



How to install Docker Desktop on Windows 10 / Windows 11

In this post, I am going to install Docker Desktop on Windows 11. I am running below version



Docker Desktop Requirements:


WSL Backend

- WSL version 1.1.3.0 or later.
- Windows 11 64-bit: Home or Pro version 21H2 or higher, or Enterprise or Education version 21H2 or higher.
- Windows 10 64-bit:
 - We recommend Home or Pro 22H2 (build 19045) or higher, or Enterprise or Education 22H2 (build 19045) or higher.
 - Minimum required is Home or Pro 21H2 (build 19044) or higher, or Enterprise or Education 21H2 (build 19044) or higher.
- Turn on the WSL 2 feature on Windows. For detailed instructions, refer to the [Microsoft documentation](#) .
- The following hardware prerequisites are required to successfully run WSL 2 on Windows 10 or Windows 11:
 - 64-bit processor with [Second Level Address Translation \(SLAT\)](#) 
 - 4GB system RAM
 - Enable hardware virtualization in BIOS. For more information, see [Virtualization](#).



Hyper-V backend and containers

- Windows 11 64-bit: Pro version 21H2 or higher, or Enterprise or Education version 21H2 or higher.
- Windows 10 64-bit:
 - We recommend Home or Pro 22H2 (build 19045) or higher, or Enterprise or Education 22H2 (build 19045) or higher.
 - Minimum required is Home or Pro 21H2 (build 19044) or higher, or Enterprise or Education 21H2 (build 19044) or higher.



For Windows 10 and Windows 11 Home, see the system requirements in the WSL 2 backend tab.

- Turn on Hyper-V and Containers Windows features.
- The following hardware prerequisites are required to successfully run Client Hyper-V on Windows 10:
 - 64 bit processor with [Second Level Address Translation \(SLAT\)](#) 
 - 4GB system RAM
 - Turn on BIOS-level hardware virtualization support in the BIOS settings. For more information, see [Virtualization](#).

Difference between WSL and Hyper-V

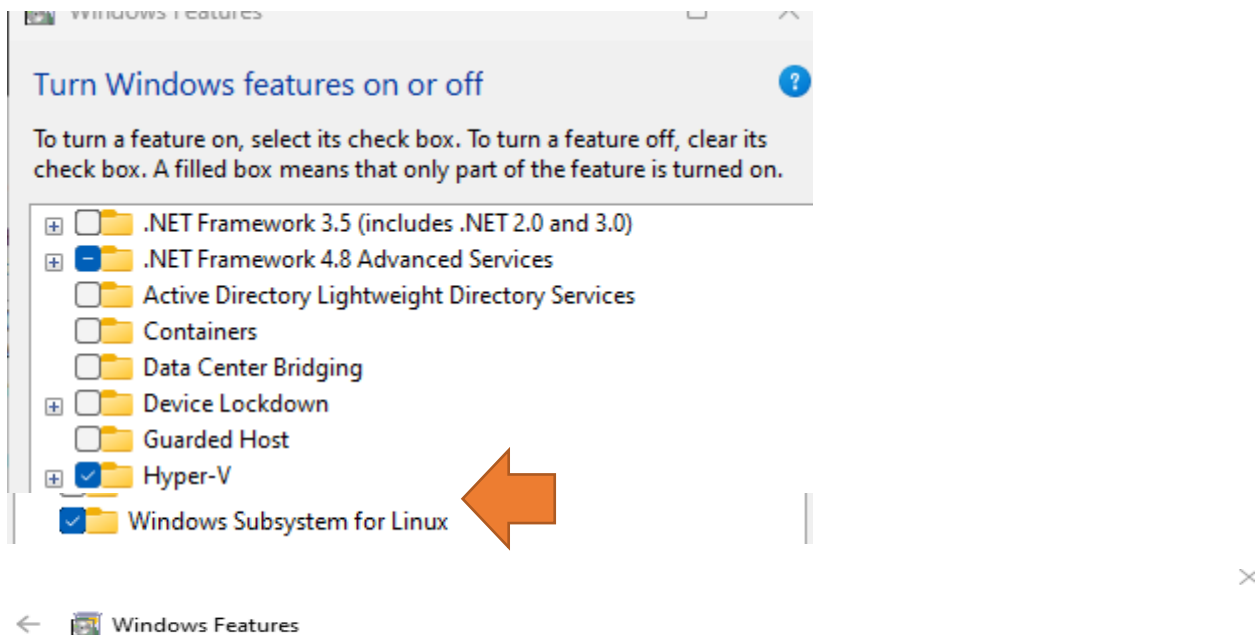
 What is the difference between WSL and Hyper-V? 

