

WSL2 Ubuntu docker to replace docker desktop

!!
windowdocker desktop window window WSL docker

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1. WSL2 Windos10
 - WSL Windows 10 2004
 -

Windows 規格

版本	Windows 10 專業版
版本	21H2
安裝於	2021-03-09
OS 組建	19044.1526
體驗	Windows Feature Experience Pack 120.2212.4170.0

2. WSL Windows
 - a. WindowsWSL
 - b. PowerShell

```
系統管理員: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. 著作權所有，並保留一切權利。
請嘗試新的跨平台 PowerShell https://aka.ms/pscore6
PS C:\Users\user>
```

c. wsl --install wsl

d. WSL

- i. dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart

•

```
PS C:\Users\user> dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart
部署映像服務與管理工具
版本: 10.0.19041.844
映像版本: 10.0.19044.1526
啟用功能
[=====100.0%=====]
操作順利完成。
```

e. Linux

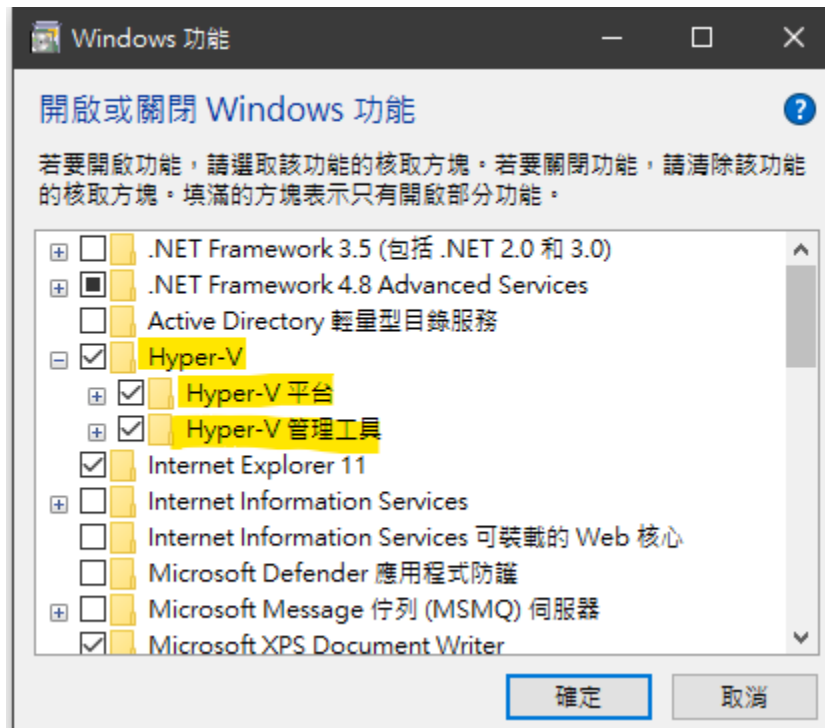
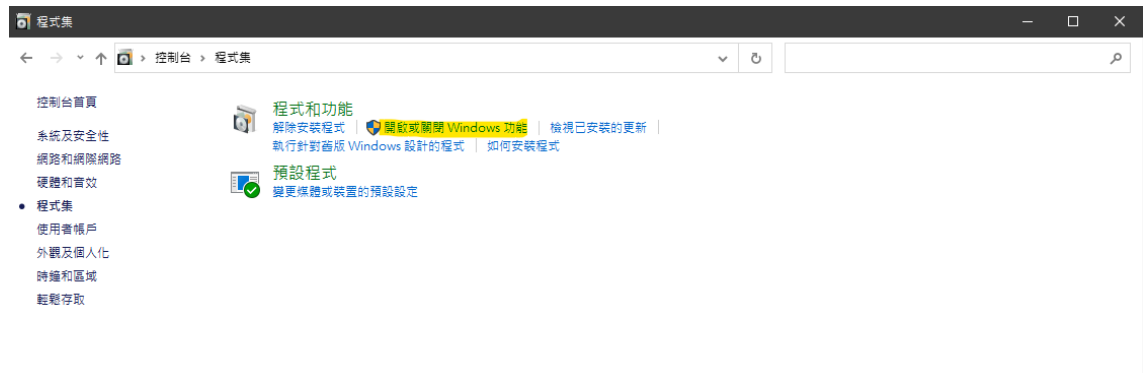
- i. dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart

•

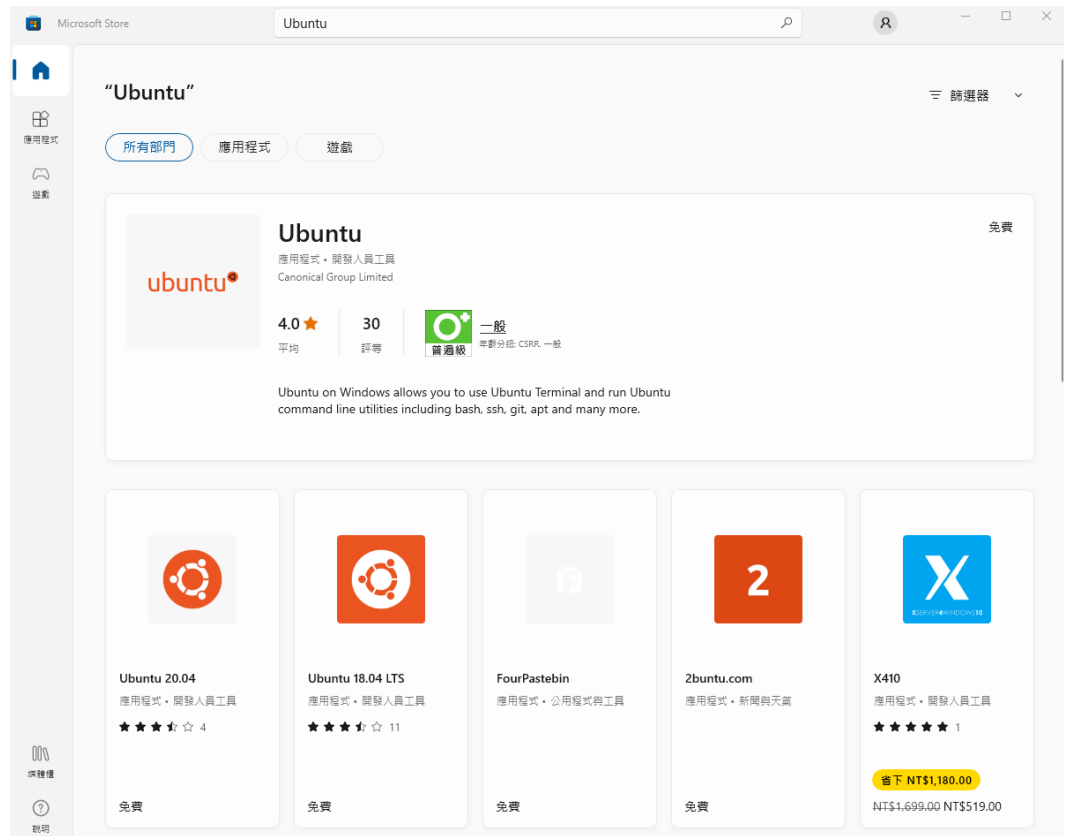
```
PS C:\Users\user> dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart
部署映像服務與管理工具
版本: 10.0.19041.844
映像版本: 10.0.19044.1526
啟用功能
[=====100.0%=====]
操作順利完成。
```

