

Отчёт по лабораторной работе №1

Установка и проверка Rocky Linux в VirtualBox

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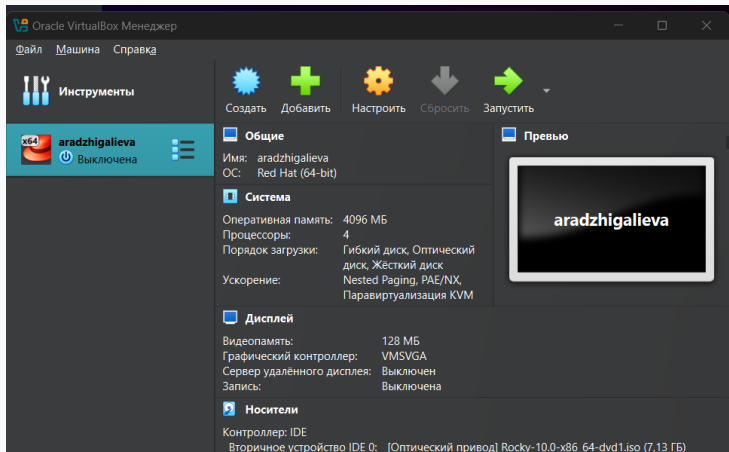
Цель работы

Установить и настроить **Rocky Linux 10.0** в VirtualBox, проверить работу системы и базовых команд Linux.

Ход выполнения

Конфигурация виртуальной машины

- Имя: *aradzhigalieva*
- Память: 4 ГБ, CPU: 4 ядра
- Диск: 40 ГБ, Видео: 128 МБ



Запуск установщика (GRUB)

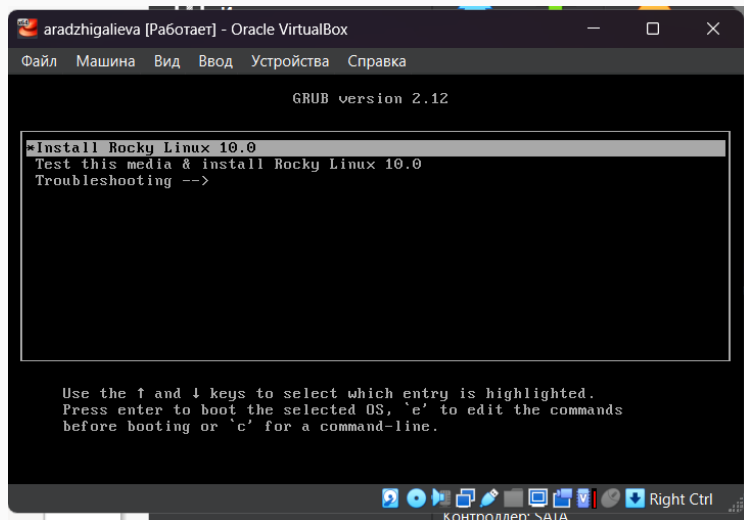


Рис. 2: Выбор Install Rocky Linux

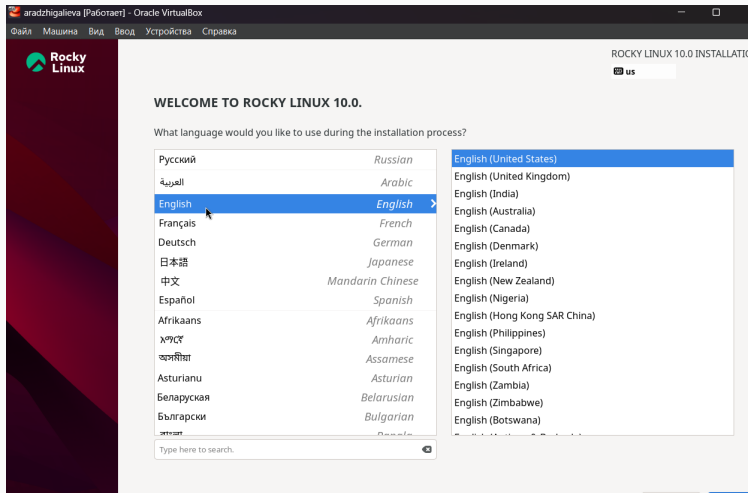
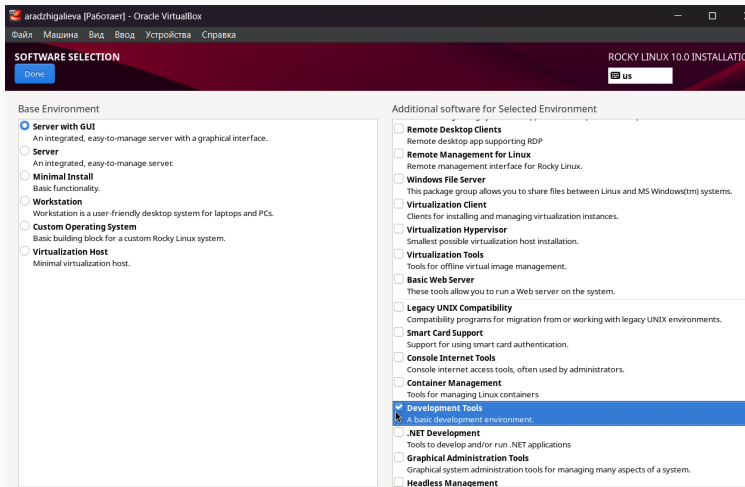


