

# 15 CMD Commands Every Windows User Should Know

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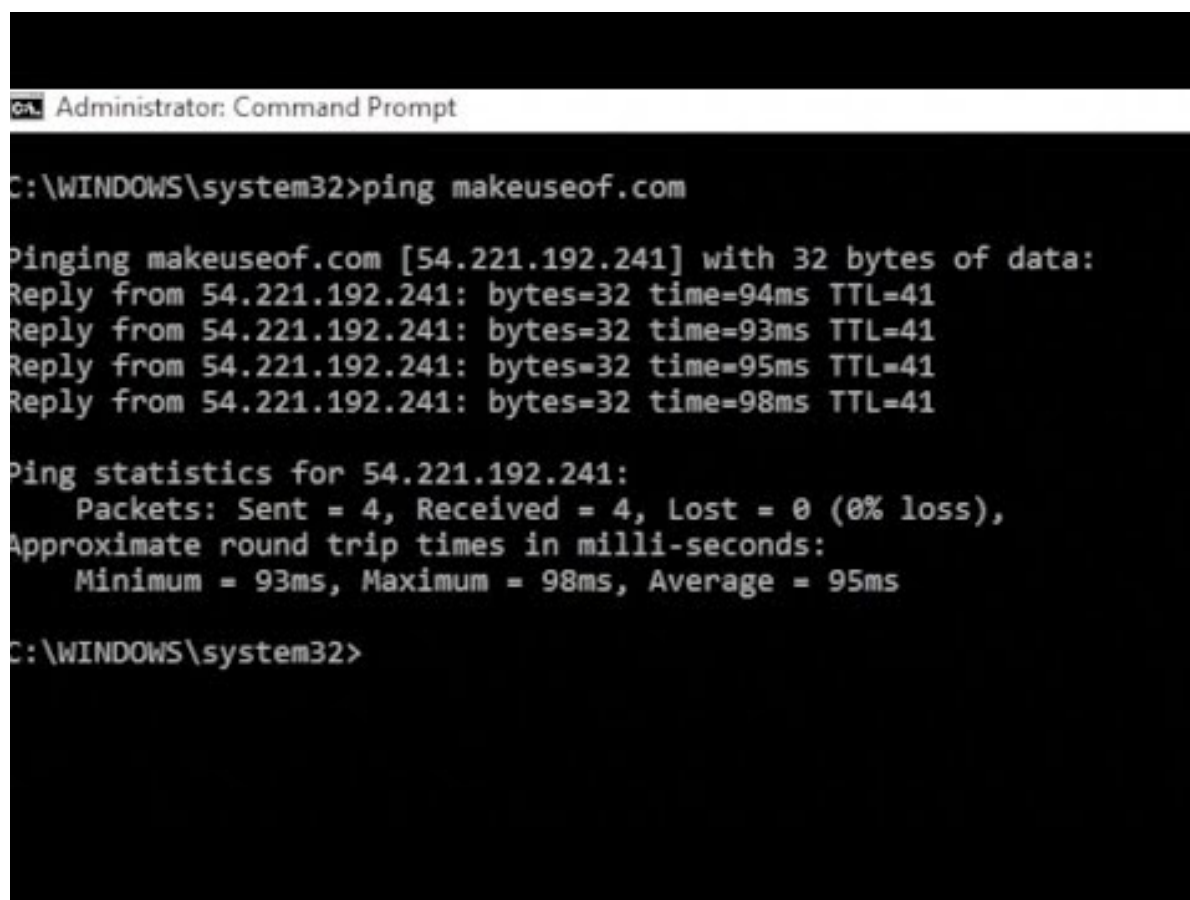
*Updated by Tina Sieber on January 21, 2017.*

Microsoft has slowly but surely pushed the [command line](#) aside in the Windows interface. This is not without reason. It's an antiquated and mostly unnecessary tool from an era of text-based input. [10 Windows Command Line Tips You Should Check Out](#) While the Windows command line is not considered as powerful as a Linux's, here are some Windows command line tips and tricks not everyone might know about. [Read More](#)

But many commands remain useful, and Windows 8 and 10 even added new features. Here we present the 15 commands every Windows user needs to know.

In case you're not sure how to access the command prompt, forgot basic commands, or would like to know how to see a list of switches for each command, you can refer to our [beginners guide to the Windows command line](#) for instructions.