f. Windows Hyper-V

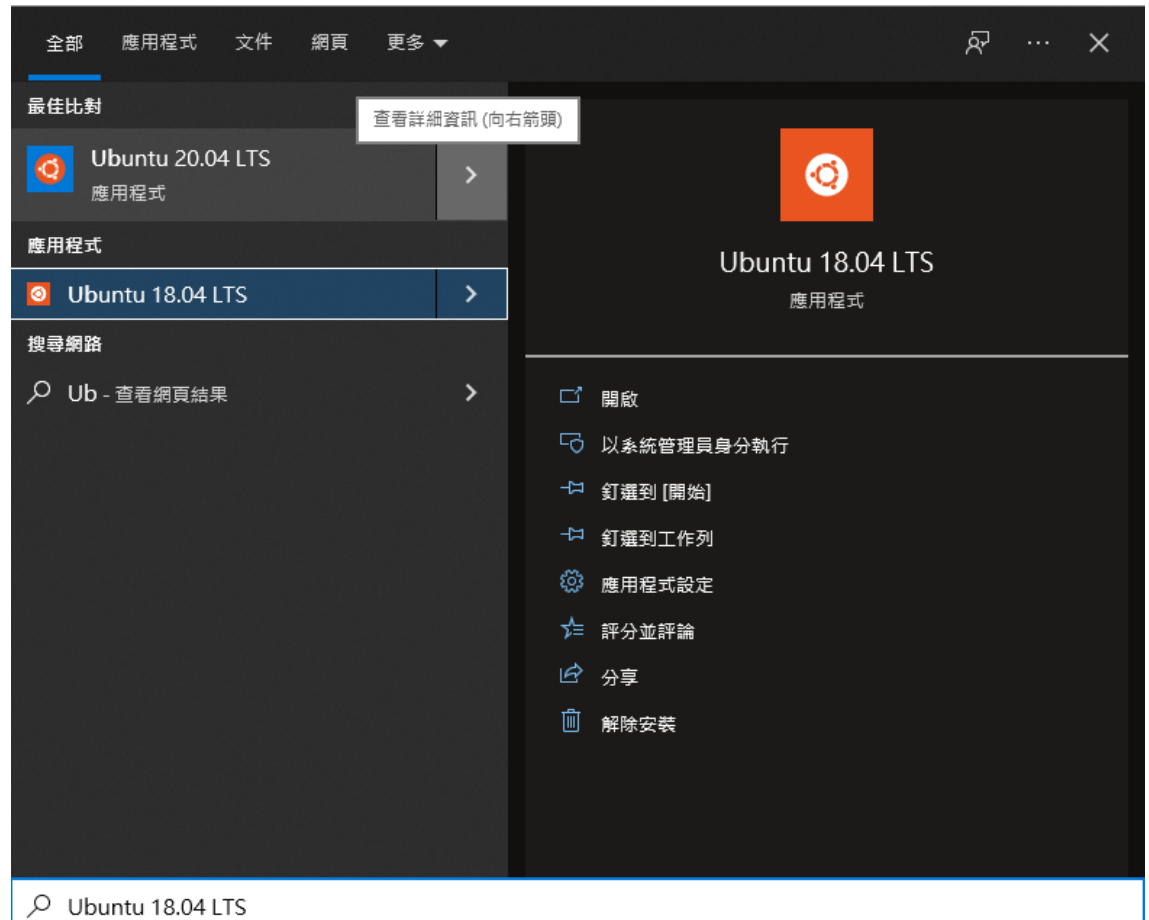
•



- g.
- h. WSL2 linux kernel : [WSL2 Linux \(x64 \)](#)
- i. PowerShell WSL WSL2
 - i. wsl --set-default-version 2
- j. microsoft store
 - i. Ubuntu 20.04
 -



k. Ubuntu 20.04



```
Ubuntu 20.04 LTS
Installing, this may take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username:
```

```
moin@FA00158:~$
Installing, this may take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: moin
New password:
Retype new password:
passwd: password updated successfully
Installation successful!
To run a command as administrator (user "root"), use "sudo <command>".
See 'man sudo_root' for details.

Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.10.16.3-microsoft-standard-WSL2 x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Tue Feb 22 12:12:40 CST 2022

System load:  0.0               Processes:    8
Usage of /:   0.5% of 250.98GB  Users logged in: 0
Memory usage: 0%               IPv4 address for eth0: 172.26.11.87
Swap usage:   0%

1 update can be applied immediately.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

This message is shown once a day. To disable it please create the
/home/moin/.hushlogin file.
moin@FA00158:~$
```

l. :ls /mnt/ CD

```
This message is shown once a day. To disable it please create the
/home/moin/.hushlogin file.
moin@FA00158:~$ ls /mnt/
[?] [?] wsl
moin@FA00158:~$
```

m. PowerShell : wsl -l -v

```
PS C:\Users\user> wsl -l -v
+ NAME          STATE          VERSION
+ Ubuntu-20.04  Running       2
PS C:\Users\user>

VERSION1, wsl --set-version Ubuntu-20.04 2 VERSION2. /bin/bash: --set-version: command not found, wsl
.exe --set-version Ubuntu 2
```

3. Ubuntu docker docker-compose

a. Ubuntu root: sudo -i

•

```
root@FA00158: ~  
moim@FA00158:~$ ls /mnt/  
wsl  
moim@FA00158:~$ sudo -i  
[sudo] password for moim:  
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.10.16.3-microsoft-standard-WSL2 x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
System information as of Tue Feb 22 14:00:52 CST 2022  
  
System load:  0.0          Processes:      10  
Usage of /:   0.5% of 250.98GB    Users logged in: 0  
Memory usage: 0%          IPv4 address for eth0: 172.26.11.87  
Swap usage:   0%  
  
1 update can be applied immediately.  
To see these additional updates run: apt list --upgradable  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
This message is shown once a day. To disable it please create the  
/root/.hushlogin file.  
root@FA00158:~#
```

b. docker:

i. apt-get update

```
root@FA00158:~# apt-get update  
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]  
Hit:2 http://archive.ubuntu.com/ubuntu focal InRelease  
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]  
Get:4 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1263 kB]  
Get:5 http://archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]  
Get:6 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [8628 kB]  
Get:7 http://security.ubuntu.com/ubuntu focal-security/main Translation-en [221 kB]  
Get:8 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [9556 B]  
Get:9 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [764 kB]  
Get:10 http://security.ubuntu.com/ubuntu focal-security/restricted Translation-en [109 kB]  
Get:11 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 c-n-f Metadata [504 B]  
Get:12 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [678 kB]  
Get:13 http://security.ubuntu.com/ubuntu focal-security/universe Translation-en [116 kB]  
Get:14 http://security.ubuntu.com/ubuntu focal-security/universe amd64 c-n-f Metadata [13.1 kB]  
Get:15 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [20.7 kB]  
Get:16 http://security.ubuntu.com/ubuntu focal-security/multiverse Translation-en [5196 B]  
Get:17 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 c-n-f Metadata [500 B]  
Get:18 http://archive.ubuntu.com/ubuntu focal/universe Translation-en [5124 kB]  
Get:19 http://archive.ubuntu.com/ubuntu focal/universe amd64 c-n-f Metadata [265 kB]  
Get:20 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [144 kB]  
Get:21 http://archive.ubuntu.com/ubuntu focal/multiverse Translation-en [104 kB]  
Get:22 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 c-n-f Metadata [9136 B]  
Get:23 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1598 kB]  
Get:24 http://archive.ubuntu.com/ubuntu focal-updates/main Translation-en [306 kB]  
Get:25 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [14.7 kB]  
Get:26 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [818 kB]  
Get:27 http://archive.ubuntu.com/ubuntu focal-updates/restricted Translation-en [116 kB]  
Get:28 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 c-n-f Metadata [500 B]  
Get:29 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [904 kB]  
Get:30 http://archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [201 kB]  
Get:31 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [20.1 kB]  
Get:32 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [23.7 kB]  
Get:33 http://archive.ubuntu.com/ubuntu focal-updates/multiverse Translation-en [7312 B]  
Get:34 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 c-n-f Metadata [580 B]  
Get:35 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [42.0 kB]  
Get:36 http://archive.ubuntu.com/ubuntu focal-backports/main Translation-en [10.0 kB]  
Get:37 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 c-n-f Metadata [864 B]  
Get:38 http://archive.ubuntu.com/ubuntu focal-backports/restricted amd64 c-n-f Metadata [116 B]  
Get:39 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [21.6 kB]  
Get:40 http://archive.ubuntu.com/ubuntu focal-backports/universe Translation-en [15.0 kB]  
Get:41 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 c-n-f Metadata [716 B]  
Get:42 http://archive.ubuntu.com/ubuntu focal-backports/multiverse amd64 c-n-f Metadata [116 B]  
Fetched 21.9 MB in 5s (4171 kB/s)  
Reading package lists... Done
```

ii. apt-get install -y curl

```

Reading package lists... Done
root@FA00158:~# apt-get install -y curl
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libcurl4
The following packages will be upgraded:
  curl libcurl4
2 upgraded, 0 newly installed, 0 to remove and 124 not upgraded.
Need to get 396 kB of archives.
After this operation, 2048 B of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 curl amd64 7.68.0-1ubuntu2.7 [161 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 libcurl4 amd64 7.68.0-1ubuntu2.7 [234 kB]
Fetched 396 kB in 2s (187 kB/s)
(Reading database ... 32223 files and directories currently installed.)
Preparing to unpack .../curl_7.68.0-1ubuntu2.7_amd64.deb ...
Unpacking curl (7.68.0-1ubuntu2.7) over (7.68.0-1ubuntu2.6) ...
Preparing to unpack .../libcurl4_7.68.0-1ubuntu2.7_amd64.deb ...
Unpacking libcurl4:amd64 (7.68.0-1ubuntu2.7) over (7.68.0-1ubuntu2.6) ...
Setting up libcurl4:amd64 (7.68.0-1ubuntu2.7) ...
Setting up curl (7.68.0-1ubuntu2.7) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.2) ...

