

## Lab 4: Implementing DHCP on a Router

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Aim: Configure a router to provide DHCP services to a network.

Objectives:

1. Set up a DHCP server on a router.
2. Configure network devices to obtain IP addresses automatically.
3. Verify the DHCP configuration.

Steps:

1. Open Cisco Packet Tracer:

- Create a new project.

2. Add Devices:

- Add a Router: Drag a router (e.g., 2911).

- Add PCs: Drag multiple PCs and connect them to the router via a switch.

3. Configure DHCP on the Router:

Access the router CLI and configure DHCP:

bash

Copy code

```
Router> enable
```

```
Router# configure terminal
```

```
Router(config)# ip dhcp pool LAN_POOL
```

```
Router(config-dhcp)# network 192.168.1.0 255.255.255.0
```

```
Router(config-dhcp)# default-router 192.168.1.1
```

```
Router(config-dhcp)# exit
```

4. Configure PCs to Obtain IP Addresses Automatically:
  - On each PC, go to the Desktop tab, open IP Configuration, and select “DHCP.”
5. Verify DHCP Configuration:
  - On each PC, use the Command Prompt to check the assigned IP address with the `ipconfig` command.