20MCA136-NETWORKING & ADMINISTRATION

INSTALLING DOCKER ON WINDOWS 10

Submitted To,

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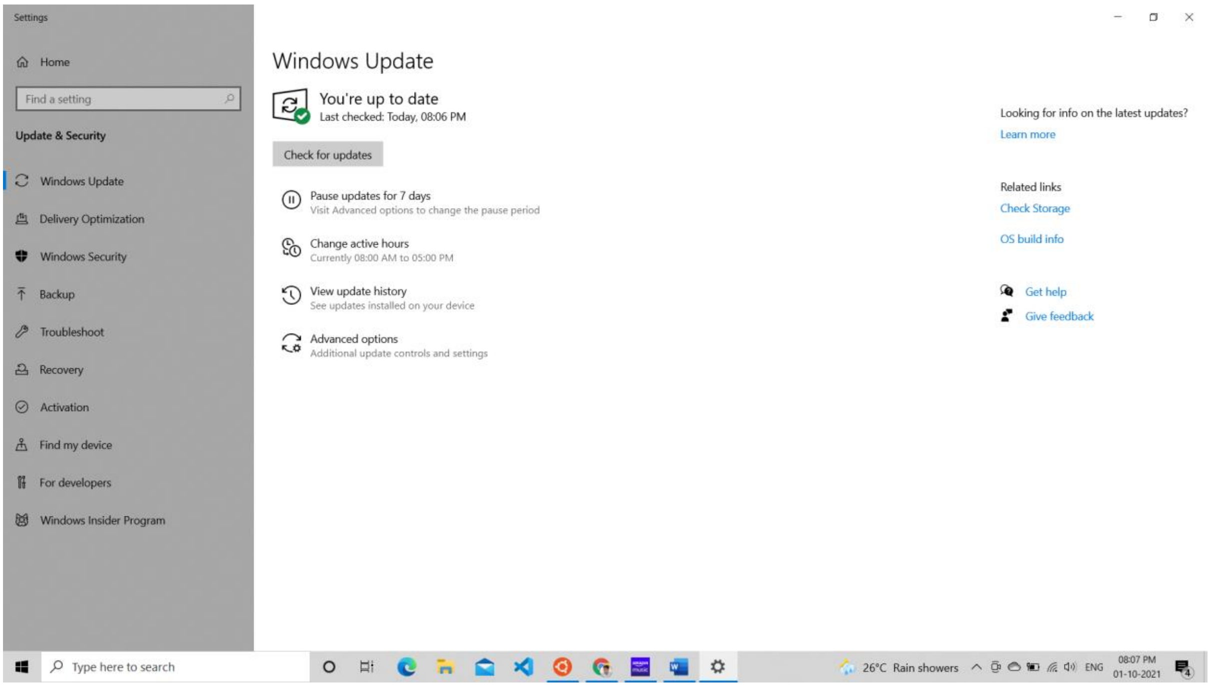
Roll No: 40

Installing Docker on Windows 10

First make sure Windows is up to date.

In the Windows search type "Windows Update" and select Windows Update setting

You should see a green check and “You’re up to date”. If not click “Check for updates”. You will need to repeat this process until you no longer have any updates to install.



You're up to date
Last checked: Today, 08:06 PM

Visit Advanced options to change the pause period

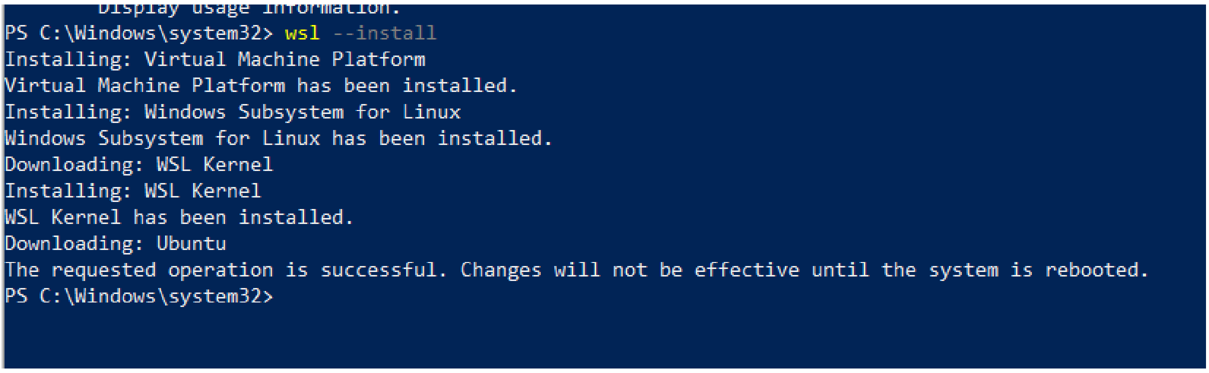
Currently 08:00 AM to 05:00 PM

See updates installed on your device

Additional update controls and settings

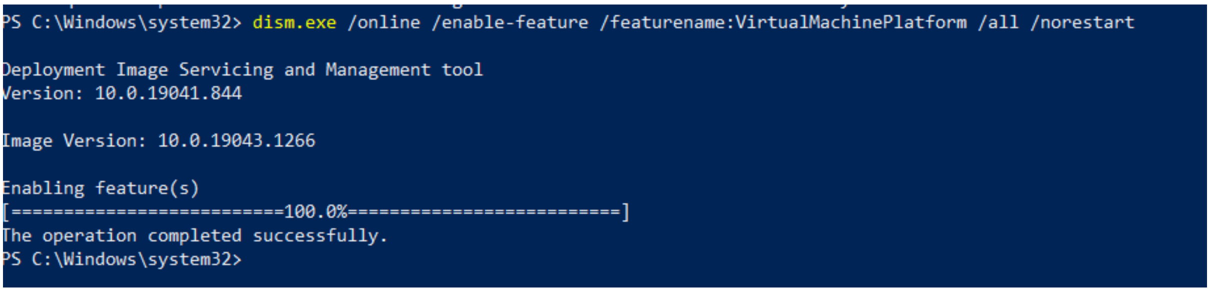
Next install WSL2

- From the Windows Search Type "powershell" then right-click on Windows PowerShell and then Run as administrator.
- Click `Yes' to allow PowerShell to make changes to your device.
- In the Administrator: Windows PowerShell window run (copy and past) "wsl –install" to install Windows Services for Linux (wsl).



