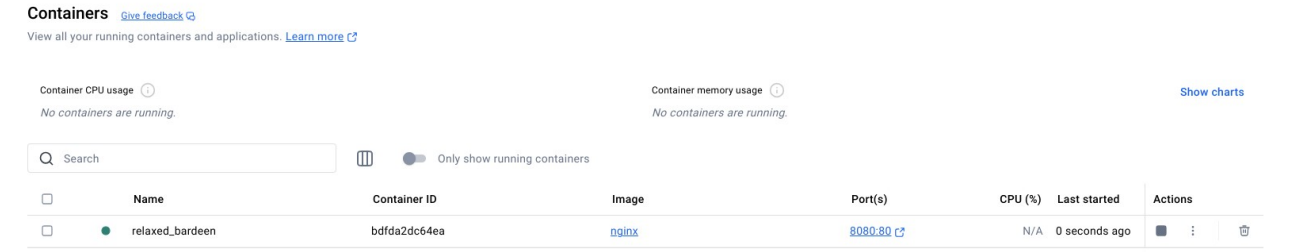
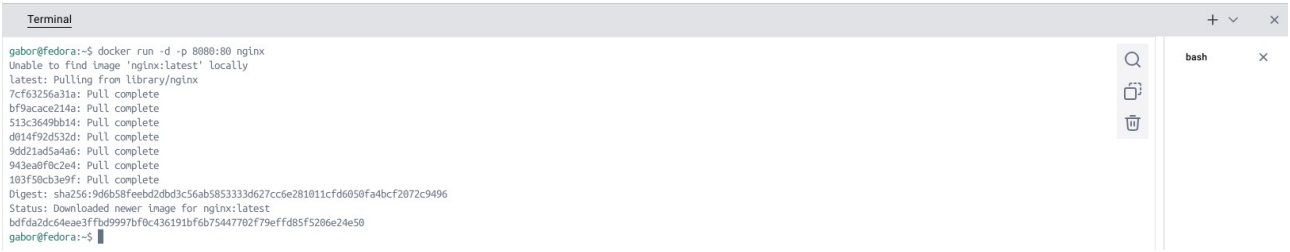
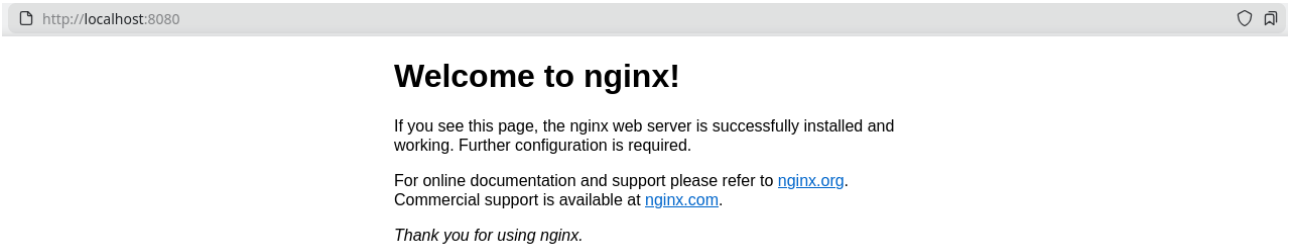
Lab 2 Containers

Publishing and exposing ports

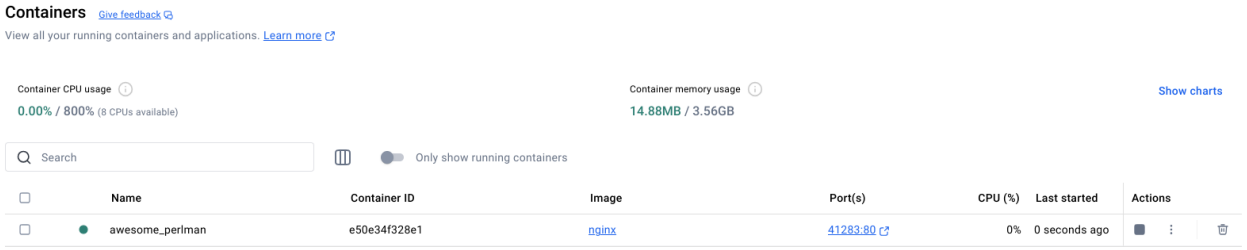
Running Nginx on port 8080.

