

Задача 2.1: Управление виртуальной машиной с использованием Vagrant

Инициализация проекта

```
vagrant init
```

В текущей директории появился файл Vagrantfile

```
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ vagrant init
A `Vagrantfile` has been placed in this directory. You are now
ready to `vagrant up` your first virtual environment! Please read
the comments in the Vagrantfile as well as documentation on
`vagrantup.com` for more information on using Vagrant.
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ ll
итого 12
drwxrwxr-x 2 ruslan ruslan 4096 окт 25 21:59 ./
drwxrwxr-x 3 ruslan ruslan 4096 окт 25 20:41 ../
-rw-rw-r-- 1 ruslan ruslan 3010 окт 25 21:59 Vagrantfile
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$
```

Настройка виртуальной машины

Для настройки виртуальной машины необходимо отредактировать файл Vagrantfile:

```
nano Vagrantfile
```

1. Настройка базового образа Ubuntu 20.04:


```
config.vm.box = "ubuntu/focal64"
```



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	ubuntu/focal64 20231011.0.0 Official Ubuntu 20.04 LTS (Focal Fossa) builds	virtualbox	Downloads 406,112	Released 8 days ago
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2. Установка необходимого количества CPU и объема оперативной памяти:

```
config.vm.provider "virtualbox" do |v|
  v.cpus = 2
  v.memory = 4096
end
```

3. Проксирование портов, чтобы можно было получить доступ к виртуальной машине извне:

```
config.vm.network "forwarded_port", guest: 80, host: 8080
```

Финальный вид Vagrantfile:

```
# -*- mode: ruby -*-
# vi: set ft=ruby :

Vagrant.configure("2") do |config|
  config.vm.box = "ubuntu/focal64"
  config.vm.network "forwarded_port", guest: 80, host: 8080

  config.vm.provider "virtualbox" do |v|
    v.cpus = 2
    v.memory = 4096
  end
end
```

4. Запуск виртуальной машины:

```
vagrant up
```

5. Подключение к ВМ через SSH:

```
vagrant ssh
```

```
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ vagrant ssh
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.4.0-164-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Wed Oct 25 17:05:14 UTC 2023

System load:  0.16           Processes:            130
Usage of /:   3.7% of 38.70GB Users logged in:          0
Memory usage: 5%           IPv4 address for enp0s3: 10.0.2.15
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update
New release '22.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

vagrant@ubuntu-focal:~$
```

6. Проверка статуса виртуальной машины:

```
vagrant status
```

7. Остановка виртуальной машины:

```
vagrant halt
```

```
vagrant@ubuntu-focal:~$ logout
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ vagrant status
Current machine states:

default                                running (virtualbox)

The VM is running. To stop this VM, you can run `vagrant halt` to
shut it down forcefully, or you can run `vagrant suspend` to simply
suspend the virtual machine. In either case, to restart it again,
simply run `vagrant up`.
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ vagrant halt
==> default: Attempting graceful shutdown of VM...
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ vagrant status
Current machine states:

default                                poweroff (virtualbox)

The VM is powered off. To restart the VM, simply run `vagrant up`
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$
```

8. Удаление виртуальной машины:

```
vagrant destroy
```

```
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ vagrant status
Current machine states:

default                                poweroff (virtualbox)

The VM is powered off. To restart the VM, simply run `vagrant up`
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ vagrant destroy
  default: Are you sure you want to destroy the 'default' VM? [y/N] y
==> default: Destroying VM and associated drives...
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$ vagrant status
Current machine states:

default                                not created (virtualbox)

The environment has not yet been created. Run `vagrant up` to
create the environment. If a machine is not created, only the
default provider will be shown. So if a provider is not listed,
then the machine is not created for that environment.
ruslan@ruslan-Z690-UD:~/IT-2023/task_2/vagrant$
```