Week#6 – Starting from Feb 08 – 2016

1.Learning objectives:

a.To know how DNS works.

b. To learn how to add a Web server to a network.

c. To understand, what happens in the back end, when we browse.

Lab is divided in to 2 parts :

i)   Study how to configure DNS & WEB based network, referring already configured network.

ii)   Set up a different network as per the requirements given.

Part1.Study the reference DNS network.

1.1. Test the DNS & WEB
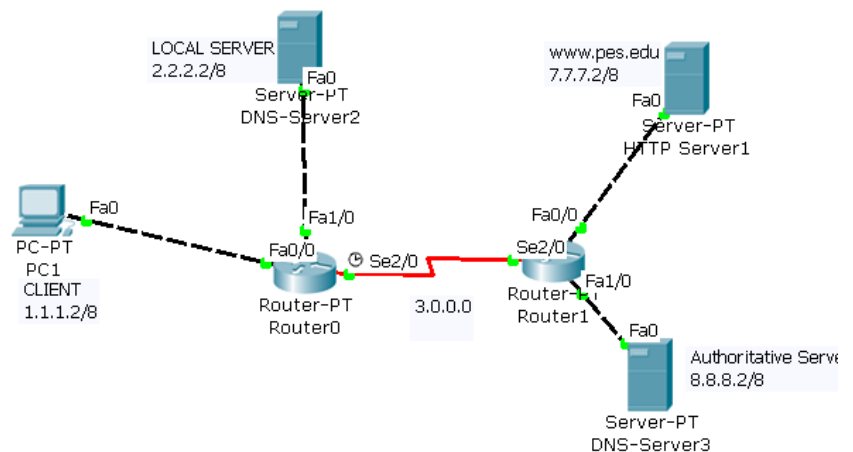## 1.1.2.- Browse as a normal user.
1.Download the file

DNS-Reference-Network.pkt

from the Lab server. (Note that the network is fully configured)
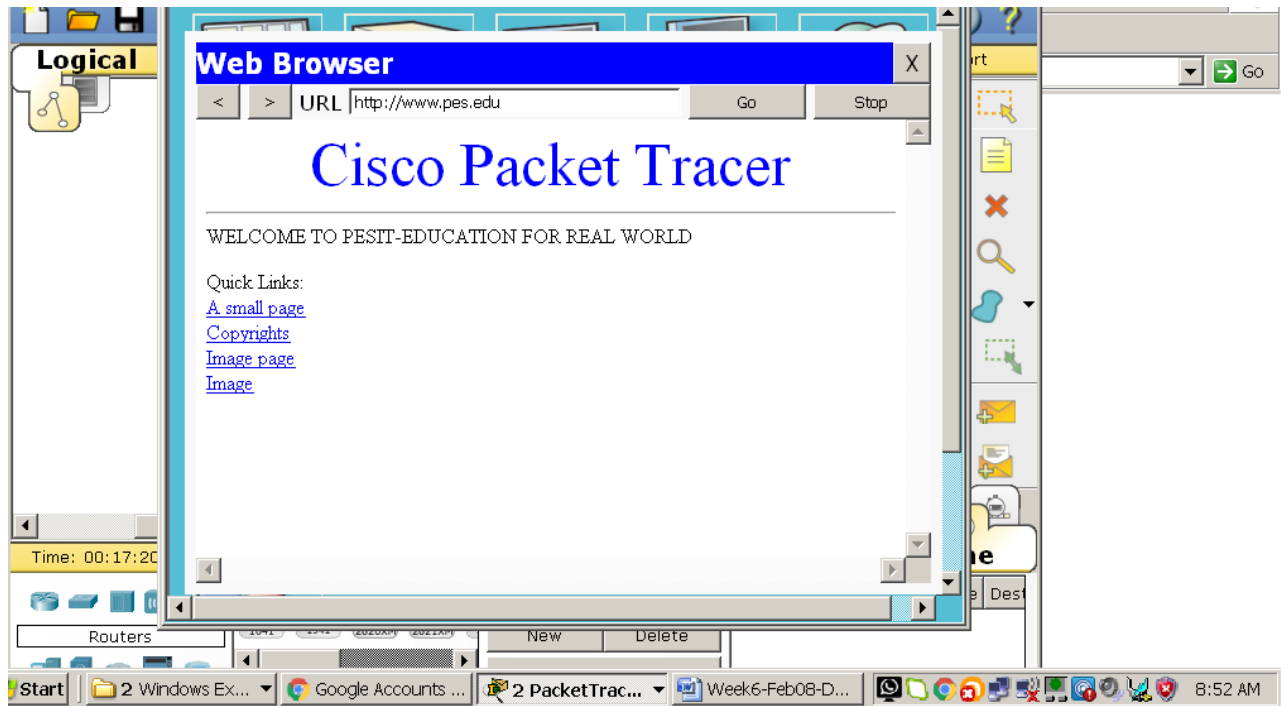
Note that one Web server, One local DNS and one intermediate-Authoritative server are included.
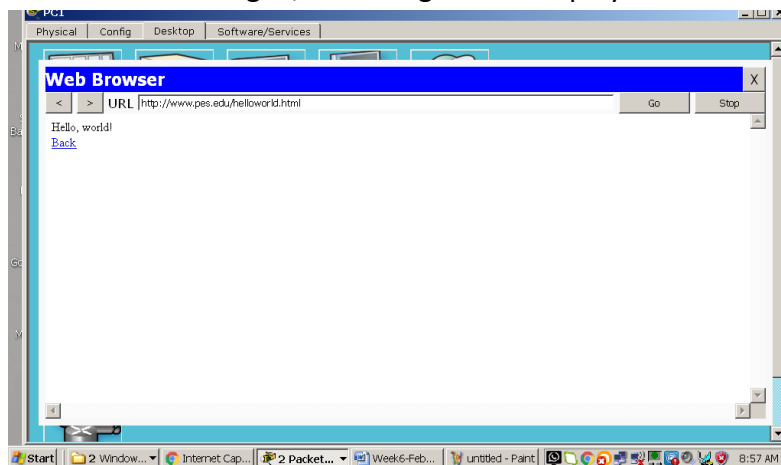
Topology is as follows :

