

```
db@db-linux:~$ sudo su
[sudo] пароль для db:
root@db-linux:/home/db# hostname -I
192.168.0.101
root@db-linux:/home/db# lxc storage list
Команда «lxc» не найдена, но может быть установлена с помощью:
snap install lxd          # version 5.17-e5ead86, or
apt install lxd-installer # version 1
See 'snap info lxd' for additional versions.
root@db-linux:/home/db# lxc storage --help
Команда «lxc» не найдена, но может быть установлена с помощью:
snap install lxd          # version 5.17-e5ead86, or
apt install lxd-installer # version 1
See 'snap info lxd' for additional versions.
root@db-linux:/home/db# snap install lxd
lxd 5.17-e5ead86 от Canonical✓ установлен
root@db-linux:/home/db# lxc storage list
If this is your first time running LXD on this machine, you should also run: lxd init
To start your first container, try: lxc launch ubuntu:22.04
Or for a virtual machine: lxc launch ubuntu:22.04 --vm
```

+-----+-----+-----+-----+-----+-----+

//УСТАНОВКА ПАКЕТОВ

```
root@db-linux:/home/db# sudo apt-get install lxc debootstrap bridge-utils lxc-templates
```

```
root@db-linux:/home/db# lxc-start -d -n test123
```

```
root@db-linux:/home/db# lxc-attach -n test123
```

```
root@test123:/# ls /sys/fs/cgroup
```

cgroup.controllers	cpuset.cpus.partition	io.pressure	memory.swap.events
cgroup.events	cpuset.mems	io.prio.class	memory.swap.high
cgroup.freeze	cpuset.mems.effective	io.stat	memory.swap.max
cgroup.kill	cpu.stat	io.weight	memory.zswap.current
cgroup.max.depth	cpu.uclamp.max	memory.current	memory.zswap.max
cgroup.max.descendants	cpu.uclamp.min	memory.events	misc.current
cgroup.pressure	cpu.weight	memory.events.local	misc.events
cgroup.procs	cpu.weight.nice	memory.high	misc.max
cgroup.stat	dev-hugepages.mount	memory.low	pids.current
cgroup.subtree_control	hugetlb.2MB.current	memory.max	pids.events
cgroup.threads	hugetlb.2MB.events	memory.min	pids.max
cgroup.type	hugetlb.2MB.events.local	memory.numa_stat	pids.peak
cpu.idle	hugetlb.2MB.max	memory.oom.group	rdma.current
cpu.max	hugetlb.2MB.numa_stat	memory.peak	rdma.max

cpu.max.burst	hugetlb.2MB.rsvd.current	memory.pressure	system.slice
cpu.pressure	hugetlb.2MB.rsvd.max	memory.reclaim	user.slice
cpuset.cpus	init.scope	memory.stat	
cpuset.cpus.effective	io.max	memory.swap.current	

