

# Commonly used CMD commands on Windows

The most commonly used and popular CMD commands on Windows are useful for network administrators and IT students, both at home and in businesses, when troubleshooting or checking network or computer system problems. This article explains the meaning and usage of CMD commands on a computer.

CMD commands require you to memorize the exact commands and use them in the black and white Windows window. Many people find these **CMD** commands tedious and dislike using them ; however, they offer significant benefits to users. Network administrators and hackers, in particular, consider them invaluable tools.



A compilation of commonly used CMD commands on Windows.

To use CMD commands, you need to open the CMD window as follows:

On your desktop, click the **Start** menu , then select **Run** . Type "**cmd**" in the Open box of the Run dialog box and **press Enter** . **The Command Line** window will appear for you to type commands. Many computers require running cmd with administrator privileges; you can refer to how to run CMD with administrator privileges here.

On a Windows 7 computer, simply click Start, type cmd in the Search box, and press Enter to use it.

## *SYSTEM INFO*

```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>systeminfo

Host Name:                PATEL
OS Name:                  Microsoft Windows XP Professional
OS Version:               5.1.2600 Service Pack 2 Build 2600
OS Manufacturer:        Microsoft Corporation
OS Configuration:        Standalone Workstation
OS Build Type:             Uniprocessor Free
Registered Owner:         Edward Patel
Registered Organization:  SweBee Tech
Product ID:                55274-640-6762696-23545
Original Install Date:    5/4/2006, 10:16:25 PM
System Up Time:            0 Days, 0 Hours, 17 Minutes, 33 Seconds
System Manufacturer:      IBM
System Model:              1843A12
System type:               X86-based PC
Processor(s):              1 Processor(s) Installed.
                           [01]: x86 Family 6 Model 13 Stepping 8
GenuineIntel ~ 794 | Mhz
BIOS Version:              IBM - 1550
Windows Directory:         C:\WINDOWS
System Directory:          C:\WINDOWS\system32
Boot Device:                \Device\HarddiskVolume1
System Locale:              en-us;English (United States)
Input Locale:               en-us;English (United States)
Time Zone:                  (GMT-05:00) Eastern Time (US & Canada)
Total Physical Memory:     702 MB
Available Physical Memory: 361 MB
Virtual Memory: Max Size:  2,048 MB
Virtual Memory: Available: 2,007 MB
Virtual Memory: In Use:    41 MB
Page File Location(s):     C:\pagefile.sys
Domain:                     WORKGROUP
Logon Server:               \\PATEL
Hotfix(s):                  3 Hotfix(s) Installed.
                           [01]: KB913446 - Update
                           [02]: KB917530 - Update
                           [03]: XpsEPSC
Network Card(s):           2 NIC(s) Installed.
                           [01]: 11b/g Wireless LAN Mini PCI Adapter
                               Connection Name: Wireless Network Connection
                           [02]: Broadcom NetXtreme Fast Ethernet
                               Connection Name: Local Area Connection
                               Status: Media disconnected

```

Displays detailed configuration information about the computer and operating system, including operating system configuration, security information, product ID, and hardware attributes such as RAM, disk space, and network card.

### ***IPCONFIG***

```

C:\WINDOWS\system32\cmd.exe

C:\Documents and Settings\Corey>ipconfig /all

Windows IP Configuration

Host Name . . . . . : beatyou
Primary Dns Suffix . . . . . :
Node Type . . . . . : Unknown
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : ma.dl.cox.net

Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix . : ma.dl.cox.net
Description . . . . . : VIA Rhine II Fast Ethernet Adapter
Physical Address. . . . . : 00-50-2C-A5-F5-73
Dhcp Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IP Address. . . . . : 192.168.1.30
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.2
DHCP Server . . . . . : 192.168.1.2
DNS Servers . . . . . : 68.1.208.30
                       68.109.202.25
                       68.1.18.25
Lease Obtained. . . . . : Monday, November 07, 2005 1:20:59 AM

```

Displays all current TCP/IP network configuration values and refreshes the Dynamic Host Configuration Protocol (DHCP) settings as well as Domain Name System (DNS) settings. Used without parameters, ipconfig displays the default IP address, subnet mask, and gateway for all network devices.