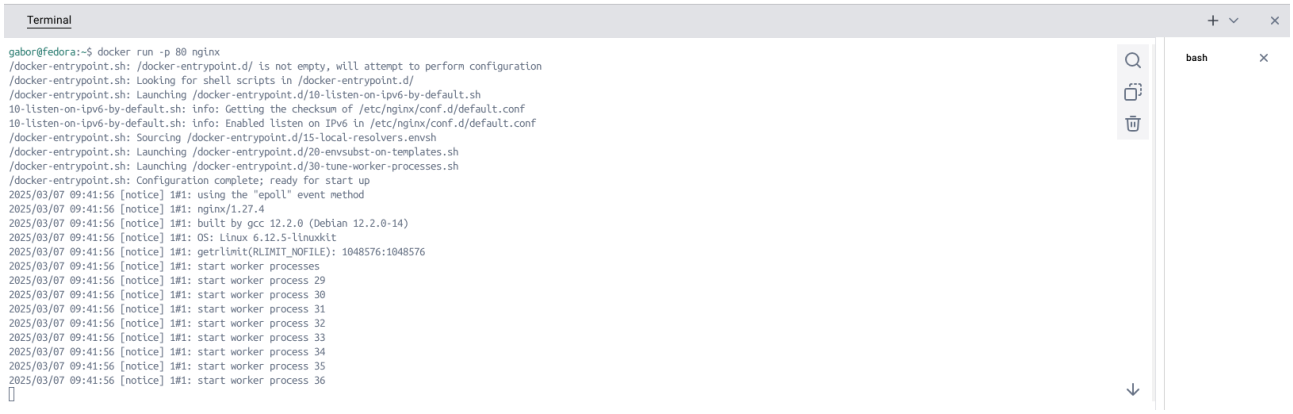


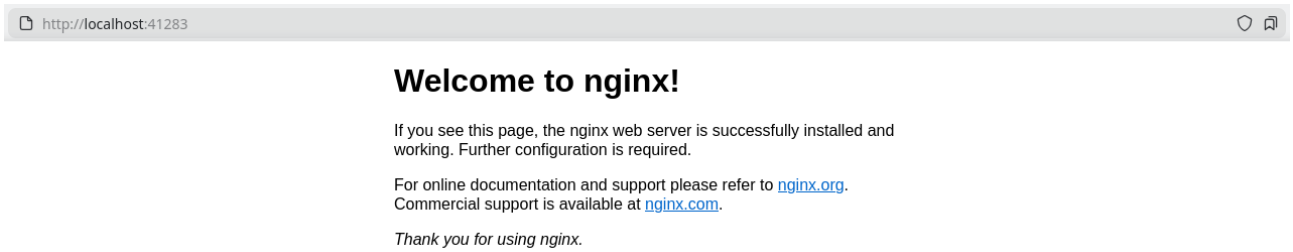




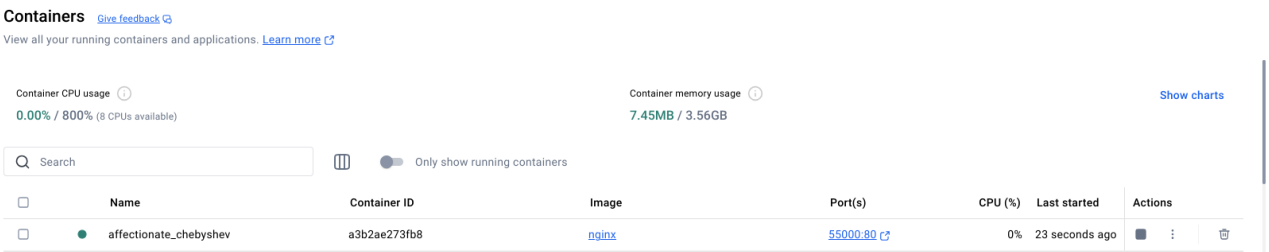
Running Nginx on automatic port.

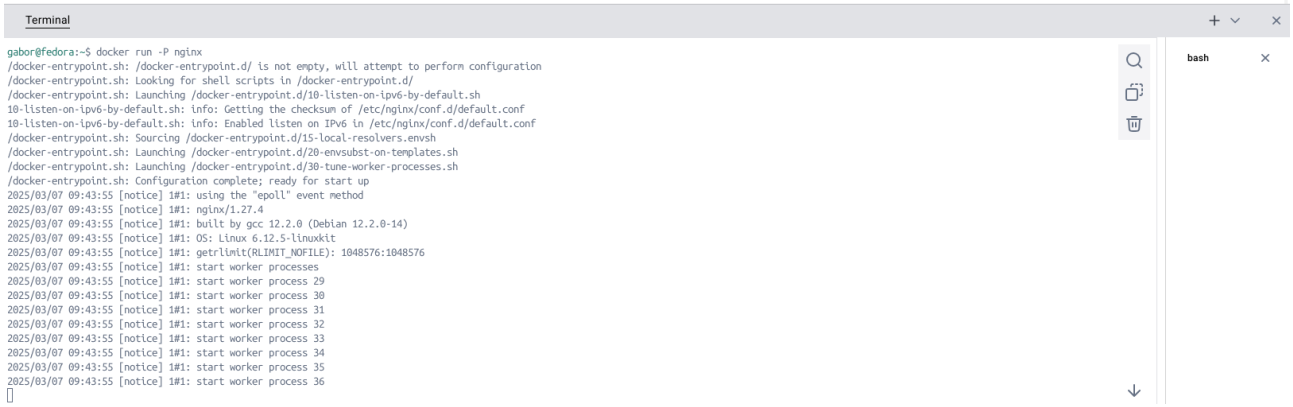


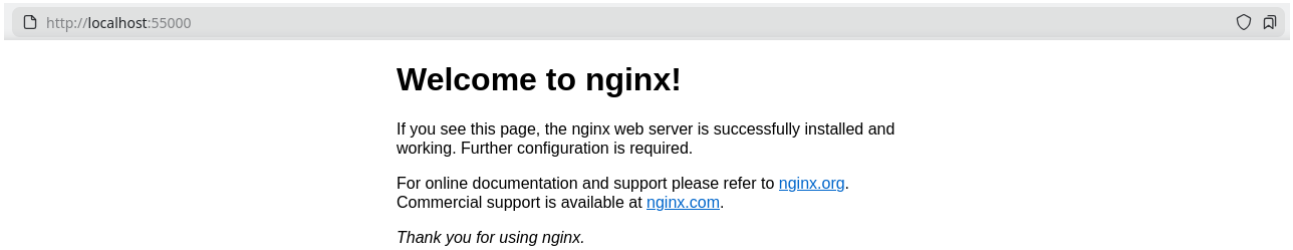




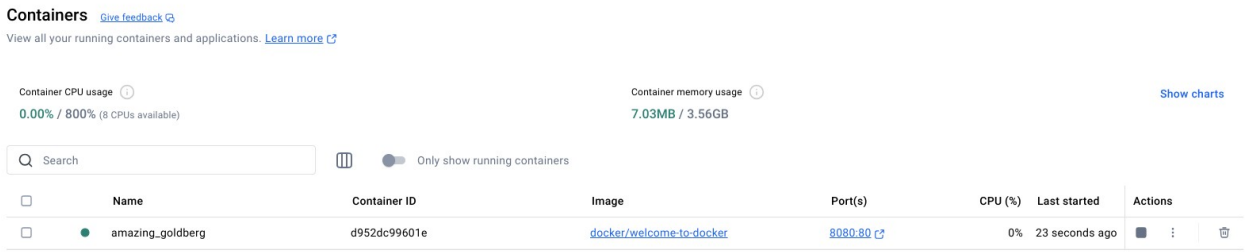
Running Nginx on all ports.

