Internet Engineering - ENEL4IE

Assignment 2 – Trivial File Transfer Protocol (TFTP)

Due: **Thursday 17th September 2015, 15H00** – ***Hard Copy***.

This assignment introduces the TFTP protocol and its internal operation. It involves developing a TFTP client and testing its operation in downloading files from a server set up in the EE LAN.

Background:

The TFTP (RFC 1350) is the predecessor to FTP and is used for transferring new firmware to routers, for booting network terminals etc. It has two main uses:

a) Transferring a file from a client to a server.

b) Transferring a file from a server to a client.

Your task will be to:

1. Use a TFTT client to connect to TFTP server with IP address: 146.230.193.16 and download the files listed in Table 1 (make sure you get the exact syntax) onto your local client machine.

|  |  |  |  |
| --- | --- | --- | --- |
|  | File Name | Description | File size |
| 1 | textFile.txt | Small sized Text file | 283 bytes |
| 2 | picFile | Medium sized picture file | 38 296 bytes |
| 3 | movieFile | Large sized video file | 7 215 406 bytes |

Table : Files to download

2. Develop a modified TFTP client, in a language of your choice, to download the files in Table 1. A typical TFTP client can do both upload and download, but you only need to achieve the latter functionality. It is recommended that you develop your client program in stages. First test and debug your client code to ensure that it can download the smallest file before attempting the larger files.

After each download (in both tasks), verify that the file size is the same as that shown in the above table. Include screen captures of this verification step in your report. Also capture the traffic with Wireshark and discuss in your report how the results from packet capture process correlate with the operation of the file transfer protocol.

Marks for this lab are heavily weighted on the amount of relevant detail you give in your report—linking to the theory of the file transfer protocol. Email to the course coordinator a software copy of your report in which you should include the (**commented**) code used to compile your modified TFTP client.