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An A-Z Index of the Windows CMD command line

```
    ADDUSERS Add or list users to/from a CSV file
    ADmodcmd Active Directory Bulk Modify
    ARP      Address Resolution Protocol
    ASSOC    Change file extension associations•
    ATTRIB   Change file attributes
b
    BCDBOOT  Create or repair a system partition
    BCDEDIT  Manage Boot Configuration Data
    BITSADMIN Background Intelligent Transfer Service
    BROWSTAT Get domain, browser and PDC info
c
    CACLS    Change file permissions
    CALL     Call one batch program from another•
    CERTREQ  Request certificate from a certification authority
    CERTUTIL Utility for certification authority (CA) files and services
    CD       Change Directory - move to a specific Folder•
    CHANGE   Change Terminal Server Session properties
    CHCP     Change the active console Code Page
    CHKDSK   Check Disk - check and repair disk problems
    CHKNTFS  Check the NTFS file system
    CHOICE   Accept keyboard input to a batch file
    CIPHER   Encrypt or Decrypt files/folders
    CleanMgr Automated cleanup of Temp files, recycle bin
    CLIP     Copy STDIN to the Windows clipboard
    CLS      Clear the screen•
    CMD      Start a new CMD shell
    CMDKEY   Manage stored usernames/passwords
    COLOR    Change colors of the CMD window•
    COMP     Compare the contents of two files or sets of files
    COMPACT  Compress files or folders on an NTFS partition
    COMPRESS Compress one or more files
    CONVERT  Convert a FAT drive to NTFS
    COPY     Copy one or more files to another location•
    Coreinfo Show the mapping between logical & physical processors
    CSCcmd   Client-side caching (Offline Files)
    CSVDE    Import or Export Active Directory data
d
    DATE     Display or set the date•
    DEFRAG   Defragment hard drive
    DEL      Delete one or more files•
    DELPROF  Delete user profiles
    DELTREE  Delete a folder and all subfolders
    DevCon   Device Manager Command Line Utility
    DIR      Display a list of files and folders•
    DIRQUOTA File Server Resource Manager Disk quotas
    DIRUSE   Display disk usage
    DISKPART Disk Administration
    DISKSHADOW Volume Shadow Copy Service
    DISKUSE  Show the space used in folders
    DNSCMD   Manage DNS servers
    DOSKEY   Edit command line, recall commands, and create macros
    DriverQuery Display installed device drivers
    DSACLs   Active Directory ACLs
    DSAdd    Add items to active directory (user group computer)
    DSGet    View items in active directory (user group computer)
    DSQuery  Search for items in active directory (user group computer)
    DSMod    Modify items in active directory (user group computer)
    DSMove   Move an Active directory Object
    DSRM     Remove items from Active Directory
    Dsmgmt   Directory Service Management
e
    ECHO     Display message on screen•
    ENDLOCAL End localisation of environment changes in a batch file•
    ERASE    Delete one or more files•
```

EVENTCREATE Add a message to the Windows event log
EXIT   Quit the current script/routine and set an errorlevel•
EXPAND   Uncompress CAB files
EXPLORER Open Windows Explorer
EXTRACT Uncompress CAB files
f
FC   Compare two files
FIND   Search for a text string in a file
FINDSTR Search for strings in files
FLTMC   Manage MiniFilter drivers
FOR /F   Loop command: against a set of files•
FOR /F   Loop command: against the results of another command•
FOR   Loop command: all options Files, Directory, List•
FORFILES Batch process multiple files
FORMAT   Format a disk
FREEDISK Check free disk space
FSUTIL   File and Volume utilities
FTP   File Transfer Protocol
FTYPE   File extension file type associations•
g
GETMAC   Display the Media Access Control (MAC) address
GOTO   Direct a batch program to jump to a labelled line•
GPRESULT Display Resultant Set of Policy information
GPUPDATE Update Group Policy settings
h
HELP   Online Help
HOSTNAME Display the host name of the computer
i
iCACLS   Change file and folder permissions
IEXPRESS Create a self extracting ZIP file archive
IF   Conditionally perform a command•
IFMEMBER Is the current user a member of a group
IPCONFIG Configure IP
INUSE   Replace files that are in use by the OS
l
LABEL   Edit a disk label
LGPO   Local Group Policy Object utility
LODCTR   Load PerfMon performance counters
LOGMAN   Manage Performance Monitor logs
LOGOFF   Log a user off
LOGTIME Log the date and time in a file
m
MAKECAB Create .CAB files
MAPISEND Send email from the command line
MBSAcli Baseline Security Analyzer
MEM   Display memory usage
MD   Create new folders•
MKLINK   Create a symbolic link (linkd) •
MODE   Configure a system device COM/LPT/CON
MORE   Display output, one screen at a time
MOUNTVOL Manage a volume mount point
MOVE   Move files from one folder to another•
MOVEUSER Move a user from one domain to another
MSG   Send a message
MSIEXEC Microsoft Windows Installer
MSINFO32 System Information
MSTSC   Terminal Server Connection (Remote Desktop Protocol)
n
NET   Manage network resources
NETDOM   Domain Manager
NETSH   Configure Network Interfaces, Windows Firewall & Remote access
NBTSTAT Display networking statistics (NetBIOS over TCP/IP)
NETSTAT Display networking statistics (TCP/IP)
NLSINFO Display locale information (reskit).
