PSG COLLEGE OF TECHNOLOGY, COIMBATORE - 641004

Department of Applied Mathematics and Computational Sciences

MSc Software Systems - Semester 4 - Lab Exercise

Wireshark – Lab 2

Question 1]

Aim of this exercise is to familiarize with the concept of client-server protocols and the role of IP address and Port numbers in the communication. Also the student must realize the possible transport layer protocols that are involved in the communication.

Capture Wireshark logs of the following sessions:

1. HTTP session
2. FTP session
3. DNS session
4. SSH session

Answer the following:

1. With your machine as source, fill in the following table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Application Layer Protocol** | **Src IP** | **Src Port** | **Destination IP** | **Destination Port** | **Transport Protocol (UDP/TCP)** |
| **FTP** | 192.168.1.34 | 58265 | 54.243.216.217 | 21 | TCP |
| **HTTP** | 192.168.1.34 | 62234 | 188.184.21.108 | 80 | TCP |
| **DNS** | 192.168.1.34 | 59755 | 218.248.112.65 | 53 | UDP |
| **SSH** | 192.168.1.34 | 58116 | 54.243.216.217 | 22 | TCP |

1. What are the basic functions of FTP, HTTP, DNS, SSH protocols.

FTP: It stands for file sharing. It enables user to move files more reliably and efficiently.

HTTP: Used to connect to web servers in the internet. The primary function is to establish a connection with the server and send HTML pages and other required data back to the user’s browser.

DNS: It is used to translate domain names into IP addresses. Some examples are Cloudfare , Google Public DNS

SSH: It is used to secure remote login from one computer to another. For example remotely connecting to out college servers.

1. What difference do you notice between FTP and SSH

FTP - file transfer protocol

SSH - network protocol

FTP – not much secure

SSH - secure

FTP - only allows the control of files

SSH - allows a wide variety of applications