root@test123:/# ll /sys/fs/cgroup/

итого 0

drwxr-xr-x 7 root root 0 сен 12 17:52 ./

drwxr-xr-x 8 root root 0 сен 12 17:51 ../

-r--r--r-- 1 root root 0 сен 12 17:51 cgroup.controllers

-r--r--r-- 1 root root 0 сен 12 17:52 cgroup.events

-rw-r--r-- 1 root root 0 сен 12 17:51 cgroup.freeze

--w----- 1 root root 0 сен 12 17:52 cgroup.kill

-rw-r--r-- 1 root root 0 сен 12 17:52 cgroup.max.depth

-rw-r--r-- 1 root root 0 сен 12 17:52 cgroup.max.descendants

-rw-r--r-- 1 root root 0 сен 12 17:52 cgroup.pressure

-rw-r--r-- 1 root root 0 сен 12 17:51 cgroup.procs

-r--r--r-- 1 root root 0 сен 12 17:52 cgroup.stat

-rw-r--r-- 1 root root 0 сен 12 17:51 cgroup.subtree_control

-rw-r--r-- 1 root root 0 сен 12 17:52 cgroup.threads

-rw-r--r-- 1 root root 0 сен 12 17:52 cgroup.type

-rw-r--r-- 1 root root 0 сен 12 17:52 cpu.idle

-rw-r--r-- 1 root root 0 сен 12 17:52 cpu.max

-rw-r--r-- 1 root root 0 сен 12 17:52 cpu.max.burst

-rw-r--r-- 1 root root 0 сен 12 17:52 cpu.pressure

-rw-r--r-- 1 root root 0 сен 12 17:52 cpuset.cpus

-r--r--r-- 1 root root 0 сен 12 17:52 cpuset.cpus.effective

-rw-r--r-- 1 root root 0 сен 12 17:52 cpuset.cpus.partition

-rw-r--r-- 1 root root 0 сен 12 17:52 cpuset.mems

-r--r--r-- 1 root root 0 сен 12 17:52 cpuset.mems.effective

-r--r--r-- 1 root root 0 сен 12 17:52 cpu.stat

-rw-r--r-- 1 root root 0 сен 12 17:52 cpu.uclamp.max

-rw-r--r-- 1 root root 0 сен 12 17:52 cpu.uclamp.min

-rw-r--r-- 1 root root 0 сен 12 17:52 cpu.weight

-rw-r--r-- 1 root root 0 сен 12 17:52 cpu.weight.nice

drwxr-xr-x 2 root root 0 сен 12 17:51 dev-hugepages.mount/

-r--r--r-- 1 root root 0 сен 12 17:52 hugetlb.2MB.current

-r--r--r-- 1 root root 0 сен 12 17:52 hugetlb.2MB.events

-r--r--r-- 1 root root 0 сен 12 17:52 hugetlb.2MB.events.local

-rw-r--r-- 1 root root 0 сен 12 17:52 hugetlb.2MB.max

-r--r--r-- 1 root root 0 сен 12 17:52 hugetlb.2MB.numa_stat

-r--r--r-- 1 root root 0 сен 12 17:52 hugetlb.2MB.rsvd.current

-rw-r--r-- 1 root root 0 сен 12 17:52 hugetlb.2MB.rsvd.max

drwxr-xr-x 2 root root 0 сен 12 17:51 init.scope/

```

-rw-r--r-- 1 root root 0 сен 12 17:52 io.max
-rw-r--r-- 1 root root 0 сен 12 17:52 io.pressure
-rw-r--r-- 1 root root 0 сен 12 17:52 io.prio.class
-r--r--r-- 1 root root 0 сен 12 17:52 io.stat
-rw-r--r-- 1 root root 0 сен 12 17:52 io.weight
drwxr-xr-x 2 root root 0 сен 12 17:52 .lxc/
-r--r--r-- 1 root root 0 сен 12 17:51 memory.current
-r--r--r-- 1 root root 0 сен 12 17:52 memory.events
-r--r--r-- 1 root root 0 сен 12 17:52 memory.events.local
-rw-r--r-- 1 root root 0 сен 12 17:52 memory.high
-rw-r--r-- 1 root root 0 сен 12 17:52 memory.low
-rw-r--r-- 1 root root 0 сен 12 17:51 memory.max
-rw-r--r-- 1 root root 0 сен 12 17:52 memory.min
-r--r--r-- 1 root root 0 сен 12 17:52 memory.numa_stat
-rw-r--r-- 1 root root 0 сен 12 17:52 memory.oom.group
-r--r--r-- 1 root root 0 сен 12 17:52 memory.peak
-rw-r--r-- 1 root root 0 сен 12 17:52 memory.pressure
--w----- 1 root root 0 сен 12 17:52 memory.reclaim
-r--r--r-- 1 root root 0 сен 12 17:51 memory.stat
-r--r--r-- 1 root root 0 сен 12 17:52 memory.swap.current
-r--r--r-- 1 root root 0 сен 12 17:52 memory.swap.events
-rw-r--r-- 1 root root 0 сен 12 17:52 memory.swap.high
-rw-r--r-- 1 root root 0 сен 12 17:52 memory.swap.max
-r--r--r-- 1 root root 0 сен 12 17:52 memory.zswap.current
-rw-r--r-- 1 root root 0 сен 12 17:52 memory.zswap.max
-r--r--r-- 1 root root 0 сен 12 17:52 misc.current
-r--r--r-- 1 root root 0 сен 12 17:52 misc.events
-rw-r--r-- 1 root root 0 сен 12 17:52 misc.max
-r--r--r-- 1 root root 0 сен 12 17:52 pids.current
-r--r--r-- 1 root root 0 сен 12 17:52 pids.events
-rw-r--r-- 1 root root 0 сен 12 17:51 pids.max
-r--r--r-- 1 root root 0 сен 12 17:52 pids.peak
-r--r--r-- 1 root root 0 сен 12 17:52 rdma.current
-rw-r--r-- 1 root root 0 сен 12 17:52 rdma.max
drwxr-xr-x 15 root root 0 сен 12 18:07 system.slice/
drwxr-xr-x 2 root root 0 сен 12 17:51 user.slice/
root@test123:/# exit
exit
root@db-linux:/home/db# exit
exit

