Лабораторная работа №2

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Vagrant disk

Создаем директорию и инициализируем базовую машину:

```
sarkoxedaf@████████████ ~/Working/University/containers/lab2
$$ % vagrant init ubuntu/jammy64
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.
```

Для того чтобы использовать модуль `disks`, выставляем переменную окружения:

```
sarkoxedaf@herorgasmotron2 ~/Working/University/co
$$ % export VAGRANT_EXPERIMENTAL="disks"
```

Изначальный размер диска:

```
$$ % vagrant ssh
==> vagrant: You have requested to enabled the experimental flag with t
==> vagrant:
==> vagrant: Features:  disks
==> vagrant:
==> vagrant: Please use with caution, as some of the features may not b
==> vagrant: functional yet.
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-91-generic x86_64)

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

  System information as of Thu Dec 21 03:08:05 UTC 2023

  System load:  0.95947265625    Processes:               110
  Usage of /:   4.8% of 38.70GB   Users logged in:         0
  Memory usage: 24%              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

lvagrant@ubuntu-jammy:~$ lsblk
NAME   MAJ:MIN RM    SIZE RO TYPE MOUNTPOINTS
loop0    7:0    0   63.9M  1 loop /snap/core20/2105
loop1    7:1    0  111.9M  1 loop /snap/lxd/24322
loop2    7:2    0   40.9M  1 loop /snap/snapd/20290
sda      8:0    0     40G  0 disk
└─sda1   8:1    0     40G  0 part /
sdb      8:16   0     10M  0 disk
```

Выставляем размер в `60 Gb` на основной диск:

```
sarkoxedaf@████████████ ~/Working/University/containers/lab2
$$ % cat Vagrantfile
Vagrant.configure("2") do |config|
  config.vbguest.auto_update = false
  config.vm.box = "ubuntu/jammy64"

  config.vm.disk :disk, size: "60GB", primary: true
end
```

Проверяем:

```
==> vagrant: You have requested to enabled the experimental flag with the following featu
==> vagrant:
==> vagrant: Features:  disks
==> vagrant:
==> vagrant: Please use with caution, as some of the features may not be fully
==> vagrant: functional yet.
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-91-generic x86_64)

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

  System information as of Thu Dec 21 03:16:27 UTC 2023

  System load:  0.2216796875    Processes:              124
  Usage of /:   2.4% of 58.09GB  Users logged in:        0
  Memory usage: 20%              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

vagrant@ubuntu-jammy:~$ lsblk
NAME    MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0     7:0    0  63.9M  1 loop /snap/core20/2105
loop1     7:1    0 111.9M  1 loop /snap/lxd/24322
loop2     7:2    0  40.9M  1 loop /snap/snapd/20290
sda       8:0    0    60G  0 disk
└─sda1    8:1    0    60G  0 part /
sdb       8:16   0    10M  0 disk
vagrant@ubuntu-jammy:~$
```

Добавляем дополнительный диск размером `10Gb` :

```
$$ % cat Vagrantfile
Vagrant.configure("2") do |config|
  config.vbguest.auto_update = false
  config.vm.box = "ubuntu/jammy64"

  config.vm.disk :disk, size: "60GB", primary: true
  config.vm.disk :disk, size: "10GB", name: "second"
end
```

Появился диск `sdc` :

```
vagrant@ubuntu-jammy:~$ lsblk
NAME    MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0     7:0    0  63.9M  1 loop /snap/core20/2105
loop1     7:1    0 111.9M  1 loop /snap/lxd/24322
loop2     7:2    0  40.9M  1 loop /snap/snapd/20290
sda       8:0    0    60G  0 disk
└─sda1    8:1    0    60G  0 part /
sdb       8:16   0    10M  0 disk
sdc       8:32   0    10G  0 disk
```

Vagrant network

Пробрасываем порт, добавляем адаптеры сетей:

```
config.vm.network "forwarded_port", guest: 22, host: 3333
config.vm.network "private_network", ip: "172.20.0.2"
config.vm.network "public_network"
```

