Настройка сети

Первая машина (шлюз)

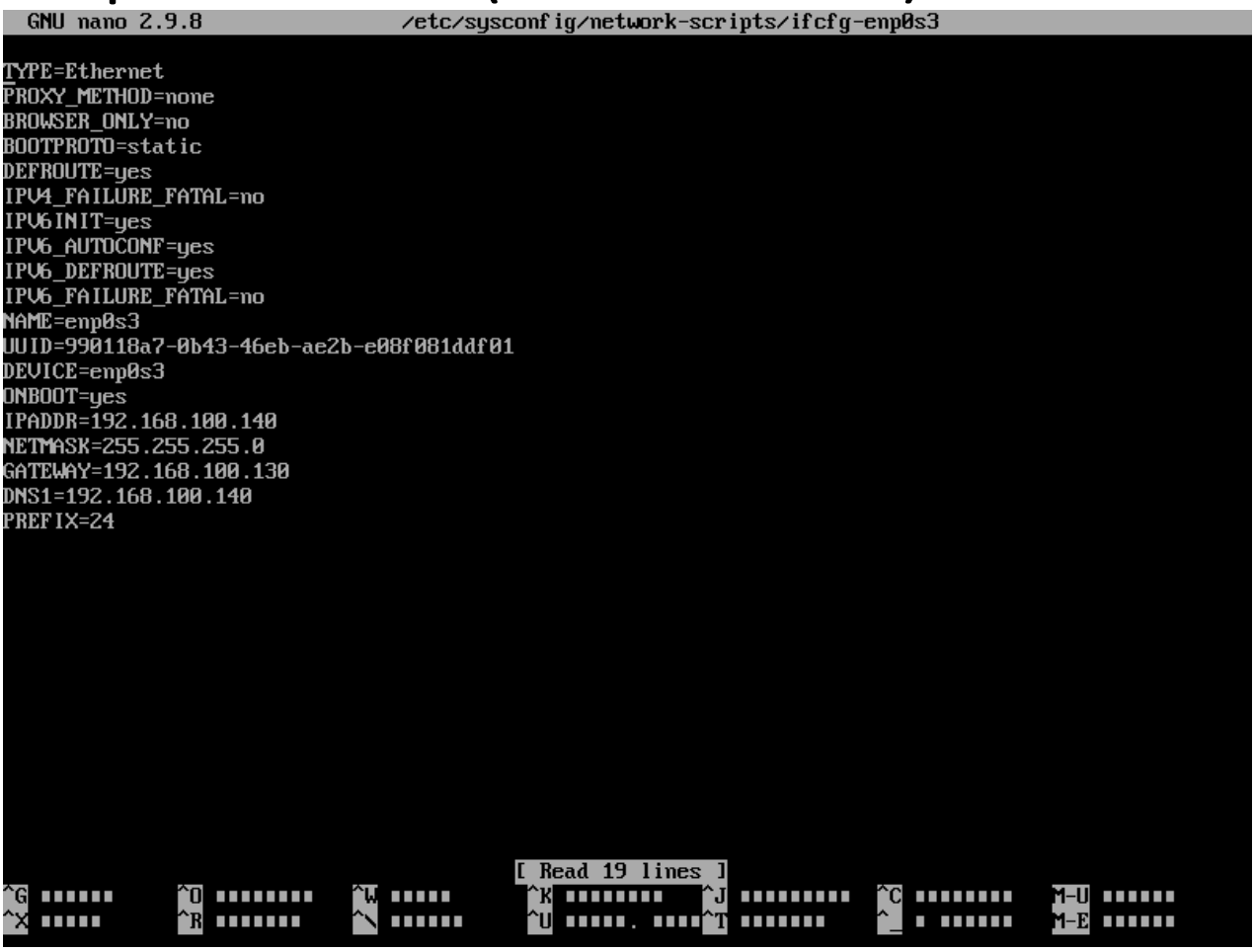
```
  GNU nano 2.9.8                /etc/sysconfig/network-scripts/ifcfg-enp0s3

TYPE=Ethernet
PROXY_METHOD=none
BROWSER_ONLY=no
DEFROUTE=no
IPV4_FAILURE_FATAL=no
IPV6INIT=yes
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_FAILURE_FATAL=no
NAME=enp0s3
UUID=deb59cf5-c658-47f3-9aeb-93468128a7a2
DEVICE=enp0s3
ONBOOT=yes
IPADDR=10.0.2.15
NETMASK=255.255.255.0
DNS1=8.8.8.8
PREFIX=24
BOOTPROTO=static
GATEWAY=10.0.2.2
PREFIX=24

                              [ Read 20 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify   ^C Cur Pos   M-U Undo
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text ^T To Spell  ^_ Go To Line M-E Redo
```

```
  GNU nano 2.9.8                /etc/sysconfig/network-scripts/ifcfg-enp0s8

TYPE=Ethernet
PROXY_METHOD=none
BROWSER_ONLY=no
DEFROUTE=yes
IPV4_FAILURE_FATAL=no
IPV6INIT=yes
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_FAILURE_FATAL=no
NAME=enp0s8
UUID=d0432c4f-2954-4e9b-b6b4-3291ef363cbd
DEVICE=enp0s8
ONBOOT=yes
IPADDR=192.168.100.130
NETMASK=255.255.255.0
GATEWAY=10.0.2.2
DNS1=192.168.100.140
PREFIX=24
BOOTPROTO=static

                              [ Read 19 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify   ^C Cur Pos   M-U Undo
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text ^T To Spell  ^_ Go To Line M-E Redo
```

```
[root@localhost ~]# ping ya.ru
PING ya.ru (87.250.250.242) 56(84) bytes of data.
64 bytes from ya.ru (87.250.250.242): icmp_seq=1 ttl=247 time=83.8 ms
64 bytes from ya.ru (87.250.250.242): icmp_seq=2 ttl=247 time=139 ms
^C
--- ya.ru ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1023ms
rtt min/avg/max/mdev = 83.753/111.177/138.601/27.424 ms
[root@localhost ~]# ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=105 time=201 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=105 time=72.1 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=105 time=49.7 ms
^C
--- 8.8.8.8 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2004ms
rtt min/avg/max/mdev = 49.668/107.507/200.731/66.554 ms
```

```
[root@localhost ~]# 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 100
0
    link/ether 08:00:27:05:02:83 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global noprefixroute enp0s3
       valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fe05:283/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 100
0
    link/ether 08:00:27:93:ed:97 brd ff:ff:ff:ff:ff:ff
    inet 192.168.100.130/24 brd 192.168.100.255 scope global noprefixroute enp0s8
       valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fe93:ed97/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
```

