

Отчет по лабораторной работе №1 Модуль 5

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Скриншот компиляции, вставки и работы примитивного модуля ядра:

```
vyacheslav@vyacheslav:~/Module5/helloK$ ls
hello.c  Makefile
vyacheslav@vyacheslav:~/Module5/helloK$ make
make -C /lib/modules/6.5.0-35-generic/build M=/home/vyacheslav/Module5/helloK 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/helloK/hello.o
MODPOST /home/vyacheslav/Module5/helloK/Module.symvers
CC [M] /home/vyacheslav/Module5/helloK/hello.mod.o
LD [M] /home/vyacheslav/Module5/helloK/hello.ko
BTF [M] /home/vyacheslav/Module5/helloK/hello.ko
Skipping BTF generation for /home/vyacheslav/Module5/helloK/hello.ko due to unavailability of vmlinux
make[1]: Leaving directory '/usr/src/linux-headers-6.5.0-35-generic'
vyacheslav@vyacheslav:~/Module5/helloK$ sudo insmod hello.ko
[sudo] password for vyacheslav:
Sorry, try again.
[sudo] password for vyacheslav:
vyacheslav@vyacheslav:~/Module5/helloK$ sudo dmesg | tail -1
[ 5994.817796] Hello world!
vyacheslav@vyacheslav:~/Module5/helloK$ modinfo hello.ko
filename: /home/vyacheslav/Module5/helloK/hello.ko
description: My first hello world Kernel
author: Dolgikh Vyacheslav
license: ThisIsMine
srcversion: A5F0DCF049005A5C27E4E09
depends:
retpoline: Y
name: hello
vermagic: 6.5.0-35-generic SMP preempt mod_unload modversions
vyacheslav@vyacheslav:~/Module5/helloK$ lsmod | grep "hello"
hello 12288 0
vyacheslav@vyacheslav:~/Module5/helloK$ sudo rmmod hello.ko
vyacheslav@vyacheslav:~/Module5/helloK$ sudo dmesg | tail -1
[ 6079.007191] Goodbuy world!
vyacheslav@vyacheslav:~/Module5/helloK$ lsmod | grep "hello"
vyacheslav@vyacheslav:~/Module5/helloK$
```

Для вставки модуля было необходимо отключить безопасный режим, который не позволяет пользователям вставлять собственные модули ядра.