

```
1  Starts a new instance of the Windows command interpreter
2
3  CMD [/A | /U] [/Q] [/D] [/E:ON | /E:OFF] [/F:ON | /F:OFF] [/V:ON | /V:OFF]
4      [[/S] [/C | /K] string]
5
6  /C      Carries out the command specified by string and then terminates
7  /K      Carries out the command specified by string but remains
8  /S      Modifies the treatment of string after /C or /K (see below)
9  /Q      Turns echo off
10 /D      Disable execution of AutoRun commands from registry (see below)
11 /A      Causes the output of internal commands to a pipe or file to be ANSI
12 /U      Causes the output of internal commands to a pipe or file to be
13          Unicode
14 /T:fg   Sets the foreground/background colors (see COLOR /? for more info)
15 /E:ON   Enable command extensions (see below)
16 /E:OFF  Disable command extensions (see below)
17 /F:ON   Enable file and directory name completion characters (see below)
18 /F:OFF  Disable file and directory name completion characters (see below)
19 /V:ON   Enable delayed environment variable expansion using ! as the
20          delimiter. For example, /V:ON would allow !var! to expand the
21          variable var at execution time. The var syntax expands variables
22          at input time, which is quite a different thing when inside of a FOR
23          loop.
24 /V:OFF  Disable delayed environment expansion.
25
26 Note that multiple commands separated by the command separator '&&'
27 are accepted for string if surrounded by quotes. Also, for compatibility
28 reasons, /X is the same as /E:ON, /Y is the same as /E:OFF and /R is the
29 same as /C. Any other switches are ignored.
30
31 If /C or /K is specified, then the remainder of the command line after
32 the switch is processed as a command line, where the following logic is
33 used to process quote (") characters:
34
35     1. If all of the following conditions are met, then quote characters
36        on the command line are preserved:
37
38         - no /S switch
39         - exactly two quote characters
40         - no special characters between the two quote characters,
41           where special is one of: &<>()@^|
42         - there are one or more whitespace characters between the
43           two quote characters
44         - the string between the two quote characters is the name
45           of an executable file.
46
47     2. Otherwise, old behavior is to see if the first character is
48        a quote character and if so, strip the leading character and
49        remove the last quote character on the command line, preserving
50        any text after the last quote character.
51
52 If /D was NOT specified on the command line, then when CMD.EXE starts, it
53 looks for the following REG_SZ/REG_EXPAND_SZ registry variables, and if
54 either or both are present, they are executed first.
55
56     HKEY_LOCAL_MACHINE\Software\Microsoft\Command Processor\AutoRun
57
58     and/or
59
60     HKEY_CURRENT_USER\Software\Microsoft\Command Processor\AutoRun
61
```

62 Command Extensions are enabled by default. You may also disable
63 extensions for a particular invocation by using the /E:OFF switch. You
64 can enable or disable extensions for all invocations of CMD.EXE on a
65 machine and/or user logon session by setting either or both of the
66 following REG_DWORD values in the registry using REGEDIT.EXE:
67
68 HKEY_LOCAL_MACHINE\Software\Microsoft\Command Processor\EnableExtensions
69
70 and/or
71
72 HKEY_CURRENT_USER\Software\Microsoft\Command Processor\EnableExtensions
73
74 to either 0x1 or 0x0. The user specific setting takes precedence over
75 the machine setting. The command line switches take precedence over the
76 registry settings.
77
78 In a batch file, the SETLOCAL ENABLEEXTENSIONS or DISABLEEXTENSIONS arguments
79 takes precedence over the /E:ON or /E:OFF switch. See SETLOCAL /? for details.
80
81 The command extensions involve changes and/or additions to the following
82 commands:
83
84 DEL or ERASE
85 COLOR
86 CD or CHDIR
87 MD or MKDIR
88 PROMPT
89 PUSHD
90 POPD
91 SET
92 SETLOCAL
93 ENDLOCAL
94 IF
95 FOR
96 CALL
97 SHIFT
98 GOTO
99 START (also includes changes to external command invocation)
100 ASSOC
101 FTYPE
102
103 To get specific details, type commandname /? to view the specifics.
104
105 Delayed environment variable expansion is NOT enabled by default. You
106 can enable or disable delayed environment variable expansion for a
107 particular invocation of CMD.EXE with the /V:ON or /V:OFF switch. You
108 can enable or disable delayed expansion for all invocations of CMD.EXE on a
109 machine and/or user logon session by setting either or both of the
110 following REG_DWORD values in the registry using REGEDIT.EXE:
111
112 HKEY_LOCAL_MACHINE\Software\Microsoft\Command Processor\DelayedExpansion
113
114 and/or
115
116 HKEY_CURRENT_USER\Software\Microsoft\Command Processor\DelayedExpansion
117
118 to either 0x1 or 0x0. The user specific setting takes precedence over
119 the machine setting. The command line switches take precedence over the
120 registry settings.
121
122 In a batch file the SETLOCAL ENABLEDELAYEDEXPANSION or DISABLEDELAYEDEXPANSION

123 arguments takes precedence over the /V:ON or /V:OFF switch. See SETLOCAL /?
124 for details.
125
126 If delayed environment variable expansion is enabled, then the exclamation
127 character can be used to substitute the value of an environment variable
128 at execution time.
129
130 You can enable or disable file name completion for a particular
131 invocation of CMD.EXE with the /F:ON or /F:OFF switch. You can enable
132 or disable completion for all invocations of CMD.EXE on a machine and/or
133 user logon session by setting either or both of the following REG_DWORD
134 values in the registry using REGEDIT.EXE:
135
136 HKEY_LOCAL_MACHINE\Software\Microsoft\Command Processor\CompletionChar
137 HKEY_LOCAL_MACHINE\Software\Microsoft\Command Processor\PathCompletionChar
138
139 and/or
140
141 HKEY_CURRENT_USER\Software\Microsoft\Command Processor\CompletionChar
142 HKEY_CURRENT_USER\Software\Microsoft\Command Processor\PathCompletionChar
143
144 with the hex value of a control character to use for a particular
145 function (e.g. 0x4 is Ctrl-D and 0x6 is Ctrl-F). The user specific
146 settings take precedence over the machine settings. The command line
147 switches take precedence over the registry settings.
148
149 If completion is enabled with the /F:ON switch, the two control
150 characters used are Ctrl-D for directory name completion and Ctrl-F for
151 file name completion. To disable a particular completion character in
152 the registry, use the value for space (0x20) as it is not a valid
153 control character.
154
155 Completion is invoked when you type either of the two control
156 characters. The completion function takes the path string to the left
157 of the cursor appends a wild card character to it if none is already
158 present and builds up a list of paths that match. It then displays the
159 first matching path. If no paths match, it just beeps and leaves the
160 display alone. Thereafter, repeated pressing of the same control
161 character will cycle through the list of matching paths. Pressing the
162 Shift key with the control character will move through the list
163 backwards. If you edit the line in any way and press the control
164 character again, the saved list of matching paths is discarded and a new
165 one generated. The same occurs if you switch between file and directory
166 name completion. The only difference between the two control characters
167 is the file completion character matches both file and directory names,
168 while the directory completion character only matches directory names.
169 If file completion is used on any of the built in directory commands
170 (CD, MD or RD) then directory completion is assumed.
171
172 The completion code deals correctly with file names that contain spaces
173 or other special characters by placing quotes around the matching path.
174 Also, if you back up, then invoke completion from within a line, the
175 text to the right of the cursor at the point completion was invoked is
176 discarded.
177
178 The special characters that require quotes are:
179 <space>
180 &()[\]^=;!'+,`~
181