Вторая машина (пользователь)



Пинг в основную машину идёт

```
[root@localhost ~]# ping 192.168.100.130
PING 192.168.100.130 (192.168.100.130) 56(84) bytes of data.
64 bytes from 192.168.100.130: icmp_seq=1 ttl=64 time=0.538 ms
64 bytes from 192.168.100.130: icmp_seq=2 ttl=64 time=0.262 ms
64 bytes from 192.168.100.130: icmp_seq=3 ttl=64 time=0.614 ms
```

Пинга в интернет нет

```
[root@localhost ~]# ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
^C
--- 8.8.8.8 ping statistics ---
8 packets transmitted, 0 received, 100% packet loss, time 7179ms
```

Шлюз

```
[root@localhost ~]# firewall-cmd --get-active-zones
public
  interfaces: enp0s3 enp0s8
```

```
[root@localhost ~]# firewall-cmd --get-active-zones
public
  interfaces: enp0s3 enp0s8
[root@localhost ~]# firewall-cmd --list-all
public (active)
  target: default
  icmp-block-inversion: no
  interfaces: enp0s3 enp0s8
  sources:
  services: cockpit dhcpv6-client ssh
  ports:
  protocols:
  forward: no
  masquerade: no
  forward-ports:
  source-ports:
  icmp-blocks:
  rich rules:
[root@localhost ~]# firewall-cmd --zone=public --add-masquerade
success
[root@localhost ~]# firewall-cmd --runtime-to-permanent
success
```