До:

```
vagrant@vm1:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 02:a0:a0:bb:0a:b7 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 metric 100 brd 10.0.2.255 scope global dynamic enp0s3
       valid_lft 86382sec preferred_lft 86382sec
    inet6 fe80::a0:a0ff:febb:ab7/64 scope link
       valid_lft forever preferred_lft forever
vagrant@vm1:~$
```

```
$$ % cat /etc/vbox/networks.conf
* 0.0.0.0/0 ::/0
```

```
$$ % vagrant up
==> vagrant: You have requested to enabled the experimental flag with the followi
==> vagrant:
==> vagrant: Features:  disks
==> vagrant:
==> vagrant: Please use with caution, as some of the features may not be fully
==> vagrant: functional yet.
Bringing machine 'lab2' up with 'virtualbox' provider...
==> lab2: Checking if box 'ubuntu/jammy64' version '20231213.1.0' is up to date..
==> lab2: Clearing any previously set network interfaces...
==> lab2: Available bridged network interfaces:
1) enp3s0
2) enp6s0
3) docker0
==> lab2: When choosing an interface, it is usually the one that is
==> lab2: being used to connect to the internet.
==> lab2:
    lab2: Which interface should the network bridge to? enp6s0
    lab2: Which interface should the network bridge to? 2
==> lab2: Preparing network interfaces based on configuration...
    lab2: Adapter 1: nat
    lab2: Adapter 2: hostonly
    lab2: Adapter 3: bridged
==> lab2: Forwarding ports...
    lab2: 22 (guest) => 3333 (host) (adapter 1)
    lab2: 22 (guest) => 2222 (host) (adapter 1)
==> lab2: Configuring storage mediums...
    lab2: Disk 'vagrant_primary' needs to be resized. Resizing disk...
    lab2: Disk 'second' not found in guest. Creating and attaching disk to guest.
==> lab2: Running 'pre-boot' VM customizations...
==> lab2: Booting VM...
```

Проверяем, что `ip` в приватной сети выставлен правильно;

Проверяем, что появился `ip` в публичной сети

```
vagrant@vm1:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 02:a0:a0:bb:0a:b7 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 metric 100 brd 10.0.2.255 scope global dynamic enp0s3
       valid_lft 86355sec preferred_lft 86355sec
    inet6 fe80::a0:a0ff:febb:ab7/64 scope link
       valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:46:ec:6c brd ff:ff:ff:ff:ff:ff
    inet 172.20.0.2/24 brd 172.20.0.255 scope global enp0s8
       valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fe46:ec6c/64 scope link
       valid_lft forever preferred_lft forever
4: enp0s9: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:b3:5f:e1 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.165/24 metric 100 brd 192.168.1.255 scope global dynamic enp0s9
       valid_lft 86357sec preferred_lft 86357sec
    inet6 fe80::a00:27ff:feb3:5fe1/64 scope link
       valid_lft forever preferred_lft forever
```

Проверяем, что хост установился правильно:

```
vagrant@vm1:~$ cat /etc/hostname
vm1
```

```
vagrant@vm1:~$ cat /etc/hosts
127.0.0.1       localhost

# The following lines are desirable for IPv6 capable hosts
::1     ip6-localhost    ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
127.0.1.1       ubuntu-jammy    ubuntu-jammy

127.0.2.1 vm1.local vm1
```

Проверяем, что порт пробросился:

```
$$ % ssh vagrant@localhost -p 3333 -i .vagrant/machines/lab2/virtualbox/private_key
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-91-generic x86_64)

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

  System information as of Thu Dec 21 03:47:45 UTC 2023

  System load:  0.0                Users logged in:           0
  Usage of /:   2.4% of 58.09GB    IPv4 address for enp0s3: 10.0.2.15
  Memory usage: 19%                IPv4 address for enp0s8: 172.20.0.2
  Swap usage:   0%                 IPv4 address for enp0s9: 192.168.1.165
  Processes:    104


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

Last login: Thu Dec 21 03:42:25 2023 from 10.0.2.2
vagrant@vm1:~$
```