```

//ПРОВЕРКА, ЧТО УСТАНОВЛЕНО

```
db@db-linux:~$ lxc storage list
```

If this is your first time running LXD on this machine, you should also run: `lxd init`
To start your first container, try: `lxc launch ubuntu:22.04`
Or for a virtual machine: `lxc launch ubuntu:22.04 --vm`

```
+-----+-----+-----+-----+-----+-----+
| NAME | DRIVER | SOURCE | DESCRIPTION | USED BY | STATE |
+-----+-----+-----+-----+-----+-----+
```

//К СОЖАЛЕНИЮ В ОТЛИЧИИ ОТ СЕМИНАРА ВСЕ ПУСТО

```
db@db-linux:~$ sudo su
[sudo] пароль для db:
root@db-linux:/home/db# find /usr -name lxc-veth.conf
/usr/share/doc/liblxc-common/examples/lxc-veth.conf
root@db-linux:/home/db# cd /etc/netplan
root@db-linux:/etc/netplan# ls
01-network-manager-all.yaml
root@db-linux:/etc/netplan# nano 00-installer-config.yaml
root@db-linux:/etc/netplan# cd ..
root@db-linux:/etc# cd ..
```

//УСТАНОВКА ДОПОЛНИТЕЛЬНЫХ ПАКЕТОВ

```
root@db-linux:/# apt install cgroup-tools
Чтение списков пакетов... Готово
Построение дерева зависимостей... Готово
Чтение информации о состоянии... Готово
Будут установлены следующие дополнительные пакеты:
  libcgroup1
Следующие НОВЫЕ пакеты будут установлены:
  cgroup-tools libcgroup1
Обновлено 0 пакетов, установлено 2 новых пакетов, для удаления отмечено 0
пакетов, и 211 пакетов не обновлено.
Необходимо скачать 121 kB архивов.
После данной операции объём занятого дискового пространства возрастёт на 435
kB.
Хотите продолжить? [Д/н] y
Пол:1 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 libcgroup1 amd64
2.0-2 [49,8 kB]
Пол:2 http://ru.archive.ubuntu.com/ubuntu jammy/universe amd64 cgroup-tools amd64
2.0-2 [70,8 kB]
Получено 121 kB за 0с (562 kB/s)
Выбор ранее не выбранного пакета libcgroup1:amd64.
(Чтение базы данных ... на данный момент установлено 179239 файлов и
каталогов.)
```

```

Подготовка к распаковке .../libcgroup1_2.0-2_amd64.deb ...
Распаковывается libcgroup1:amd64 (2.0-2) ...
Выбор ранее не выбранного пакета cgroup-tools.
Подготовка к распаковке .../cgroup-tools_2.0-2_amd64.deb ...
Распаковывается cgroup-tools (2.0-2) ...
Настраивается пакет libcgroup1:amd64 (2.0-2) ...
Настраивается пакет cgroup-tools (2.0-2) ...
Обрабатываются триггеры для libc-bin (2.35-0ubuntu3.1) ...
Обрабатываются триггеры для man-db (2.10.2-1) ...
root@db-linux:/# unshare --fork --pid --mount-proc bash
root@db-linux:/# ps -aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.2 18888 4096 pts/1    S   21:46   0:00 bash
root         7  0.0  0.1 21620 3712 pts/1    R+  21:46   0:00 ps -aux
root@db-linux:/# cgcreate -a $USER -g memory:mytestgroup -g cpu:mytestgroup
root@db-linux:/# ls /sys/fs/cgroup/mytestgroup/
cgroup.controllers      cpuset.cpus.effective  io.pressure             memory.swap.current
