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

**“Configuring My LAN Interface (enp0s3) Using the ip Command in Linux”**

When setting up networking on my Linux VM, I need to configure my LAN interface so that it can communicate within the network. My interface is named enp0s3, and I will manually assign an IP address, enable the interface, and configure a default gateway to ensure proper connectivity.

**Steps to Configure enp0s3**

1. **Checking Available Network Interfaces**  
   First, I check the available network interfaces on my system by running:

ip link show

This lists all network interfaces, and I make sure enp0s3 appears in the output.

1. **Enabling the Interface**  
   If enp0s3 is down, I bring it up with:

ip link set enp0s3 up

This activates the interface so it can send and receive packets.

1. **Assigning a Static IP Address**  
   Next, I assign an IP address to the interface. In my case, I set it to 192.168.1.50 with a subnet mask of 255.255.255.0:

ip addr add 192.168.1.50/24 dev enp0s3

Here, 192.168.1.50 is my chosen IP, and /24 represents the subnet mask, which means all devices within 192.168.1.x are on the same network.

1. **Setting Up the Default Gateway**  
   To allow communication beyond my local network, I configure the default gateway (assuming it is 192.168.1.1):

ip route add default via 192.168.1.1

This tells my system to send any traffic for unknown destinations through 192.168.1.1.

1. **Verifying the Configuration**  
   To check if everything is set correctly, I run:

ip addr show enp0s3

ip route show

The first command displays the assigned IP, and the second shows my routing table, including the default gateway.

By following these steps, I can successfully configure my LAN interface and ensure my Linux VM connects properly to the network.