*Prefer this tutorial in video form? We've got you covered:*



```
Administrator: Command Prompt

C:\WINDOWS\system32>ping makeuseof.com

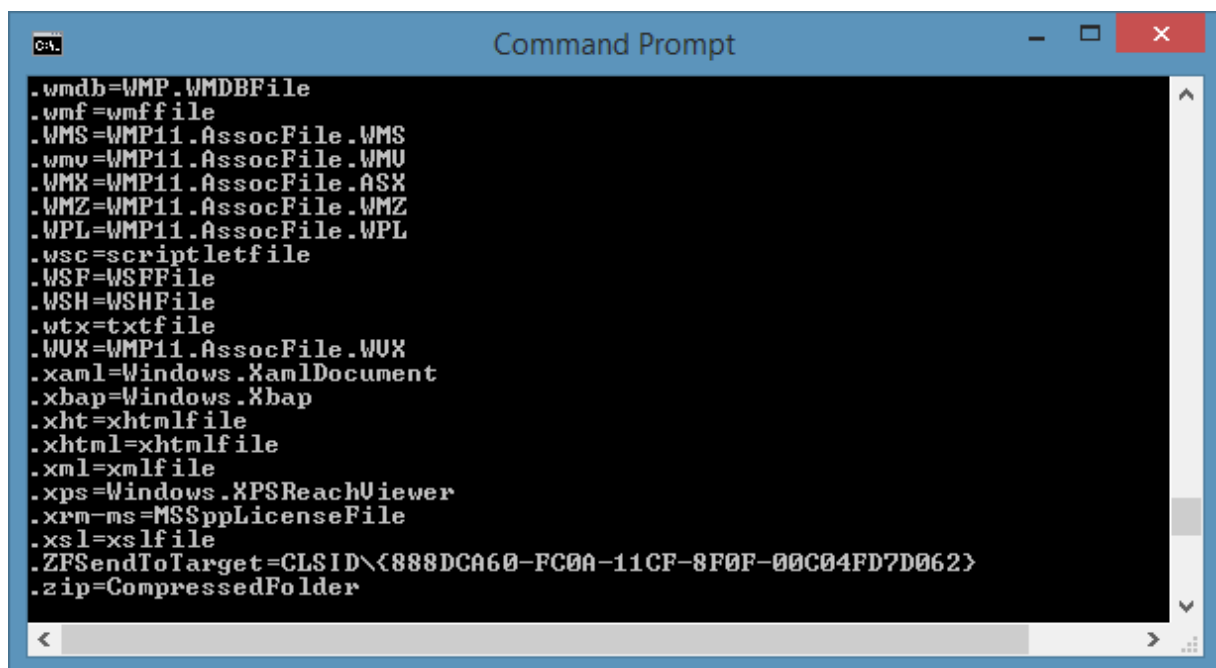
Pinging makeuseof.com [54.221.192.241] with 32 bytes of data:
Reply from 54.221.192.241: bytes=32 time=94ms TTL=41
Reply from 54.221.192.241: bytes=32 time=93ms TTL=41
Reply from 54.221.192.241: bytes=32 time=95ms TTL=41
Reply from 54.221.192.241: bytes=32 time=98ms TTL=41

Ping statistics for 54.221.192.241:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 93ms, Maximum = 98ms, Average = 95ms

C:\WINDOWS\system32>
```

## Our 15 Favorites

### 1. [ASSOC](#)



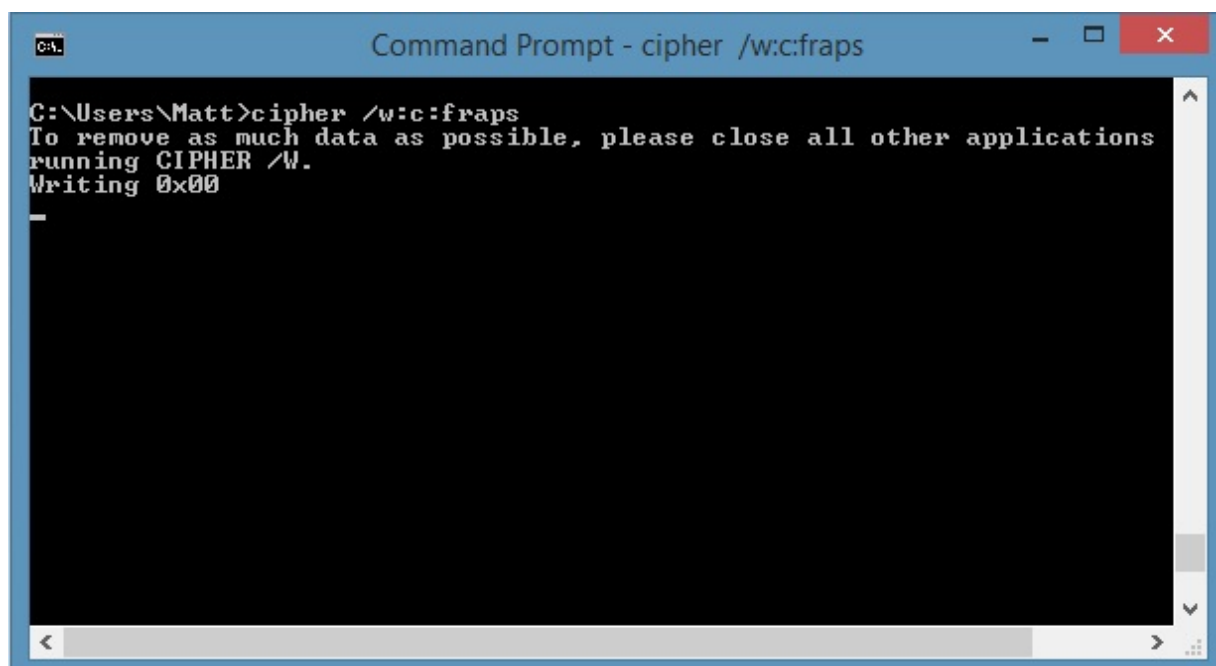
```
C:\>.wmdb=WMP.WMDBFile
.wmf=wmffile
.WMS=WMP11.AssocFile.WMS
.wmv=WMP11.AssocFile.WMU
.WMX=WMP11.AssocFile.ASX
.WMZ=WMP11.AssocFile.WMZ
.WPL=WMP11.AssocFile.WPL
.wsc=scriptletfile
.WSF=WSFFile
.WSH=WSHFile
.wtx=txtfile
.WUX=WMP11.AssocFile.WUX
.xaml=Windows.XamlDocument
.xbap=Windows.Xbap
.xht=xhtmlfile
.xhtml=xhtmlfile
.xml=xmlfile
.xps=Windows.XPSReachViewer
.xrm-ms=MSSppLicenseFile
.xsl=xslfile
.ZFSendToTarget=CLSID\{888DCA60-FC0A-11CF-8F0F-00C04FD7D062}
.zip=CompressedFolder
```

