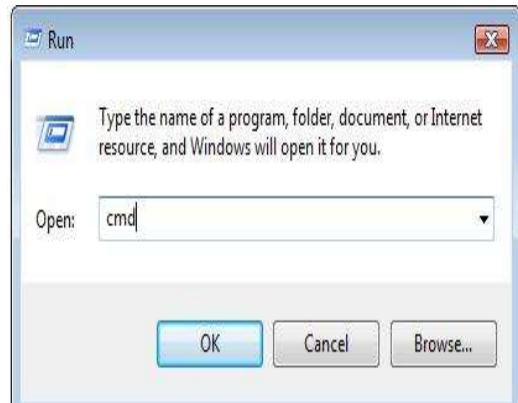


## Verification of Established LAN using PING Command

### **Step 1: To Check the Network Card and driver software**

1. Click on **Start, Programs, Accessories, Command Prompt**  
(Or)

Click on **Start, Run** and type **cmd** in the Run dialog box and click on **O.K**



2. A new "Command Prompt window" appears
3. with DOS prompt like **C: \>\_**
4. Type, "**Ping 127.0.0.1**" <Enter> to check the local configuration of TCP/IP i.e. A **local loop back** check, you will find the reply as shown below if TCP/IP configuration is OK
5. If you get a reply stating Reply from 127.0.0.1: bytes=32 time<10ms TTL=128

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Ping statistics for 127.0.0.1:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

This test confirms that your network card and software drivers are installed correctly.

5. If you receive a message stating **Request Timed Out**, check that:
  - The network card is inserted properly in the PCI slot in the computer - it may have become loose. Try re-installing the network card drivers.

6. Repeat **Step 1** again.
7. Now check response from your local system IP address  
e.g. **Ping <IP address of your system>**
8. Then Check the response from the other PCs connected on SWITCH using ping command with its respective IP address. ex. **Ping <IP address of destination PC>**

**Round Trip Time** - \_\_\_\_msec indicates the time taken of the packet travels from your PC to destination PC and return back to your PC.

**TTL** - \_\_\_\_\_ (Time to Live) indicates the Packet which crosses no. of Routers and Windows PC. For Eg: TTL Starting Value is 256, If Packet is responds by other windows PC , the value 128 is reduced from 256, If it crosses one router Value 1 is reduced.

For Eg: If you are getting the Value 126 means that your packet crosses one windows PC and 2 Routers  $(256 - (128 + 2) = 126)$ .

9. If you receive a message stating **Request Timed Out**, the reason may be
  - *The Destination PC may not be switched on*  
(OR)
  - *The cable connectivity (or) media cable from your PC to the Destination PC may be having break.*
10. If you receive a message stating **Destination host un-reachable**, the reason may be
  - *The other system may not be in the same network*
11. On default ping will send 4 echo requests only. To increase no. of echo request C:/>Ping <neighbor PCs IP address> -n 50 (request to send 50 echo requests)
12. On default ping will send 32 bytes only. To increase size of packet C:/>Ping <neighbor PCs IP address> -l 1000 (the length of the packet increases from 32 to 1000 (Max you can assign 65500))
13. Try Ping <ip address> -t,  
This will sends continuous echo requests to the specified host until stopped by pressing Ctrl-C  
{This continuous echo requests will certainly help in tracing the failure}