

Configure DHCP and DNS server in Packet Tracer

1. Configuring **DHCP** server on a Router

- On the router, configure *interface gig0/0* to act as the default gateway for our LAN.

```
Router>enable
Router#config terminal
Router(config)#int gig0/0
Router(config-if)#ip add 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
```

- Configure DHCP server on the Router. In the server we will define a **DHCP pool** of IP addresses to be assigned to hosts, a **Default gateway** for the LAN and a **DNS Server**.

```
Router(config)#
Router(config)#ip dhcp pool MY_POOL
Router(dhcp-config)#network 192.168.1.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.1.1
Router(dhcp-config)#dns-server 192.168.1.10
```

- We can add **ip dhcp excluded-address** command to our configuration so as to configure the router to exclude addresses **192.168.1.1** through **192.168.1.10** when assigning addresses to clients. The **ip dhcp excluded-address** command may be used to reserve addresses that are statically assigned to key hosts. So, add the above command under the **global configuration mode**.

```
Router(config)#ip dhcp excluded-address 192.168.1.1 192.168.1.10
```

- Now go to every PC and enable **DHCP** on their **IP configuration** tabs. Every PC should be able to obtain an IP address, default gateway and DNS server.

Click **PC1->Desktop->IP configuration**. Then enable DHCP.

2. Configuring **DHCP** service on a generic server in Packet Tracer

- Click on the server, then click on the **Services tab**. You will pick **DHCP** on the menu. Then proceed to define the DHCP network parameters as follows:

Pool name: MY_POOL

Default Gateway: 192.168.1.1

DNS Server: 192.168.1.2

Start IP Address: 192.168.1.0

Subnet Mask: 255.255.255.0

Maximum Number of users: 256

- Click on **Add** then **Save**. The DHCP entry is included in the list.
- Once you've configured everything, turn **ON** the DHCP service.
- Finally, enable DHCP configuration on each PC. The three PCs should get automatically configured.

Configure **DNS** service on the generic server

- Click on the server, then Click on the **Services** tab. Click on **DNS server** from the menu. First, turn **ON** the DNS service, then define the **names** of the hosts and their corresponding **IP addresses**. For example, to specify the DNS entry on the Server PC (IP 192.168.1.3), in the **name** and **address** fields, type:

Name: www.csekuet.com

Address: 192.168.1.3

- Click on **add** then **save**.
- Test **domain name** – IP resolution. Ping the hosts from one another using their names instead of their IP addresses. If the DNS service is turned on and all IP configurations are okay, then ping should work.