Пользователь

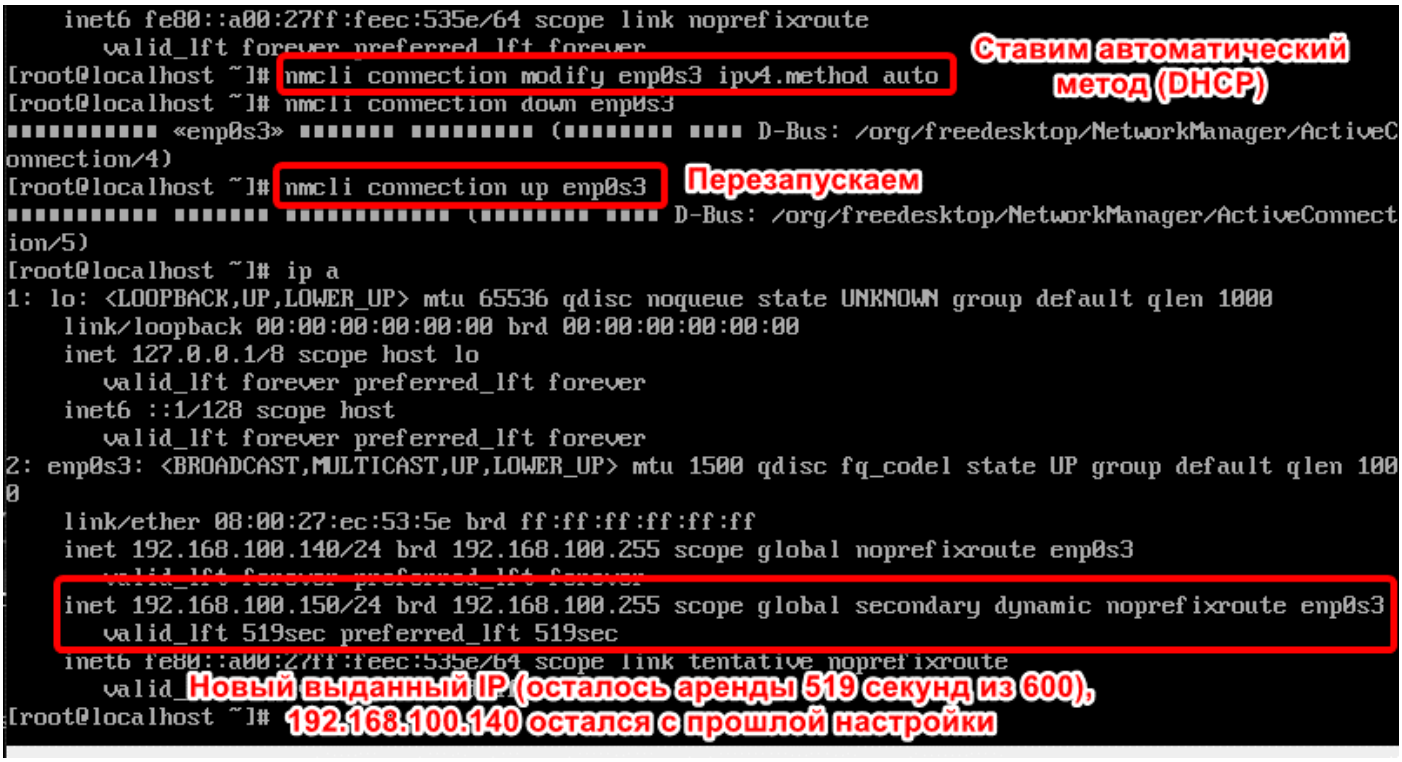
```
[root@localhost ~]# ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=104 time=56.3 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=104 time=110 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=104 time=59.6 ms
^C
--- 8.8.8.8 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2006ms
```

