WSL2 Ubuntu docker to replace docker desktop

> ℹ️ !!
> windowdocker desktop window window WSL docker

-

1. WSL2 Windos10
   - WSL Windows 10 2004
     -

Windows 規格

版本	Windows 10 專業版
版本	<mark>21H2</mark>
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
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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。
```
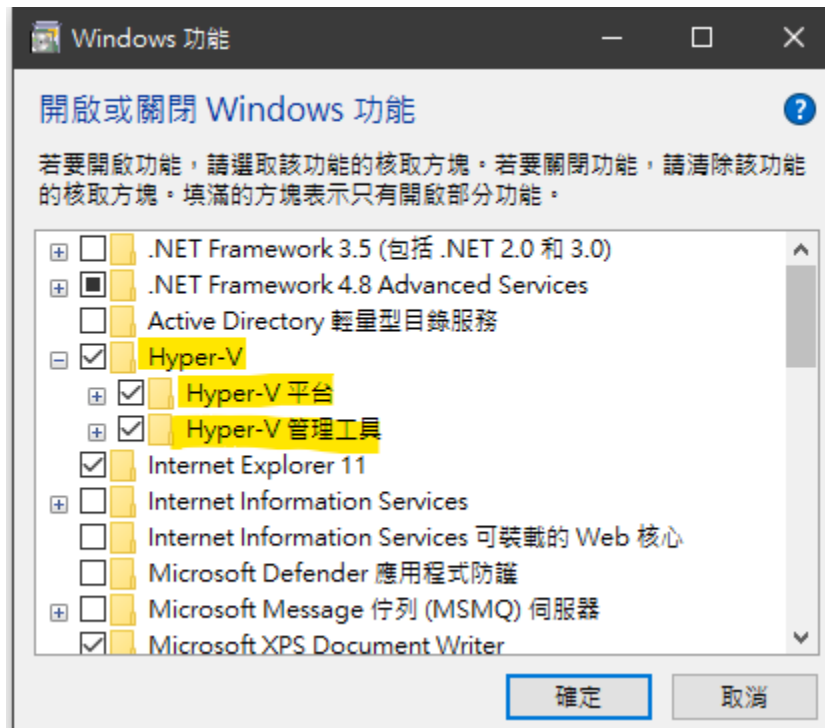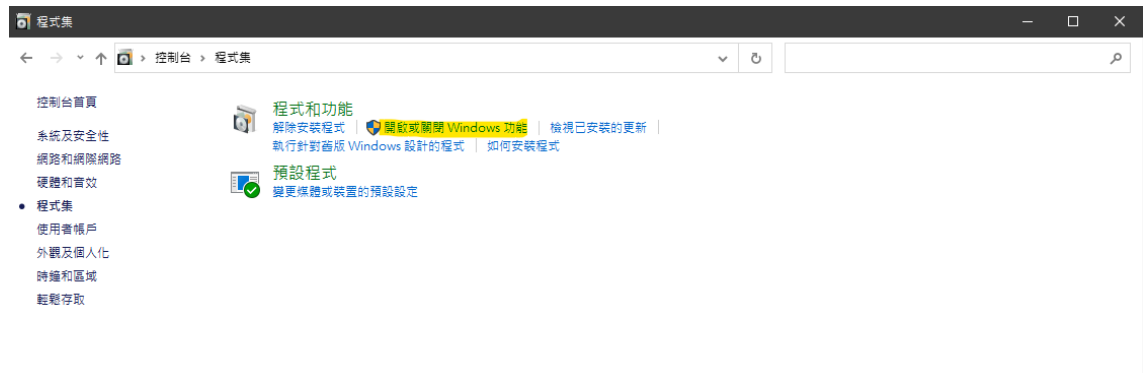
   e. Linux
      i. `dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart`
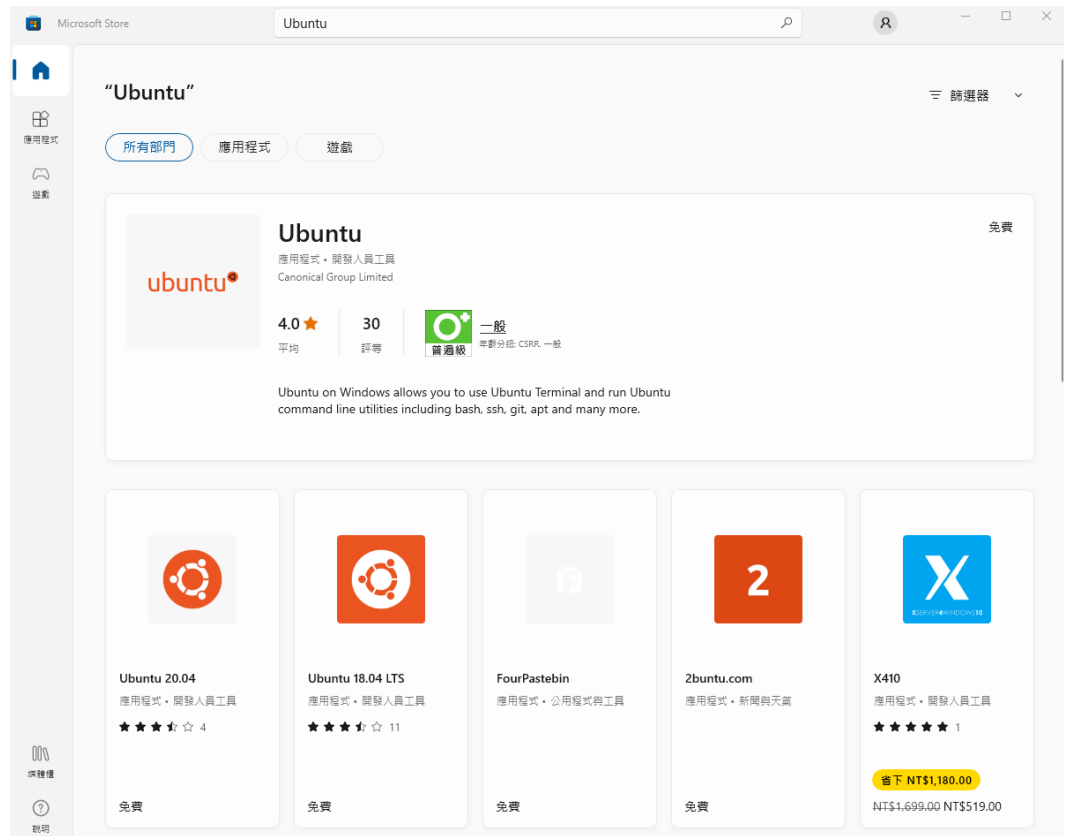   -