NLTEST   Network Location Test (AD)
NOW   Display the current Date and Time
NSLOOKUP Name server lookup
NTBACKUP Windows Backup folders to tape
NTDSUtil Active Directory Domain Services management
NTRIGHTS Edit user account rights

NVSPBIND Modify network bindings
o
OPENFILES Query or display open files
p
PATH   Display or set a search path for executable files•
PATHPING Trace route plus network latency and packet loss
PAUSE   Suspend processing of a batch file and display a message•
PERMS   Show permissions for a user
PERFMON Performance Monitor
PING   Test a network connection
POPD   Return to a previous directory saved by PUSHD•
PORTQRY Display the status of ports and services
POWERCFG Configure power settings
PRINT   Print a text file
PRINTBRM Print queue Backup/Recovery
PRNCNFG Configure or rename a printer
PRNMNGR Add, delete, list printers and printer connections
ProcDump Monitor an application for CPU spikes
PROMPT   Change the command prompt•
PsExec   Execute process remotely
PsFile   Show files opened remotely
PsGetSid Display the SID of a computer or a user
PsInfo   List information about a system
PsKill   Kill processes by name or process ID
PsList   List detailed information about processes
PsLoggedOn Who's logged on (locally or via resource sharing)
PsLogList Event log records
PsPasswd Change account password
PsPing   Measure network performance
PsService View and control services
PsShutdown Shutdown or reboot a computer
PsSuspend Suspend processes
PUSHD   Save and then change the current directory•
q
QGREP   Search file(s) for lines that match a given pattern
Query Process / QPROCESS Display processes
Query Session / QWinsta   Display all sessions (TS/Remote Desktop)
Query TermServer /QAppSrv List all servers (TS/Remote Desktop)
Query User   / QUSER   Display user sessions (TS/Remote Desktop)
r
RASDIAL Manage RAS connections
RASPHONE Manage RAS connections
RECOVER Recover a damaged file from a defective disk
REG   Registry: Read, Set, Export, Delete keys and values
REGEDIT Import or export registry settings
REGSVR32 Register or unregister a DLL
REGINI   Change Registry Permissions
REM   Record comments (remarks) in a batch file•
REN   Rename a file or files•
REPLACE Replace or update one file with another
Reset Session Delete a Remote Desktop Session
RD   Delete folder(s)•
RMTSHARE Share a folder or a printer
ROBOCOPY Robust File and Folder Copy
ROUTE   Manipulate network routing tables
RUN   Start | RUN commands
RUNAS   Execute a program under a different user account
RUNDLL32 Run a DLL command (add/remove print connections)

s
SC   Service Control
SCHTASKS Schedule a command to run at a specific time
SET   Display, set, or remove session environment variables•
SETLOCAL Control the visibility of environment variables•
SetSPN   Edit Service Principal Names
SETX   Set environment variables
SFC   System File Checker
SHARE   List or edit a file share or print share
ShellRunAs Run a command under a different user account
SHIFT   Shift the position of batch file parameters•

```
      SHORTCUT  Create a windows shortcut (.LNK file)
      SHUTDOWN  Shutdown the computer
      SIGCHECK  Display file version no. VirusTotal status & timestamp
      SLEEP     Wait for x seconds
      SLMGR     Software Licensing Management (Vista/2008)
      SORT      Sort input
      START     Start a program, command or batch file•
      STRINGS   Search for ANSI and UNICODE strings in binary files
      SUBINACL  Edit file and folder Permissions, Ownership and Domain
      SUBST     Associate a path with a drive letter
      SYSMON    Monitor and log system activity to the Windows event log
      SYSTEMINFO List system configuration
t
      TAKEOWN   Take ownership of a file
      TASKLIST  List running applications and services
      TASKKILL  End a running process
      TELNET    Communicate with another host using the TELNET protocol
      TIME      Display or set the system time•
      TIMEOUT   Delay processing of a batch file/command
      TITLE     Set the window title for a CMD.EXE session•
      TLIST     Task list with full path
      TOUCH     Change file timestamps
      TRACERT   Trace route to a remote host
      TREE      Graphical display of folder structure
      TSDISCON  Disconnect a Remote Desktop Session
      TSKILL    End a running process
      TYPE      Display the contents of a text file•
      TypePerf  Write performance data to a log file
      TZUTIL    Time Zone Utility
v
      VER       Display version information•
      VERIFY    Verify that files have been saved•
      VMConnect Connect to a Hyper-V Virtual Machine
      VOL       Display a disk label•
      VSSADMIN  Display volume shadow copy backups and shadow copy writers/providers.
w
      W32TM     Time Service
      WAITFOR   Wait for or send a signal
      WBADMIN   Windows Backup Admin
      WECUTIL   Windows Event Collector Utility
      WEVTUTIL  Clear event logs, enable/disable/query logs
      WHERE     Locate and display files in a directory tree
      WHOAMI    Output the current UserName and domain
      WINDIFF   Compare the contents of two files or sets of files
      WINRM     Windows Remote Management
      WINRS     Windows Remote Shell
      WMIC      WMI Commands
      WPEUTIL   Run WinPE commands
      WPR       Windows Performance Recorder
      WUSA      Windows Update Standalone Installer
      WUAUCLT   Windows Update
x
      XCACLS    Change file and folder permissions
      XCOPY     Copy files and folders
      ::        Comment / Remark•
```

Commands marked • are *Internal* commands only available within the CMD shell.
