



Practical Uses for the WSL

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Mike Nelson



mike@geektweakers.com



@nelmedia



geektweakers.com



<http://github.com/nelmediamike>



Microsoft MVP, Azure UG Leader



Citrix Technology Professional (CTP)



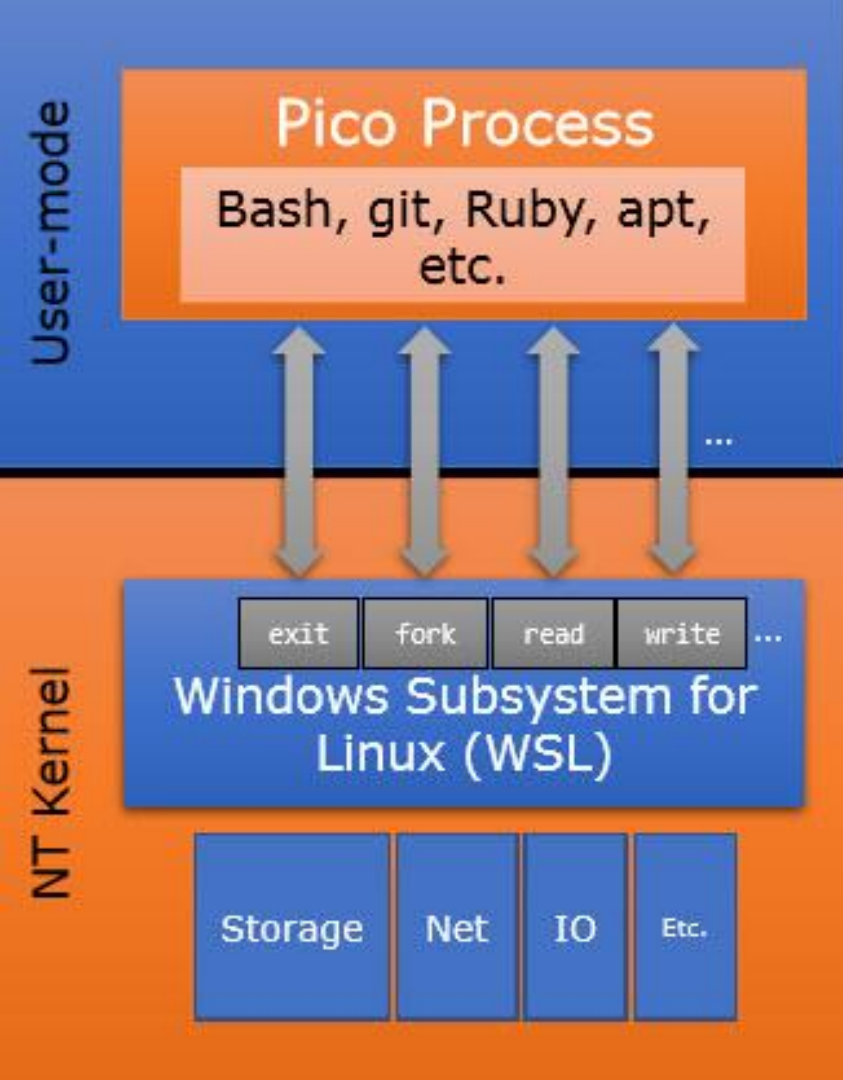
vExpert – Wisconsin VMUG Leader





TM

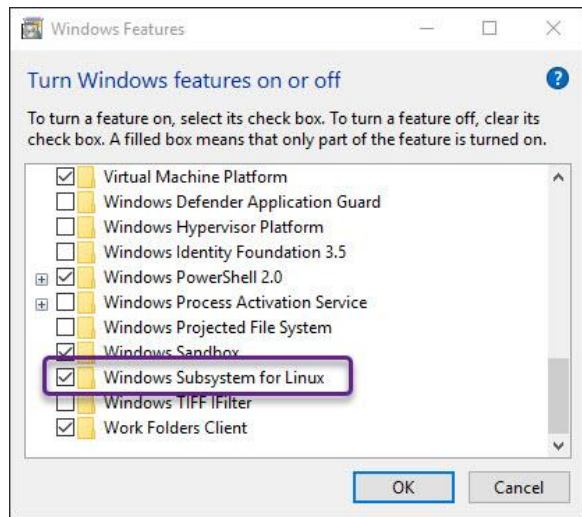




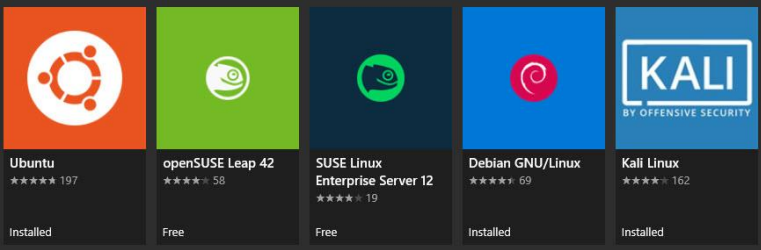
How it works

- Not VM's
- Genuine Linux ELF64 binaries loaded into lightweight "Pico Processes"
- WSL exposes Linux-compatible System Call Interface (SCI) & calling convention
 - Component of NT Kernel
- Utilizes existing NT Kernel APIs
 - Shares network, storage, IO, etc with Windows host

Install WSL



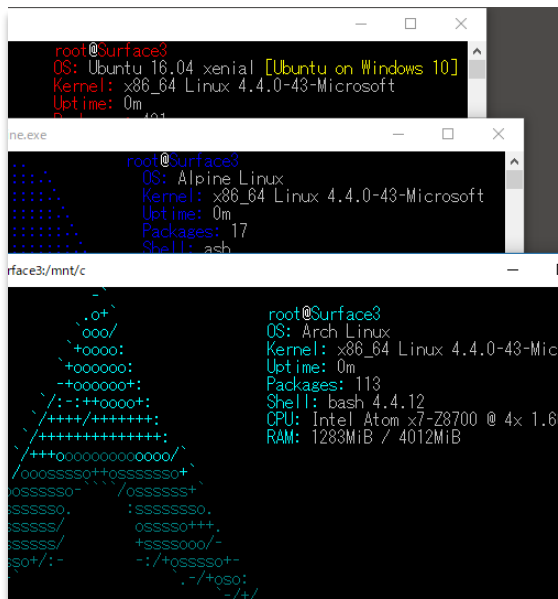
- Control Panel
- Turn Windows features on or off
- Select Windows Subsystem for Linux
- PowerShell
- `Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux`



In the Store

- Ubuntu 16/18...
- Debian
- Kali
- openSUSE Leap 15/42...
- SUSE Enterprise Server 12/15...
- Wlinux (\$\$)

More Enterprise features
in MS Business Store