```

- **curl**

iii. curl -s https://get.docker.com | sudo sh

```

root@FA00158:~# curl -s https://get.docker.com | sudo sh
# Executing docker install script, commit: 92d49975926e4cf9c519605fe85052a2c32be
DEB DEBUTED: We recommend using Docker Desktop for Windows.
Please get Docker Desktop from https://www.docker.com/products/docker-desktop

To get press Ctrl+C now to abort this script.
# sleep 30
# DEBIAN_FRONTEND=noninteractive apt-get install -y --no-install-recommends docker-ce-cli docker-ce-rootless-extras >/dev/null
# echo "deb [arch=amd64] signed-by=/usr/share/keyrings/docker-archive-keyring.gpg https://download.docker.com/linux/ubuntu focal stable" > /etc/apt/sources.list.d/docker.list
# DEBIAN_FRONTEND=noninteractive apt-get install -y --no-install-recommends docker-ce-cli docker-ce-rootless-extras >/dev/null
# return 0
# DEBIAN_FRONTEND=noninteractive apt-get install -y --no-install-recommends docker-ce-rootless-extras >/dev/null

To run Docker as a non-privileged user, consider setting up the
Docker daemon in rootless mode for your user.

dockerd-rootless-setup.sh install

Visit https://docs.docker.com/go/rootless/ to learn about rootless mode.

To run the Docker daemon as a fully privileged service, but granting non-root
users access, refer to https://docs.docker.com/go/docker-access/.

WARNING: Access to the remote API on a privileged Docker daemon is equivalent
to root access on the host. Refer to the 'Docker daemon attack surface'
documentation for details: https://docs.docker.com/go/attack-surface/

```

iv. docker

- **docker : docker version**

```

root@FA00158:~# docker version
Client: Docker Engine - Community
Version: 20.10.12
API version: 1.41
Go version: go1.16.12
Git commit: e91ed57
Built: Mon Dec 13 11:45:33 2021
OS/Arch: linux/amd64
Context: default
Experimental: true

```

- **: service docker start**

```

root@FA00158:~# sudo -i
[sudo] password for moin:
root@FA00158:~# service docker start
* Starting Docker: docker

```

- **: service docker stop**

```

root@FA00158:~# service docker stop
* Stopping Docker: docker

```

- **: service docker restart**

```

root@FA00158:~# service docker restart
* Starting Docker: docker

```

v. docker

```

root@FA00158:~# docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
root@FA00158:~# sudo -i
[sudo] password for moin:
root@FA00158:~# service docker start
* Starting Docker: docker

```

vi. docker docker ps

```

root@FA00079:~# docker ps

```

- **docker version docker**

- docker Failed to connect to bus: Host is down <https://blog.csdn.net/zhangyuhaifa/article/details/119756642>
- <https://www.awaimai.com/2587.html>


c. docker-compose

i. apt install docker-compose -y

-

```
root@A00158:~# docker-compose version
docker-compose version 1.25.0, build unknown
docker.py version: 4.1.0
Python version: 3.8.10
OpenSSL version: OpenSSL 1.1.1f 31 Mar 2020
```

- ```
extra_hosts :
 - "host.docker.internal:host-gateway"
```

-  , window docker desktopdelete. .env volumn mountpathlinux
- docker WSL

1. <https://cloud.tencent.com/developer/article/1884572>
2. <https://docs.microsoft.com/zh-tw/windows/wsl/install-manual>

C:\Users\\.wslconfig .wslconfig

```
[wsl2]
memory=8GB # Limits VM memory in WSL 2 up to 8GB
processors=4 # Makes the WSL 2 VM use two virtual processors
```

, cmdwsl,

a. wsl

```
wsl --shutdown
```

b. wsl

```
wsl
```

c. (linux) memory8GB

```
sudo top
```

```
top - 17:20:12 up 34 min, 0 users, load average: 1.18, 1.13, 1.08
Tasks: 91 total, 2 running, 89 sleeping, 0 stopped, 0 zombie
%Cpu(s): 1.3 us, 6.8 sy, 0.0 ni, 87.1 id, 0.0 wa, 0.0 hi, 4.9 si, 0.0 st
MiB Mem: 7957.3 total, 376.0 free, 5278.0 used, 2303.2 buff/cache
MiB Swap: 2048.0 total, 2048.0 free, 0.0 used, 2356.7 avail Mem
```

d. 4

```
cat /proc/cpuinfo | grep "^processor" | wc -l
```

```
root@FA00079:/mnt/c/Users/user# cat /proc/cpuinfo | grep "^processor" | wc -l
4
```

memory,

1. <https://itnext.io/wsl2-tips-limit-cpu-memory-when-using-docker-c022535faf6f>
2. <https://www.ltsplus.com/linux/linux-list-cpu-number-cores-number>