



INDIAN INSTITUTE OF INFORMATION TECHNOLOGY KALYANI

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Lab Assignment #04

Submit on or before 06/02/18

Weekly contact : 0 – 0 – 3 (L – T – P)
Course No. : CS 612
Course Title : Computer Networks
Instructor-In-Charge : Dr. SK Hafizul Islam (hafi786@gmail.com)

Aim

- Telnet configuration and analysis of traffic using Wireshark.

Telnet

Telnet is an application layer protocol used on the Internet or LAN to provide a bidirectional interactive text-oriented communication facility using a virtual terminal connection. User data is interspersed in-band with Telnet control information in an 8-bit byte oriented data connection over the TCP.

In computer networking, xinetd (extended Internet daemon) is an open-source super-server daemon, runs on many Unix-like systems and manages Internet-based connectivity. It offers a more secure alternative to the older inetd ("the Internet daemon"), which most modern Linux distributions have deprecated.

Telnet Server Configuration

Step 1: install telnet service

sudo apt-get install xinetd telnetd

Step 2: Create a file *inetd.conf* and add the following line

"telnet stream tcp nowait telnetd /usr/sbin/tcpd /usr/sbin/in.telnetd"

sudo -i

gedit /etc/inetd.conf

```
telnet stream tcp nowait telnetd /usr/sbin/tcpd /usr/sbin/in.telnetd
```

```
#<off># sane-portstream tcp nowait saned:saned /usr/sbin/saned saned
```

Step 3: Check the configuration file *xinetd.conf* and comment out "log-on-success"

- *sudo -i*
- *gedit /etc/xinetd.conf*

```
# Simple configuration file for xinetd
#
# Some defaults, and include /etc/xinetd.d/
defaults
{
# Please note that you need a log_type line to be able to use
log_on_success
# and log_on_failure. The default is the following :
# log_type = SYSLOG daemon info
instances = 60
log_type = SYSLOG authpriv
log_on_success = HOST PID
log_on_failure = HOST
cps = 25 30
}
```

Step 4: Disable the firewall

sudo ufw disable

(after experiment enable it as “*sudo ufw enable*”)

Step 5: You can change the default port of telnet from 23 to something else

sudo -i

gedit /etc/services

Step 6: Restart the telnet service:

sudo /etc/init.d/xinetd restart

Step 7: Execute

telnet <ip address of other machine>

Or

telnet -l <name of remote host> <ip address of remote host>

Step 8: Enable the firewall

sudo ufw enable

Assignment

- 1) Connect your machine with another machine using “telnet” protocol.
- 2) Run “wireshark” on both the machines.
- 3) Capture some telnet packets on both the machines.

Answer the following

- 1) Which transport layer protocol is used to connect the remote machine?
- 2) Fire the command “ifconfig” on the client machine. It returns the ip address of which machine and why?
- 3) How the “telnet” protocol makes a connection with the remote machine using the transport layer protocol. Describe it.
- 4) How the “telnet” protocol closes a connection with the remote machine using the transport layer protocol. Describe it.

Reference

- 1) <http://ubuntuguide.net/install-and-enable-telnet-server-in-ubuntu-linux>
- 2) <https://en.wikipedia.org/wiki/Telnet>
- 3) <https://en.wikipedia.org/wiki/Xinetd>
- 4) <https://www.youtube.com/watch?v=Mszf9mAY1D8>