### ***TASKLIST***

```

C:\WINDOWS\system32\cmd.exe
C:\>tasklist /svc /fi "imagename eq svchost.exe"

Image Name          PID Services
-----
svchost.exe         1544 DcomLaunch, TermService
svchost.exe         1592 RpcSs
svchost.exe         384 AudioSrv, CryptSvc, Dhcp, dnserver, ERSvc,
EventSystem, FastUserSwitchingCompatibility,
helpsvc, lanmanserver, lanmanworkstation,
Netman, Nla, RasMan, Schedule, seclogon,
SENS, ShellHWDetection, srsservice, TapiSrv,
Themes, TrkWks, W32Time, winmgmt, wscsv,
wuauclt
svchost.exe         708 alerter, LmHosts, WebClient
svchost.exe         1976 stisvc

C:\>_

```

Displays a list of applications and services with their names and process IDs (PIDs), along with all tasks currently running on the local or remote computer.

### TASKILL

```

Administrator: C:\Windows\system32\cmd.exe
C:\Users\jp>taskill
Invalid parameter(s)
Ends a process.

TASKILL processid ; processname [/SERVER:servername] [/ID:sessionid ; /A] [/U]

processid          Process ID for the process to be terminated.
processname        Process name to be terminated.
/SERVER:servername Server containing processID (default is current).
                   /ID or /A must be specified when using processname
                   and /SERVER
/ID:sessionid      End process running under the specified session.
/A                 End process running under ALL sessions.
/U                 Display information about actions being performed.

C:\Users\jp>_

```

This terminates one or more running tasks or processes on your computer. Programs can be closed by force closing, similar to the Windows Task Manager you commonly use.

### NETSTAT

```

C:\Documents and Settings\J D>netstat
Active Connections

Proto Local Address          Foreign Address         State
TCP   p4-gpalsq 5:1110                 localhost:1112         ESTABLISHED
TCP   p4-gpalsq 5:1112                 localhost:1110         ESTABLISHED
TCP   p4-gpalsq 5:2113                 localhost:2115         ESTABLISHED
TCP   p4-gpalsq 5:2115                 localhost:2113         ESTABLISHED
TCP   p4-gpalsq 5:1041                 720plan.ovh.net:http   CLOSE_WAIT
TCP   p4-gpalsq 5:1111                 64.12.31.232:5190      ESTABLISHED
TCP   p4-gpalsq 5:2114                 bayn-cs66.msgr.hotmail.com:1863 ESTABLISHED
TCP   p4-gpalsq 5:2316                 192.168.0.3:netbios-ssn ESTABLISHED

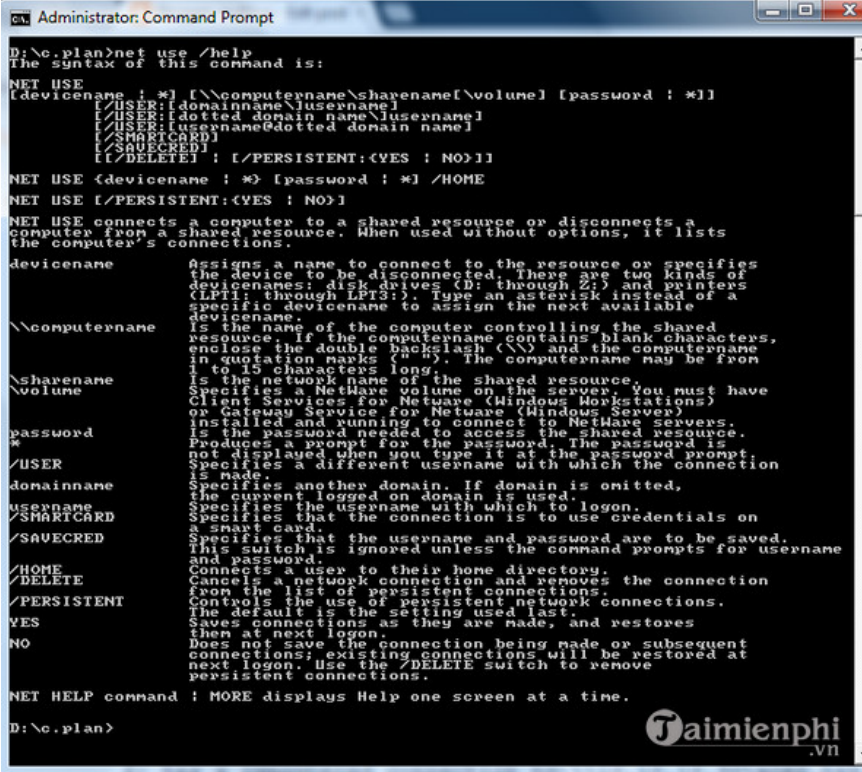
C:\Documents and Settings\J D>netstat -n
Active Connections

Proto Local Address          Foreign Address         State
TCP   127.0.0.1:1110         127.0.0.1:1112         ESTABLISHED
TCP   127.0.0.1:1112         127.0.0.1:1110         ESTABLISHED
TCP   127.0.0.1:2113         127.0.0.1:2115         ESTABLISHED
TCP   127.0.0.1:2115         127.0.0.1:2113         ESTABLISHED
TCP   192.168.0.2:1041      213.186.33.16:80       CLOSE_WAIT
TCP   192.168.0.2:1111      64.12.31.232:5190      ESTABLISHED
TCP   192.168.0.2:2114      207.46.106.66:1863    ESTABLISHED
TCP   192.168.0.2:2316      192.168.0.3:139        ESTABLISHED

