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            List the app packages installed in a user profile.
 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.
       Get-CimAssociatedInstance  Retrieve CIM instance by an association.
       Get-CimClass     gcls   Get a list of CIM classes in a specific namespace.
 Register-CimIndicationEvent Subscribe to indications using a filter or query expression.
       New-CimInstance  ncim   Create a new instance of a class.
       Get-CimInstance  gcim   Get a managed resource (storage, network, software etc).
   Remove-CimInstance  rcim   Remove a CIM instance from a computer.
       Set-CimInstance  scim   Modify a CIM instance on a CIM server.
   Invoke-CimMethod    icim   Invoke a method of a CIM class or CIM instance.
       Get-CimSession   gcms   Get current CIM session objects.
       New-CimSession   ncms   Create a CIM session.
       New-CimSessionOption    Advanced options for New-CimSession.
   Remove-CimSession   rcms   Remove one or more CIM session objects.
       Get-Clipboard           Get the current Windows clipboard entry.
       Set-Clipboard           Set the current Windows clipboard entry.
       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.
   Rename-Computer           Rename a computer.
   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.
       Get-ComputerInfo       Get system and operating system properties.
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.
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    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.
      Get-FileHash              Compute the hash value for a file.
    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.
Update-Help                     Download and install the newest help files on your computer.
     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).
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   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.
   Invoke-CimMethod    icim  Invoke a method of a CIM class or CIM instance.
   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.
   Invoke-RestMethod          Send an HTTP or HTTPS request to a RESTful web service.
     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.
     MessageBox               Display a message box to the user
    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.
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   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-PSCallStack    gcs     Display the current call stack.
     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                     Check multiple conditions
   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.
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   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-WindowsCapability  Install a Windows capability package on the specified OS image.
      Get-WindowsCapability  Get capabilities for an image or a running OS.
   Remove-WindowsCapability  Uninstall a Windows capability package from an image.
      Add-WindowsFeature     Install roles, role services, and features. (Server 2008 R2).
       Get-WindowsFeature    Retrieve roles, role services, and features.
 Install-WindowsFeature      Install roles, role services, or features (Server 2012 R2).
Uninstall-WindowsFeature     Uninstall/remove roles, role services, and features (2012 R2)
Disable-WindowsOptionalFeature Disable a feature in a Windows image.
Enable-WindowsOptionalFeature Enable a feature in a Windows image.
   Get-WindowsOptionalFeature Get information about optional features in a Windows image.
   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