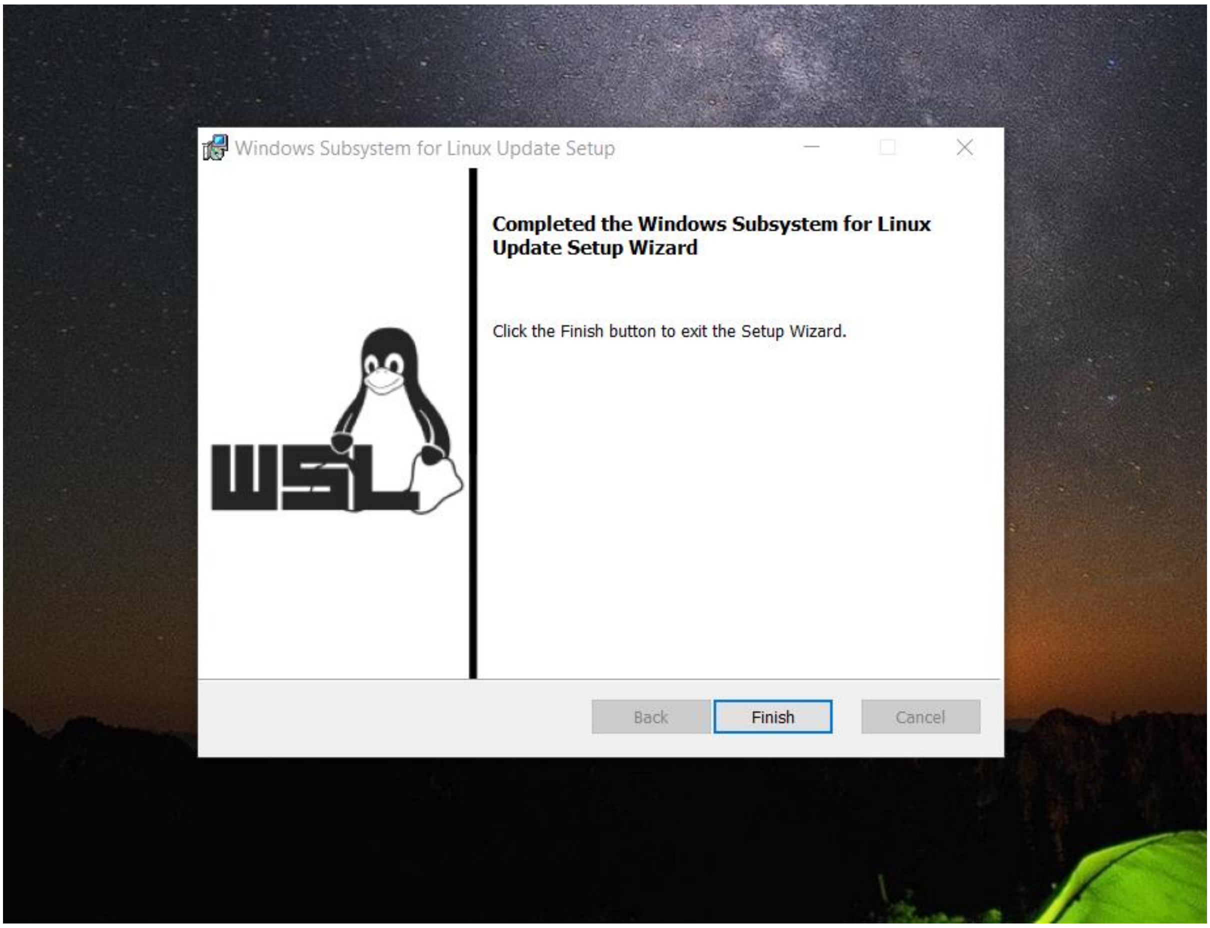
```
        Display usage information.
PS C:\Windows\system32> wsl --install
Installing: Virtual Machine Platform
Virtual Machine Platform has been installed.
Installing: Windows Subsystem for Linux
Windows Subsystem for Linux has been installed.
Downloading: WSL Kernel
Installing: WSL Kernel
WSL Kernel has been installed.
Downloading: Ubuntu
The requested operation is successful. Changes will not be effective until the system is rebooted.
PS C:\Windows\system32>
```

- Next enable the Virtual Machine Platform. In the Administrator: Windows PowerShell run (copy and past) "dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart".



```
PS C:\Windows\system32> dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart

Deployment Image Servicing and Management tool
Version: 10.0.19041.844

Image Version: 10.0.19043.1266

Enabling feature(s)
[==========================100.0%==========================]
The operation completed successfully.
PS C:\Windows\system32>
```

- Download and install the [WSL2 Linux kernel update package for x64 machines]

