

Отчет о лабораторной работе

Лабораторная работа №1

Казначеев Сергей Ильич

Содержание

| | | |
|----------|---------------------------------------|-----------|
| 1 | Цель работы | 5 |
| 2 | Выполнение лабораторной работы | 6 |
| 3 | Выводы | 11 |

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).

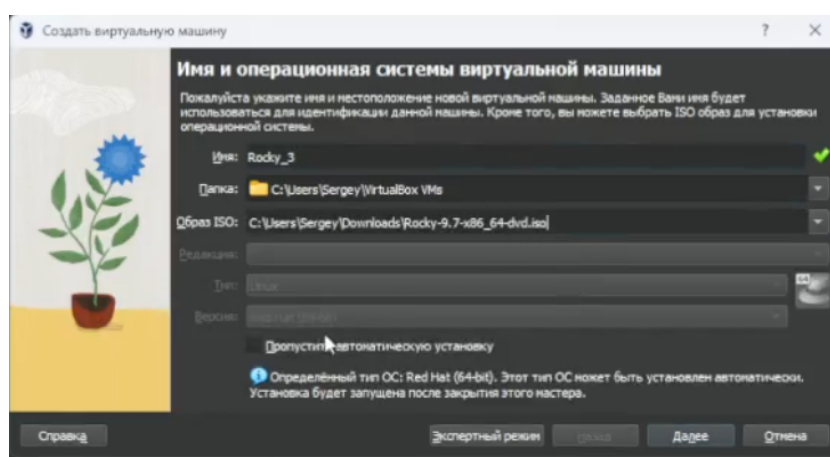


Рис. 2.1: 1

Выделяем память и процессор (рис. 2.2).

