

Отчёт по лабораторной работе №1

Установка Rocky Linux в VirtualBox

Максат Хемраев

5 сентября 2025

Российский университет дружбы народов, Москва, Россия

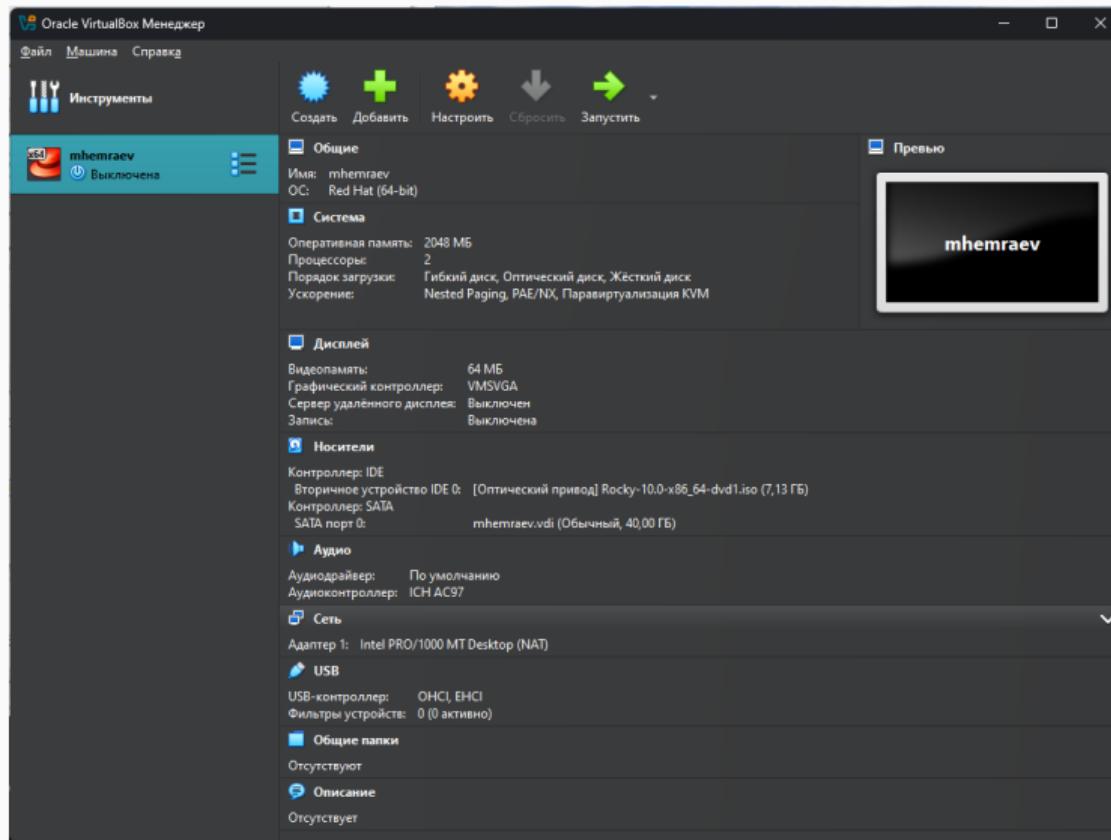
Цель работы

Основная цель

Установить и настроить Rocky Linux в VirtualBox, затем проверить работу системы.

