

Домашняя работа № 2

1. Запустить контейнер с ubuntu, используя механизм LXC:

```
yakdd@yddux: ~  
Настраивается пакет liblxc-common (1:5.0.0~git2209-g5a7b9ce67-0ubuntu1) ...  
Обрабатываются триггеры для man-db (2.10.2-1) ...  
Обрабатываются триггеры для libc-bin (2.35-0ubuntu3.1) ...  
yakdd@yddux:~$ sudo lxc-create -n homework-2 -t ubuntu  
Checking cache download in /var/cache/lxc/jammy/rootfs-amd64 ...  
Installing packages in template: apt-transport-https,ssh,vim,language-pack-en,language-pack-ru  
Downloading ubuntu jammy minimal ...  
I: Target architecture can be executed  
I: Retrieving InRelease  
I: Checking Release signature  
I: Valid Release signature (key id F6ECB3762474EDA9D21B7022871920D19918C93C)  
I: Retrieving Packages  
I: Validating Packages  
I: Retrieving Packages  
I: Validating Packages  
I: Resolving dependencies of required packages...  
I: Resolving dependencies of base packages...  
I: Checking component main on http://archive.ubuntu.com/ubuntu...  
I: Checking component universe on http://archive.ubuntu.com/ubuntu...  
I: Retrieving adduser 3.118ubuntu5  
I: Validating adduser 3.118ubuntu5  
I: Retrieving apt 2.4.5  
I: Validating apt 2.4.5  
I: Retrieving apt-utils 2.4.5  
I: Validating apt-utils 2.4.5  
I: Retrieving base-files 12ubuntu4  
I: Validating base-files 12ubuntu4  
I: Retrieving base-passwd 3.5.52build1  
I: Validating base-passwd 3.5.52build1  
I: Retrieving bash 5.1-6ubuntu1  
I: Validating bash 5.1-6ubuntu1  
I: Retrieving bsdutils 1:2.37.2-4ubuntu3
```

2. Ограничить контейнер 256 Мб ОЗУ и проверить, что ограничение работает:

```
root@homework-2: /  
yakdd@yddux:~$ sudo lxc-ls  
homework-2  
yakdd@yddux:~$ sudo lxc-cgroup -n homework-2 memory.max 256M  
yakdd@yddux:~$ free -m  
total          used          free         shared buff/cache   available  
Память:      1963         951           64           20       947        808  
Подкачка:     2679         606        2073  
yakdd@yddux:~$ sudo lxc-attach -n homework-2  
root@homework-2:/# free -m  
total          used          free         shared buff/cache   available  
Память:      256           27          197           0         31        228  
Подкачка:         0           0           0  
root@homework-2:/#
```

3. Настроить автоматическую маршрутизацию между контейнерами.

Адреса можно взять: 10.0.12.0/24 и 10.0.13.0/24.

е.х. `sudo lxc-create -n test123 -t ubuntu -f /usr/share/doc/lxc/examples/lxc-veth.conf`:

**Попытался выполнить задание, но получил ошибку на этапе запуска контейнеров.
Прикладываю скриншоты с командами и ошибками:**

```
yakdd@yddux:~$ sudo cat /home/yakdd/temp/lxc-veth-1.conf
[sudo] пароль для yakdd:
# Container with network virtualized using a pre-configured bridge named br0 and
# veth pair virtual network devices
lxc.uts.name = beta
lxc.net.0.type = veth
lxc.net.0.flags = up
lxc.net.0.link = br0
lxc.net.0.hwaddr = 4a:49:43:49:79:bf
lxc.net.0.ipv4.address = 10.0.12.0/24
lxc.net.0.ipv6.address = 2003:db8:1:0:214:1234:fe0b:3597
yakdd@yddux:~$ sudo cat /home/yakdd/temp/lxc-veth-2.conf
# Container with network virtualized using a pre-configured bridge named br0 and
# veth pair virtual network devices
lxc.uts.name = beta
lxc.net.0.type = veth
lxc.net.0.flags = up
lxc.net.0.link = br0
lxc.net.0.hwaddr = 4a:49:43:49:79:bf
lxc.net.0.ipv4.address = 10.0.13.0/24
lxc.net.0.ipv6.address = 2003:db8:1:0:214:1234:fe0b:3597
yakdd@yddux:~$
```

```
yakdd@yddux: /

yakdd@yddux:/$ sudo lxc-create -n task3-1 -t ubuntu -f /home/yakdd/temp/lxc-veth-1.conf
Checking cache download in /var/cache/lxc/jammy/rootfs-amd64 ...
Copy /var/cache/lxc/jammy/rootfs-amd64 to /var/lib/lxc/task3-1/rootfs ...
Copying rootfs to /var/lib/lxc/task3-1/rootfs ...
Generating locales (this might take a while)...
    ru_RU.UTF-8... done
Generation complete.
Creating SSH2 RSA key; this may take some time ...
3072 SHA256:5r6fCOGhmmILvzV4pl/6kGfzVDT100gK0Pv5YUKx5Ig root@yddux (RSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:1NDbm/OqBmNRkJMCbupjIXDw6T9eD5IpFGnCPjM+69w root@yddux (ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
256 SHA256:Y1GM0RMKCh97dN9/ttVyY2qz5wKxepaMsPaob41pxa0 root@yddux (ED25519)
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.

Current default time zone: 'Etc/UTC'
Local time is now:      Wed Jul 12 10:33:39 UTC 2023.
Universal Time is now:  Wed Jul 12 10:33:39 UTC 2023.

##
# The default user is 'ubuntu' with password 'ubuntu'!
# Use the 'sudo' command to run tasks as root in the container.
##

yakdd@yddux:/$ █
```



```

yakdd@yddux:/$ sudo lxc-create -n task3-2 -t ubuntu -f /home/yakdd/temp/lxc-veth-2.conf
Checking cache download in /var/cache/lxc/jammy/rootfs-amd64 ...
Copy /var/cache/lxc/jammy/rootfs-amd64 to /var/lib/lxc/task3-2/rootfs ...
Copying rootfs to /var/lib/lxc/task3-2/rootfs ...
Generating locales (this might take a while)...
    ru_RU.UTF-8... done
Generation complete.
Creating SSH2 RSA key; this may take some time ...
3072 SHA256:UhnwZCCJs00fkBT5d2jERryWmKkMmHqXLEUF2rfhuzY root@yddux (RSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:/zyTmIGPpNutBCH90vKYk3PzvKH9ZE4nHyJoz00fJTg root@yddux (ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
256 SHA256:YELryVKAmgLWYqLnQ5D42SfpovUiKTwnW/uSl8SpIp4 root@yddux (ED25519)
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.

Current default time zone: 'Etc/UTC'
Local time is now:      Wed Jul 12 10:37:51 UTC 2023.
Universal Time is now:  Wed Jul 12 10:37:51 UTC 2023.