Шлюз

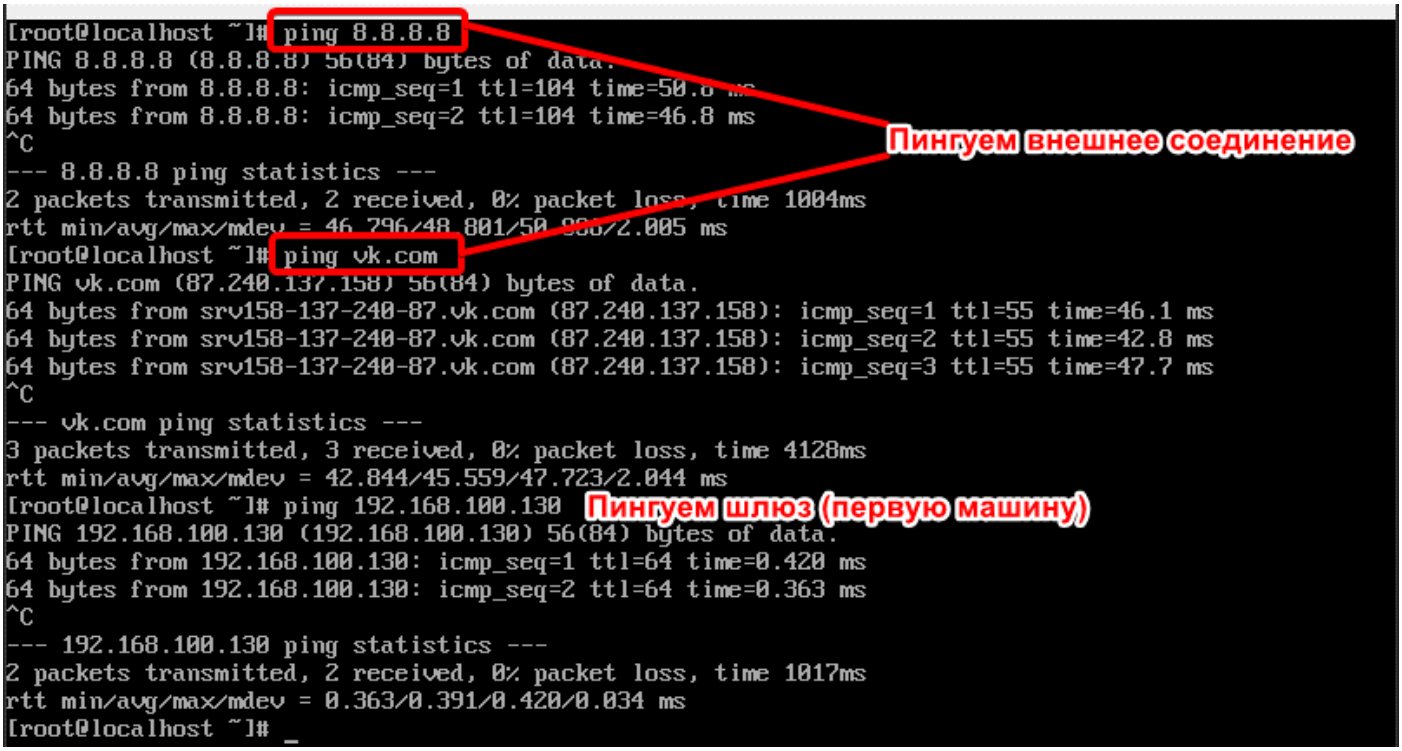
```
  GNU nano 2.9.8                  /etc/dhcp/dhcpd.conf                  Modified

# network, the authoritative directive should be uncommented.
#authoritative;

# Use this to send dhcp log messages to a different log file (you also
# have to hack syslog.conf to complete the redirection).
log-facility local7;

# A slightly different configuration for an internal subnet.
subnet 192.168.100.0 netmask 255.255.255.0 {
  range 192.168.100.150 192.168.100.200;
  option domain-name-servers 192.168.100.100, 8.8.8.8;
  option domain-name "gw.com";
  option routers 192.168.100.130;
  default-lease-time 600;
  max-lease-time 7200;
}

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify   ^C Cur Pos   M-U Undo
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text ^T To Spell  ^_ Go To Line M-E Redo
```

```
[root@localhost ~]# firewall-cmd --permanent --add-service=dhcp
success
[root@localhost ~]# firewall-cmd reload
usage: see firewall-cmd man page
firewall-cmd: error: unrecognized arguments: reload
[root@localhost ~]# firewall-cmd --reload
success
[root@localhost ~]#
```

