

Презентация по лабораторной работе №1

Установка и конфигурация операционной системы
на виртуальную машину

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Цель работы

Получить навыки установок операционной системы на виртуальную машину и настроить минимально необходимых для дальнейшей работы сервисов.

Установить операционную систему Linux на VirtualBox

- Создать новую виртуальную машину, указать название и тип операционной системы — Linux, RedHat.
- Указать размер основной памяти виртуальной машины - 4096 МБ, и количество процессора - 2.
- Задавать размер диска — 60 ГБ.
- Добавить новый привод оптических дисков.

Установить операционную систему Linux на VirtualBox

Create Virtual Machine

Virtual machine Name and Operating System

Please choose a descriptive name and destination folder for the new virtual machine. The name you choose will be used throughout VirtualBox to identify this machine. Additionally, you can select an ISO image which may be used to install the guest operating system.

Name: rocky_linux ✓

Folder: D:\danguen


ISO Image: <not selected>

Edition:

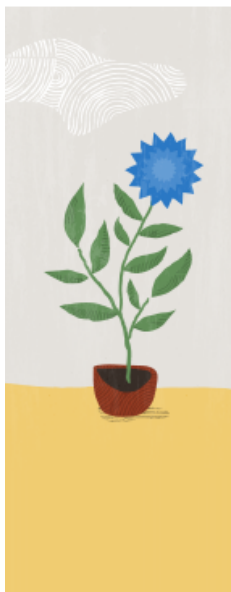
Type: Linux

Version: Red Hat (64-bit)

☐ Skip Unattended Installation

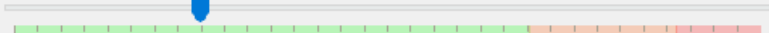

 No ISO image is selected, the guest OS will need to be installed manually.

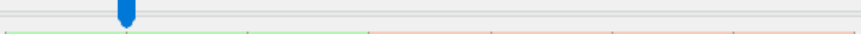

Help Expert Mode Back Next Cancel



Hardware

You can modify virtual machine's hardware by changing amount of RAM and virtual CPU count. Enabling EFI is also possible.

Base Memory:  4096 MB 

Processors:  2 

1 CPU 8 CPUs

☐ Enable EFI (special OSes only)

[Help](#)[Back](#)[Next](#)[Cancel](#)

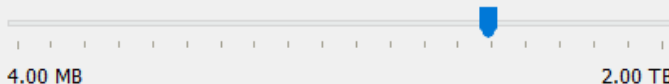


Virtual Hard disk

If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file or select an existing one. Alternatively you can create a virtual machine without a virtual hard disk.

☒ Create a Virtual Hard Disk Now

Disk Size:



60.00 GB

☐ Pre-allocate Full Size

☐ Use an Existing Virtual Hard Disk File

! packer-rocky-virtualbox-vm-disk001.vmdk (Normal, Inaccessible)



☐ Do Not Add a Virtual Hard Disk

Help

Back

Next

Cancel

General

System

Display

Storage

Audio

Network

Serial Ports

USB

Shared Folders

User Interface

Storage

Storage Devices

Controller: IDE

Rocky-9.4-x86_64-dvd.iso

Controller: SATA

rocky_linux.vdi

Attributes

Optical Drive: IDE Secondary Device

☐ Live CD/DVD

Information

Type: Image

Size: 10.17 GB

Location: D:\Rocky-9.4-x86_64-dvd.iso

Attached to: --

OK

Cancel

Help

Настроить систему для работы сервисов

- Выбрать “Server with GUI” и “Development tool”
- Отключить KDUMP
- Включить сетевое соединение и в качестве имени узла указать danguen.localdomain
- Установить пароль для root и пользователя с правами администратора
- Перезапустить подключить образ диска дополнений гостевой ОС

Настроить систему для работы сервисов

SOFTWARE SELECTION

Done

us

Help!

Base Environment

☒ **Server with GUI**
An integrated, easy-to-manage server with a graphical interface.

☐ **Server**
An integrated, easy-to-manage server.

☐ **Minimal Install**
Basic functionality.

