

Презентация по лабораторной работе №1

Подготовка лабораторного стенда

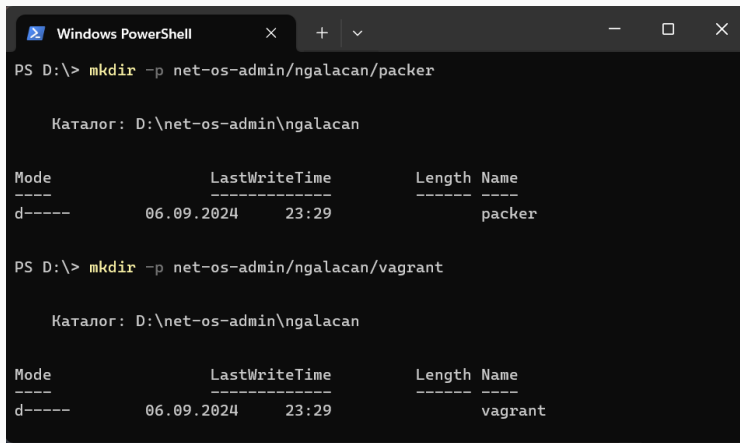
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Целью данной работы является приобретение практических навыков установки Rocky Linux на виртуальную машину с помощью инструмента Vagrant.

Выполнение лабораторной работы



```
Windows PowerShell
PS D:\> mkdir -p net-os-admin/ngalacan/packer

Каталог: D:\net-os-admin\ngalacan

Mode                LastWriteTime         Length Name
----                -
d-----            06.09.2024    23:29             packer

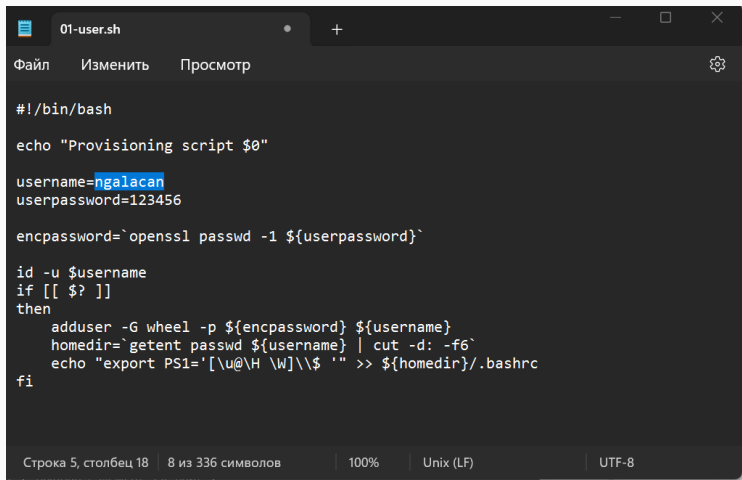
PS D:\> mkdir -p net-os-admin/ngalacan/vagrant

Каталог: D:\net-os-admin\ngalacan

Mode                LastWriteTime         Length Name
----                -
d-----            06.09.2024    23:29             vagrant
```

Рис. 1: Создание каталогов

Выполнение лабораторной работы



```
01-user.sh
Файл  Изменить  Просмотр  ⚙️

#!/bin/bash

echo "Provisioning script $0"

username=ngalacan
userpassword=123456

encpassword=`openssl passwd -1 ${userpassword}`

id -u $username
if [[ $? ]]
then
    adduser -G wheel -p ${encpassword} ${username}
    homedir=`getent passwd ${username} | cut -d: -f6`
    echo "export PS1='\u@\H \W]\$ '" >> ${homedir}/.bashrc
fi

Строка 5, столбец 18 | 8 из 336 символов | 100% | Unix (LF) | UTF-8
```

