



PowerShell Conference Europe

May the debugger be with you



Manfred Wallner

Many thanks to our sponsors:





Manfred Wallner

- Software Engineer (~15 years)
 - Freelancer, R&D
 - Automotive
- PowerShell since 2016 (Chocolatey)
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- <https://mwallner.net>



debugging

In computer programming and software development, debugging is the process of finding and resolving bugs (defects or problems that prevent correct operation) within computer programs, software, or systems.

(wikipedia)

debugging tools

- printline debugging
 - `Write-Host` (`Write-Verbose` / `Write-Debug`)
- control flow analysis
 - deduce flow based on input/output
- debuggers
 - cli
 - backed by ide (vscode)

debugging

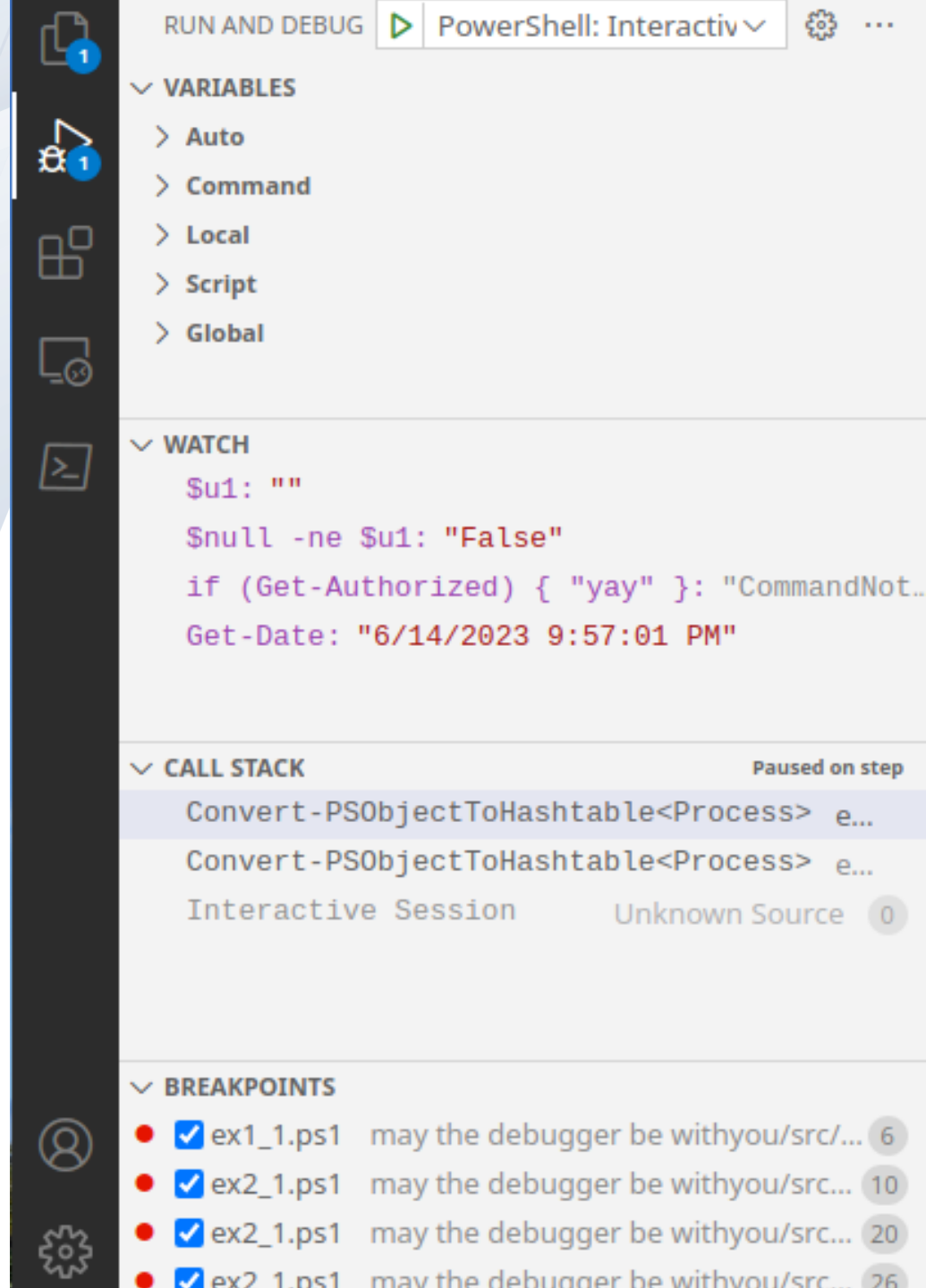
```
if (-Not ($players = Enter-Maze)) {  
    throw "YOU SHALL NOT PASS"  
}
```