Ход выполнения

Конфигурация ВМ в VirtualBox



Выбор языка установки

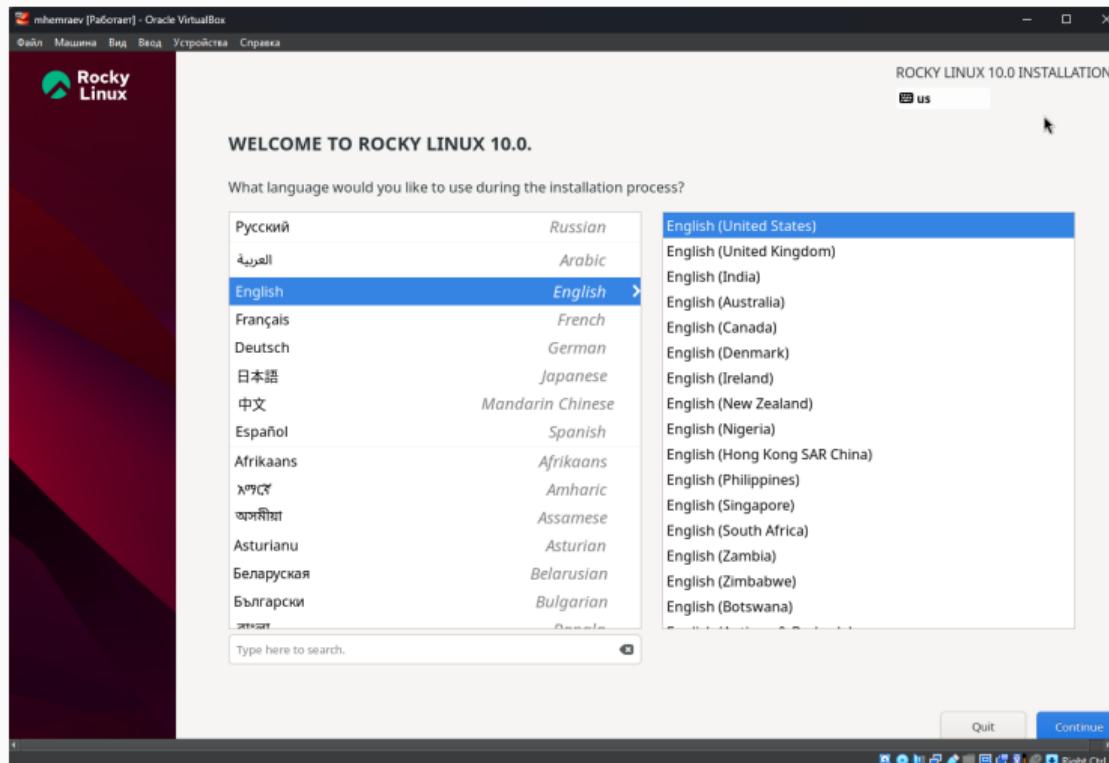


Рис. 2: Welcome / Language

Сводка параметров установки