```

Netstat displays active TCP connections, the network ports the computer is using, internet statistics, IP routing table, IPv4 statistics (for IP, ICMP, TCP, and UDP protocols), and IPv6 statistics (for IPv6, ICMPv6, TCP over IPv6, and UDP over IPv6 protocols). Used without parameters, netstat displays active TCP connections.

## NET



```
Administrator: Command Prompt
D:\c.plan>net use /help
The syntax of this command is:
NET USE
[deviceName : *] [\\computerName\shareName [volume] [password : *]]
[ /USER:[domainName\username]
[ /USER:[dotted domain name\username]
[ /USER:[ipAddress@dotted domain name]
[ /SMARTCARD]
[ /SAVECRED]
[ /DELETE] : [ /PERSISTENT:(YES | NO) ] ]
NET USE {deviceName : *} [password : *] /HOME
NET USE [ /PERSISTENT:(YES | NO) ]
NET USE connects a computer to a shared resource or disconnects a
computer from a shared resource. When used without options, it lists
the computer's connections.
deviceName      Assigns a name to connect to the resource or specifies
                 the device to be disconnected. There are two kinds of
                 deviceNames: disk drives (D: through Z:) and printers
                 (LPT1: through LPT3:). Type an asterisk instead of a
                 specific deviceName to assign the next available
                 deviceName.
\\computerName  Is the network name of the computer controlling the shared
                 resource. If the computerName contains blank characters,
                 enclose the double backslash (\\) and the computerName
                 in quotation marks (" "). The computerName may be from
                 1 to 15 characters long.
\shareName      Is the network name of the shared resource.
\volume         Specifies a NetWare volume on the server. You must have
                 Client Services for NetWare (Windows Workstations)
                 or Gateway Service for NetWare (Windows Server)
                 installed and running to connect to NetWare servers.
password        Is the password needed to access the shared resource.
*              Produces a prompt for the password. The password is
                 not displayed when you type it at the password prompt.
/USER           Specifies a different username with which the connection
                 is made.
domainName     Specifies another domain. If domain is omitted,
                 the current logged on domain is used.
username       Specifies the username with which to logon.
/SMARTCARD     Specifies that the connection is to use credentials on
                 a smart card.
/SAVECRED      Specifies that the username and password are to be saved.
                 This switch is ignored unless the command prompts for username
                 and password.
/HOME          Connects a user to their home directory.
/DELETE        Cancels a network connection and removes the connection
                 from the list of persistent connections.
/PERSISTENT    Controls the use of persistent network connections.
                 The default is the setting used last.
YES            Saves connections as they are made, and restores
                 them at next logon.
NO             Does not save the connection being made or subsequent
                 connections; existing connections will be restored at
                 next logon. Use the /DELETE switch to remove
                 persistent connections.
NET HELP command : MORE displays Help one screen at a time.
D:\c.plan>
```

NET helps you update, troubleshoot, monitor, and configure network devices. To start a service, you need to type the command `net start`. If you want to disable a service, type `net stop`.