The biggest difference between them is that WSL 1 uses the Windows kernel to implement Linux system calls, while WSL 2 uses Hyper-V technology, a virtual machine technology.

 Should I use Hyper-V or WSL for Docker? 

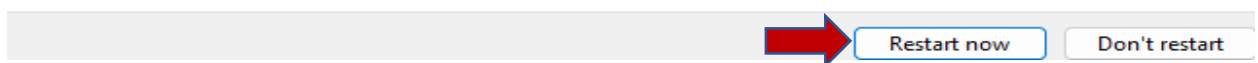
A common issue for Windows users is slowness due to Docker using WSL instead of Hyper-V. If you have Windows 10 64-bit: Pro, Enterprise, or Education (Build 16299 or later) — you have the option to use Hyper-V, which is the most reliable way to speed up

Enable Hyper-V and WSL feature



Windows completed the requested changes.

Windows needs to reboot your PC to finish installing the requested changes.



Check WSL Status

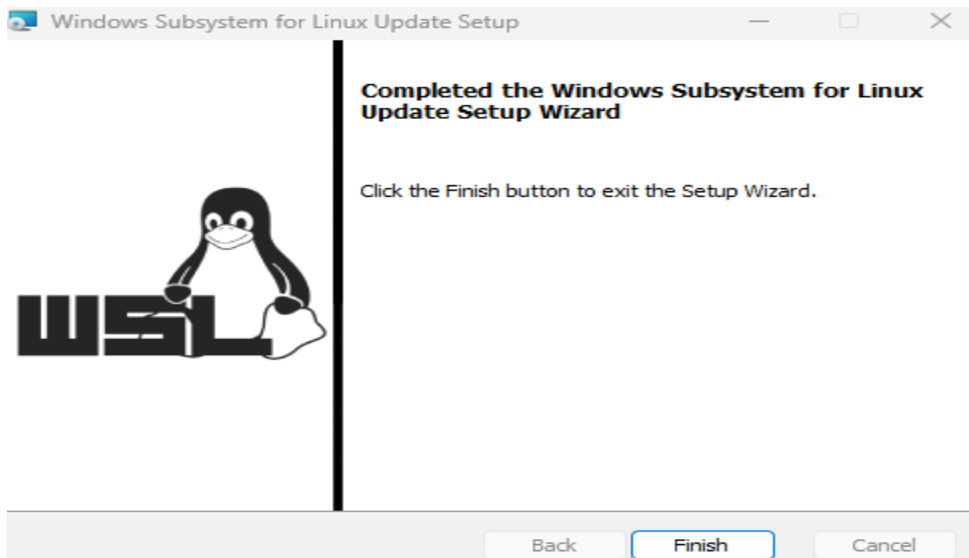
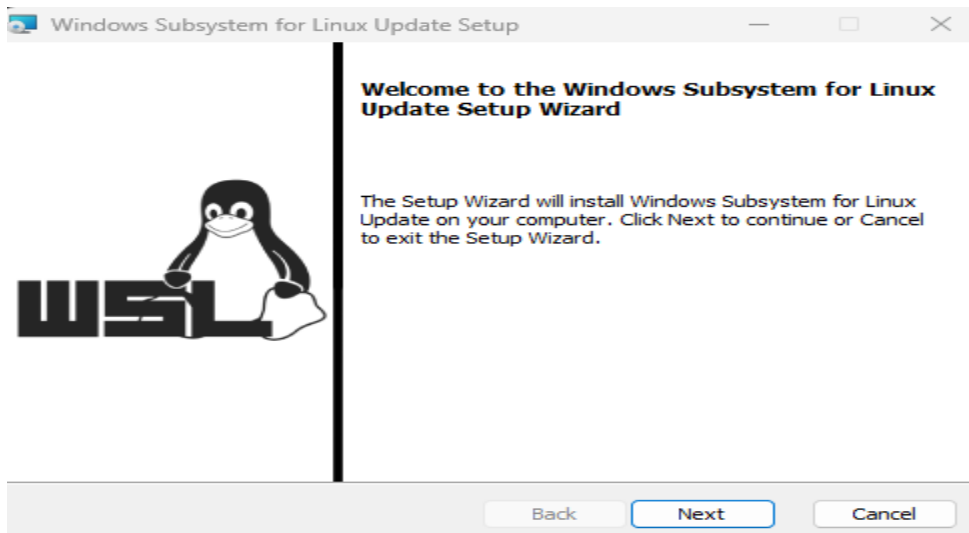
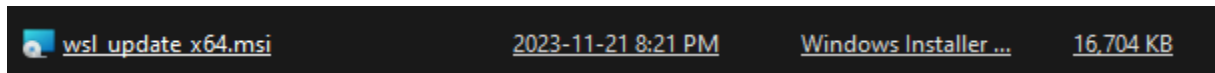
```
C:\Users\ramla>wsl --status
Default Version: 2

WSL automatic updates are on.

The WSL 2 kernel file is not found. To update or restore the kernel please run 'wsl --update'.
```