All other commands (not marked with •) are *external* commands.
External commands may be used under the CMD shell, PowerShell, or directly from START-RUN.

See also: a categorized list of Windows CMD commands
Microsoft Help pages: 2003 Server, 2008 Server, Windows 7/Server 2012 / Technology
Discussion forum
Links to other sites, books etc...

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An A-Z Index of Windows **PowerShell** commands

```
        %                         Alias for ForEach-Object
        ?                         Alias for Where-Object
a
    Get-Acl                       Get permission settings for a file or registry key
    Set-Acl                       Set permissions
        Active Directory          Account, Computer, Group and User cmdlets
    Get-Alias            gal       Return alias names for Cmdlets
 Import-Alias           ipal       Import an alias list from a file
    New-Alias            nal       Create a new alias.
    Set-Alias            sal       Create or change an alias
    Get-AppXPackage
 Compress-Archive                 Create a new archive/zipped file [PS 5+]
   Expand-Archive                 Extract files from an archive (zipped) file [PS 5+]
   Get-AuthenticodeSignature      Get the signature object associated with a file
   Set-AuthenticodeSignature      Place a signature in a .ps1 script or other file
b
        Backup-GPO                Backup group policy objects (GPOs)
        Begin                     Function BEGIN block
        BITS                      Background Intelligent Transfer Service cmdlets
        Break                     Exit a program loop
c
    Catch                         Handle a terminating error within a scriptblock
   Set-Location   cd/chdir/sl     Set the current working location
   Get-ChildItem    dir/ls/gci    Get child items (contents of a folder or registry key)
    Clear-Host    clear/cls       Clear the screen
    Clear-Item           cli      Remove content from a variable or an alias
      New-CimInstance   ncim      Create a new instance of a class
      Get-CIMInstance   gcim      Get a managed resource (storage, network, software etc)
    Invoke-CimMethod              Invoke instance or static method of a class
      Get-Command        gcm      Retrieve basic information about a command
   Measure-Command               Measure running time
     Trace-Command               Trace an expression or command
       Add-Computer              Add a computer to the domain
 Checkpoint-Computer             Create a system restore point (XP)
     Remove-Computer             Remove the local computer from a workgroup or domain
    Restart-Computer             Restart the operating system on a computer
    Restore-Computer             Restore the computer to a previous state
       Stop-Computer             Stop (shut down) a computer
Reset-ComputerMachinePassword Reset the machine account password for the computer
 Test-ComputerSecureChannel      Test and repair the secure channel to the domain
     Add-Content          ac      Add to the content of the item
     Get-Content cat/type/gc      Get content from item (specific location)
     Set-Content          sc      Set content in the item (specific location)
   Clear-Content          clc     Remove content from a file/item
        Continue                  Skip just this iteration of a loop
     Get-Command          gcm      Get basic information about cmdlets
   Invoke-Command         icm      Run command
   Enable-ComputerRestore        Enable System Restore on a drive
   Disable-ComputerRestore       Disable System Restore on a drive
  Get-ComputerRestorePoint       Get the restore points on the local computer
 Test-Connection                 Ping one or more computers
   ConvertFrom-CSV               Convert object properties (in CSV format) into CSV objects
   ConvertTo-CSV                 Convert .NET Framework objects into CSV variable-length strings
   ConvertTo-Html                Convert the input into an HTML table
   ConvertTo-Xml                 Convert the input into XML
   ConvertFrom-SecureString      Convert a secure string into an encrypted standard string
   ConvertTo-SecureString        Convert an encrypted standard string into a secure string
   Copy-Item     copy/cp/ci      Copy an item from a namespace location
   Export-Counter                Export Performance Counter data to log files
     Get-Counter                 Get performance counter data
   Import-Counter                Import performance counter log files
   Get-Credential                Get a security credential (username/password)
   Get-Culture                   Get region information (language and keyboard layout)
d
```

```
   Get-ChildItem    Dir/ls/gci Get child items (contents of a folder or registry key)
   Get-Date                    Get current date and time
   Set-Date                    Set system time on the host system
   Remove-Item   Del/erase/rd/rm/rmdir    Delete an item
   Compare-Object diff/compare    Compare the properties of objects
     Get-DnsClientCache        Retrieve the content of the local DNS client cache
   Clear-DnsClientCache        Clear the content of the DNS client cache
   Do                          Loop while a condition is True
     Get-DscConfiguration      Get the current config. of a node
     Get-DscLocalConfigurationManager   Get Local Config Manager settings
     Get-DscResource           Get Desired State Config. resources from a computer
     New-DSCCheckSum           Create checksum files for DSC docs/resources
   Start-DscConfiguration      Apply Desired State config to nodes
e
   Write-Output         echo  Write an object to the pipeline
         End                   Function END block
     Get-Event                 Get events in the PowerShell event queue
     New-Event                 Create a new event
  Remove-Event                 Delete events from the event queue
 Unregister-Event             Cancel an event subscription
    Wait-Event                 Wait until a particular event is raised
   Clear-EventLog              Delete all entries from an event log
     Get-Eventlog              Get event log data (2003)
   Limit-EventLog              Limit the size of the event log
     New-Eventlog              Create a new event log and a new event source
  Remove-EventLog              Delete an event log
    Show-EventLog              Display an event log
   Write-EventLog              Write an event to an event log
     Get-WinEvent              Get event log data (Vista+)
