**ASSOC**

Displays or modifies file extension associations

ASSOC [.ext[=[fileType]]]

.ext Specifies the file extension to associate the file type with fileType

Type ASSOC without parameters to display the current file associations. If ASSOC is invoked with just a file extension, it displays the current file association for that file extension. Specify nothing for the file type and the command will delete the association for the file extension.ATTRIB

Displays or changes file attributes.

Example:

C:\Users\Student>assoc .txt

.txt=txtfile

**ATTRIB**

Display or change the attributes of a file or directory. Here is the syntax and some examples:

attrib [+R|-R] [+A|-A] [+S|-S] [+H|-H] [drive:][path][filename] [/S [/D]]

Parameters:

- `+R` / `-R`: Sets or clears the Read-only attribute.

- `+A` / `-A`: Sets or clears the Archive attribute.

- `+S` / `-S`: Sets or clears the System attribute.

- `+H` / `-H`: Sets or clears the Hidden attribute.

- `[drive:][path][filename]`: Specifies the file or directory for which you want to display or change attributes.

- `/S`: Processes matching files in the current directory and all of its subdirectories.

- `/D`: Processes folders as well.

Examples:

1. To display the attributes of a file:

attrib filename.txt

2. To add the Read-only attribute to a file:

attrib +R filename.txt

3. To remove the Hidden attribute from a directory and all its subdirectories:

attrib -H /S /D C:\example\directory

4. To set the Archive attribute for all files in a directory and its subdirectories:

attrib +A /S /D C:\example\directory\\*.\*

**BREAK**

Sets or Clears Extended CTRL+C checking on DOS system

This is present for Compatibility with DOS systems. It has no effect under Windows.

If Command Extensions are enabled, and running on the Windows platform, then the BREAK command will enter a hard coded breakpoint. if being debugged by a debugger.

**BCDEDIT**

======================================

/bootsequence Sets the one-time boot sequence for the boot manager.

/default Sets the default entry that the boot manager will use.

/displayorder Sets the order in which the boot manager displays the multiboot menu.

/timeout Sets the boot manager time-out value.

/toolsdisplayorder Sets the order in which the boot manager displays the tools menu.

Commands that control Emergency Management Services for a boot application ==========================================================================

/bootems Enables or disables Emergency Management Services for a boot application.

/ems Enables or disables Emergency Management Services for an operating system entry.

/emssettings Sets the global Emergency Management Services parameters.

Command that control debugging

==============================

/bootdebug Enables or disables boot debugging for a boot application.

/dbgsettings Sets the global debugger parameters.

/debug Enables or disables kernel debugging for an operating system entry.

/hypervisorsettings Sets the hypervisor parameters.

Command that control remote event logging

=========================================

/eventsettings Sets the global remote event logging parameters.

/event Enables or disables remote event logging for an operating system entry.

**CACLS**

NOTE: Cacls is now deprecated, please use Icacls.

Displays or modifies access control lists (ACLs) of files

CACLS filename [/T] [/M] [/L] [/S[:SDDL]] [/E] [/C] [/G user:perm]

[/R user [...]] [/P user:perm [...]] [/D user [...]]

filename Displays ACLs.

/T Changes ACLs of specified files in the current directory and all subdirectories.

/L Work on the Symbolic Link itself versus the target

/M Changes ACLs of volumes mounted to a directory

/S Displays the SDDL string for the DACL.

/S:SDDL Replaces the ACLs with those specified in the SDDL string (not valid with /E, /G, /R, /P, or /D).

/E Edit ACL instead of replacing it.

/C Continue on access denied errors.

/G user:perm Grant specified user access rights.

Perm can be: R Read

W Write

C Change (write)

F Full control

/R user Revoke specified user's access rights (only valid with /E).

/P user:perm Replace specified user's access rights.

Perm can be: N None

R Read

W Write

C Change (write)

F Full control

/D user Deny specified user access.

Wildcards can be used to specify more than one file in a command.

You can specify more than one user in a command.

Abbreviations:

CI - Container Inherit. The ACE will be inherited by directories.

OI - Object Inherit. The ACE will be inherited by files.

IO - Inherit Only. The ACE does not apply to the current file/directory.

ID - Inherited. The ACE was inherited from the parent directory's ACL.

**CALL**

Calls one batch program from another.

CALL [drive:][path]filename [batch-parameters]

batch-parameters Specifies any command-line information required by the batch program.

If Command Extensions are enabled CALL changes as follows:

CALL command now accepts labels as the target of the CALL. The syntax is:

CALL :label arguments

A new batch file context is created with the specified arguments and control is passed to the statement after the label specified. You must "exit" twice by reaching the end of the batch script file twice. The

first time you read the end, control will return to just after the CALL statement. The second time will exit the batch script. Type GOTO /? for a description of the GOTO :EOF extension that will allow you to

"return" from a batch script.

In addition, expansion of batch script argument references (%0, %1,etc.) have been changed as follows:

%\* in a batch script refers to all the arguments (e.g. %1 %2 %3 %4 %5 ...)

Substitution of batch parameters (%n) has been enhanced. You can now use the following optional syntax:

%~1 - expands %1 removing any surrounding quotes (")

%~f1 - expands %1 to a fully qualified path name

%~d1 - expands %1 to a drive letter only

%~p1 - expands %1 to a path only

%~n1 - expands %1 to a file name only

%~x1 - expands %1 to a file extension only

%~s1 - expanded path contains short names only

%~a1 - expands %1 to file attributes

%~t1 - expands %1 to date/time of file

%~z1 - expands %1 to size of file

%~$PATH:1 - searches the directories listed in the PATH environment variable and expands %1 to the fully qualified name of the first one found. If the environment variable name is not defined or the file is not found by the search, then this modifier expands to the empty string

The modifiers can be combined to get compound results:

%~dp1 - expands %1 to a drive letter and path only

%~nx1 - expands %1 to a file name and extension only

%~dp$PATH:1 - searches the directories listed in the PATH environment variable for %1 and expands to the drive letter and path of the first one found.

%~ftza1 - expands %1 to a DIR like output line In the above examples %1 and PATH can be replaced by other valid values. The %~ syntax is terminated by a valid argument number. The %~ modifiers may not be used with %\*

**CHDIR | CD**

Displays the name of or changes the current directory.

CHDIR [/D] [drive:][path]

CHDIR [..]

CD [/D] [drive:][path]

CD [..]

.. Specifies that you want to change to the parent directory.

Type CD drive: to display the current directory in the specified drive.

Type CD without parameters to display the current drive and directory.

Use the /D switch to change current drive in addition to changing current directory for a drive.

If Command Extensions are enabled CHDIR changes as follows:

The current directory string is converted to use the same case as the on disk names. So CD C:\TEMP would actually set the current directory to C:\Temp if that is the case on disk.

CHDIR command does not treat spaces as delimiters, so it is possible to CD into a subdirectory name that contains a space without surrounding the name with quotes. For example:

cd \winnt\profiles\username\programs\start menu

is the same as:

cd "\winnt\profiles\username\programs\start menu"

which is what you would have to type if extensions were disabled.

**CHCP**

Displays or sets the active code page number.

CHCP [nnn]

nnn Specifies a code page number.

Type CHCP without a parameter to display the active code page number.

**CHKDSK**

Checks a disk and displays a status report.

CHKDSK [volume[[path]filename]]] [/F] [/V] [/R] [/X] [/I] [/C] [/L[:size]] [/B] [/scan] [/spotfix]

volume Specifies the drive letter (followed by a colon), point, or volume name.

filename FAT/FAT32 only: Specifies the files to check for fragmentation.

/F Fixes errors on the disk.