```
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

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啟用功能
[===================100.0%===================]
操作順利完成。
```

   f. Windows Hyper-V
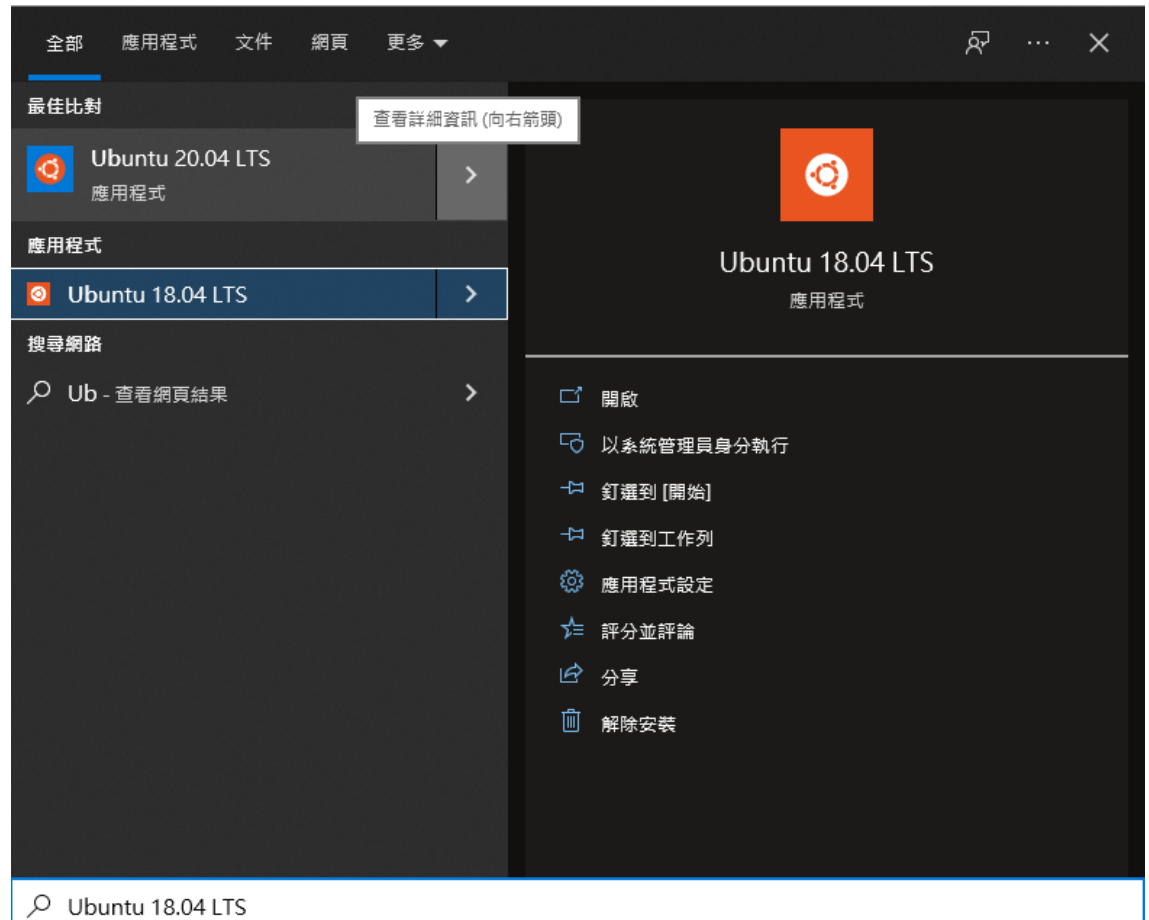   -

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

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:

-

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/
c   d   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. Ubunturoot : `sudo -i`
        -

b. docker :
  i. `apt-get update`
      -
  ii. `apt-get install -y curl`
      -

- **curl**

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

iv. docker

- docker : `docker version`

- : `service docker start`

- : `service docker stop`

- : `service docker restart`

v. docker

vi. docker `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@BFA00158:~# apt install docker-compose
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  pigz python3-cached-property python3-docker python3-dockerpty python3-docopt python3-texttable python3-websocket
Recommended packages:
  docker.io
The following NEW packages will be installed:
  docker-compose pigz python3-cached-property python3-docker python3-dockerpty python3-docopt python3-texttable
  python3-websocket
0 upgraded, 8 newly installed, 0 to remove and 123 not upgraded.
Need to get 319 kB of archives.
After this operation, 1875 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu focal/universe amd64 pigz amd64 2.4-1 [57.4 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal/universe amd64 python3-cached-property all 1.5.1-4 [10.9 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal/universe amd64 python3-websocket all 0.53.0-2ubuntu1 [32.3 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal/universe amd64 python3-docker all 4.1.0-1 [83.8 kB]
Get:5 http://archive.ubuntu.com/ubuntu focal/universe amd64 python3-dockerpty all 0.4.1-2 [11.1 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal/universe amd64 python3-docopt all 0.6.2-2.2ubuntu1 [19.7 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal/universe amd64 python3-texttable all 1.6.2-2 [11.0 kB]
Get:8 http://archive.ubuntu.com/ubuntu focal/universe amd64 docker-compose all 1.25.0-1 [92.7 kB]
Fetched 319 kB in 2s (202 kB/s)
Selecting previously unselected package pigz.
(Reading database ... 32468 files and directories currently installed.)
Preparing to unpack .../0-pigz_2.4-1_amd64.deb ...