   Get-EventSubscriber         Get event subscribers
Register-EngineEvent          Subscribe to PowerShell events
Register-ObjectEvent          Subscribe to .NET events
   Register-WmiEvent           Subscribe to a WMI event
   Get-ExecutionPolicy         Get the execution policy for the shell
   Set-ExecutionPolicy         Change the execution policy (user preference)
   Export-Alias        epal  Export an alias list to a file
   Export-Clixml               Produce a clixml representation of PowerShell objects
   Export-Console              Export console configuration to a file
   Export-Csv         epcsv  Export to Comma Separated Values (spreadsheet)
   Exit-PSSession      Exit  Exit PowerShell (or exit a script)
f
   -F operator                 Format operator
   Unblock-File                Unblock files downloaded from the Internet
   ForEach-Object    foreach  Loop through each item in the pipeline ( % )
   ForEach                     Loop through each item in a collection
   ForEach method              Loop through each item in a collection
   For                         Loop through items that match a condition
   Format-Custom       fc   Format output using a customized view
   Format-List         fl   Format output as a list of properties, each on a new line
   Format-Table        ft   Format output as a table
   Format-Wide         fw   Format output as a table listing one property only
  Export-FormatData            Save formatting data from the current session
    Get-FormatData             Get the formatting data in the current session
g
   Get-Item            gi   Get a file/registry object (or any other namespace object)
   Get-ChildItem    dir/ls/gci Get child items (contents of a folder or registry key)
    Backup-GPO                 Backup group policy objects (GPOs)
   Restore-GPO                 Restore one or all GPOs from a GPO backup
    Import-GPO                 Import Group Policy settings into a specified GPO from a GPO backup
h
   Get-Help          help   Open the help file
     Add-History               Add entries to the session history
   Clear-History      clhy   Delete entries from the session history
     Get-History  history/h/ghy Get a listing of the session history
  Invoke-History     r/ihy   Invoke a previously executed Cmdlet
     Get-Host                  Get host information (PowerShell Version and Region)
   Clear-Host      clear/cls  Clear the screen
    Out-Host            oh   Send output to the host
   Read-Host                  Read a line of input from the host console
   Write-Host                 Write customized output to the host/screen
```

```
     Get-HotFix              Get Installed hotfixes
i
   if                        Conditionally perform a command
   Import-Clixml             Import a clixml file and rebuild the PS object
   Import-Csv         ipcsv  Take values from a CSV list and send objects down the pipeline
   Invoke-Command            Run commands on local and remote computers
   Invoke-Expression    iex  Run a PowerShell expression
   Invoke-WebRequest         Get content from a web page
     Get-Item            gi  Get a file object or get a registry (or other namespace) object
   Invoke-Item           ii  Invoke an executable or open a file (START)
     New-Item   md/mkdir/ni  Create a new item in a namespace
   Remove-Item  rm/del/erase/rd/ri/rmdir   Remove an item
     Set-Item            si  Change the value of an item
    Clear-ItemProperty  clp  Remove the property value from a property
    Copy-ItemProperty   cpp  Copy a property along with it's value
     Get-ItemProperty    gp  Retrieve the properties of an object
    Move-ItemProperty    mp  Move a property from one location to another
     New-ItemProperty        Set a new property
   Remove-ItemProperty   rp  Remove a property and its value
   Rename-ItemProperty  rnp  Renames a property at its location
     Set-ItemProperty    sp  Set a property at the specified location to a specified value
j
     Get-Job            gjb  Get PowerShell background jobs that are running
   Receive-Job          rcjb  Get PowerShell background job results
    Remove-Job           rjb  Delete a PowerShell background job
     Start-Job          sajb  Start a PowerShell background job
     Stop-Job           spjb  Stop a PowerShell background job
     Wait-Job            wjb  Wait for a background job
   Job Trigger cmdlets        Get/Set Scheduled job triggers
k
   Stop-Process     kill/spps  Stop a running process
l
Update-List                  Add and remove items from a collection
   Get-Location     pwd / gl  Get and display the current location
   Pop-Location         popd  Set the current working location from the stack
  Push-Location        pushd  Push a location to the stack
   Set-Location  cd/chdir/sl  Set the current working location
m
   Send-MailMessage           Send an email message
   Add-Member                 Add a member to an instance of a PowerShell object
   Get-Member            gm   Enumerate the properties of an object
    Get-Module           gmo  Get the modules imported to the session
 Import-Module          ipmo  Add a module to the session
    New-Module           nmo  Create a new dynamic module (only in memory)
 Remove-Module          rmo   Remove a module from the current session
 Export-ModuleMember          Export specific module members
   Move-Item      mv/move/mi  Move an item from one location to another
    Set-MpPreference          Configure preferences for Windows Defender
o
  Compare-Object diff/compare Compare the properties of objects
    Group-Object        group  Group objects that contain the same value
 Measure-Object               Measure the properties of an object
    New-Object                Create a new .Net object
  Select-Object       select  Select properties of objects
    Sort-Object         sort  Sort objects by property value
   Where-Object               Filter the objects passed along the command pipeline
  Out-Default                 Send output to default
  Out-File                    Send output to a file
  Out-GridView          ogv   Send output to an interactive table
  Out-Host               oh   Send output to the host
  Out-Null                    Send output to null
  Out-Printer            lp   Send the output to a printer
  Out-String                  Send objects to the host as strings
p
        Param                Script Parameters
        Pause                Pause and display the message "Press Enter to continue"
        Powershell           Launch a PowerShell session/run a script.
