

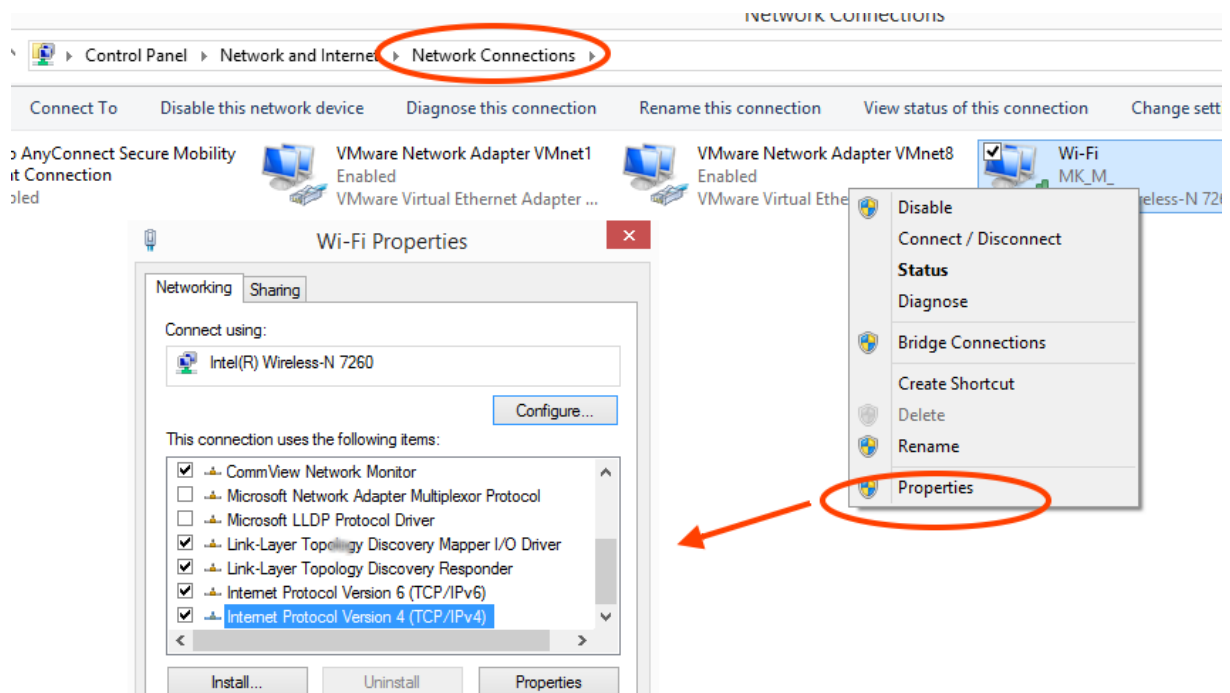
# **BASIC TERMS AND COMMANDS**

## TCP/IP - Transport Control Protocol/Internet Protocol

A set of rules for communication in the network where each device is assigned a unique valid IP address

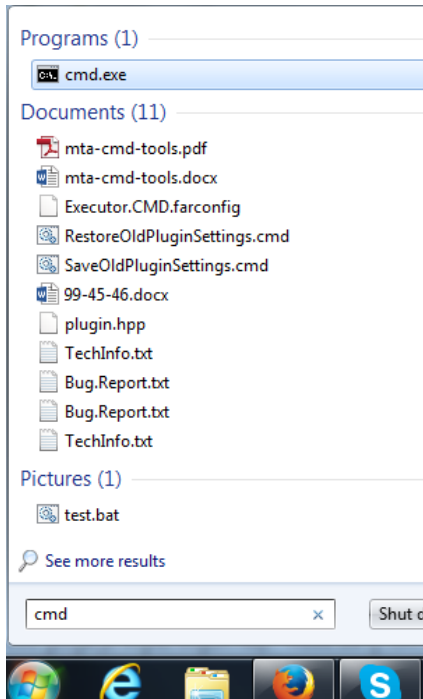
### IP ADDRESS

It identifies a device connected to the network. An IP address can be assigned statically or dynamically. This option can be found in the TCP/IP protocol settings.



