86-64.so.2 (0x00005590cdbf8000)
/usr/bin/systemd-run:
linux-vdso.so.1 => (0x00007ffd02f8e000)
librt.so.1 => /lib64/librt.so.1 (0x00007fbd761fa000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007fbd75fe4000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007fbd75dc7000)
libc.so.6 => /lib64/libc.so.6 (0x00007fbd75a04000)
/lib64/ld-linux-x86-64.so.2 (0x0000556251449000)
/usr/bin/ucs2any:
linux-vdso.so.1 => (0x00007ffcfcdbb000)
libc.so.6 => /lib64/libc.so.6 (0x00007fa3519e7000)
/lib64/ld-linux-x86-64.so.2 (0x00005562febb61000)
/usr/bin/wrestool:
linux-vdso.so.1 => (0x00007ffc7158b000)
libc.so.6 => /lib64/libc.so.6 (0x00007f84d4cc4000)
/lib64/ld-linux-x86-64.so.2 (0x0000556371af31000)
/usr/bin/xvattr:
linux-vdso.so.1 => (0x00007ffd0d9d8000)
libSM.so.6 => /lib64/libSM.so.6 (0x00007f0e0fc0a000)
libICE.so.6 => /lib64/libICE.so.6 (0x00007f0e0f9ee000)
libX11.so.6 => /lib64/libX11.so.6 (0x00007f0e0f6af000)
libXext.so.6 => /lib64/libXext.so.6 (0x00007f0e0f49d000)
libXv.so.1 => /lib64/libXv.so.1 (0x00007f0e0f298000)
libc.so.6 => /lib64/libc.so.6 (0x00007f0e0eed4000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007f0e0eccf000)
libxcb.so.1 => /lib64/libxcb.so.1 (0x00007f0e0eaa7000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f0e0e8a2000)

```

```
/lib64/ld-linux-x86-64.so.2 (0x000055b629389000)
libXau.so.6 => /lib64/libXau.so.6 (0x00007f0e0e69e000)
```

Instead of looking through the entire output to look for error message, we will run the program again and this time only output the error message.

```
In [48]: ssh -X $SERVER_ADD "cd $WORKING_DIR && ./lddBIn.sh 2>&1 >/dev/null"
```

```
which: no smbpasswd in (/u/eng/class/classtzh/miniconda3/bin:/usr/local/bin:/usr/bin)
```

This error appears because there is a missing package called smbpasswd.

1.5 Step 6

Now we will go ahead and get a sorted list of every dynamic library that is used by any of the commands on the list.

```
In [49]: ssh -X $SERVER_ADD "cd $WORKING_DIR && ./lddBIn.sh 2> /dev/null | grep so | sort -u"
```

```
/lib64/ld-linux-x86-64.so.2 (0x00005577ee251000)
/lib64/ld-linux-x86-64.so.2 (0x00005577fdbab000)
/lib64/ld-linux-x86-64.so.2 (0x000055876394e000)
/lib64/ld-linux-x86-64.so.2 (0x0000559cd34de000)
/lib64/ld-linux-x86-64.so.2 (0x0000559e4a97b000)
/lib64/ld-linux-x86-64.so.2 (0x000055a643a15000)
/lib64/ld-linux-x86-64.so.2 (0x000055b88bc08000)
/lib64/ld-linux-x86-64.so.2 (0x000055cabf96d000)
/lib64/ld-linux-x86-64.so.2 (0x000055dc2ffb5000)
/lib64/ld-linux-x86-64.so.2 (0x000055e4fd4a4000)
/lib64/ld-linux-x86-64.so.2 (0x000055e983e0f000)
/lib64/ld-linux-x86-64.so.2 (0x000055ec9c25f000)
/lib64/ld-linux-x86-64.so.2 (0x000055f05ee35000)
/lib64/ld-linux-x86-64.so.2 (0x000055f5ddb73000)
/lib64/ld-linux-x86-64.so.2 (0x000055f67d713000)
/lib64/ld-linux-x86-64.so.2 (0x000055f9d220c000)
/lib64/ld-linux-x86-64.so.2 (0x00005600c4838000)
/lib64/ld-linux-x86-64.so.2 (0x000056060a7cb000)
/lib64/ld-linux-x86-64.so.2 (0x00005607913d4000)
/lib64/ld-linux-x86-64.so.2 (0x0000560ff9398000)
/lib64/ld-linux-x86-64.so.2 (0x0000561622179000)
/lib64/ld-linux-x86-64.so.2 (0x0000562c30327000)
/lib64/ld-linux-x86-64.so.2 (0x0000563da0281000)
/lib64/ld-linux-x86-64.so.2 (0x0000564b2260d000)
/lib64/ld-linux-x86-64.so.2 (0x0000564ff5ca0000)
libICE.so.6 => /lib64/libICE.so.6 (0x00007f2765e96000)
