

Table Of Contents

Table Of Contents 1

ifconfig command line 2

Debian / Ubuntu Linux Instructions 2

Red Hat / RHEL / CentOS / Fedora Linux Instructions 2

Red Hat / CentOS / Fedora Multiple IP address range 3

See also: 4

[Home](#) > [Faq](#) > [CentOS](#)

Linux Creating or Adding New Network Alias To a Network Card (NIC)

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Q. I would like to create alias for my network card (NIC). How do I setup 2 IP address on One NIC? How do I add alias under Centos / Fedora / Debian / Ubuntu Linux?

A. Linux allows you to add additional network address using alias feature. Please note that all additional network IP address must be in same subnet. For example if your eth0 using 192.168.1.5 IP address then alias must be setup using 192.168.1.0/24 subnet.

ifconfig command line

You can use ifconfig command to configure a network interface and alias. For example:

- eth0 NIC IP 192.168.1.5
- eth0:0 first NIC alias: 192.168.1.6

To setup eth0:0 alias type the following command as the root user:

```
# ifconfig eth0:0 192.168.1.6 up
```

Verify alias is up and running using following command:

```
# ifconfig -a
```

```
# ping 192.168.1.6
```

However, if you reboot the system you will lost all your alias. To make it permanent you need to add it network configuration file.

Debian / Ubuntu Linux Instructions

You can configure the additional IP addresses automatically at boot with another iface statement in /etc/network/interfaces:

```
# vi /etc/network/interfaces
```

Append text as follows:

```
auto eth0:1
iface eth0:1 inet static
name Ethernet alias LAN card
address 192.168.1.7
netmask 255.255.255.0
broadcast 192.168.1.255
network 192.168.1.0
```

Save and close the file. Restart the network:

```
# /etc/init.d/networking restart
```

Red Hat / RHEL / CentOS / Fedora Linux Instructions

Copy etc/sysconfig/network-scripts/ifcfg-eth0 file as /etc/sysconfig/network-scripts/ifcfg-eth0:0

```
# cp /etc/sysconfig/network-scripts/ifcfg-eth0 /etc/sysconfig/network-scripts/ifcfg-eth0:0
```

Open file /etc/sysconfig/network-scripts/ifcfg-eth0:0 using vi text editor:

```
# vi /etc/sysconfig/network-scripts/ifcfg-eth0:0
```

Find entry that read as follows:

DEVICE=eth0

Replace with:

DEVICE=eth0:0

Find entry that read as follows:

```
IPADDR=xxx.xxx.xxx.xxx
```

Replace it with your actual IP address:

```
IPADDR=192.168.1.7
```

At the end your file should like as follows:

```
DEVICE=eth0:0
IPADDR=192.168.1.7
NETMASK=255.255.255.0
NETWORK=192.168.1.0
ONBOOT=yes
NAME=eth0:0
```

Open file /etc/sysconfig/network-scripts/ifcfg-eth0 and make sure file does not have a GATEWAY= entry:

```
# vi /etc/sysconfig/network-scripts/ifcfg-eth0
```

Find the entry that read as follows:

```
GATEWAY=your-ip
```

Remove or comment it out by prefixing # (hash) :

```
# GATEWAY=192.168.1.254
```

Save the file. Add the GATEWAY= to your /etc/sysconfig/network:

```
# vi /etc/sysconfig/network
```

Append or modify GATEWAY entry:

```
GATEWAY=192.168.1.254
```

Save the file. Reboot the system or run the following command:

```
# ifup eth0:0
```

OR

```
# service network restart
```

Red Hat / CentOS / Fedora Multiple IP address range

You can assign multiple ip address range as follows to eth0:

```
vi /etc/sysconfig/network-scripts/ifcfg-eth0-range0
```

Append following code from 202.54.112.120 to 202.54.112.140:

```
IPADDR_START=202.54.112.120
IPADDR_END=202.54.112.140
CLONENUM_START=0
NETMASK=255.255.255.0
```

Save and close the file.

See also:

- [FreeBSD : How do I setup 2 IP address on One NIC?](#) ^[2]

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URLs in this post:

[1] Image: <http://www.cyberciti.biz/faq/faq/category/networking/>

[2] FreeBSD : How do I setup 2 IP address on One NIC?: <http://www.cyberciti.biz/tips/freebsd-how-to-setup-2-ip-address-on-one-nic.html>