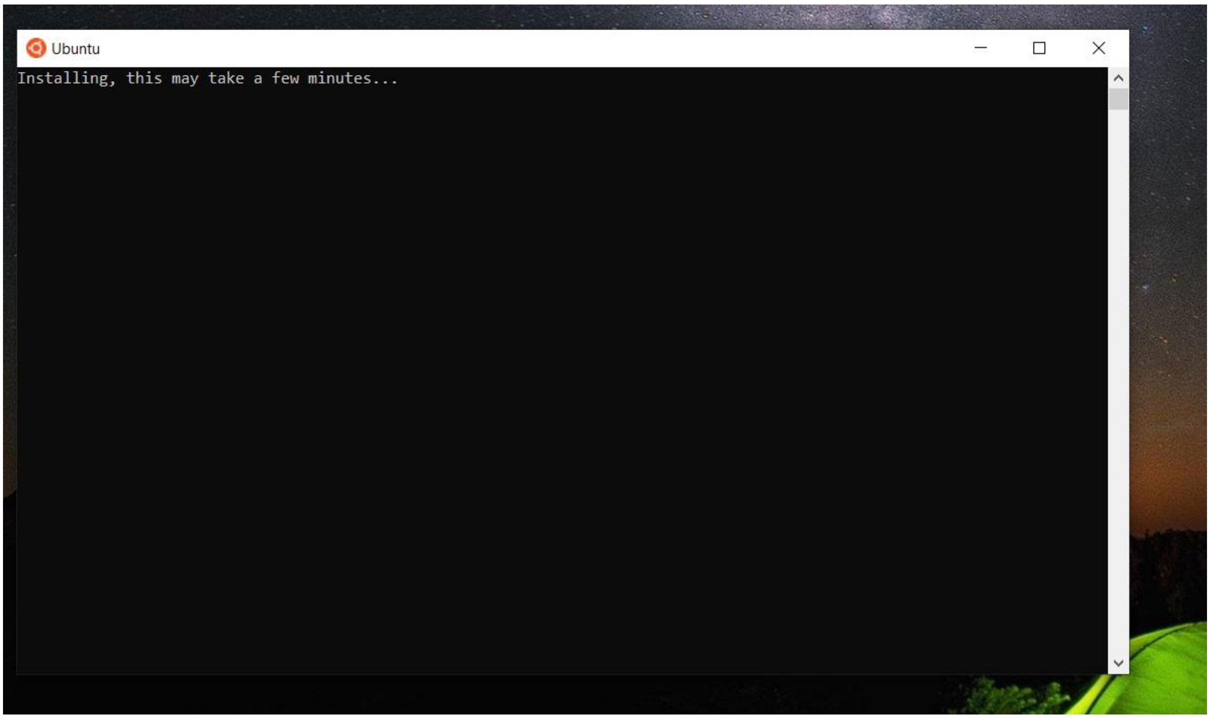


Windows Subsystem for Linux Update Setup

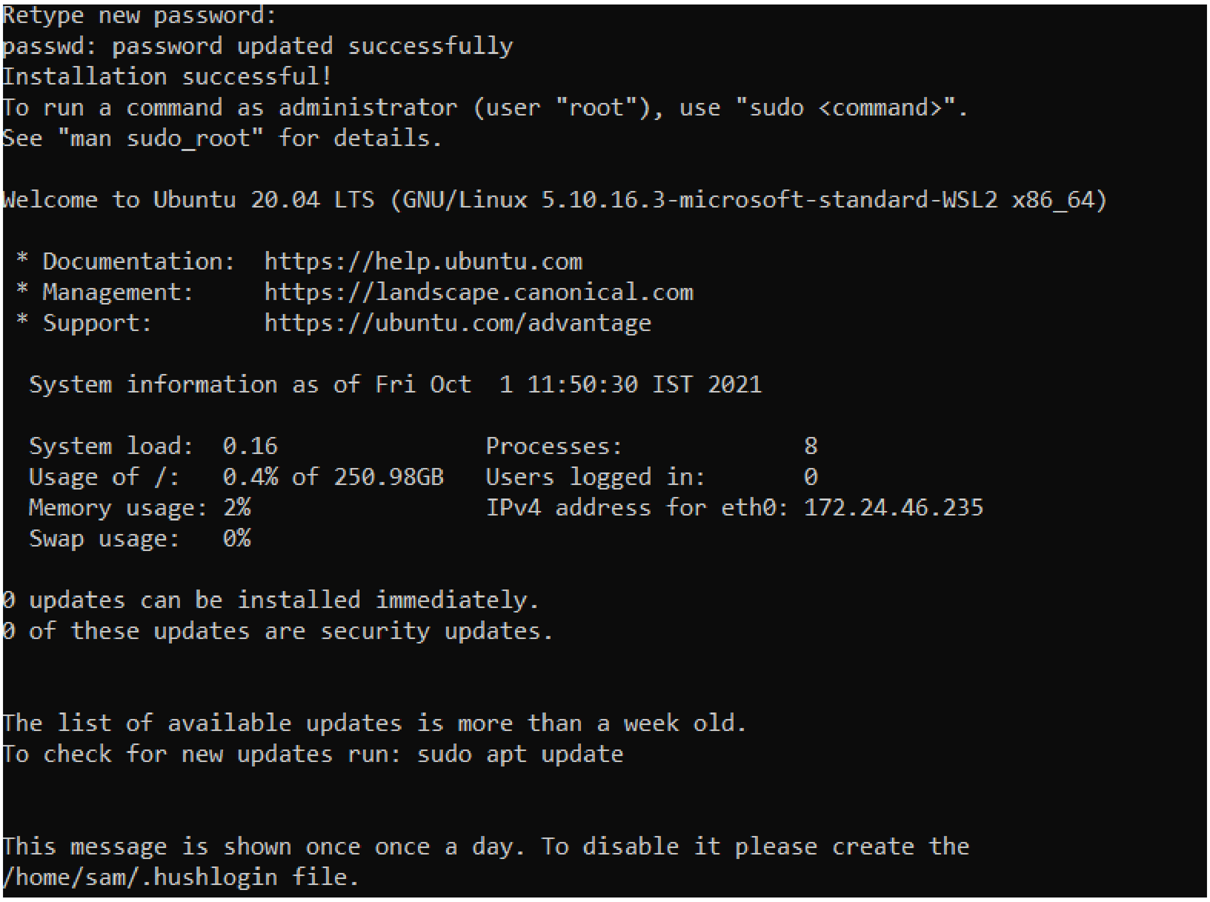
Completed the Windows Subsystem for Linux Update Setup Wizard

Click the Finish button to exit the Setup Wizard.

- set up a Linux user



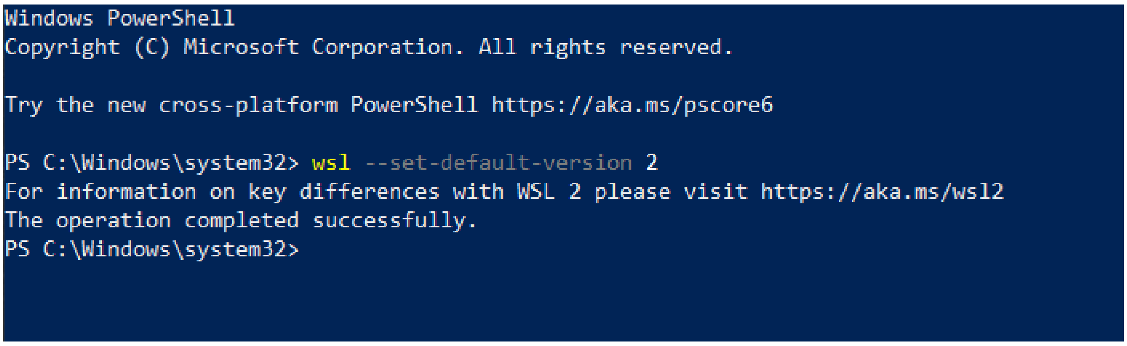
```
Installing, this may take a few minutes...
```



```
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 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 Fri Oct  1 11:50:30 IST 2021

  System load:  0.16               Processes:             8
  Usage of /:   0.4% of 250.98GB   Users logged in:       0
  Memory usage: 2%                 IPv4 address for eth0: 172.24.46.235
  Swap usage:   0%

0 updates can be installed immediately.
0 of these updates are security updates.


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 once a day. To disable it please create the
/home/sam/.hushlogin file.
```

- Reboot Windows.
- Again, from the Windows Search Type "powershell" then right-click on Windows PowerShell and then Run as administrator.

- In the PowerShell window run "**wsl --set-default-version 2**".



