

Лабораторная работа 1

Установка Linux в виртуальной машине

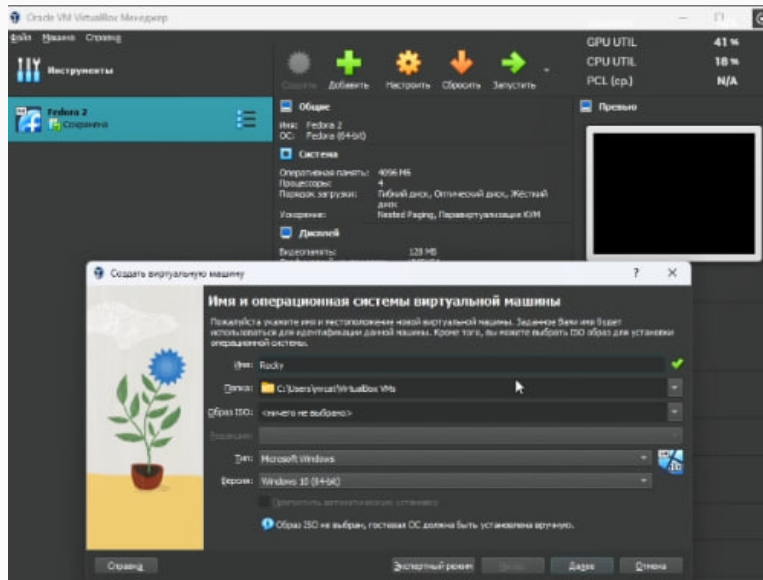
Баранов Никита Дмитриевич

Информация

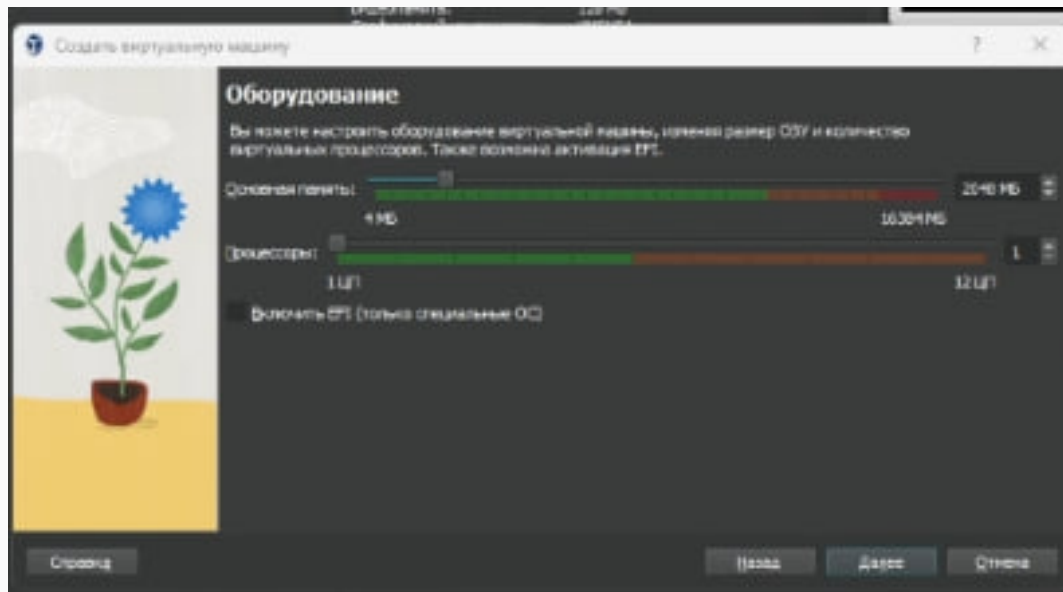
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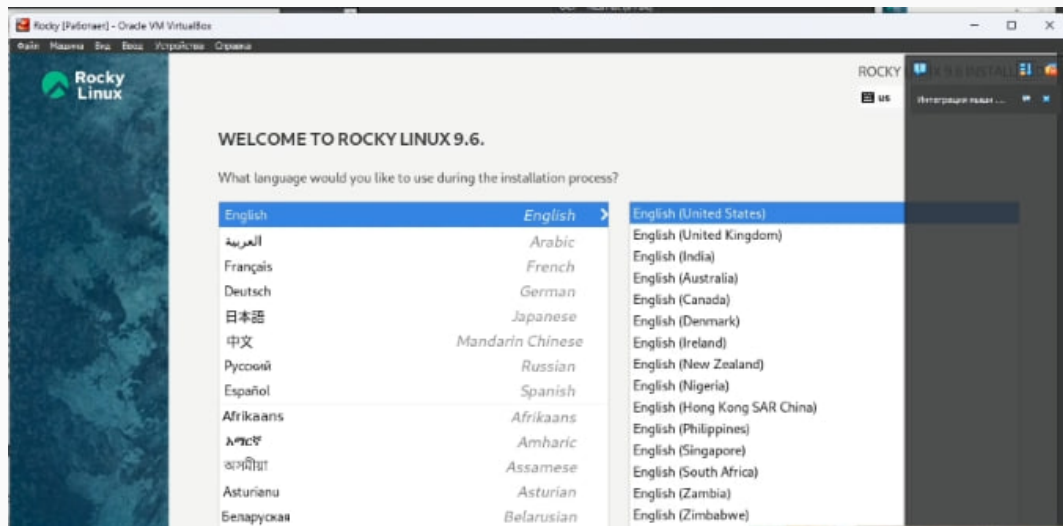
Выбираю ISO-образ