Download the package from below link and install

<https://learn.microsoft.com/en-us/windows/wsl/install-manual#step-4---download-the-linux-kernel-update-package>




```
C:\Users\ramla>wsl --status
Default Version: 2

Windows Subsystem for Linux was last updated on 2023-11-21
WSL automatic updates are on.

Kernel version: 5.10.16

C:\Users\ramla>
```

Restart the system 

Install Docker


<https://docs.docker.com/desktop/install/windows-install/>


Install Docker Desktop on Windows

This page contains the download URL, information about system requirements, and instructions on how to install Docker Desktop for Windows.

Docker Desktop for Windows


Today

 Docker Desktop Installer.exe	2023-11-21 8:13 PM	Application	601,709 KB
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 Installing Docker Desktop 4.25.2 (129061) — □ ×

Configuration

- Use WSL 2 instead of Hyper-V (recommended)
- Add shortcut to desktop

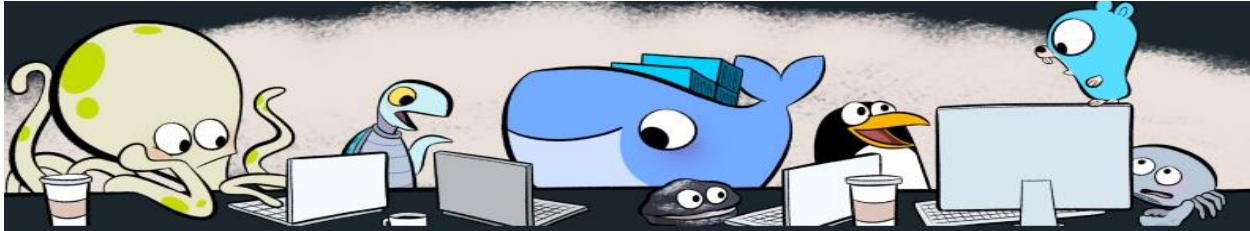
 Installing Docker Desktop 4.25.2 (129061) — □ ×

Docker Desktop 4.25.2

Installation succeeded

You must restart Windows to complete installation.

Close and restart



Docker Subscription Service Agreement

By selecting **accept**, you agree to the [Subscription Service Agreement](#), the [Docker Data Processing Agreement](#), and the [Data Privacy Policy](#).

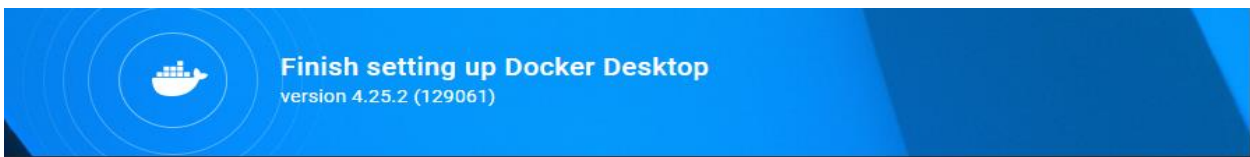
Note: Docker Desktop is free for small businesses (fewer than 250 employees AND less than \$10 million in annual revenue), personal use, education, and non-commercial open source projects. Otherwise, it requires a paid subscription for professional use. Paid subscriptions are also required for government entities.

[Read the FAQ to learn more.](#)

[View Full Terms](#)

[Accept](#)

[Close](#)



Finish setting up Docker Desktop

version 4.25.2 (129061)

Complete the installation of Docker Desktop.

- Use recommended settings (requires administrator password)**
Docker Desktop automatically sets the necessary configurations that work for most developers.
- Use advanced settings**
You manually set your preferred configurations.

[Finish](#)



Welcome to Docker Desktop

Sign in to connect to your Docker Desktop subscription or access online features.

[Sign up](#)

Already have an account? [Sign in](#)

[Continue without signing in](#)

Tell us about the work you do

This helps us make Docker better for people like you

What's your role?