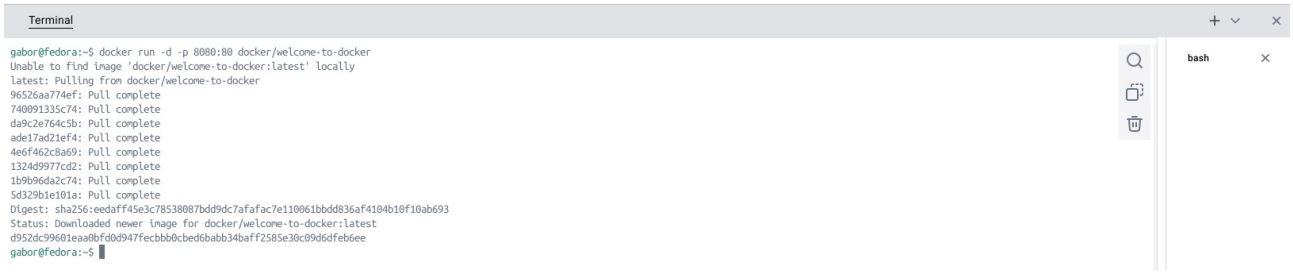


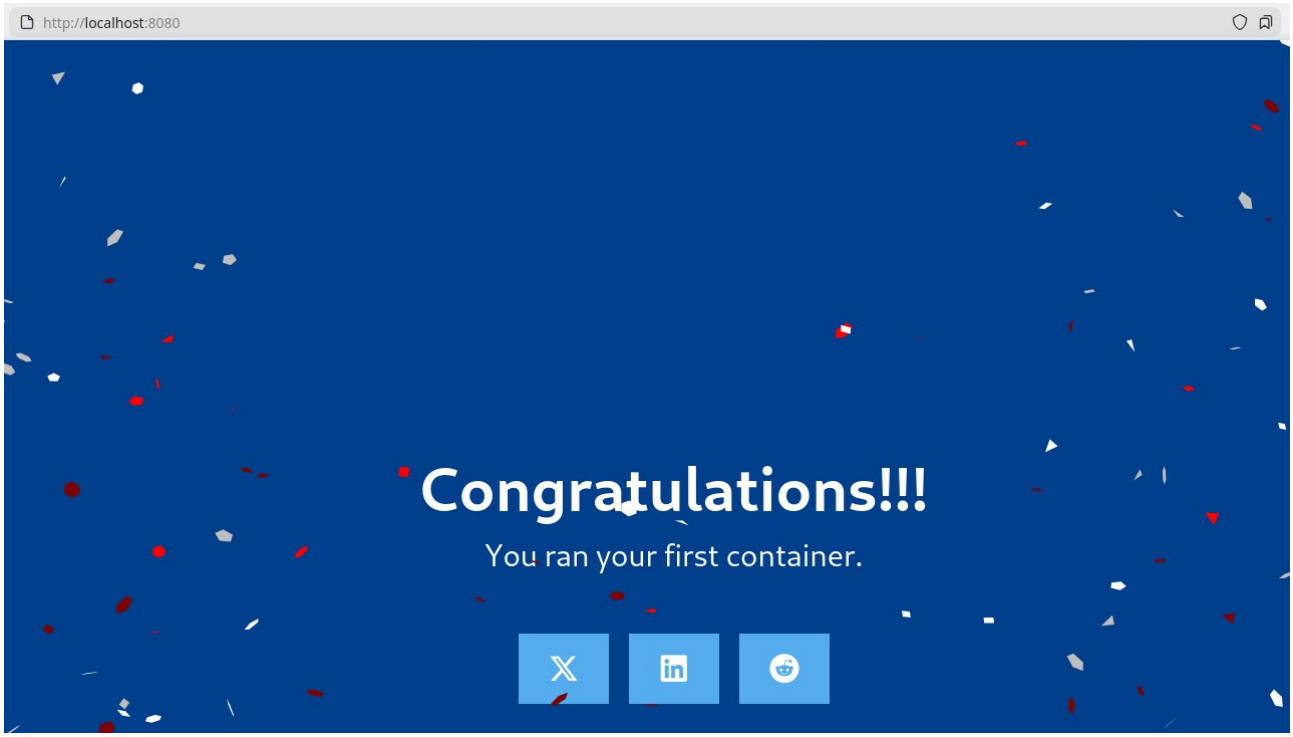




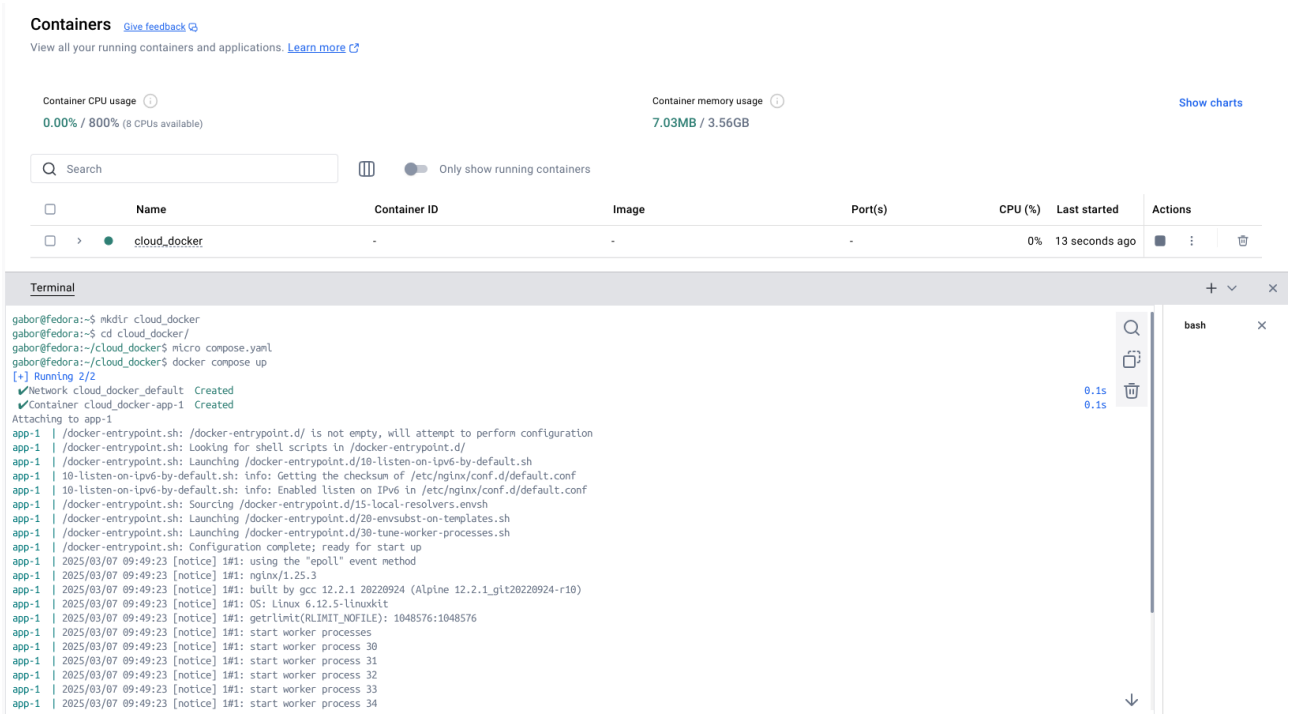
Run “Welcome to Docker” container.