Настраиваю параметры VM



Выбираю язык установки





Подтверждаю параметры установки


**Rocky Linux**



INSTALLATION SUMMARY





ROCKY LINUX
ru



LOCALIZATION
 **Keyboard**
English (US), Russian

 **Language Support**
*English (United States),
Русский (Россия)*

 **Time & Date**
Europe/Moscow timezone

SOFTWARE
 **Installation Source**
Local media
 **Software Selection**
Server with GUI

SYSTEM
 **Installation Destination**
Automatic partitioning selected
 **KDUMP**
Kdump is disabled
 **Network & Host Name**
Connected: enp0s3
 **Security Profile**
No profile selected

USER SETTINGS
 **Root Password**
Root account is disabled
 **User Creation**
No user will be created

Устанавливаю Guest Additions

```
VirtualBox Guest Additions Installation
Verifying archive integrity... 100% MD5 checksums are OK. All good.
Uncompressing VirtualBox 7.0.20 Guest Additions for Linux 100%
VirtualBox Guest Additions installer
Copying additional installer modules ...
Installing additional modules ...
VirtualBox Guest Additions: Starting.
VirtualBox Guest Additions: Setting up modules
VirtualBox Guest Additions: Building the VirtualBox Guest Additions kernel
modules. This may take a while.
VirtualBox Guest Additions: To build modules for other installed kernels, run
VirtualBox Guest Additions: /sbin/rcvboxadd quicksetup <version>
VirtualBox Guest Additions: or
VirtualBox Guest Additions: /sbin/rcvboxadd quicksetup all
VirtualBox Guest Additions: Building the modules for kernel
5.14.0-570.17.1.el9_6.x86_64.

VirtualBox Guest Additions: Look at /var/log/vboxadd-setup.log to find out what
went wrong.
VirtualBox Guest Additions: reloading kernel modules and services
VirtualBox Guest Additions: unable to load vboxguest kernel module, see dmesg
VirtualBox Guest Additions: kernel modules and services were not reloaded
The log file /var/log/vboxadd-setup.log may contain further information.
```


Переименовываю хост по правилам

```
[baranov@baranov media]$ sudo -i
[sudo] password for baranov:
[root@baranov ~]# adduser -G wheel nbaranov
[root@baranov ~]# hostnamectl set-hostname nbaranov
[root@baranov ~]# hostnamectl
Static hostname: nbaranov
Icon name: computer-vn
Chassis: vm
Machine ID: ce5436fdb861482c88cb03227586575e
Boot ID: 638a3de3b9ef4fdeb293e610b6f5f126
Virtualization: oracle
Operating System: Rocky Linux 9.6 (Blue Onyx)
CPE OS Name: cpe:/o:rocky:rocky:9::baseos
Kernel: Linux 5.14.0-570.37.1.el9_6.x86_64
Architecture: x86_64
Hardware Vendor: innotek GmbH
Hardware Model: VirtualBox
Firmware Version: VirtualBox
[root@baranov ~]#
```