MIND!

- vscode integrated terminal session state
- \$matches is not reset implicitly in `-match` and `-notmatch`

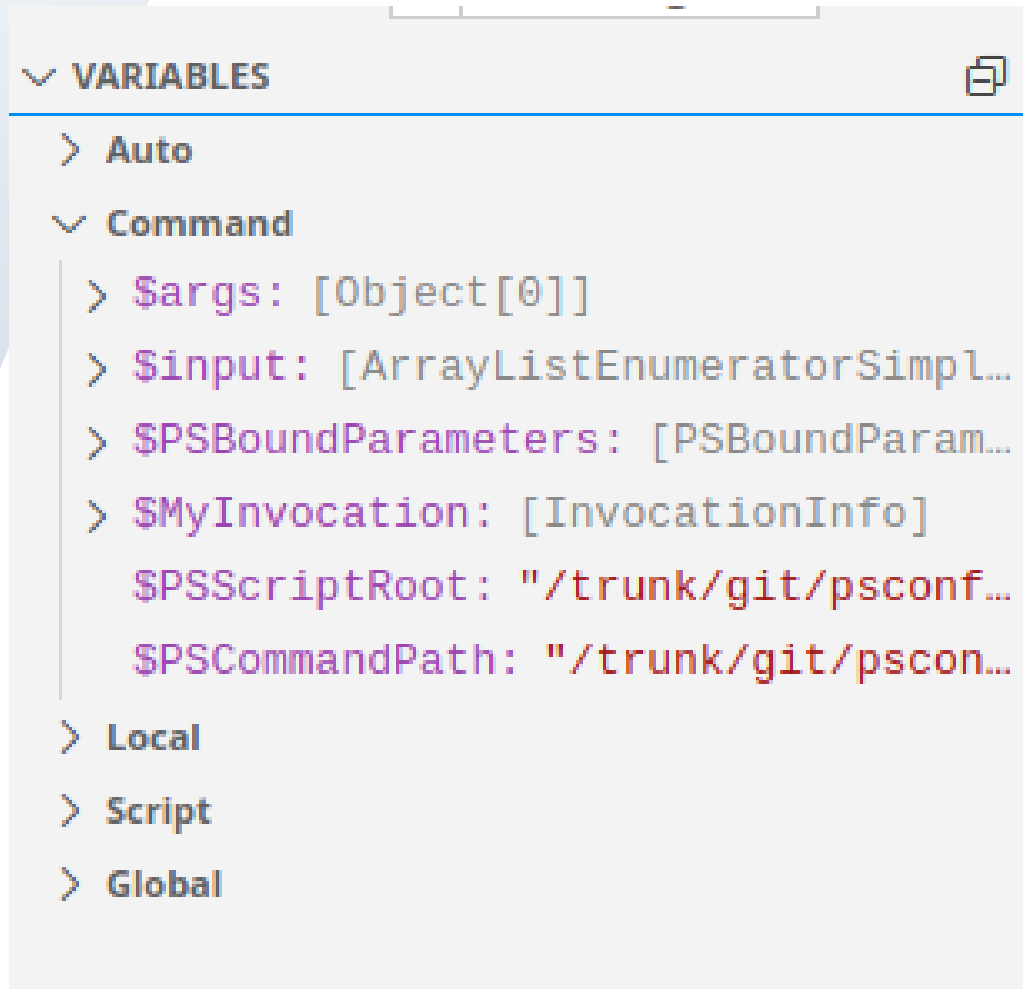
debugging in vscode

- variables
- watch
- call stack
- breakpoints



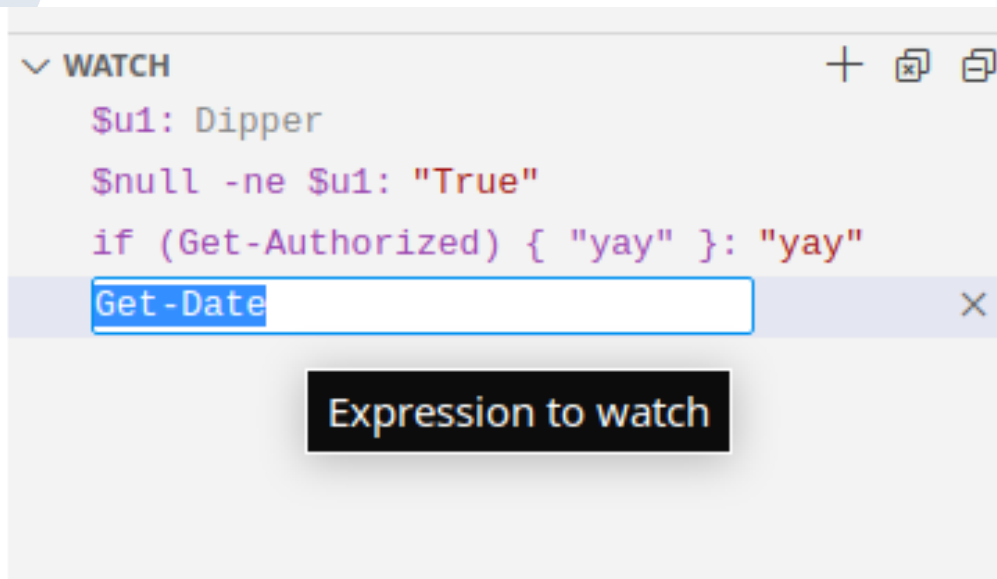
debugging in vscode

- **variables**
- watch
- call stack
- breakpoints



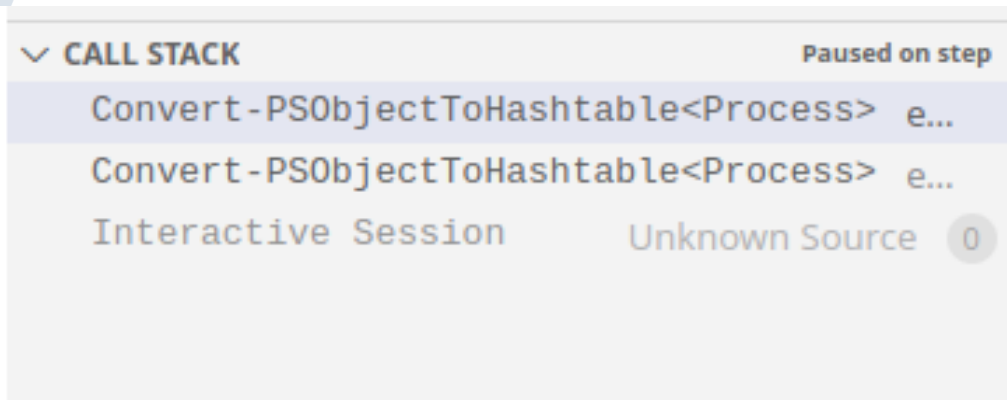
debugging in vscode

- variables
- **watch**
- call stack
- breakpoints



debugging in vscode

- variables
- watch
- **call stack**
- breakpoints



debugging in vscode

- variables
- watch
- call stack
- **breakpoints**

▼ BREAKPOINTS

●	<input checked="" type="checkbox"/>	ex1_1.ps1	may the debugger be withyou/src/...	6
●	<input checked="" type="checkbox"/>	ex2_1.ps1	may the debugger be withyou/src...	10
●	<input checked="" type="checkbox"/>	ex2_1.ps1	may the debugger be withyou/src...	20
●	<input checked="" type="checkbox"/>	ex2_1.ps1	may the debugger be withyou/src...	26