/V On FAT/FAT32: Displays the full path and name of every file on the disk.

On NTFS: Displays cleanup messages if any.

/R Locates bad sectors and recovers readable information (implies /F, when /scan not specified).

/L:size NTFS only: Changes the log file size to the specified number of kilobytes. If size is not specified, displays current size.

/X Forces the volume to dismount first if necessary. All opened handles to the volume would then be invalid (implies /F).

/I NTFS only: Performs a less vigorous check of index entries.

/C NTFS only: Skips checking of cycles within the folder structure.

/B NTFS only: Re-evaluates bad clusters on the volume (implies /R)

/scan NTFS only: Runs an online scan on the volume

/forceofflinefix NTFS only: (Must be used with "/scan") Bypass all online repair; all defects found are queued for offline repair (i.e. "chkdsk /spotfix").

/perf NTFS only: (Must be used with "/scan") Uses more system resources to complete a scan as fast as

possible. This may have a negative performance impact on

other tasks running on the system.

/spotfix NTFS only: Runs spot fixing on the volume

/sdcleanup NTFS only: Garbage collect unneeded security descriptor data (implies /F).

/offlinescanandfix Runs an offline scan and fix on the volume.

/freeorphanedchains FAT/FAT32/exFAT only: Frees any orphaned cluster chains instead of recovering their contents.

/markclean FAT/FAT32/exFAT only: Marks the volume clean if no corruption was detected, even if /F was not specified.

The /I or /C switch reduces the amount of time required to run Chkdsk by skipping certain checks of the volume.

**CHKNTFS**

Displays or modifies the checking of disk at boot time.

CHKNTFS volume [...]

CHKNTFS /D

CHKNTFS /T[:time]

CHKNTFS /X volume [...]

CHKNTFS /C volume [...]

volume Specifies the drive letter (followed by a colon), mount point, or volume name.

/D Restores the machine to the default behavior; all drives are checked at boot time and chkdsk is run on those that are dirty.

/T:time Changes the AUTOCHK initiation countdown time to the specified amount of time in seconds. If time is not specified, displays the current setting.

/X Excludes a drive from the default boot-time check. Excluded drives are not accumulated between command invocations.

/C Schedules a drive to be checked at boot time; chkdsk will run if the drive is dirty.

If no switches are specified, CHKNTFS will display if the specified drive is dirty or scheduled to be checked on next reboot.

**CLS**

Clears the screen.

**CMD**

Starts a new instance of the Windows command interpreter

CMD [/A | /U] [/Q] [/D] [/E:ON | /E:OFF] [/F:ON | /F:OFF] [/V:ON | /V:OFF]

[[/S] [/C | /K] string]

/C Carries out the command specified by string and then terminates

/K Carries out the command specified by string but remains

/S Modifies the treatment of string after /C or /K (see below)

/Q Turns echo off

/D Disable execution of AutoRun commands from registry (see below)

/A Causes the output of internal commands to a pipe or file to be ANSI

/U Causes the output of internal commands to a pipe or file to be Unicode

/T:fg Sets the foreground/background colors (see COLOR /? for more info)

/E:ON Enable command extensions (see below)

/E:OFF Disable command extensions (see below)

/F:ON Enable file and directory name completion characters (see below)

/F:OFF Disable file and directory name completion characters (see below)

/V:ON Enable delayed environment variable expansion using ! as the delimiter. For example, /V:ON would allow !var! to expand the variable var at execution time. The var syntax expands variables at input time, which is quite a different thing when inside of a FOR loop.

/V:OFF Disable delayed environment expansion.

Note that multiple commands separated by the command separator '&&' are accepted for string if surrounded by quotes. Also, for compatibility reasons, /X is the same as /E:ON, /Y is the same as /E:OFF and /R is the same as /C. Any other switches are ignored.

**COLOR**

color//

Sets the default console foreground and background colors.

COLOR [attr]

attr Specifies color attribute of console output

Color attributes are specified by TWO hex digits -- the first corresponds to the background; the second the foreground. Each digit can be any of the following values:

0 = Black 8 = Gray

1 = Blue 9 = Light Blue

2 = Green A = Light Green

3 = Aqua B = Light Aqua

4 = Red C = Light Red

5 = Purple D = Light Purple

6 = Yellow E = Light Yellow

7 = White F = Bright White

If no argument is given, this command restores the color to what it was when CMD.EXE started. This value either comes from the current console window, the /T command line switch or from the DefaultColor registry value.

The COLOR command sets ERRORLEVEL to 1 if an attempt is made to execute the COLOR command with a foreground and background color that are the same.

Example: "COLOR fc" produces light red on bright white

**COMP**

Compares the contents of two files or sets of files.

COMP [data1] [data2] [/D] [/A] [/L] [/N=number] [/C] [/OFF[LINE]] [/M]

data1 Specifies location and name(s) of first file(s) to compare.

data2 Specifies location and name(s) of second files to compare.

/D Displays differences in decimal format.

/A Displays differences in ASCII characters.

/L Displays line numbers for differences.

/N=number Compares only the first specified number of lines in each file.

/C Disregards case of ASCII letters when comparing files.

/OFF[LINE] Do not skip files with offline attribute set.

/M Do not prompt for compare more files.

To compare sets of files, use wildcards in data1 and data2 parameters.

**COMPACT**

Displays or alters the compression of files on NTFS partitions.

COMPACT [/C | /U] [/S[:dir]] [/A] [/I] [/F] [/Q] [/EXE[:algorithm]]

[/CompactOs[:option] [/WinDir:dir]] [filename [...]]

/C Compresses the specified files. Directories will be marked so that files added afterward will be compressed unless /EXE is specified.

/U Uncompresses the specified files. Directories will be marked so that files added afterward will not be compressed. If /EXE is specified, only files compressed as executables will

be uncompressed; if this is omitted, only NTFS compressed files will be uncompressed.

/S Performs the specified operation on files in the given directory and all subdirectories. Default "dir" is the current directory.

/A Displays files with the hidden or system attributes. These files are omitted by default.

/I Continues performing the specified operation even after errors have occurred. By default, COMPACT stops when an error is encountered.

/F Forces the compress operation on all specified files, even those which are already compressed. Already-compressed files are skipped by default.

/Q Reports only the most essential information.

/EXE Use compression optimized for executable files which are read frequently and not modified. Supported algorithms are:

XPRESS4K (fastest) (default)

XPRESS8K

XPRESS16K

LZX (most compact)

/CompactOs Set or query the system's compression state. Supported options are:

query - Query the system's Compact state.

always - Compress all OS binaries and set the system state to Compact which remains unless administrator changes it.

never - Uncompress all OS binaries and set the system state to non Compact which remains unless administrator changes it.

/WinDir Used with /CompactOs:query, when querying the offline OS. Specifies the directory where Windows is installed.

filename Specifies a pattern, file, or directory.

Used without parameters, COMPACT displays the compression state of the current directory and any files it contains. You may use multiple filenames and wildcards. You must put spaces between multiple parameters.

**CONVERT**

Converts a FAT volume to NTFS.

CONVERT volume /FS:NTFS [/V] [/CvtArea:filename] [/NoSecurity] [/X]

volume Specifies the drive letter (followed by a colon), mount point, or volume name.

/FS:NTFS Specifies that the volume will be converted to NTFS.

/V Specifies that Convert will be run in verbose mode.

/CvtArea:filename

Specifies a contiguous file in the root directory that will be the place holder for NTFS system files.

/NoSecurity Specifies that the security settings on the converted files and directories allow access by all users.

/X Forces the volume to dismount first if necessary. All open handles to the volume will not be valid.

**COPY**

Copies one or more files to another location.

