

# **Отчет о лабораторной работе**

**Лабораторная работа №1**

Казначеев Сергей Ильич

# **Содержание**

<b>1 Цель работы</b>	<b>5</b>
<b>2 Выполнение лабораторной работы</b>	<b>6</b>
<b>3 Выводы</b>	<b>11</b>

# **Список иллюстраций**

2.1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
2.2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
2.3	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7
2.4	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7
2.5	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8
2.6	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8
2.7	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8
2.8	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9
2.9	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9
2.10	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9
2.11	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9
2.12	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10
2.13	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10
2.14	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10

# **Список таблиц**

# **1 Цель работы**

Целью данной работы является приобретение практических навыков установки операционной системы на виртуальную машину настройки минимально необходимых для дальнейшей работы сервисов

## 2 Выполнение лабораторной работы

Для начала назовем нашу виртуальную машину Rocky3 и выберем установочный диск (рис. 2.1).

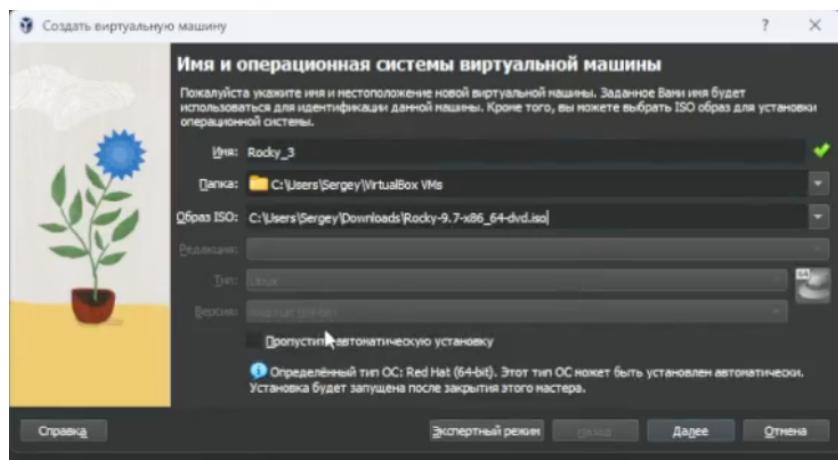


Рис. 2.1: 1

Выделяем память и процессор (рис. 2.2).

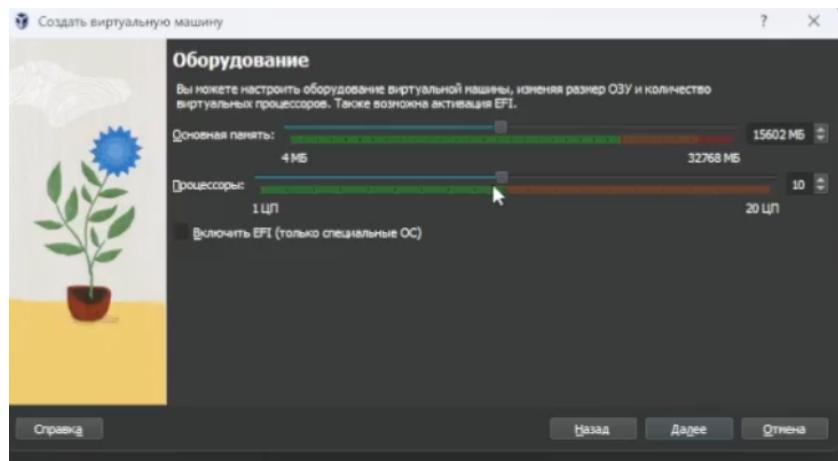


Рис. 2.2: 2

Выделяем размер диска (20 гб) (рис. 2.3).

