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Class:- SY CSP

Title:- DHCP, DHS & Web Server configuration.

Aim :- Configuration network using Dynamic Host Configuration Protocol, DNS, Web Server use Ping utility to test connectivity.

Objective:-
1) To learn the DHCP installation and understand the practical use of DHCP, DNS & Web server.
2) To learn the mechanism to access the remote machine by using ping utility to test connectivity.

- Theory:-

i) Dynamic Host Configuration Protocol (DHCP):-
DHCP is a client/server protocol that automatically provides an internet Protocol host with its IP address & other related configuration information such as the subnet mask & default gateway.

ii) The need of DHCP:-
DHCP reduces the chances of common errors occuring when IP addresses are assigned manually. It also ensures no two hosts can have same IP addresses. DHCP plays an important role in managing small networks where mobile devices are used & require IP addresses on a

non - permanent basis.

iii) DHCP Message Format:-
It is based on BOOTP message format although DHCP uses some of the fields in significantly different ways. The numbers in parenthesis indicates the size of each field in bytes.

iv) DHCP Operations:-
It falls into four phases:- server discovery, IP lease offer, IP lease request, & IP lease acknowledgement. These stages are often abbreviated as DORA for discovery, offer, request & acknowledgement.

v) DNS and Email Server:- An email address is matched to a domain name and this needs to be matched to an IP address to be able to send the data. So the mail server uses DNS to match the address on the 'envelope' to its destination & deliver the email.

Students Observation:-
Thus, we have configured network using DHCP, DNS and Web server.
Use Ping utility to test connectivity

* FAQs

Q.1] What are different ways to check IP address of a machine?

→ First, click on your start Menu & type cmd in search box & press enter.
A blank & white window will open where you will type ipconfig /all & press enter.
There is a space between the command ipconfig & the switch of /all - Your ip addresses will be the IPV4 address.

Q.2] What are different ways to assign IP addressed?

→ Either a static or dynamic IP address is assigned to a device when it connects to internet. This goes some way when we host dedicated server.

Q.3] What do you mean by private & public IP address? Specify the ranges?

→ A public IP address identifies you to the wider internet so that all the information you are searching for can find you.
A private IP address is used when a private network to connect securely to other device within that same network.
Public = 1 to 191
Private:- Class :- A=10.0.0.0 to 10.255.255.255

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Q.4] Difference between DHCP & DNS.

→ DNS is an internet service that translates domain names into IP addresses.

DHCP is a protocol for automatically assigning IP addresses & other configuration to devices when they connect to a network.