System administrator

What will you use Docker for?

- Deploying applications
- Local development
- Debugging images
- Data science
- AI/ML
- I don't know
- For work
- Testing applications
- Inspect images
- Hobby projects
- Learning or teaching
- Other (specify)

Skip

Continue

Docker Desktop Upgrade plan Search for images, containers, volumes, extensions and more... Ctrl+K Sign in

Containers Give feedback

Images

Volumes

Dev Environments BETA

Docker Scout

Learning center

Extensions

Add Extensions

Your running containers show up here

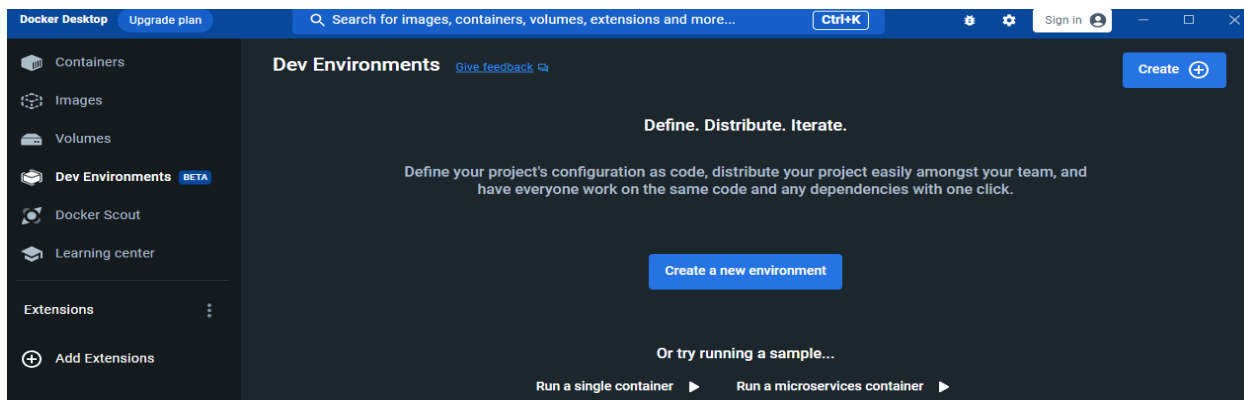
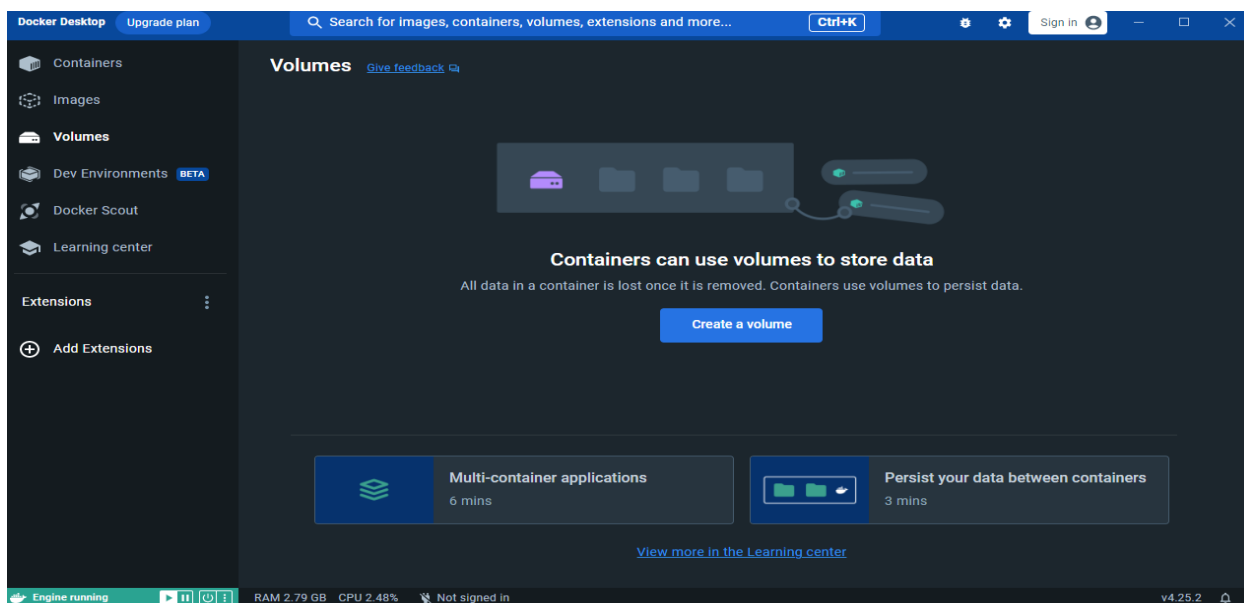
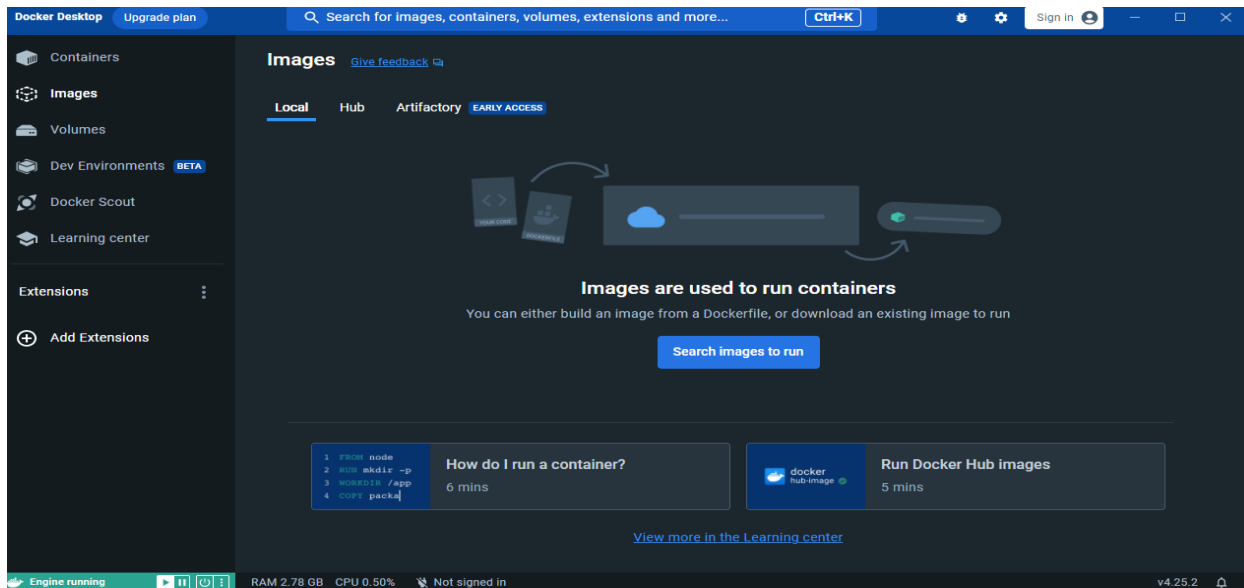
A container is an isolated environment for your code

