Computer Networks

LAB -9

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Aim: Learn about various networking commands in windows.

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1) Tracert

Description: tracert is a diagnostic command which is used to determine the path taken to a destination by sending internet protocol message protocol (ICMP) requests which incremantally increases the TTL.

Usage

1) tracert google.com.

In this command the packets are sent to google.com like ping. and their return routes are recorded. Now the command sends the packets to google.com with increasing TTL. If * is returned in the path then the TTL expired in route. It by default sends max TTL of 30.

2) tracert /h 2 google.com

The output is same as normal tracert but the max TTL is adjusted to 2 here.

3) tracert /w 1000 google.com

The output is same as normal tracert but the timeout time is changed as per /w's argument here 1000.

2) Route

Description : The route command is used to display and modify the entries in the local IP routing table.

Usage

1) route print

This command "route print" displays all the entries in the local routing table. It shows each entry's network destination, Netmask, gateway, interface, metric. these are shown for both IPV4 & IPV6.

2) route print 192*

The output is same as route command but it filters out all the destination address which starts with 192, in the routing table.

3). route add 0.0.0.0 mask 0.0.0.0 . 192.168.12.1

This command adds a default route with the default gateway of 192.168.12.1 type

3> Ftp

Description
The FTP command is used to transfer files to & from a computer running a FTP server service. This command can be used in interactively or batch mode by processing ASCII files.

Usage

1) Connecting to the host.
   ex ftp ftp.ddu.ac.in.

now a command prompt pops up.

2) In this command prompt we can type the commands like.
   (i) mkdir - makes a directory on ftp server

(ii) delete : for deleting a file.
(iii) cd : changing directory

and many more commands to access the remote file system via the command prompt.

4) SSH

Description

The SSH command provides a secure encrypted connection between two hosts over an insecure network. This connection can also be used for terminal access, file transfers and other tunneling applications

Usage

1) connecting to remote host.

ssh   user_name @ host.
ex   ssh   jenil @ 192.168.22.1

2) ssh -keygen.

This command generates a secure key using RSA cryptography.

5> Telnet

Description :

Telnet is a client-server protocol predating the TCP protocol. The network protocol allows a user to log into another computer within the same network through a TCP/IP connection.

Usage

1) telnet 127.0.0.1 80

The command shows error as 80 is a reserved port.

2) telnet If a port is available for connection then the command goes into a blank screen.

6> Netstat

Description displays active TCP connections on which the computer is listening, ethernet stats, IP routing table, IPV4 & IPV6 stats

1) netstat.

This shows all active TCP connections.

2) netstat - s

Displays the stats by protocol. By default the stats are shown for UDP, TCP, ICMP, and IP. If IPV6 is installed then its stats are also shown

3) netstat -a

Shows list of all active TCP connections & the TCP & UDP ports on which the computer is listening.