launching the debugger

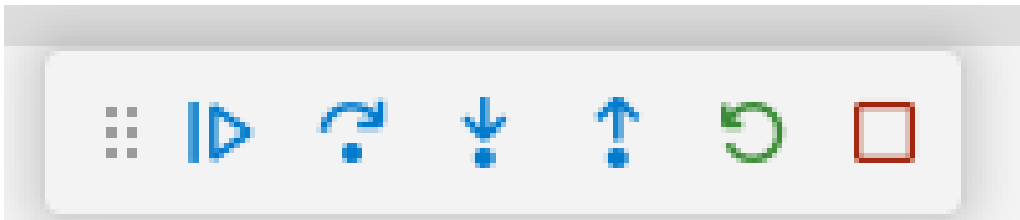
.vscode/launch.json

- preconfigured
 - Launch File
 - Interactive Session
 - Attach to Host Process
- IntelliSense

```
.vscode > {} launch.json > ...
1 {
2   // Use IntelliSense to learn about possible attributes.
3   // Hover to view descriptions of existing attributes.
4   // For more information, visit: https://go.microsoft.com/
5   "version": "0.2.0",
6   "configurations": [
7     {
8       "name": "PowerShell Launch Current File",
9       "type": "PowerShell",
10      "request": "launch",
11      "script": "${file}",
12      "cwd": "${cwd}"
13    },
14    {
15      "name": "PowerShell: Interactive Session",
16      "type": "PowerShell",
17      "request": "launch"
18    }
19  ]
20 }
```

navigation

- F5 : Start/Continue
- F9 : Toggle Breakpoint
- F10 : Step Over
- F11 : Step Into