- What is a container? 5 mins
- ```
1 FROM node
2 RUN mkdir -p
3 WORKDIR /app
4 COPY package
```

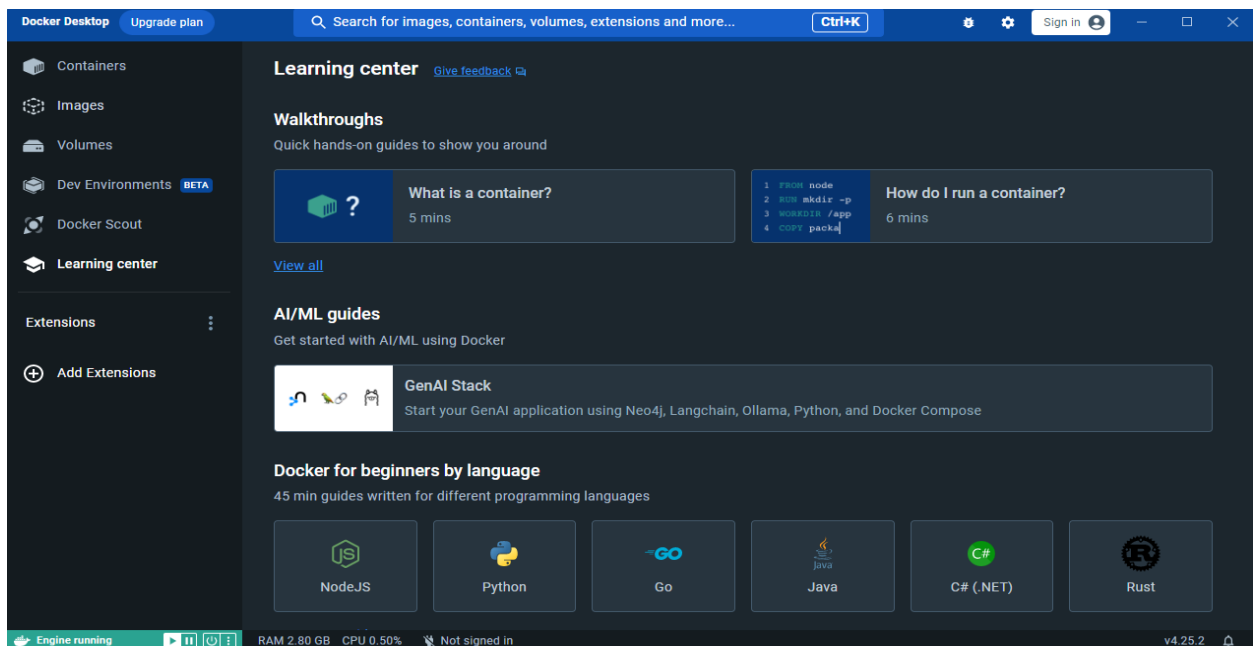
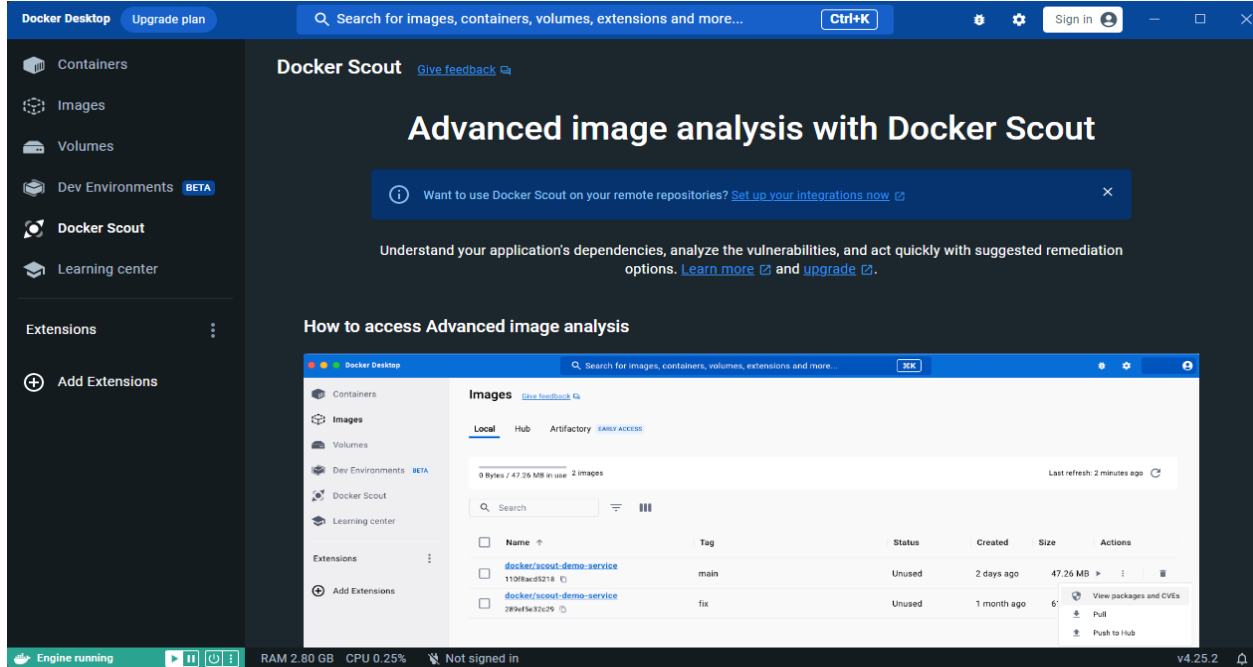
 How do I run a container? 6 mins

[View more in the Learning center](#)