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Windows\system32> wsl --set-default-version 2
For information on key differences with WSL 2 please visit https://aka.ms/wsl2
The operation completed successfully.
PS C:\Windows\system32>
```
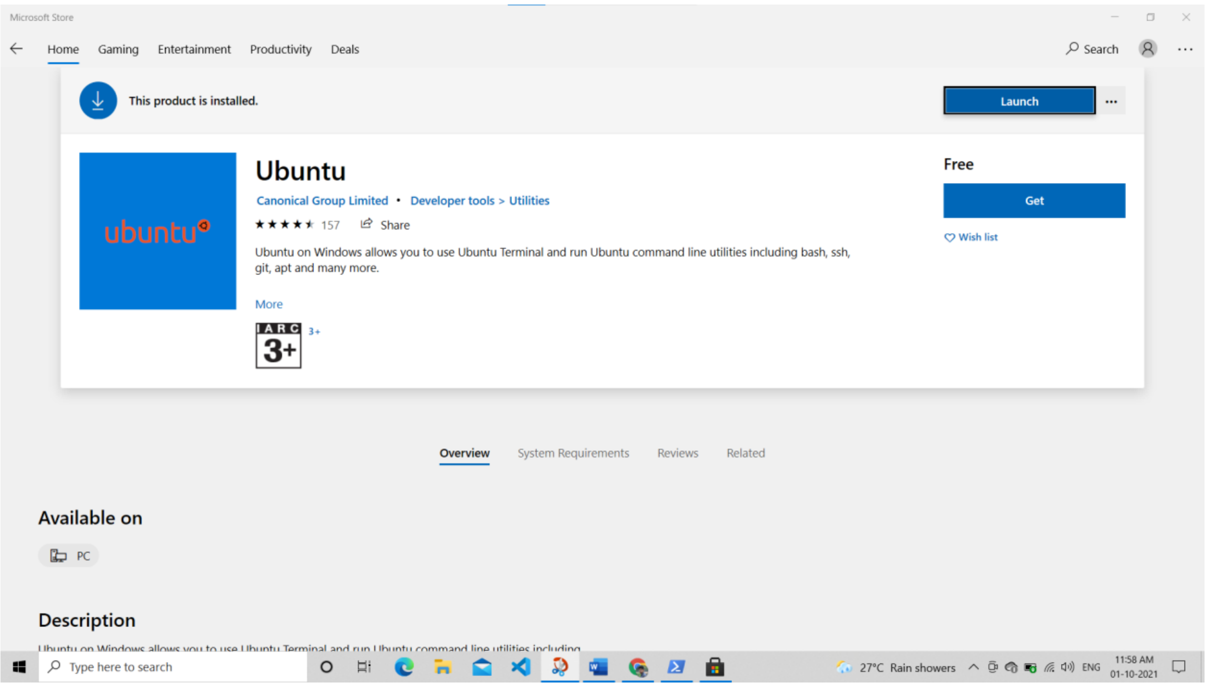

- Next install a Linux distribution from the [Microsoft Store]()



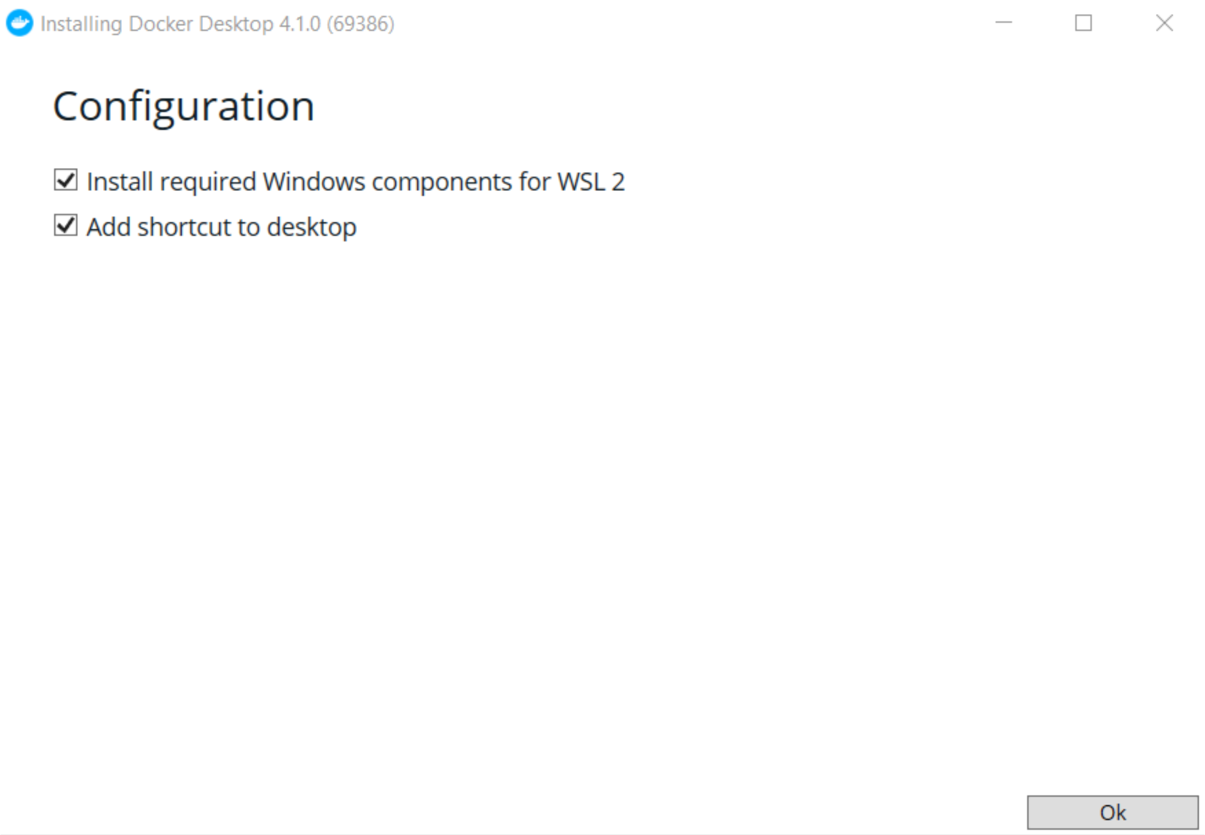
This product is installed.

Ubuntu on Windows allows you to use Ubuntu Terminal and run Ubuntu command line utilities including bash, ssh, git, apt and many more.

- You will now be able to run Linux commands in the Ubuntu terminal window.

Now you can install [Docker Desktop for Windows]()

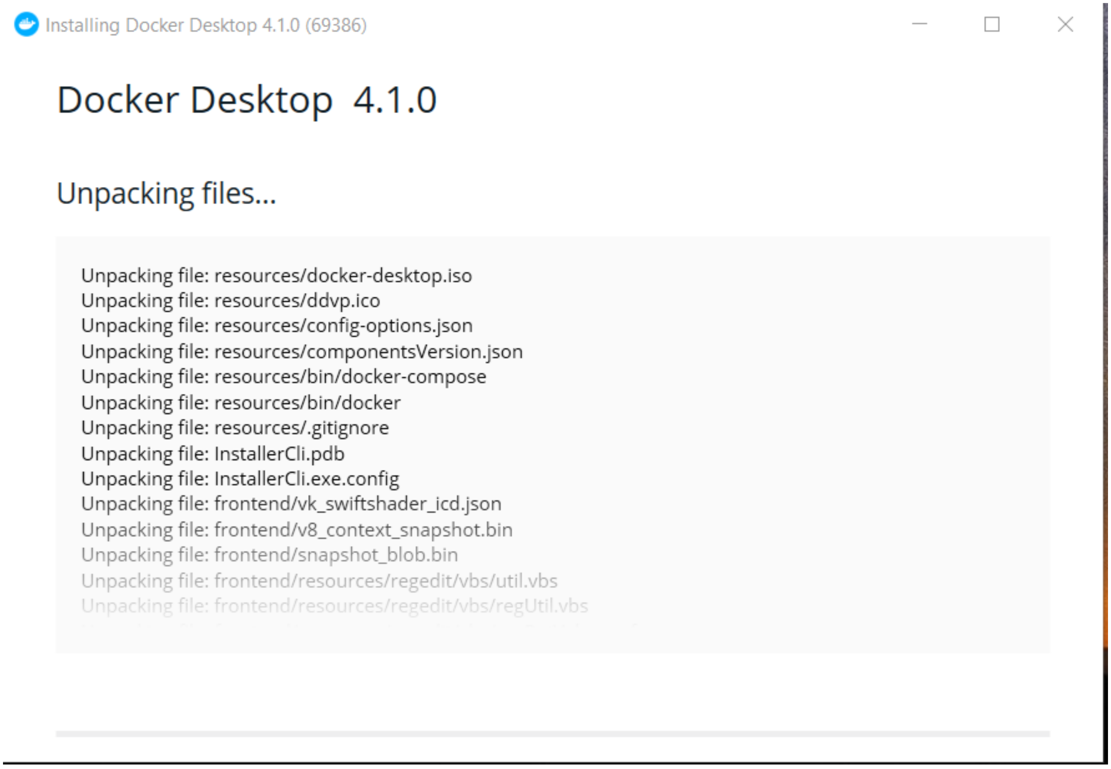
- Download the Docker Desktop for Windows installer from https://www.docker.com/products/docker-desktop
- Run the installer.



Configuration

☑ Install required Windows components for WSL 2

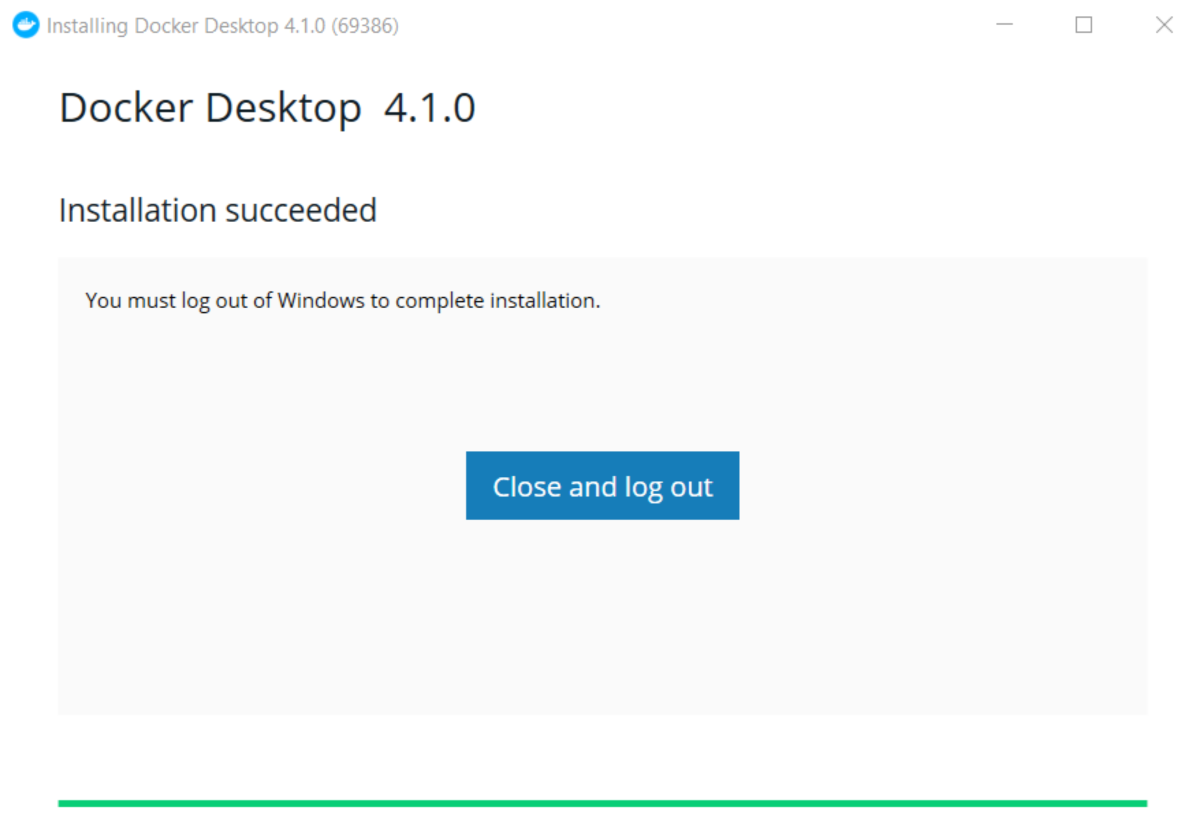
☑ Add shortcut to desktop



Docker Desktop 4.1.0

Unpacking files...

