

```
Object is unknown, try 'ip help'.
aleksey@aleksey-ubuntu:~$ 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 08:00:27:95:79:0b brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
        valid_lft 83701sec preferred_lft 83701sec
    inet6 fe80::5bd4:fb37:1c50:94d6/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
3: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    link/ether 02:42:70:46:cc:fb 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
aleksey@aleksey-ubuntu:~$ sudo netns add testns123
sudo: netns: команда не найдена
aleksey@aleksey-ubuntu:~$ sudo ip netns add testns123
aleksey@aleksey-ubuntu:~$ sudo ip netns list
testns123
aleksey@aleksey-ubuntu:~$ sudo ip netns add testns123 bash
Cannot create namespace file "/run/netns/testns123": File exists
aleksey@aleksey-ubuntu:~$ sudo ip netns exec testns123 bash
root@aleksey-ubuntu:/home/aleksey# ip a
1: lo: <LOOPBACK> mtu 65536 qdisc noop state DOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
root@aleksey-ubuntu:/home/aleksey# ip a
1: lo: <LOOPBACK> mtu 65536 qdisc noop state DOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
4: veth1@if5: <BROADCAST,MULTICAST> mtu 1500 qdisc noop state DOWN group default qlen 1000
    link/ether 32:7f:46:37:16:65 brd ff:ff:ff:ff:ff:ff link-netnsid 0
root@aleksey-ubuntu:/home/aleksey# ip addr add 10.0.0.2/24 dev veth1
root@aleksey-ubuntu:/home/aleksey# ip link set dev veth1 up
root@aleksey-ubuntu:/home/aleksey# ping 10.0.0.1
PING 10.0.0.1 (10.0.0.1) 56(84) bytes of data.
64 bytes from 10.0.0.1: icmp_seq=1 ttl=64 time=0.040 ms
64 bytes from 10.0.0.1: icmp_seq=2 ttl=64 time=0.081 ms
64 bytes from 10.0.0.1: icmp_seq=3 ttl=64 time=0.087 ms
64 bytes from 10.0.0.1: icmp_seq=4 ttl=64 time=0.068 ms
64 bytes from 10.0.0.1: icmp_seq=5 ttl=64 time=0.228 ms
^C
--- 10.0.0.1 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4089ms
rtt min/avg/max/mdev = 0.040/0.100/0.228/0.065 ms
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aleksey@aleksey-ubuntu:~$ 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 08:00:27:95:79:0b brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
        valid_lft 83511sec preferred_lft 83511sec
    inet6 fe80::5bd4:fb37:1c50:94d6/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
3: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    link/ether 02:42:70:46:cc:fb 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
aleksey@aleksey-ubuntu:~$ sudo ip link add veth0 type veth peer name veth1
[sudo] пароль для aleksey:
aleksey@aleksey-ubuntu:~$ 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 08:00:27:95:79:0b brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
        valid_lft 83296sec preferred_lft 83296sec
    inet6 fe80::5bd4:fb37:1c50:94d6/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
3: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    link/ether 02:42:70:46:cc:fb 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
4: veth1@veth0: <BROADCAST,MULTICAST,M-DOWN> mtu 1500 qdisc noop state DOWN group default qlen 1000
    link/ether 32:7f:46:37:16:65 brd ff:ff:ff:ff:ff:ff
5: veth0@veth1: <BROADCAST,MULTICAST,M-DOWN> mtu 1500 qdisc noop state DOWN group default qlen 1000
    link/ether 8a:de:25:45:e7:40 brd ff:ff:ff:ff:ff:ff
aleksey@aleksey-ubuntu:~$ sudo ip link set veth1 netns testns123
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aleksey@aleksey-ubuntu:~$ 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 08:00:27:95:79:0b brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
        valid_lft 83211sec preferred_lft 83211sec
    inet6 fe80::5bd4:fb37:1c50:94d6/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
3: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    link/ether 02:42:70:46:cc:fb 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
5: veth0@if4: <BROADCAST,MULTICAST> mtu 1500 qdisc noop state DOWN group default qlen 1000
    link/ether 8a:de:25:45:e7:40 brd ff:ff:ff:ff:ff:ff link-netns testns123
aleksey@aleksey-ubuntu:~$ sudo ip addr add 10.0.0.1/24 dev veth0
aleksey@aleksey-ubuntu:~$ sudo ip link set dev veth0 up
aleksey@aleksey-ubuntu:~$ 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 08:00:27:95:79:0b brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
        valid_lft 82888sec preferred_lft 82888sec
    inet6 fe80::5bd4:fb37:1c50:94d6/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
3: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    link/ether 02:42:70:46:cc:fb 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
5: veth0@if4: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
    link/ether 8a:de:25:45:e7:40 brd ff:ff:ff:ff:ff:ff link-netns testns123
    inet 10.0.0.1/24 scope global veth0
        valid_lft forever preferred_lft forever
    inet6 fe80::88de:25ff:fe45:e740/64 scope link
        valid_lft forever preferred_lft forever

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aleksey@aleksey-ubuntu:~$ ping 10.0.0.2
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.
64 bytes from 10.0.0.2: icmp_seq=1 ttl=64 time=0.055 ms
64 bytes from 10.0.0.2: icmp_seq=2 ttl=64 time=0.091 ms
64 bytes from 10.0.0.2: icmp_seq=3 ttl=64 time=0.056 ms
64 bytes from 10.0.0.2: icmp_seq=4 ttl=64 time=0.043 ms
64 bytes from 10.0.0.2: icmp_seq=5 ttl=64 time=0.052 ms
64 bytes from 10.0.0.2: icmp_seq=6 ttl=64 time=0.084 ms
^C
--- 10.0.0.2 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5117ms
rtt min/avg/max/mdev = 0.043/0.063/0.091/0.017 ms
aleksey@aleksey-ubuntu:~$
```