Рис. 3: Language selection

Выбор окружения

- Server with GUI
- Дополнительно: Development Tools



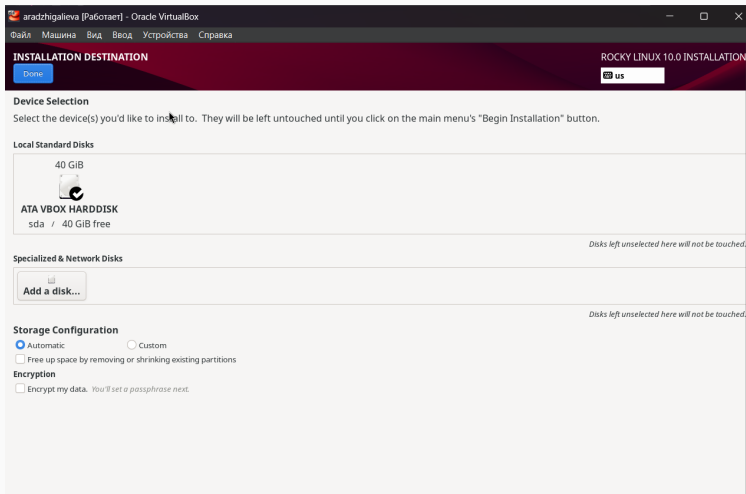


Рис. 5: Installation Destination

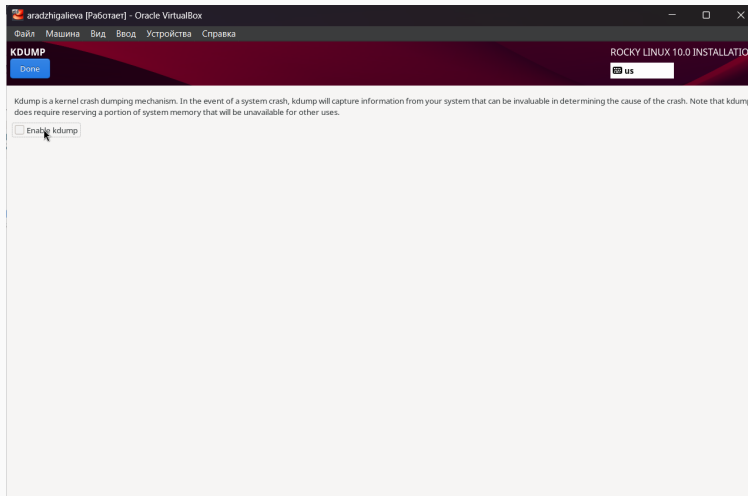


Рис. 6: KDUMP отключен

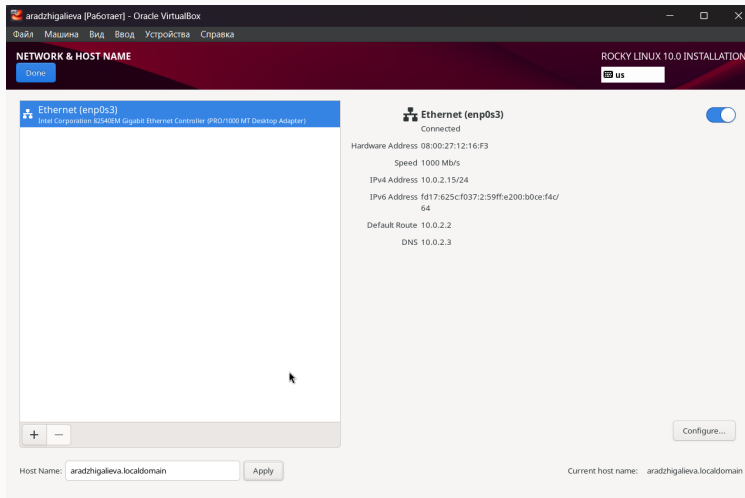


Рис. 7: Network & Hostname

Root-учётная запись

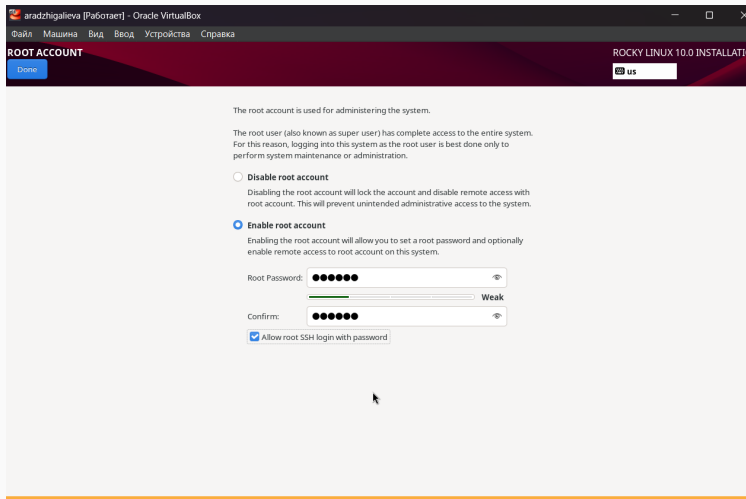


Рис. 8: Root Account

Создание пользователя

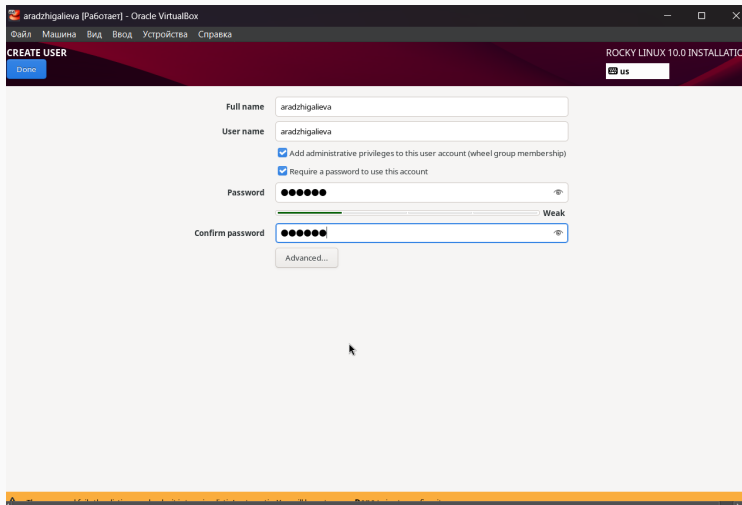


Рис. 9: User Creation

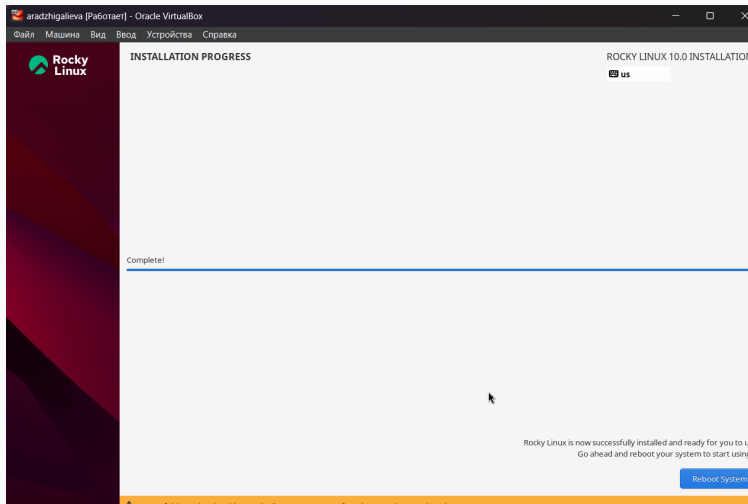


Рис. 10: Installation Complete

Установка Guest Additions

```
root@aradzhigalieva:/run/media/aradzhigalieva/VBox_GAs_7...
root@aradzhigalieva:~# cd /run/media/aradzhigalieva/VBox_GAs_7.1.12/
root@aradzhigalieva:/run/media/aradzhigalieva/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@aradzhigalieva:/run/media/aradzhigalieva/VBox_GAs_7.1.12# ./VBoxLinuxAdditi
ons.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/rcvboxadd quicksetup <version>
VirtualBox Guest Additions: or
VirtualBox Guest Additions: /sbin/rcvboxadd quicksetup all
VirtualBox Guest Additions: Building the modules for kernel
6.12.0-55.12.1.el10_0.x86_64.
```