cgroup.events            cpuset.cpus.partition  io.prio.class            memory.swap.events
cgroup.freeze            cpuset.mems             io.stat                  memory.swap.high
cgroup.kill              cpuset.mems.effective  io.weight                memory.swap.max
cgroup.max.depth         cpu.stat                memory.current           memory.zswap.current
cgroup.max.descendants     cpu.uclamp.max         memory.events
memory.zswap.max
cgroup.pressure          cpu.uclamp.min         memory.events.local     misc.current
cgroup.procs             cpu.weight              memory.high              misc.events
cgroup.stat              cpu.weight.nice         memory.low               misc.max
cgroup.subtree_control   hugetlb.2MB.current    memory.max               pids.current
cgroup.threads           hugetlb.2MB.events     memory.min               pids.events
cgroup.type              hugetlb.2MB.events.local memory.numa_stat         pids.max
cpu.idle                 hugetlb.2MB.max         memory.oom.group         pids.peak
cpu.max                  hugetlb.2MB.numa_stat   memory.peak              rdma.current
cpu.max.burst            hugetlb.2MB.rsvd.current memory.pressure           rdma.max
cpu.pressure             hugetlb.2MB.rsvd.max    memory.reclaim
cpuset.cpus              io.max                  memory.stat
root@db-linux:/# cgexec -g memory:mytestgroup bash

```

//ДЕЙСТВИЯ ПО ОГРАНИЧЕНИЮ ПАМЯТИ

```

root@db-linux:/# cat /sys/fs/cgroup/mytestgroup/memory.max
max
root@db-linux:/# vi /sys/fs/cgroup/mytestgroup/memory.max

```

```

[1]+  Остановлен vi /sys/fs/cgroup/mytestgroup/memory.max
root@db-linux:/# nano /sys/fs/cgroup/mytestgroup/memory.max

```

```

root@db-linux:/# nano /sys/fs/cgroup/mytestgroup/memory.max
root@db-linux:/# nano /sys/fs/cgroup/mytestgroup/memory.max
root@db-linux:/# nano /sys/fs/cgroup/mytestgroup/memory.max
root@db-linux:/# nano /sys/fs/cgroup/mytestgroup/memory.min
root@db-linux:/# cat memory.min
cat: memory.min: Нет такого файла или каталога
root@db-linux:/# cat /sys/fs/cgroup/mytestgroup/memory.min
104857600
root@db-linux:/# free -m

```

	total	used	free	shared	buff/cache	available
Память:	1959	726	136	13	1096	1036
Подкачка:	2139	70	2069			

//ИЗМЕНЕНИЙ НЕТ (ПО ПАМЯТИ)

```

root@db-linux:/# lxc storage list

```

NAME	DRIVER	SOURCE	DESCRIPTION	USED BY	STATE
------	--------	--------	-------------	---------	-------

//ТОЖЕ НИЧЕГО В ТАБЛИЧКЕ НЕТ, В ОТЛИЧИИ ОТ СЕМИНАРА
 //ПРОБУЮ ЕЩЕ РАЗ, МОЖЕТ ЧТО-ТО НЕ ДОУСТАНОВИЛ

```

root@db-linux:/# sudo apt-get install lxc debootstrap bridge-utils lxc-templates

```

Чтение списков пакетов... Готово

Построение дерева зависимостей... Готово

Чтение информации о состоянии... Готово

Уже установлен пакет bridge-utils самой новой версии (1.7-1ubuntu3).