libICE.so.6 => /lib64/libICE.so.6 (0x00007f9f23905000)
libICE.so.6 => /lib64/libICE.so.6 (0x00007fb901239000)
```

```

libQtCore.so.4 => /lib64/libQtCore.so.4 (0x00007f2768234000)
libQtDBus.so.4 => /lib64/libQtDBus.so.4 (0x00007f276871f000)
libQtGui.so.4 => /lib64/libQtGui.so.4 (0x00007f276733c000)
libQtNetwork.so.4 => /lib64/libQtNetwork.so.4 (0x00007f27649c0000)
libQtSvg.so.4 => /lib64/libQtSvg.so.4 (0x00007f27670e4000)
libQtXml.so.4 => /lib64/libQtXml.so.4 (0x00007f2766e9f000)
libSM.so.6 => /lib64/libSM.so.6 (0x00007f27660b3000)
libSM.so.6 => /lib64/libSM.so.6 (0x00007f9f23b21000)
libSM.so.6 => /lib64/libSM.so.6 (0x00007fb901455000)
libX11.so.6 => /lib64/libX11.so.6 (0x00007f2765b58000)
libX11.so.6 => /lib64/libX11.so.6 (0x00007f9f235c6000)
libX11.so.6 => /lib64/libX11.so.6 (0x00007fb900efa000)
libXau.so.6 => /lib64/libXau.so.6 (0x00007f276552b000)
libXau.so.6 => /lib64/libXau.so.6 (0x00007f9f22f99000)
libXau.so.6 => /lib64/libXau.so.6 (0x00007fb8ffee9000)
libXcursor.so.1 => /lib64/libXcursor.so.1 (0x00007f276437d000)
libXdmcp.so.6 => /lib64/libXdmcp.so.6 (0x00007f9f22d93000)
libXext.so.6 => /lib64/libXext.so.6 (0x00007f2765946000)
libXext.so.6 => /lib64/libXext.so.6 (0x00007f9f233b4000)
libXext.so.6 => /lib64/libXext.so.6 (0x00007fb900ce8000)
libXfixes.so.3 => /lib64/libXfixes.so.3 (0x00007f2764176000)
libXft.so.2 => /lib64/libXft.so.2 (0x00007f276572f000)
libXft.so.2 => /lib64/libXft.so.2 (0x00007f9f2319e000)
libXi.so.6 => /lib64/libXi.so.6 (0x00007f276205f000)
libXinerama.so.1 => /lib64/libXinerama.so.1 (0x00007f2761c51000)
libXinerama.so.1 => /lib64/libXinerama.so.1 (0x00007f9f2297d000)
libXpm.so.4 => /lib64/libXpm.so.4 (0x00007f2765319000)
libXpm.so.4 => /lib64/libXpm.so.4 (0x00007f9f22b81000)
libXrandr.so.2 => /lib64/libXrandr.so.2 (0x00007f2761e54000)
libXrender.so.1 => /lib64/libXrender.so.1 (0x00007f2763f6b000)
libXrender.so.1 => /lib64/libXrender.so.1 (0x00007f9f21078000)
libXtst.so.6 => /lib64/libXtst.so.6 (0x00007f2764588000)
libXv.so.1 => /lib64/libXv.so.1 (0x00007fb900ae3000)
libaddns-samba4.so => /usr/lib64/samba/libaddns-samba4.so (0x00007f50b63c0000)
libasn1util-samba4.so => /usr/lib64/samba/libasn1util-samba4.so (0x00007f50ba27f000)
libattica.so.0.4 => /lib64/libattica.so.0.4 (0x00007f2764d06000)
libattr.so.1 => /lib64/libattr.so.1 (0x00007f50b763f000)
libauth-sam-reply-samba4.so => /usr/lib64/samba/libauth-sam-reply-samba4.so (0x00007f50b763f000)
libauthkrb5-samba4.so => /usr/lib64/samba/libauthkrb5-samba4.so (0x00007f50be258000)
libblkid.so.1 => /lib64/libblkid.so.1 (0x00007efd25720000)
libblkid.so.1 => /lib64/libblkid.so.1 (0x00007f5d6d6d3000)
libbz2.so.1 => /lib64/libbz2.so.1 (0x00007f2763b44000)
libbz2.so.1 => /lib64/libbz2.so.1 (0x00007f50b7000000)
libc.so.6 => /lib64/libc.so.6 (0x00007efd26869000)
libc.so.6 => /lib64/libc.so.6 (0x00007efe3e503000)
libc.so.6 => /lib64/libc.so.6 (0x00007f0195b7c000)
libc.so.6 => /lib64/libc.so.6 (0x00007f10c65c8000)
libc.so.6 => /lib64/libc.so.6 (0x00007f1b0461f000)

```

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libc.so.6 => /lib64/libc.so.6 (0x00007f1b1e336000)
libc.so.6 => /lib64/libc.so.6 (0x00007f27662bb000)
libc.so.6 => /lib64/libc.so.6 (0x00007f46bcdea000)
libc.so.6 => /lib64/libc.so.6 (0x00007f50bfb1f000)