Проверка системы

```
aradzhigalieva@aradzhigalieva:~  
~  
aradzhigalieva@aradzhigalieva:~$ dmesg | grep -i "Linux version"  
dmesg: read kernel buffer failed: Operation not permitted  
aradzhigalieva@aradzhigalieva:~$ sudo dmesg | grep -i "Linux version"  
[sudo] password for aradzhigalieva:  
[ 0.000000] Linux version 6.12.0-55.12.1.el10_0.x86_64 (mockbuild@iad1-prod-b  
uild001.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  
aradzhigalieva@aradzhigalieva:~$  
aradzhigalieva@aradzhigalieva:~$  
aradzhigalieva@aradzhigalieva:~$ sudo dmesg | grep -i "MHz"  
[ 0.000005] tsc: Detected 3187.204 MHz processor  
[ 4.719897] e1000 0000:00:03.0 eth0: (PCI:33MHz:32-bit) 08:00:27:12:16:f3  
aradzhigalieva@aradzhigalieva:~$ sudo dmesg | grep -i "Mem"  
[ 0.000000] BIOS-e820: [mem 0x0000000000000000-0x000000000009fbff] usable  
[ 0.000000] BIOS-e820: [mem 0x000000000009fc00-0x000000000009ffff] reserved  
[ 0.000000] BIOS-e820: [mem 0x00000000000f0000-0x00000000000ffffff] reserved  
[ 0.000000] BIOS-e820: [mem 0x0000000000100000-0x0000000000dffff] usable  
[ 0.000000] BIOS-e820: [mem 0x000000000dffff0000-0x000000000dfffffff] ACPI data  
[ 0.000000] BIOS-e820: [mem 0x00000000fec00000-0x00000000fec00fff] reserved  
[ 0.000000] BIOS-e820: [mem 0x00000000fee00000-0x00000000fee00fff] reserved  
[ 0.000000] BIOS-e820: [mem 0x00000000fffc0000-0x00000000ffffffff] reserved  
[ 0.000000] BIOS-e820: [mem 0x0000000100000000-0x000000011fffffff] usable  
[ 0.000000] DMI: Memory slots populated: 0/0  
[ 0.000409] e820: update [mem 0x00000000-0x00000fff] usable ==> reserved
```

```
[ 0.436086] Freeing unused decrypted memory: 2028K
[ 0.436422] Freeing unused kernel image (initmem) memory: 4320K
[ 0.436558] Freeing unused kernel image (rodata/data gap) memory: 232K
[ 0.808446] systemd[1]: memtrack.service - Memtrack Anylazing Service was s
kipped because no trigger condition checks were met.
[ 1.741772] vmwgfx 0000:00:02.0: [drm] Legacy memory limits: VRAM = 131072 Ki
B, FIFO = 2048 KiB, surface = 393216 KiB
[ 1.741774] vmwgfx 0000:00:02.0: [drm] Maximum display memory size is 131072
KiB
aradzhigalieva@aradzhigalieva:~$
aradzhigalieva@aradzhigalieva:~$
aradzhigalieva@aradzhigalieva:~$ sudo dmesg | grep -i "Memory av"
aradzhigalieva@aradzhigalieva:~$ sudo dmesg | grep -i "Huper"
aradzhigalieva@aradzhigalieva:~$ sudo dmesg | grep -i "Hyper"
[ 0.000000] Hypervisor detected: KVM
[ 1.741738] vmwgfx 0000:00:02.0: [drm] *ERROR* vmwgfx seems to be running on
an unsupported hypervisor.
aradzhigalieva@aradzhigalieva:~$
```

Рис. 13: Hypervisor

```
aradzhigalieva@aradzhigalieva:~$ mount
/dev/mapper/rl_vbox-root on / type xfs (rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota)
devtmpfs on /dev type devtmpfs (rw,nosuid,seclabel,size=4096k,nr_inodes=495642,mode=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=620,ptmxmode=000)
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime,seclabel)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
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=800564k,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,timeout=0,minproto=5,maxproto=5,direct,pipe_ino=5714)
tracefs on /sys/kernel/tracing type tracefs (rw,nosuid,nodev,noexec,relatime,seclabel)
```

Итоги

- Установка Rocky Linux прошла успешно.
- Настроены сеть, пользователи и локализация.
- Установлены Guest Additions для интеграции с VirtualBox.
- Проверены: ядро, процессор, память, гипервизор и файловые системы.