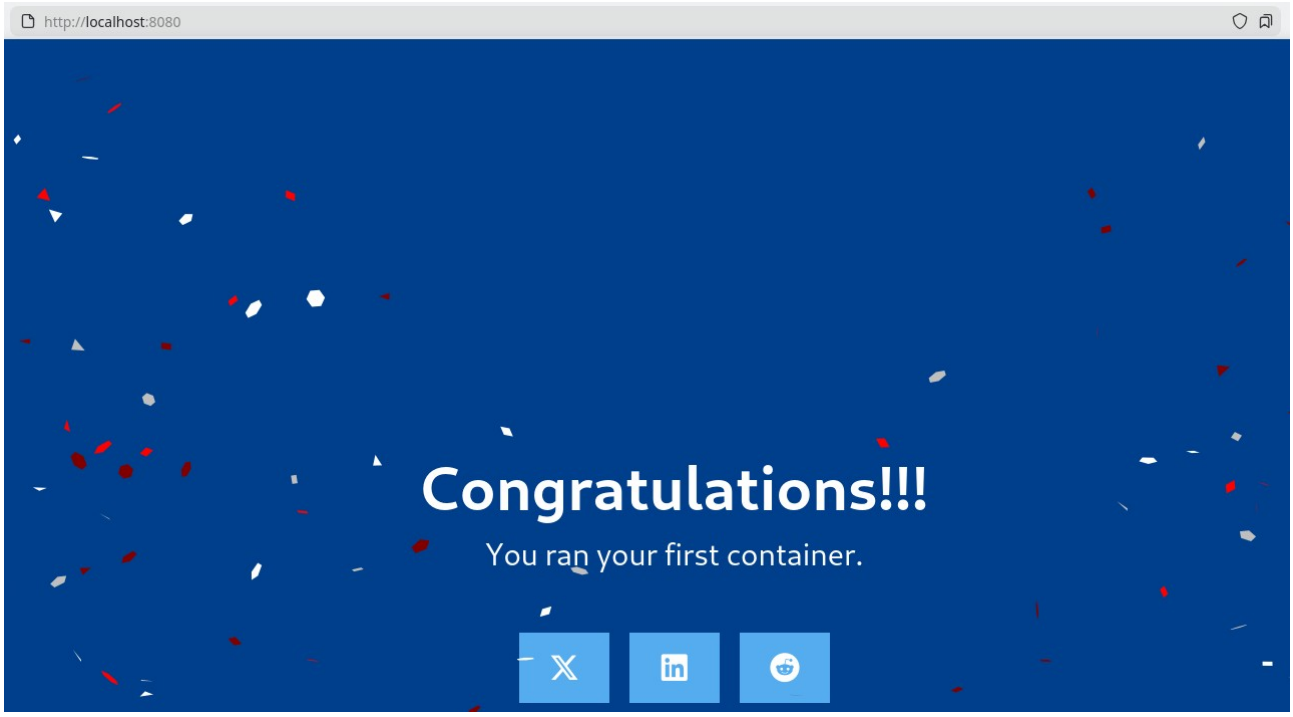






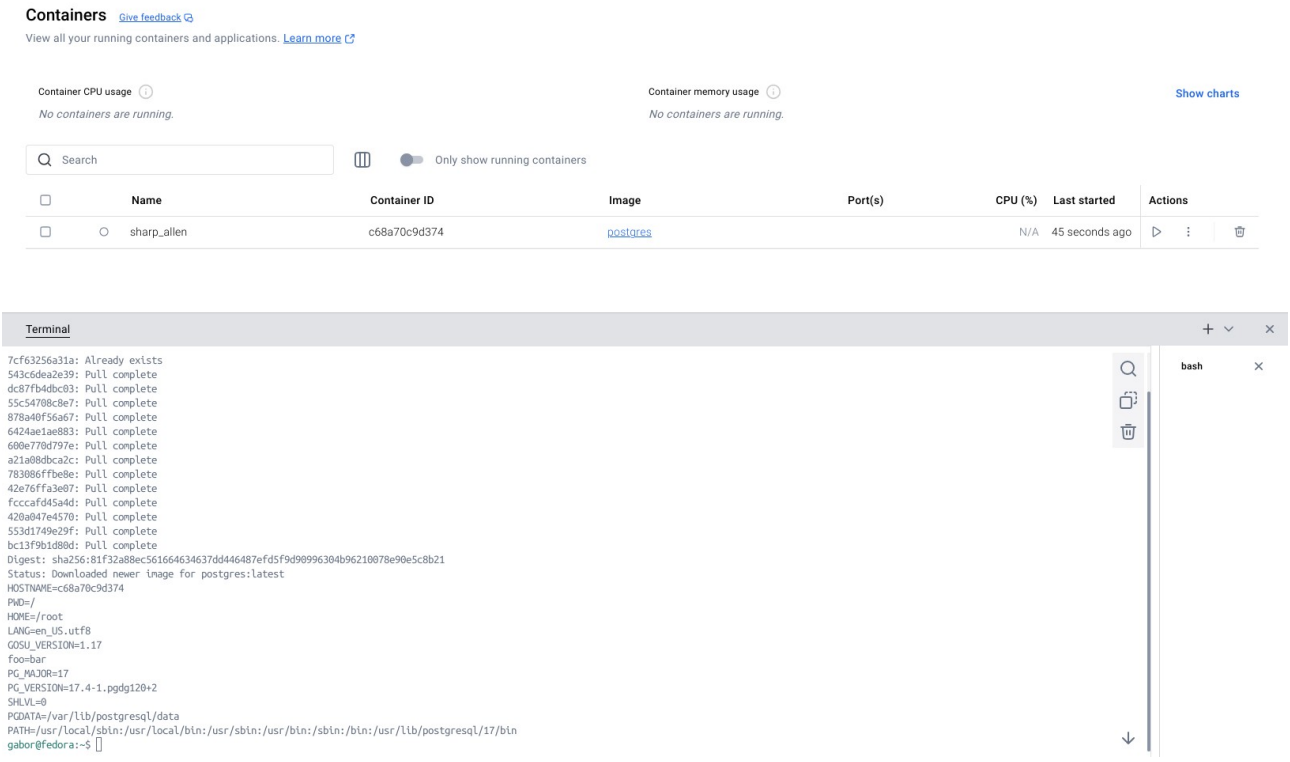
Use Docker Compose to run “Welcome to Docker”.