```
Unpacking file: resources/docker-desktop.iso
Unpacking file: resources/ddvp.ico
Unpacking file: resources/config-options.json
Unpacking file: resources/componentsVersion.json
Unpacking file: resources/bin/docker-compose
Unpacking file: resources/bin/docker
Unpacking file: resources/.gitignore
Unpacking file: InstallerCli.pdb
Unpacking file: InstallerCli.exe.config
Unpacking file: frontend/vk_swiftshader_icd.json
Unpacking file: frontend/v8_context_snapshot.bin
Unpacking file: frontend/snapshot_blob.bin
Unpacking file: frontend/resources/regedit/vbs/util.vbs
Unpacking file: frontend/resources/regedit/vbs/regUtil.vbs
```



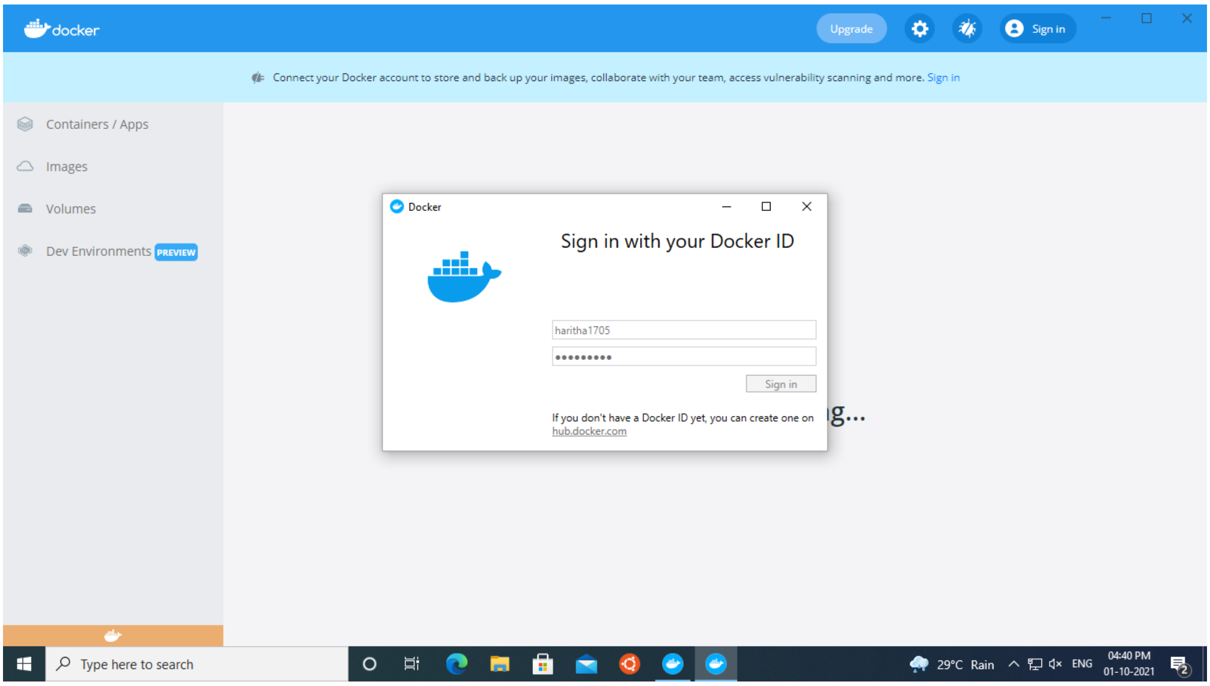
Installing Docker Desktop 4.1.0 (69386)

Docker Desktop 4.1.0

Installation succeeded

You must log out of Windows to complete installation.

- Reboot Windows.
- Login to Windows and let Docker finish setting up. This can take a few minutes depending on your machine.



Connect your Docker account to store and back up your images, collaborate with your team, access vulnerability scanning and more. Sign in