Рис. 2: Редактирование скрипта

Выполнение лабораторной работы

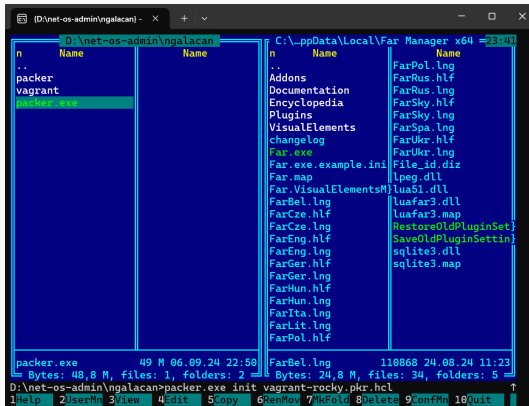
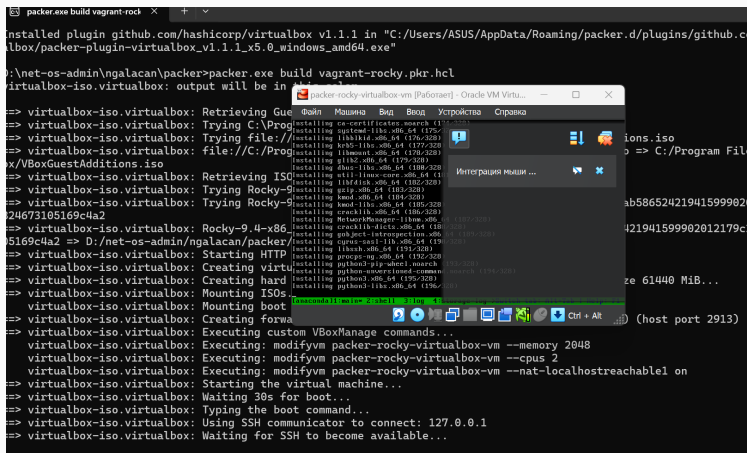


Рис. 3: Начало автоматической установки ОС

Выполнение лабораторной работы



```
packer.exe build vagrant-rocky.pkr.hcl
Installing plugin github.com/hashicorp/virtualbox v1.1.1 in "C:/Users/ASUS/AppData/Roaming/packer.d/plugins/github.com/hashicorp/virtualbox/packer-plugin-virtualbox_v1.1.1_x5.0_windows_amd64.exe"

D:\net-os-admin\ngalacan\packer>packer.exe build vagrant-rocky.pkr.hcl
virtualbox-iso.virtualbox: output will be in this folder: C:\Users\ASUS\AppData\Local\Temp\packer-plugin-virtualbox_v1.1.1_x5.0_windows_amd64.exe\packer-rocky-virtualbox-vm

=> virtualbox-iso.virtualbox: Retrieving Guest Additions ISO
=> virtualbox-iso.virtualbox: Trying C:\Program Files\Oracle\VirtualBox\GuestAdditions.iso
=> virtualbox-iso.virtualbox: Trying file://C:/Program Files/Oracle/VBoxGuestAdditions.iso
=> virtualbox-iso.virtualbox: Retrieving ISO
=> virtualbox-iso.virtualbox: Trying Rocky-9-4-x86_64.iso
=> virtualbox-iso.virtualbox: Trying Rocky-9-4-x86_64.iso
=> virtualbox-iso.virtualbox: Rocky-9-4-x86_64.iso
D:\net-os-admin\ngalacan\packer>packer.exe build vagrant-rocky.pkr.hcl
=> virtualbox-iso.virtualbox: Starting HTTP
=> virtualbox-iso.virtualbox: Creating virtual disk
=> virtualbox-iso.virtualbox: Creating hard disk
=> virtualbox-iso.virtualbox: Mounting ISOs
=> virtualbox-iso.virtualbox: Mounting boot ISO
=> virtualbox-iso.virtualbox: Creating forward ports
=> virtualbox-iso.virtualbox: Executing custom VBoxManage commands...
=> virtualbox-iso.virtualbox: Executing: modifyvm packer-rocky-virtualbox-vm --memory 2048
=> virtualbox-iso.virtualbox: Executing: modifyvm packer-rocky-virtualbox-vm --cpus 2
=> virtualbox-iso.virtualbox: Executing: modifyvm packer-rocky-virtualbox-vm --nat-localhostreachable on
=> virtualbox-iso.virtualbox: Starting the virtual machine...
=> virtualbox-iso.virtualbox: Waiting 30s for boot...
=> virtualbox-iso.virtualbox: Typing the boot command...
=> virtualbox-iso.virtualbox: Using SSH communicator to connect: 127.0.0.1
=> virtualbox-iso.virtualbox: Waiting for SSH to become available...
```