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Most files in Windows are associated with a specific program that is assigned to open the file by default. At times, remembering these associations can become confusing. You can remind yourself by entering the command “assoc” to display a full list of file name extensions and program associations.

You can also extend the command to change file associations. For example, “assoc .txt=” will change the file association for text files to whatever program you enter after the equal sign. The ASSOC command itself will reveal both the extension names and program names, which will help you properly use this command. You can probably do this more easily in the GUI, but the command line interface is a perfectly functional alternative.

## 2. Cipher



```
C:\Users\Matt>cipher /w:c:fraps
To remove as much data as possible, please close all other applications
running CIPHER /W.
Writing 0x00
```

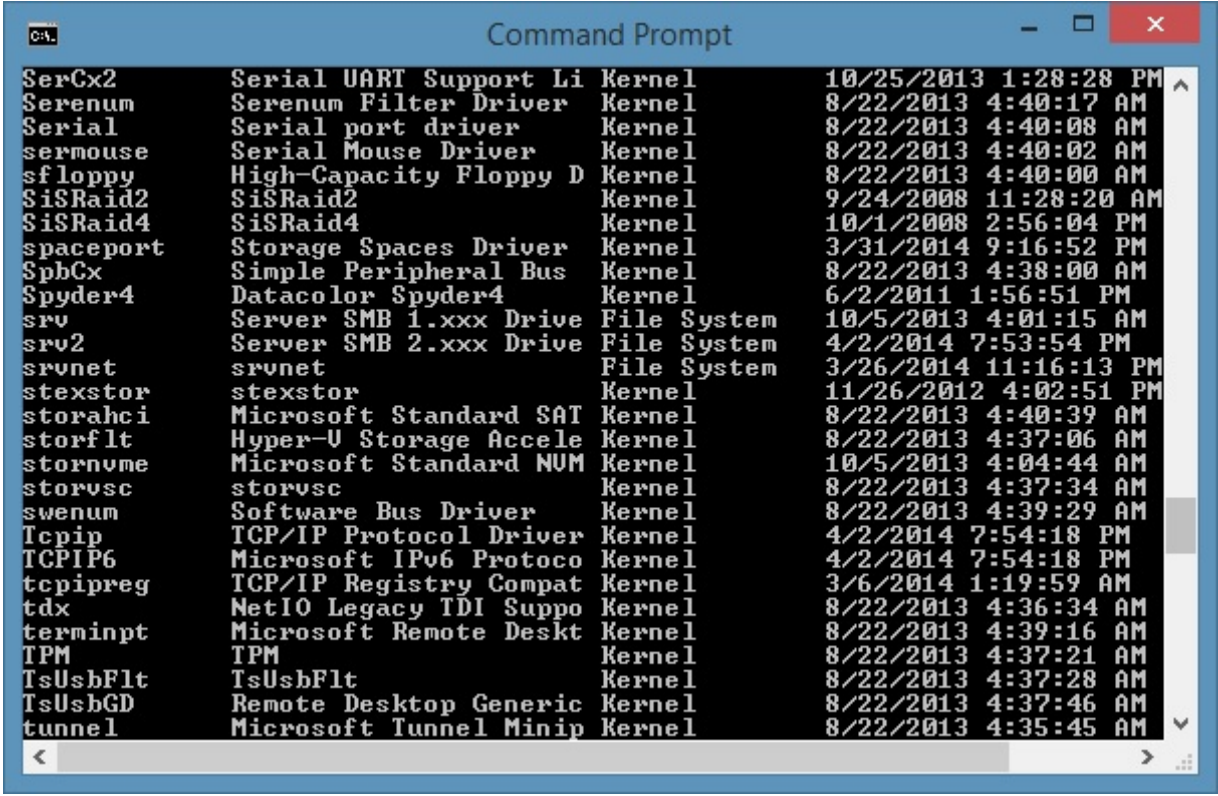
Deleting files on a mechanical hard drive [doesn't really delete them at all](#). Instead, it marks the files as no longer accessible and the space they took up as free. The files remain recoverable until the system overwrites them with new data, which can take some time. [How to Securely Delete Files From Your HDD or SSD in Windows](#) [How to Securely Delete Files From Your HDD or SSD in Windows](#) Did you know files never actually get deleted?