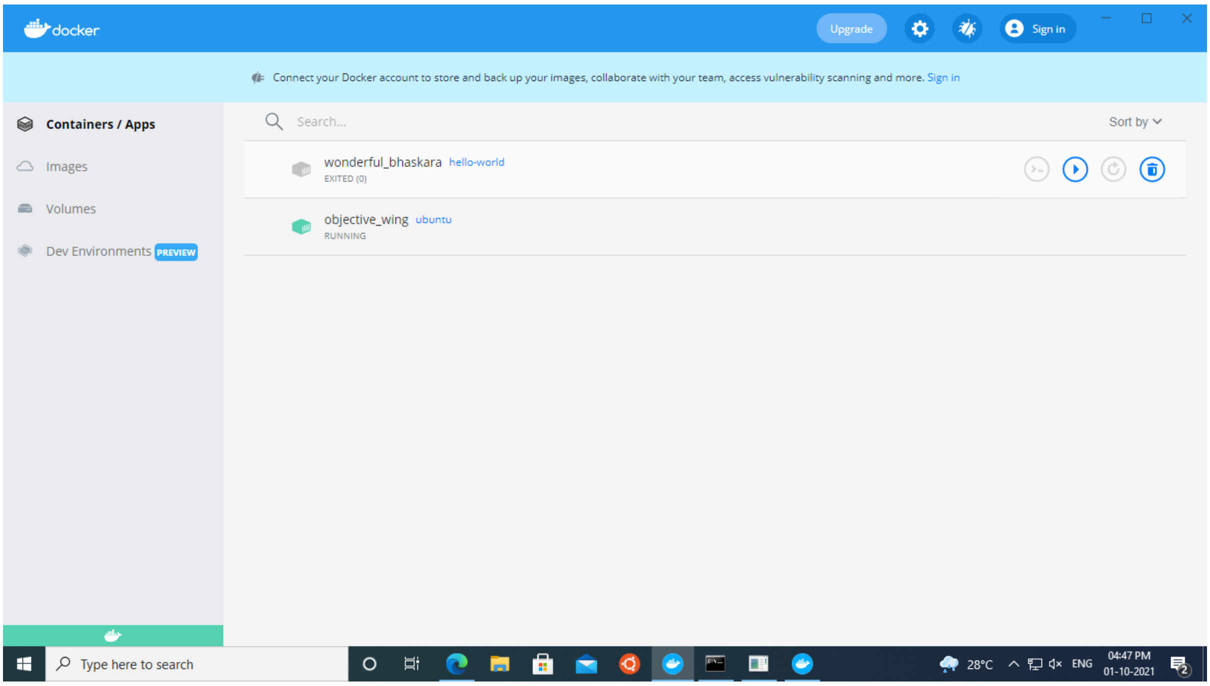
Docker

Sign in with your Docker ID

haritha1705

•••••••••

If you don't have a Docker ID yet, you can create one on hub.docker.com

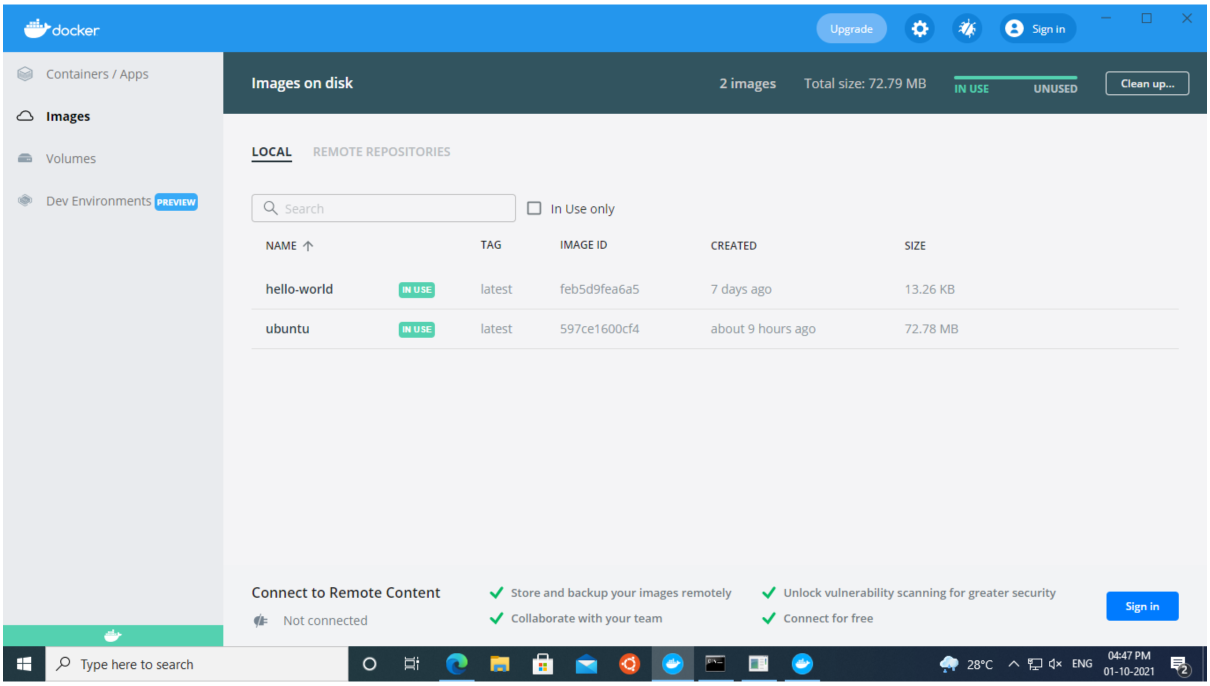


Connect your Docker account to store and back up your images, collaborate with your team, access vulnerability scanning and more. Sign in

Search... Sort by

wonderful_bhaskara hello-world
EXITED (0)

objective_wing ubuntu
RUNNING



Images on disk 2 images Total size: 72.79 MB IN USE UNUSED

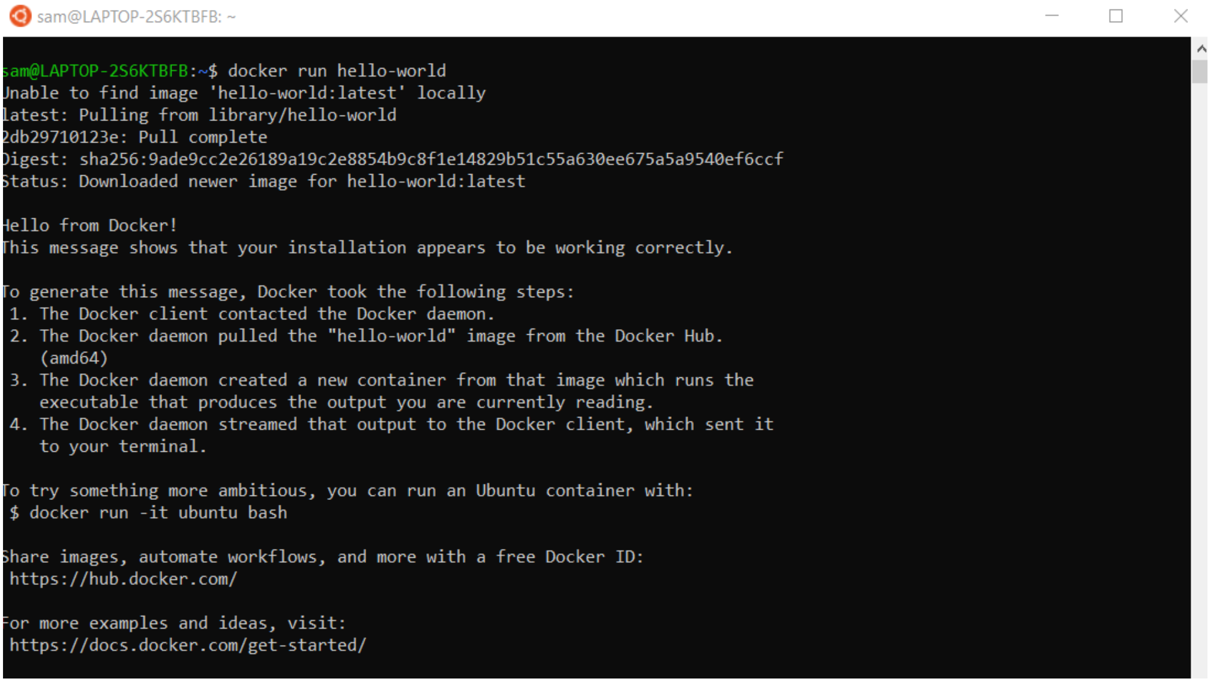
Search □ In Use only

NAME		TAG	IMAGE ID	CREATED	SIZE
hello-world	IN USE	latest	feb5d9fea6a5	7 days ago	13.26 KB
ubuntu	IN USE	latest	597ce1600cf4	about 9 hours ago	72.78 MB

Connect to Remote Content
Not connected

✓ Store and backup your images remotely
✓ Collaborate with your team
✓ Unlock vulnerability scanning for greater security
✓ Connect for free

- Run the docker “**Hello World**” from an Ubuntu Terminal run "**docker run hello-world**".

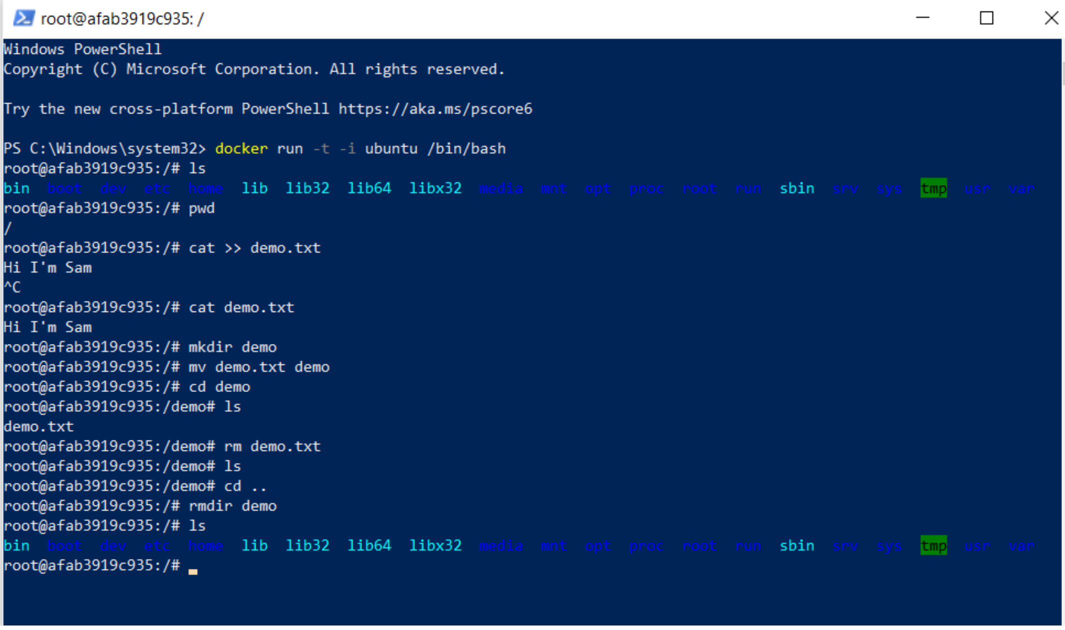


sam@LAPTOP-2S6KTBFB: ~

