

Лабораторная работа №1

Установка и конфигурация операционной системы на виртуальную машину

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Информация

Докладчик

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Цели и задачи

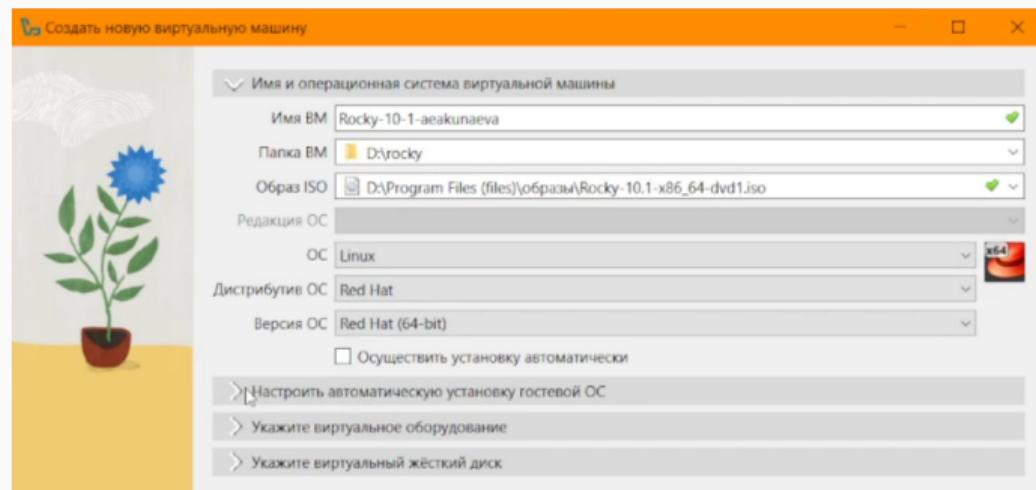
- Целью данной работы является приобретение практических навыков установки операционной системы на виртуальную машину, настройки минимально необходимых для дальнейшей работы сервисов.
1. Установить дистрибутив Rocky 10.1 на виртуальную машину.

Материалы и методы

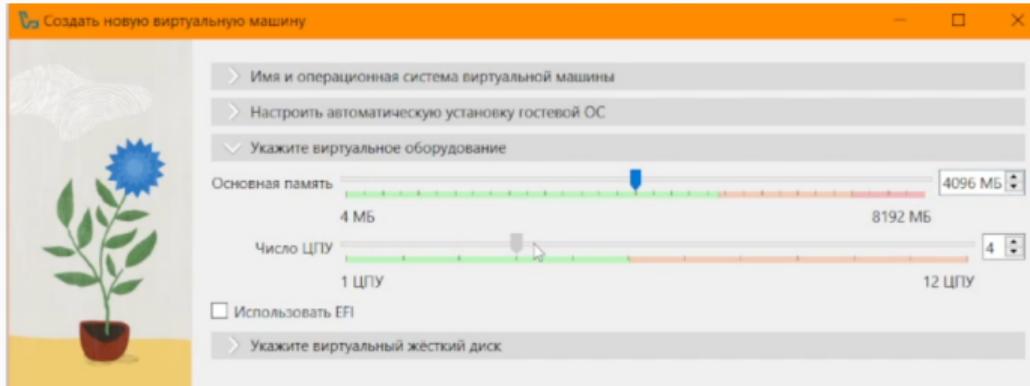
- Linux (дистрибутив Rocky 10.1)
- Oracle VirtualBox