libc.so.6 => /lib64/libc.so.6 (0x00007f51364fc000)
libc.so.6 => /lib64/libc.so.6 (0x00007f5d6e81c000)
libc.so.6 => /lib64/libc.so.6 (0x00007f5db6ba2000)
libc.so.6 => /lib64/libc.so.6 (0x00007f60bcd4e000)
libc.so.6 => /lib64/libc.so.6 (0x00007f74a6954000)
libc.so.6 => /lib64/libc.so.6 (0x00007f77ac630000)
libc.so.6 => /lib64/libc.so.6 (0x00007f7b6c470000)
libc.so.6 => /lib64/libc.so.6 (0x00007f7b899d0000)
libc.so.6 => /lib64/libc.so.6 (0x00007f88e6e3d000)
libc.so.6 => /lib64/libc.so.6 (0x00007f9a52047000)
libc.so.6 => /lib64/libc.so.6 (0x00007f9f21d99000)
libc.so.6 => /lib64/libc.so.6 (0x00007fb837182000)
libc.so.6 => /lib64/libc.so.6 (0x00007fb90071f000)
libc.so.6 => /lib64/libc.so.6 (0x00007fd3e34b8000)
libc.so.6 => /lib64/libc.so.6 (0x00007fe5bd303000)
libc.so.6 => /lib64/libc.so.6 (0x00007ff500a35000)
libcap.so.2 => /lib64/libcap.so.2 (0x00007f50bbb5c000)
libcdio.so.15 => /lib64/libcdio.so.15 (0x00007f5db7268000)
libcli-cldap-samba4.so => /usr/lib64/samba/libcli-cldap-samba4.so (0x00007f50b8962000)
libcli-ldap-common-samba4.so => /usr/lib64/samba/libcli-ldap-common-samba4.so (0x00007f50b8962000)
libcli-ldap-samba4.so => /usr/lib64/samba/libcli-ldap-samba4.so (0x00007f50b851f000)
libcli-nbt-samba4.so => /usr/lib64/samba/libcli-nbt-samba4.so (0x00007f50b61b5000)
libcli-smb-common-samba4.so => /usr/lib64/samba/libcli-smb-common-samba4.so (0x00007f50b8962000)
libcliauth-samba4.so => /usr/lib64/samba/libcliauth-samba4.so (0x00007f50be8aa000)
libcmdline-credentials-samba4.so => /usr/lib64/samba/libcmdline-credentials-samba4.so (0x00007f50b8962000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007f2760142000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007f50bd73b000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007f74a6234000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007fb8363e8000)
libcom_err.so.2 => /lib64/libcom_err.so.2 (0x00007fe5bc742000)
libcrypt.so.1 => /lib64/libcrypt.so.1 (0x00007f50bbf66000)
libcrypt.so.1 => /lib64/libcrypt.so.1 (0x00007fe5b9b61000)
libcrypto.so.10 => /lib64/libcrypto.so.10 (0x00007f2760f11000)
libcrypto.so.10 => /lib64/libcrypto.so.10 (0x00007fb837545000)
libcrypto.so.10 => /lib64/libcrypto.so.10 (0x00007fe5bcc2f000)
libdbus-1.so.3 => /lib64/libdbus-1.so.3 (0x00007f27632b3000)
libdbusmenu-qt.so.2 => /lib64/libdbusmenu-qt.so.2 (0x00007f276478e000)
libdbwrap-samba4.so => /usr/lib64/samba/libdbwrap-samba4.so (0x00007f50beabe000)
libdcercpc-binding.so.0 => /lib64/libdcercpc-binding.so.0 (0x00007f50b8f9b000)
libdcercpc-samba-samba4.so => /usr/lib64/samba/libdcercpc-samba-samba4.so (0x00007f50bca000)
libdcercpc.so.0 => /lib64/libdcercpc.so.0 (0x00007f50bd08c000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007efd26665000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007efe3e8c7000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f27630af000)

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libdl.so.2 => /lib64/libdl.so.2 (0x00007f50bbd62000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f5d6e618000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f74a5e21000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f88e7502000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f9f21767000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007fb835fb0000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007fb9000ed000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007fe5bbc44000)