Containers
Give feedback
View all your running containers and applications. Learn more
Container CPU usage
0.00% / 800% (8 CPUs available)
Container memory usage
7.03MB / 3.56GB
Show charts
Search
Only show running containers
Name
Container ID
Image
Port(s)
CPU (%)
Last started
Actions
cloud_docker
-
-
-
0%
13 seconds ago
Terminal
bash
gabor@fedora:~$ mkdir cloud_docker
gabor@fedora:~$ cd cloud_docker/
gabor@fedora:~/cloud_docker$ micro compose.yaml
gabor@fedora:~/cloud_docker$ docker compose up
[+] Running 2/2
✔Network cloud_docker_default Created 0.1s
✔Container cloud_docker-app-1 Created 0.1s
Attaching to app-1
app-1 | /docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
app-1 | /docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
app-1 | /docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
app-1 | 10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
app-1 | 10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
app-1 | /docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
app-1 | /docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
app-1 | /docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
app-1 | /docker-entrypoint.sh: Configuration complete; ready for start up
app-1 | 2025/03/07 09:49:23 [notice] 1#1: using the "epoll" event method
app-1 | 2025/03/07 09:49:23 [notice] 1#1: nginx/1.25.3
app-1 | 2025/03/07 09:49:23 [notice] 1#1: built by gcc 12.2.1 20220924 (Alpine 12.2.1_git20220924-r10)
app-1 | 2025/03/07 09:49:23 [notice] 1#1: OS: Linux 6.12.5-linuxkit
app-1 | 2025/03/07 09:49:23 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
app-1 | 2025/03/07 09:49:23 [notice] 1#1: start worker processes
app-1 | 2025/03/07 09:49:23 [notice] 1#1: start worker process 30
app-1 | 2025/03/07 09:49:23 [notice] 1#1: start worker process 31
app-1 | 2025/03/07 09:49:23 [notice] 1#1: start worker process 32
app-1 | 2025/03/07 09:49:23 [notice] 1#1: start worker process 33
app-1 | 2025/03/07 09:49:23 [notice] 1#1: start worker process 34

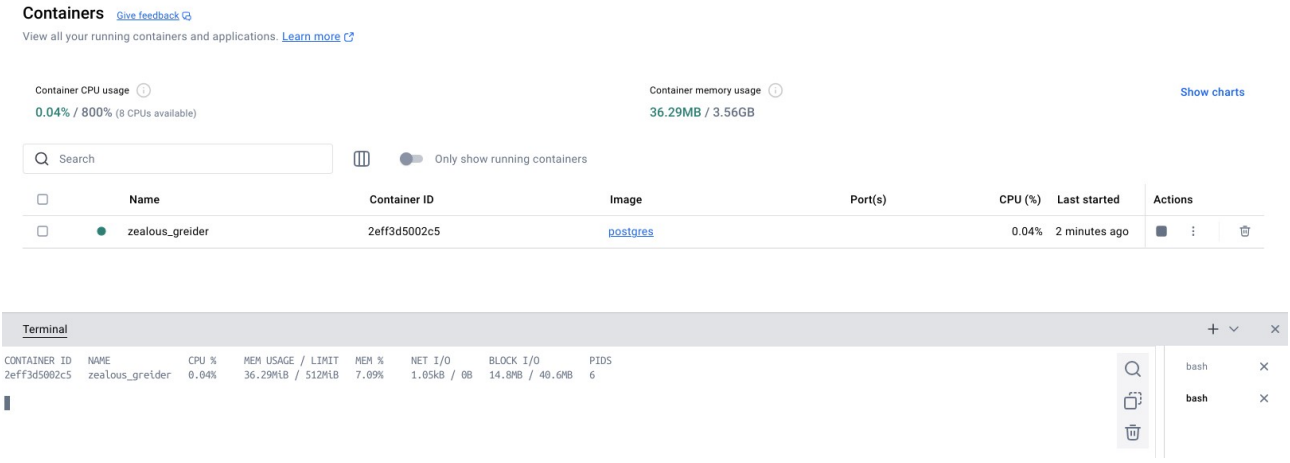

http://localhost:8080
Congratulations!!!
You ran your first container.

Overriding container defaults

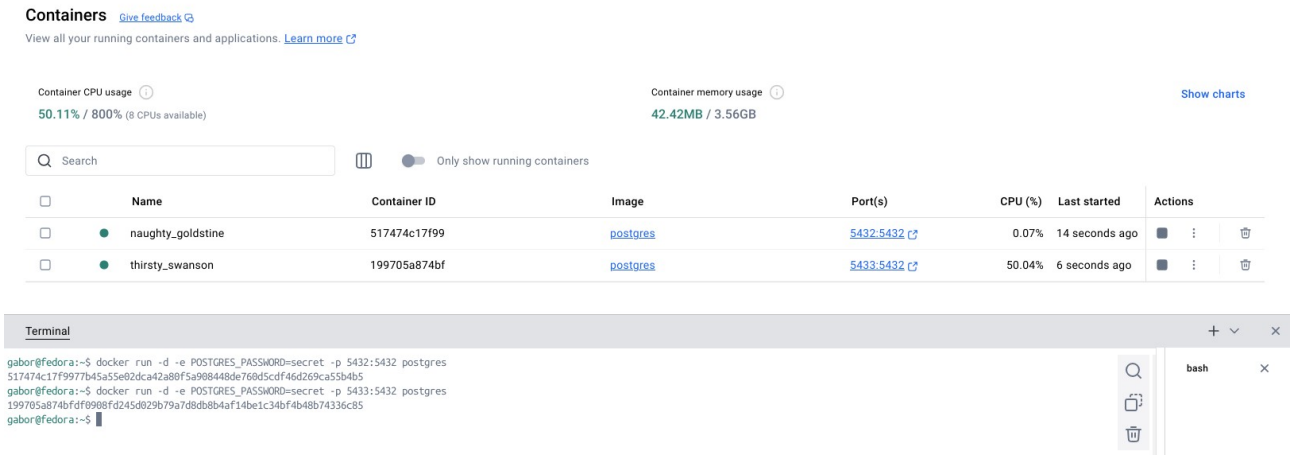
Setting environment variables. Foo has been set as bar.