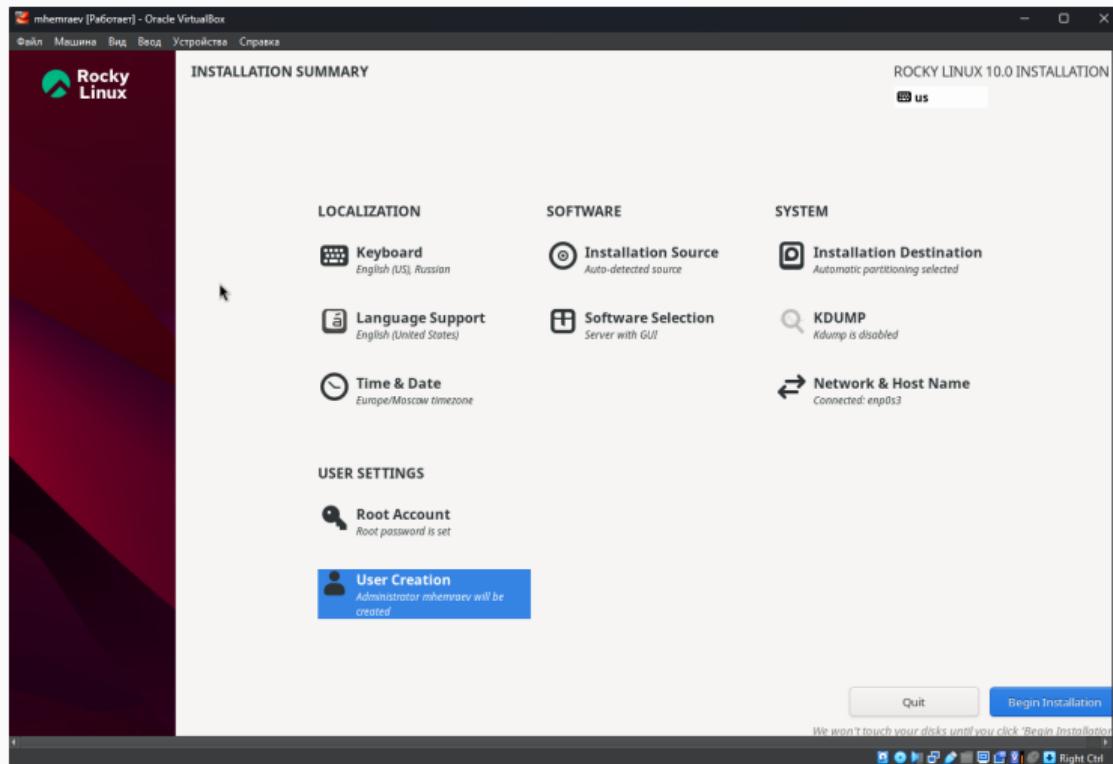


Рис. 3: Installation Summary

Ход установки

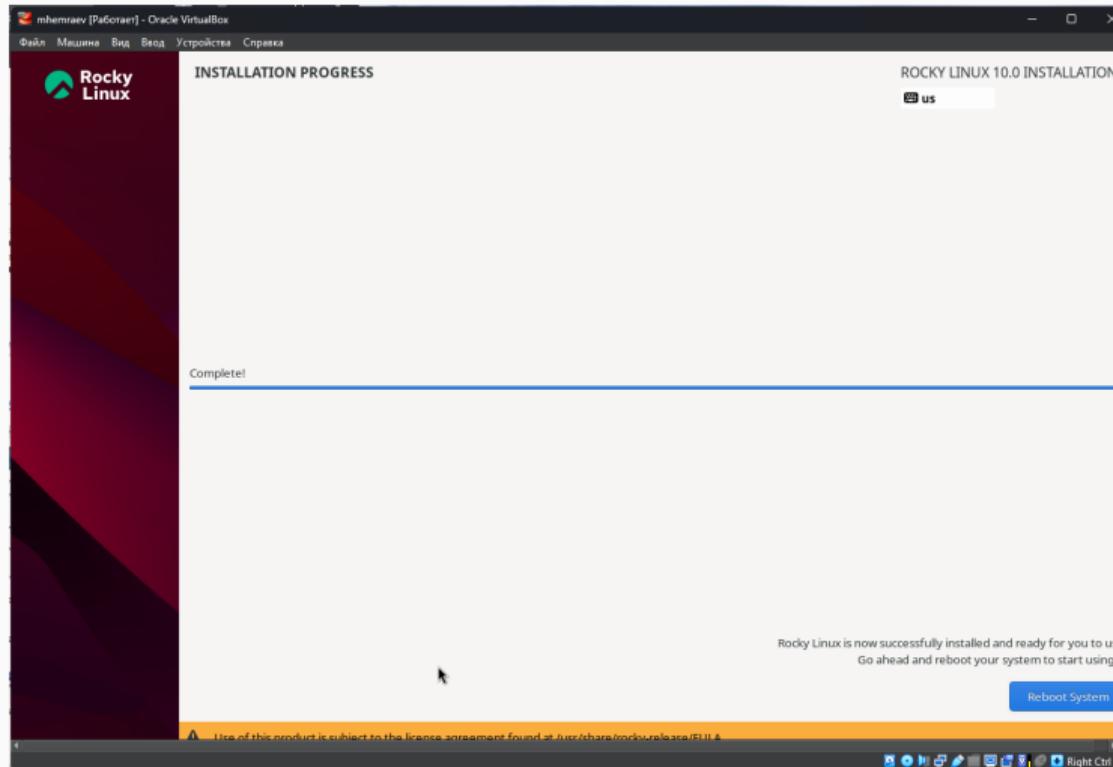


Рис. 4: Installation Progress

Экран входа (GDM)

