

LAB 4

CC

PES2UG23CS103

ATHARV MITTAL

```
atharv_mittal@PES2UG23CS103: ~  
atharv__mittal@PES2UG23CS103:~$ export SRN=PES2UG23CS103  
atharv__mittal@PES2UG23CS103:~$ echo $SRN  
PES2UG23CS103  
atharv__mittal@PES2UG23CS103:~$ export PS1="[u@$SRN \W]\$ "  
[atharv__mittal@PES2UG23CS103 ~]$ docker run hello-world  
  
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/
```

```
atharv_mittal@PES2UG23CS103: ~  
[atharv__mittal@PES2UG23CS103 ~]$ docker compose version  
Docker Compose version v5.0.2  
[atharv__mittal@PES2UG23CS103 ~]$
```

```
atharv_mittal@PES2UG23CS103: ~  
beeb0d870d438: Pull complete  
7ec4c696b8bb: Download complete  
16ef6b12768c: Download complete  
Digest: sha256:e582c0bc7766f3342496d8485efb5a1df782b5ce3886ad017e2eaae442311f69  
Status: Downloaded newer image for rabbitmq:3-management  
d8318d9ffa0cb4c261eae22eebe2f9f50e0c18f93ecf280f8e3c8afc6f297b6e  
[atharv__mittal@PES2UG23CS103 docker-advanced-lab]$ docker ps  


| CONTAINER ID | IMAGE                 | COMMAND                  | CREATED       | STATUS       | PORTS                                                                |
|--------------|-----------------------|--------------------------|---------------|--------------|----------------------------------------------------------------------|
| d8318d9ffa0c | rabbitmq:3-management | "docker-entrypoint.s..." | 3 seconds ago | Up 2 seconds | 4369/tcp, 5671-5672/tcp, 15671-15672/tcp, 15691-15692/tcp, 25672/tcp |

  
[atharv__mittal@PES2UG23CS103 docker-advanced-lab]$
```

```
atharv_mittal@PES2UG23CS103: ~  
--- No Previous Chat History ---  
--- Chat Started (unknown-user connecting to localhost) ---  
RabbitMQ not ready, retrying... (1/5)  
RabbitMQ not ready, retrying... (1/5)  
RabbitMQ not ready, retrying... (2/5)  
RabbitMQ not ready, retrying... (2/5)  
RabbitMQ not ready, retrying... (3/5)  
RabbitMQ not ready, retrying... (3/5)  
RabbitMQ not ready, retrying... (4/5)  
RabbitMQ not ready, retrying... (4/5)  
RabbitMQ not ready, retrying... (5/5)  
RabbitMQ not ready, retrying... (5/5)  
  
ERROR: Could not connect to RabbitMQ at localhost  
  
Falling back to standalone mode...  
=====STANDALONE MODE (No RabbitMQ)=====
```

```
--- No Previous Chat History ---  
  
Messages will not be sent to any other container.  
  
Type message (standalone):  
ERROR: Could not connect to RabbitMQ at localhost
```

```
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab  
atharv_mittal@PES2UG23CS103: ~  
atharv_mittal@PES2UG23CS103: ~/docker-ad...  
atharv_mittal@PES2UG23CS103: ~/docker-ad...  