  Convert-Path         cvpa   Convert a ps path to a provider path
    Join-Path                 Combine a path and child-path
  Resolve-Path         rvpa   Resolves the wildcards in a path
```

```
        Split-Path              Return part of a path
         Test-Path              Return true if the path exists, otherwise return false
   Get-Pfxcertificate          Get pfx certificate information
      Pop-Location       popd   Set the current working location from the stack
     Push-Location      pushd   Push a location to the stack
          Process               Function PROCESS block
      Get-Process      ps/gps   Get a list of processes on a machine
     Debug-Process             Attach a debugger to a running process
    Start-Process  start/saps   Start one or more processes
     Stop-Process   kill/spps   Stop a running process
     Wait-Process              Wait for a process to stop
   Enable-PSBreakpoint   ebp    Enable a breakpoint in the current console
  Disable-PSBreakpoint   dbp    Disable a breakpoint in the current console
      Get-PSBreakpoint   gbp    Get the currently set breakpoints
      Set-PSBreakpoint   sbp    Set a breakpoint on a line, command, or variable
   Remove-PSBreakpoint   rbp    Delete breakpoints from the current console
      Get-PSDrive        gdr    Get drive information (DriveInfo)
      New-PSDrive    mount/ndr  Create a mapped network drive.
   Remove-PSDrive         rdr   Remove a provider/drive from its location
      Get-PSProvider            Get information for the specified provider
      Set-PSdebug               Turn script debugging on or off
   Disable-PSRemoting           Disable remote session configuration on the local computer
    Enable-PSRemoting           Run PowerShell commands on remote computers
     Enter-PSSession   etsn     Start an interactive session with a remote computer
      Exit-PSSession   exsn     End an interactive session with a remote computer
    Export-PSSession   epsn     Import commands and save them in a PowerShell module
       Get-PSSession    gsn     Get the PSSessions in the current session
    Import-PSSession   ipsn     Import commands from another session
       New-PSSession    nsn     Create a persistent connection to a local or remote computer
    Remove-PSSession    rsn     Close PowerShell sessions
     Disable-PSSessionConfiguration  Disable session configurations on the local computer
      Enable-PSSessionConfiguration  Enable session configurations on the local computer
         Get-PSSessionConfiguration  Get the registered PS session configuration
    Register-PSSessionConfiguration  Create and register a new PS session configuration
         Set-PSSessionConfiguration  Change properties of a registered session configuration
  Unregister-PSSessionConfiguration  Delete registered PS session configuration
          New-PSSessionOption        Advanced options for a PSSession
    Add-PsSnapIn        asnp    Add snap-ins to the console
    Get-PsSnapin        gsnp    List PowerShell snap-ins on this computer
    Remove-PSSnapin     rsnp    Remove PowerShell snap-ins from the console
r
    Get-Random                Get a random number
    Read-Host                 Read a line of input from the host console
    Remove-Item   rm/del/erase/rd/ri/rmdir   Remove an item
    Rename-Item       ren/rni   Change the name of an existing item
    Rename-ItemProperty         Rename a property of an item
    Return                      Exit the current scope, (function, script, or script block)
    Run/Call          &         Run a command (call operator)
s
    Scheduler cmdlets           Get/Set scheduled jobs
    Select-Object     select    Select properties of objects
    Select-XML                  Find text in an XML string or document
    Send-MailMessage            Send an email message
       Get-Service      gsv     Get a list of services
       New-Service              Create a new service
    Restart-Service             Stop and then restart a service
     Resume-Service             Resume a suspended service
        Set-Service             Change the start mode/properties of a service
      Start-Service     sasv    Start a stopped service
       Stop-Service     spsv    Stop a running service
    Suspend-Service             Suspend a running service
    Sort-Object         sort    Sort objects by property value
    Set-StrictMode              Enforce coding rules in expressions & scripts
    Start-Sleep        sleep    Suspend shell, script, or runspace activity
    Switch                      Multiple if statements
    ConvertFrom-StringData      Convert a here-string into a hash table
    Select-String               Search through strings or files for patterns
t
    Tee-Object          tee     Send input objects to two places
    New-Timespan                Create a timespan object
```

```
       Trace-Command             Trace an expression or command
       Get-Tracesource           Get components that are instrumented for tracing.