Vagrant provision

Добавляем выполнение скрипта на установку докера:

```
$$ % cat Vagrantfile
Vagrant.configure("2") do |config|
  config.vm.define "lab2"
  config.vbguest.auto_update = false
  config.vm.box = "ubuntu/jammy64"

  config.vm.disk :disk, size: "60GB", primary: true
  config.vm.disk :disk, size: "10GB", name: "second"

  config.vm.hostname = "vm1.local"

  config.vm.network "forwarded_port", guest: 22, host: 3333
  config.vm.network "private_network", ip: "172.20.0.2"
  config.vm.network "public_network"

  config.vm.provision "shell", privileged: true, path: "https://get.docker.com"
end
```

Переконфигурируем:

```
$$ % vagrant reload --provision
==> vagrant: You have requested to enabled the experimental flag with the following featur
==> vagrant:
==> vagrant: Features:  disks
==> vagrant:
```

```
==> lab2: Running provisioner: shell...
    lab2: Running: /tmp/vagrant-shell20231221-174467-mrjsdc.com
    lab2: # Executing docker install script, commit: e5543d473431b782227f8908005543bb4389b8de
    lab2: + sh -c apt-get update -qq >/dev/null
    lab2: + sh -c DEBIAN_FRONTEND=noninteractive apt-get install -y -qq apt-transport-https ca-certificates curl >/dev/
    lab2: + sh -c install -m 0755 -d /etc/apt/keyrings
    lab2: + sh -c curl -fsSL "https://download.docker.com/linux/ubuntu/gpg" | gpg --dearmor --yes -o /etc/apt/keyrings/
    lab2: + sh -c chmod a+r /etc/apt/keyrings/docker.gpg
    lab2: + sh -c echo "deb [arch=amd64 signed-by=/etc/apt/keyrings/docker.gpg] https://download.docker.com/linux/ubunt
ources.list.d/docker.list
    lab2: + sh -c apt-get update -qq >/dev/null
    lab2: + sh -c DEBIAN_FRONTEND=noninteractive apt-get install -y -qq docker-ce docker-ce-cli containerd.io docker-co
ess-extras docker-buildx-plugin >/dev/null
    lab2: + sh -c docker version
    lab2: Client: Docker Engine - Community
    lab2:  Version:           24.0.7
    lab2:  API version:       1.43
    lab2:  Go version:        go1.20.10
    lab2:  Git commit:        afdd53b
    lab2:  Built:             Thu Oct 26 09:07:41 2023
    lab2:  OS/Arch:           linux/amd64
    lab2:  Context:           default
    lab2:
    lab2: Server: Docker Engine - Community
    lab2:  Engine:
    lab2:   Version:          24.0.7
```

Проверяем, что докер поставился:

```
vagrant@vm1:~$ sudo !!
sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
c1ec31eb5944: Pull complete
Digest: sha256:ac69084025c660510933cca701f615283cdbb3aa0963188770b54c31c8962493
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

Vagrant multi-mashine

Из интересного: скрипты теперь не в одну строчку.