## NSLOOKUP

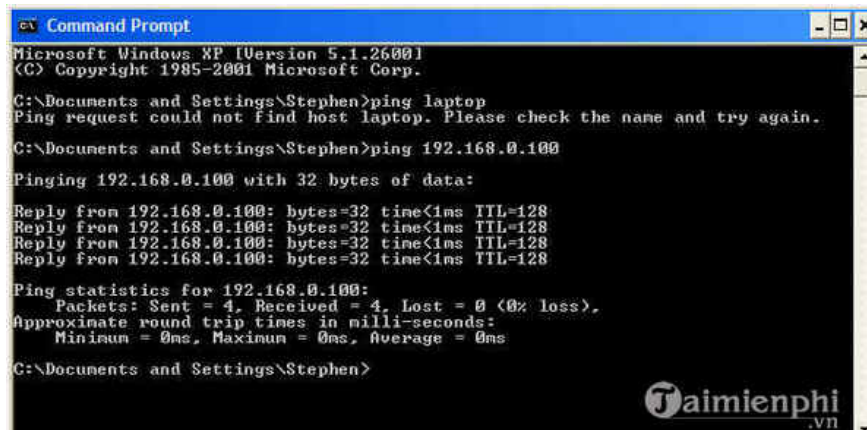


```
cmd.exe - nslookup
C:\WINDOWS>nslookup
Default Server: zeus.pngcom.com
Address: 206.62.8.10
> www.techrepublic.com
Server: zeus.pngcom.com
Address: 206.62.8.10
Non-authoritative answer:
Name: c17-sha-redirect-lb.cnet.com
Address: 216.239.113.101
Aliases: www.techrepublic.com
>
```

Applicable to: Windows Server 2003, Windows Vista, Windows Server 2008, Windows Server 2008 R2, Windows Server 2008 R2, Windows Server 2012, Windows Server 2003 with SP1, Windows 8. It provides more DNS information than the Ping method you usually use.

This tool displays information you can use to diagnose your DNS server infrastructure. Before using this tool, you should familiarize yourself with how DNS works. The Nslookup command-line tool is only available if you have TCP/IP protocol installed.

## PING and TRACERT



```
Microsoft Windows XP [Version 5.1.2600]
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C:\Documents and Settings\Stephen>ping laptop
Ping request could not find host laptop. Please check the name and try again.

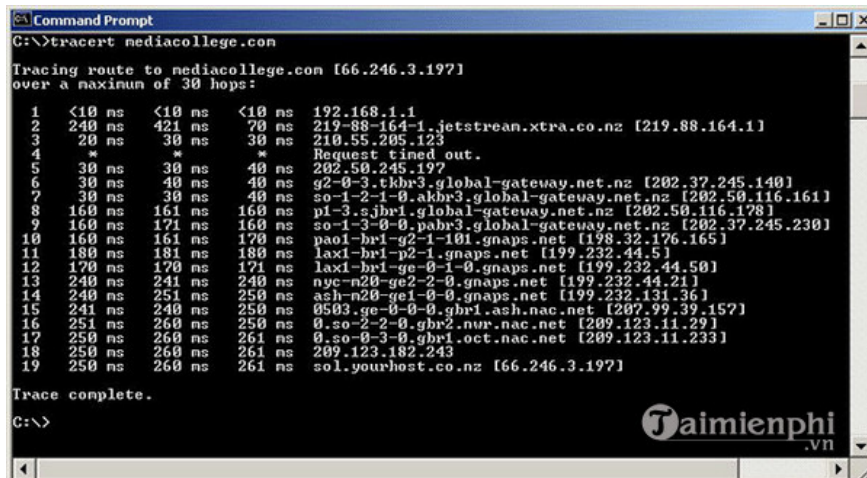
C:\Documents and Settings\Stephen>ping 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:

Reply from 192.168.0.100: bytes=32 time<1ms TTL=128
Reply from 192.168.0.100: bytes=32 time<1ms TTL=128
Reply from 192.168.0.100: bytes=32 time<1ms TTL=128
Reply from 192.168.0.100: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\Stephen>
```