       Set-Tracesource           Trace a PowerShell component
      Start-Transaction          Start a new transaction
   Complete-Transaction          Commit the transaction
        Get-Transaction          Get information about the active transaction
        Use-Transaction          Add a command or expression to the transaction
       Undo-Transaction          Roll back a transaction
       Start-Transcript          Start a transcript of a command shell session
        Stop-Transcript          Stop the transcription process
               Trap              Handle a terminating error
          Try ... Catch          Handle a terminating error within a scriptblock
         Add-Type                Add a .NET Framework type to a PowerShell session
      Update-TypeData            Update extended type configuration
u
      Get-Uiculture             Get the ui culture information
         Unblock-File           Unblock files downloaded from the Internet
      Get-Unique          gu    Get the unique items in a collection
       Update-Formatdata         Update and append format data files
      Update-Help               Download and install help files
       Update-Typedata          Update the current extended type configuration
v
      Clear-Variable      clv   Remove the value from a variable
        Get-Variable       gv    Get a PowerShell variable
        New-Variable       nv    Create a new variable
   Remove-Variable         rv    Remove a variable and its value
        Set-Variable    set/sv   Set a variable and a value
w
Checkpoint-WebApplicationMonitoring Create a checkpoint for an IIS web app
 Get-WebApplicationMonitoringStatus Get the monitoring status of web apps
 New-WebServiceProxy          Create a Web service proxy object
Invoke-WebRequest            Get content from a web page
    Where-Object      where/?  Filter input from the pipeline
    Where method               Filter objects from a collection
    While                      Loop while a condition is True
 Add-WindowsFeature           Install roles, role services, and features
 Get-WindowsFeature           Retrieve roles, role services, and features
 Remove-WindowsFeature        Remove roles, role services, and features
    Write-Debug               Write a debug message to the host display
    Write-Error               Write an object to the error pipeline
    Write-Host                Display text on screen
    Write-Output   write/echo  Write an object to the pipeline
    Write-Progress            Display a progress bar
    Write-Verbose             Write a string to the host's verbose display
    Write-Warning             Write a string in reverse video to the display
     Set-WmiInstance          Create or update an instance of an existing WMI class
 Invoke-WmiMethod     iwmi    Call WMI methods
     Get-WmiObject     gwmi    Get WMI class information
 Remove-WmiObject     rwmi    Delete an instance of a WMI class
     Connect-WSMan            Connect to the WinRM service on a remote computer
 Disconnect-WSMan            Disconnect from the WinRM service on a remote computer
       Test-WSMan             Test if a computer is setup to receive remote commands
  Invoke-WSManAction         Invoke an action on a specified object
 Disable-WSManCredSSP         Disable Credential Security Service Provider (SSP) authentication
  Enable-WSManCredSSP         Enable Credential SSP authentication
     Get-WSManCredSSP         Get the Credential SSP configuration
   New-WSManInstance          Create a new instance of a management resource
   Get-WSManInstance          Display management information (XML or value)
   Set-WSManInstance          Modify the management information related to a resource
Remove-WSManInstance          Delete a management resource instance
   Set-WSManQuickConfig        Configure the local computer for remote management
   New-WSManSessionOption      Options for WSMan commands
z
   Zipfile                   Compress or Extract zip files
        #                    Comment / Remark
        . (source)           Run a command script in the current shell
        & (call)             Run a command, script or function
        %                    Alias for ForEach-Object
        --%                  Stop parsing input
        ?                    Alias for Where-Object
```

```
$variable = "value"     Define a variable  also: ${n!a#me} = "value"
$_                      The current pipeline object
@(...)                  Force an expression to be evaluated as an array
```

The cmdlets above are listed in A-Z order, matching the *Verb-* and/or *-Noun* and/or *Alias* of the cmdlet (so some duplicates).

PowerShell can also run all the standard CMD commands (external commands), `.cmd` batch files will run within a CMD.exe shell (so can include *internal* CMD commands), plus all Resource Kit utilities. VBScripts can be run via cscript. [Examples]

Microsoft: PowerShell 5.0 cmdlets, core cmdlets, Windows 2008 R2 cmdlets... more optional cmdlets.
Discussion forum
Links to other websites & books

<table>
<tr><td>(SS64)</td><td>links...</td><td>Syntax</td><td></td><td>Search</td></tr>
</table>

An A-Z Index of the **Linux** command line: bash + utilities.