Engine running RAM 0.00 GB CPU 0.00% Not signed in v4.25.2







## Command to Test

```
C:\Users\ramla>wsl --version
WSL version: 2.0.9.0
Kernel version: 5.15.133.1-1
WSLg version: 1.0.59
MSRDC version: 1.2.4677
Direct3D version: 1.611.1-81528511
DXCore version: 10.0.25131.1002-220531-1700.rs-onecore-base2-hyp
Windows version: 10.0.22621.2715
```

```
Command Prompt
Microsoft Windows [Version 10.0.22621.2715]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ramla>docker version
Client:
 Cloud integration: v1.0.35+desktop.5
 Version: 24.0.6
 API version: 1.43
 Go version: go1.20.7
 Git commit: ed223bc
 Built: Mon Sep 4 12:32:48 2023
 OS/Arch: windows/amd64
 Context: default

Server: Docker Desktop 4.25.2 (129061)
Engine:
 Version: 24.0.6
 API version: 1.43 (minimum version 1.12)
 Go version: go1.20.7
 Git commit: 1a79695
 Built: Mon Sep 4 12:32:16 2023
 OS/Arch: linux/amd64
 Experimental: false
containerd:
 Version: 1.6.22
 GitCommit: 8165feabfdfe38c65b599c4993d227328c231fca
runc:
 Version: 1.1.8
 GitCommit: v1.1.8-0-g82f18fe
docker-init:
 Version: 0.19.0
 GitCommit: de40ad0

C:\Users\ramla>
```

```
C:\Users\ramla>docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
```

```
C:\Users\ramla>docker search mysql
```

| NAME                          | DESCRIPTION                                     | STARS | OFFICIAL | AUTOMATED |
|-------------------------------|-------------------------------------------------|-------|----------|-----------|
| mysql                         | MySQL is a widely used, open-source relation... | 14629 | [OK]     |           |
| mariadb                       | MariaDB Server is a high performing open sou... | 5576  | [OK]     |           |
| percona                       | Percona Server is a fork of the MySQL relati... | 622   | [OK]     |           |
| phpmyadmin                    | phpMyAdmin - A web interface for MySQL and M... | 897   | [OK]     |           |
| bitnami/mysql                 | Bitnami MySQL Docker Image                      | 103   |          | [OK]      |
| circleci/mysql                | MySQL is a widely used, open-source relation... | 29    |          |           |
| bitnami/mysqld-exporter       |                                                 | 5     |          |           |
| cimg/mysql                    |                                                 | 2     |          |           |
| ubuntu/mysql                  | MySQL open source fast, stable, multi-thread... | 54    |          |           |
| rapidfort/mysql               | RapidFort optimized, hardened image for MySQL   | 25    |          |           |
| rapidfort/mysql8-ib           | RapidFort optimized, hardened image for MySQ... | 9     |          |           |
| google/mysql                  | MySQL server for Google Compute Engine          | 25    |          | [OK]      |
| rapidfort/mysql-official      | RapidFort optimized, hardened image for MySQ... | 9     |          |           |
| hashicorp/mysql-portworx-demo |                                                 | 0     |          |           |
| elestio/mysql                 | MySQL, verified and packaged by Elestio         | 0     |          |           |
| newrelic/mysql-plugin         | New Relic Plugin for monitoring MySQL databa... | 1     |          | [OK]      |
| bitnamicharts/mysql           |                                                 | 0     |          |           |
| databack/mysql-backup         | Back up mysql databases to... anywhere!         | 104   |          |           |
| linuxserver/mysql             | A Mysql container, brought to you by LinuxSe... | 41    |          |           |
| mirantis/mysql                |                                                 | 0     |          |           |
| docksal/mysql                 | MySQL service images for Docksal - https://d... | 0     |          |           |
| linuxserver/mysql-workbench   |                                                 | 52    |          |           |
| vitess/mysqlctld              | vitess/mysqlctld                                | 1     |          | [OK]      |
| eclipse/mysql                 | Mysql 5.7, curl, rsync                          | 1     |          | [OK]      |
| drupalci/mysql-5.5            | https://www.drupal.org/project/drupalci         | 3     |          | [OK]      |

```
C:\Users\ramla>docker search python
```