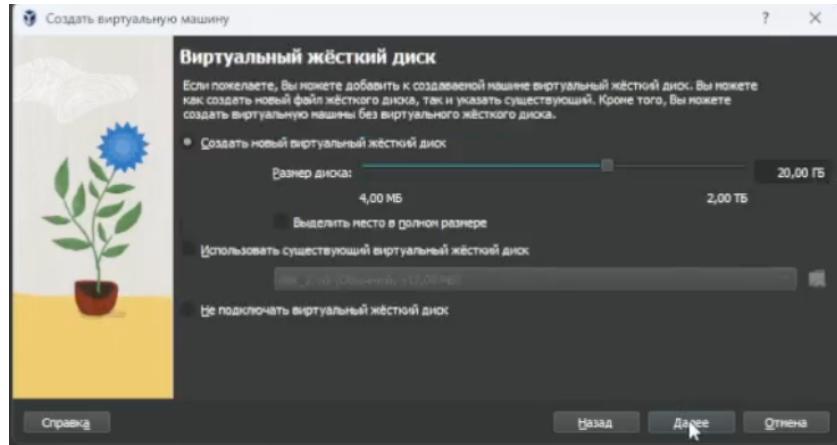


Рис. 2.3: 3

Далее выбираем язык, я выбрал русский язык (рис. 2.4).

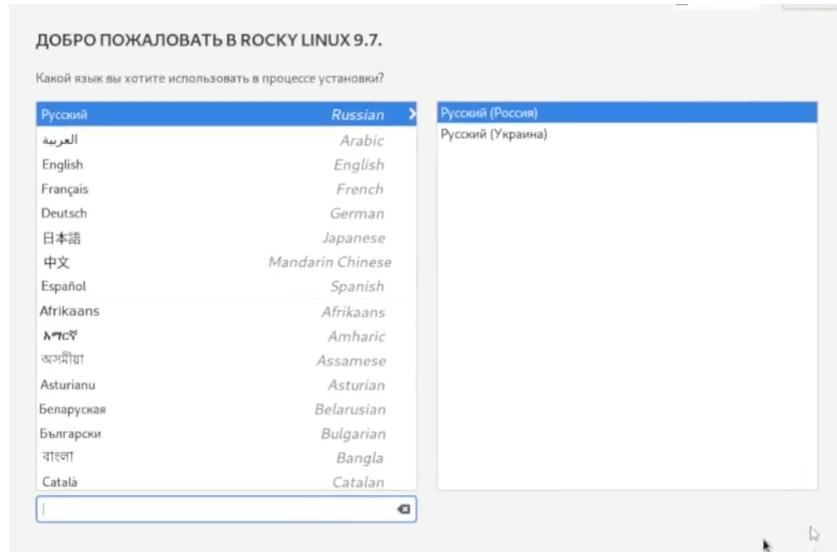


Рис. 2.4: 4

Выбираем диск куда установится система (рис. 2.5).

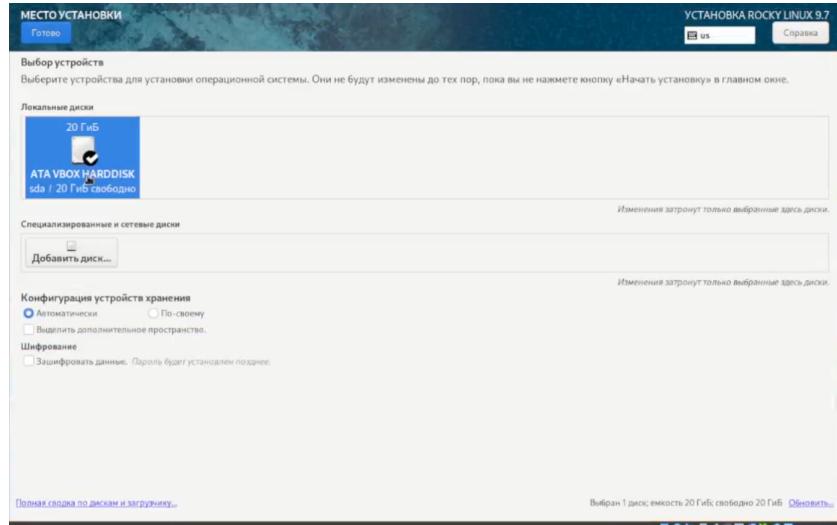


Рис. 2.5: 5

Настроим рут пользователю указав пароль для него и разрешив ему ssh (рис. 2.6).

