

Q7) Describe how you would configure a basic LAN interface using the ip command in Linux (kernel.org)

Configuring a LAN Interface Using the ip Command in Linux

Check available network interfaces:

```
ip link show
```

Assign a static IP address:

```
ip addr add 192.168.1.100/24 dev eth0
```

Bring the interface up:

```
ip link set eth0 up
```

Set the default gateway:

```
ip route add default via 192.168.1.1
```

Verify the configuration:

```
ip addr show eth0  
ip route show  
ping -c 4 8.8.8.8
```

Make changes permanent:

For Debian-based systems, edit /etc/network/interfaces:

```
auto eth0  
iface eth0 inet static  
address 192.168.1.100  
netmask 255.255.255.0  
gateway 192.168.1.1
```

For RHEL-based systems, edit /etc/sysconfig/network-scripts/ifcfg-eth0:

```
BOOTPROTO=static  
IPADDR=192.168.1.100  
NETMASK=255.255.255.0  
GATEWAY=192.168.1.1  
ONBOOT=yes
```

Restart the network service:

```
systemctl restart networking
```