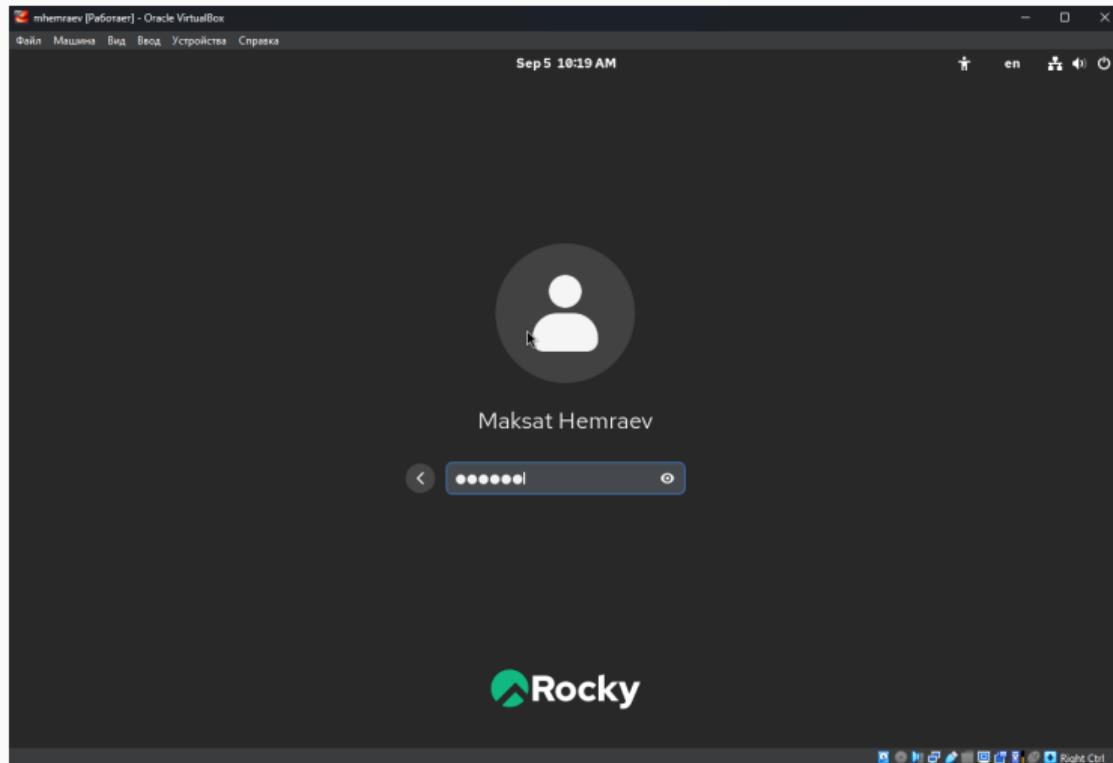


Рис. 5: Login screen

Установка VirtualBox Guest Additions

```
[sudo] password for mhemraev:  
root@mhemraev:~# cd /run/media/mhemraev/VBox_GAs_7.1.12/  
root@mhemraev:/run/media/mhemraev/VBox_GAs_7.1.12# ls -a  
. OS2 VBoxLinuxAdditions.run  
.. runasroot.sh VBoxSolarisAdditions.pkg  
AUTORUN.INF TRANS.TBL VBoxWindowsAdditions-amd64.exe  
autorun.sh VBoxDarwinAdditions.pkg VBoxWindowsAdditions.exe  
cert VBoxDarwinAdditionsUninstall.tool VBoxWindowsAdditions-x86.exe  
NT3x VBoxLinuxAdditions-arm64.run windows11-bypass.reg  
root@mhemraev:/run/media/mhemraev/VBox_GAs_7.1.12# ./VBoxLinuxAdditions.run  
Verifying archive integrity... 100% MD5 checksums are OK. All good.  
Uncompressing VirtualBox 7.1.12 Guest Additions for Linux 100%  
VirtualBox Guest Additions installer  
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/recvboxadd quicksetup <version>  
VirtualBox Guest Additions: or  
VirtualBox Guest Additions: /sbin/recvboxadd quicksetup all  
VirtualBox Guest Additions: Building the modules for kernel  
6.12.0-55.12.1.el10_0.x86_64.
```