Выполнение лабораторной работы

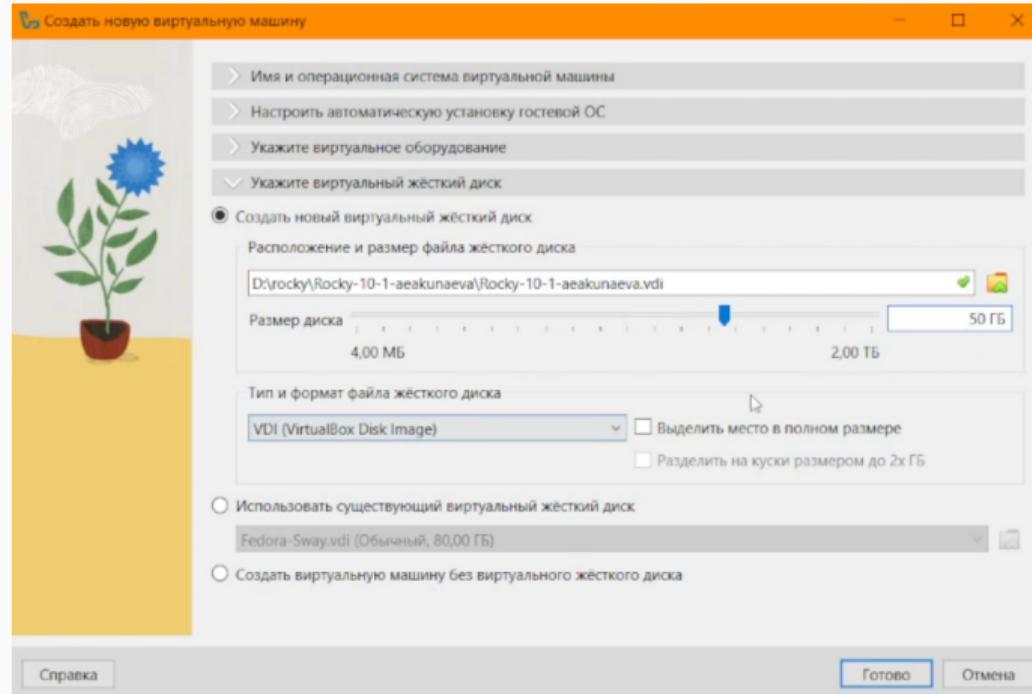
Создание виртуальной машины



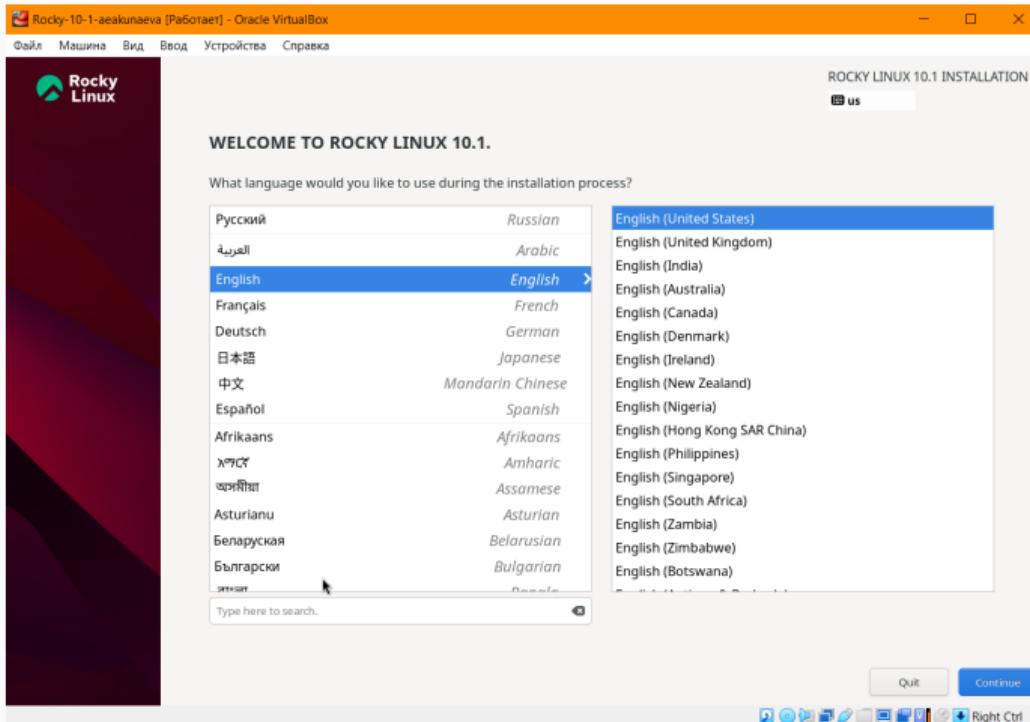
Задание параметров ОС



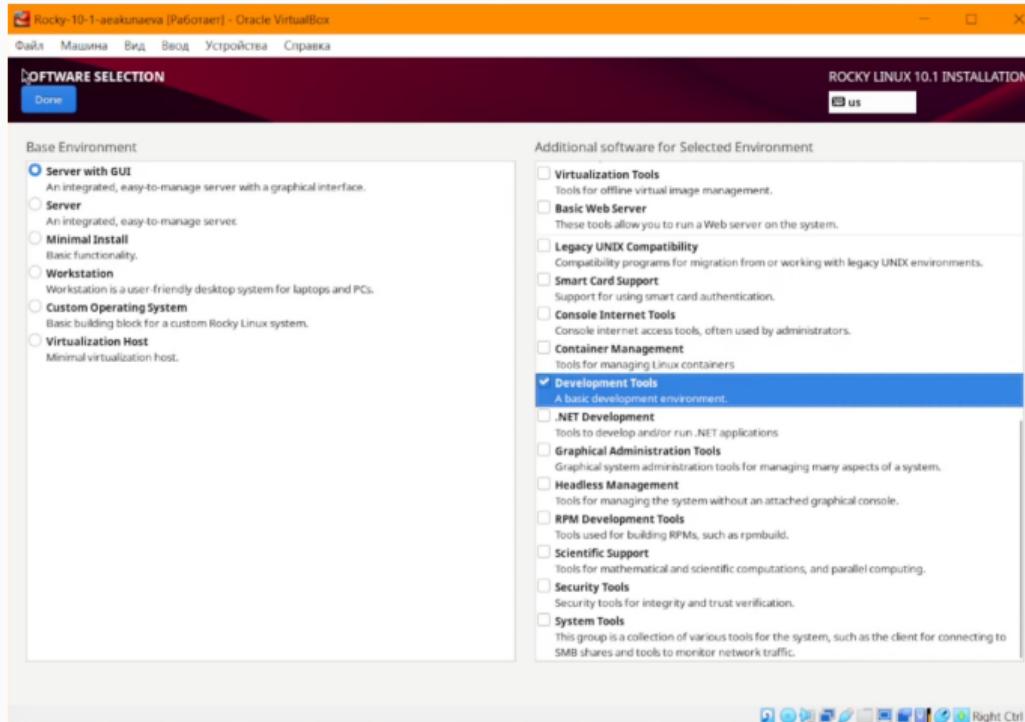
Создание виртуального жёсткого диска



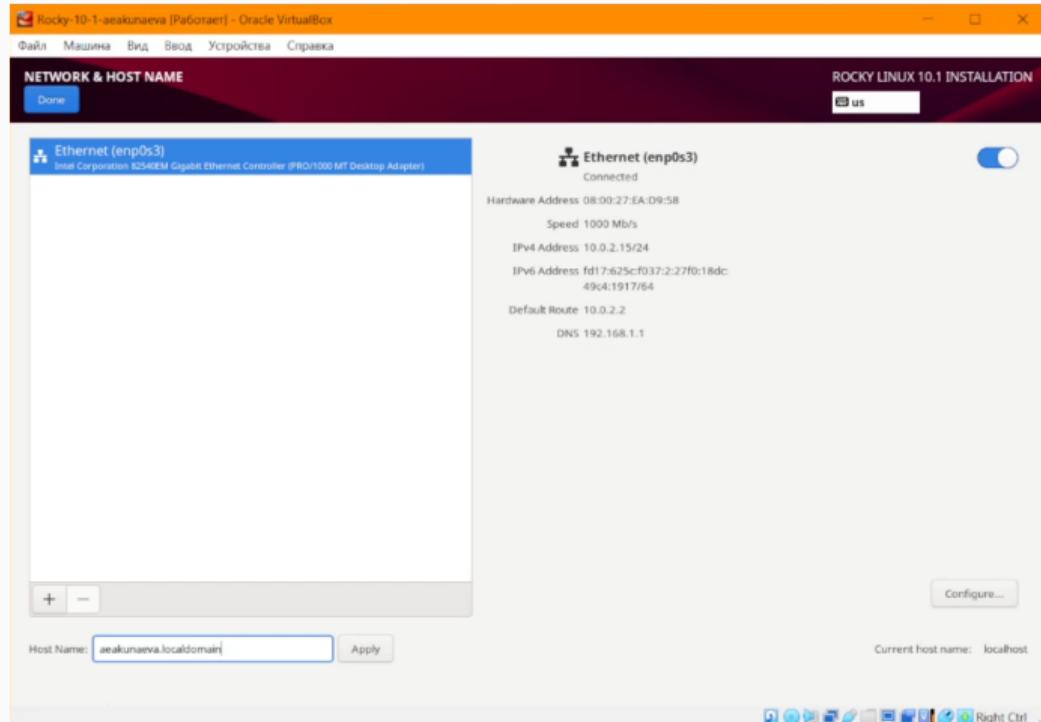
Установка основного языка системы



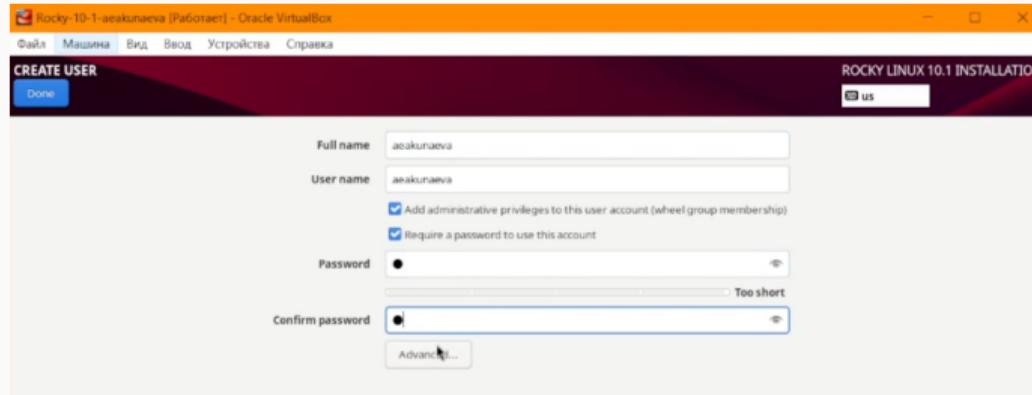
Секция Software Selection



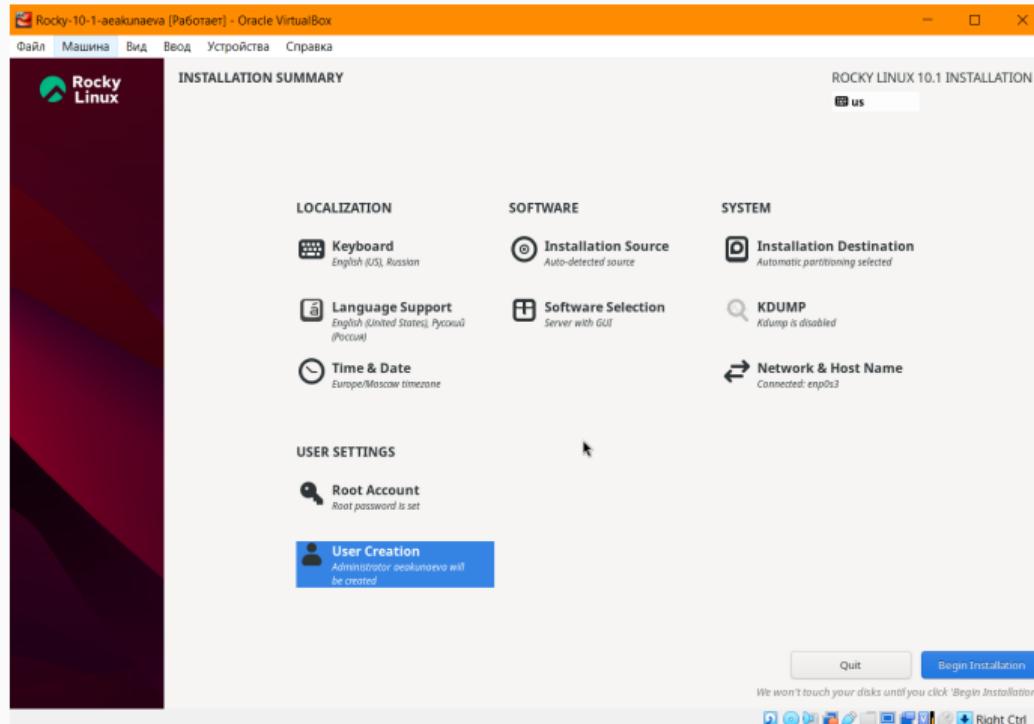