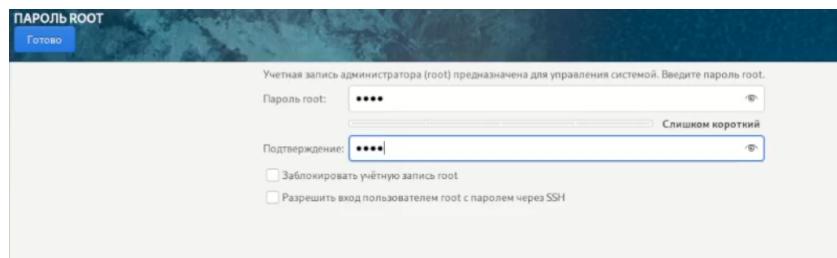


Рис. 2.6: 7

Настром своего пользователя согласно об именовании (рис. 2.7).

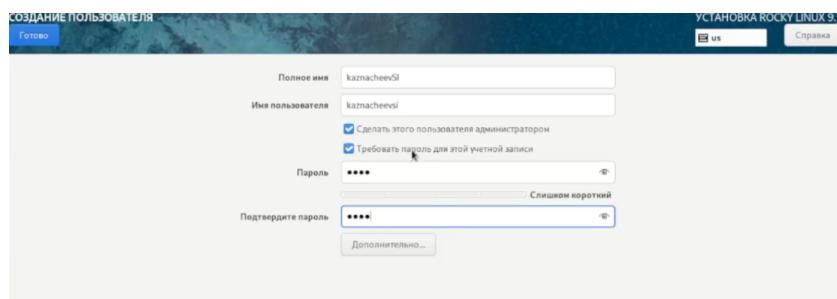


Рис. 2.7: 6

Теперь выполняем домашнее задание находим версию ядра (рис. 2.8).

```
[root@localhost ~]# dmesg | grep -i "linux version"
[    0.000000] Linux version 5.14.0-611.5.1.el9_7.x86_64 (mockbuild@iad1-prod-build001.bld.equ.rockylinux.org) (gcc (GCC) 11.5.0 20240719 (Red Hat 11.5.0-11), G
NU ld version 2.35.2-67.el9) #1 SMP PREEMPT_DYNAMIC Tue Nov 11 22:20:27 UTC 2025
```

Рис. 2.8: 8

2) Частота процессора (рис. 2.9).

```
[root@localhost ~]# dmesg | grep -i "detected.*mhz"
[    0.000006] tsc: Detected 3686.398 MHz processor
```

Рис. 2.9: 9

3) Модель процессора (рис. 2.10).

```
[root@localhost ~]# dmesg | grep -i "cpu0"
[    0.298249] smpboot: CPU0: 12th Gen Intel(R) Core(TM) i5-12600KF (family: 0x6
, model: 0x97, stepping: 0x2)
```

