

# The Difference Between Static and Dynamic IP Addresses

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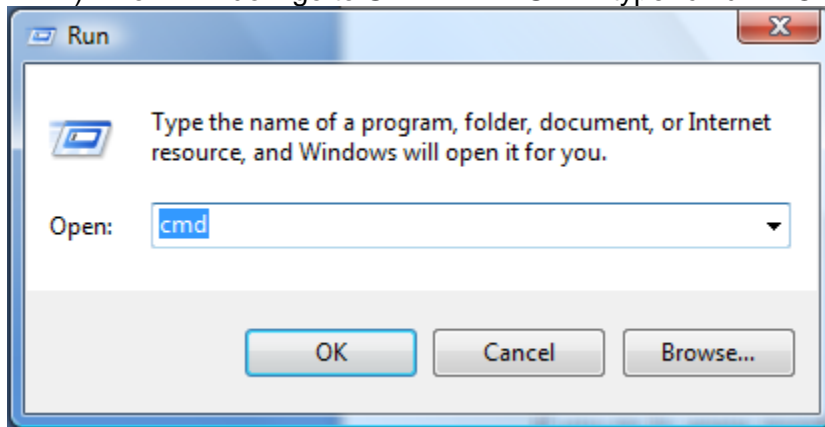
## STATIC IP ADDRESS

A Static IP address is an address that does not change over time unless changed manually. It is used when you need the IP address or network location to remain the same consistently.

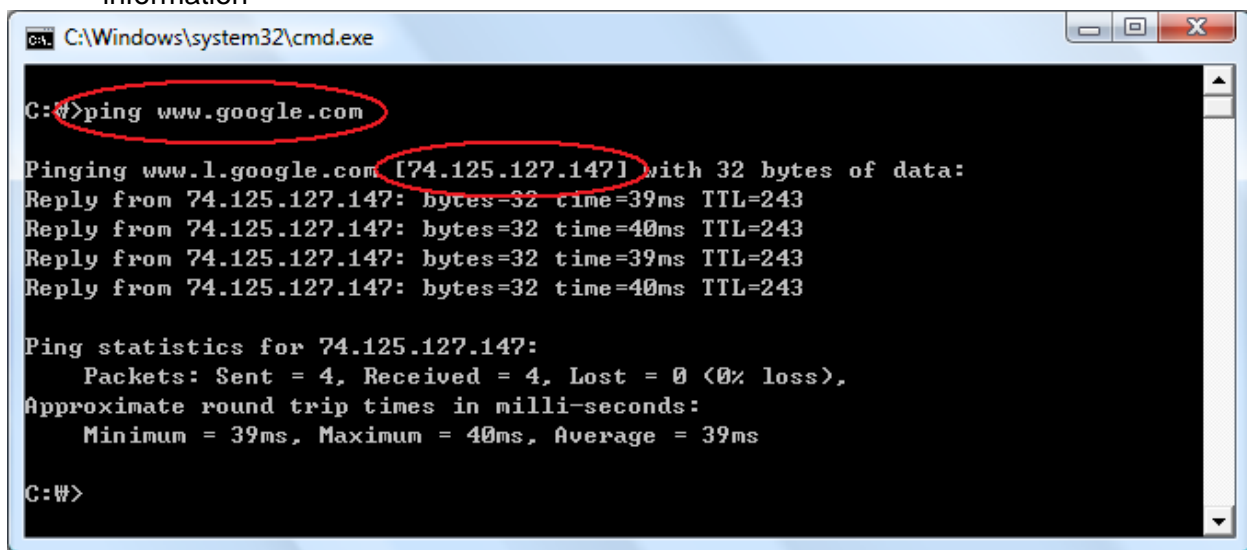
### **EXAMPLE**

A good example of this is for a web server.

A) From Window go to START -> RUN -> type "cmd" -> OK



B) On command Window type "ping www.google.com" then you will see the following information