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\>tracert mediacollege.com

Tracing route to mediacollege.com [66.246.3.197]
over a maximum of 30 hops:
  0  <10 ns  <10 ns  <10 ns  192.168.1.1
  1  240 ns  421 ns  70 ns  219-88-164-1.jetstream.xtra.co.nz [219.88.164.1]
  2  20 ns  30 ns  30 ns  210.55.205.123
  3  * * *
  4  * * *
  5  30 ns  30 ns  40 ns  202.50.245.197
  6  30 ns  40 ns  40 ns  g2-0-3.tkbr3.global-gateway.net.nz [202.37.245.140]
  7  30 ns  30 ns  40 ns  so-1-2-1-0.akbr3.global-gateway.net.nz [202.50.116.161]
  8  160 ns  161 ns  160 ns  pl-3.ejbr1.global-gateway.net.nz [202.50.116.178]
  9  160 ns  171 ns  160 ns  so-1-3-0-0.pabr3.global-gateway.net.nz [202.37.245.230]
 10  160 ns  161 ns  170 ns  pa01-br1-g2-1-101.gnaps.net [198.32.176.165]
 11  180 ns  181 ns  180 ns  lax1-br1-p2-1.gnaps.net [199.232.44.5]
 12  170 ns  170 ns  171 ns  lax1-br1-ge-0-1-0.gnaps.net [199.232.44.50]
 13  240 ns  241 ns  240 ns  nyc-n20-ge2-2-0.gnaps.net [199.232.44.21]
 14  240 ns  251 ns  250 ns  ash-n20-ge1-0-0.gnaps.net [199.232.131.36]
 15  241 ns  240 ns  250 ns  0503-ge-0-0-0.gbr1.ash.nac.net [207.99.39.157]
 16  251 ns  260 ns  250 ns  0.so-2-2-0.gbr2.nur.nac.net [209.123.11.29]
 17  250 ns  260 ns  261 ns  0.so-0-3-0.gbr1.oct.nac.net [209.123.11.233]
 18  250 ns  260 ns  261 ns  209.123.182.243
 19  250 ns  260 ns  261 ns  sol.yourhost.co.nz [66.246.3.197]

Trace complete.

C:\>
```

You're probably familiar with this command; it verifies an IP-level connection to another TCP/IP computer by sending an ICMP request message and receiving corresponding messages back, displaying them on the command line along with the round-trip time. Ping is a key TCP/IP command used for troubleshooting connection issues, availability, and domain name resolution.

Tracert, on the other hand, is used to identify the route of data packets traveling through an IP network.

## GPRESULT

```

c:\>gpresult /r
Microsoft (R) Windows (R) Operating System Group Policy Result tool v2.0
© 2013 Microsoft Corporation. All rights reserved.
Created on 14.08.2014 at 15:21:56

RSOP data for TN\dak on MAN01 : Logging Mode
-----
OS Configuration: Member Server
OS Version: 6.3.9600
Site Name: N/A
Roaming Profile: N/A
Local Profile: C:\Users\dak
Connected over a slow link?: No

USER SETTINGS
-----
CN=Dmitry,OU=Admins,OU=Accounts,DC= tn.DC=loc
Last time Group Policy was applied: 14.08.2014 at 14:42:55
Group Policy was applied from: ... dc02. tn.loc
Group Policy slow link threshold: 500 kbps
Domain Name: ?
Domain Type: Windows 2008 or later

Applied Group Policy Objects
-----
Disable Cached Credentials
DNS Suffix Search List
Enable Windows Firewall
Default Domain Policy

```

For administrators, the command-line tool verifies all settings are effective for a specific user or computer. Administrators can run GPRresult on any remote computer within their management scope. By default, GPRresult returns the settings that are effective on the computer running GPRresult.

## NETSH

```

C:\WINNT\system32\cmd.exe
C:\Documents and Settings\Administrator>netsh /?

Usage: netsh [-a AliasFile] [-c Context] [-r RemoteMachine]
[Command] [-f ScriptFile]

The following commands are available:

Commands in this context:
? - Displays a list of commands.
add - Adds a configuration entry to a list of entries.
delete - Deletes a configuration entry from a list of entries.
dump - Displays a configuration script.
exec - Runs a script file.
help - Displays a list of commands.
interface - Changes to the 'interface' context.
ras - Changes to the 'ras' context.
routing - Changes to the 'routing' context.
set - Updates configuration settings.
show - Displays information.

The following subcontexts are available:
routing interface ras

To view help for a command, type the command, followed by a space and
type ?.

```

Netsh is a command-line firewall utility that allows you to control a computer locally or remotely, displaying or modifying the network configuration of a currently running computer. Netsh also provides a scripting feature that allows you to run a set of commands in a preset mode for a specific computer. Netsh can also save a configuration script in a text file for archiving purposes or to help you configure other servers.

The above CMD commands will certainly be very important for administrators and network students. Keep these CMD commands handy for use when needed with your home or business computer network. If you don't want to type the CMD commands, you can copy and **paste the commands from CMD** like this.

You finished reading the article "**Commonly used CMD commands on Windows**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.