| NAME                             | DESCRIPTION                                     | STARS | OFFICIAL | AUTOMATED |
|----------------------------------|-------------------------------------------------|-------|----------|-----------|
| python                           | Python is an interpreted, interactive, objec... | 9211  | [OK]     |           |
| pypy                             | PyPy is a fast, compliant alternative implem... | 381   | [OK]     |           |
| hylang                           | Hy is a Lisp dialect that translates express... | 58    | [OK]     |           |
| circleci/python                  | Python is an interpreted, interactive, objec... | 88    |          |           |
| cimg/python                      |                                                 | 9     |          |           |
| bitnami/python                   | Bitnami Python Docker Image                     | 27    |          | [OK]      |
| okteto/python                    |                                                 | 0     |          |           |
| appdynamics/python-agent-init    | AppDynamics Repository for Python agent inst... | 0     |          |           |
| rapidfort/python-chromedriver    |                                                 | 12    |          |           |
| intel/python                     |                                                 | 0     |          |           |
| pachyderm/python-build           |                                                 | 0     |          |           |
| pachyderm/python-sdk-ci-testing  |                                                 | 0     |          |           |
| clearlinux/python                | Python programming interpreted language with... | 9     |          |           |
| faucet/python3                   | Python3 docker image for amd64                  | 6     |          |           |
| airbyte/python-connector-base    |                                                 | 0     |          |           |
| openwhisk/python3action          | Apache OpenWhisk runtime for Python 3 Actions   | 6     |          |           |
| openwhisk/python2action          | Apache OpenWhisk runtime for Python v2 Actio... | 2     |          |           |
| paketobuildpacks/python          |                                                 | 0     |          |           |
| paketobuildpacks/python-start    |                                                 | 0     |          |           |
| mirantis/python-operations-api   | https://mirantis.jira.com/browse/IT-40189       | 0     |          | [OK]      |
| okteto/python-fastapi            |                                                 | 0     |          |           |
| opensuse/python                  | openSUSE base image with python                 | 0     |          | [OK]      |
| submitty/python                  | Official Repository for Submitty Python Imag... | 0     |          |           |
| fndsc/python-poetry              | Python Poetry                                   | 9     |          |           |
| pipelinecomponents/python-safety | Safety by pyup.io for Python in a container ... | 0     |          |           |

```
C:\Users\ramla>docker search mango
```

| NAME                              | DESCRIPTION                                     | STARS | OFFICIAL | AUTOMATED |
|-----------------------------------|-------------------------------------------------|-------|----------|-----------|
| mangoraft/mongodb-arm             |                                                 | 9     |          |           |
| mangoweb/mango-cli                | A project scaffolding and build tool to acce... | 1     |          |           |
| mangomm/tyk-grpc-plugin           | Test gRPC plugin for Tyk                        | 0     |          |           |
| hkalexling/mango                  | Mango is a self-hosted manga server and web ... | 36    |          |           |
| mangomm/trevorblades-countries    |                                                 | 0     |          |           |
| mangoweb/ci-deploy-php            |                                                 | 0     |          |           |
| mangocode/mango_daily_base        | INTERNAL - Base for other Mango-related imag... | 1     |          |           |
| mangothecat/docker-docker-gcpsdk  | Docker-in-Docker with GCP SDK                   | 0     |          |           |
| mangothecat/buildr                | Build an R package                              | 0     |          | [OK]      |
| mangoweb/golang-build             | Image for building go with glide as dependen... | 0     |          |           |
| opinionatedgeek/mango-explorer-v3 | Python code for integrating with V3 of https... | 1     |          |           |
| mangoboost/bionic                 |                                                 | 0     |          |           |
| mangomm/go-bench-suite            | Toolkit for benchmarking & tuning proxies & ... | 0     |          |           |
| mangohub/pcppjava                 |                                                 | 0     |          |           |
| mangoweb/ci-kubernetes            |                                                 | 0     |          |           |
| mangoweb/rekola-ci                | rekola ci                                       | 0     |          | [OK]      |
| mangoraft/elasticsearch-arm       |                                                 | 0     |          |           |
| mangoweb/www-redirect             |                                                 | 0     |          |           |
| solipsist01/mangoszero            | This is an unofficial mangos zero docker con... | 9     |          | [OK]      |
| mangoweb/darujme-ci               |                                                 | 0     |          |           |
| ssorriaux/mangosone-server        | A MangosOne WoW server Docker image.            | 3     |          |           |
| mangoweb/nodejs-build             |                                                 | 0     |          |           |
| mangothecat/minipydata            | Image of a core subset of the pydata ecosyst... | 0     |          | [OK]      |
| mangoweb/leo-express-bot-ci       | CircleCI                                        | 0     |          | [OK]      |
| mangolas/testing-image-base       | Ubuntu bionic plus curl, jq, python             | 0     |          |           |

### Check & Set Default Version

```
C:\Users\ramla>wsl -l -v
 NAME STATE VERSION
* docker-desktop Running 2
 docker-desktop-data Running 2
```

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

```
C:\Users\ramla>wsl --status
Default Distribution: docker-desktop
Default Version: 2
```

This concludes Docker Desktop install.

Thanks

**Ram**  
**21<sup>st</sup> Nov 2023**

### Useful Links:

<https://docs.docker.com/desktop/install/windows-install/>

<https://learn.microsoft.com/en-us/windows/wsl/install-manual>

<https://learn.microsoft.com/en-us/windows/wsl/basic-commands>