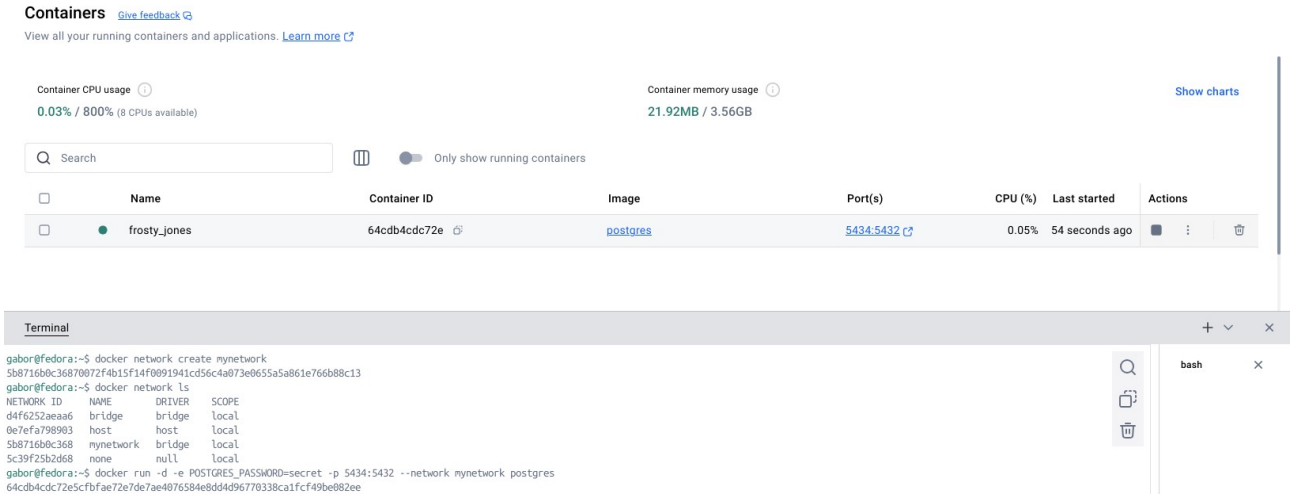
Restricting the container’s amount of resources. Only 0.5 CPU cores, and 512MiB of memory.



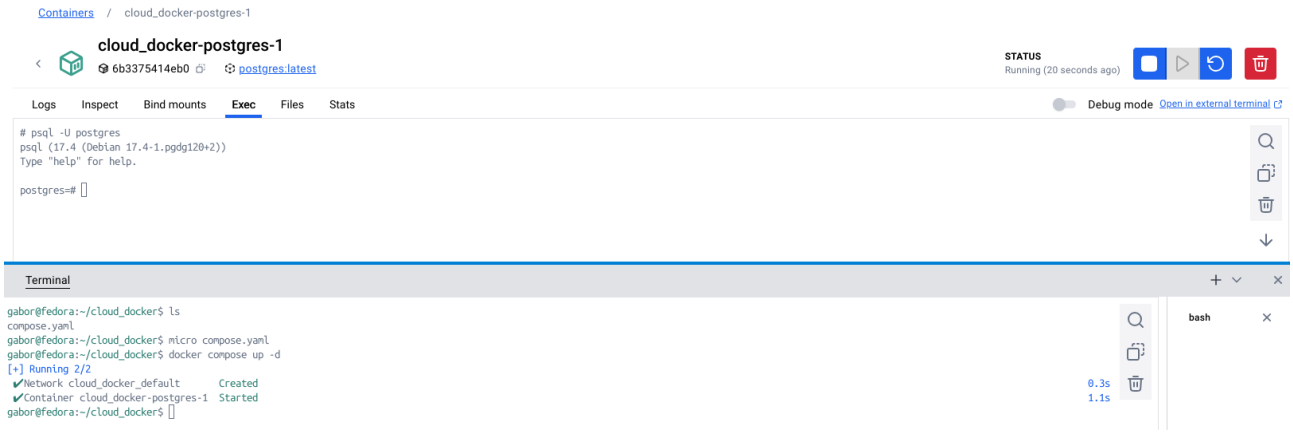
Run multiple instances of the Postgres database.



Run Postgres container in a controlled network.



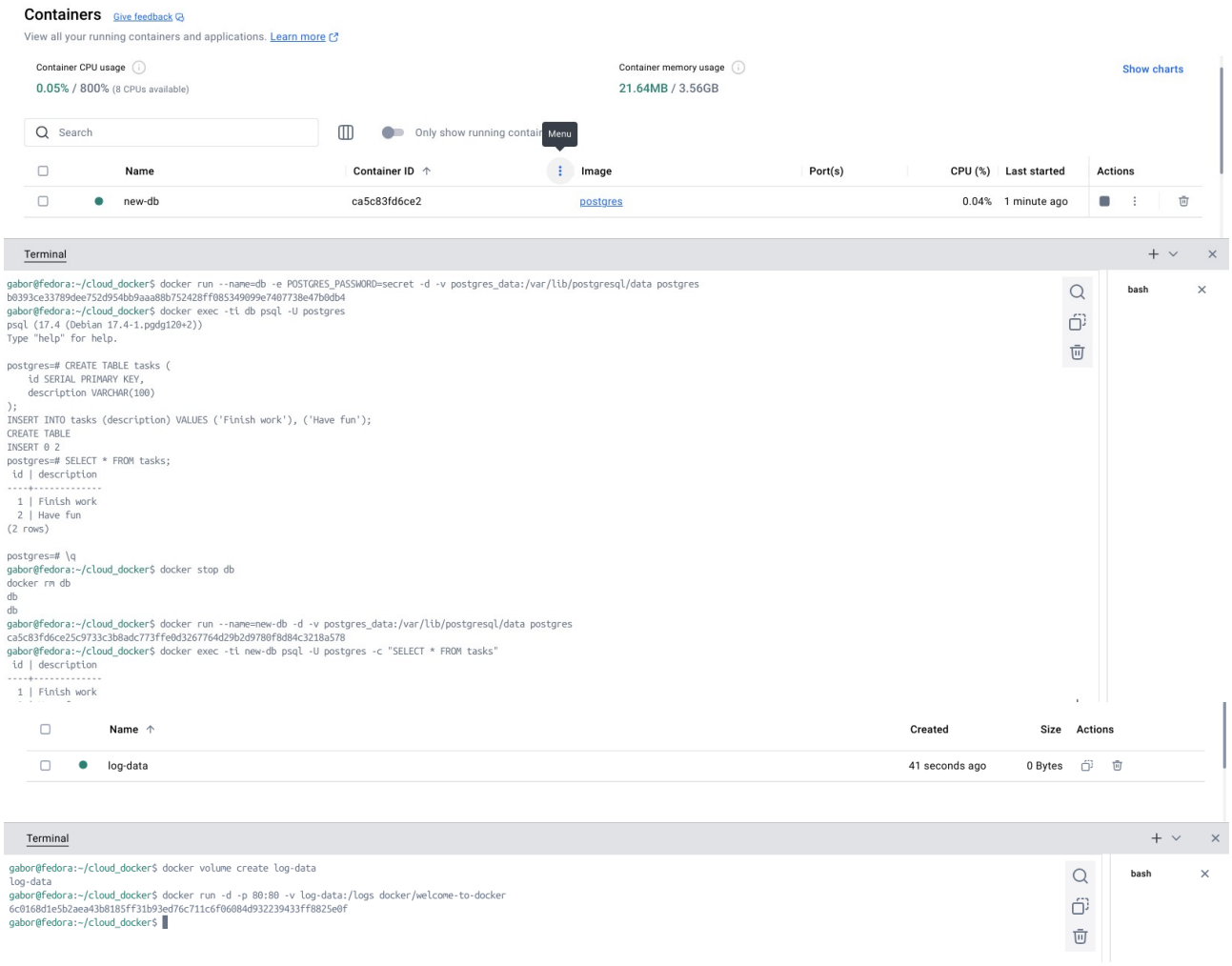
Override the default CMD and ENTRYPOINT in Docker Compose.