## CMD (*Command Prompt*)

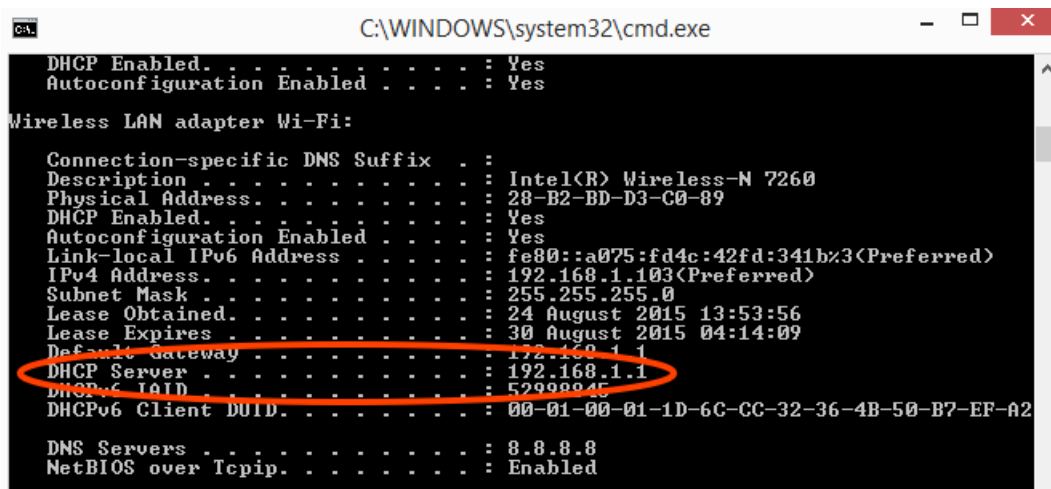
Click the **Start button**. In the Search box, type Command Prompt or cmd, and then double-click Command Prompt or cmd.



## DHCP - Dynamic Host Configuration Protocol

A dynamic IP address is assigned by a special server. It is a DHCP Server. In small networks it is your router.

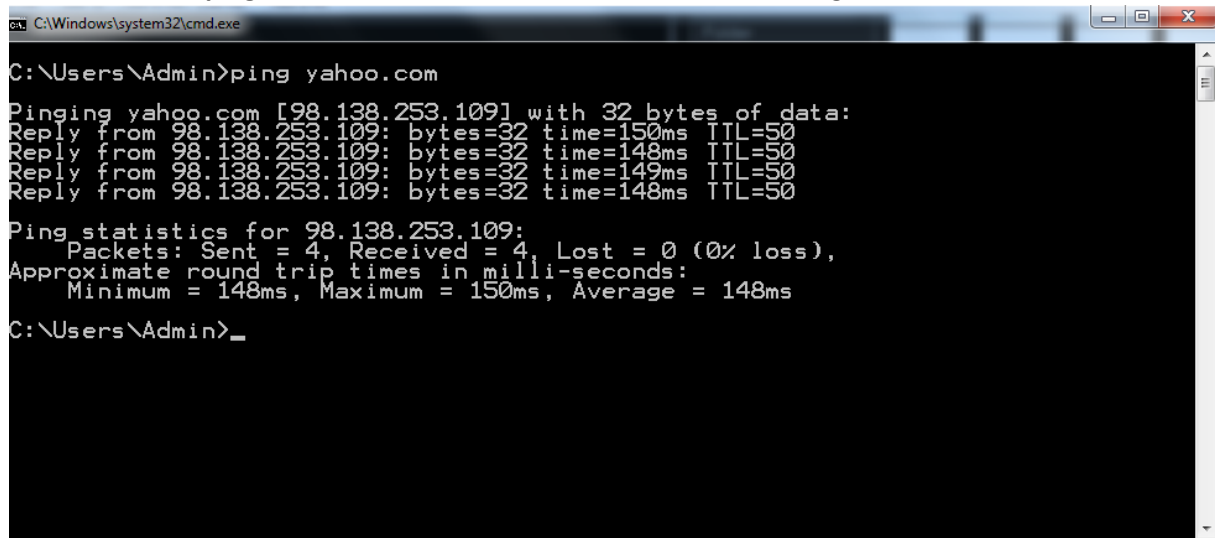
Use **ipconfig /all** in the **cmd** to check it and confirm you are using a DHCP Server at the moment.