Пользователь

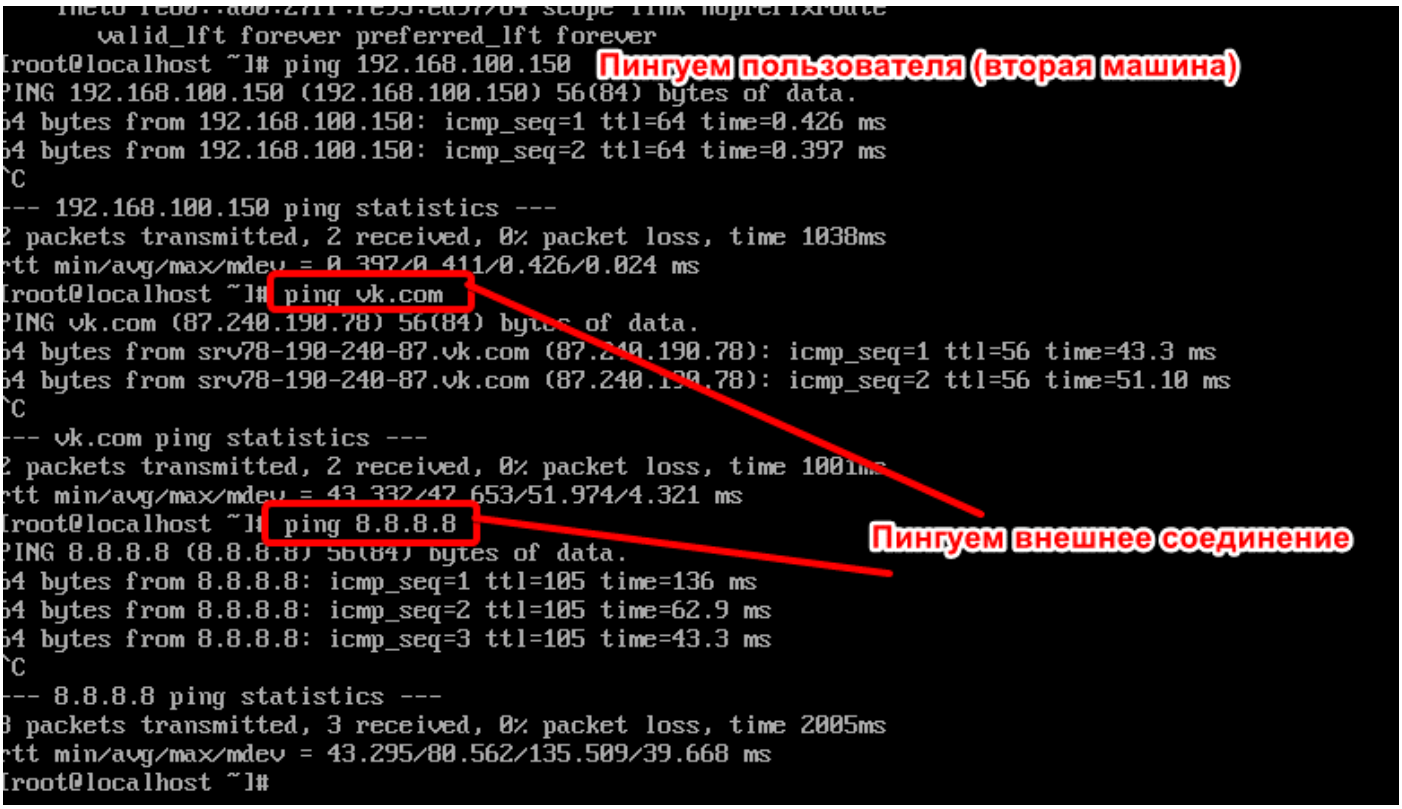



```
    inet6 fe80::a00:27ff:feec:535e/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
[root@localhost ~]# nmcli connection modify enp0s3 ipv4.method auto
[root@localhost ~]# nmcli connection down enp0s3
■■■■■■■■■■■■ «enp0s3» ■■■■■■■ ■■■■■■■■■ (■■■■■■■■ ■■■■ D-Bus: /org/freedesktop/NetworkManager/ActiveC
onnection/4)
[root@localhost ~]# nmcli connection up enp0s3
■■■■■■■■■■■■ ■■■■■■■ ■■■■■■■■■■■■ (■■■■■■■■ ■■■■ D-Bus: /org/freedesktop/NetworkManager/ActiveConnect
ion/5)
[root@localhost ~]# 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 100
0
    link/ether 08:00:27:ec:53:5e brd ff:ff:ff:ff:ff:ff
    inet 192.168.100.140/24 brd 192.168.100.255 scope global noprefixroute enp0s3
       valid_lft forever preferred_lft forever
    inet 192.168.100.150/24 brd 192.168.100.255 scope global secondary dynamic noprefixroute enp0s3
       valid_lft 519sec preferred_lft 519sec
    inet6 fe80::a00:27ff:feec:535e/64 scope link tentative noprefixroute
       valid_lft forever preferred_lft forever
[root@localhost ~]#
```




```
[root@localhost ~]# ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=104 time=50.8 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=104 time=46.8 ms
^C
--- 8.8.8.8 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1004ms
rtt min/avg/max/mdev = 46.796/48.801/50.806/2.005 ms
[root@localhost ~]# ping vk.com
PING vk.com (87.240.137.158) 56(84) bytes of data.
64 bytes from srv158-137-240-87.vk.com (87.240.137.158): icmp_seq=1 ttl=55 time=46.1 ms
64 bytes from srv158-137-240-87.vk.com (87.240.137.158): icmp_seq=2 ttl=55 time=42.8 ms
64 bytes from srv158-137-240-87.vk.com (87.240.137.158): icmp_seq=3 ttl=55 time=47.7 ms
^C
--- vk.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 4128ms
rtt min/avg/max/mdev = 42.844/45.559/47.723/2.044 ms
[root@localhost ~]# ping 192.168.100.130
PING 192.168.100.130 (192.168.100.130) 56(84) bytes of data.
64 bytes from 192.168.100.130: icmp_seq=1 ttl=64 time=0.420 ms
64 bytes from 192.168.100.130: icmp_seq=2 ttl=64 time=0.363 ms
^C
--- 192.168.100.130 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1017ms
rtt min/avg/max/mdev = 0.363/0.391/0.420/0.034 ms
[root@localhost ~]# _
```