A screenshot of a Windows command prompt window. The title bar shows 'C:\Windows\system32\cmd.exe'. The command prompt shows the command 'C:\>ping www.google.com' with a red circle around it. The output shows 'Pinging www.l.google.com [74.125.127.147] with 32 bytes of data:' with a red circle around the IP address. Below this, there are four lines of output: 'Reply from 74.125.127.147: bytes=32 time=39ms TTL=243', 'Reply from 74.125.127.147: bytes=32 time=40ms TTL=243', 'Reply from 74.125.127.147: bytes=32 time=39ms TTL=243', and 'Reply from 74.125.127.147: bytes=32 time=40ms TTL=243'. Below this, there is a section for 'Ping statistics for 74.125.127.147:' with the following information: 'Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 39ms, Maximum = 40ms, Average = 39ms'. The command prompt ends with 'C:\>'.

```
C:\Windows\system32\cmd.exe
C:\>ping www.google.com

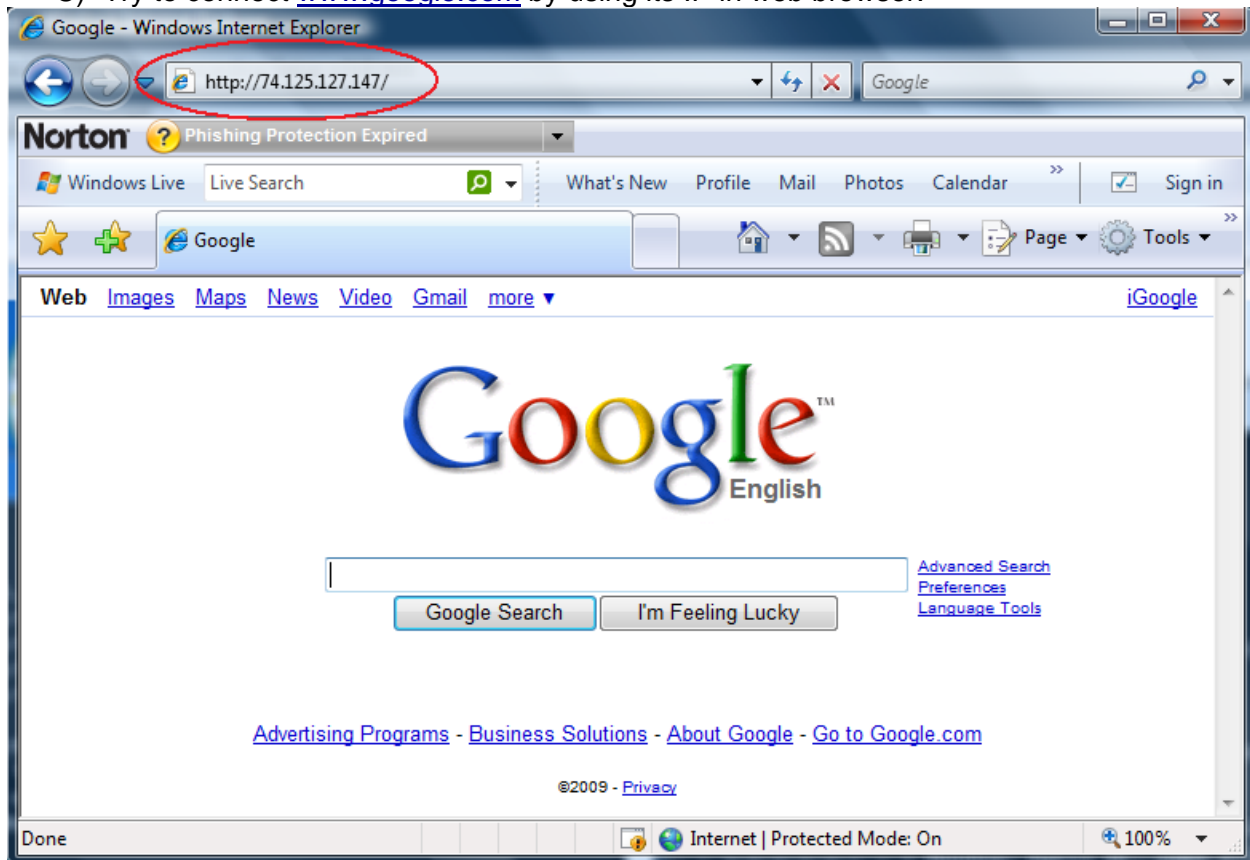
Pinging www.l.google.com [74.125.127.147] with 32 bytes of data:
Reply from 74.125.127.147: bytes=32 time=39ms TTL=243
Reply from 74.125.127.147: bytes=32 time=40ms TTL=243
Reply from 74.125.127.147: bytes=32 time=39ms TTL=243
Reply from 74.125.127.147: bytes=32 time=40ms TTL=243

Ping statistics for 74.125.127.147:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 39ms, Maximum = 40ms, Average = 39ms

C:\>
```

This means 74.125.127.147 is the current IP for [www.google.com](http://www.google.com)

C) Try to connect [www.google.com](http://www.google.com) by using its IP in web browser.



If 74.125.127.147 is a Static IP you would be able to connect Google at anytime by using its IP address instead [www.google.com](http://www.google.com).

## **DYNAMIC IP ADDRESS**

A Dynamic IP address is an address that keeps on changing.

### **EXAMPLE**

- A) If 74.125.127.147 is a Dynamic IP, and when the IP change suddenly you would not be able to get to Google unless you know the new IP address, or until Google updates their DNS records.
- B) Another example would be the IP address your ISP (internet service provider) assigns you when you log on to the internet. You must have an IP address to surf the web but once you disconnect you loose that address. Then the next time you sign on you are assigned a new one. This is done using DHCP.