

## Лабораторная работа 10

### Тема: Docker

#### Задача 1: Настройка SSH-аутентификации по ключу

Генерируем ключ

```
maksimkolosov — -zsh — 80x24
Last login: Sun Dec  8 11:35:40 on ttys000
[(base) maksimkolosov@MacBook-Pro-Maksim ~ % ssh-keygen -t rsa -b 4096 -f ~/.ssh/
docker_ssh_key
Generating public/private rsa key pair.
[Enter passphrase (empty for no passphrase):
[Enter same passphrase again:
Your identification has been saved in /Users/maksimkolosov/.ssh/docker_ssh_key
Your public key has been saved in /Users/maksimkolosov/.ssh/docker_ssh_key.pub
The key fingerprint is:
SHA256:/Dovjg6P6l2QKQtZ4W9tGEHodm5kjTFyv7GPzSSyf+g maksimkolosov@MacBook-Pro-Mak
sim.local
The key's randomart image is:
+---[RSA 4096]-----+
|  .oo                |
|  .o.+               |
|  .oo.*              |
|  oo.=*+.           |
|o..=B o+S           |
|  . ++o+  ..        |
|   ...o.O   .        |
|    ..=o.B.         |
|   .o.o+Eoo+.       |
+-----[SHA256]-----+
(base) maksimkolosov@MacBook-Pro-Maksim ~ %
```

Копируем ключ с локалки на сервер

```
.ssh — -zsh — 80x24
[(base) maksimkolosov@MacBook-Pro-Maksim .ssh % ls
docker_ssh_key          id_ed25519              known_hosts
docker_ssh_key.pub      id_ed25519.pub          known_hosts.old
[(base) maksimkolosov@MacBook-Pro-Maksim .ssh % cat docker_ssh_key.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDSX1Iq15v/i4YTR2I6lHnbVyt4QsADftFqVWBonk+O
41PDwaTKvEsN6FEv9J6JpQAm5O4w7n8avxCTkeR/QjTMrrC6jioLBQjJ4tagXIVA5BesP3qizNYnsUDw
mydMFCjD98EmfJnuL+ghm4xaxXmAW5mhErMEEabcbghvF3xR08+GzQV1FKDmWqBnPvv13Qk6g3TXOum
SeCOU4bZybWW44H4VZhM68/2Ye+fDkKk0DHyaGNdimNiOLik3t+ZokR32ItUoZ/fydYH64pratmdwgVM
Qp93C1jciGeshADwbGVBBeInUE+mdP9Jix/ObsOWth8obzn0Ji9D5Wf9GnNM3GpZY5Jfp31mraRhC2wVP
RZKV9cFuNGXjJyA0fAHAuWXLHK+lFscEsjBGLiydOTNDX00dFb1Mxtw8p13pPyj/ESZzRo8tzTINuZKS
N8b/16WSl/1sv6VdGx0GuABJxDGW90w7RrWZ7dHx1EftKSJJJBG7gPH+gDQNKqQiuLKZqBYA8I05/kcH
0cAlHkWwJFzEyzr2gRntwNnd/C1bv5c9VKUyUj3tfEyDRf1jeol8dgySyAU80tV6bSv4/gfTmKqr+y8H
cVvVwDqXVQxCHjBHZFcm3yUVyc+ucqcQnj03KwUv7y5mc/a3CWHmvXvHKn4qyQ/s7qxztVGf7zn2PHNI
4w== maksimkolosov@MacBook-Pro-Maksim.local
(base) maksimkolosov@MacBook-Pro-Maksim .ssh %
```

```
maksimkolosov — root@b2e8b78946a3: / — docker run -p 2222:22 -it --pla...
GNU nano 7.2 /root/.ssh/authorized_keys *
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDSX1Iq15v/i4YTR2I6lHnbVyt4QsADftFqVWBonk+>
```

<b>^G</b> Help	<b>^O</b> Write Out	<b>^W</b> Where Is	<b>^K</b> Cut	<b>^T</b> Execute	<b>^C</b> Location
<b>^X</b> Exit	<b>^R</b> Read File	<b>^_\</b> Replace	<b>^U</b> Paste	<b>^J</b> Justify	<b>^/</b> Go To Line

Убеждаемся, что вход по ssh возможен без пароля:

```
maksimkolosov — root@b2e8b78946a3: ~ — ssh -i ~/.ssh/docker_ssh_key -...
Last login: Sun Dec  8 12:31:03 on ttys001
[(base) maksimkolosov@MacBook-Pro-Maksim ~ % ssh -i ~/.ssh/docker_ssh_key -p 2222
root@localhost
The authenticity of host '[localhost]:2222 (:::1):2222]' can't be established.
ED25519 key fingerprint is SHA256:2owXGxfolE0tBJG0sRmk6JqbsGDix34yPhoJDUVHUsk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '[localhost]:2222' (ED25519) to the list of known hos
ts.
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.10.14-linuxkit x86_64)

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

This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

root@b2e8b78946a3:~#
```

## Задача 2: Создание архивов на удаленной машине

Создание архива на удаленной машине:

```
ssh -p 2222 root@localhost "tar -czf /myarchive.tar.gz /folder1"
```

Скрин командной строки хоста:

```
[(base) maksimkolosov@MacBook-Pro-Maksim ~ % ssh -p 2222 root@localhost "tar -czf]
/myarchive.tar.gz /folder1"
[root@localhost's password:
tar: Removing leading `/' from member names
(base) maksimkolosov@MacBook-Pro-Maksim ~ %
```

Скрин командной строки удалёнки:

```
[root@2238280bbb76:/# ls
bin      etc      lib      media    opt      run      sys      var
boot     folder1 lib.usr-is-merged mnt      proc     sbin     tmp
dev      home     lib64    myarchive.tar.gz root     srv      usr
root@2238280bbb76:/#
```

Архив создан!

### Задача 3: Перенос файлов и архивов между локальным хостом и удаленной машиной

```
scp -i ~/.ssh/docker_ssh_key -P 2222 root@localhost:/myarchive.tar.gz ~/ssh
```

```
[(base) maksimkolosov@MacBook-Pro-Maksim ~ % scp -i ~/.ssh/docker_ssh_key -P 2222  
root@localhost:/myarchive.tar.gz ~/ssh  
[Enter passphrase for key '/Users/maksimkolosov/.ssh/docker_ssh_key':  
myarchive.tar.gz 100% 177 83.5KB/s 00:00  
(base) maksimkolosov@MacBook-Pro-Maksim ~ %
```

```
[(base) maksimkolosov@MacBook-Pro-Maksim ~ % cd  
[(base) maksimkolosov@MacBook-Pro-Maksim ~ % cd ssh  
[(base) maksimkolosov@MacBook-Pro-Maksim ssh % ls  
myarchive.tar.gz  
(base) maksimkolosov@MacBook-Pro-Maksim ssh %
```