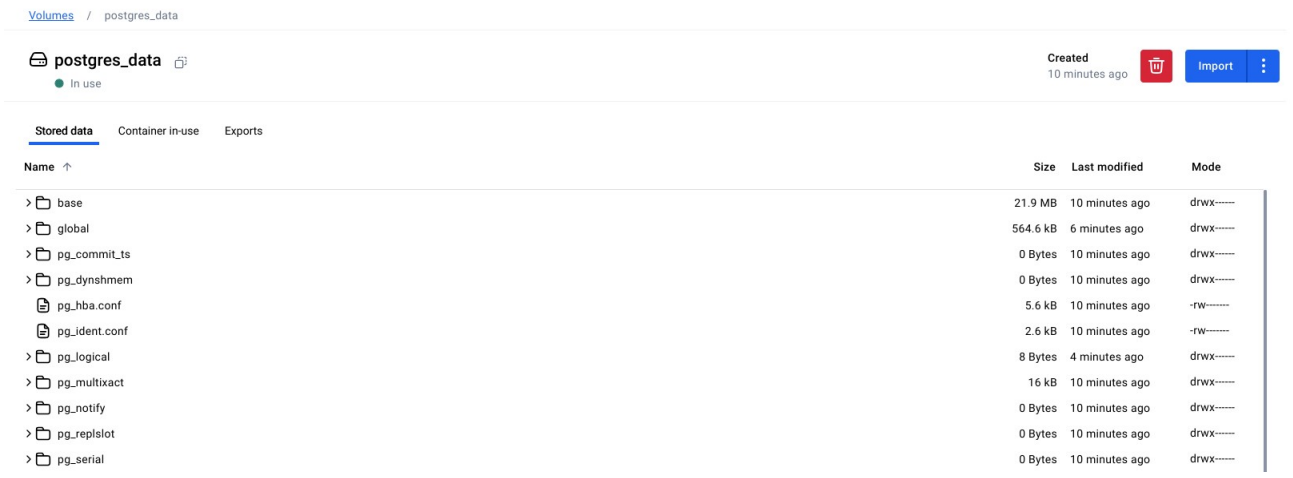
Persisting container data

Creating a container volume for logs.

Using volumes.

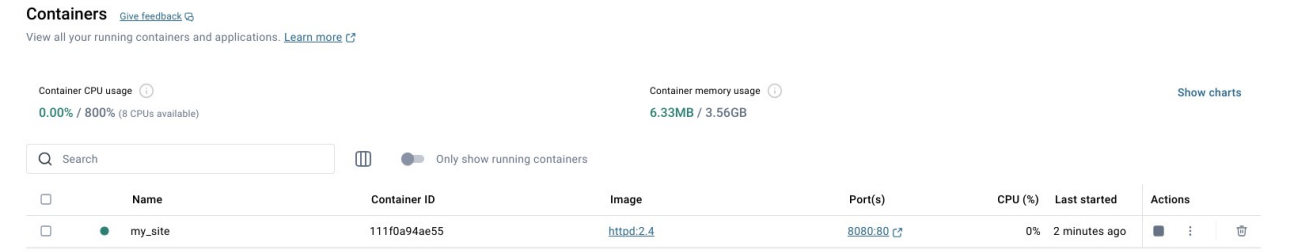


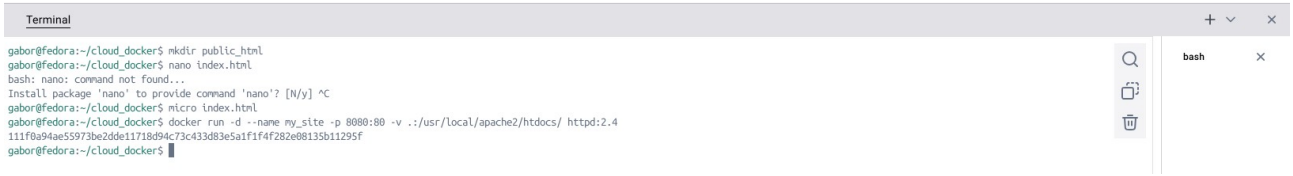
View volume contents.

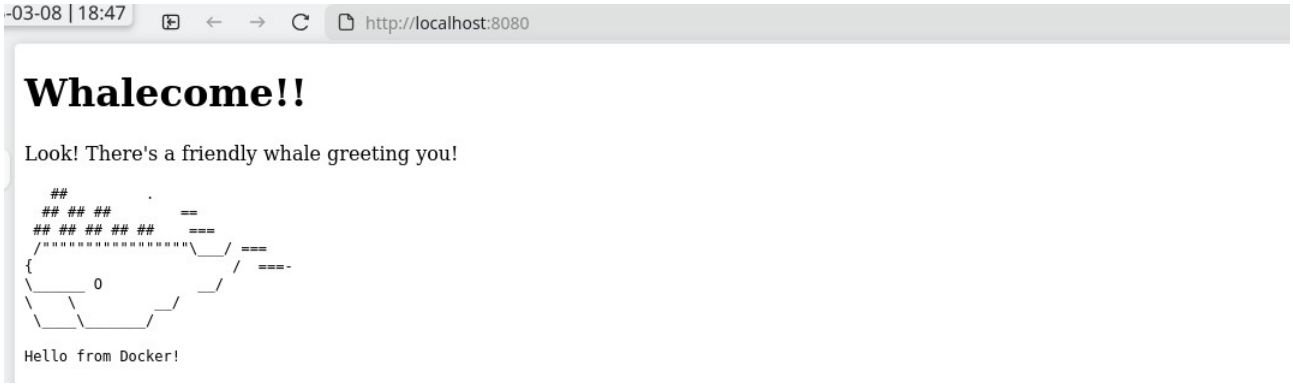


Sharing local files with containers

Using a bind mount.

