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## Assignment-10

Title - DHCP

Problem statement -

Installing and configuring DHCP server and write a programme to install the software on remote machine.

Prerequisite -

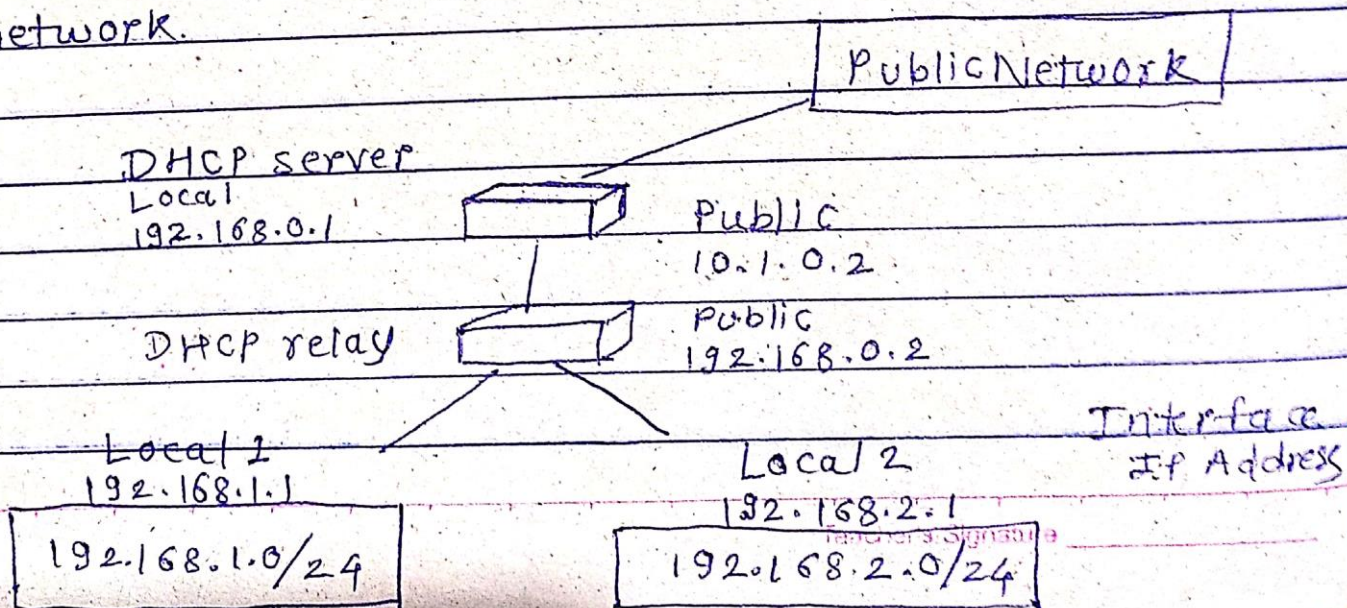
Application layer - Protocols, Roles  
DHCP

Learning Objectives

Students will be able to  
understand and configure DHCP servers

Theory -

Dynamic Host configuration protocol (DHCP) is defined as network protocol that initiates or enables a server to automatically allocate an IP address to a respective computer from a specified defined range of numbers (scope) which is configured for a required network.





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DHCP available for IPv4 and IPv6