Рис. 4: Процесс установки ОС

Выполнение лабораторной работы

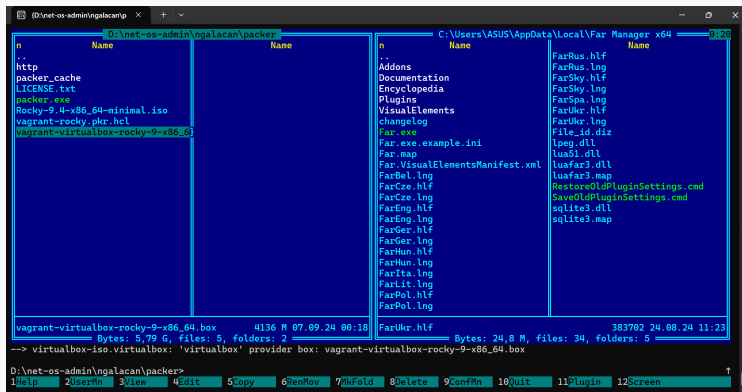


Рис. 5: box-файл

Выполнение лабораторной работы

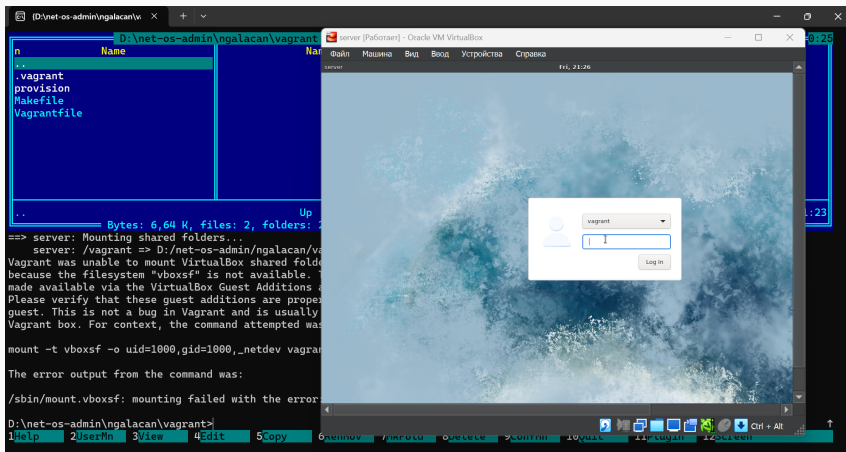


Рис. 6: Запуск VM

Выполнение лабораторной работы

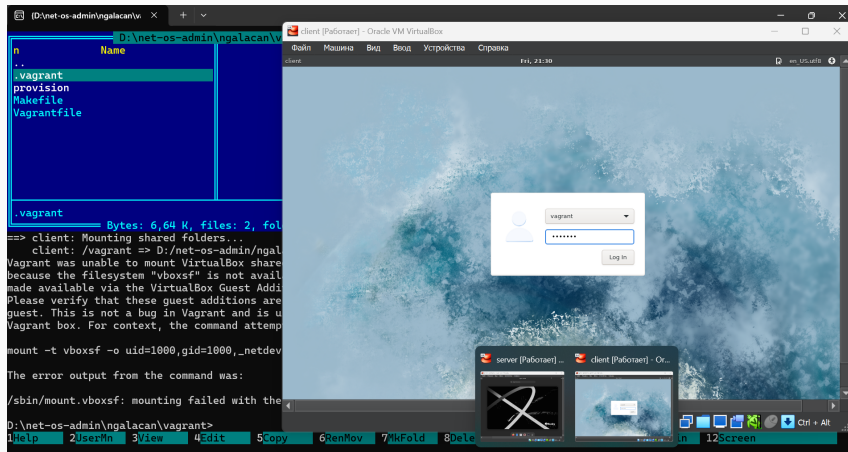


Рис. 7: Вход в систему

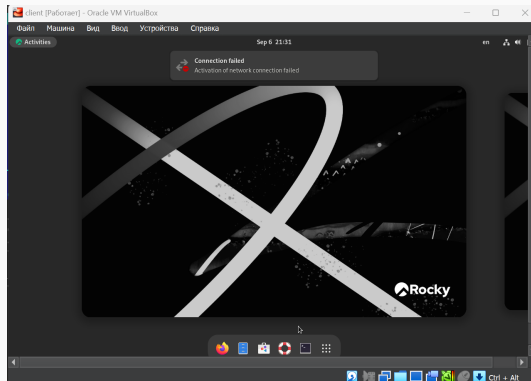


Рис. 8: Запуск ОС

Выполнение лабораторной работы

```
D:\net-os-admin\ngalacan\vagrant>vagrant ssh server
==> server: The machine you're attempting to SSH into is configured to use
==> server: password-based authentication. Vagrant can't script entering the
==> server: password for you. If you're prompted for a password, please enter
==> server: the same password you have configured in the Vagrantfile.
vagrant@127.0.0.1's password:
Last login: Fri Sep  6 21:29:07 2024
[vagrant@server ~]$ su - ngalacan
su: user ngalacan does not exist or the user entry does not contain all the required fields
[vagrant@server ~]$ exit
logout
Connection to 127.0.0.1 closed.

D:\net-os-admin\ngalacan\vagrant>vagrant ssh client
==> client: The machine you're attempting to SSH into is configured to use
==> client: password-based authentication. Vagrant can't script entering the
==> client: password for you. If you're prompted for a password, please enter
==> client: the same password you have configured in the Vagrantfile.
vagrant@127.0.0.1's password:
Last login: Fri Sep  6 21:30:56 2024
[vagrant@client ~]$ su - ngalacan
su: user ngalacan does not exist or the user entry does not contain all the required fields
[vagrant@client ~]$ vagrant halt server
bash: vagrant: command not found...
[vagrant@client ~]$ exit
logout
Connection to 127.0.0.1 closed.
```

Рис. 9: Подключение к серверу и клиенту через консоль