libdw.so.1 => /lib64/libdw.so.1 (0x00007f50bb613000)
libelf.so.1 => /lib64/libelf.so.1 (0x00007f50b7427000)
libevents-samba4.so => /usr/lib64/samba/libevents-samba4.so (0x00007f50c02fd000)
libexpat.so.1 => /lib64/libexpat.so.1 (0x00007f10c5148000)
libexpat.so.1 => /lib64/libexpat.so.1 (0x00007f276087c000)
libexpat.so.1 => /lib64/libexpat.so.1 (0x00007f9f20e4d000)
libexpect5.45.so => /lib64/libexpect5.45.so (0x00007f88e7a2f000)
libfam.so.0 => /lib64/libfam.so.0 (0x00007f27634fb000)
libffi.so.6 => /lib64/libffi.so.6 (0x00007efd261fa000)
libffi.so.6 => /lib64/libffi.so.6 (0x00007f2760aa6000)
libffi.so.6 => /lib64/libffi.so.6 (0x00007f5d6e1ad000)
libflag-mapping-samba4.so => /usr/lib64/samba/libflag-mapping-samba4.so (0x00007f50bb1
libfontconfig.so.1 => /lib64/libfontconfig.so.1 (0x00007f10c5a42000)
libfontconfig.so.1 => /lib64/libfontconfig.so.1 (0x00007f2761a13000)
libfontconfig.so.1 => /lib64/libfontconfig.so.1 (0x00007f9f2152a000)
libfreebl3.so => /lib64/libfreebl3.so (0x00007f50b7844000)
libfreebl3.so => /lib64/libfreebl3.so (0x00007fe5b94f3000)
libfreetype.so.6 => /lib64/libfreetype.so.6 (0x00007f10c579c000)
libfreetype.so.6 => /lib64/libfreetype.so.6 (0x00007f27624c0000)
libfreetype.so.6 => /lib64/libfreetype.so.6 (0x00007f9f21283000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f10c698b000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f276667e000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f50bb3fd000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f7b6ca50000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f9f2215c000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007ff500df8000)
libgcrypt.so.11 => /lib64/libgcrypt.so.11 (0x00007f50b7c4d000)
libgdk_pixbuf-2.0.so.0 => /lib64/libgdk_pixbuf-2.0.so.0 (0x00007efd27e72000)
libgenrand-samba4.so => /usr/lib64/samba/libgenrand-samba4.so (0x00007f50bf71a000)
libgensec-samba4.so => /usr/lib64/samba/libgensec-samba4.so (0x00007f50b8d72000)
libgio-2.0.so.0 => /lib64/libgio-2.0.so.0 (0x00007efd278d9000)
libgio-2.0.so.0 => /lib64/libgio-2.0.so.0 (0x00007f5d6f562000)
libglib-2.0.so.0 => /lib64/libglib-2.0.so.0 (0x00007efd27377000)
libglib-2.0.so.0 => /lib64/libglib-2.0.so.0 (0x00007f2762b9a000)
libglib-2.0.so.0 => /lib64/libglib-2.0.so.0 (0x00007f5d6efff000)
libgmodule-2.0.so.0 => /lib64/libgmodule-2.0.so.0 (0x00007efd27c6e000)
libgmodule-2.0.so.0 => /lib64/libgmodule-2.0.so.0 (0x00007f5d6f8f6000)
libgobject-2.0.so.0 => /lib64/libgobject-2.0.so.0 (0x00007efd27689000)
libgobject-2.0.so.0 => /lib64/libgobject-2.0.so.0 (0x00007f2762270000)
libgobject-2.0.so.0 => /lib64/libgobject-2.0.so.0 (0x00007f5d6f311000)

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libgpg-error.so.0 => /lib64/libgpg-error.so.0 (0x00007f50b7a48000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007f276062e000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007f50bd2be000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007f74a78f9000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007fb8368d5000)
libgssapi_krb5.so.2 => /lib64/libgssapi_krb5.so.2 (0x00007fe5bc4f5000)
libgthread-2.0.so.0 => /lib64/libgthread-2.0.so.0 (0x00007f2762eac000)