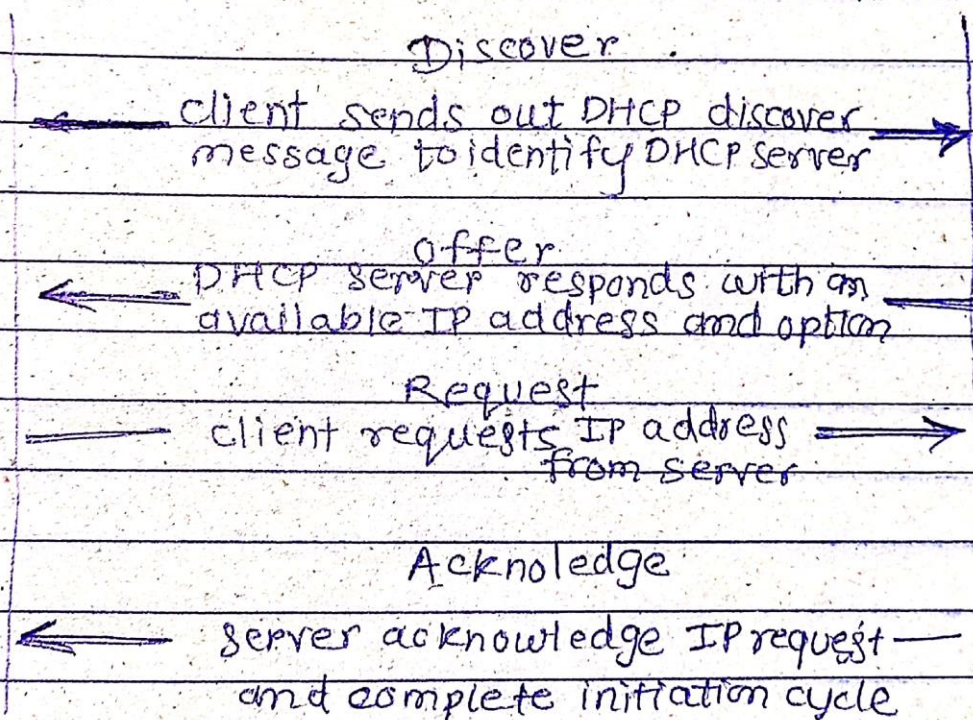
Need of DHCP -

- Avoid manual entry of IP address and configuration information for all computers/ Network devices individually
- Provide a central mechanism to keep track of all assigned IP address in a network.
- To reclaim unused IP address and reassign.
- To make central configuration / topology changes in the network easier
- To dynamically allocate IP addresses to portable clients that keeps moving from place to place in the network.

DHCP handshake -

DHCP client


DHCP server



Conclusion - Successfully installed and configured DHCP server and also created a programme to install software on a remote machine.


Teacher's Signature \_\_\_\_\_




 python

 +   ...


```
PSpython -u "c:\Users\HP\Rupesh\PICT\TE SEM 1\CNS Lab\Assignment 10\31124_Rupesh_CN
SL_Assignment_10_server.py"
Binding the port: 9999
Listening...
turtle> connection: <socket.socket fd=368, family=Address
Family.AF_INET, type=SocketKind.SOCK_STREAM, proto=0, laddr=('192.168.43.233', 9999), raddr=('192.168.43.233', 61766)>
address: ('192.168.43.233', 61766)
connection: <socket.socket fd=384, family=AddressFamily.AF_INET, type=SocketKind.SOCK_STREAM, proto=0, laddr=('192.168.43.233', 9999), raddr=('192.168.43.233', 60630)>
address: ('192.168.43.233', 60630)

turtle> list
<socket.socket fd=368, family=AddressFamily.AF_INET, type=SocketKind.SOCK_STREAM, proto=0, laddr=('192.168.43.233', 9999), raddr=('192.168.43.233', 61766)> ('192.168.43.233', 61766)
<socket.socket fd=384, family=AddressFamily.AF_INET, type=SocketKind.SOCK_STREAM, proto=0, laddr=('192.168.43.233', 9999), raddr=('192.168.43.233', 60630)> ('192.168.43.233', 60630)
<socket.socket fd=384, family=AddressFamily.AF_INET, type=SocketKind.SOCK_STREAM, proto=0, laddr=('192.168.43.233', 9999), raddr=('192.168.43.233', 60630)> ('192.168.43.233', 60630)
available?
yes
downloading a file on that client...
turtle> 
```


 python

 ...

Try the new cross-platform PowerShell <https://aka.ms/pscore6>

```
PS C:\Users\HP\Rupesh\PICT\TE SEM 1\CNS Lab\Assignment 10> python -u "
c:\Users\HP\Rupesh\PICT\TE SEM 1\CNS Lab\Assignment 10\31124_Rupesh_CN
SL_Assignment_10_client.py"

```

 powershell

 ...

Windows PowerShell

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Try the new cross-platform PowerShell <https://aka.ms/pscore6>

```
PS C:\Users\HP\Rupesh\PICT\TE SEM 1\CNS Lab\Assignment 10> python -u "
c:\Users\HP\Rupesh\PICT\TE SEM 1\CNS Lab\Assignment 10\31124_Rupesh_CN
SL_Assignment_10_client.py"
performed...
```

```
PS C:\Users\HP\Rupesh\PICT\TE SEM 1\CNS Lab\Assignment 10> 
```



Feed



RupeshRavin...



Elite T



Jennifer Lopez -....mp3



Canceled