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Lab Exercise 3: Working with Docker Volumes

## Objective:

* Learn how to create and manage Docker volumes.
* Understand how Docker volumes can be used to persist data across container restarts.
* Practice mounting Docker volumes to containers.

## Prerequisites:

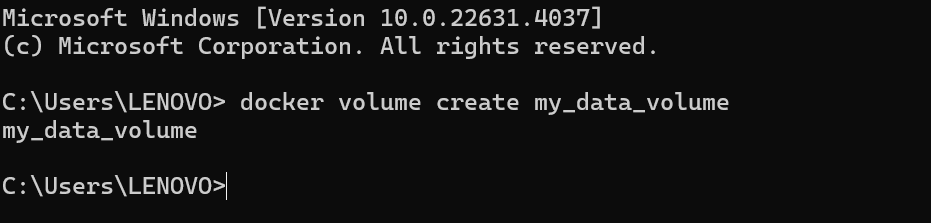
* Docker installed on your system.
* Basic understanding of Docker commands and container concepts.

## Step 1: Create a Docker Volume

Create a new Docker volume:



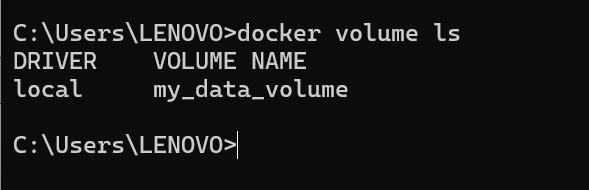
This command creates a Docker volume named my\_data\_volume.



Verify that the volume was created:



You should see my\_data\_volume listed among the volumes.

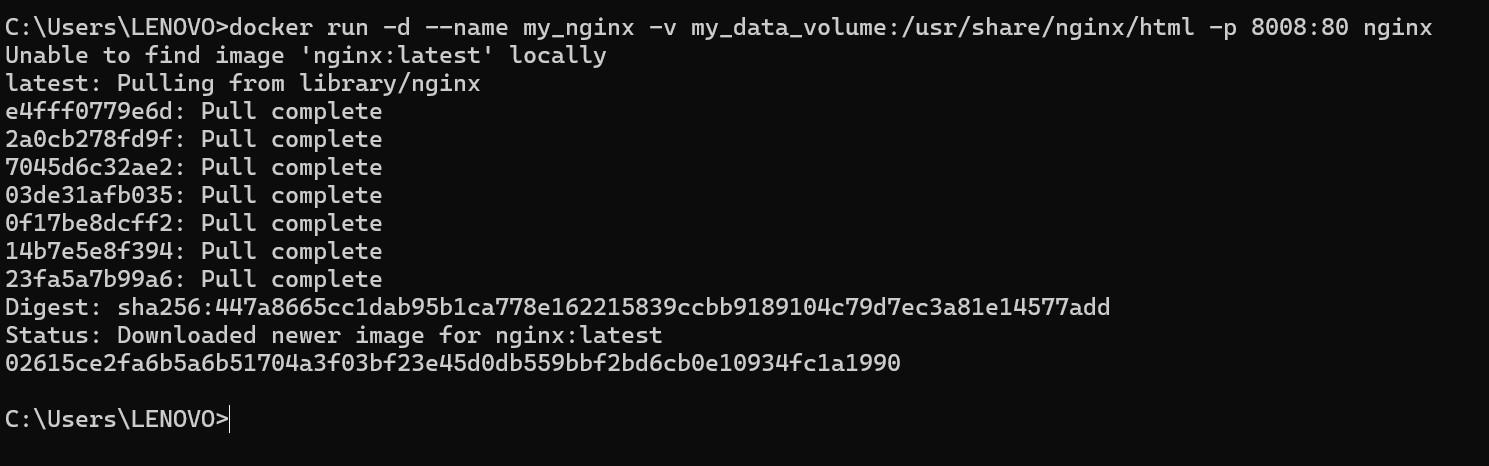


**Step 2: Run a Container with the Volume Mounted**

Run an Nginx container with the volume mounted:



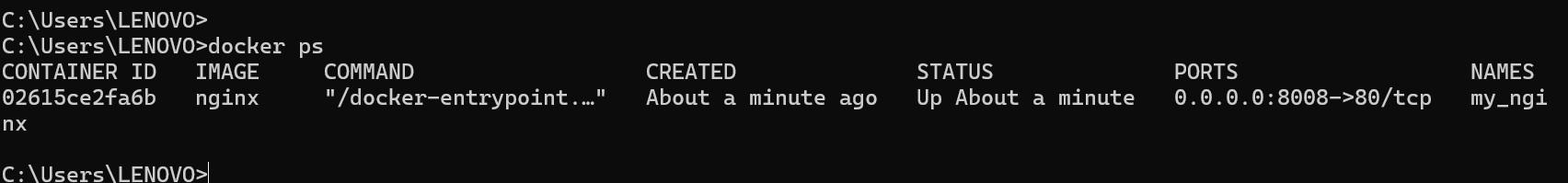
This command starts an Nginx container named my\_nginx and mounts the my\_data\_volume volume to the /usr/share/nginx/html directory inside the container.



Verify that the container is running:

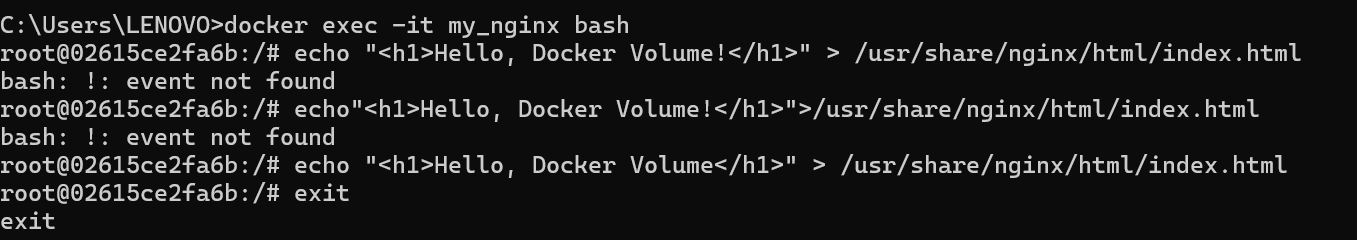


You should see my\_nginx listed as one of the running containers.



# Step 3: Interact with the Volume

Create a simple HTML file in the volume:

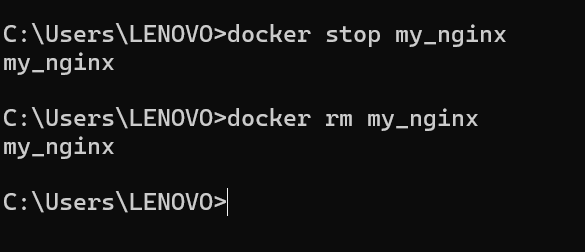


This command creates an HTML file inside the /usr/share/nginx/html directory, which is backed by my\_data\_volume.

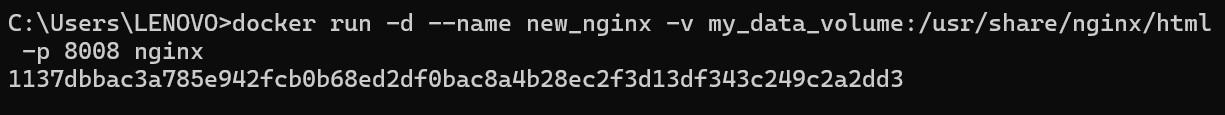
Access the Nginx server to see your file: Open a browser and navigate to http://localhost:8008. You should see the message "Hello, Docker Volume!" displayed on the page.

# Step 4: Test Data Persistence

Stop and remove the container:



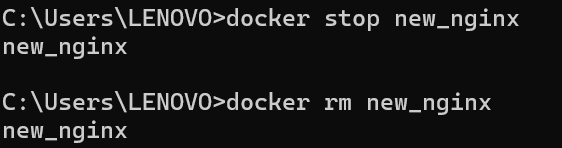
Run a new Nginx container using the same volume:



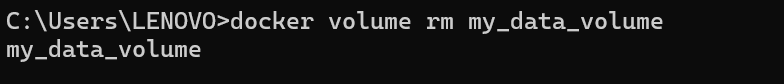
Access the Nginx server again: Navigate to [http://localhost](http://localhost/) in your browser. You should still see the "Hello, Docker Volume!" message, demonstrating that the data persisted across container instances.

# Step 5: Clean Up

Stop and remove the container:

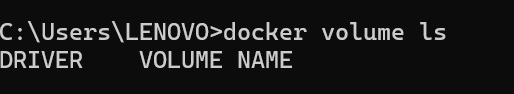


Remove the Docker volume:



Verify that the volume is removed:





Ensure that my\_data\_volume is no longer listed.