COPY [/D] [/V] [/N] [/Y | /-Y] [/Z] [/L] [/A | /B ] source [/A | /B]

[+ source [/A | /B] [+ ...]] [destination [/A | /B]]

source Specifies the file or files to be copied.

/A Indicates an ASCII text file.

/B Indicates a binary file.

/D Allow the destination file to be created decrypted destination Specifies the directory and/or filename for the new file(s).

/V Verifies that new files are written correctly.

/N Uses short filename, if available, when copying a file with a non-8dot3 name.

/Y Suppresses prompting to confirm you want to overwrite an existing destination file.

/-Y Causes prompting to confirm you want to overwrite an existing destination file.

/Z Copies networked files in restartable mode.

/L If the source is a symbolic link, copy the link to the target instead of the actual file the source link points to.

The switch /Y may be preset in the COPYCMD environment variable. This may be overridden with /-Y on the command line. Default is to prompt on overwrites unless COPY command is being executed from

within a batch script.

To append files, specify a single file for destination, but multiple files

for source (using wildcards or file1+file2+file3 format).

**COPY CON**

The `COPY CON` command in MS-DOS is used to create or edit a text file directly from the command prompt. The name "CON" is short for console, representing the console input. This command is often used to quickly create small text files without using a separate text editor.

Here's how you can use the `COPY CON` command:

COPY CON filename.txt

- Syntax:

- `COPY CON` followed by the name of the file you want to create or edit.

- To end input:

- To end the input and save the file, press `Ctrl + Z` (or `Ctrl + D` on some systems), and then press Enter.

- Example:

- To create a new text file named "example.txt," you would enter:

COPY CON example.txt

This is some text.

Press Ctrl+Z to save and exit.

- Note:

- The `CON` device is used for console input. When you use `COPY CON`, you are essentially copying from the console (your keyboard) to a file.

Keep in mind that the `COPY CON` method is suitable for small text files, and it might not be the most convenient way to handle larger or more complex documents. For more extensive text editing tasks, you may prefer to use a dedicated text editor or word processor.

**CLIP**

Description:

Redirects output of command line tools to the Windows clipboard. This text output can then be pasted into other programs.

Parameter List:

/? Displays this help message.

Examples:

DIR | CLIP Places a copy of the current directory listing into the Windows clipboard.

CLIP < README.TXT Places a copy of the text from readme.txt on to the Windows clipboard.

**DATE**

Displays or sets the date.

DATE [/T | date]

Type DATE without parameters to display the current date setting and a prompt for a new one. Press ENTER to keep the same date.

If Command Extensions are enabled the DATE command supports the /T switch which tells the command to just output the

current date, without prompting for a new date.

**DEL**

Deletes one or more files.

DEL [/P] [/F] [/S] [/Q] [/A[[:]attributes]] names

ERASE [/P] [/F] [/S] [/Q] [/A[[:]attributes]] names

names Specifies a list of one or more files or directories. Wildcards may be used to delete multiple files. If a directory is specified, all files within the directory will be deleted.

/P Prompts for confirmation before deleting each file.

/F Force deleting of read-only files.

/S Delete specified files from all subdirectories.

/Q Quiet mode, do not ask if ok to delete on global wildcard

/A Selects files to delete based on attributes

attributes R Read-only files S System files

H Hidden files A Files ready for archiving

I Not content indexed Files L Reparse Points

O Offline files - Prefix meaning not

If Command Extensions are enabled DEL and ERASE change as follows:

The display semantics of the /S switch are reversed in that it shows you only the files that are deleted, not the ones it could not find.

**DIR**

Displays a list of files and subdirectories in a directory.

DIR [drive:][path][filename] [/A[[:]attributes]] [/B] [/C] [/D] [/L] [/N] [/O[[:]sortorder]] [/P] [/Q] [/R] [/S] [/T[[:]timefield]] [/W] [/X] [/4]

[drive:][path][filename]

Specifies drive, directory, and/or files to list.

/A Displays files with specified attributes.

attributes D Directories R Read-only files

H Hidden files A Files ready for archiving

S System files I Not content indexed files

L Reparse Points O Offline files

- Prefix meaning not

/O List by files in sorted order.

sortorder N By name (alphabetic) S By size (smallest first)

E By extension (alphabetic) D By date/time (oldest first)

G Group directories first - Prefix to reverse order

/S Displays files in specified directory and all subdirectories.

/W Uses wide list format.

**DISKPART**

Displays or configures Disk Partition properties.

**DOSKEY**

Edits command lines, recalls Windows commands, and creates macros.

DOSKEY [/REINSTALL] [/LISTSIZE=size] [/MACROS[:ALL | :exename]]

[/HISTORY] [/INSERT | /OVERSTRIKE] [/EXENAME=exename] [/MACROFILE=filename]

[macroname=[text]]

/REINSTALL Installs a new copy of Doskey.

/LISTSIZE=size Sets size of command history buffer.

/MACROS Displays all Doskey macros.

/MACROS:ALL Displays all Doskey macros for all executables which have Doskey macros.

/MACROS:exename Displays all Doskey macros for the given executable.

/HISTORY Displays all commands stored in memory.

/INSERT Specifies that new text you type is inserted in old text.

/OVERSTRIKE Specifies that new text overwrites old text.

/EXENAME=exename Specifies the executable.

/MACROFILE=filename Specifies a file of macros to install.

macroname Specifies a name for a macro you create.

text Specifies commands you want to record.

UP and DOWN ARROWS recall commands; ESC clears command line; F7 displays command history; ALT+F7 clears command history; F8 searches command history; F9 selects a command by number; ALT+F10 clears macro definitions.

The following are some special codes in Doskey macro definitions:

$T Command separator. Allows multiple commands in a macro.

$1-$9 Batch parameters. Equivalent to %1-%9 in batch programs.

$\* Symbol replaced by everything following macro name on command line.

**DRIVERQUERY**

DRIVERQUERY [/S system [/U username [/P [password]]]]

[/FO format] [/NH] [/SI] [/V]

Description:

Enables an administrator to display a list of

installed device drivers.

Parameter List:

/S system Specifies the remote system to connect to.

/U [domain\]user Specifies the user context under which the command should execute.

/P [password] Specify the password for the given user context.

/FO format Specifies the type of output to display. Valid values to be passed with the switch are "TABLE", "LIST", "CSV".

/NH Specifies that the "Column Header" should not be displayed. Valid for "TABLE" and "CSV" format only.

/SI Provides information about signed drivers.

/V Displays verbose output. Not valid for signed drivers.

/? Displays this help message.

Examples:

DRIVERQUERY

DRIVERQUERY /FO CSV /SI

DRIVERQUERY /NH

DRIVERQUERY /S ipaddress /U user /V

DRIVERQUERY /S system /U domain\user /P password /FO LIST

**ECHO**

Displays messages, or turns command-echoing on or off.

ECHO [ON | OFF]

ECHO [message]

Type ECHO without parameters to display the current echo setting.

**ENDLOCAL**

Ends localization of environment changes in a batch file.

Environment changes made after ENDLOCAL has been issued are

not local to the batch file; the previous settings are not

restored on termination of the batch file.

ENDLOCAL

If Command Extensions are enabled ENDLOCAL changes as follows:

If the corresponding SETLOCAL enable or disabled command extensions

using the new ENABLEEXTENSIONS or DISABLEEXTENSIONS options, then

after the ENDLOCAL, the enabled/disabled state of command extensions

will be restored to what it was prior to the matching SETLOCAL

command execution.

**ERASE**

Deletes one or more files.

DEL [/P] [/F] [/S] [/Q] [/A[[:]attributes]] names

ERASE [/P] [/F] [/S] [/Q] [/A[[:]attributes]] names

names Specifies a list of one or more files or directories. Wildcards may be used to delete multiple files. If a directory is specified, all files within the directory will be deleted.