libhttp-samba4.so => /usr/lib64/samba/libhttp-samba4.so (0x00007f50b8b6b000)
libinterfaces-samba4.so => /usr/lib64/samba/libinterfaces-samba4.so (0x00007f50b6dfc000)
libiov-buf-samba4.so => /usr/lib64/samba/libiov-buf-samba4.so (0x00007f50b831c000)
libiso9660.so.9 => /lib64/libiso9660.so.9 (0x00007f5db7491000)
libjbig.so.2.0 => /lib64/libjbig.so.2.0 (0x00007f10c5373000)
libjpeg.so.62 => /lib64/libjpeg.so.62 (0x00007f10c5ea4000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007f275ff0e000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007f50b9c38000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007f74a6438000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007fb8361b5000)
libk5crypto.so.3 => /lib64/libk5crypto.so.3 (0x00007fe5bbe48000)
libkdecore.so.5 => /lib64/libkdecore.so.5 (0x00007f276899d000)
libkdeinit4_kbuildsycoca4.so => /lib64/libkdeinit4_kbuildsycoca4.so (0x00007f27694dc000)
libkdeui.so.5 => /lib64/libkdeui.so.5 (0x00007f2768e71000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007f275fafc000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007f50b9825000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007f74a5c1d000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007fb835987000)
libkeyutils.so.1 => /lib64/libkeyutils.so.1 (0x00007fe5bb61b000)
libkpathsea.so.6 => /lib64/libkpathsea.so.6 (0x00007f10c71ac000)
libkpathsea.so.6 => /lib64/libkpathsea.so.6 (0x00007f1b04ce5000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007f2760346000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007f50bd93f000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007f74a666c000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007fb8365ec000)
libkrb5.so.3 => /lib64/libkrb5.so.3 (0x00007fe5bc947000)
libkrb5samba-samba4.so => /usr/lib64/samba/libkrb5samba-samba4.so (0x00007f50bde47000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007f275fd00000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007f50b9a29000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007f74a6026000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007fb835b8c000)
libkrb5support.so.0 => /lib64/libkrb5support.so.0 (0x00007fe5bb81f000)
liblber-2.4.so.2 => /lib64/liblber-2.4.so.2 (0x00007fe5bb1f1000)
liblcms2.so.2 => /lib64/liblcms2.so.2 (0x00007f10c636d000)
libldap_r-2.4.so.2 => /lib64/libldap_r-2.4.so.2 (0x00007fe5bc298000)
libldb.so.1 => /lib64/libldb.so.1 (0x00007f50bd50c000)
libldbsamba-samba4.so => /usr/lib64/samba/libldbsamba-samba4.so (0x00007f50be465000)
liblzma.so.5 => /lib64/liblzma.so.5 (0x00007f276391e000)
liblzma.so.5 => /lib64/liblzma.so.5 (0x00007f50b7ece000)
libm.so.6 => /lib64/libm.so.6 (0x00007efd26e49000)
libm.so.6 => /lib64/libm.so.6 (0x00007f10c6ba1000)

```



```

libm.so.6 => /lib64/libm.so.6 (0x00007f1b049e3000)
libm.so.6 => /lib64/libm.so.6 (0x00007f2766895000)
libm.so.6 => /lib64/libm.so.6 (0x00007f46bd1ad000)
libm.so.6 => /lib64/libm.so.6 (0x00007f50bb85a000)
libm.so.6 => /lib64/libm.so.6 (0x00007f51368c0000)
libm.so.6 => /lib64/libm.so.6 (0x00007f5db6f65000)
libm.so.6 => /lib64/libm.so.6 (0x00007f88e7200000)
libm.so.6 => /lib64/libm.so.6 (0x00007f9f22373000)
libm.so.6 => /lib64/libm.so.6 (0x00007ff50100f000)
libmount.so.1 => /lib64/libmount.so.1 (0x00007efd25960000)