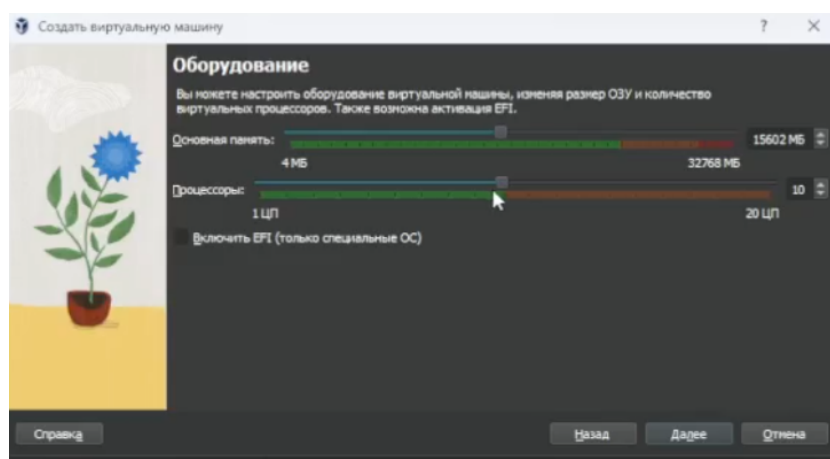


Рис. 2.2: 2

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

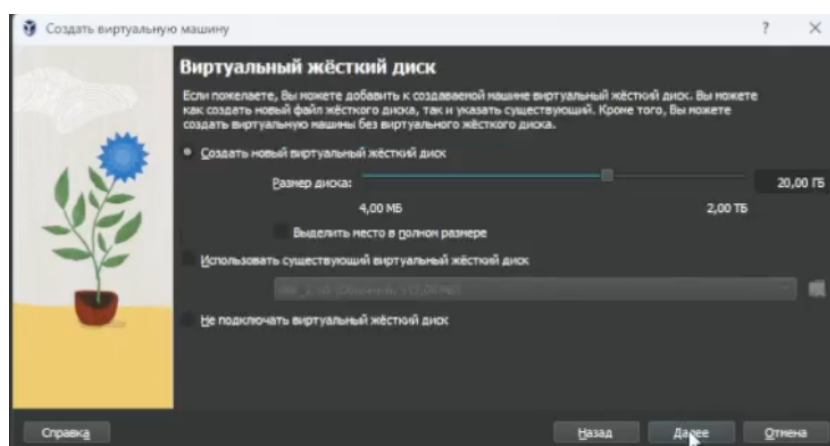


Рис. 2.3: 3

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

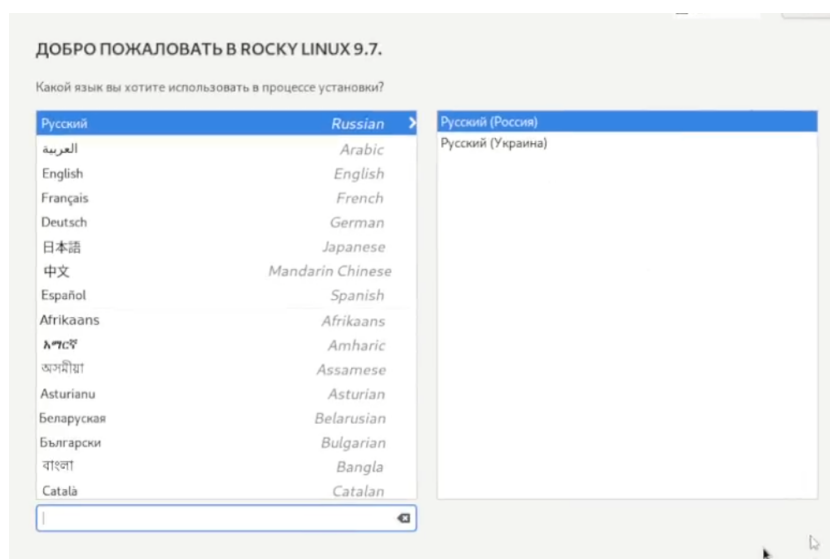


Рис. 2.4: 4

Выбираем диск куда установится система (рис. 2.5).

