

## Apply network tool to building Class A and Class B network using router

### Class A:

IP address range: 10.0.0.0 to 10.255.255.255

Subnet mask: 255.0.0.0

1. `sudo nano /etc/sysctl.conf`  
(It will open a file on terminal )
2. (Uncomment or add the following line to enable IP forwarding)  
`net.ipv4.ip_forward = 1`
3. `route -n`  
(see iface )
4. `sudo ifconfig eth0(iface) 10.0.0.1 netmask 255.0.0.0 up`
5. `route -n`

### Class B:

IP address range: 172.16.0.0 to 172.31.255.255

Subnet mask: 255.255.0.0

- `sudo nano /etc/sysctl.conf`  
(It will open a file on terminal )
- (Uncomment or add the following line to enable IP forwarding)  
`net.ipv4.ip_forward = 1`
  - `route -n`  
(see iface )
- `sudo ip addr add 172.16.0.1/16 dev eth0(iface)`
  - `route -n`

## Apply network tool to building Class A network using switch.

- `Route -n`  
(see iface )
- `sudo ip addr add 10.0.0.2/8 dev eth0(iface)`
- `sudo ip route add default via 10.0.0.1 dev eth0(iface)`
- `ping 10.0.0.3`

