Network Specific Commands

ifconfig - to get the ip address of the system

```
emertxe@ubuntu:~/NEW$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.15  netmask 255.255.255.0  broadcast 10.0.2.255
        inet6 fe80::a00:27ff:fe80:3172  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:80:31:72  txqueuelen 1000  (Ethernet)
        RX packets 10933  bytes 14710868 (14.7 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 4136  bytes 283524 (283.5 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 206  bytes 18134 (18.1 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 206  bytes 18134 (18.1 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

Figure 1 ifconfig output

From the above figure inet 10.0.2.15 is the ipv4 address of the system and inet6 is the ipv6 address of the system

ip addr - shows ip address assigned to all network interface

```
emertxe@ubuntu:~$ ip addr
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 08:00:27:80:31:72 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic enp0s3
       valid_lft 69389sec preferred_lft 69389sec
    inet6 fe80::a00:27ff:fe80:3172/64 scope link
       valid_lft forever preferred_lft forever
emertxe@ubuntu:~$
```

Figure 2 ip addr output

Ping - to check connectivity

Ping command is used to check connectivity of other system or server

command

ping <ip-address>

ping <domain name>

```
emertxe@ubuntu:~/NEW$ ping www.google.com
PING www.google.com (172.217.166.4) 56(84) bytes of data.
64 bytes from del03s17-in-f4.1e100.net (172.217.166.4): icmp_seq=1 ttl=109 time=77.2 ms
64 bytes from del03s17-in-f4.1e100.net (172.217.166.4): icmp_seq=2 ttl=109 time=74.5 ms
^C
--- www.google.com ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1002ms
rtt min/avg/max/mdev = 74.547/75.898/77.250/1.379 ms
emertxe@ubuntu:~/NEW$
```

ssh - remote login

ssh is a program to login to a remote machine. It provides secured connection between local and remote systems . The minimum requirements for ssh login are that both host and remote should be in the same network or the remote should be reachable from host, and openSSH service should be enabled on both machines.

command

ssh <username>@<ipaddress>

or

ssh <ip address of remote system>

scp -secure copy

The requirements for secure copy are the same as for ssh login . Remote host should be reachable and the the service openSSH should be enabled

To copy file and folders between remote and local machine

To copy from remote host to local host

scp <username>@<ipaddress>:<path of source file> <destination>

Example:

scp user@12.12.12.2:/home/user/file .

To copy file or folder from local to remote host

scp <path of the source file> <username>@<ipaddress>:<destination with respect to home directory>

Example:

scp file user@12.12.12.2:/home/user/.