- **in REAL TIME MODE**
    2. Check the successful communication by Pinging among all the end hosts.
    3. Click PC1-Client.
    4. Click Desktop
    5. Click the icon http:// Web Browser and get the browser window.
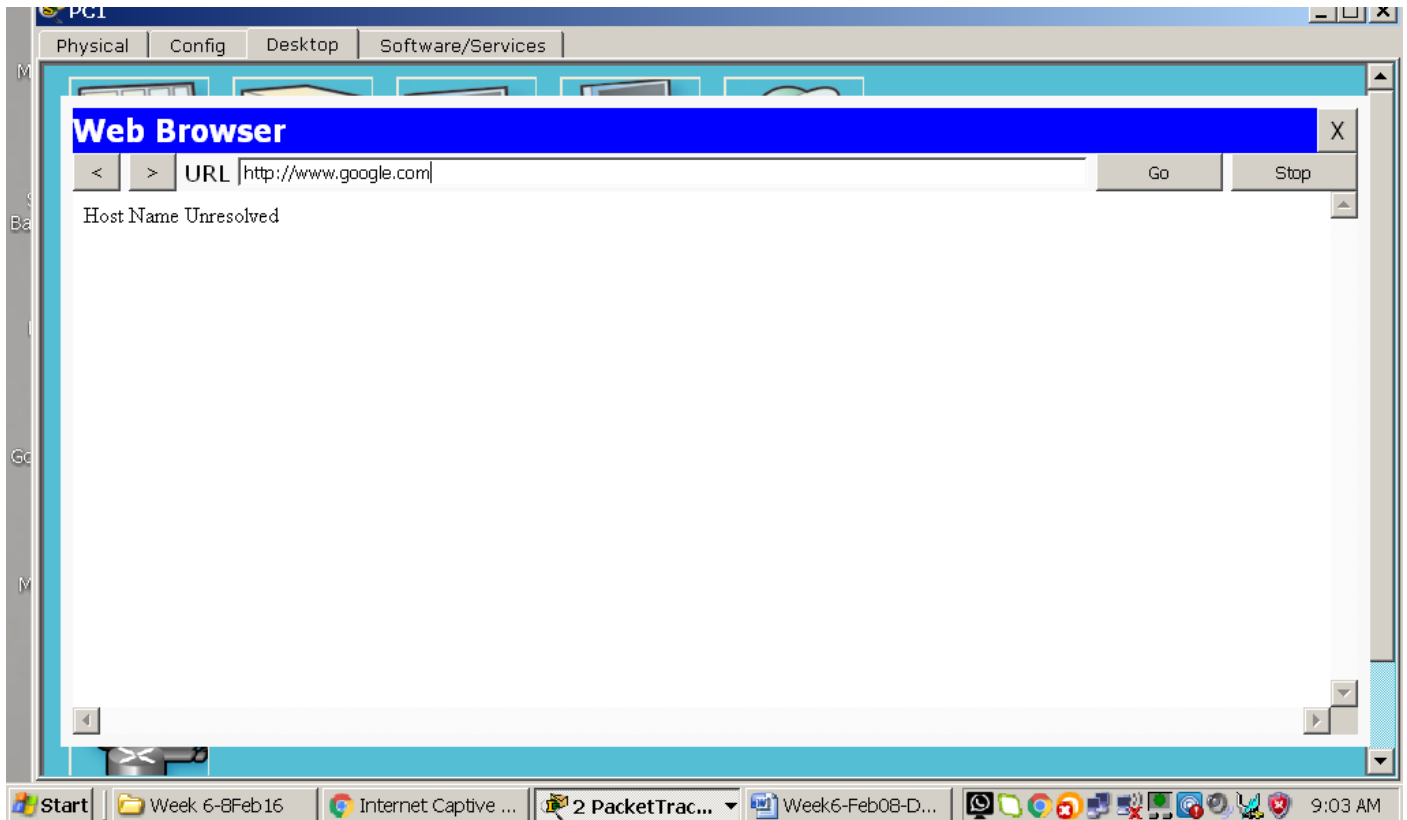   6. Enter www.pes.edu
    7. Following page will be displayed.

