

Windows 10 Help on Commands

C:\>HELP 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]
  [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.

SEPARATE Start 16-bit Windows program in separate memory space.

SHARED Start 16-bit Windows program in shared memory space.

LOW Start application in the IDLE priority class.

NORMAL Start application in the NORMAL priority class.

HIGH Start application in the HIGH priority class.

REALTIME Start application in the REALTIME priority class.

ABOVENORMAL Start application in the ABOVENORMAL priority class.

BELOWNORMAL Start application in the BELOWNORMAL priority class.

NODE Specifies the preferred Non-Uniform Memory Architecture (NUMA) node as a decimal integer.

AFFINITY Specifies the processor affinity mask as a hexadecimal number. The process is restricted to running on these processors.

Windows 10 Help on Commands

node's processor mask is right shifted to begin at bit zero.

The process is restricted to running on those processors in common between the specified affinity mask and the NUMA node.

If no processors are in common, the process is restricted to running on the specified NUMA node.

WAIT Start application and wait for it to terminate.

command/program

If it is an internal cmd command or a batch file then the command processor is run with the /K switch to cmd.exe.

This means that the window will remain after the command has been run.

If it is not an internal cmd command or batch file then it is a program and will run as either a windowed application or a console application.

parameters These are the parameters passed to the command/program.

NOTE: The SEPARATE and SHARED options are not supported on 64-bit platforms.

Specifying /NODE allows processes to be created in a way that leverages memory locality on NUMA systems. For example, two processes that communicate with each other heavily through shared memory can be created to share the same preferred NUMA node in order to minimize memory latencies. They allocate memory from the same NUMA node when possible, and they are free to run on processors outside the specified node.

```
start /NODE 1 application1.exe
```

```
start /NODE 1 application2.exe
```

These two processes can be further constrained to run on specific processors within the same NUMA node. In the following example, application1 runs on the low-order two processors of the node, while application2 runs on the next two

Windows 10 Help on Commands

four logical processors. Note that the node number can be changed to any valid node number for that computer without having to change the affinity mask.

```
start /NODE 1 /AFFINITY 0x3 application1.exe
```

```
start /NODE 1 /AFFINITY 0xc application2.exe
```

If Command Extensions are enabled, external command invocation through the command line or the START command changes as follows:

non-executable files may be invoked through their file association just by typing the name of the file as a command. (e.g. WORD.DOC would launch the application associated with the .DOC file extension). See the ASSOC and FTYPE commands for how to create these associations from within a command script.

When executing an application that is a 32-bit GUI application, CMD.EXE does not wait for the application to terminate before returning to the command prompt. This new behavior does NOT occur if executing within a command script.

When executing a command line whose first token is the string "CMD " without an extension or path qualifier, then "CMD" is replaced with the value of the COMSPEC variable. This prevents picking up CMD.EXE from the current directory.

When executing a command line whose first token does NOT contain an extension, then CMD.EXE uses the value of the PATHEXT environment variable to determine which extensions to look for and in what order. The default value for the PATHEXT variable is:

```
.COM;.EXE;.BAT;.CMD
```

Windows 10 Help on Commands

semicolons separating the different elements.

When searching for an executable, if there is no match on any extension, then looks to see if the name matches a directory name. If it does, the START command launches the Explorer on that path. If done from the command line, it is the equivalent to doing a CD /D to that path.