/P Prompts for confirmation before deleting each file.

/F Force deleting of read-only files.

/S Delete specified files from all subdirectories.

/Q Quiet mode, do not ask if ok to delete on global wildcard

/A Selects files to delete based on attributes

attributes R Read-only files S System files

H Hidden files A Files ready for archiving

I Not content indexed Files L Reparse Points

O Offline files - Prefix meaning not

If Command Extensions are enabled DEL and ERASE change as follows:

The display semantics of the /S switch are reversed in that it shows you only the files that are deleted, not the ones it could not find.

**EXIT**

Quits the CMD.EXE program (command interpreter).

**FC**

Compares two files or sets of files and displays the differences between them

FC [/A] [/C] [/L] [/LBn] [/N] [/OFF[LINE]] [/T] [/U] [/W] [/nnnn]

[drive1:][path1]filename1 [drive2:][path2]filename2

FC /B [drive1:][path1]filename1 [drive2:][path2]filename2

/A Displays only first and last lines for each set of differences.

/B Performs a binary comparison.

/C Disregards the case of letters.

/L Compares files as ASCII text.

/LBn Sets the maximum consecutive mismatches to the specified number of lines.

/N Displays the line numbers on an ASCII comparison.

/OFF[LINE] Do not skip files with offline attribute set.

/T Does not expand tabs to spaces.

/U Compare files as UNICODE text files.

/W Compresses white space (tabs and spaces) for comparison.

/nnnn Specifies the number of consecutive lines that must match after a mismatch.

[drive1:][path1]filename1

Specifies the first file or set of files to compare.

[drive2:][path2]filename2

Specifies the second file or set of files to compare.

**FIND**

Searches for a text string in a file or files.

FIND [/V] [/C] [/N] [/I] [/OFF[LINE]] "string" [[drive:][path]filename[ ...]]

/V Displays all lines NOT containing the specified string.

/C Displays only the count of lines containing the string.

/N Displays line numbers with the displayed lines.

/I Ignores the case of characters when searching for the string.

/OFF[LINE] Do not skip files with offline attribute set.

"string" Specifies the text string to find.

[drive:][path]filename

Specifies a file or files to search.

If a path is not specified, FIND searches the text typed at the prompt or piped from another command.

**FINDSTR**

Searches for strings in files.

FINDSTR [/B] [/E] [/L] [/R] [/S] [/I] [/X] [/V] [/N] [/M] [/O] [/P] [/F:file]

[/C:string] [/G:file] [/D:dir list] [/A:color attributes] [/OFF[LINE]]

strings [[drive:][path]filename[ ...]]

/B Matches pattern if at the beginning of a line.

/E Matches pattern if at the end of a line.

/L Uses search strings literally.

/R Uses search strings as regular expressions.

/S Searches for matching files in the current directory and all subdirectories.

/I Specifies that the search is not to be case-sensitive.

/X Prints lines that match exactly.

/V Prints only lines that do not contain a match.

/N Prints the line number before each line that matches.

/M Prints only the filename if a file contains a match.

/O Prints character offset before each matching line.

/P Skip files with non-printable characters.

/OFF[LINE] Do not skip files with offline attribute set.

/A:attr Specifies color attribute with two hex digits. See "color /?"

/F:file Reads file list from the specified file(/ stands for console).

/C:string Uses specified string as a literal search string.

/G:file Gets search strings from the specified file(/ stands for console).

/D:dir Search a semicolon delimited list of directories

strings Text to be searched for.

[drive:][path]filename

Specifies a file or files to search.

Use spaces to separate multiple search strings unless the argument is prefixed with /C. For example, 'FINDSTR "hello there" x.y' searches for "hello" or "there" in file x.y. 'FINDSTR /C:"hello there" x.y' searches for

"hello there" in file x.y.

Regular expression quick reference:

. Wildcard: any character

\* Repeat: zero or more occurrences of previous character or class

^ Line position: beginning of line

$ Line position: end of line

[class] Character class: any one character in set

[^class] Inverse class: any one character not in set

[x-y] Range: any characters within the specified range

\x Escape: literal use of metacharacter x

\<xyz Word position: beginning of word

xyz\> Word position: end of word

**FOR**

Runs a specified command for each file in a set of files.

FOR %variable IN (set) DO command [command-parameters]

%variable Specifies a single letter replaceable parameter.

(set) Specifies a set of one or more files. Wildcards may be used.

command Specifies the command to carry out for each file.

command-parameters

Specifies parameters or switches for the specified command.

**FORMAT**

Formats a disk for use with Windows.

FORMAT volume [/FS:file-system] [/V:label] [/Q] [/L[:state]] [/A:size] [/C] [/I:state] [/X] [/P:passes] [/S:state]

FORMAT volume [/V:label] [/Q] [/F:size] [/P:passes]

FORMAT volume [/V:label] [/Q] [/T:tracks /N:sectors] [/P:passes]

FORMAT volume [/V:label] [/Q] [/P:passes]

FORMAT volume [/Q]

volume Specifies the drive letter (followed by a colon), mount point, or volume name.

/FS:filesystem Specifies the type of the file system (FAT, FAT32, exFAT, NTFS, UDF, ReFS).

/V:label Specifies the volume label.

/Q Performs a quick format. Note that this switch overrides /P.

/C NTFS only: Files created on the new volume will be compressed by default.

/X Forces the volume to dismount first if necessary. All opened handles to the volume would no longer be valid.

/R:revision UDF only: Forces the format to a specific UDF version (1.02, 1.50, 2.00, 2.01, 2.50). The default revision is 2.01.

/D UDF 2.50 only: Metadata will be duplicated.

/L[:state] NTFS Only: Overrides the default size of file record. default, a non-tiered volume will be formatted with small size file records and a tiered volume will be formatted with large size file records. /L and /L:enable forces format to use large size file records and /L:disable forces format to use small size file records.

/A:size Overrides the default allocation unit size. Default settings are strongly recommended for general use.

ReFS supports 4096, 64K.

NTFS supports 512, 1024, 2048, 4096, 8192, 16K, 32K, 64K, 128K, 256K, 512K, 1M, 2M.

FAT supports 512, 1024, 2048, 4096, 8192, 16K, 32K, 64K, (128K, 256K for sector size > 512 bytes).

FAT32 supports 512, 1024, 2048, 4096, 8192, 16K, 32K, 64K, (128K, 256K for sector size > 512 bytes).

exFAT supports 512, 1024, 2048, 4096, 8192, 16K, 32K, 64K, 128K, 256K, 512K, 1M, 2M, 4M, 8M, 16M, 32M.

Note that the FAT and FAT32 files systems impose the

following restrictions on the number of clusters on a volume:

FAT: Number of clusters <= 65526

FAT32: 65526 < Number of clusters < 4177918

Format will immediately stop processing if it decides that the above requirements cannot be met using the specified cluster size.NTFS compression is not supported for allocation unit sizes above 4096.

/F:size Specifies the size of the floppy disk to format (1.44)

/T:tracks Specifies the number of tracks per disk side.

/N:sectors Specifies the number of sectors per track.

/P:count Overwrite the volume "count" times using a different random number each time followed by writing zeros to every sector. If "count" is zero, we'll just zero every sector on the volume. This switch is ignored when /Q is specified.

/S:state Specifies support for short filenames (enable, disable) Short names are disabled by default

/TXF:state Specifies if txf should be enabled/disabled (enable, disable) is enabled by default

/I:state ReFS only: Specifies whether integrity should be enabled on the new volume. "state" is either "enable" or "disable"

Integrity is enabled on storage that supports data redundancy by default.