The image shows three overlapping terminal windows from the 'WSL-DistroLauncher' application. The top window displays the prompt 'root@Surface3' and system information for Ubuntu 16.04 xenial. The middle window shows 'root@Surface3' and system information for Alpine Linux. The bottom window shows 'root@Surface3' and system information for Arch Linux, along with a large ASCII art tree in the background.

```
root@Surface3
OS: Ubuntu 16.04 xenial [Ubuntu on Windows 10]
Kernel: x86_64 Linux 4.4.0-43-Microsoft
Uptime: 0m 10s

root@Surface3
OS: Alpine Linux
Kernel: x86_64 Linux 4.4.0-43-Microsoft
Uptime: 0m
Packages: 17
Shell: ash

root@Surface3
OS: Arch Linux
Kernel: x86_64 Linux 4.4.0-43-Microsoft
Uptime: 0m
Packages: 113
Shell: bash 4.4.12
CPU: Intel Atom x7-Z8700 @ 4x 1.6GHz
RAM: 1283MiB / 4012MiB
```

In the Wild

- Alpine
- Arch
- Void
- Fedora
- ??

• Roll your own!

<https://github.com/Microsoft/WSL-DistroLauncher>



Tools

- `wslconfig`
- `Wslpath`
- `WSLENV`
- `lxrunoffline`
- `Opsview WSLTools`
- `wslutilities`
- *Github is the place*



Microsoft ❤️ Linux

Caveats

- Win editors *cannot edit Linux files, but Linux editors can edit Win files
- FS permissions
- Graphical apps & X Servers
- Single install distro's
- Process kills
- .bashrc & profiles
- Some things just don't run...



Your PC ran into a problem that it couldn't handle, and now it needs to restart.

Let's Demo



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