libmount.so.1 => /lib64/libmount.so.1 (0x00007f5d6d913000)
libndr-krb5pac.so.0 => /lib64/libndr-krb5pac.so.0 (0x00007f50ba070000)
libndr-nbt.so.0 => /lib64/libndr-nbt.so.0 (0x00007f50b91bd000)
libndr-samba-samba4.so => /usr/lib64/samba/libndr-samba-samba4.so (0x00007f50bacbc000)
libndr-standard.so.0 => /lib64/libndr-standard.so.0 (0x00007f50bc5c4000)
libndr.so.0 => /lib64/libndr.so.0 (0x00007f50be692000)
libnetif-samba4.so => /usr/lib64/samba/libnetif-samba4.so (0x00007f50b5faf000)
libnetpbm.so.11 => /lib64/libnetpbm.so.11 (0x00007f46bd6c6000)
libnetpbm.so.11 => /lib64/libnetpbm.so.11 (0x00007f5136bc2000)
libnsl.so.1 => /lib64/libnsl.so.1 (0x00007f7b89d93000)
libnsl.so.1 => /lib64/libnsl.so.1 (0x00007fb836f69000)
libnspr4.so => /lib64/libnspr4.so (0x00007f74a6f1d000)
libnspr4.so => /lib64/libnspr4.so (0x00007fe5b9fc0000)
libnss3.so => /lib64/libnss3.so (0x00007f74a73a7000)
libnss3.so => /lib64/libnss3.so (0x00007fe5ba836000)
libnssutil3.so => /lib64/libnssutil3.so (0x00007f74a57d5000)
libnssutil3.so => /lib64/libnssutil3.so (0x00007fe5ba608000)
libopenjpeg.so.1 => /lib64/libopenjpeg.so.1 (0x00007f10c5c7f000)
libpcre.so.1 => /lib64/libpcre.so.1 (0x00007efd26403000)
libpcre.so.1 => /lib64/libpcre.so.1 (0x00007f2760caf000)
libpcre.so.1 => /lib64/libpcre.so.1 (0x00007f50b5d4d000)
libpcre.so.1 => /lib64/libpcre.so.1 (0x00007f5d6e3b5000)
libpcre.so.1 => /lib64/libpcre.so.1 (0x00007f74a4b0c000)
libpcre.so.1 => /lib64/libpcre.so.1 (0x00007fb8352e3000)
libpcre.so.1 => /lib64/libpcre.so.1 (0x00007fe5b96f6000)
libplc4.so => /lib64/libplc4.so (0x00007f74a6d17000)
libplc4.so => /lib64/libplc4.so (0x00007fe5ba1ff000)
libplds4.so => /lib64/libplds4.so (0x00007f74a55d1000)
libplds4.so => /lib64/libplds4.so (0x00007fe5ba404000)
libpng15.so.15 => /lib64/libpng15.so.15 (0x00007efd2714b000)
libpng15.so.15 => /lib64/libpng15.so.15 (0x00007f10c7a6b000)
libpng15.so.15 => /lib64/libpng15.so.15 (0x00007f2762766000)
libpoppler.so.46 => /lib64/libpoppler.so.46 (0x00007f10c73c5000)
libpopt.so.0 => /lib64/libpopt.so.0 (0x00007efe3eacb000)
libpopt.so.0 => /lib64/libpopt.so.0 (0x00007f50bfee2000)
libpq.so.5 => /lib64/libpq.so.5 (0x00007fe5bd6c6000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007efd26c2d000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f10c557f000)

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libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f2768017000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f50c1524000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f5d6ebdf000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f74a53b5000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f7b6c833000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f88e6a1d000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f9f20c31000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007fb836d4c000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007fe5bc07b000)
libqca.so.2 => /lib64/libqca.so.2 (0x00007f2765000000)
libreadline.so.6 => /lib64/libreadline.so.6 (0x00007fb837c19000)
libregistry-samba4.so => /usr/lib64/samba/libregistry-samba4.so (0x00007f50c0c73000)