Проверка системы

Ядро и CPU (dmesg)

```
root@mhemraev:~# dmesg | grep -i "Linux version"
[    0.000000] Linux version 6.12.0-55.12.1.el10_0.x86_64 (mockbuild@iad1-prod-build001.bld.equ.rockylinux.org) (gcc (GCC) 14.2.1 20250110 (Red Hat 14.2.1-7), G
NU ld version 2.41-53.el10) #1 SMP PREEMPT_DYNAMIC Fri May 23 17:41:02 UTC 2025
root@mhemraev:~# dmesg | grep -i "processor"
[    0.000004] tsc: Detected 3187.204 MHz processor
[    0.135939] smpboot: Total of 2 processors activated (12748.81 BogoMIPS)
[    0.152971] ACPI: Added _OSI(Processor Device)
[    0.152972] ACPI: Added _OSI(Processor Aggregator Device)
root@mhemraev:~# dmesg | grep -i "CPU"
[    0.003829] ACPI: SSDT 0x000000007FFF02A0 00036C (v01 VBOX    VBOXCPU 00000000
2 INTL 20100528)
[    0.004505] CPU topo: Max. logical packages: 1
[    0.004506] CPU topo: Max. logical dies: 1
[    0.004506] CPU topo: Max. dies per package: 1
[    0.004507] CPU topo: Max. threads per core: 1
[    0.004508] CPU topo: Num. cores per package: 2
[    0.004508] CPU topo: Num. threads per package: 2
[    0.004508] CPU topo: Allowing 2 present CPUs plus 0 hotplug CPUs
[    0.007706] setup_percpu: NR_CPUS:8192 nr_cpusmask_bits:2 nr_cpu_ids:2 nr_node
_ids:1
[    0.007840] percpu: Embedded 66 pages/cpu s233472 r8192 d28672 u1048576
[    0.007842] pcpu-alloc: s233472 r8192 d28672 u1048576 alloc=1*2097152
[    0.007844] pcpu-alloc: [0] 0 1
```

Рис. 7: Kernel & CPU info

Гипервизор (dmesg)

```
[    0.000000] PM: hibernation: Registered nosave memory: [mem 0x/TTT0000-0x/TTT  
fffff]  
[    0.029920] Freeing SMP alternatives memory: 40K  
[    0.139940] Memory: 1966728K/2096696K available (18432K kernel code, 5782K rw  
data, 14104K rodata, 4320K init, 6792K bss, 126000K reserved, 0K cma-reserved)  
[    0.140014] x86/mm: Memory block size: 128MB  
[    0.240990] Freeing initrd memory: 31088K  
[    0.245847] Non-volatile memory driver v1.3  
[    0.726699] Freeing unused decrypted memory: 2028K  
[    0.727113] Freeing unused kernel image (initmem) memory: 4320K  
[    0.727307] Freeing unused kernel image (rodata/data gap) memory: 232K  
[    1.226427] vmwgfx 0000:00:02.0: [drm] Legacy memory limits: VRAM = 65536 KiB  
, FIFO = 2048 KiB, surface = 458752 KiB  
[    1.226430] vmwgfx 0000:00:02.0: [drm] Maximum display memory size is 65536 K  
iB  
root@mhemraev:~# dmesg | grep -i "Hypervisor"  
[    0.000000] Hypervisor detected: KVM  
[    1.226321] vmwgfx 0000:00:02.0: [drm] *ERROR* vmwgfx seems to be running on  
an unsupported hypervisor.  
root@mhemraev:~#
```

Рис. 8: Hypervisor detected

Смонтированные файловые системы (mount)

```
root@mhemraev:~ - sudo -i
root@mhemraev:~#
root@mhemraev:~# mount
/dev/mapper/rl_vbox-root on / type xfs (rw,relatime,seclabel,attr2,inode64,logbu
fs=8,logbsize=32k,noquota)
devtmpfs on /dev type devtmpfs (rw,nosuid,seclabel,size=4096k,nr_inodes=246337,m
ode=755,inode64)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev,seclabel,inode64)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,seclabel,gid=5,mode=62
0,ptmxmode=000)
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime,seclabel)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relat
ime)
cgroup2 on /sys/fs/cgroup type cgroup2 (rw,nosuid,nodev,noexec,relatime,seclabel
,nsdelegate,memory_recursiveprot)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime,seclabel)
bpf on /sys/fs/bpf type bpf (rw,nosuid,nodev,noexec,relatime,mode=700)
configfs on /sys/kernel/config type configfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
tmpfs on /run type tmpfs (rw,nosuid,nodev,seclabel,size=401676k,nr_inodes=819200
,mode=755,inode64)
selinuxfs on /sys/fs/selinux type selinuxfs (rw,nosuid,noexec,relatime)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=36,pgrp=1,time
out=0,minproto=5,maxproto=5,direct,pipe_ino=5334)
mqueue on /dev/mqueue type mqueue (rw,nosuid,nodev,noexec,relatime,seclabel)
```

Итоги

Вывод

Rocky Linux установлен и работает. Выполнена интеграция с VirtualBox (Guest Additions), вход в систему и базовая проверка: ядро, CPU, гипервизор и файловые системы отображаются корректно.