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Cheat Sheet for Windows Command Prompt

Aug 3, 2011 • Danial Goodwin

I got bored today, found some command line links that I had and decided to read them all. The following is my command prompt reference in case I forget any of it. This can also be used as a how-to guide if you are new to the Windows command line. You can open the your program and start testing out the features. Just make sure you don’t accidentally delete anything important.  
Here’s the results: (if you are new to this, then first see cd and dir)  
Feel free to leave feedback!

To open the Windows command prompt you may do one of the following:

* Click Start -> Programs -> Accessories -> Command Prompt
* Click Start (or hit the Windows key), type “cmd” in search, then hit [ENTER]
* Windows Key + R (#r, not the pound symbol) brings up Run. Then type “cmd” then [ENTER]
* SHIFT + right-click in any folder or desktop, then select “open command window here”

**Basic Command Prompt Commands**

x /? = provides syntax info and complete list of all parameters for x (a command, like “cd”)  
cd = change directory  
cd .. = move to the parent directory  
cd\ = move to the root of current drive  
cd x = move to the current\x directory  
cd z: = change to the z root directory (as opposed to c:)  
copy x y = copy file x to directory y (Ex: D:\games\galaga.exe C:\programs[\awesome.exe]), [] = optional  
copy file con = display file contents in console  
copy con file.txt = create text file in the console window, end with ctrl+z (^z or F6)  
date = change the date  
del = delete/erase  
del x = deletes all files/folders fitting x  
del . = deletes all files within current directory  
del \*.\* = deletes all files within current directory  
dir = display contents of current directory (Ex: dir [c:][\programs]), [] = optional  
dir \*.txt = list all .txt files in current directory  
dir \*.? = list all files with extensions one character in length in current directory  
dir /w /p \*.\* = display all contents one screen at a time  
dir | more = display all contents one line at a time  
dir /? = provides syntax info and complete list of all dir parameters  
echo = send command line input to display (by default)  
echo sometext » somefile.txt = append line(s) of text to any file  
echo sometext > somefile.txt = overwrites file with sometext  
erase = delete/erase  
exit = exit the command prompt  
filename.txt = opens filename.txt in current directory in Notepad (or default .txt program)  
format z: = format z drive [Ex: use to format a disc or flash drive]  
mkdir x = make directory x in current directory  
move x y = more or rename x to y  
q = escapes sequential display of contents (i.e. the more parameter)  
rd x = remove/delete directory x if it’s empty  
ren x y = rename file x to y  
time = change the time  
type file = display the contents of the file ‘file’ (displays file contents in console)  
type file |more = display the contents one line at a time

**Advanced Command Prompt Commands**

ipconfig [/all] = display network adapter information (advanced)  
netstat –n = display local address and addresses you are connected to (advanced)  
netstat –nb = above with name of foreign addresses (advanced) (this shows your private IP, if you are behind a router or proxy, then your public IP address will be different)  
ping google.com = how long it takes for your computer to talk to google.com  
*\*\**

**Convert output of one process into the input of another process**

Send contents of script.js to the system debug.exe file:  
type script.js | c:\programs]debug.exe  
programs\debug.exe < script.js

**Send directory listing to a printer or file**

dir > prn (theoretically to a printer)  
dir > somefile.txt  
dir \*.mp3 > c:\Users\Dan\Desktop\musiclist.txt = print all .mp3 files in current directory to musiclist.txt

**Customize the DOS command prompt**

prompt /? = display prompt options  
prompt $p$g = display current directory followed by a greater-than symbol (Windows default)  
prompt $p$g$t = display time after the default prompt  
prompt [%computername%][%username%] $g = display computer name followed by username  
prompt = reset prompt to default

color 0a = change prompt color to matrix green and screen color to black  
color 84 = change colors to red on grey  
0 = black  
1 = blue  
2 = green  
3 = cyan  
4 = red  
5 = magenta  
6 = yellow  
7 = white  
8 = grey  
9 = bright blue  
a = bright green  
b = bright cyan  
c = bright red  
d = bright magenta  
e = bright yellow  
f = bright white