/DAX[:state] NTFS Only: Enable direct access storage (DAX) mode for this volume. In DAX mode, the volume is accessed via the memory bus, boosting IO performance. A volume can be formatted with DAX mode only if the hardware is DAX capable. State can specify "enable" or "disable". /DAX is considered as /DAX:enable.

/LogSize[:size] NTFS Only: Specifies the size for NTFS log file in kilobytes.

The minimum supported size is 2MB, so specifying size smaller than 2MB will result in a 2MB log file. Zero indicates the default value which generally depend on the volume size.

/NoRepairLogs NTFS Only: Disables NTFS repair logs. If the flag is set spotfix (i.e. chkdsk /spotfix) will not work.

/NoTrim Skip sending trim (delete notification) during format.

/DevDrv ReFS Only: Format the volume as a dev drive. A dev drive or a developer volume, is a volume optimized for performance of developer scenarios. Gives administrators control over what mini-filters are attached to this volume.

/Y No prompt, force the volume to dismount if necessary and assumes empty label when no label is specified.

**FSUTIL**

Displays or configures the file system properties.

The `fsutil` command is a Windows Command Prompt utility that provides various file and volume-related operations. In particular, the `fsutil` command has functionality related to managing file systems, file streams, hard links, and quotas. Here are some common tasks you can perform using `fsutil`:

1. File System Information:

- `fsutil fsinfo drives`: Lists all available drives on the system.

- `fsutil fsinfo volumeinfo C:`: Displays information about the specified volume (replace "C:" with the appropriate drive letter).

2. File Streams:

- `fsutil stream`: Displays information about streams on a file.

- `fsutil stream query <filename>`: Lists all named streams on a file.

3. Hard Links:

- `fsutil hardlink create <linkname> <filename>`: Creates a hard link between two files.

- `fsutil hardlink list <filename>`: Lists all hard links associated with a file.

4. Quota Management:

- `fsutil quota query C:`: Displays disk space usage and quota information for a specified volume.

- `fsutil quota enforce C:`: Enables quota enforcement on the specified volume.

5. File Compression:

- `fsutil compression query C:`: Displays the compression state of files on a specified volume.

- `fsutil compression set <filename>`: Sets the compression state of a file.

6. Sparse Files:

- `fsutil sparse queryflag <filename>`: Displays the sparse file attribute for a file.

- `fsutil sparse setflag <filename>`: Sets the sparse file attribute for a file.

7. Object ID:

- `fsutil objectid query C:`: Displays the object ID for a specified volume.

- `fsutil objectid setinfo <filename>`: Sets the object ID for a file.

8. Transactional NTFS:

- `fsutil transaction start <filename>`: Starts a transaction for a specified file.

- `fsutil transaction commit <filename>`: Commits a transaction for a specified file.

**FTYPE**

Displays or modifies file types used in file extension associations

FTYPE [fileType[=[openCommandString]]]

fileType Specifies the file type to examine or change openCommandString Specifies the open command to use when launching files of this type.

Type FTYPE without parameters to display the current file types that have open command strings defined. FTYPE is invoked with just a file type, it displays the current open command string for that file type.

Specify nothing for the open command string and the FTYPE command will delete the open command string for the file type. Within an open command string %0 or %1 are substituted with the file name being launched through the assocation. %\* gets all the parameters and %2 gets the 1st parameter, %3 the second, etc. %~n gets all the remaining parameters starting with the nth parameter, where n may be between 2 and 9, inclusive. For example:

ASSOC .pl=PerlScript

FTYPE PerlScript=perl.exe %1 %\*

would allow you to invoke a Perl script as follows:

script.pl 1 2 3

If you want to eliminate the need to type the extensions, then do the

following:

set PATHEXT=.pl;%PATHEXT%

and the script could be invoked as follows:

script 1 2 3

**GOTO**

Directs the Windows command interpreter to a labeled line in a batch program.

Directs cmd.exe to a labeled line in a batch program.

GOTO label

label Specifies a text string used in the batch program as a label.

You type a label on a line by itself, beginning with a colon.

**GPRESULT**

Displays Group Policy information for machine or user.

GPRESULT [/S system [/U username [/P [password]]]] [/SCOPE scope]

[/USER targetusername] [/R | /V | /Z]

Description:

This command line tool displays the Resultant Set of Policy (RSoP) information for a target user and computer.

Parameter List:

/S system Specifies the remote system to connect to.

/U [domain\]user Specifies the user context under which the command should run.

/P [password] Specifies the password for the given user context. Prompts for input if omitted.

/SCOPE scope Specifies whether the user or the computer settings need to be displayed.

Valid values: "USER", "COMPUTER".

/USER [domain\]user Specifies the user name for which the RSoP data is to be displayed.

/R Displays RSoP summary data.

/V Specifies that verbose information should be displayed. Verbose information provides

additional detailed settings that have been applied with a precedence of 1.

/Z Specifies that the super-verbose should be displayed. Super-verbose information provides additional settings that have been applied with a precedence of 1 and higher. This allows you to see if a setting was set in

multiple places. See the Group Policy

online help topic for more information.

/? Displays this help message.

Examples:

GPRESULT /R

GPRESULT /USER targetusername /V

GPRESULT /S system /USER targetusername /SCOPE COMPUTER /Z

GPRESULT /S system /U username /P password /SCOPE USER /V

**GRAFTABL**

Enables Windows to display an extended character set in graphics mode.

For example: graftabl

The command sets the code page to 850, which is a commonly used code page for Western European languages.

\*note supported in modern windows system

**HELP**

Provides Help information for Windows commands.

**ICACLS**

Display, modify, backup, or restore ACLs for files and directories.

ICACLS name /save aclfile [/T] [/C] [/L] [/Q]

stores the DACLs for the files and folders that match the name

into aclfile for later use with /restore. Note that SACLs,

owner, or integrity labels are not saved.

ICACLS directory [/substitute SidOld SidNew [...]] /restore aclfile

[/C] [/L] [/Q]

applies the stored DACLs to files in directory.

ICACLS name /setowner user [/T] [/C] [/L] [/Q]

changes the owner of all matching names. This option does not

force a change of ownership; use the takeown.exe utility for

that purpose.

ICACLS name /findsid Sid [/T] [/C] [/L] [/Q]

finds all matching names that contain an ACL

explicitly mentioning Sid.

ICACLS name /verify [/T] [/C] [/L] [/Q]

finds all files whose ACL is not in canonical form or whose

lengths are inconsistent with ACE counts.

ICACLS name /reset [/T] [/C] [/L] [/Q]

replaces ACLs with default inherited ACLs for all matching files.

ICACLS name [/grant[:r] Sid:perm[...]]

[/deny Sid:perm [...]]

[/remove[:g|:d]] Sid[...]] [/T] [/C] [/L] [/Q]

[/setintegritylevel Level:policy[...]]

/grant[:r] Sid:perm grants the specified user access rights. With :r,

the permissions replace any previously granted explicit permissions.

Without :r, the permissions are added to any previously granted

explicit permissions.

/deny Sid:perm explicitly denies the specified user access rights.

An explicit deny ACE is added for the stated permissions and

the same permissions in any explicit grant are removed.

/remove[:[g|d]] Sid removes all occurrences of Sid in the ACL. With

:g, it removes all occurrences of granted rights to that Sid. With

:d, it removes all occurrences of denied rights to that Sid.

/setintegritylevel [(CI)(OI)]Level explicitly adds an integrity

ACE to all matching files. The level is to be specified as one

of:

L[ow]

M[edium]

H[igh]

Inheritance options for the integrity ACE may precede the level

and are applied only to directories.