Запускаю dmesg | less

```
baranov@ndbaranov:~$ less
__ptrval__) -0x(__ptrval__)
[ 0.326414] Console: colour VGA+ 80x25
[ 0.326423] printk: legacy console [tty0] enabled
[ 0.326470] ACPI: Core revision 20230331
[ 0.327964] APIC: Switch to symmetric I/O mode setup
[ 0.343666] ..TIMER: vector=0x30 apic1=0 pin1=2 apic2=-1 pin2=-1
[ 0.343962] clocksource: tsc-early: mask: 0xffffffffffffffff max_cycles: 0x33
cbd10ad70, max_idle_ns: 440795339741 ns
[ 0.343974] Calibrating delay loop (skipped) preset value.. 7186.71 BogoMIPS
(lpj=3593358)
[ 0.344969] AMD Zen1 DIV0 bug detected. Disable SMT for full protection.
[ 0.344969] Last level iTLB entries: 4KB 1024, 2MB 1024, 4MB 512
[ 0.344969] Last level dTLB entries: 4KB 1536, 2MB 1536, 4MB 768, 1GB 0
[ 0.344969] Spectre V1 : Mitigation: usercopy/swapgs barriers and __user poin
ter sanitization
[ 0.344969] Spectre V2 : Mitigation: Retpolines
[ 0.344969] Spectre V2 : Spectre v2 / SpectreRSB mitigation: Filling RSB on c
ontext switch
[ 0.344969] Spectre V2 : Spectre v2 / SpectreRSB : Filling RSB on VMEXIT
[ 0.344969] RETbleed: Mitigation: untrained return thunk
[ 0.344969] Speculative Return Stack Overflow: IBPB-extending microcode not a
pplied!
[ 0.344969] Speculative Return Stack Overflow: WARNING: See https://kernel.or
```

Проверяю версию ядра

```
[Baranov@ndbaranov ~]$ dmesg | grep -i "Linux version"
[    0.000000] Linux version 5.14.0-573.37.1.el9_6.x86_64 (mockbuild@adi-prod-build001.bld.equ.rockylinux.org) (gcc (GCC) 11.5.0 20240719 (Red Hat 11.5.0-5), GNU ld version 2.35.2-63.el9) #1 SMP PREEMPT_DYNAMIC Thu Aug 28 10:41:06 UTC 2025
[Baranov@ndbaranov ~]$
```

Проверяю частоту процессора

```
[baranov@ndharanov ~]$ dmesg | grep -i "MHz"
[ 0.000010] tsc: Detected 3593.358 MHz processor
[ 4.485854] e1000 0000:00:03:0 eth0: (PCI:33MHz:32-bit) 00:00:27:2a:f0:35
[baranov@ndharanov ~]$
```

Определяю модель процессора

```
[baranov@ndbaranov ~]$ dmesg | grep -i "CPU0"  
[    0.464969] smpboot: CPU0: AMD Ryzen 5 2600X Six-Core Processor (family: 0x17  
, model: 0x5, stepping: 0x2)  
[baranov@ndbaranov ~]$
```

Смотрю доступную оперативную память

```
[ 0.000000] data, 13632K rodata, 4048K init, 7384K bss, 517348K reserved, 0K cma-reserved)
[ 0.363487] Freeing SMP alternatives memory: 40K
[ 0.483197] x86/mm: Memory block size: 128MB
[ 0.735000] Non-volatile memory driver v1.3
[ 1.589871] Freeing initrd memory: 59634K
[ 1.925881] Freeing unused decrypted memory: 2028K
[ 1.927511] Freeing unused kernel image (initmem) memory: 4048K
[ 1.929270] Freeing unused kernel image (rodata/data gap) memory: 704K
[ 3.956444] vmwgfx 0000:00:02.0: [drm] Legacy memory limits: VRAM = 16384 KiB
, FIFO = 3048 KiB, surface = 507984 KiB
[ 3.956456] vmwgfx 0000:00:02.0: [drm] Maximum display memory size is 16384 K
iB
[baranov@ndbaranov ~]$
```

Определяю гипервизор

```
[baranov@ndbaranov ~]$ dmesg | grep -i "hypervisor detected"
[    0.000000] Hypervisor detected: KVM
[baranov@ndbaranov ~]$
```

Проверяю root-файловую систему и порядок монтирования

```
[baranov@ndbaranov ~]$ dmesg | grep -i "Filesystem"
[    6.489575] XFS (dm-0): Mounting V5 Filesystem 1ab1ae65-f3b8-4570-ab38-c2800a
583263
[    9.935376] XFS (sda1): Mounting V5 Filesystem 55e3f8a8-d40d-4cc0-a4fd-7e5551
52edf4
[baranov@ndbaranov ~]$
```