

Отчет по лабораторной работе №2 Модуль 5

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Взаимодействие User space и Kernel space через виртуальную файловую систему procfs

Скриншот компиляции, вставки и работы модуля ядра:

```
vyacheslav@vyacheslav:~/Module5/procK$ make
make -C /lib/modules/6.5.0-35-generic/build M=/home/vyacheslav/Module5/procK modules
make[1]: Entering directory '/usr/src/linux-headers-6.5.0-35-generic'
warning: the compiler differs from the one used to build the kernel
The kernel was built by: x86_64-linux-gnu-gcc-12 (Ubuntu 12.3.0-1ubuntu1~22.04) 12.3.0
You are using: gcc-12 (Ubuntu 12.3.0-1ubuntu1~22.04) 12.3.0
CC [M] /home/vyacheslav/Module5/procK/proc.o
MODPOST /home/vyacheslav/Module5/procK/Module.symvers
CC [M] /home/vyacheslav/Module5/procK/proc.mod.o
LD [M] /home/vyacheslav/Module5/procK/proc.ko
BTF [M] /home/vyacheslav/Module5/procK/proc.ko
Skipping BTF generation for /home/vyacheslav/Module5/procK/proc.ko due to unavailability of vmlinux
make[1]: Leaving directory '/usr/src/linux-headers-6.5.0-35-generic'
vyacheslav@vyacheslav:~/Module5/procK$ sudo insmod proc.ko
vyacheslav@vyacheslav:~/Module5/procK$ lsmod | grep proc
proc                12288  0
vyacheslav@vyacheslav:~/Module5/procK$ sudo dmesg | tail -1
[ 7522.249336] proc module loaded
vyacheslav@vyacheslav:~/Module5/procK$ su
Password:
root@vyacheslav:/home/vyacheslav/Module5/procK# echo "hi, I'm here" > /proc/hello
root@vyacheslav:/home/vyacheslav/Module5/procK# exit
exit
vyacheslav@vyacheslav:~/Module5/procK$ cat /proc/hello
hi, I'm here
vyacheslav@vyacheslav:~/Module5/procK$ modinfo proc.ko
filename:           /home/vyacheslav/Module5/procK/proc.ko
author:             Dolgikh
license:            GPL
srcversion:         17A09116D1D35198E6BAD76
depends:
retpoline:          Y
name:               proc
vermagic:           6.5.0-35-generic SMP preempt mod_unload modversions
```

```
vyacheslav@vyacheslav:~/Module5/procK$ ls -l /proc/hello
-r--r--r-- 1 root root 0 июн 11 02:35 /proc/hello
vyacheslav@vyacheslav:~/Module5/procK$ sudo rmmod proc.ko
vyacheslav@vyacheslav:~/Module5/procK$
```