Рис. 2.10: 10

4) Количество доступной памяти (рис. 2.11).

```
[root@localhost ~]# dmesg | grep -i "memory"
[    0.001270] ACPI: Reserving FACP table memory at [mem 0xdffff00f0-0xfffff01e3]
[    0.001280] ACPI: Reserving DSOT table memory at [mem 0xdffff0650-0xfffff29a2]
[    0.001281] ACPI: Reserving FACS table memory at [mem 0xdffff200-0xfffff023f]
[    0.001281] ACPI: Reserving FACS table memory at [mem 0xdffff200-0xfffff023f]
[    0.001282] ACPI: Reserving APIC table memory at [mem 0xdffff0240-0xfffff02db]
[    0.001282] ACPI: Reserving DSOT table memory at [mem 0xdffff0240-0xfffff064b]
[    0.002071] Early memory node ranges
[    0.011030] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x00000fff]
[    0.011040] PM: hibernation: Registered nosave memory: [mem 0x000f7000-0x0000ffff]
[    0.011041] PM: hibernation: Registered nosave memory: [mem 0x000a0000-0x000effff]
[    0.011042] PM: hibernation: Registered nosave memory: [mem 0x00050000-0x000effff]
[    0.011042] PM: hibernation: Registered nosave memory: [mem 0xfffff0000-0xfffff0ffff]
[    0.011042] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x00ffffff]
[    0.011042] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x000fffff]
[    0.011042] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x000fffff]
[    0.011043] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x000fffff]
[    0.011043] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x000fffff]
[    0.011044] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x000fffff]
[    0.011044] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x000fffff]
[    0.194997] Freeing SMP alternatives : 40K
[    1.731046] memory: 15245816K/15975992K available (16384K kernel code, 5783K rwdata, 13988K rodata, 40668K init, 7312K bss, 723264K reserved, 0K cma-reserved)
[    1.742123] x86/mm: memory block size: 128M
[    1.742123] Freeing initrd memory: 61204K
[    12.100560] PM: hibernation: Registered nosave memory driver v1.3
[    12.472285] Freeing unused decrypted memory: 2028K
[    12.475760] Freeing unused kernel image (initmem) memory: 4068K
[    12.484667] Freeing unused kernel image (rodata/data gap) memory: 348K
[    18.926585] vmmgrx: 0000:00:02.0: [drm] Legacy memory limits: VRAM = 131072 K1B, FIFO = 2048 K1B, surface = 393216 K1B
[    18.926585] vmmgrx: 0000:00:02.0: [drm] Maximum display memory size is 131072 K1B
[root@localhost ~]# dmesg | grep -i "available"
[    0.002080] On node 0, zone DMA: 1 pages in unavailable ranges
[    0.002130] On node 0, zone DMA: 97 pages in unavailable ranges
[    0.009733] On node 0, zone Normal: 10 pages in unavailable ranges
[    0.009764] On node 0, zone Normal: 3584 pages in unavailable ranges
[    0.009764] [mem 0x00000000-0xffffffff] available memory for services
[    1.731046] memory: 15245816K/15975992K available (16384K kernel code, 5783K rwdata, 13988K rodata, 40668K init, 7312K bss, 723264K reserved, 0K cma-reserved)
[    18.992536] vmmgrx: 0000:00:02.0: [drm] Available shader model: Legacy.
[root@localhost ~]# dmesg | grep -i "memory available"
[root@localhost ~]# dmesg | grep -i "hypervisor"
[    0.000000] hypervisor detected: KVM
[    18.926512] vmmgrx: 0000:00:02.0: [drm] +ERROR+ vmmgrx seems to be running on an unsupported hypervisor.
```

Рис. 2.11: 11

5) Найти гипервизор (рис. 2.12).

```

root@localhost ~]# dmesg | grep -i "memory"
0.001770 [ACPI] Reserving FACP table memory at [mem 0xdffff000-0xdffff00e3]
0.001208 [ACPI] Reserving DSDT table memory at [mem 0xfffff0e50-0xfffff2932]
0.001201 [ACPI] Reserving FADT table memory at [mem 0xfffff2930-0xfffff2931]
0.001201 [ACPI] Reserving FACS table memory at [mem 0xfffff2020-0xfffff202f]
0.001201 [ACPI] Reserving APIC table memory at [mem 0xfffff0240-0xfffff02d0]
0.001202 [ACPI] Reserving SSDT table memory at [mem 0xfffff02e0-0xfffff04b0]
0.002071] Early memory node ranges
0.010803 PM: hibernation: Registered nosave memory: [mem 0x000000000-0x000000ff]
0.010804 PM: hibernation: Registered nosave memory: [mem 0x0009f000-0x0009ffff]
0.010841 PM: hibernation: Registered nosave memory: [mem 0x000aa0000-0x000effff]
0.010841 PM: hibernation: Registered nosave memory: [mem 0x000ff0000-0x000fffff]
0.010842 PM: hibernation: Registered nosave memory: [mem 0xfffff0000-0xffffffff]
0.010842 PM: hibernation: Registered nosave memory: [mem 0x0e0000000-0xfefbf7fff]
0.010843 PM: hibernation: Registered nosave memory: [mem 0x100000000-0x10000ffff]
0.010843 PM: hibernation: Registered nosave memory: [mem 0xc10000000-0xc1000ffff]
0.010843 PM: hibernation: Registered nosave memory: [mem 0xe00000000-0xe0000ffff]
0.010843 PM: hibernation: Registered nosave memory: [mem 0xfee01000-0xfffffbffff]
0.010843 PM: hibernation: Registered nosave memory: [mem 0xffffc0000-0xffffffff]
0.010844 PM: hibernation: Registered nosave memory: [mem 0xffffc0000-0xffffffff]
0.154907] Freeing SMP alternative memory: 40K
1.161461 Memory: 15245816/15975992K available (16384K kernel code, 5783K rdata, 13988K rodata, 4068K init, 7312K bss, 723264K reserved, 0K cma-reserved)
1.742125 x86/mm: memory block size: 128KB
12.068761 Freeing initrd memory: 61204K
12.109569] Non-volatile memory driver v1.3
13.223020] Freeing unused decrypted memory: 2628K
13.476108] Freeing unused kernel image (initmem) memory: 4068K
12.484607] Freeing unused kernel image (rodata/data gap) memory: 348K
16.920595] vmwgfx 0000:00:02.0: [drm] Legacy memory lmtis: VRAM = 131072 Kib, FIFO = 2048 Kib, surface = 393216 Kib
16.920595] vmwgfx 0000:00:02.0: [drm] Maximum display memory size is 131072 Kib
root@localhost ~]# dmesg | grep -i "available"
0.000000 On node 0 zone Normal: 514 pages in unavailable ranges
0.000000 On node 0 zone HighMem: 97 pages in unavailable ranges
0.000733] On node 0, zone Normal: 16 pages in unavailable ranges
0.000764] On node 0, zone Normal: 3584 pages in unavailable ranges
0.010844] [mem 0x00000000-0xfefbf7fff] available for PCI devices
1.731046] Memory: 15245816/15975992K available (16384K kernel code, 5783K rdata, 13988K rodata, 4068K init, 7312K bss, 723264K reserved, 0K cma-reserved)
18.902556] vmwgfx 0000:00:02.0: [drm] Available shader model: legacy.
[root@localhost ~]# dmesg | grep -i "available"
[root@localhost ~]# dmesg | grep -i "hypervisor available"
[root@localhost ~]# dmesg | grep -i "hypervisor"
0.000000] Hypervisor detected: KVM
18.920312] vmwgfx 0000:00:02.0: [drm] +ERROR+ vmwgfx seems to be running on an unsupported hypervisor.