Уже установлен пакет lxc самой новой версии (1:5.0.0~git2209-g5a7b9ce67-0ubuntu1).

Уже установлен пакет lxc-templates самой новой версии (3.0.4-5).

Уже установлен пакет debootstrap самой новой версии (1.0.126+nmu1ubuntu0.5).

Обновлено 0 пакетов, установлено 0 новых пакетов, для удаления отмечено 0 пакетов, и 211 пакетов не обновлено.

//ВРОДЕ БЫ ВСЕ УСТАНОВЛЕНО И БЫЛО
 //ПРОВЕРКА КОМАНД ПО МЕТОДИЧКЕ

```

root@db-linux:/# lxc storage list

```

NAME	DRIVER	SOURCE	DESCRIPTION	USED BY	STATE
------	--------	--------	-------------	---------	-------

```

root@db-linux:/# lxc network list

```

NAME	TYPE	MANAGED	IPV4	IPV6	DESCRIPTION	USED BY	STATE
enp0s3	physical	NO				0	
lxcbr0	bridge	NO				0	

```

+-----+-----+-----+-----+-----+-----+-----+
root@db-linux:/# lxc remote list
+-----+-----+-----+-----+-----+-----+-----+
--+
|  NAME      |          URL           | PROTOCOL  | AUTH TYPE | PUBLIC |
| STATIC | GLOBAL |
+-----+-----+-----+-----+-----+-----+-----+
--+
| images      | https://images.linuxcontainers.org | simplestreams | none      | YES
| NO  | NO  |
+-----+-----+-----+-----+-----+-----+-----+
--+
| local (current) | unix://              | lxd      | file access | NO  | YES  | NO
|
+-----+-----+-----+-----+-----+-----+-----+
--+
| ubuntu      | https://cloud-images.ubuntu.com/releases | simplestreams | none      |
YES  | YES  | NO  |
+-----+-----+-----+-----+-----+-----+-----+
--+
| ubuntu-daily | https://cloud-images.ubuntu.com/daily   | simplestreams | none      |
YES  | YES  | NO  |
+-----+-----+-----+-----+-----+-----+-----+
--+
root@db-linux:/# lxc image -c dasut list ubuntu: | head -n 11
+-----+-----+-----+-----+-----+-----+-----+
-----+
|          DESCRIPTION          | ARCHITECTURE |  SIZE  |      UPLOAD
| DATE      |  TYPE  |
+-----+-----+-----+-----+-----+-----+-----+
-----+
| ubuntu 12.04 LTS amd64 (release) (20170502) | x86_64      | 152.61MiB | May 2,
2017 at 12:00am (UTC) | CONTAINER |
+-----+-----+-----+-----+-----+-----+-----+
-----+
| ubuntu 12.04 LTS amd64 (release) (20170502) | x86_64      | 248.63MiB | May 2,
2017 at 12:00am (UTC) | VIRTUAL-MACHINE |
+-----+-----+-----+-----+-----+-----+-----+
-----+
| ubuntu 12.04 LTS armhf (release) (20170502) | armv7l      | 134.87MiB | May 2, 2017
at 12:00am (UTC) | CONTAINER |
+-----+-----+-----+-----+-----+-----+-----+
-----+

```

| ubuntu 12.04 LTS armhf (release) (20170502) | armv7l | 221.31MiB | May 2, 2017
at 12:00am (UTC) | VIRTUAL-MACHINE |