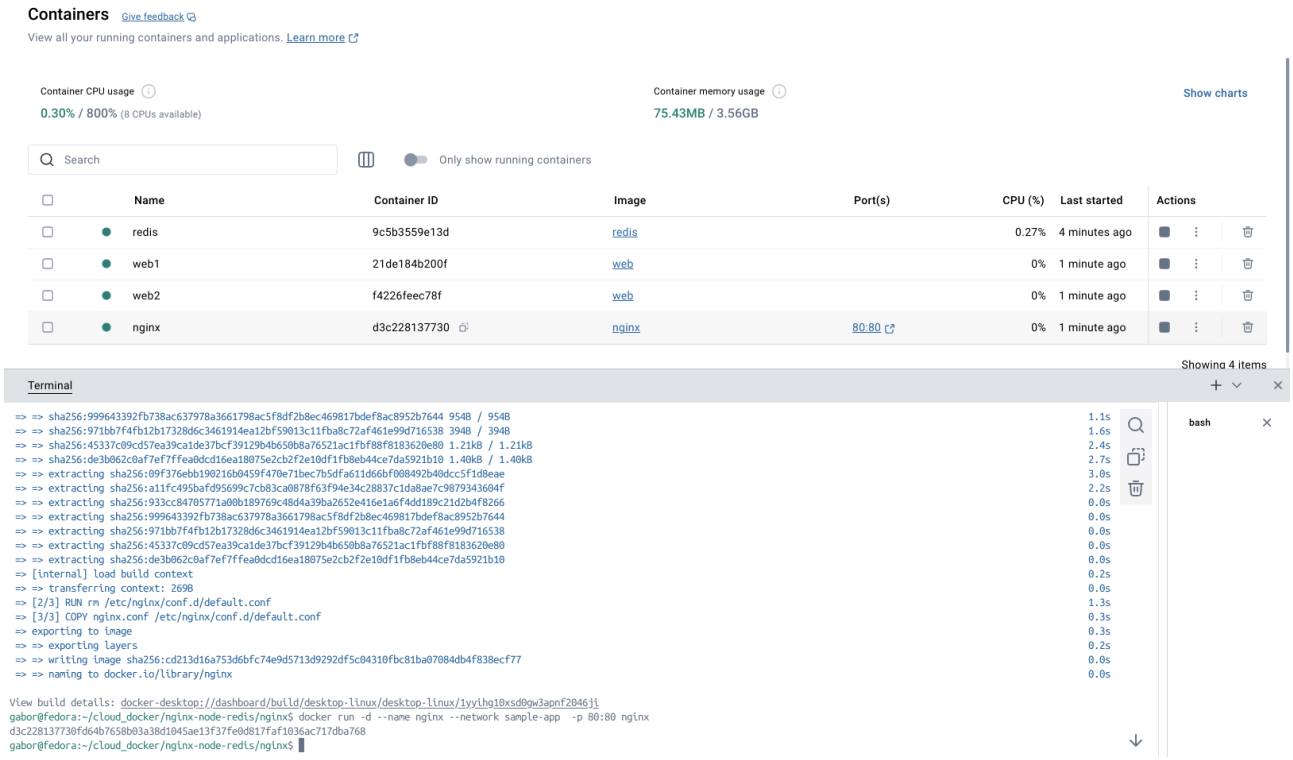
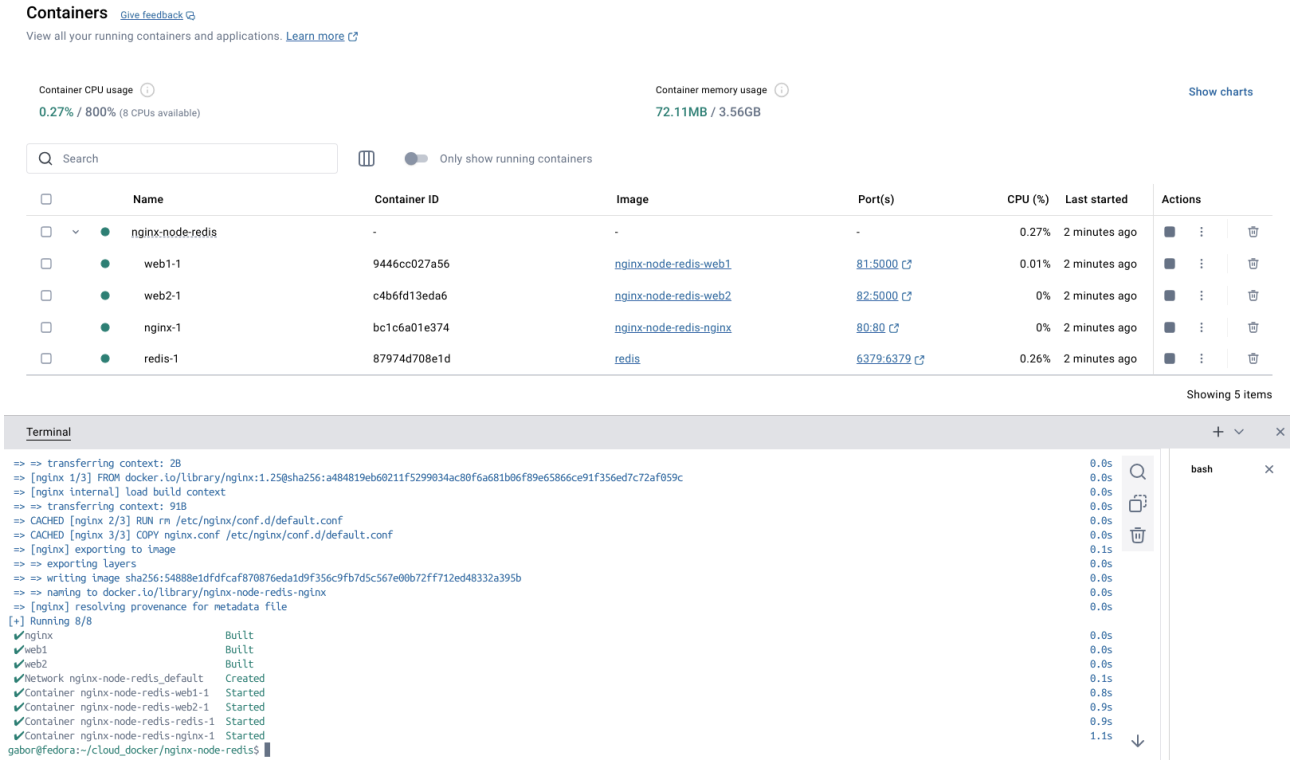






Multi-container applications

Deployment manually.



Deployment using Docker Compose.