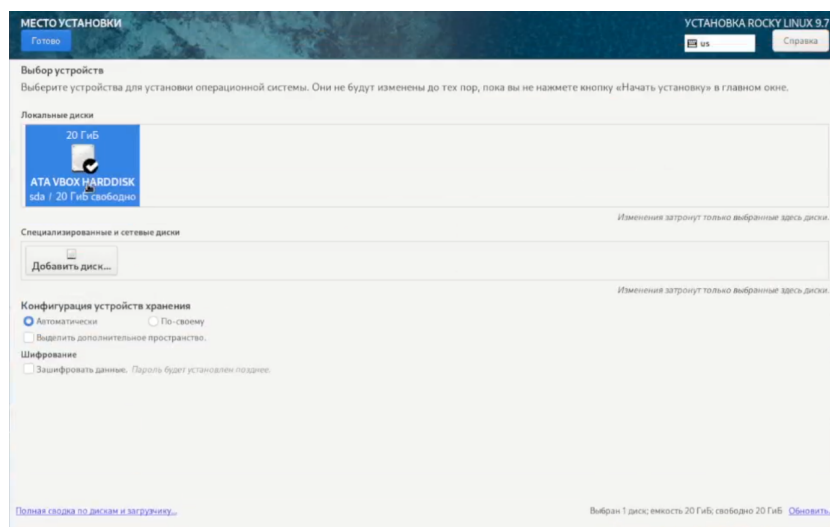


Рис. 2.5: 5

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

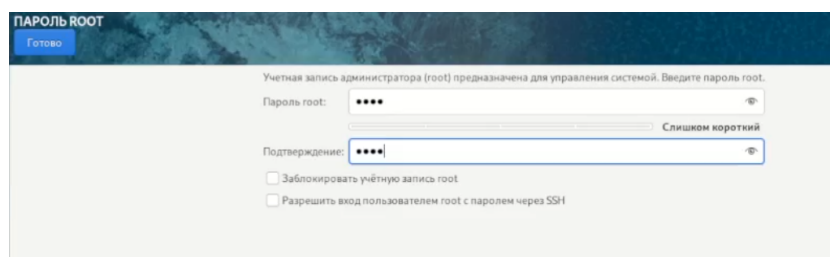


Рис. 2.6: 7

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

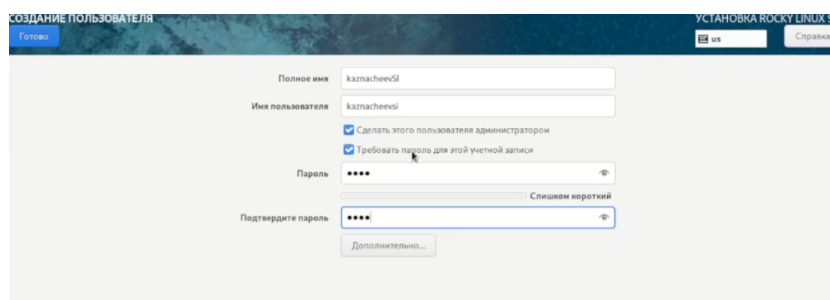


Рис. 2.7: 6

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-bu
fld001.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 3606.398 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"
[ 0.001279] ACPI: Reserving FACP table memory at [mem 0x00000000-0x0000000f]
[ 0.001280] ACPI: Reserving DSDT table memory at [mem 0x00000010-0x0000001f]
[ 0.001281] ACPI: Reserving FACS table memory at [mem 0x00000020-0x0000002f]
[ 0.001281] ACPI: Reserving APIC table memory at [mem 0x00000030-0x0000003f]
[ 0.001281] ACPI: Reserving SSDT table memory at [mem 0x00000040-0x0000004b]
[ 0.002071] Early memory node ranges
[ 0.011039] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x00000fff]
[ 0.011040] PM: hibernation: Registered nosave memory: [mem 0x0000f000-0x0000ffff]
[ 0.011041] PM: hibernation: Registered nosave memory: [mem 0x0000a000-0x0000efff]
[ 0.011041] PM: hibernation: Registered nosave memory: [mem 0x0000f000-0x0000ffff]
[ 0.011042] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x0000ffff]
[ 0.011042] PM: hibernation: Registered nosave memory: [mem 0x00000000-0x0000ffff]
[ 0.011042] PM: hibernation: Registered nosave memory: [mem 0xfec00000-0xfec0ffff]
[ 0.011043] PM: hibernation: Registered nosave memory: [mem 0xfec00000-0xfec0ffff]
[ 0.011043] PM: hibernation: Registered nosave memory: [mem 0xfec00000-0xfec0ffff]
[ 0.011043] PM: hibernation: Registered nosave memory: [mem 0xfec00000-0xfec0ffff]
[ 0.011044] PM: hibernation: Registered nosave memory: [mem 0xfec00000-0xfec0ffff]
[ 0.011044] PM: hibernation: Registered nosave memory: [mem 0xfec00000-0xfec0ffff]
[ 0.194997] Freeing SMP alternatives memory: 40K
[ 1.731046] Memory: 15245816K/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: 128MB
[ 12.008761] Freeing initrd memory: 61204K
[ 12.100569] Non-volatile memory driver v1.3
[ 12.472205] Freeing unused decrypted memory: 2028K
[ 12.475708] Freeing unused kernel image (initmem) memory: 4068K
[ 12.484667] Freeing unused kernel image (rodata/data gap) memory: 348K
[ 18.920589] vmwgfx 0000:00:02:0: [drm] Legacy memory limits: VRAM = 131072 KiB, FIFO = 2048 KiB, surface = 393216 KiB
[ 18.920593] vmwgfx 0000:00:02:0: [drm] Maximum display memory size is 131072 KiB
[root@localhost ~]# dmesg | grep -i "available"
[ 0.002889] 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: 16 pages in unavailable ranges
[ 0.009764] On node 0, zone Normal: 3584 pages in unavailable ranges
[ 0.011044] [mem 0xe0000000-0xfef00000] available for PCI devices
[ 1.731046] Memory: 15245816K/15975992K available (16384K kernel code, 5783K rdata, 13988K rodata, 4068K init, 7312K bss, 723264K reserved, 0K cma-
reserved)
[ 18.992536] vmwgfx 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
[ 18.920312] vmwgfx 0000:00:02:0: [drm] *ERROR* vmwgfx seems to be running on an unsupported hypervisor.
```

Рис. 2.11: 11

5) Найти гипервизор (рис. 2.12).