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab$ docker run -it --name user-a \  
--network chat-net \  
-e USER_NAME=user-a \  
-e RABBIT_HOST=rabbitmq \  
-e QUEUE_NAME=queue_a \  
-e TARGET_QUEUE=queue_b \  
chat-app  
  
--- No Previous Chat History ---  
--- Chat Started (user-a connecting to rabbitmq) ---  
RabbitMQ not ready, retrying... (1/5)  
RabbitMQ not ready, retrying... (1/5)  
RabbitMQ not ready, retrying... (2/5)  
RabbitMQ not ready, retrying... (2/5)  
RabbitMQ not ready, retrying... (3/5)  
RabbitMQ not ready, retrying... (3/5)  
Type message: Hello Atharv1  
Sent by user-a: Hello Atharv1  
Type message:  
Received from user-b: Hello Atharv 2  
Type message:
```

```
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab$ docker run -it --name user-b \
--network chat-net \
-e USER_NAME=user-b \
-e RABBIT_HOST=rabbitmq \
-e QUEUE_NAME=queue_b \
-e TARGET_QUEUE=queue_a \
chat-app

--- No Previous Chat History ---

--- Chat Started (user-b connecting to rabbitmq) ---
Type message:
Received from user-a: Hello Atharv1
Type message: Hello Atharv 2
Sent by user-b: Hello Atharv 2
Type message: 
```

```
[atharv_mittal@PES2UG23CS103 docker-advanced-lab]$ docker stop user-a user-b rabbitmq
docker rm user-a user-b rabbitmq
docker network rm chat-net
user-a
user-b
rabbitmq
user-a
user-b
rabbitmq
chat-net
```

```
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab
minor RabbitMQ version and the feature will be removed from a future major RabbitMQ version; actual versions to be determined.
rabbitmq-1 | 2026-02-12 10:07:35.411720+00:00 [warning] <0.709.0> To continue using this feature when it is not permitted by default, set the following parameter in your configuration:
rabbitmq-1 | 2026-02-12 10:07:35.411720+00:00 [warning] <0.709.0> "deprecated_features.permit.management_metrics_collection = true"
rabbitmq-1 | 2026-02-12 10:07:35.411720+00:00 [warning] <0.709.0> To test RabbitMQ as if the feature was removed, set this in your configuration:
rabbitmq-1 | 2026-02-12 10:07:35.411720+00:00 [warning] <0.709.0> "deprecated_features.permit.management_metrics_collection = false"
rabbitmq-1 | 2026-02-12 10:07:47.794404+00:00 [info] <0.746.0> Management plugin: HTTP (non-TLS) listener started on port 15672
rabbitmq-1 | 2026-02-12 10:07:47.794714+00:00 [info] <0.776.0> Statistics database started.
rabbitmq-1 | 2026-02-12 10:07:47.794847+00:00 [info] <0.775.0> Starting worker pool 'management_worker_pool' with 3 processes in it
rabbitmq-1 | 2026-02-12 10:07:47.822265+00:00 [info] <0.794.0> Prometheus metrics: HTTP (non-TLS) listener started on port 15692
rabbitmq-1 | 2026-02-12 10:07:47.823051+00:00 [info] <0.680.0> Ready to start client connection listeners
rabbitmq-1 | 2026-02-12 10:07:47.841757+00:00 [info] <0.838.0> started TCP listener on [::]:5672
rabbitmq-1 | completed with 5 plugins.
rabbitmq-1 | 2026-02-12 10:07:48.832715+00:00 [info] <0.680.0> Server startup complete; 5 plugins started.
