Extracting shared memory Information using the kvm Library

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-- shminfo.c --
/*
* to compile:
* % cc shminfo.c -o shminfo -lkvm -lelf -o shminfo
* to install:
* % su
* # chgrp sys shminfo
* # chmod 2555 shminfo
* # exit
* % shminfo
*/
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/shm.h>
#include <nlist.h>
#include <kvm.h>

#define SHM 0
#define SHMINFO 1
struct nlist nl[] = {{"shmem"}, {"shminfo"}, {0}};

main(argc, argv)
char **argv;
{
kvm_t *kd;
struct shminfo si;
int sz = sizeof (struct shminfo);

if (!(kd = kvm_open(0, 0, "/dev/kmem", 0, *argv)))
exit(1);

if (kvm_nlist(kd, nl) < 0) {
perror("cannot read namelist");
exit(1);
}

if (!nl[SHM].n_value || !nl[SHMINFO].n_value) {
printf("Shared Memory module not in the system\n");
exit(1);
}
if (kvm_read(kd, nl[SHMINFO].n_value, (void *)&si, sz) != sz) {
perror("read error");
exit(1);
}
```

```
printf("Max segment size(shmmax): 0x%x\n", si.shmmax);
printf("Min segment size(shmmin): 0x%x\n", si.shmmin);
printf("# of identifiers(shmmni): 0x%x\n", si.shmmni);
printf("Max attached(shmseg)    : 0x%x\n", si.shmseg);
exit(0);
}
```