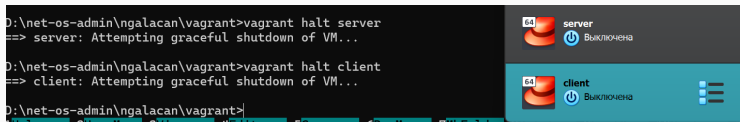


Рис. 10: Выключение VM

```
D:\net-os-admin\ngalacan\vagrant>vagrant up server --provision
Bringing machine 'server' up with 'virtualbox' provider...
==> server: You assigned a static IP ending in ".1" to this machine.
==> server: This is very often used by the router and can cause the
==> server: network to not work properly. If the network doesn't work
==> server: properly, try changing this IP.
==> server: You assigned a static IP ending in ".1" to this machine.
==> server: This is very often used by the router and can cause the
==> server: network to not work properly. If the network doesn't work
==> server: properly, try changing this IP.
==> server: Clearing any previously set forwarded ports...
==> server: Clearing any previously set network interfaces...
==> server: Preparing network interfaces based on configuration...
       server: Adapter 1: nat
       server: Adapter 2: intnet
==> server: Forwarding ports...
       server: 22 (guest) => 2222 (host) (adapter 1)
==> server: Running 'pre-boot' VM customizations...
==> server: Booting VM...
```

Рис. 11: Внесение изменения в настройки внутреннего окружения VM

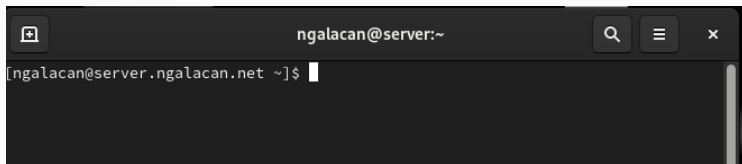


Рис. 12: Приглашение на сервере

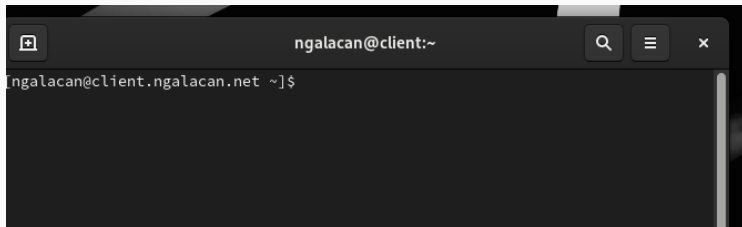


Рис. 13: Приглашение на клиенте


```
D:\net-os-admin\ngalacan\vagrant>vagrant halt server  
==> server: Attempting graceful shutdown of VM...  
  
D:\net-os-admin\ngalacan\vagrant>vagrant halt client  
==> client: Attempting graceful shutdown of VM...  
  
D:\net-os-admin\ngalacan\vagrant>
```

Рис. 14: Выключение VM

В результате выполнения работы были приобретены практические навыки установки Rocky Linux на виртуальную машину с помощью инструмента Vagrant.