/inheritance:e|d|r

e - enables inheritance

d - disables inheritance and copy the ACEs

r - remove all inherited ACEs

**IF**

Performs conditional processing in batch programs.

IF [NOT] ERRORLEVEL number command

IF [NOT] string1==string2 command

IF [NOT] EXIST filename command

NOT Specifies that Windows should carry out the command only if the condition is false.

ERRORLEVEL number Specifies a true condition if the last program run returned an exit code equal to or greater than the number specified.

string1==string2 Specifies a true condition if the specified text strings match.

EXIST filename Specifies a true condition if the specified filename exists.

command Specifies the command to carry out if the condition is met. Command can be followed by ELSE command which will execute the command after the ELSE keyword if the specified condition is FALSE

The ELSE clause must occur on the same line as the command after the IF. For example:

IF EXIST filename. (

del filename.

) ELSE (

echo filename. missing.

)

The following would NOT work because the del command needs to be terminated by a newline:

IF EXIST filename. del filename. ELSE echo filename. missing

Nor would the following work, since the ELSE command must be on the same line as the end of the IF command:

IF EXIST filename. del filename.

ELSE echo filename. missing

The following would work if you want it all on one line:

IF EXIST filename. (del filename.) ELSE echo filename. Missing

**LABEL**

Creates, changes, or deletes the volume label of a disk.

Creates, changes, or deletes the volume label of a disk.

LABEL [drive:][label]

LABEL [/MP] [volume] [label]

drive: Specifies the drive letter of a drive.

label Specifies the label of the volume.

/MP Specifies that the volume should be treated as a

mount point or volume name.

volume Specifies the drive letter (followed by a colon),

mount point, or volume name. If volume name is specified,

the /MP flag is unnecessary.

**MD | MKDIR**

Creates a directory.

MKDIR [drive:]path

MD [drive:]path

If Command Extensions are enabled MKDIR changes as follows:

MKDIR creates any intermediate directories in the path, if needed. For example, assume \a does not exist then:

mkdir \a\b\c\d

is the same as:

mkdir \a

chdir \a

mkdir b

chdir b

mkdir c

chdir c

mkdir d

which is what you would have to type if extensions were disabled.

**MKLINK**

Creates a symbolic link.

MKLINK [[/D] | [/H] | [/J]] Link Target

/D Creates a directory symbolic link. Default is a file

symbolic link.

/H Creates a hard link instead of a symbolic link.

/J Creates a Directory Junction.

Link Specifies the new symbolic link name.

Target Specifies the path (relative or absolute) that the new link

refers to.

**MODE**

Configures system devices.

Serial port: MODE COMm[:] [BAUD=b] [PARITY=p] [DATA=d] [STOP=s] to=on|off] [xon=on|off] [odsr=on|off] octs=on|off] [dtr=on|off|hs] [rts=on|off|hs|tg] [idsr=on|off]

Device Status: MODE [device] [/STATUS]

Redirect printing: MODE LPTn[:]=COMm[:]

Select code page: MODE CON[:] CP SELECT=yyy

Code page status: MODE CON[:] CP [/STATUS]

Display mode: MODE CON[:] [COLS=c] [LINES=n]

Typematic rate: MODE CON[:] [RATE=r DELAY=d]

**MORE**

Displays output one screen at a time.

MORE [/E [/C] [/P] [/S] [/Tn] [+n]] < [drive:][path]filename command-name | MORE [/E [/C] [/P] [/S] [/Tn] [+n]]

MORE /E [/C] [/P] [/S] [/Tn] [+n] [files]

[drive:][path]filename Specifies a file to display one screen at a time.

command-name Specifies a command whose output will be displayed.

/E Enable extended features

/C Clear screen before displaying page

/P Expand FormFeed characters

/S Squeeze multiple blank lines into a single line

/Tn Expand tabs to n spaces (default 8)

Switches can be present in the MORE environment variable.

+n Start displaying the first file at line n

files List of files to be displayed. Files in the list are separated by blanks.

If extended features are enabled, the following commands are accepted at the -- More -- prompt:

P n Display next n lines

S n Skip next n lines

F Display next file

Q Quit

= Show line number

? Show help line

<space> Display next page

<ret> Display next line

**MOVE**

Moves one or more files from one directory to another directory.

Moves files and renames files and directories.

To move one or more files:

MOVE [/Y | /-Y] [drive:][path]filename1[,...] destination

To rename a directory:

MOVE [/Y | /-Y] [drive:][path]dirname1 dirname2

[drive:][path]filename1 Specifies the location and name of the file or files you want to move.

destination Specifies the new location of the file. Destination can consist of a drive letter and colon, a directory name, or a combination. If you are moving only one file, you can also include a filename if you want to rename the file when you move it.

[drive:][path]dirname1 Specifies the directory you want to rename.

dirname2 Specifies the new name of the directory.

/Y Suppresses prompting to confirm you want to overwrite an existing destination file.

/-Y Causes prompting to confirm you want to overwrite an existing destination file.

**NET USER:**

- Syntax: `net user [username [password | \*] [options]] [/domain]`

- Description: Manages user accounts on a Windows system. You can use it to create, modify, or display user accounts.

Examples:

- Display information about a user:

net user username

- Change a user's password:

net user username newpassword

**NOTEPAD:**

- Syntax: `notepad [filename]`

- Description: Opens the Notepad text editor. If a filename is provided, it opens that specific file in Notepad.

Example:

notepad example.txt

**OPENFILES**

Displays files opened by remote users for a file share.

OPENFILES /parameter [arguments]

Description:

Enables an administrator to list or disconnect files and folders that have been opened on a system.

Parameter List:

/Disconnect Disconnects one or more open files.

/Query Displays files opened locally or from shared folders.

/Local Enables / Disables the display of local open files.

/? Displays this help message.

Examples:

OPENFILES /Disconnect /?

OPENFILES /Query /?

OPENFILES /Local /?

**PATH**

Displays or sets a search path for executable files.

PATH [[drive:]path[;...][;%PATH%]

PATH ;

Type PATH ; to clear all search-path settings and direct cmd.exe to search only in the current directory.

Type PATH without parameters to display the current path.

Including %PATH% in the new path setting causes the old path to be appended to the new setting.

**PAUSE**

Suspends processing of a batch file and displays a message.

**POPD**

Changes to the directory stored by the PUSHD command.

POPD

If Command Extensions are enabled the POPD command will delete any temporary drive letter created by PUSHD when you POPD that drive off the pushed directory stack.

**PRINT**

Prints a text file.

PRINT [/D:device] [[drive:][path]filename[...]]

/D:device Specifies a print device.

**PROMPT**

Changes the cmd.exe command prompt.

PROMPT [text]

text Specifies a new command prompt.

prompt can be made up of normal characters and the following special codes:

$A & (Ampersand)

$B | (pipe)

$C ( (Left parenthesis)

$D Current date

$E Escape code (ASCII code 27)

$F ) (Right parenthesis)

$G > (greater-than sign)

$H Backspace (erases previous character)

$L < (less-than sign)

$N Current drive

$P Current drive and path

$Q = (equal sign)

$S (space)

$T Current time

$V Windows version number

$\_ Carriage return and linefeed

$$ $ (dollar sign)

**PUSHD**

Stores the current directory for use by the POPD command, then changes to the specified directory.

PUSHD [path | ..]

path Specifies the directory to make the current directory.

**RD**

Removes (deletes) a directory.

RMDIR [/S] [/Q] [drive:]path

RD [/S] [/Q] [drive:]path

/S Removes all directories and files in the specified directory in addition to the directory itself. Used to remove a directory tree.

/Q Quiet mode, do not ask if ok to remove a directory tree with /S

**RECOVER**

Recovers readable information from a bad or defective disk.