```
alias     Create an alias •
apropos   Search Help manual pages (man -k)
apt-get   Search for and install software packages (Debian/Ubuntu)
aptitude  Search for and install software packages (Debian/Ubuntu)
aspell    Spell Checker
awk       Find and Replace text, database sort/validate/index
b
basename  Strip directory and suffix from filenames
bash      GNU Bourne-Again SHell
bc        Arbitrary precision calculator language
bg        Send to background
bind      Set or display readline key and function bindings •
break     Exit from a loop •
builtin   Run a shell builtin
bzip2     Compress or decompress named file(s)
c
cal       Display a calendar
case      Conditionally perform a command
cat       Concatenate and print (display) the content of files
cd        Change Directory
cfdisk    Partition table manipulator for Linux
chattr    Change file attributes on a Linux file system
chgrp     Change group ownership
chmod     Change access permissions
chown     Change file owner and group
chroot    Run a command with a different root directory
chkconfig System services (runlevel)
cksum     Print CRC checksum and byte counts
clear     Clear terminal screen
cmp       Compare two files
comm      Compare two sorted files line by line
command   Run a command - ignoring shell functions •
continue  Resume the next iteration of a loop •
cp        Copy one or more files to another location
cron      Daemon to execute scheduled commands
crontab   Schedule a command to run at a later time
csplit    Split a file into context-determined pieces
curl      Transfer data  from or to a server
cut       Divide a file into several parts
d
date      Display or change the date & time
dc        Desk Calculator
dd        Convert and copy a file, write disk headers, boot records
ddrescue  Data recovery tool
declare   Declare variables and give them attributes •
df        Display free disk space
diff      Display the differences between two files
diff3     Show differences among three files
dig       DNS lookup
dir       Briefly list directory contents
dircolors Colour setup for `ls'
dirname   Convert a full pathname to just a path
dirs      Display list of remembered directories
dmesg     Print kernel & driver messages
du        Estimate file space usage
e
echo      Display message on screen •
egrep     Search file(s) for lines that match an extended expression
eject     Eject removable media
enable    Enable and disable builtin shell commands •
env       Environment variables
ethtool   Ethernet card settings
eval      Evaluate several commands/arguments
exec      Execute a command
```

```
    exit      Exit the shell
    expect    Automate arbitrary applications accessed over a terminal
    expand    Convert tabs to spaces
    export    Set an environment variable
    expr      Evaluate expressions
f
    false     Do nothing, unsuccessfully
    fdformat  Low-level format a floppy disk
    fdisk     Partition table manipulator for Linux
    fg        Send job to foreground
    fgrep     Search file(s) for lines that match a fixed string
    file      Determine file type
    find      Search for files that meet a desired criteria
    fmt       Reformat paragraph text
    fold      Wrap text to fit a specified width.
    for       Expand words, and execute commands
    format    Format disks or tapes
    free      Display memory usage
    fsck      File system consistency check and repair
    ftp       File Transfer Protocol
    function  Define Function Macros
    fuser     Identify/kill the process that is accessing a file
g
    gawk      Find and Replace text within file(s)
    getopts   Parse positional parameters
    grep      Search file(s) for lines that match a given pattern
    groupadd  Add a user security group
    groupdel  Delete a group
    groupmod  Modify a group
    groups    Print group names a user is in
    gzip      Compress or decompress named file(s)
h
    hash      Remember the full pathname of a name argument
    head      Output the first part of file(s)
    help      Display help for a built-in command •
    history   Command History
    hostname  Print or set system name
    htop      Interactive process viewer
i
    iconv     Convert the character set of a file
    id        Print user and group id's
    if        Conditionally perform a command
    ifconfig  Configure a network interface
    ifdown    Stop a network interface
    ifup      Start a network interface up
    import    Capture an X server screen and save the image to file
    install   Copy files and set attributes
    iostat    Report CPU and i/o statistics
    ip        Routing, devices and tunnels
j
    jobs      List active jobs •
    join      Join lines on a common field
k
    kill      Kill a process by specifying its PID
    killall   Kill processes by name
l
    less      Display output one screen at a time
    let       Perform arithmetic on shell variables •
    link      Create a link to a file
    ln        Create a symbolic link to a file
    local     Create a function variable •
    locate    Find files
    logname   Print current login name
    logout    Exit a login shell •
    look      Display lines beginning with a given string
    lpc       Line printer control program
    lpr       Off line print
    lprint    Print a file
    lprintd   Abort a print job
    lprintq   List the print queue
```

```
   lprm     Remove jobs from the print queue
   lsattr   List file attributes on a Linux second extended file system
   lsblk    List block devices
   ls       List information about file(s)
   lsof     List open files
   lspci    List all PCI devices
m
   make     Recompile a group of programs
   man      Help manual
   mkdir    Create new folder(s)
   mkfifo   Make FIFOs (named pipes)
   mkfile   Make a file
   mkisofs  Create an hybrid ISO9660/JOLIET/HFS filesystem
   mknod    Make block or character special files
   mktemp   Make a temporary file
   more     Display output one screen at a time
