**Hello World Container Operations**

1. Overview [Read Chapters 1 and 7 of our Text Book: Docker Deep Dive by Nigel Poulton 2023 Edition](https://www.amazon.com/Docker-Deep-Dive-Nigel-Poulton/dp/1916585256)
2. Installing Docker Desktop (Chapter 3)

<https://docs.docker.com/get-docker/>

docker version

Test Docker Installation:

docker run hello-world

**For Windows:**

* 64-bit version of Windows 10/11
* Hardware virtualization support must be enabled in your system’s BIOS
* WSL 2

[How to Install WSL2 with Ubuntu](https://youtu.be/J2PQuVAI99c?si=X-lg60sGq6PkkD5P)

[Docker for Windows Installation and Troubleshooting for Beginners](https://youtu.be/R4uy6Oqiy5I?si=DglDYuvf-zvFY9bS)

**Multipass:**

[Running a container with the Docker blueprint in Multipass](https://multipass.run/docs/docker-tutorial)

**For Mac**, if docker command not running:

<https://stackoverflow.com/questions/64009138/docker-command-not-found-when-running-on-mac>

<https://www.insightsjava.com/2022/01/how-to-create-bash-profile-on-mac.html>

1. Play with Docker

Play with Docker (PWD) is a fully functional internet-based Docker playground that lasts for 4 hours. You can add multiple nodes and even cluster them in a swarm.

<https://labs.play-with-docker.com/>

1. The Big Picture (Chapter 4)

**The Ops Perspective**

<https://docs.anaconda.com/free/anaconda/applications/docker/>

<https://hub.docker.com/r/continuumio/anaconda3>

* Pull Anaconda Image:

docker pull continuumio/anaconda3

* List the Images:

docker images

* Launch the Container:

docker run -it continuumio/anaconda3:latest /bin/bash

Note: You’ll see that the shell prompt has changed. This is because the -it flags switch your shell into the terminal of the container — your shell is now inside of the new container!

* List Envirnoments:

conda env list

* Check Python Version:

python --version

* List all running processes:

ps -elf

* Exit the Container without terminating it:

Press Ctrl-PQ to exit the container without terminating it.

* List All Running Containers:

docker ps

* Attaching to running Container:

docker exec -it container\_name bash

* Stop the Container:

docker stop container\_name

* List the Containers, even those that are in stopped state:

docker ps -a

* Kill the Container:

docker rm container\_name

**TestContainers**

[Adopting Testcontainers for local development](https://www.youtube.com/watch?v=he6Mtn3xCNU)

[Locally Test Your Serverless Applications with Test Containers](https://www.youtube.com/watch?v=z0F9tofV_MQ)

<https://testcontainers.com/>

**Localstack**

<https://www.localstack.cloud/>

<https://medium.com/agorapulse-stories/how-to-unit-test-aws-services-with-localstack-and-testcontainers-1d39fe5dc6c2>

**Attach VSCode to a Running Container**

<https://code.visualstudio.com/docs/devcontainers/attach-container>

<https://www.youtube.com/watch?v=OTrJrDZEFYs>