Expt.No.
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Practical NO: 05

Aim: configuring the DHCP Serv

Software required: Cisco packet tracer

Theory: Dynamic Host configuration protocol ~~used to automate~~ (DHCP) is a network management protocol used to automate the process of configuring devices on IP networks thus allowing them to use network services on IP network them to use network services such as DNR. NTP and only communication protocol based on UDP or tcp.

Step for configuring the DHCP server:

(i) Build the network topology in packet tracer

(ii) configure static IP address on the server (180.158.1.1)

(iii) Now configure DHCP service on the generic server.

To do this, click on the server then on Service tab. Now pick DHCP on

1] DHCP discovery message :- this is the first message generated in the communication process between server and client, this message is generated by client, this message is generated by client host in order to discover if there is any DHCP server are present in network or not. this message is broadcasted to all device present in a network to find the DHCP server.

2] DHCP offer message :-
the server will respond to host in this message specifying the unclosed IP addresses and other TCP configuration information. this message is broadcasted by servers. size of message is 342 bytes. if there are more than one DHCP server present in the network then client host will accept the DHCP offer message.

3] DHCP request message :- when a client receives a offer message it responds by broadcasting a DHCP request message

the menu then proceed to define

The DHCP network parameters as follows:

- Pool Name :- MY LAN
- Default Gateway :- 180.158.1.1
- DNS Server : 180.158.1.1
- Start IP addresses : 180.158.0.0
- Subset mask :- 285.285.0.0
- maximum number of users : 256

Click on add and save. the DHCP entry is included in the list

once you have configured everything turn on the DHCP service

(iv) Now, we can send msg message from one end device to another.

In DHCP, the client and the server exchange mainly 4 DHCP message in order to make connection., also called DORA process, but there are 8 DHCP message in the process.

The client will produce a gratitous ARP in order to find if there is any other host present in the network with same IP address.

4] DHCP Acknowledgement message : In response to the request message received the server will make an entry with specified client Id and bind the IP address offered with least time. Now the client will have the IP address provided by user.

conclusion : thus, we have studied how the DHCP server works and pt's configuration.

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