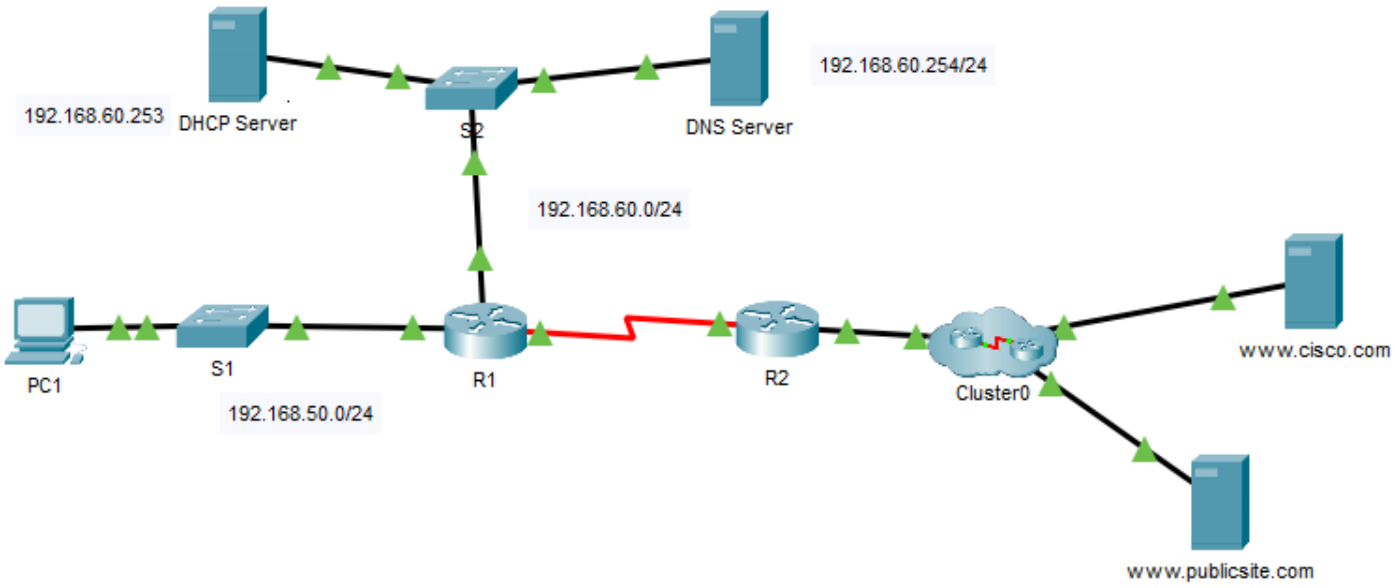
Packet Tracer - Configuring DHCP Using DHCP Server

Topology



Addressing Table

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
R1	G0/0	192.168.50.1	255.255.255.0	N/A
	S0/0/0	10.3.3.1	255.255.255.252	N/A
R2	G0/0	192.168.20.1	255.255.255.0	N/A
	G0/1	DHCP Assigned	DHCP Assigned	N/A
	S0/0/0	10.3.3.2	255.255.255.252	N/A
PC1	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
DNS Server	NIC	192.168.60.254	255.255.255.0	192.168.60.1
DHCP Server	NIC	192.168.60.253	255.255.255.0	192.168.60.1

Objectives

Part 1: Configure a Router as a DHCP Server

Part 2: Configure DHCP Relay

Part 3: Verify DHCP and Connectivity

Scenario

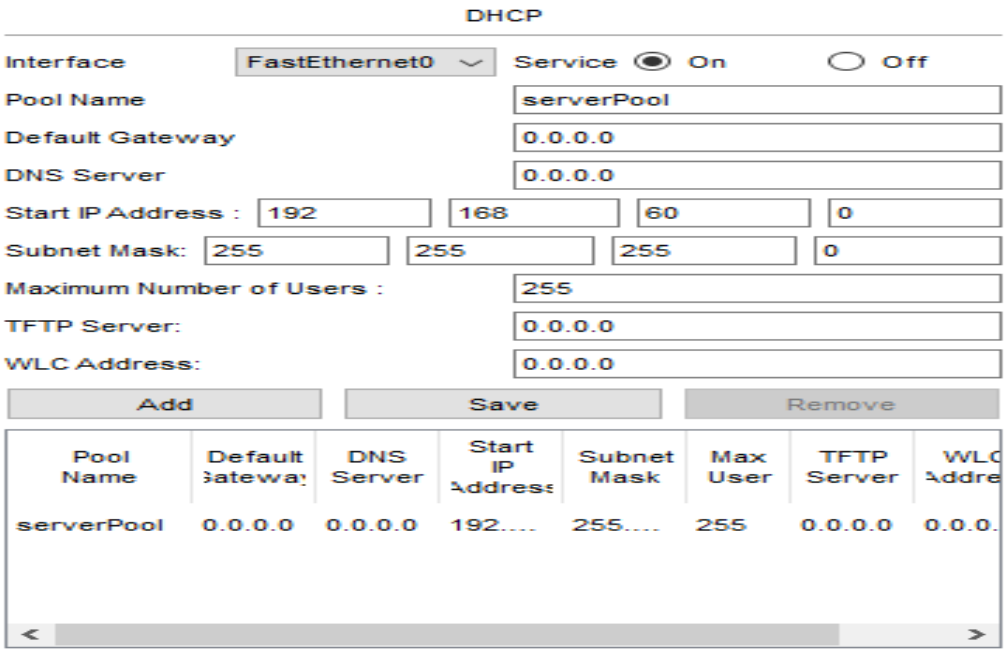
A dedicated DHCP server is scalable and relatively easy to manage. It can be configured to provide DHCP services without the need for a dedicated server. As the network technician for your company, you are tasked with configuring a DHCP server to provide dynamic allocation of addresses to clients on the network. You are also required to configure the edge router as a DHCP client so that it receives an IP address from the ISP network.

Part 1: Configure the DHCP Server

Step 1: Exploring the DHCP Server

At first click the DHCP server and then an interface would pop up. Then select the services tab. Here you will find many services but you need to select the second option (DHCP). You will see that the service is off, you need to switch it on.

Step 2: Create a DHCP pool for R1 LAN



You will find a GUI similar to the figure shown. In the class task you were shown to write commands in router to configure the DHCP pool, however you can configure the DHCP very easily using the GUI provided.

1) Set the pool name as “R1_LAN”
2) Set the default gateway for R1 Lan (find the address from the table given above).
3) Set the IP address of the DNS Server (find the address from the table given above).

Step 3: Exclude addresses for R1 LAN

Configure **DHCP Server** to exclude the first 10 addresses from the R1. All other addresses should be available in the DHCP address pool.

To do this you need to set the Start IP Address accordingly. For example, to exclude the first 10 addresses of the network 192.168.10.0, the starting address will be 192.168.10.11.

Part 2: Configure DHCP Relay

Step 1: Configure R1 as a DHCP relay agent.

The helper address is the IP address of the DHCP server.

Step 2: Set PC1 to receive IP addressing information from DHCP.

Open PC1. Go to Ip Configuration and change static to DHCP.

Warning: You may receive DHCP APIPA error the first time. Change it to static and then try changing to DHCP. It should be Successful.

Part 3: Verify DHCP and Connectivity

Step 1: Verify configurations.

Verify that **you can browse cisco.com and publicsite.com from PC1 browser.**