That's why they can be recovered; by you or someone else. If this makes you feel uncomfortable, learn how to securely delete files. [Read More](#)

The `cipher` command, however, wipes a directory by writing random data to it. To wipe your C drive, for example, you'd use the command "`cipher /w:c`", which will wipe free space on the drive. The command does not overwrite undeleted data, so you will not wipe out files you need by running this command.

You can use a host of other cipher commands, however, they are generally redundant with Bitlocker enabled versions of Windows.

### 3. DriverQuery

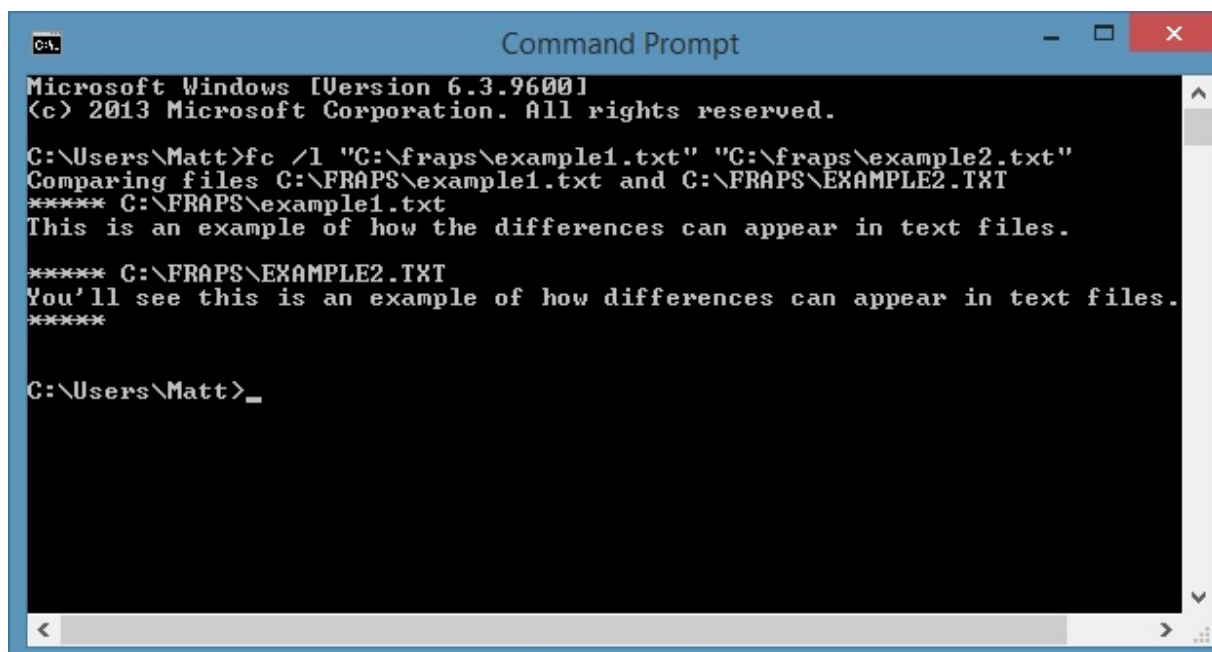


|           |                        |             |                       |
|-----------|------------------------|-------------|-----------------------|
| SerCx2    | Serial UART Support Li | Kernel      | 10/25/2013 1:28:28 PM |
| Serenum   | Serenum Filter Driver  | Kernel      | 8/22/2013 4:40:17 AM  |
| Serial    | Serial port driver     | Kernel      | 8/22/2013 4:40:08 AM  |
| sermouse  | Serial Mouse Driver    | Kernel      | 8/22/2013 4:40:02 AM  |
| sfloppy   | High-Capacity Floppy D | Kernel      | 8/22/2013 4:40:00 AM  |
| SiSRaid2  | SiSRaid2               | Kernel      | 9/24/2008 11:28:20 AM |
| SiSRaid4  | SiSRaid4               | Kernel      | 10/1/2008 2:56:04 PM  |
| spaceport | Storage Spaces Driver  | Kernel      | 3/31/2014 9:16:52 PM  |
| SpbCx     | Simple Peripheral Bus  | Kernel      | 8/22/2013 4:38:00 AM  |
| Spyder4   | Datacolor Spyder4      | Kernel      | 6/2/2011 1:56:51 PM   |
| srv       | Server SMB 1.xxx Drive | File System | 10/5/2013 4:01:15 AM  |
| srv2      | Server SMB 2.xxx Drive | File System | 4/2/2014 7:53:54 PM   |
| srvnet    | srvnet                 | File System | 3/26/2014 11:16:13 PM |
| stexstor  | stexstor               | Kernel      | 11/26/2012 4:02:51 PM |
| storahci  | Microsoft Standard SAT | Kernel      | 8/22/2013 4:40:39 AM  |
| storflt   | Hyper-U Storage Accele | Kernel      | 8/22/2013 4:37:06 AM  |
| stornume  | Microsoft Standard NUM | Kernel      | 10/5/2013 4:04:44 AM  |
| storvsc   | storvsc                | Kernel      | 8/22/2013 4:37:34 AM  |
| swenum    | Software Bus Driver    | Kernel      | 8/22/2013 4:39:29 AM  |
| Tcpip     | TCP/IP Protocol Driver | Kernel      | 4/2/2014 7:54:18 PM   |
| TCPIP6    | Microsoft IPv6 Protoco | Kernel      | 4/2/2014 7:54:18 PM   |
| tcpipreg  | TCP/IP Registry Compat | Kernel      | 3/6/2014 1:19:59 AM   |
| tdx       | NetIO Legacy TDI Suppo | Kernel      | 8/22/2013 4:36:34 AM  |
| terminpt  | Microsoft Remote Deskt | Kernel      | 8/22/2013 4:39:16 AM  |
| TPM       | TPM                    | Kernel      | 8/22/2013 4:37:21 AM  |
| TsUshFlt  | TsUshFlt               | Kernel      | 8/22/2013 4:37:28 AM  |
| TsUshGD   | Remote Desktop Generic | Kernel      | 8/22/2013 4:37:46 AM  |