RECOVER [drive:][path]filename

**REM**

Records comments (remarks) in a batch file or CONFIG.SYS.

REM [comment]

**REN |RENAME**

Renames a file or files.

RENAME [drive:][path]filename1 filename2.

REN [drive:][path]filename1 filename2.

**REPLACE**

Replaces files.

REPLACE [drive1:][path1]filename [drive2:][path2] [/A] [/P] [/R] [/W]

REPLACE [drive1:][path1]filename [drive2:][path2] [/P] [/R] [/S] [/W] [/U]

[drive1:][path1]filename Specifies the source file or files.

[drive2:][path2] Specifies the directory where files are to be replaced.

/A Adds new files to destination directory. Cannot use with /S or /U switches.

/P Prompts for confirmation before replacing a file or adding a source file.

/R Replaces read-only files as well as unprotected files.

/S Replaces files in all subdirectories of the destination directory. Cannot use with the /A switch.

/W Waits for you to insert a disk before beginning.

/U Replaces (updates) only files that are older than source files. Cannot use with the /A switch.

**RMDIR**

Removes (deletes) a directory.

RMDIR [/S] [/Q] [drive:]path

RD [/S] [/Q] [drive:]path

/S Removes all directories and files in the specified directory in addition to the directory itself. Used to remove a directory tree.

/Q Quiet mode, do not ask if ok to remove a directory tree with /S

**ROBOCOPY**

`Robocopy` (Robust File Copy) is a command-line utility in Windows for copying files and directories. It comes with a variety of options and parameters to customize your file copy operations. Here's a basic overview of the `robocopy` command and some common usage examples:

Basic Syntax:

robocopy source destination [files] [options]

- source: The source directory or file(s) you want to copy.

- destination: The destination directory where you want to copy the files.

- files: Optional. Specifies a file or a set of files to copy.

- options: Various command-line options to customize the behavior of `robocopy`.

Common Options:

- `/S` or `/E`: Copies subdirectories, including empty ones. `/E` includes empty directories even if they are not specified.

- `/COPY:attributes`: Specifies the file properties to be copied. Common attributes include D (Data), A (Attributes), T (Timestamps), S (Security), and more.

- `/ZB`: Uses restartable mode. If a file copy is interrupted, it will restart from where it left off.

- `/R:n` and `/W:n`: Specifies the number of retries on failed copies (`/R`) and the wait time between retries in seconds (`/W`).

- `/LOG:file`: Writes the status to a log file. You can use a full path or just a file name for the log file.

- `/TEE`: Writes the status to the console window, as well as to the log file.

Example Usage:

1. Basic Copy:

robocopy C:\SourceFolder D:\DestinationFolder /E

This will copy all files and subdirectories from `C:\SourceFolder` to `D:\DestinationFolder`.

2. Copy with Restartable Mode and Logging:

robocopy C:\SourceFolder D:\DestinationFolder /E /ZB /LOG:C:\CopyLog.txt

Copies with restartable mode and writes the progress to `C:\CopyLog.txt`.

3. Mirror a Directory:

robocopy C:\SourceFolder D:\DestinationFolder /MIR

Mirrors the source directory to the destination. Deletes files in the destination that don't exist in the source.

4. Copy Files Based on Last Modified Time:

robocopy C:\SourceFolder D:\DestinationFolder /E /COPY:DT /DCOPY:T

Copies files and directories based on the last modified time.

**SET**

Displays, sets, or removes cmd.exe environment variables.

SET [variable=[string]]

variable Specifies the environment-variable name.

string Specifies a series of characters to assign to the variable.

Type SET without parameters to display the current environment variables.

**SETLOCAL**

Begins localization of environment changes in a batch file. Environment changes made after SETLOCAL has been issued are local to the batch file. ENDLOCAL must be issued to restore the previous settings. When the end of a batch script is reached, an implied ENDLOCAL is executed for any outstanding SETLOCAL commands issued by that batch script.

SETLOCAL

**SC**

SC is a command line program used for communicating with the Service Control Manager and services.

sc <server> [command] [service name] <option1> <option2>...

Commands:

start-----------Starts a service.

pause-----------Sends a PAUSE control request to a service.

interrogate-----Sends an INTERROGATE control request to a service.

continue--------Sends a CONTINUE control request to a service.

stop------------Sends a STOP request to a service.

config----------Changes the configuration of a service (persistent).

delete----------Deletes a service (from the registry).

create----------Creates a service. (adds it to the registry).

control---------Sends a control to a service.

EXAMPLE:

sc start MyService

**SCHTASKS**

Enables an administrator to create, delete, query, change, run and end scheduled tasks on a local or remote system.

Parameter List:

/Create Creates a new scheduled task.

/Delete Deletes the scheduled task(s).

/Query Displays all scheduled tasks.

/Change Changes the properties of scheduled task.

/Run Runs the scheduled task on demand.

/End Stops the currently running scheduled task.

/ShowSid Shows the security identifier corresponding to a scheduled task name.

/? Displays help message.

**SHIFT**

Changes the position of replaceable parameters in a batch file.

SHIFT [/n]

If Command Extensions are enabled the SHIFT command supports the /n switch which tells the command to start shifting at the nth argument, where n may be between zero and eight. For example:

SHIFT /2

would shift %3 to %2, %4 to %3, etc. and leave %0 and %1 unaffected.

**SHUTDOWN**

Allows proper local or remote shutdown of machine.

Usage: shutdown [/i | /l | /s | /sg | /r | /g | /a | /p | /h | /e | /o] [/hybrid] [/soft] [/fw] [/f]

[/m \\computer][/t xxx][/d [p|u:]xx:yy [/c "comment"]]

No args Display help. This is the same as typing /?.

/? Display help. This is the same as not typing any options.

/i Display the graphical user interface (GUI).

/l Log off. This cannot be used with /m or /d options.

/s Shutdown the computer.

/sg Shutdown the computer. On the next boot, if Automatic Restart Sign-On is enabled, automatically sign in and lock last interactive user. After sign in, restart any registered applications.

/r Full shutdown and restart the computer.

/g Full shutdown and restart the computer. After the system is rebooted,

if Automatic Restart Sign-On is enabled, automatically sign in and lock last interactive user.

After sign in, restart any registered applications.

/a Abort a system shutdown. This can only be used during the time-out period.

Combine with /fw to clear any pending boots to firmware.

/p Turn off the local computer with no time-out or warning. Can be used with /d and /f options.

/h Hibernate the local computer. Can be used with the /f option.

/hybrid Performs a shutdown of the computer and prepares it for fast startup.

/f Force running applications to close without forewarning users.

**SORT**

Sorts input.

SORT [/R] [/+n] [/M kilobytes] [/L locale] [/REC recordbytes]

[[drive1:][path1]filename1] [/T [drive2:][path2]]

[/O [drive3:][path3]filename3]

/+n Specifies the character number, n, to begin each comparison. /+3 indicates that

each comparison should begin at the 3rd character in each line. By default comparisons start at the first character in each line.

**START**

Starts a separate window to run a specified program or command.

START ["title"] [/D path] [/I] [/MIN] [/MAX] [/SEPARATE | /SHARED] [/LOW | /NORMAL | /HIGH | /REALTIME | /ABOVENORMAL | /BELOWNORMAL] [/NODE <NUMA node>] [/AFFINITY <hex affinity mask>] [/WAIT] [/B] [/MACHINE <x86|amd64|arm|arm64>][command/program] [parameters]

"title" Title to display in window title bar.

path Starting directory.

B Start application without creating a new window. The application has ^C handling ignored. Unless the application enables ^C processing, ^Break is the only way to interrupt the application.