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
-----+

```
root@db-linux:/# cat /etc/default/lxc-net
```

```
# This file is auto-generated by lxc.postinst if it does not  
# exist. Customizations will not be overridden.
```

```
# Leave USE_LXC_BRIDGE as "true" if you want to use lxcbr0 for your  
# containers. Set to "false" if you'll use virbr0 or another existing  
# bridge, or mavlan to your host's NIC.
```

```
USE_LXC_BRIDGE="true"
```

```
# If you change the LXC_BRIDGE to something other than lxcbr0, then  
# you will also need to update your /etc/lxc/default.conf as well as the  
# configuration (/var/lib/lxc/<container>/config) for any containers  
# already created using the default config to reflect the new bridge  
# name.
```

```
# If you have the dnsmasq daemon installed, you'll also have to update  
# /etc/dnsmasq.d/lxc and restart the system wide dnsmasq daemon.
```

```
LXC_BRIDGE="lxcbr0"
```

```
LXC_ADDR="10.0.3.1"
```

```
LXC_NETMASK="255.255.255.0"
```

```
LXC_NETWORK="10.0.3.0/24"
```

```
LXC_DHCP_RANGE="10.0.3.2,10.0.3.254"
```

```
LXC_DHCP_MAX="253"
```

```
# Uncomment the next line if you'd like to use a conf-file for the lxcbr0  
# dnsmasq. For instance, you can use 'dhcp-host=mail1,10.0.3.100' to have  
# container 'mail1' always get ip address 10.0.3.100.
```

```
#LXC_DHCP_CONFILE=/etc/lxc/dnsmasq.conf
```

```
# Uncomment the next line if you want lxcbr0's dnsmasq to resolve the .lxc  
# domain. You can then add "server=/lxc/10.0.3.1" (or your actual $LXC_ADDR)  
# to your system dnsmasq configuration file (normally /etc/dnsmasq.conf,  
# or /etc/NetworkManager/dnsmasq.d/lxc.conf on systems that use NetworkManager).  
# Once these changes are made, restart the lxc-net and network-manager services.
```

```
# 'container1.lxc' will then resolve on your host.
```

```
#LXC_DOMAIN="lxc"
```

```
root@db-linux:/# cat /etc/lxc/default.conf
```

```
lxc.net.0.type = veth
```

```
lxc.net.0.link = lxcbr0
```

```
lxc.net.0.flags = up
```

```
lxc.net.0.hwaddr = 00:16:3e:xx:xx:xx
```

```
root@db-linux:/# 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 08:00:27:43:28:91 brd ff:ff:ff:ff:ff:ff
    inet 192.168.0.101/24 brd 192.168.0.255 scope global dynamic noprefixroute enp0s3
        valid_lft 4138sec preferred_lft 4138sec
    inet6 fe80::669a:9781:b627:9328/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
3: lxcbr0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state
DOWN group default qlen 1000
    link/ether 00:16:3e:00:00:00 brd ff:ff:ff:ff:ff:ff
    inet 10.0.3.1/24 brd 10.0.3.255 scope global lxcbr0
        valid_lft forever preferred_lft forever

```

//ПОВТОРНАЯ ПОПЫТКА СОЗДАТЬ СУЩЕСТВУЮЩИЙ КОНТЕЙНЕР

```

root@db-linux:/# lxc-create -n test123 -t ubuntu -f
/usr/share/doc/lxc/examples/lxc-veth.conf
lxc-create: test123: tools/lxc_create.c: main: 264 Container already exists

```

//ЗАПУСК КОНТЕЙНЕРА

```

root@db-linux:/# lxc-start -d -n test123
lxc-start: test123: tools/lxc_start.c: main: 256 Container is already running
root@db-linux:/# lxc-stop -n test123
root@db-linux:/# lxc storage list

```

```

+-----+-----+-----+-----+-----+-----+
| NAME | DRIVER | SOURCE | DESCRIPTION | USED BY | STATE |
+-----+-----+-----+-----+-----+-----+

```

//ОПЯТЬ ТАБЛИЧКА ПУСТАЯ

```

root@db-linux:/# lxc-attach -n test123
root@test123:/# ping localhost
PING localhost (127.0.0.1) 56(84) bytes of data.
64 bytes from localhost (127.0.0.1): icmp_seq=1 ttl=64 time=0.018 ms
64 bytes from localhost (127.0.0.1): icmp_seq=2 ttl=64 time=0.065 ms
64 bytes from localhost (127.0.0.1): icmp_seq=3 ttl=64 time=0.067 ms
64 bytes from localhost (127.0.0.1): icmp_seq=4 ttl=64 time=0.031 ms
64 bytes from localhost (127.0.0.1): icmp_seq=5 ttl=64 time=0.029 ms

