

LINUX Network Concepts

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Second Linux Festival

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IP Configuration

- Display current IP address and setting for network interface called eth0
 - You can see your IP Configuration for eth0 interface card by this Command :
 - # ifconfig eth0
 - You can see your System Network interface cards and their option by this command :
 - # ifconfig

IP Configuration

- **Change IP address**

- You can change ip address using ifconfig command itself. To set IP address 192.168.1.5, enter command:

- # ifconfig eth0 192.168.1.5 netmask 255.255.255.0 **up**
 - # ifconfig eth0

IP Configuration

- if you want to configure DHCP address you need to edit the `/etc/network/interfaces` and you need to enter the following lines replace `eth0` with your network interface card

```
auto eth0
```

```
iface eth0 inet dhcp
```

Set Static IP Address

- auto eth0
 - iface eth0 inet static
 - address 192.168.3.90
 - gateway 192.168.3.1
 - netmask 255.255.255.0
 - network 192.168.3.0
 - broadcast 192.168.3.255

IP Configuration

- After entering all the details you need to restart networking services using the following command
 - `sudo /etc/init.d/networking restart`

Setting up Second IP address or Virtual IP address in Ubuntu

- If you are a server system administrator or normal user some time you need to assign a second ipaddress to your Ubuntu machine. For this you need to edit the `/etc/network/interfaces` file and you need to add the following syntax. Below one is the only example you need to change according to your ip address settings

Setting up Second IP address or Virtual IP address in Ubuntu

```
sudo vi /etc/network/interfaces
```

```
auto eth0:1
```

```
iface eth0:1 inet static
```

```
address 192.168.1.60
```

```
netmask 255.255.255.0
```

```
network x.x.x.x
```

```
broadcast x.x.x.x
```

```
gateway x.x.x.x
```

Follow Links

- <http://www.ubuntugeek.com>
- <http://www.cyberciti.biz/tips/category/ubuntu-linux>
- <http://www.debianadmin.com>

Testing Tools

- PING

- Ping uses the ICMP protocol's mandatory ECHO_REQUEST datagram to elicit an ICMP ECHO_RESPONSE from a host or gateway. ECHO_REQUEST datagrams (“pings”) have an IP and ICMP header

Testing Tools

- PING Options

- **-c count**

Stop after sending (and receiving) count ECHO_RESPONSE packets.

- **-i wait**

Wait seconds between sending each packet.
The default is to wait for one second between each packet.

Testing Tools

- PING Options
 - **p pattern**

For example, “-p ff” will cause the sent packet to be filled with all ones.

Testing Tools

- PING Options

- **q**

- Quiet output.