```

```

##
# The default user is 'ubuntu' with password 'ubuntu'!
# Use the 'sudo' command to run tasks as root in the container.
##

yakdd@yddux:/$

```

```

yakdd@yddux:/$ sudo lxc-ls -f
NAME      STATE   AUTOSTART GROUPS IPV4      IPV6 UNPRIVILEGED
homework-2 RUNNING 0         -      10.0.3.143 - false
task3-1   STOPPED 0         -      -         - false
task3-2   STOPPED 0         -      -         - false
yakdd@yddux:/$ sudo lxc-start -n task3-1
lxc-start: task3-1: lxcontainer.c: wait_on_daemonized_start: 877 Received container state "ABORTING" instead of "RUNNING"
lxc-start: task3-1: tools/lxc_start.c: main: 306 The container failed to start
lxc-start: task3-1: tools/lxc_start.c: main: 309 To get more details, run the container in foreground mode
lxc-start: task3-1: tools/lxc_start.c: main: 311 Additional information can be obtained by setting the --logfile and --logpriority options
yakdd@yddux:/$ sudo lxc-start -n task3-1 --logfile=lxcStart
lxc-start: task3-1: lxcontainer.c: wait_on_daemonized_start: 877 Received container state "ABORTING" instead of "RUNNING"
lxc-start: task3-1: tools/lxc_start.c: main: 306 The container failed to start
lxc-start: task3-1: tools/lxc_start.c: main: 309 To get more details, run the container in foreground mode
lxc-start: task3-1: tools/lxc_start.c: main: 311 Additional information can be obtained by setting the --logfile and --logpriority options
yakdd@yddux:/$ cat lxcStart
cat: lxcStart: Отказано в доступе
yakdd@yddux:/$ sudo cat lxcStart
lxc-start task3-1 20230712113848.559 ERROR    network - network.c:netdev_configure_server_veth:711 - No such file or directory - Failed to attach "vethyoVCuF" to bridge "br0", bridge interface doesn't exist
lxc-start task3-1 20230712113848.572 ERROR    network - network.c:lxc_create_network_priv:3427 - No such file or directory - Failed to create network device
lxc-start task3-1 20230712113848.572 ERROR    start - start.c:lxc_spawn:1843 - Failed to create the network
lxc-start task3-1 20230712113848.572 ERROR    lxcontainer - lxcontainer.c:wait_on_daemonized_start:877 - Received container state "ABORTING" instead of "RUNNING"
lxc-start task3-1 20230712113848.572 ERROR    lxc_start - tools/lxc_start.c:main:306 - The container failed to start
lxc-start task3-1 20230712113848.573 ERROR    lxc_start - tools/lxc_start.c:main:309 - To get more details, run the container in foreground mode
lxc-start task3-1 20230712113848.573 ERROR    lxc_start - tools/lxc_start.c:main:311 - Additional information can be obtained by setting the --logfile and --logpriority options
lxc-start task3-1 20230712113848.578 ERROR    start - start.c:__lxc_start:2074 - Failed to spawn container "task3-1"
yakdd@yddux:/$

```