libreplace-samba4.so => /usr/lib64/samba/libreplace-samba4.so (0x00007f50bf517000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007efd25ba2000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007f2763704000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007f50b960b000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007f5d6db55000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007f74a5a03000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007fb83576d000)
libresolv.so.2 => /lib64/libresolv.so.2 (0x00007fe5bb400000)
librt.so.1 => /lib64/librt.so.1 (0x00007f2762992000)
librt.so.1 => /lib64/librt.so.1 (0x00007f50bf10c000)
librt.so.1 => /lib64/librt.so.1 (0x00007f74a4f96000)
librt.so.1 => /lib64/librt.so.1 (0x00007f7b6cc66000)
librt.so.1 => /lib64/librt.so.1 (0x00007fb838063000)
librt.so.1 => /lib64/librt.so.1 (0x00007fe5b9959000)
libsamba-credentials.so.0 => /lib64/libsamba-credentials.so.0 (0x00007f50c0e97000)
libsamba-debug-samba4.so => /usr/lib64/samba/libsamba-debug-samba4.so (0x00007f50c0842000)
libsamba-errors.so.1 => /lib64/libsamba-errors.so.1 (0x00007f50c04ff000)
libsamba-hostconfig.so.0 => /lib64/libsamba-hostconfig.so.0 (0x00007f50c0a48000)
libsamba-modules-samba4.so => /usr/lib64/samba/libsamba-modules-samba4.so (0x00007f50b960b000)
libsamba-security-samba4.so => /usr/lib64/samba/libsamba-security-samba4.so (0x00007f50b960b000)
libsamba-sockets-samba4.so => /usr/lib64/samba/libsamba-sockets-samba4.so (0x00007f50b960b000)
libsamba-util.so.0 => /lib64/libsamba-util.so.0 (0x00007f50c10aa000)
libsamdb-common-samba4.so => /usr/lib64/samba/libsamdb-common-samba4.so (0x00007f50bec00000)
libsamdb.so.0 => /lib64/libsamdb.so.0 (0x00007f50b65cb000)
libsasl2.so.3 => /lib64/libsasl2.so.3 (0x00007fe5baf40000)
libseldlinux.so.1 => /lib64/libseldlinux.so.1 (0x00007efd25dbd000)
libseldlinux.so.1 => /lib64/libseldlinux.so.1 (0x00007f275f8d4000)
libseldlinux.so.1 => /lib64/libseldlinux.so.1 (0x00007f50b80f5000)
libseldlinux.so.1 => /lib64/libseldlinux.so.1 (0x00007f5d6dd6f000)
libseldlinux.so.1 => /lib64/libseldlinux.so.1 (0x00007f74a4d6e000)
libseldlinux.so.1 => /lib64/libseldlinux.so.1 (0x00007fb835545000)
libseldlinux.so.1 => /lib64/libseldlinux.so.1 (0x00007fe5b9d99000)
libserver-role-samba4.so => /usr/lib64/samba/libserver-role-samba4.so (0x00007f50bc1bd000)
libsmb-transport-samba4.so => /usr/lib64/samba/libsmb-transport-samba4.so (0x00007f50b960b000)
libsmbclient-raw-samba4.so => /usr/lib64/samba/libsmbclient-raw-samba4.so (0x00007f50b960b000)
libsmime3.so => /lib64/libsmime3.so (0x00007f74a76d2000)

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libsmime3.so => /lib64/libsmime3.so (0x00007fe5bab60000)
libsocket-blocking-samba4.so => /usr/lib64/samba/libsocket-blocking-samba4.so (0x00007f
libssl.so.10 => /lib64/libssl.so.10 (0x00007f2761373000)
libssl.so.10 => /lib64/libssl.so.10 (0x00007fb8379a7000)
libssl.so.10 => /lib64/libssl.so.10 (0x00007fe5bd090000)
libssl3.so => /lib64/libssl3.so (0x00007f74a715b000)
libssl3.so => /lib64/libssl3.so (0x00007fe5bad87000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007f10c6ea4000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007f2766b97000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007f9f22675000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007ff501311000)
libsys-rw-samba4.so => /usr/lib64/samba/libsys-rw-samba4.so (0x00007f50bc3c1000)