```

Рис. 2.12: 12

6) Найти тип файловой системы корневого раздела (рис. 2.13).

Файловая система	Type	Размер	Использовано	ост.	Использовано%	Смонтировано в
devtmpfs	devtmpfs	4,0M	0	4,0M	0%	/dev
tmpfs	tmpfs	7,4G	0	7,4G	0%	/dev/shm
tmpfs	tmpfs	3,0G	9,3M	3,0G	1%	/run
/dev/mapper/r1-root	xfs	17G	6,4G	11G	38%	/
/dev/sda1	xfs	960M	372M	589M	39%	/boot
tmpfs	tmpfs	1,5G	52K	1,5G	1%	/run/user/42
tmpfs	tmpfs	1,5G	132K	1,5G	1%	/run/user/1000
/dev/sr0	iso9660	53M	53M	0	100%	/run/media/kaznacheevsi/VBox_GAs_7.0.26

Рис. 2.13: 13

7) Напиши последовательность монтирования файловых систем

```
[root@localhost ~]# dmesg | grep -i "mount"
[ 0.195041] Mount-cache hash table entries: 32768 (order: 6, 262144 bytes, linear)
[ 0.195041] Mount-point-cache hash table entries: 32768 (order: 6, 262144 bytes, linear)
[ 24.186777] XFS (dm-0): Mounting V5 Flesystem a2e5a515-d5be-4c06-a181-7bb7104e42a0
[ 24.202443] XFS (dm-0): Ending clean mount
[ 26.468533] systemd[1]: Set up automount Arbitrary Executable File Formats File System Automount Point.
[ 26.508090] systemd[1]: Mounting Huge Pages File System...
[ 26.509279] systemd[1]: Mounting POSIX Message Queue File System...
[ 26.510325] systemd[1]: Mounting Kernel Debug File System...
[ 26.511372] systemd[1]: Mounting Kernel Trace File System...
[ 26.865620] systemd[1]: Starting Remount Root and Kernel File Systems...
[ 33.509778] XFS (sdal): Mounting V5 Flesystem 86c3d694-ec20-41da-88da-f66a25779977
[ 33.533463] XFS (sdal): Ending clean
```

Рис. 2.14: 14

## **3 Выводы**

В результате выполнения лабораторной работы была установлена система Rocky.