| tunnel    | Microsoft Tunnel Minip | Kernel      | 8/22/2013 4:35:45 AM  |

Drivers remain among the most important software installed on a PC. [Improperly configured or missing drivers](#) can cause all sorts of trouble, so its good to have access to a list of what's on your PC. That's exactly what the "driverquery" command does. You can extend it to "`driverquery -v`" to obtain more information, including the directory in which the driver is installed.

### 4. File Compare

You can use this command to identify differences in text between two files. It's particularly useful for writers and programmers trying to find small changes between two versions of a file. Simply type "`fc`" and then the directory path and file name of the two [files you want to compare](#).



```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\Matt>fc /l "C:\fraps\example1.txt" "C:\fraps\example2.txt"
Comparing files C:\FRAPS\example1.txt and C:\FRAPS\EXAMPLE2.TXT
***** C:\FRAPS\example1.txt
This is an example of how the differences can appear in text files.

***** C:\FRAPS\EXAMPLE2.TXT
You'll see this is an example of how differences can appear in text files.
*****

C:\Users\Matt>_
```

You can also extend the command in several ways. Typing “/b” compares only binary output, “/c” disregards the case of text in the comparison, and “/l” only compares ASCII text.

So, for example, you could use the following:

```
fc /l "C:\Program Files (x86)\example1.doc" "C:\Program Files
(x86)\example2.doc"
```

The above command compares ASCII text in two word documents.

## 5. Ipconfig

This command relays the IP address that your computer is currently using. However, if you’re behind a router (like most computers today), you’ll instead receive the local network address of the router.

Still, ipconfig is useful because of its extensions. “ipconfig /release” followed by “ipconfig /renew” can force your Windows PC into asking for a new IP address, which is useful if your computer claims one isn’t available. You can also use “ipconfig /flushdns” to refresh your DNS address. These commands are great if the Windows network troubleshooter chokes, which does happen on occasion.

## 6. Netstat

Entering the command “netstat -an” will provide you with a list of [currently open ports and related IP addresses](#). This command will also tell you what state the port is in – listening, established or closed. [Find Out Who's Eating Your Bandwidth With These Tips](#) Find Out Who's Eating Your Bandwidth With These Tips Click....wait. Click....wait. Click....ARG! Does that seem familiar? It's you when you run out of Internet bandwidth! Let's find out what occupies your Internet connection and how to get it back. [Read More](#)

This is a great command for when you’re trying to troubleshoot devices connected to your PC or when you fear a Trojan infected your system and you’re trying to locate a malicious connection.