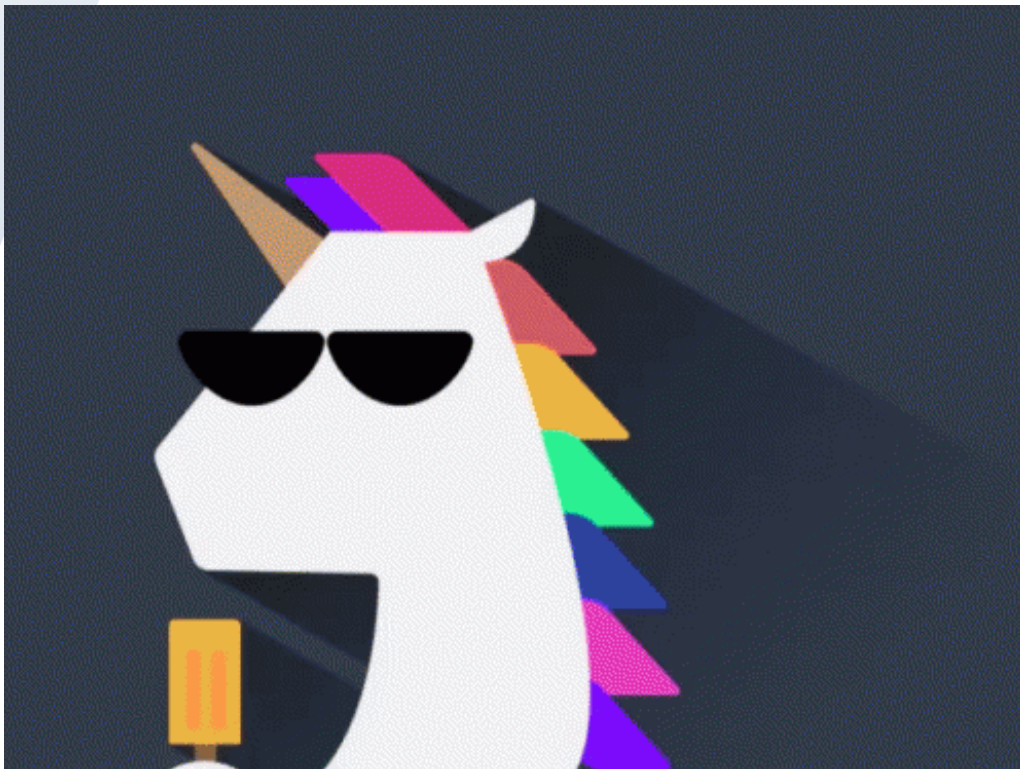


debugging

```
Import-Module ...  
Start-ThreadJob ...
```

debugging

```
$theargs = @{  
    ComputerName = 'win2k22'  
    PackageName  = 'psconf.demo'  
    Credential   = Get-Credential  
}  
Install-BoxstarterPackage @theargs
```

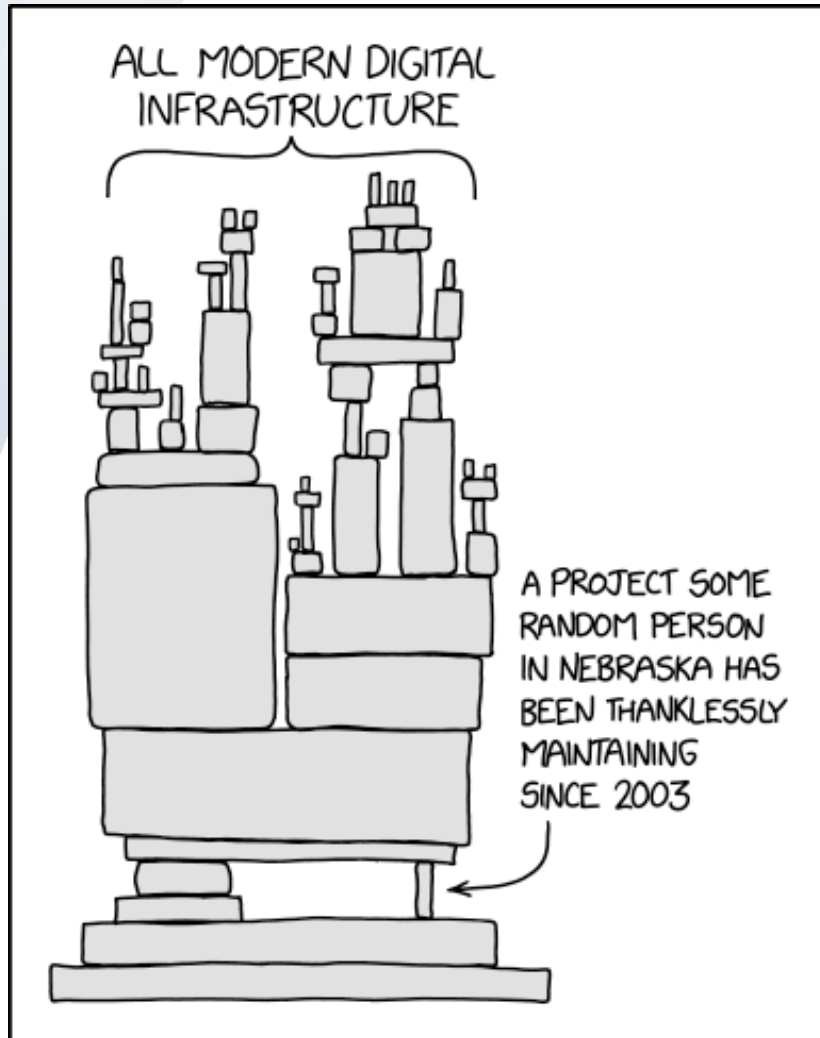
we've covered...

- vscode debugger views
- debugging principles
 - scripts
 - modules
 - attach to process (remote)



PRAGUE23





We build our computer (systems) the way we build our cities: over time, without a plan, on top of ruins.

(quote: Ellen Ullman)
(comic: Randall Munroe)