Секция Network & Host Name



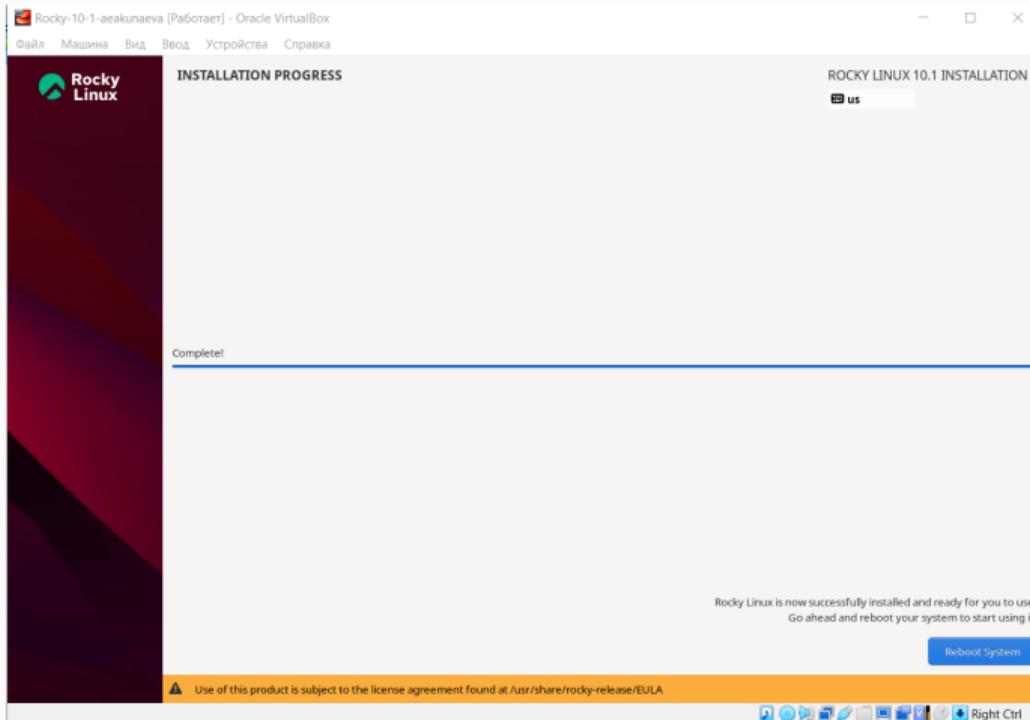
Секция Create User/Root Account



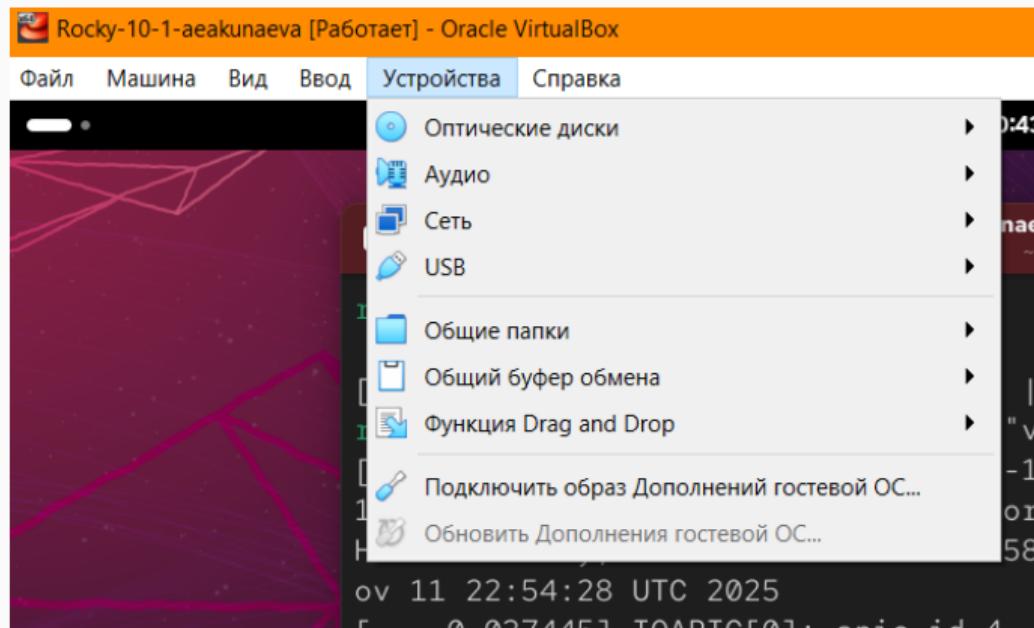
Общие настройки системы



Установка ОС



Подключение образа Дополнений гостевой ОС



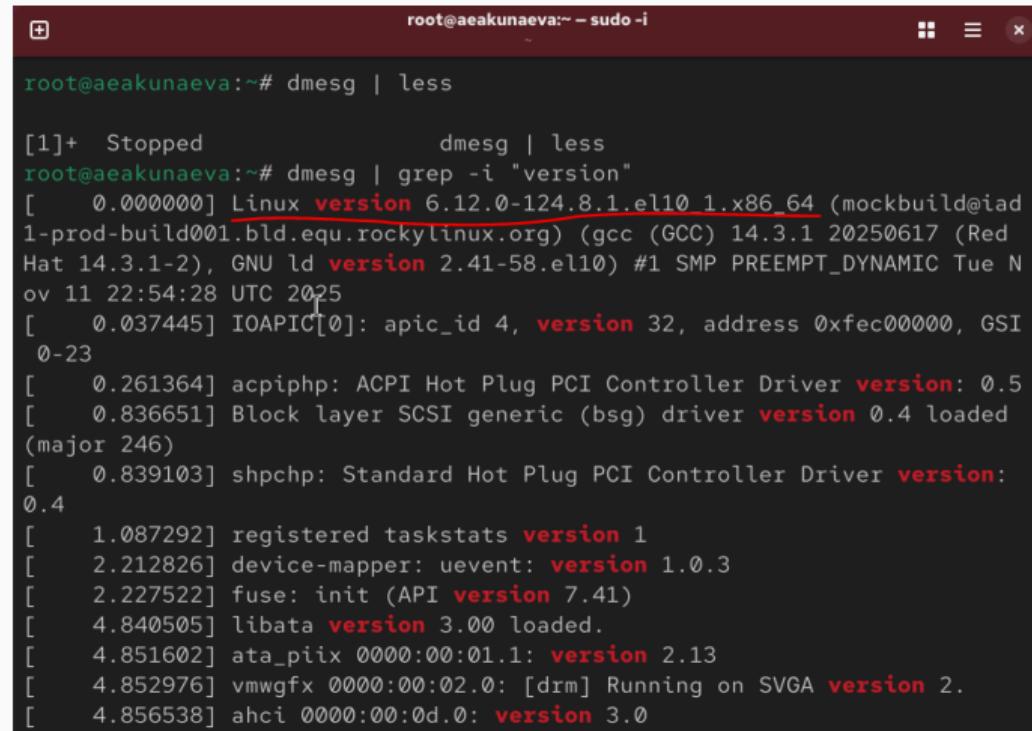
Домашнее задание: dmesg | less

dmesg | less

```
[    0.000000] Linux version 6.12.0-124.8.1.el10_1.x86_64 (mockbuild@iad1-prod-build001.bld.equ.rockylinux.org) (gcc (GCC) 14.3.1 20250617 (Red Hat 14.3.1-2), GNU ld version 2.41-58.el10) #1 SMP PREEMPT_DYNAMIC Tue Nov 11 22:54:28 UTC 2025
[    0.000000] Command line: BOOT_IMAGE=(hd0,gpt2)/vmlinuz-0-rescue-9f9fef444fae48829267e4939c0ecffe root=/dev/mapper/rl-root ro resume=UUID=22441bfe-0d78-4438-9080-10bf6eaee6f5 rd.lvm.lv=rl/root rd.lvm.lv=rl/swap rhgb quiet
[    0.000000] [Firmware Bug]: TSC doesn't count with P0 frequency!
[    0.000000] BIOS-provided physical RAM map:
[    0.000000] BIOS-e820: [mem 0x0000000000000000-0x000000000009fbff] usable
[    0.000000] BIOS-e820: [mem 0x000000000009fc00-0x000000000009ffff] reserved
[    0.000000] BIOS-e820: [mem 0x00000000000f0000-0x00000000000fffff] reserved
[    0.000000] BIOS-e820: [mem 0x00000000000100000-0x000000000dffeffff] usable
[    0.000000] BIOS-e820: [mem 0x000000000dffff0000-0x000000000dfffffff] ACPI data
[    0.000000] BIOS-e820: [mem 0x00000000fec00000-0x00000000fec00fff] reserved
```

Домашнее задание №1

```
dmesg | grep -i "version"
```



A screenshot of a terminal window titled "root@aekunaeva:~ - sudo -". The terminal displays the output of the command "dmesg | less". The output shows various kernel messages with the word "version" highlighted in red. Key entries include:

- [0.000000] Linux **version** 6.12.0-124.8.1.el10.1.x86_64 (mockbuild@iad1-prod-build001.bld.equ.rockylinux.org) (gcc (GCC) 14.3.1 20250617 (Red Hat 14.3.1-2), GNU ld **version** 2.41-58.el10) #1 SMP PREEMPT_DYNAMIC Tue Nov 11 22:54:28 UTC 2025
- [0.037445] IOAPIC[0]: apic_id 4, **version** 32, address 0xfec00000, GSI 0-23
- [0.261364] acpiphp: ACPI Hot Plug PCI Controller Driver **version**: 0.5
- [0.836651] Block layer SCSI generic (bsg) driver **version** 0.4 loaded (major 246)
- [0.839103] shpchp: Standard Hot Plug PCI Controller Driver **version**: 0.4
- [1.087292] registered taskstats **version** 1
- [2.212826] device-mapper: uevent: **version** 1.0.3
- [2.227522] fuse: init (API **version** 7.41)
- [4.840505] libata **version** 3.00 loaded.
- [4.851602] ata_piix 0000:00:01.1: **version** 2.13
- [4.852976] vmwgfx 0000:00:02.0: [drm] Running on SVGA **version** 2.
- [4.856538] ahci 0000:00:0d.0: **version** 3.0

Домашнее задание №2-3

```
dmesg | grep -i "processor"
```

```
root@aekunaeva:~# dmesg | grep -i "processor"
[    0.000012] tsc: Detected 3393.626 MHz processor
[    0.243522] smpboot: CPU0: AMD Ryzen 5 2600 Six-Core Processor (family: 0x17, model: 0x8, stepping: 0x2)
[    0.254243] smpboot: Total of 4 processors activated (27149.00 BogoMIPS)
[    0.263304] ACPI: Added _OSI(Processor Device)
[    0.263304] ACPI: Added _OSI(Processor Aggregator Device)
```

Домашнее задание №4.1

```
dmesg | grep -i "memory"
```

```
root@aekunaeva:~# dmesg | grep -i "memory"
[    0.000000] DMI: Memory slots populated: 0/0
[    0.006775] ACPI: Reserving FACP table memory at [mem 0xfffff00f0-0xdf
ff01e3]
[    0.006776] ACPI: Reserving DSDT table memory at [mem 0xfffff0310-0xdf
ff2662]
[    0.006777] ACPI: Reserving FACS table memory at [mem 0xfffff0200-0xdf
ff023f]
```

Домашнее задание №4.2

```
[    0.140082] Freeing SMP alternatives memory: 40K
[    0.257512] Memory: 3829168K/4193848K available (18432K kernel code,
5804K rwdata, 14268K rodata, 4344K init, 6696K bss, 360280K reserved, 0K
cma-reserved)
[    0.258251] x86/mm: Memory block size: 128MB
[    0.799813] Freeing initrd memory: 162720K
[    0.841653] Non-volatile memory driver v1.3
[    1.190889] Freeing unused decrypted memory: 2028K
[    1.191995] Freeing unused kernel image (initmem) memory: 4344K
[    1.192432] Freeing unused kernel image (rodata/data gap) memory: 68K
[    4.853087] vmwgfx 0000:00:02.0: [drm] Legacy memory limits: VRAM = 1
6384 KiB, FIFO = 2048 KiB, surface = 501904 KiB
[    4.853097] vmwgfx 0000:00:02.0: [drm] Maximum display memory size is
16384 KiB
```

Домашнее задание №5

```
dmesg | grep -i "hypervisor"
```

```
root@aekunaeva:~# dmesg | grep -i "hypervisor"
[    0.000000] Hypervisor detected: KVM
[   4.852986] vmwgfx 0000:00:02.0: [drm] *ERROR* vmwgfx seems to be run
ning on an unsupported hypervisor.
```

Домашнее задание №6-7

```
dmesg | grep -i "filesystem"
```

```
root@aekunaeva:~# dmesg | grep -i "filesystem"
[    6.441115] XFS (dm-0): Mounting V5 Filesystem b96e4268-0f6b-434f-a89
2-44c53ae31157
[   22.925844] XFS (sda2): Mounting V5 Filesystem 6cb4a6e9-36f6-4691-8ad
7-87ee2c4f918f
```

Выводы

Выводы

Я приобрела практические навыки установки операционной системы на виртуальную машину, настройки минимально необходимых для дальнейшей работы сервисов.