**Modify any file extension associations**

[assoc .extension=fileType]  
assoc /? = prints this information  
assoc = display list of current file extensions recognized by your computer (any fileType value may be used)  
assoc > fileextensions.txt = print list to somefile.txt in current directory  
assoc .txt = displays current file association of .txt (.docx, .html, .zip, .htaccess, assoc textfile, et cetera)  
assoc .txt= = will delete the association for the given file extension

File Extension Tips/Ideas:  
- Windows by default doesn’t know the following extensions, but check anyways with “assoc .”, “assoc .htaccess” and “assoc .xml” anyways just to be sure. If the extension is defined already, then you may not need to change it.  
assoc .=txtfile = associate extensionless files with Notepad  
assoc .htaccess=txtfile = associate nameless .htaccess files with Notepad  
assoc .xml=txtfile = associate XML files with Notepad

**Miscellaneous**

Acceptable characters: A-Z a-z 0-9 $ # & @ ! ( ) – { } ‘ ` \_ ~  
Unacceptable characters: | < > \ ^ + = ? / [ ] ” ; , \* : %

? = wildcard for any single character  
\* = wildcard for any/all characters/files  
> = redirects output to (overwrite) a file or device  
» = redirects output to (append to) a file or device  
< = directs data from a file or device to a program or device  
« = directs additional data from a file or device to a program or device  
nul = black hole

**Environmental Variables via the DOS command prompt**

* System-generated upon Windows startup:  
  %DATE% = Tue 08/02/2011  
  %TIME% = 14:23:33.37  
  %SYSTEMROOT% = C:\Windows  
  %COMPUTERNAME% = DAN-PC
* System-generated upon user login:  
  %USERNAME% = Dan  
  %USERDOMAIN% = Dan-PC
* Local machine variables for all users:  
  %PATH% = C:\Windows\system32  
  %HOMEPATH% = \Users\Dan  
  %HOMEDRIVE% = C:  
  (Hint: Use echo)

**Function Keys**

F1 = Sequential, individual repeat of previously entered characters  
F2 = Copies any number of characters from the previous command line  
F3 = Repeats the contents of the previous command line  
F4 = Deletes any number of characters from the previous command line  
F5 = Return to the previous command line  
F6 = Enters the characters ^z (CTRL+z), indicating “end of file”  
F7 = Displays a history of command-line entries for the current session (50-line cache)  
F8 = Sequentially displays previous command-line entries  
F9 = Enables user to recall previous command lines by number (0 = first line)

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# Windows PowerShell cmdlet name

With this in mind, the following chart lists Windows PowerShell command aliases, the Windows PowerShell cmdlet name, and a description of what the command actually does.