```
sam@LAPTOP-2S6KTBFB:~$ docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:9ade9cc2e26189a19c2e8854b9c8f1e14829b51c55a630ee675a5a9540ef6ccf
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

Running the Ubuntu Machine

- Run the command “**docker run -t -i ubuntu /bin/bash**” in powershell
- This is a Linux root bash, try some commands



root@afab3919c935: /

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Windows\system32> docker run -t -i ubuntu /bin/bash
root@afab3919c935:/# ls
bin  boot  dev  etc  home  lib  lib32  lib64  libx32  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@afab3919c935:/# pwd
/
root@afab3919c935:/# cat >> demo.txt
Hi I'm Sam
^C
root@afab3919c935:/# cat demo.txt
Hi I'm Sam
root@afab3919c935:/# mkdir demo
root@afab3919c935:/# mv demo.txt demo
root@afab3919c935:/# cd demo
root@afab3919c935:/demo# ls
demo.txt
root@afab3919c935:/demo# rm demo.txt
root@afab3919c935:/demo# ls
root@afab3919c935:/demo# cd ..
root@afab3919c935:/# rmdir demo
root@afab3919c935:/# ls
bin  boot  dev  etc  home  lib  lib32  lib64  libx32  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@afab3919c935:/#
```
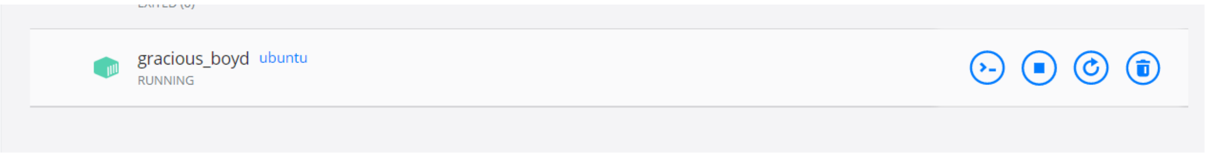
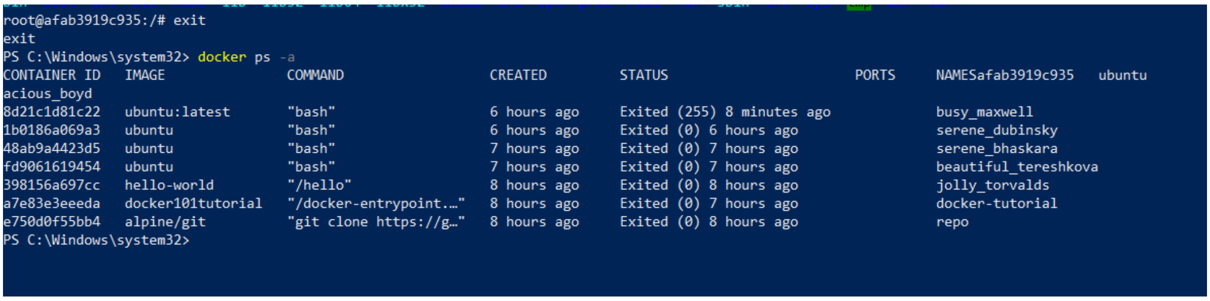

Docker GUI-Containers

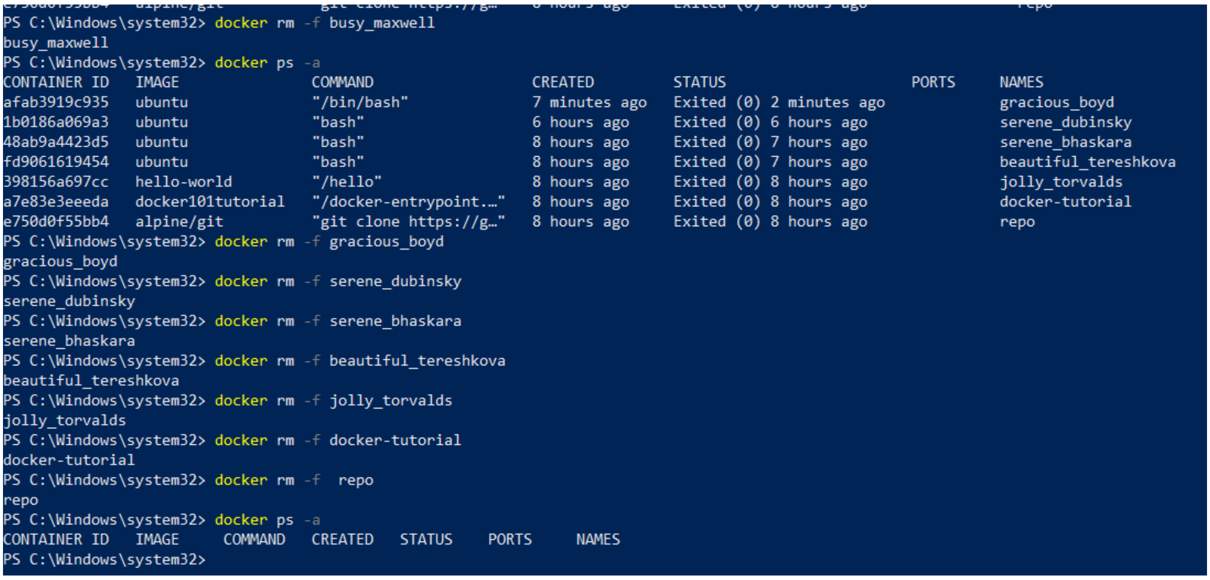


gracious_boyd ubuntu
RUNNING

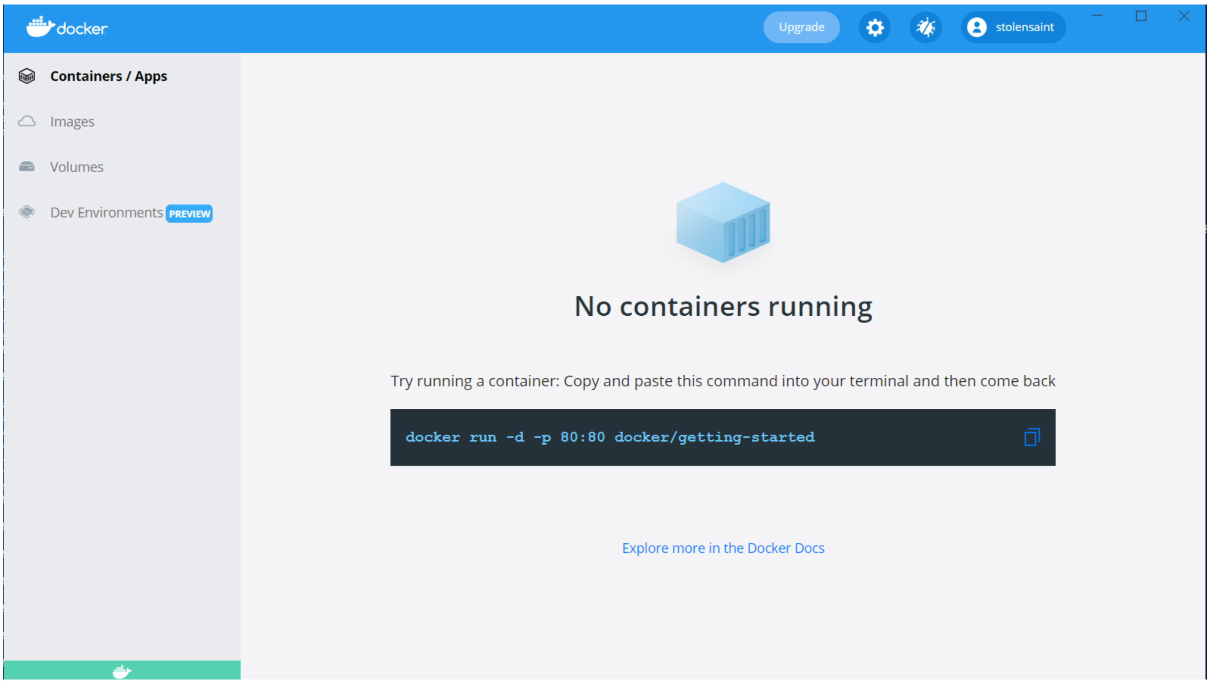
Removing All Containers