Unpacking pigz (2.4-1) ...
Selecting previously unselected package python3-cached-property.
Preparing to unpack .../1-python3-cached-property_1.5.1-4_all.deb ...
Unpacking python3-cached-property (1.5.1-4) ...
Selecting previously unselected package python3-websocket.
Preparing to unpack .../2-python3-websocket_0.53.0-2ubuntu1_all.deb ...
Unpacking python3-websocket (0.53.0-2ubuntu1) ...
Selecting previously unselected package python3-docker.
Preparing to unpack .../3-python3-docker_4.1.0-1_all.deb ...
Unpacking python3-docker (4.1.0-1) ...
Selecting previously unselected package python3-dockerpty.
Preparing to unpack .../4-python3-dockerpty_0.4.1-2_all.deb ...
Unpacking python3-dockerpty (0.4.1-2) ...
Selecting previously unselected package python3-docopt.
Preparing to unpack .../5-python3-docopt_0.6.2-2.2ubuntu1_all.deb ...
Unpacking python3-docopt (0.6.2-2.2ubuntu1) ...
Selecting previously unselected package python3-texttable.
Preparing to unpack .../6-python3-texttable_1.6.2-2_all.deb ...
Unpacking python3-texttable (1.6.2-2) ...
Selecting previously unselected package docker-compose.
Preparing to unpack .../7-docker-compose_1.25.0-1_all.deb ...
Unpacking docker-compose (1.25.0-1) ...
Setting up python3-cached-property (1.5.1-4) ...
Setting up python3-texttable (1.6.2-2) ...
Setting up python3-docopt (0.6.2-2.2ubuntu1) ...
Setting up pigz (2.4-1) ...
Setting up python3-websocket (0.53.0-2ubuntu1) ...
update-alternatives: using /usr/bin/python3-wsdump to provide /usr/bin/wsdump (wsdump) in auto mode
Setting up python3-dockerpty (0.4.1-2) ...
Setting up python3-docker (4.1.0-1) ...
Setting up docker-compose (1.25.0-1) ...
Processing triggers for man-db (2.9.1-1) ...
```

ii. :docker-compose version

-
```
root@BFA00158:~# docker-compose version
docker-compose version 1.25.0, build unknown
docker-py version: 4.1.0
CPython version: 3.8.10
OpenSSL version: OpenSSL 1.1.1f  31 Mar 2020
```

d. :

i. build docker

- host.docker.internal service

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

- windows pathlinux path ex. C:\\work\\hybris_docker\\hybris_docker\\ /mnt/c/work/hybris_docker/hybris_docker/

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

Docker Desktop IDE   IntelliJ IDEA Mimic Docker Desktop

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

Ubuntu docker, RAM, WSL2memoryprocessors

C:\Users\<your username>\.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