```

root@localhost:~# dmccg | grep -i "memory"
0.001279) ACPI: Reserving FACP table memory at [mem 0xfffff00f0-0xfffff01e3]
0.001280) ACPI: Reserving DSDT table memory at [mem 0xfffff0050-0xfffff02a2]
0.001281) ACPI: Reserving FACS table memory at [mem 0xfffff0200-0xfffff0233]
0.001282) ACPI: Reserving FACS table memory at [mem 0xfffff0200-0xfffff0233]
0.001281) ACPI: Reserving APIC table memory at [mem 0xfffff0240-0xfffff02d0]
0.001282) ACPI: Reserving SSDT table memory at [mem 0xfffff02e0-0xfffff04d0]
0.002071) Early memory node ranges
0.010390) PM: hibernation: Registered nosave memory : [mem 0x00000000-0x00000fff]
0.010400) PM: hibernation: Registered nosave memory : [mem 0x00009000-0x00009fff]
0.010410) PM: hibernation: Registered nosave memory : [mem 0x00000000-0x0000ffff]
0.010410) PM: hibernation: Registered nosave memory : [mem 0x00000000-0x0000ffff]
0.010420) PM: hibernation: Registered nosave memory : [mem 0xfffff0000-0xfffff0fff]
0.010420) PM: hibernation: Registered nosave memory : [mem 0x00000000-0x0000ffff]
0.010420) PM: hibernation: Registered nosave memory : [mem 0xfec00000-0xfec0ffff]
0.010430) PM: hibernation: Registered nosave memory : [mem 0xfec10000-0xfec1ffff]
0.010430) PM: hibernation: Registered nosave memory : [mem 0xfec00000-0xfec0ffff]
0.010430) PM: hibernation: Registered nosave memory : [mem 0xfec10000-0xfec1ffff]
0.010430) PM: hibernation: Registered nosave memory : [mem 0xfec00000-0xfec0ffff]
0.134047) Freeing SMP alternatives memory : 40K
1.731946) memory : 15245816/15975992K available (16384K kernel code, 5783K rwdata, 19888K rodata, 4068K init, 7312K bss, 732264K reserved, 0K cma-
reserved)
1.742225) x86/mm: memory block size: 128MB
1.740876) Freeing initrd memory : 61204K
1.740569) Non-volatile memory driver v1.3
1.742205) Freeing unused decrypted memory : 2028K
1.742760) Freeing unused kernel image (initramfs) memory : 4065K
1.748467) Freeing unused kernel image (rodata/data gap) memory : 348K
1.920589) vmxgf 0000:00:02:0: [drm] Legacy memory limits: VRAM = 131072 KiB, FIFO = 2048 KiB, surface = 393120 KiB
1.920593) vmxgf 0000:00:02:0: [drm] Maximal display memory size is 131072 KiB
root@localhost:~# dmccg | grep -i "available"
0.002080) On node 0, zone DMA: 0 pages in unavailable ranges
0.002130) On node 0, zone DMA: 97 pages in unavailable ranges
0.006793) On node 0, zone Normal: 16 pages in unavailable ranges
0.006794) On node 0, zone Normal: 3554 pages in unavailable ranges
0.010444) [mem 0x00000000-0x00000fff] available for PCI devices
1.731946) memory : 15245816/15975992K available (16384K kernel code, 5783K rwdata, 19888K rodata, 4068K init, 7312K bss, 732264K reserved, 0K cma-
reserved)
1.922534) vmxgf 0000:00:02:0: [drm] available shader model: Legacy.
root@localhost:~# dmccg | grep -i "memory available"
root@localhost:~# dmccg | grep -i "hypervisor"
0.000000) memory detected: 0K
1.920589) vmxgf 0000:00:02:0: [drm] -ERR00: vmxgf seems to be running on an unsupported hypervisor.

```

Рис. 2.12: 12

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

```
[root@localhost ~]# df -Th
```

| Файловая система | Тип | Размер | Использовано | Дост | Использованое | Мониторингово 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/rl-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 | 53H | 53H | 0 | 100% | /run/media/kaznacheevs1/VBox_GAs_7.0.26 |

Рис. 2.13: 13

7) Нати последовательность монтирования файловых систем

```
root@localhost:~# dmesg | grep -i "mount"
```

```
0.195044] mount-cache hash table entries: 32768 (order: 6, 262144 bytes, linear)
0.195041] mountpoint-cache hash table entries: 32768 (order: 6, 262144 bytes, linear)
24.186777] XFS (dm-0): Mounting V5 Filesystem a2e5a51d-d5be-4c06-a181-7bb7104e42a0
24.202443] XFS (dm-0): Ending clean mount
26.468533] system[1]: Set up auto mount Arbitrary Executable File Formats File System Auto mount Point.
26.508090] system[1]: Mounting Huge Pages File System...
26.509279] system[1]: Mounting POSIX Message Queue File System...
26.510325] system[1]: Mounting Kernel Debug File System...
26.511372] system[1]: Mounting Kernel Trace File System...
26.865620] system[1]: Starting Re mount Root and Kernel File Systems...
33.599778] XFS (sda1): Mounting V5 Filesystem 86c3d694-ec20-41da-88da-f66a25779977
```

Рис. 2.14: 14

3 Выводы

В результате выполнения лабораторной работы была установлена система Rocky.