## 7. Ping

```
Command Prompt

UDP 192.168.1.10:138 ***
UDP 192.168.1.10:1900 ***
UDP [::1]:5355 ***
UDP [::1]:1900 ***
UDP [::1]:49152 ***
UDP [fe80::ce7:3483:3f57:fef5%41]:546 ***
UDP [fe80::1116:a985:ad23:f162%31]:546 ***
UDP [fe80::1116:a985:ad23:f162%31]:1900 ***

C:\Users\Matt>ping google.com

Pinging google.com [173.194.46.64] with 32 bytes of data:
Reply from 173.194.46.64: bytes=32 time=65ms TTL=50
Reply from 173.194.46.64: bytes=32 time=61ms TTL=50
Reply from 173.194.46.64: bytes=32 time=63ms TTL=50
Reply from 173.194.46.64: bytes=32 time=62ms TTL=50

Ping statistics for 173.194.46.64:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 61ms, Maximum = 65ms, Average = 62ms

C:\Users\Matt>
```

Sometimes, you need to know whether or not packets are making it to a specific networked device. That's where ping comes in handy. Typing "ping" followed by an IP address or web domain will send a series of test packets to the specified address. If they arrive and are returned, you know the device is capable of communicating with your PC; if it fails, you know that there's something blocking communication between the device and your computer. This can help you decide if the root of the issue is an improper configuration or a failure of network hardware.

## 8. PathPing

This is a more advanced version of ping that's useful if there are multiple routers between your PC and the device you're testing. Like ping, you use this command by typing "pathping" followed by the IP address, but unlike ping, pathping also relays some information about the route the test packets take.

## 9. Tracert

```
Command Prompt - tracert google.com

C:\Users\Matt>tracert google.com

Tracing route to google.com [173.194.46.64]
over a maximum of 30 hops:

  0  4 ms    6 ms    7 ms  Wireless_Broadband_Router.fttrdhpuser.ne
68.1.11
  1  20 ms   21 ms   20 ms  static-50-53-216-1.bvtn.or.frontiernet.n
3.216.11
  2  19 ms   16 ms   17 ms  184.19.244.64
  3  21 ms   21 ms   22 ms  xe--11-3-0---0.car01.tgrd.or.frontiernet
.38.7.211
  4  51 ms   34 ms   27 ms  ae2---0.cor02.bvtn.or.frontiernet.net [7
811
  5  27 ms   27 ms   24 ms  ae0---0.cor01.bvtn.or.frontiernet.net [7
851
  6  27 ms   26 ms   27 ms  ae4---0.cor01.sttl.wa.frontiernet.net [7
211
  7  25 ms   31 ms   27 ms  ae0---0.cbr01.sttl.wa.frontiernet.net [7
221
  8  25 ms   25 ms   25 ms  74.40.26.177
  9  25 ms   26 ms   31 ms
10
```

The "tracert" command is similar to pathping. Once again, type "tracert" followed by the IP address or domain you'd like to trace. You'll receive information about each step in the route between your PC and the target. Unlike pathping, however, tracert also tracks how much time (in milliseconds) each hop between servers or devices

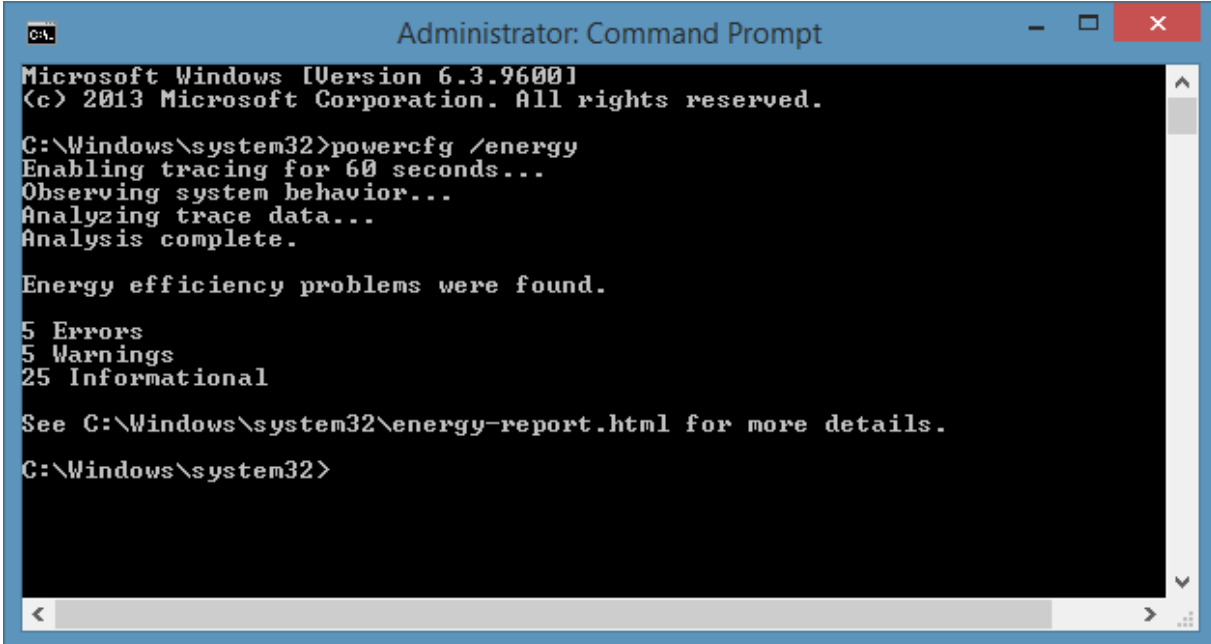
takes.