libsystemd-daemon.so.0 => /lib64/libsystemd-daemon.so.0 (0x00007f50bf105000)
libsystemd-journal.so.0 => /lib64/libsystemd-journal.so.0 (0x00007f50bc19e000)
libtalloc.so.2 => /lib64/libtalloc.so.2 (0x00007f50c00ed000)
libtcl8.5.so => /lib64/libtcl8.5.so (0x00007f88e7707000)
libtdb-wrap-samba4.so => /usr/lib64/samba/libtdb-wrap-samba4.so (0x00007f50ba69c000)
libtdb.so.1 => /lib64/libtdb.so.1 (0x00007f50ba485000)
libtevent-util.so.0 => /lib64/libtevent-util.so.0 (0x00007f50ba89f000)
libtevent.so.0 => /lib64/libtevent.so.0 (0x00007f50beef5000)
libtiff.so.5 => /lib64/libtiff.so.5 (0x00007f10c60f9000)
libtime-basic-samba4.so => /usr/lib64/samba/libtime-basic-samba4.so (0x00007f50bf91d000)
libtinfo.so.5 => /lib64/libtinfo.so.5 (0x00007fb836b22000)
libutil-reg-samba4.so => /usr/lib64/samba/libutil-reg-samba4.so (0x00007f50bce88000)
libutil-tdb-samba4.so => /usr/lib64/samba/libutil-tdb-samba4.so (0x00007f50be053000)
libutil.so.1 => /lib64/libutil.so.1 (0x00007f5d6edfc000)
libutil.so.1 => /lib64/libutil.so.1 (0x00007f88e6c39000)
libutil.so.1 => /lib64/libutil.so.1 (0x00007fb837e5f000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007efd2551b000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007f276180e000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007f5d6d4ce000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007f9f21b94000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007fb90051a000)
libwbclient.so.0 => /lib64/libwbclient.so.0 (0x00007f50b69e6000)
libwinbind-client-samba4.so => /usr/lib64/samba/libwinbind-client-samba4.so (0x00007f5
libwrap.so.0 => /lib64/libwrap.so.0 (0x00007fb83826b000)
libxcb.so.1 => /lib64/libxcb.so.1 (0x00007f27615e5000)
libxcb.so.1 => /lib64/libxcb.so.1 (0x00007f9f2196b000)
libxcb.so.1 => /lib64/libxcb.so.1 (0x00007fb9002f2000)
libz.so.1 => /lib64/libz.so.1 (0x00007efd25fe4000)
libz.so.1 => /lib64/libz.so.1 (0x00007f10c7855000)
libz.so.1 => /lib64/libz.so.1 (0x00007f2763d55000)
libz.so.1 => /lib64/libz.so.1 (0x00007f46bd4b0000)
libz.so.1 => /lib64/libz.so.1 (0x00007f50b7210000)
libz.so.1 => /lib64/libz.so.1 (0x00007f5d6df97000)
libz.so.1 => /lib64/libz.so.1 (0x00007f74a519e000)
libz.so.1 => /lib64/libz.so.1 (0x00007fb835d9a000)
libz.so.1 => /lib64/libz.so.1 (0x00007fe5bba2d000)

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linux-vdso.so.1 => (0x00007ffc6b798000)
linux-vdso.so.1 => (0x00007ffcbb0af000)
linux-vdso.so.1 => (0x00007ffd19fdf000)
linux-vdso.so.1 => (0x00007ffd2234f000)
linux-vdso.so.1 => (0x00007ffd63d9b000)
linux-vdso.so.1 => (0x00007ffdd49fd000)
linux-vdso.so.1 => (0x00007ffdfa7a2000)
linux-vdso.so.1 => (0x00007ffe0a2bd000)
linux-vdso.so.1 => (0x00007ffe149f8000)
linux-vdso.so.1 => (0x00007ffe1e9df000)
linux-vdso.so.1 => (0x00007ffe584b4000)
linux-vdso.so.1 => (0x00007ffe59c71000)
linux-vdso.so.1 => (0x00007ffe7fb10000)
linux-vdso.so.1 => (0x00007ffe969d0000)
linux-vdso.so.1 => (0x00007ffea3bbb000)
linux-vdso.so.1 => (0x00007ffeda79e000)
linux-vdso.so.1 => (0x00007ffedb30c000)
linux-vdso.so.1 => (0x00007ffede1a0000)
linux-vdso.so.1 => (0x00007ffee2731000)
linux-vdso.so.1 => (0x00007fff191ba000)
linux-vdso.so.1 => (0x00007fff20517000)
linux-vdso.so.1 => (0x00007fff8dd03000)
linux-vdso.so.1 => (0x00007fffa39b0000)
linux-vdso.so.1 => (0x00007fffb2bb8000)
linux-vdso.so.1 => (0x00007fffcf9f7000)
```