## Why does the runas command require its command line to be quoted?

devblogs.microsoft.com/oldnewthing/20110815-00

August 15, 2011



Commenter teo complained that the runas command requires its command line to be quoted. Well, if you think about it, why single out runas? Pretty much all programs require their command line to be quoted if they contain special characters (like spaces that you want to be interpreted as part of a file name instead of as an argument separator). The runas command is just doing things the way everybody else does. Recall that on Windows, programs perform their own command line parsing. This isn't unix where the command shell does the work of parsing quotation marks and globs before handing the (now-partly-parsed) command line to the child process. Mind you, most programs do not do their own custom parsing; they rely on the C runtime library to do the parsing into arguments. Okay, but let's single out the runas command anyway, because runas does live in a slightly different world. It is a convention dating back to MS-DOS that programs which accept a command line as an argument do so without requiring quoting. The archetypal example of this is the command processor itself. Whatever you pass after the /c flag is treated as the command line to execute. Once the /c is encountered, parsing stops and everything from there to the end of the raw command line is treated as the argument. (It also imposes the requirement that /c be the last parameter on the command line.) (Note also that there is a special weirdo rule in the cmd.exe parser with respect to the /C and /K switches; see cmd /? for details.) (Therefore, if you want a program that forwards its command line to another program, the way to do this is not to parse your command line and then try to unparse it but rather to just forward the original command line.) The authors of the runas program appeared not to be aware of this historical convention at the time they wrote it. They just used the regular C runtime library command line parser, unaware that "programs which accept a command line on the command line" fall into a special alternate reality. Hence the need for the double-extra-quoting.

Back when the runas program was being developed, I pointed out this historical alternate reality to the people responsible for the runas program. They took my remarks under advisement but evidently chose to stick with the "standard" parsing rules rather than

entering the little-known alternate reality. (As a consolation prize, they did add some examples at the end of the runas /? output to explain how quotation marks should be used.)

Raymond Chen

**Follow** 