```
Vagrantfile
 1  Vagrant.configure("2") do |config|
 2    config.vbguest.auto_update = false
 3    config.vm.box = "ubuntu/jammy64"
 4
 5    config.vm.define "vm1" do |vm1|
 6      vm1.vm.provider "virtualbox" do |vb|
 7        vb.name = "vm1"
 8      end
 9      vm1.vm.network "forwarded_port", guest: 80, host: 8080
10
11      vm1.vm.provision "shell", privileged: true, inline: <<-SHELL
12        apt update
13        apt -y install nginx
14        systemctl enable nginx
15        systemctl start nginx
16      SHELL
17
18      vm1.vm.network "private_network", ip: "172.20.0.78"
19    end
20
21    config.vm.define "vm2" do |vm2|
22      vm2.vm.provider "virtualbox" do |vb|
23        vb.name = "vm2"
24      end
25      vm2.vm.disk :disk, size: "60GB", primary: true
26      vm2.vm.network "public_network"
27
28      vm2.vm.provision "shell", privileged: true, path: "https://get.docker.com"
29    end
30
31    config.vm.define "vm3" do |vm3|
32      vm3.vm.provider "virtualbox" do |vb|
33        vb.name = "vm3"
34      end
35      vm3.vm.network "private_network", ip: "172.20.0.87"
36
37      vm3.vm.provision "shell", privileged: true, inline: <<-SHELL
38        apt update
39        apt -y install zsh
40        useradd -U -m -s /bin/zsh -G sudo adam
41        echo "adam ALL=(ALL) NOPASSWD:ALL" | sudo tee /etc/sudoers.d/adam
42      SHELL
43    end
44  end
```

Проверяем имена:
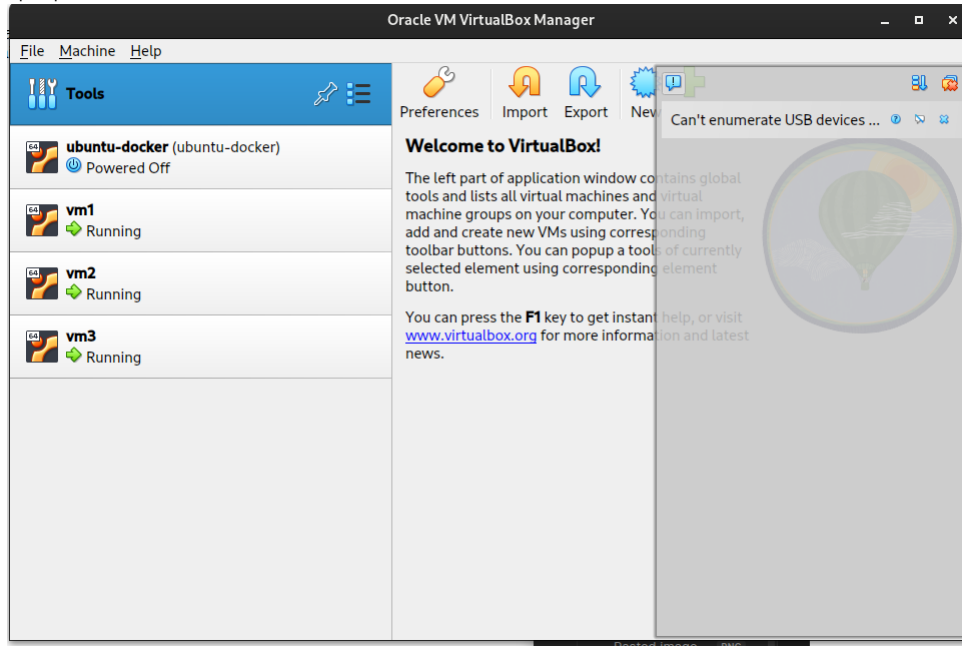
vm1

Проверяем, что nginx работает:

```
$$ % vagrant ssh vm1
==> vagrant: You have requested to enabled the experimental flag with the following features:
==> vagrant:
==> vagrant: Features:  disks
==> vagrant:
==> vagrant: Please use with caution, as some of the features may not be fully
==> vagrant: functional yet.
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-91-generic x86_64)

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

  System information as of Thu Dec 21 04:41:53 UTC 2023

  System load:  0.01123046875    Processes:               104
  Usage of /:   4.1% of 38.70GB   Users logged in:         0
  Memory usage: 23%               IPv4 address for enp0s3: 10.0.2.15
  Swap usage:   0%                IPv4 address for enp0s8: 172.20.0.78


Expanded Security Maintenance for Applications is not enabled.

10 updates can be applied immediately.
9 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

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


vagrant@ubuntu-jammy:~$ sudo systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
     Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset: enabled)
     Active: active (running) since Thu 2023-12-21 04:30:48 UTC; 11min ago
       Docs: man:nginx(8)
   Main PID: 2881 (nginx)
      Tasks: 3 (limit: 1102)
     Memory: 5.4M
        CPU: 27ms
     CGroup: /system.slice/nginx.service
             ├─2881 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             ├─2883 "nginx: worker process" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" ""
             └─2884 "nginx: worker process" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" ""

Dec 21 04:30:48 ubuntu-jammy systemd[1]: Starting A high performance web server and a reverse prox
Dec 21 04:30:48 ubuntu-jammy systemd[1]: Started A high performance web server and a reverse proxy
vagrant@ubuntu-jammy:~$
```

И в браузере:

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

Проверяем `ip` в приватной сети:

```
vagrant@ubuntu-jammy:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 02:a0:a0:bb:0a:b7 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 metric 100 brd 10.0.2.255 scope global dynamic enp0s3
       valid_lft 85671sec preferred_lft 85671sec
    inet6 fe80::a0:a0ff:febb:ab7/64 scope link
       valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:a4:4b:37 brd ff:ff:ff:ff:ff:ff
    inet 172.20.0.78/24 brd 172.20.0.255 scope global enp0s8
       valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fea4:4b37/64 scope link
       valid_lft forever preferred_lft forever
```

vm2

Проверяем что есть `ip` в публичной сети:

```
Last login: Thu Dec 21 04:43:25 2023 from 10.0.2.2
vagrant@ubuntu-jammy:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 02:a0:a0:bb:0a:b7 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 metric 100 brd 10.0.2.255 scope global dynamic enp0s3
       valid_lft 85756sec preferred_lft 85756sec
    inet6 fe80::a0:a0ff:febb:ab7/64 scope link
       valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:b1:06:d7 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.167/24 metric 100 brd 192.168.1.255 scope global dynamic enp0s8
       valid_lft 85758sec preferred_lft 85758sec
    inet6 fe80::a00:27ff:feb1:6d7/64 scope link
       valid_lft forever preferred_lft forever
4: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    link/ether 02:42:ad:cb:d1:c9 brd ff:ff:ff:ff:ff:ff
    inet 172.17.0.1/16 brd 172.17.255.255 scope global docker0
       valid_lft forever preferred_lft forever
    inet6 fe80::42:adff:fecb:d1c9/64 scope link
       valid_lft forever preferred_lft forever
```

Проверяем диск:

```
vagrant@ubuntu-jammy:~$ lsblk
NAME    MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0     7:0    0  63.9M  1 loop /snap/core20/2105
loop1     7:1    0  40.9M  1 loop /snap/snapd/20290
loop2     7:2    0 111.9M  1 loop /snap/lxd/24322
sda       8:0    0    60G  0 disk
└─sda1    8:1    0    60G  0 part /
sdb       8:16   0    10M  0 disk
```

Проверяем докер:

```
vagrant@ubuntu-jammy:~$ sudo docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent i
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

vm3

Заходим за Адама:

```
$$ % vagrant ssh vm3
==> vagrant: You have requested to enabled the experimental flag with the following features:
==> vagrant:
==> vagrant: Features:  disks
==> vagrant:
==> vagrant: Please use with caution, as some of the features may not be fully
==> vagrant: functional yet.
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-91-generic x86_64)

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

  System information as of Thu Dec 21 04:47:41 UTC 2023

  System load:  0.39794921875     Processes:             108
  Usage of /:   4.2% of 38.70GB   Users logged in:       0
  Memory usage: 21%               IPv4 address for enp0s3: 10.0.2.15
  Swap usage:   0%                IPv4 address for enp0s8: 172.20.0.87


Expanded Security Maintenance for Applications is not enabled.

10 updates can be applied immediately.
9 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

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


Last login: Thu Dec 21 04:47:42 2023 from 10.0.2.2
vagrant@ubuntu-jammy:~$ sudo su adam
```

Проверяем кто мы, какие у нас группы, какой у нас шелл и `ip`
Проверяем, что на `sudo` не просит пароль:

```
The function will be run again next time.  To prevent this, execute:
  touch ~/.zshrc
ubuntu-jammy% whoami
adam
ubuntu-jammy% groups
adam sudo
ubuntu-jammy% echo $SHELL
/bin/zsh
ubuntu-jammy% sudo ls /root
snap
ubuntu-jammy% ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 02:a0:a0:bb:0a:b7 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 metric 100 brd 10.0.2.255 scope global dynamic enp0s3
       valid_lft 86228sec preferred_lft 86228sec
    inet6 fe80::a0:a0ff:febb:ab7/64 scope link
       valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:c9:56:da brd ff:ff:ff:ff:ff:ff
    inet 172.20.0.87/24 brd 172.20.0.255 scope global enp0s8
       valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fec9:56da/64 scope link
       valid_lft forever preferred_lft forever
```