

Packet Tracer - Implement DHCPv4

Name: Danica Marie Dumalagan

Date: March 24, 2023

Addressing Table

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
R1	G0/0	192.168.10.1	255.255.255.0	N/A
	S0/0/0	10.1.1.1	255.255.255.252	
R2	G0/0	192.168.20.1	255.255.255.0	N/A
	G0/1	DHCP Assigned	DHCP Assigned	
	S0/0/0	10.1.1.2	255.255.255.252	
	S0/0/1	10.2.2.2	255.255.255.252	
R3	G0/0	192.168.30.1	255.255.255.0	N/A
	S0/0/1	10.2.2.1	255.255.255.0	
PC1	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC2	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
DNS Server	NIC	192.168.20.254	255.255.255.0	192.168.20.1

Objectives

Part 1: Configure a Router as a DHCP Server

Part 2: Configure DHCP Relay

Part 3: Configure a Router as a DHCP Client

Scenario

As the network technician for your company, you are tasked with configuring a Cisco router as 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. Since the server is centralized, you will need to configure the two LAN routers to relay DHCP traffic between the LANs and the router that is serving as the DHCP server.

Instructions

Part 1: Configure a Router as a DHCP Server

Step 1: Configure the excluded IPv4 addresses.

Configure **R2** to exclude the first 10 addresses from the R1 and R3 LANs. All other addresses should be available in the DHCP address pool.

Step 2: Create a DHCP pool on R2 for the R1 LAN.

- a. Create a DHCP pool named **R1-LAN**. The pool name must match this value in order for you to get credit for your configuration.
- b. Configure the DHCP pool to include the network address, the default gateway, and the IP address of the DNS server.

Step 3: Create a DHCP pool on R2 for the R3 LAN.

- a. Create a DHCP pool named **R3-LAN** (case-sensitive).
- b. Configure the DHCP pool to include the network address, the default gateway, and the IP address of the DNS server.

Part 2: Configure DHCP Relay

Step 1: Configure R1 and R3 as a DHCP relay agent.

Step 2: Set PC1 and PC2 to receive IP addressing information from DHCP.

Part 3: Configure R2 as a DHCP Client

Step 1: Configure the Gigabit Ethernet 0/1 interface on R2 to receive IP addressing from DHCP.

Step 2: Activate the interface.

Part 4: Post your screenshots

On the PT Activity window, make sure that the completion grade is **100%**. Click on the **Check Results** button and select the **Assessment Items** tab. Take a screen shot of the whole window, showing the table of assessment items, and the score/item count. Own your photo by placing a watermark on your photo with your name and USC ID Number. Paste your screenshot below:

Packet Tracer - Implement DHCPv4

Cisco Packet Tracer - C:\Users\ADMIN\Desktop\temp\CpE 3212\7.4.1 Packet Tracer - Implement DHCPv4.pka

File Edit Options View Tools Extensions Window Help

Activity Results Time Elapsed: 00:16:32

Congratulations Danica Marie Dumalagan! You completed the activity.

Overall Feedback Assessment Items Connectivity Tests

Expand/Collapse All Show Incorrect Items

Assessment Items	Status	Points	Component(s)	Feed
Network		0	Other	
PC1		0	Other	
Ports		0	Other	
FastEthernet0		0	Other	
✓ DHCP client enable	Correct	1	Ip	
PC2		0	Other	
Ports		0	Other	
FastEthernet0		0	Other	
✓ DHCP client enable	Correct	1	Ip	
R1		0	Other	
Ports		0	Other	
GigabitEthernet0/0		0	Other	
Helper Addresses		0	Routing	
✓ Helper Address	Correct	5	DHCPv4 Relay C...	
R2				
DHCP Server				
Excluded Addresses				
✓ 192.168.10.1 192.168.10.10	Correct	1	Ip	
✓ 192.168.30.1 192.168.30.10	Correct	1	Ip	
Pools				
Pool R1-LAN				
✓ Default Gateway	Correct	1	Ip	
✓ DNS server IP	Correct	1	Ip	
✓ Name	Correct	1	Ip	
✓ Start IP address	Correct	1	Ip	
✓ Subnet mask	Correct	1	Ip	
Pool R3-LAN				
✓ Default Gateway	Correct	1	Ip	
✓ DNS server IP	Correct	1	Ip	

Score : 34/34

Item Count : 17/17

Component	Items/Total	Score
DHCPv4 Client Configuration	1/1	10/10
DHCPv4 Relay Configuration	2/2	10/10
Ip	14/14	14/14

Danica Marie A. Dumalagan
18103276

Close