Шлюз


valid_lft forever preferred_lft forever
[root@localhost ~]# ping 192.168.100.150
Пингуем пользователя (вторая машина)
PING 192.168.100.150 (192.168.100.150) 56(84) bytes of data.
64 bytes from 192.168.100.150: icmp_seq=1 ttl=64 time=0.426 ms
64 bytes from 192.168.100.150: icmp_seq=2 ttl=64 time=0.397 ms
^C
--- 192.168.100.150 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1038ms
rtt min/avg/max/mdev = 0.397/0.411/0.426/0.024 ms
[root@localhost ~]# ping vk.com
PING vk.com (87.240.190.78) 56(84) bytes of data.
64 bytes from srv78-190-240-87.vk.com (87.240.190.78): icmp_seq=1 ttl=56 time=43.3 ms
64 bytes from srv78-190-240-87.vk.com (87.240.190.78): icmp_seq=2 ttl=56 time=51.10 ms
^C
--- vk.com ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1001ms
rtt min/avg/max/mdev = 43.332/47.653/51.974/4.321 ms
[root@localhost ~]# ping 8.8.8.8
Пингуем внешнее соединение
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=105 time=136 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=105 time=62.9 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=105 time=43.3 ms
^C
--- 8.8.8.8 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2005ms
rtt min/avg/max/mdev = 43.295/80.562/135.509/39.668 ms
[root@localhost ~]#