|  |  |  |
| --- | --- | --- |
| **Command alias** | **Cmdlet name** | **Description of command** |
| % | ForEach-Object | Performs an operation against each item in a collection of input objects. |
| ? | Where-Object | Selects objects from a collection based on their property values. |
| ac | Add-Content | Appends content, such as words or data, to a file. |
| asnp | Add-PSSnapIn | Adds one or more Windows PowerShell snap-ins to the current session. |
| cat | Get-Content | Gets the contents of a file. |
| cd | Set-Location | Sets the current working location to a specified location. |
| chdir | Set-Location | Sets the current working location to a specified location. |
| clc | Clear-Content | Deletes the contents of an item, but does not delete the item. |
| clear | Clear-Host | Clears the display in the host program. |
| clhy | Clear-History | Deletes entries from the command history. |
| cli | Clear-Item | Deletes the contents of an item, but does not delete the item. |
| clp | Clear-ItemProperty | Deletes the value of a property but does not delete the property. |
| cls | Clear-Host | Clears the display in the host program. |
| clv | Clear-Variable | Deletes the value of a variable. |
| cnsn | Connect-PSSession | Reconnects to disconnected sessions |
| compare | Compare-Object | Compares two sets of objects. |
| copy | Copy-Item | Copies an item from one location to another. |
| cp | Copy-Item | Copies an item from one location to another. |
| cpi | Copy-Item | Copies an item from one location to another. |
| cpp | Copy-ItemProperty | Copies a property and value from a specified location to another location. |
| curl | Invoke-WebRequest | Gets content from a webpage on the Internet. |
| cvpa | Convert-Path | Converts a path from a Windows PowerShell path to a Windows PowerShell provider path. |
| dbp | Disable-PSBreakpoint | Disables the breakpoints in the current console. |
| del | Remove-Item | Deletes files and folders. |
| diff | Compare-Object | Compares two sets of objects. |
| dir | Get-ChildItem | Gets the files and folders in a file system drive. |
| dnsn | Disconnect-PSSession | Disconnects from a session. |
| ebp | Enable-PSBreakpoint | Enables the breakpoints in the current console. |
| echo | Write-Output | Sends the specified objects to the next command in the pipeline. If the command is the last command in the pipeline, the objects are displayed in the console. |
| epal | Export-Alias | Exports information about currently defined aliases to a file. |
| epcsv | Export-Csv | Converts objects into a series of comma-separated (CSV) strings and saves the strings in a CSV file. |
| epsn | Export-PSSession | Imports commands from another session and saves them in a Windows PowerShell module. |
| erase | Remove-Item | Deletes files and folders. |
| etsn | Enter-PSSession | Starts an interactive session with a remote computer. |
| exsn | Exit-PSSession | Ends an interactive session with a remote computer. |
| fc | Format-Custom | Uses a customized view to format the output. |
| fl | Format-List | Formats the output as a list of properties in which each property appears on a new line. |
| foreach | ForEach-Object | Performs an operation against each item in a collection of input objects. |
| ft | Format-Table | Formats the output as a table. |
| fw | Format-Wide | Formats objects as a wide table that displays only one property of each object. |
| gal | Get-Alias | Gets the aliases for the current session. |
| gbp | Get-PSBreakpoint | Gets the breakpoints that are set in the current session. |
| gc | Get-Content | Gets the contents of a file. |
| gci | Get-ChildItem | Gets the files and folders in a file system drive. |
| gcm | Get-Command | Gets all commands. |
| gcs | Get-PSCallStack | Displays the current call stack. |
| gdr | Get-PSDrive | Gets drives in the current session. |
| ghy | Get-History | Gets a list of the commands entered during the current session. |
| gi | Get-Item | Gets files and folders. |
| gjb | Get-Job | Gets Windows PowerShell background jobs that are running in the current session. |
| gl | Get-Location | Gets information about the current working location or a location stack. |
| gm | Get-Member | Gets the properties and methods of objects. |
| gmo | Get-Module | Gets the modules that have been imported or that can be imported into the current session. |
| gp | Get-ItemProperty | Gets the properties of a specified item. |
| gps | Get-Process | Gets the processes that are running on the local computer or a remote computer. |
| group | Group-Object | Groups objects that contain the same value for specified properties. |
| gsn | Get-PSSession | Gets the Windows PowerShell sessions on local and remote computers. |
| gsnp | Get-PSSnapIn | Gets the Windows PowerShell snap-ins on the computer. |
| gsv | Get-Service | Gets the services on a local or remote computer. |
| gu | Get-Unique | Returns unique items from a sorted list. |
| gv | Get-Variable | Gets the variables in the current console. |
| gwmi | Get-WmiObject | Gets instances of Windows Management Instrumentation (WMI) classes or information about the available classes. |
| h | Get-History | Gets a list of the commands entered during the current session. |
| history | Get-History | Gets a list of the commands entered during the current session. |
| icm | Invoke-Command | Runs commands on local and remote computers. |