```

64 bytes from localhost (127.0.0.1): icmp_seq=6 ttl=64 time=0.065 ms
64 bytes from localhost (127.0.0.1): icmp_seq=7 ttl=64 time=0.066 ms
64 bytes from localhost (127.0.0.1): icmp_seq=8 ttl=64 time=0.066 ms
64 bytes from localhost (127.0.0.1): icmp_seq=9 ttl=64 time=0.070 ms
64 bytes from localhost (127.0.0.1): icmp_seq=10 ttl=64 time=0.029 ms
64 bytes from localhost (127.0.0.1): icmp_seq=11 ttl=64 time=0.035 ms
64 bytes from localhost (127.0.0.1): icmp_seq=12 ttl=64 time=0.066 ms
64 bytes from localhost (127.0.0.1): icmp_seq=13 ttl=64 time=0.068 ms
64 bytes from localhost (127.0.0.1): icmp_seq=14 ttl=64 time=0.066 ms
^C

--- localhost ping statistics ---

14 packets transmitted, 14 received, 0% packet loss, time 13313ms
rtt min/avg/max/mdev = 0.018/0.052/0.070/0.018 ms

//ПРОСМОТР ПАПОК КАК НА СЕМИНАРЕ

```
root@test123:~# l
bin@  dev/ home/ lib32@ libx32@ mnt/ proc/ run/  srv/ tmp/ var/
boot/ etc/ lib@  lib64@ media/ opt/ root/ sbin@ sys/ usr/
root@test123:~# cd var
root@test123:/var# l
backups/ cache/ lib/ local/ lock@ log/ mail/ opt/ run@ spool/ tmp/
root@test123:/var# cd lib
root@test123:/var/lib# l
apt/ dhcp/ locales/ misc/ polkit-1/ python/  sudo/  ubuntu-advantage/ vim/
dbus/ dpkg/ logrotate/ pam/ private/ shells.state systemd/ ucf/
root@test123:/var/lib# exit
exit
root@db-linux:~# find /var/lib/lxc/test123/config
/var/lib/lxc/test123/config
root@db-linux:~# /var/lib/lxc/test123/
bash: /var/lib/lxc/test123/: Это каталог
root@db-linux:~# cd /var/lib/lxc/test123/
root@db-linux:/var/lib/lxc/test123# l
config rootfs/
```

//ВНЕСЕНИЕ ИЗМЕНЕНИЙ В ФАЙЛ CONFIG

```
root@db-linux:/var/lib/lxc/test123# nano config
```

//ПРОВЕРКА, ЧТО ИЗМЕНИЛОСЬ

```
root@db-linux:/var/lib/lxc/test123# free -m
```

	total	used	free	shared	buff/cache	available
Память:	1959	710	132	13	1116	1052
Подкачка:	2139	69	2070			

//ПО ТАБЛИЧКЕ НИЧЕГО НЕ ИЗМЕНИЛОСЬ

```
root@db-linux:/var/lib/lxc/test123# lxc-ls -f
NAME   STATE   AUTOSTART GROUPS IPV4 IPV6 UNPRIVILEGED
test123 RUNNING 0       -   -   -   false
root@db-linux:/var/lib/lxc/test123# lxc-ls
test123
```

//ОСТАНОВКА КОНТЕЙНЕРА

```
root@db-linux:/var/lib/lxc/test123# lxc-stop -n test123
root@db-linux:/var/lib/lxc/test123# lxc-ls -f
NAME   STATE   AUTOSTART GROUPS IPV4 IPV6 UNPRIVILEGED
test123 STOPPED 1       -   -   -   false
```

//ИЗМЕНЕНИЯ ЕСТЬ - АВТОЗАПУСК "1"

```
root@db-linux:/var/lib/lxc/test123#
db@db-linux:~$ sudo su
[sudo] пароль для db:
root@db-linux:/home/db# lxc-attach -n test123
root@test123:/# free -m
```

	total	used	free	shared	buff/cache	available
Память:	200	28	121	0	50	171
Подкачка:	0	0	0			