## 10. Powercfg

Powercfg is a very powerful command for managing and tracking how your computer uses energy. You can use the command “powercfg /hibernate on” and “powercfg /hibernate off” to manage hibernation, and you can also use the command “powercfg /a” to view the power-saving states currently available on your PC.

Another useful command is “powercfg /devicequery s1\_supported”, which displays a list of devices on your computer that support connected standby. When enabled, you can use these devices to bring your computer out of standby – even remotely. You can enable this by selecting the device in Device Manager, opening its properties, going to the Power Management tab and then checking the “Allow this device to wake the computer” box.

“Powercfg /lastwake” will show you what device last woke your PC from a sleep state. You can use this command to troubleshoot your PC [if it seems to wake from sleep at random](#).



```
Administrator: Command Prompt
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Windows\system32>powercfg /energy
Enabling tracing for 60 seconds...
Observing system behavior...
Analyzing trace data...
Analysis complete.

Energy efficiency problems were found.

5 Errors
5 Warnings
25 Informational

See C:\Windows\system32\energy-report.html for more details.
C:\Windows\system32>
```

You can use the “powercfg /energy” command to build a detailed power consumption report for your PC. The report saves to the directory indicated after the command finishes. This report will let you know of any system faults that might increase power consumption, like devices blocking certain sleep modes, or poorly configured to respond to your power management settings.

Windows 8 added “powercfg /batteryreport”, which provides a detailed analysis of battery use, if applicable. Normally output to your Windows user directory, the report provides details about the time and length of charge and discharge cycles, lifetime average battery life, and estimated battery capacity.

## 11. Shutdown

As of Windows 8/8.1 there is now a [shutdown command](#) that – you guessed it! – shuts down your computer. [10 Clever Ways To Optimize The Windows Shutdown Process](#) Are Windows shutdowns an ordeal? Time to crack down on this process and save time. Most solutions are super simple and only take a few seconds, promised! [Read More](#)

This is of course redundant with the already easily accessed shutdown button, but what’s not redundant is the “shutdown /r /o” command, which restarts your PC and launches the Advanced Start Options menu, which is where you can access Safe Mode and Windows recovery utilities. This is useful if you want to restart your computer for troubleshooting purposes.

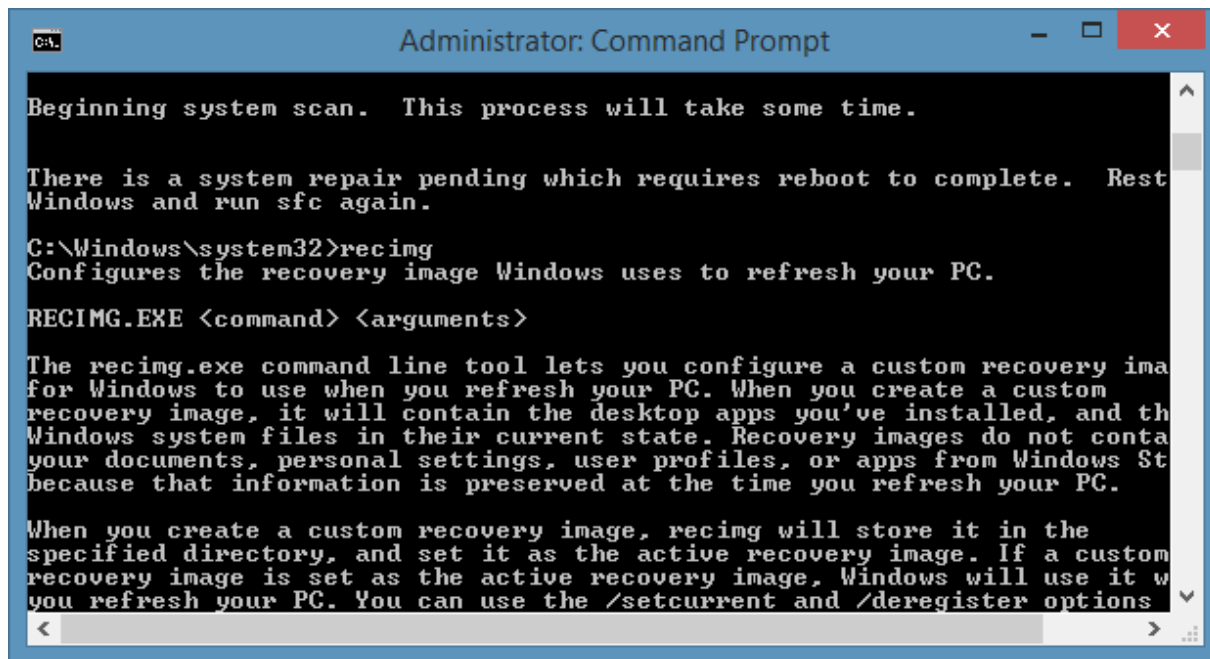


## 12. System File Checker

System File Checker is an [automatic scan and repair tool](#) that focuses on Windows system files. [How to Fix a Corrupted Windows 10 Installation](#) [How to Fix a Corrupted Windows 10 Installation](#) System corruption is the worst that could happen to your Windows installation. We show you how to get Windows 10 back on track when suffering from BSODs, driver errors, or other unexplained issues. [Read More](#)

You will need to run the command prompt with administrator privileges and enter the command “sfc /scannow”. If SFC finds any corrupt or missing files, it will automatically replace them using cached copies kept by Windows for this purpose alone. The command can require a half-hour to run on older notebooks.