| iex | Invoke-Expression | Runs commands or expressions on the local computer. |
| ihy | Invoke-History | Runs commands from the session history. |
| ii | Invoke-Item | Performs the default action on the specified item. |
| ipal | Import-Alias | Imports an alias list from a file. |
| ipcsv | Import-Csv | Creates table-like custom objects from the items in a CSV file. |
| ipmo | Import-Module | Adds modules to the current session. |
| ipsn | Import-PSSession | Imports commands from another session into the current session. |
| irm | Invoke-RestMethod | Sends an HTTP or HTTPS request to a RESTful web service. |
| ise | powershell\_ise.exe | Explains how to use the PowerShell\_ISE.exe command-line tool. |
| iwmi | Invoke-WMIMethod | Calls Windows Management Instrumentation (WMI) methods. |
| iwr | Invoke-WebRequest | Gets content from a web page on the Internet. |
| kill | Stop-Process | Stops one or more running processes. |
| lp | Out-Printer | Sends output to a printer. |
| ls | Get-ChildItem | Gets the files and folders in a file system drive. |
| man | help | Displays information about Windows PowerShell commands and concepts. |
| md | mkdir | Creates a new item. |
| measure | Measure-Object | Calculates the numeric properties of objects, and the characters, words, and lines in string objects, such as files of text. |
| mi | Move-Item | Moves an item from one location to another. |
| mount | New-PSDrive | Creates temporary and persistent mapped network drives. |
| move | Move-Item | Moves an item from one location to another. |
| mp | Move-ItemProperty | Moves a property from one location to another. |
| mv | Move-Item | Moves an item from one location to another. |
| nal | New-Alias | Creates a new alias. |
| ndr | New-PSDrive | Creates temporary and persistent mapped network drives. |
| ni | New-Item | Creates a new item. |
| nmo | New-Module | Creates a new dynamic module that exists only in memory. |
| npssc | New-PSSessionConfigurationFile | Creates a file that defines a session configuration. |
| nsn | New-PSSession | Creates a persistent connection to a local or remote computer. |
| nv | New-Variable | Creates a new variable. |
| ogv | Out-GridView | Sends output to an interactive table in a separate window. |
| oh | Out-Host | Sends output to the command line. |
| popd | Pop-Location | Changes the current location to the location most recently pushed to the stack. You can pop the location from the default stack or from a stack that you create by using the Push-Location cmdlet. |
| ps | Get-Process | Gets the processes that are running on the local computer or a remote computer. |
| pushd | Push-Location | Adds the current location to the top of a location stack. |
| pwd | Get-Location | Gets information about the current working location or a location stack. |
| r | Invoke-History | Runs commands from the session history. |
| rbp | Remove-PSBreakpoint | Deletes breakpoints from the current console. |
| rcjb | Receive-Job | Gets the results of the Windows PowerShell background jobs in the current session. |
| rcsn | Receive-PSSession | Gets results of commands in disconnected sessions. |
| rd | Remove-Item | Deletes files and folders. |
| rdr | Remove-PSDrive | Deletes temporary Windows PowerShell drives and disconnects mapped network drives. |
| ren | Rename-Item | Renames an item in a Windows PowerShell provider namespace. |
| ri | Remove-Item | Deletes files and folders. |
| rjb | Remove-Job | Deletes a Windows PowerShell background job. |
| rm | Remove-Item | Deletes files and folders. |
| rmdir | Remove-Item | Deletes files and folders. |
| rmo | Remove-Module | Removes modules from the current session. |
| rni | Rename-Item | Renames an item in a Windows PowerShell provider namespace. |
| rnp | Rename-ItemProperty | Renames a property of an item. |
| rp | Remove-ItemProperty | Deletes the property and its value from an item. |
| rsn | Remove-PSSession | Closes one or more Windows PowerShell sessions (PSSessions). |
| rsnp | Remove-PSSnapin | Removes Windows PowerShell snap-ins from the current session. |
| rujb | Resume-Job | Restarts a suspended job |
| rv | Remove-Variable | Deletes a variable and its value. |
| rvpa | Resolve-Path | Resolves the wildcard characters in a path, and displays the path contents. |
| rwmi | Remove-WMIObject | Deletes an instance of an existing Windows Management Instrumentation (WMI) class. |
| sajb | Start-Job | Starts a Windows PowerShell background job. |
| sal | Set-Alias | Creates or changes an alias (alternate name) for a cmdlet or other command element in the current Windows PowerShell session. |
| saps | Start-Process | Starts one or more processes on the local computer. |
| sasv | Start-Service | Starts one or more stopped services. |
| sbp | Set-PSBreakpoint | Sets a breakpoint on a line, command, or variable. |
| sc | Set-Content | Replaces the contents of a file with contents that you specify. |
| select | Select-Object | Selects objects or object properties. |
| set | Set-Variable | Sets the value of a variable. Creates the variable if one with the requested name does not exist. |
| shcm | Show-Command | Creates Windows PowerShell commands in a graphical command window. |
| si | Set-Item | Changes the value of an item to the valu |

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