```
root@afab3919c935:/# exit
exit
PS C:\Windows\system32> docker ps -a
CONTAINER ID   IMAGE               COMMAND                  CREATED         STATUS                       PORTS     NAMESafab3919c935   ubuntu
acious_boyd
8d21c1d81c22   ubuntu:latest       "bash"                   6 hours ago     Exited (255) 8 minutes ago             busy_maxwell
1b0186a069a3   ubuntu              "bash"                   6 hours ago     Exited (0) 6 hours ago                 serene_dubinsky
48ab9a4423d5   ubuntu              "bash"                   7 hours ago     Exited (0) 7 hours ago                 serene_bhaskara
fd9061619454   ubuntu              "bash"                   7 hours ago     Exited (0) 7 hours ago                 beautiful_tereshkova
398156a697cc   hello-world         "/hello"                 8 hours ago     Exited (0) 8 hours ago                 jolly_torvalds
a7e83e3eeeda   docker101tutorial   "/docker-entrypoint.…"   8 hours ago     Exited (0) 7 hours ago                 docker-tutorial
e750d0f55bb4   alpine/git          "git clone https://g…"   8 hours ago     Exited (0) 8 hours ago                 repo
PS C:\Windows\system32>
```



```
PS C:\Windows\system32> docker rm -f busy_maxwell
busy_maxwell
PS C:\Windows\system32> docker ps -a
CONTAINER ID   IMAGE               COMMAND                  CREATED          STATUS                      PORTS     NAMES
afab3919c935   ubuntu              "/bin/bash"              7 minutes ago    Exited (0) 2 minutes ago              gracious_boyd
1b0186a069a3   ubuntu              "bash"                   6 hours ago      Exited (0) 6 hours ago                serene_dubinsky
48ab9a4423d5   ubuntu              "bash"                   8 hours ago      Exited (0) 7 hours ago                serene_bhaskara
fd9061619454   ubuntu              "bash"                   8 hours ago      Exited (0) 7 hours ago                beautiful_tereshkova
398156a697cc   hello-world         "/hello"                 8 hours ago      Exited (0) 8 hours ago                jolly_torvalds
a7e83e3eeeda   docker101tutorial   "/docker-entrypoint.…"   8 hours ago      Exited (0) 8 hours ago                docker-tutorial
e750d0f55bb4   alpine/git          "git clone https://g…"   8 hours ago      Exited (0) 8 hours ago                repo
PS C:\Windows\system32> docker rm -f gracious_boyd
gracious_boyd
PS C:\Windows\system32> docker rm -f serene_dubinsky
serene_dubinsky
PS C:\Windows\system32> docker rm -f serene_bhaskara
serene_bhaskara
PS C:\Windows\system32> docker rm -f beautiful_tereshkova
beautiful_tereshkova
PS C:\Windows\system32> docker rm -f jolly_torvalds
jolly_torvalds
PS C:\Windows\system32> docker rm -f docker-tutorial
docker-tutorial
PS C:\Windows\system32> docker rm -f  repo
repo
PS C:\Windows\system32> docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
PS C:\Windows\system32>
```

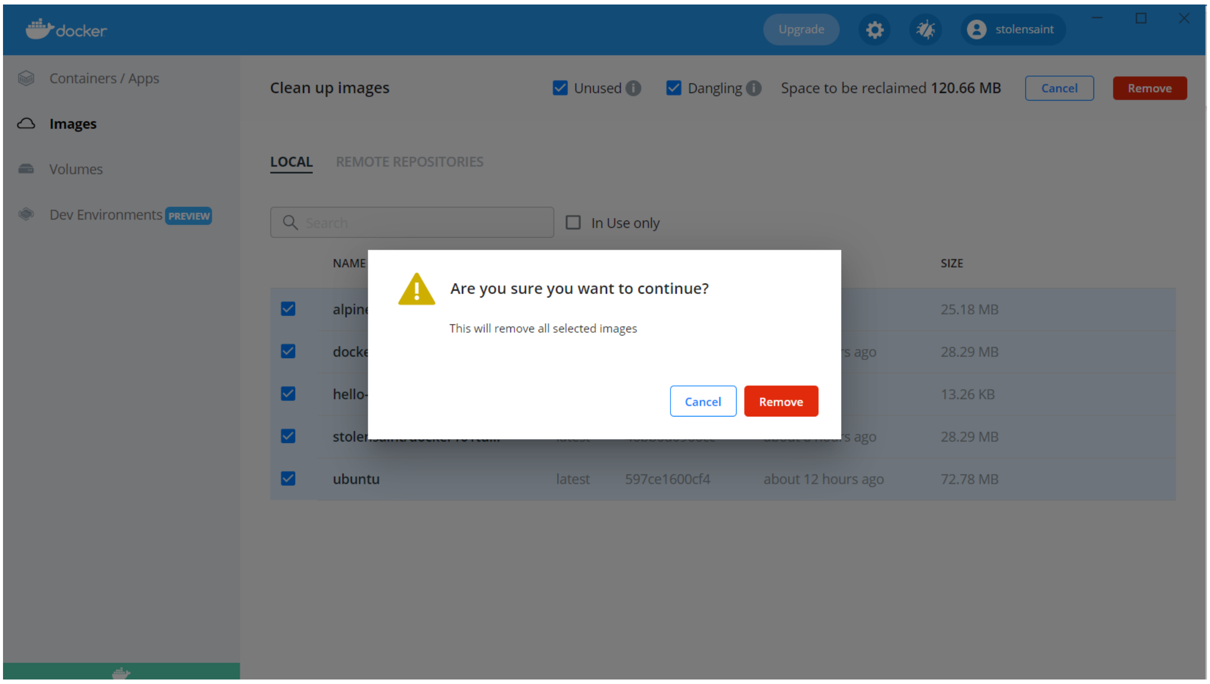


No containers running

Try running a container: Copy and paste this command into your terminal and then come back

```
docker run -d -p 80:80 docker/getting-started
```

Cleaning Up Images



Clean up images ☑ Unused ☑ Dangling Space to be reclaimed 120.66 MB

□ In Use only

	NAME				SIZE
☑	alpin				25.18 MB
☑	docke			s ago	28.29 MB
☑	hello-				13.26 KB
☑	stoler			s ago	28.29 MB
☑	ubuntu	latest	597ce1600cf4	about 12 hours ago	72.78 MB

Are you sure you want to continue?

This will remove all selected images

Cancel Remove