☐ **Workstation**
Workstation is a user-friendly desktop system for laptops and PCs.

☐ **Custom Operating System**
Basic building block for a custom Rocky Linux system.

☐ **Virtualization Host**
Minimal virtualization host.

Additional software for Selected Environment

☐ **Virtualization Client**
Clients for installing and managing virtualization instances.

☐ **Virtualization Hypervisor**
Smallest possible virtualization host installation.

☐ **Virtualization Tools**
Tools for offline virtual image management.

☐ **Basic Web Server**
These tools allow you to run a Web server on the system.

☐ **Legacy UNIX Compatibility**
Compatibility programs for migration from or working with legacy UNIX environments.

☐ **Console Internet Tools**
Console internet access tools, often used by administrators.

☐ **Container Management**
Tools for managing Linux containers

☒ **Development Tools**
A basic development environment.

☐ **.NET Development**
Tools to develop and/or run .NET applications

KDUMP

Done

ROCKY LINUX 9.4 INSTALLATION

 us

Help!

Kdump is a kernel crash dumping mechanism. In the event of a system crash, kdump will capture information from your system that can be invaluable in determining the cause of the crash. Note that kdump does require reserving a portion of system memory that will be unavailable for other uses.

☐ Enable kdump

NETWORK & HOST NAME

Done

ROCKY LINUX 9.4 INSTALLATION

us

Help!

Ethernet (enp0s3)

Intel Corporation 82540EM Gigabit Ethernet Controller (PRO/1000 MT Desktop Adapter)



Ethernet (enp0s3)

Connected



Hardware Address 08:00:27:05:2F:0B

Speed 1000 Mb/s

IP Address 10.0.2.15/24

Default Route 10.0.2.2

DNS 37.18.92.5
193.232.218.194



Configure...

Host Name: danguen.localdomain

Apply

Current host name: danguen.localdomain

 US

Help!

Root Password: ●●●●●●●●

●●●●●●●●●●

Strong

.....|

☐ Allow root SSH login with password☐ Allow root SSH login with password

CREATE USER

Done

ROCKY LINUX 9.4 INSTALLATION

us

Help!

Full name danguen

User name danguen

☒ Make this user administrator

☒ Require a password to use this account

Password

••••••••



Strong

Confirm password

••••••••



Advanced...

Познакомиться с операционной системой командой “dmesg”

- **dmesg** - команда, используемая в UNIX-подобных операционных системах для вывода буфера сообщений ядра в стандартный поток вывода (по умолчанию на экран).
- Можно использовать поиск с помощью **grep** для получения следующей информации:

Познакомиться с операционной системой командой “dmesg”

```
[danguen@danguen ~]$ dmesg | grep -i "Linux version"
[    0.000000] Linux version 5.14.0-427.13.1.el9_4.x86_64 (mockbuild@iad1-prod-build001.bld.equ.rockylinux.org) (gcc (GCC) 11.4.1 20231218 (Red Hat 11.4.1-3))
```



```
[danguen@danguen ~]$ dmesg | grep -i " Mhz processor"  
[    0.000025] tsc: Detected 1497.598 MHz processor
```

```
[danguen@danguen ~]$ dmesg | grep -i "CPU0"  
[    0.306093] smpboot: CPU0: Intel(R) Core(TM) i7-1065G7 CPU @ 1.30GHz (family: 0x6, model: 0x7e, stepping: 0x5)
```

```
[ 0.166463] Memory: 3679012K/4193848K available (16384K kernel code, 5626K rwdata, 11748K rodata, 3892K init, 5956K bss, 245832K reserved, 0K cma-reserved)
```

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

```
[danguen@danguen ~]$ dmesg | grep -i "root disk"  
[    4.520120] systemd[1]: Repartition Root Disk was skipped because no trigger condition checks were met.
```

```
[ 3.629544] XFS (dm-0): Mounting V5 Filesystem b83f31f6-cb52-421a-9bbe-49874e2c2ba5
```

Вывод

После лабораторной работы я получил навыки установок и настройки операционной системы на виртуальную машину для дальнейшей работы сервисов.