Assignment 4.

Title : DHCP server and a program to install software on remote machine.

Problem Statement : Install and configure DHCP server and write a program to install the software on a remote machine.

Software / Hardware Requirements :
Fedora 20 with Pentium processor more than 1 GB RAM, 120 GB HDD., Monitor Keyboard, Mouse, Modelio, Eclipse.

Theory :
DHCP stands for Dynamic Host Configuration Protocol is a standardized network protocol used on Internet protocols networks for dynamically distributing network configuration parameters such as IP address for interfaces and services

DHCP server can be any server that is used to distribute IP address automatically to all servers a system or network administrator

The introduction of DHCP alleviated the problems associated with manual assigning TCP/IP client address.
Network administrator have quickly the importance of DHCP.

2020/09/14 14.45

Advantages of DHCP:

- DHCP has several major advantages over manual configuration.
- Each computer gets its configuration from a pool of available numbers automatically for a specific time period.
- When a computer has finished with the address it is released for another computer to use.
- Major network resources changes requires only the DHCP server be updated with the new information.
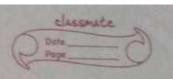
Installing DHCP in Ubuntu O.S :

Open terminal and type the following command-

1) sudo apt-get install isc-dhcp-server.

2) sudo gedit/etc/dhcp/dhcp.comf then make changes in file

```
default-lease-time 600;
max-lease-time 7200;
option subnet-mask 255.255.255.0
option broadcast-address 10.1.32.255;
subnet 192.168.1.0 - ndmask 255.255.255.0
range 101.32.10  10.1.32.20
```

3) save file and close

4) Again on terminal give following commands-

```
sudo service isc-dhcp-server restart
sudo service isc-dhcp-server start
```

5) On another PC in internet properties change to Obtain IP address automatically and then check the IP address

The <u>most common settings provided by a DHCP server to DHCP clients</u> include:-

1) IP address and netmask
2) IP address of the default-gateway to use
3) IP address of the DNS servers to use
4) However, a DHCP server can also apply configuration properties such as-
   1) Host Name
   2) Domain Name
   3) Time server
   4) Print server

<u>DHCP server can provide configuration settings using the following code-</u>

1) Manual Allocation Address (MAC address)
2) Dynamic allocation
3) Automatic allocation

In dynamic allocation, the DHCP server will assign an IP address from a pool of addresses (sometimes also a range or scope) for a period of time or lease, that is configured on the server on until the client informs the server that it doesn't need the address anymore.

2020/09/14 14:46

Conclusion :

Hence installed and configured DHCP and studied installation of the software on a remote machine.

2020/09/14 14:46