## 13. Recovery Image (Windows 8)



Virtually all Windows 8/8.1 computers ship from the factory with a [recovery image](#), but the image may include bloatware you’d rather not have re-installed. Once you’ve un-installed the software you can create a new image using the “recimg” command. Entering this command presents a very detailed explanation of how to use it. [How to Create a Windows 8 Recovery Disk](#) [How to Create a Windows 8 Recovery Disk](#) The days of reinstalling Windows when it acts up are long since gone. All you need to fix Windows 8 is a recovery disk, either on CD/DVD, a USB or an external hard disk drive. [Read More](#)

You must have administrator privileges to use the recimg command, and you can only access the custom recovery image you create via the [Windows 8 “refresh” feature](#).

In [Windows 10](#), [system recovery](#) has changed. Windows 10 systems don’t come with a recovery partition, which makes it more important than ever to [create a recovery drive](#).

## 14. Tasklist

You can use the “tasklist” command to provide a current list of all tasks running on your PC. Though somewhat redundant with [Task Manager](#), the command may sometimes find tasks hidden from view in that utility.

```
Administrator: Command Prompt
MOM.exe           4076 Console           1      4,48
jused.exe         4084 Console           1     11,31
CCC.exe           1020 Console           1      7,02
raptr_ep64.exe    3896 Console           1      6,77
WWAHost.exe       4496 Console           1     52,72
iexplore.exe      2772 Console           1     60,93
iexplore.exe      3064 Console           1    157,10
FlashUtil_ActiveX.exe 1244 Console           1      8,89
WmiPrvSE.exe      5488 Services           0     12,58
iexplore.exe      5956 Console           1    179,14
audiocd.exe       4840 Services           0      8,22
cmd.exe           6732 Console           1      2,24
conhost.exe       1932 Console           1      5,45
iexplore.exe      6288 Console           1    194,68
gimp-2.8.exe      5180 Console           1     78,30
SearchProtocolHost.exe 4836 Services           0      7,86
script-fu.exe     7020 Console           1     12,33
TrustedInstaller.exe 7164 Services           0      4,45
TiWorker.exe      4308 Services           0      9,54
tasklist.exe      6368 Console           1      5,21
WmiPrvSE.exe      6644 Services           0      5,46
C:\Windows\system32>
```

There's also a wide range of modifiers. "Tasklist -svc" shows services related to each task, use "tasklist -v" to obtain more detail on each task, and "tasklist -m" will locate .dll files associated with active tasks. These commands are useful for advanced troubleshooting.

## 15. Taskkill

Tasks that appear in the "tasklist" command will have an executable and process ID (a four-digit number) associated with them. You can force stop a program using "taskkill -im" followed by the executable's name, or "taskkill -pid" followed by the process ID. Again, this is a bit redundant with Task Manager, but you can use it to kill otherwise unresponsive or hidden programs.

## Recommended by Our Readers

**nbstat** — "for looking u names of computers on your network." –Vferg

**netstat -ano | find "est"** — "to get a list of processes with established CP connections." –Eric

**tasklist | find "[process id]"** — "to get the name of the executable associated with the particular process id that I'm interested in." –Eric

**cacsl** — "most handy to manually access hidden files and folder." –A41202813

**net use** — "to map drives of networked CNC machines." –Jimbo

**chkdsk /f C:** — "checks your (C: partition) hard disk for errors and fixes bad sectors." –Kai M.

**systeminfo** — "this command gives you a thorough list of info about your computer." –Kai M.

## Command and Conquer

This article can only give you a taste of what's hidden within the Windows command line. When including all variables, there are literally hundreds of commands. Download [Microsoft's command line reference guide](#) (in Edge or Internet Explorer) for advanced support and troubleshooting.

If you appreciate the command prompt, [you'll love PowerShell](#) and its scripting environment! Learn these [crucial PowerShell commands](#) and try these [novel PowerShell functions in Windows 10](#). [Command Prompt vs. Windows PowerShell: What's the Difference?](#) [Command Prompt vs. Windows PowerShell: What's the Difference?](#) Windows users can get by without using either the Command Prompt or PowerShell. But with



Windows 10 and new features around the corner, maybe it's about time we learned. [Read More](#)

**Did we miss any crucial commands or variables? Which commands do you find yourself using frequently?**

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