//ИЗМЕНЕНИЯ ЕСТЬ - ОГРАНИЧЕНИЕ 200М

```
root@test123:/# exit
exit
root@db-linux:/home/db# cd /
root@db-linux:/# ls /sys/fs/cgroup/
cgroup.controllers    dev-hugepages.mount  memory.reclaim
cgroup.max.depth      dev-mqueue.mount     memory.stat
cgroup.max.descendants  init.scope           misc.capacity
cgroup.pressure       io.cost.model         proc-sys-fs-binfmt_misc.mount
cgroup.procs          io.cost.qos          sys-fs-fuse-connections.mount
cgroup.stat           io.pressure          sys-kernel-config.mount
cgroup.subtree_control io.prio.class         sys-kernel-debug.mount
cgroup.threads        io.stat              sys-kernel-tracing.mount
cpu.pressure          lxc.monitor.test123  system.slice
cpuset.cpus.effective lxc.payload.test123  user.slice
cpuset.mems.effective memory.numa_stat
cpu.stat              memory.pressure
root@db-linux:/# cd /sys/fs/cgroup/
root@db-linux:/sys/fs/cgroup# l
cgroup.controllers    dev-hugepages.mount/ memory.reclaim
```

```
cgroup.max.depth      dev-mqueue.mount/   memory.stat
cgroup.max.descendants  init.scope/        misc.capacity
cgroup.pressure       io.cost.model       proc-sys-fs-binfmt_misc.mount/
cgroup.procs          io.cost.qos         sys-fs-fuse-connections.mount/
cgroup.stat           io.pressure         sys-kernel-config.mount/
cgroup.subtree_control io.prio.class       sys-kernel-debug.mount/
cgroup.threads        io.stat            sys-kernel-tracing.mount/
cpu.pressure          lxc.monitor.test123/ system.slice/
cpuset.cpus.effective lxc.payload.test123/ user.slice/
cpuset.mems.effective memory.numa_stat
cpu.stat              memory.pressure
root@db-linux:/sys/fs/cgroup# exit
exit
db@db-linux:~$ sudo su
root@db-linux:/home/db# cd /
root@db-linux:/# cd /var/lib/lxc/test123/
root@db-linux:/var/lib/lxc/test123# l
config rootfs/
root@db-linux:/var/lib/lxc/test123# nano config
root@db-linux:/var/lib/lxc/test123# nano config
root@db-linux:/var/lib/lxc/test123#
```



root@db-linux: /var/lib/lxc/test123



db@db-linux:~\$ sudo su

[sudo] пароль для db:

root@db-linux:/home/db# lxc-attach -n test123

root@test123:/# free -m

	total	used	free	shared	buff/cache	available
Память:	200	28	121	0	50	171

Подкачка: 0 0 0

root@test123:/# exit

exit

root@db-linux:/home/db# cd /

root@db-linux:/# ls /sys/fs/cgroup/

cgroup.controllers	dev-hugepages.mount	memory.reclaim
cgroup.max.depth	dev-mqueue.mount	memory.stat
cgroup.max.descendants	init.scope	misc.capacity
cgroup.pressure	io.cost.model	proc-sys-fs-binfmt_misc.mount
cgroup.procs	io.cost.qos	sys-fs-fuse-connections.mount
cgroup.stat	io.pressure	sys-kernel-config.mount
cgroup.subtree_control	io.prio.class	sys-kernel-debug.mount
cgroup.threads	io.stat	sys-kernel-tracing.mount
cpu.pressure	lxc.monitor.test123	system.slice
cpuset.cpus.effective	lxc.payload.test123	user.slice
cpuset.mems.effective	memory.numa_stat	
cpu.stat	memory.pressure	

root@db-linux:/# cd /sys/fs/cgroup/

root@db-linux:/sys/fs/cgroup# l

cgroup.controllers dev-hugepages.mount memory.reclaim