8. Click 'A Small Page' ; Following will be displayed

9.Click 'Back" to go back and click Image Page; Following page will be displayed.
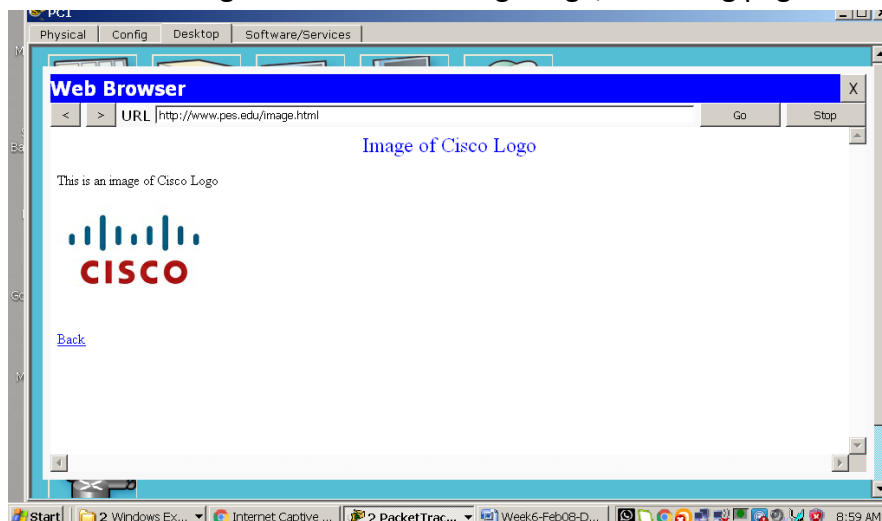
10. Enter the new URL : www.gmail.com and press Enter.; Following page will be displayed.

Yes… Browsing could be done successfully. It is time to how it could happen.

**1.1.2. Check the configuration of hosts and routers,**

    i)   **IP addresses of all the subnets, Client & Hosts**
- **Note that in the Client PC, one more parameter (apart from IP address, Gateway address), IP address (2.2.2.2/8) of the local DNS is entered.**

    ii)   **Check the configuration of all the DNS servers(…*main learning objective*)**

To resolve the Name to IP, following arrangement is done:

- **In the local server, select DNS services**
  - What name has to be resolved is entered. (i.e. www.pes.edu)
  - Reference to another intermediate server – Authoritative Server (8.8.8.2/8) is entered.
- **In the intermediate- authoritative server, select DNS services**,

  actual IP address of the web server (7.7.7.2/8) is entered

  [Observe the DNS record types NS or A ??]

Part#2 : Set up a DNS –Web network on your own.
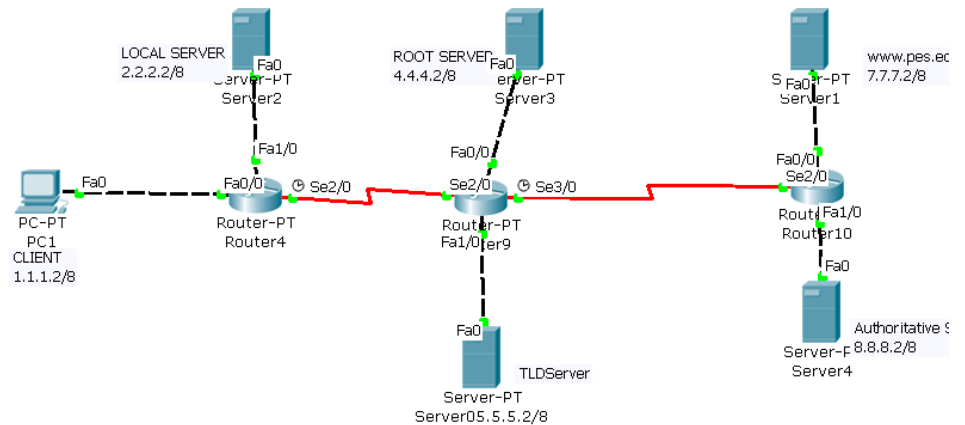
Set up a network as per following topology and browse successfully.

Note that the hierarchy of DNS request iteratively

Client->Local Server->Root Sever->TLD Server->Authoritative Server (has the actual IP address of www.pes.edu)