## DNS - Domain Name System

A special service that translates **domain names** into **IP addresses**.

You can use the **ping** command to check if a domain name is resolving to an IP address



```
C:\Windows\system32\cmd.exe

C:\Users\Admin>ping yahoo.com

Pinging yahoo.com [98.138.253.109] with 32 bytes of data:
Reply from 98.138.253.109: bytes=32 time=150ms TTL=50
Reply from 98.138.253.109: bytes=32 time=148ms TTL=50
Reply from 98.138.253.109: bytes=32 time=149ms TTL=50
Reply from 98.138.253.109: bytes=32 time=148ms TTL=50

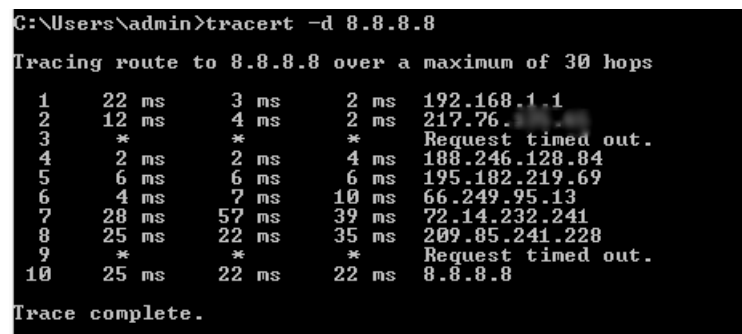
Ping statistics for 98.138.253.109:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 148ms, Maximum = 150ms, Average = 148ms

C:\Users\Admin>_
```

You can also use the **nslookup** command.

## Tracert, ping

Use the **ping** command to check basic connectivity. The **tracert** command shows you **all hops (routers)** to the destination:



```
C:\Users\admin>tracert -d 8.8.8.8

Tracing route to 8.8.8.8 over a maximum of 30 hops

  0  22 ms    3 ms     2 ms   192.168.1.1
  1  12 ms     4 ms     2 ms   217.76.1.1
  2  *         *        *      Request timed out.
  3  2 ms      2 ms     4 ms   188.246.128.84
  4  6 ms      6 ms     6 ms   195.182.219.69
  5  4 ms      7 ms    10 ms   66.249.95.13
  6  28 ms    57 ms    39 ms   72.14.232.241
  7  25 ms    22 ms    35 ms   209.85.241.228
  8  *         *        *      Request timed out.
  9  25 ms    22 ms    22 ms   8.8.8.8

Trace complete.
```

Tip: Use the **-d** switch to disable DNS lookup features

## NIC (network interface card)

A circuit board or card that is installed in a computer or laptop so that it can be connected to a network.



---

### Read more:

<http://web.pdx.edu/~stipakb/download/PA550/BasicComputerTerms.htm>

<http://www.flashcardmachine.com/basic-computer-terms.html>

<http://blog.pluralsight.com/network-troubleshooting-tools>

[http://www.webopedia.com/DidYouKnow/Internet/traceroute\\_ping.asp](http://www.webopedia.com/DidYouKnow/Internet/traceroute_ping.asp)

<http://www.computerhope.com/issues/ch000997.htm>