   most     Browse or page through a text file
   mount    Mount a file system
   mtools   Manipulate MS-DOS files
   mtr      Network diagnostics (traceroute/ping)
   mv       Move or rename files or directories
   mmv      Mass Move and rename (files)
n
   nc       Netcat, read and write data across networks
   netstat  Networking connections/stats
   nice     Set the priority of a command or job
   nl       Number lines and write files
   nohup    Run a command immune to hangups
   notify-send  Send desktop notifications
   nslookup Query Internet name servers interactively
o
   open     Open a file in its default application
   op       Operator access
p
   passwd   Modify a user password
   paste    Merge lines of files
   pathchk  Check file name portability
   Perf     Performance analysis tools for Linux
   ping     Test a network connection
   pgrep    List processes by name
   pkill    Kill processes by name
   popd     Restore the previous value of the current directory
   pr       Prepare files for printing
   printcap Printer capability database
   printenv Print environment variables
   printf   Format and print data •
   ps       Process status
   pushd    Save and then change the current directory
   pv       Monitor the progress of data through a pipe
   pwd      Print Working Directory
q
   quota    Display disk usage and limits
   quotacheck Scan a file system for disk usage
r
   ram      ram disk device
   rar      Archive files with compression
   rcp      Copy files between two machines
   read     Read a line from standard input •
   readarray Read from stdin into an array variable •
   readonly Mark variables/functions as readonly
   reboot   Reboot the system
   rename   Rename files
   renice   Alter priority of running processes
   remsync  Synchronize remote files via email
   return   Exit a shell function
   rev      Reverse lines of a file
   rm       Remove files
   rmdir    Remove folder(s)
   rsync    Remote file copy (Synchronize file trees)
s
```

```
   screen   Multiplex terminal, run remote shells via ssh
   scp      Secure copy (remote file copy)
   sdiff    Merge two files interactively
   sed      Stream Editor
   select   Accept keyboard input
   seq      Print numeric sequences
   set      Manipulate shell variables and functions
   sftp     Secure File Transfer Program
   shift    Shift positional parameters
   shopt    Shell Options
   shutdown Shutdown or restart linux
   sleep    Delay for a specified time
   slocate  Find files
   sort     Sort text files
   source   Run commands from a file '.'
   split    Split a file into fixed-size pieces
   ss       Socket Statistics
   ssh      Secure Shell client (remote login program)
   stat     Display file or file system status
   strace   Trace system calls and signals
   su       Substitute user identity
   sudo     Execute a command as another user
   sum      Print a checksum for a file
   suspend  Suspend execution of this shell •
   sync     Synchronize data on disk with memory
t
   tail     Output the last part of file
   tar      Store, list or extract files in an archive
   tee      Redirect output to multiple files
   test     Evaluate a conditional expression
   time     Measure Program running time
   timeout  Run a command with a time limit
   times    User and system times
   touch    Change file timestamps
   top      List processes running on the system
   tput     Set terminal-dependent capabilities, color, position
   traceroute Trace Route to Host
   trap      Execute a command when the shell receives a signal •
   tr       Translate, squeeze, and/or delete characters
   true     Do nothing, successfully
   tsort    Topological sort
   tty      Print filename of terminal on stdin
   type     Describe a command •
u
   ulimit   Limit user resources •
   umask    Users file creation mask
   umount   Unmount a device
   unalias  Remove an alias •
   uname    Print system information
   unexpand Convert spaces to tabs
   uniq     Uniquify files
   units    Convert units from one scale to another
   unrar    Extract files from a rar archive
   unset    Remove variable or function names
   unshar   Unpack shell archive scripts
   until    Execute commands (until error)
   uptime   Show uptime
   useradd  Create new user account
   userdel  Delete a user account
   usermod  Modify user account
   users    List users currently logged in
   uuencode Encode a binary file
   uudecode Decode a file created by uuencode
v
   v        Verbosely list directory contents (`ls -l -b')
   vdir     Verbosely list directory contents (`ls -l -b')
   vi       Text Editor
   vmstat   Report virtual memory statistics
w
   w        Show who is logged on and what they are doing
```

```
  wait     Wait for a process to complete •
  watch    Execute/display a program periodically
  wc       Print byte, word, and line counts
  whereis  Search the user's $path, man pages and source files for a program
  which    Search the user's $path for a program file
  while    Execute commands
  who      Print all usernames currently logged in
  whoami   Print the current user id and name (`id -un')
  wget     Retrieve web pages or files via HTTP, HTTPS or FTP
  write    Send a message to another user
x
  xargs    Execute utility, passing constructed argument list(s)
  xdg-open Open a file or URL in the user's preferred application.
  xz       Compress or decompress .xz and .lzma files
  yes      Print a string until interrupted
  zip      Package and compress (archive) files.
  .        Run a command script in the current shell
  !!       Run the last command again
  ###      Comment / Remark
```

Commands marked • are bash *built-ins*
Many commands particularly the Core Utils are also available under alternate shells (C shell, Korn shell etc).

More bash commands: Linux Command Directory from O'Reilly, GNU CoreUtils.
SS64 bash discussion forum
Links to other Sites, books etc