I The new environment will be the original environment passed to the cmd.exe and not the current environment.

MIN Start window minimized.

MAX Start window maximized.

**SUBST**

Associates a path with a drive letter.

SUBST [drive1: [drive2:]path]

SUBST drive1: /D

drive1: Specifies a virtual drive to which you want to assign a path.

[drive2:]path Specifies a physical drive and path you want to assign to a virtual drive.

/D Deletes a substituted (virtual) drive.

Type SUBST with no parameters to display a list of current virtual drives.

**SYSTEMINFO**

Displays machine specific properties and configuration.

SYSTEMINFO [/S system [/U username [/P [password]]]] [/FO format] [/NH]

Description:

This tool displays operating system configuration information for a local or remote machine, including service pack levels.

Parameter List:

/S system Specifies the remote system to connect to.

/U [domain\]user Specifies the user context under which the command should execute.

/P [password] Specifies the password for the given user context. Prompts for input if omitted.

/FO format Specifies the format in which the output is to be displayed. values: "TABLE", "LIST", "CSV".

/NH Specifies that the "Column Header" should not be displayed in the output.

Valid only for "TABLE" and "CSV" formats.

/? Displays this help message.

**TASKLIST**

TASKLIST [/S system [/U username [/P [password]]]] [/M [module] | /SVC | /V] [/FI filter] [/FO format] [/NH]

Description:

This tool displays a list of currently running processes on either a local or remote machine.

Parameter List:

/S system Specifies the remote system to connect to.

/U [domain\]user Specifies the user context under which the command should execute.

/P [password] Specifies the password for the given user context. Prompts for input if omitted.

/M [module] Lists all tasks currently using the given exe/dll name. If the module name is not specified all loaded modules are displayed.

/SVC Displays services hosted in each process.

/APPS Displays Store Apps and their associated processes.

/V Displays verbose task information.

/FI filter Displays a set of tasks that match a given criteria specified by the filter.

/FO format Specifies the output format. Valid values: "TABLE", "LIST", "CSV".

/NH Specifies that the "Column Header" should not be displayed in the output. Valid only for "TABLE" and "CSV" formats.

/? Displays this help message.

**TASKKILL**

TASKKILL [/S system [/U username [/P [password]]]]

{ [/FI filter] [/PID processid | /IM imagename] } [/T] [/F]

Description:

This tool is used to terminate tasks by process id (PID) or image name.

Parameter List:

/S system Specifies the remote system to connect to.

/U [domain\]user Specifies the user context under which the command should execute.

/P [password] Specifies the password for the given user context. Prompts for input if omitted.

/FI filter Applies a filter to select a set of tasks. Allows "\*" to be used. ex. imagename eq acme\*

/PID processid Specifies the PID of the process to be terminated. Use TaskList to get the PID.

/IM imagename Specifies the image name of the process to be terminated. Wildcard '\*' can be used specify all tasks or image names.

/T Terminates the specified process and any child processes which were started by it.

/F Specifies to forcefully terminate the process(es).

/? Displays this help message.

**TIME**

Displays or sets the system time.

TIME [/T | time]

Type TIME with no parameters to display the current time setting and a prompt for a new one. Press ENTER to keep the same time.

If Command Extensions are enabled the TIME command supports the /T switch which tells the command to just output the current time, without prompting for a new time.

**TITLE**

Sets the window title for the command prompt window.

TITLE [string]

string Specifies the title for the command prompt window.

**TREE**

Graphically displays the folder structure of a drive or path.

TREE [drive:][path] [/F] [/A]

/F Display the names of the files in each folder.

/A Use ASCII instead of extended characters.

**TYPE**

Displays the contents of a text file or files.

TYPE [drive:][path]filename

**VER**

Displays the Windows version.

VER

**VERIFY**

Tells cmd.exe whether to verify that your files are written correctly to a disk.

VERIFY [ON | OFF]

Type VERIFY without a parameter to display the current VERIFY setting.

**VOL**

Displays the disk volume label and serial number, if they exist.

VOL [drive:]

**XCOPY**

Copies files and directory trees.

XCOPY source [destination] [/A | /M] [/D[:date]] [/P] [/S [/E]] [/V] [/W] [/C] [/I] [/-I] [/Q] [/F] [/L] [/G] [/H] [/R] [/T] [/U] [/K] [/N] [/O] [/X] [/Y] [/-Y] [/Z] [/B] [/J] [/EXCLUDE:file1[+file2][+file3]...] [/COMPRESS]

source Specifies the file(s) to copy.

destination Specifies the location and/or name of new files.

/A Copies only files with the archive attribute set, doesn't change the attribute.

/M Copies only files with the archive attribute set, turns off the archive attribute.

/D:m-d-y Copies files changed on or after the specified date.

If no date is given, copies only those files whose source time is newer than the destination time.

/EXCLUDE:file1[+file2][+file3]...

Specifies a list of files containing strings. Each string should be in a separate line in the files. When any of the strings match any part of the absolute path of the file to be copied, that file will be excluded from being copied. For example, specifying a string like \obj\ or .obj will exclude all files underneath the directory obj or all files with the .obj extension respectively.

/P Prompts you before creating each destination file.

/S Copies directories and subdirectories except empty ones.

/E Copies directories and subdirectories, including empty ones. Same as /S /E. May be used to modify /T.

/V Verifies the size of each new file.

/W Prompts you to press a key before copying.

/C Continues copying even if errors occur.

/I If destination does not exist and copying more than one file, assumes that destination must be a directory.

/-I If destination does not exist and copying a single specified file, assumes that destination must be a file.

/Q Does not display file names while copying.

/F Displays full source and destination file names while copying.

/L Displays files that would be copied.

/G Allows the copying of encrypted files to destination that does not support encryption.

/H Copies hidden and system files also.

/R Overwrites read-only files.

/T Creates directory structure, but does not copy files. Does not include empty directories or subdirectories. /T /E includes empty directories and subdirectories.

/U Copies only files that already exist in destination.

/K Copies attributes. Normal Xcopy will reset read-only attributes.

/N Copies using the generated short names.

/O Copies file ownership and ACL information.

/X Copies file audit settings (implies /O).

/Y Suppresses prompting to confirm you want to overwrite an existing destination file.

/-Y Causes prompting to confirm you want to overwrite an existing destination file.

/Z Copies networked files in restartable mode.

/B Copies the Symbolic Link itself versus the target of the link.

/J Copies using unbuffered I/O. Recommended for very large files.

/COMPRESS Request network compression during file transfer where applicable.

/SPARSE Preserves the sparse state when copying a sparse file.

The switch /Y may be preset in the COPYCMD environment variable. This may be overridden with /-Y on the command line.

**WMIC**

Displays WMI information inside interactive command shell.

WMIC is deprecated.

[global switches] <command>

The following global switches are available:

/NAMESPACE Path for the namespace the alias operate against.

/ROLE Path for the role containing the alias definitions.

/NODE Servers the alias will operate against.

/IMPLEVEL Client impersonation level.

/AUTHLEVEL Client authentication level.

/LOCALE Language id the client should use.

/PRIVILEGES Enable or disable all privileges.

/TRACE Outputs debugging information to stderr.

/RECORD Logs all input commands and output.

/INTERACTIVE Sets or resets the interactive mode.

/FAILFAST Sets or resets the FailFast mode.

/USER User to be used during the session.

/PASSWORD Password to be used for session login.

/OUTPUT Specifies the mode for output redirection.

/APPEND Specifies the mode for output redirection.

/AGGREGATE Sets or resets aggregate mode.

/AUTHORITY Specifies the <authority type> for the connection.

/?[:<BRIEF|FULL>] Usage information.