rabbitmq-1 | 2026-02-12 10:07:48.832715+00:00 [info] <0.680.0> * rabbitmq_prometheus
rabbitmq-1 | 2026-02-12 10:07:48.832715+00:00 [info] <0.680.0> * rabbitmq_federation
rabbitmq-1 | 2026-02-12 10:07:48.832715+00:00 [info] <0.680.0> * rabbitmq_management
rabbitmq-1 | 2026-02-12 10:07:48.832715+00:00 [info] <0.680.0> * rabbitmq_management_agent
rabbitmq-1 | 2026-02-12 10:07:48.832715+00:00 [info] <0.680.0> * rabbitmq_web_dispatch
rabbitmq-1 | 2026-02-12 10:07:49.022673+00:00 [info] <0.9.0> Time to start RabbitMQ: 37952 ms
```



```
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab
=> => transferring dockerfile: 187B 0.0s
=> [internal] load metadata for docker.io/library/python:3.9-alpine 2.4s
=> [auth] library/python:pull token for registry-1.docker.io 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [1/5] FROM docker.io/library/python:3.9-alpine@sha256:c99b6eb43b3ac4d750db3d6e8b22268d5ea9a99deead7218ce3deda 0.1s
=> => resolve docker.io/library/python:3.9-alpine@sha256:c99b6eb43b3ac4d750db3d6e8b22268d5ea9a99deead7218ce3deda 0.0s
=> [internal] load build context 0.0s
=> => transferring context: 29B 0.0s
=> CACHED [2/5] WORKDIR /app 0.0s
=> CACHED [3/5] RUN pip install --no-cache-dir pika 0.0s
=> CACHED [4/5] COPY chat.py . 0.0s
=> CACHED [5/5] RUN mkdir -p /app/data 0.0s
=> exporting to image 0.7s
=> => exporting layers 0.0s
=> => exporting manifest sha256:4938348493b38072a802a00201eb6330b7c20f6dfc8bb773161e669d9d12b5e7 0.0s
=> => exporting config sha256:84c16b71014877c85e63e800cc6bf886ee48676b98686b8b1992e659ceb10a33 0.0s
=> => exporting attestation manifest sha256:db9931e236d73879b1bb4fd0e6e9e78e29ab30154784ab1f9f0363d6421594e 0.1s
=> => exporting manifest list sha256:a7865c18a51f5f906c10ffe52bbe2184a92f66a4759f1ad84c451318ff6d4a27 0.1s
=> => naming to docker.io/library/docker-advanced-lab-user-a:latest 0.0s
=> => unpacking to docker.io/library/docker-advanced-lab-user-a:latest 0.1s
=> resolving provenance for metadata file 0.1s
image docker-advanced-lab-user-a Built
Container docker-advanced-lab-user-a-run-b40e01644462 Creating
Container docker-advanced-lab-user-a-run-b40e01644462 Created

--- No Previous Chat History ---

--- Chat Started (user-a connecting to rabbitmq) ---
Type message: 
```

```
--- No Previous Chat History ---

--- Chat Started (user-a connecting to rabbitmq) ---
Type message: hello
Sent by user-a: hello
Type message:
```

```
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab
=> [internal] load metadata for docker.io/library/python:3.9-alpine 1.2s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [1/5] FROM docker.io/library/python:3.9-alpine@sha256:c99b6eb43b3ac4d750db3d6e8b22268d5ea9a99deead7218ce3deda 0.0s
=> => resolve docker.io/library/python:3.9-alpine@sha256:c99b6eb43b3ac4d750db3d6e8b22268d5ea9a99deead7218ce3deda 0.0s
=> [internal] load build context 0.0s
=> => transferring context: 29B 0.0s
=> CACHED [2/5] WORKDIR /app 0.0s
=> CACHED [3/5] RUN pip install --no-cache-dir pika 0.0s
=> CACHED [4/5] COPY chat.py . 0.0s
=> CACHED [5/5] RUN mkdir -p /app/data 0.0s
=> exporting to image 0.2s
=> => exporting layers 0.0s
=> => exporting manifest sha256:35ce4aad472636a0b621ab46fb61064c95fe1462f8f7136393a9f661611984ee 0.0s
=> => exporting config sha256:1a4c886f6a0fb36203a2ae1f331effb0d4437a686ed93d7747edc05312e565e5 0.0s
=> => exporting attestation manifest sha256:35e8cd37e59ee69dd635a24ccb84cc942f2d1210682c9412fff3248374b6897d 0.0s
=> => exporting manifest list sha256:ad47d21a4f69a51c3de94ecc1e6fb92b8ad296254280abe94292a8319e1c3c09 0.0s
=> => naming to docker.io/library/docker-advanced-lab-user-b:latest 0.0s
=> => unpacking to docker.io/library/docker-advanced-lab-user-b:latest 0.0s
=> resolving provenance for metadata file 0.0s
Image docker-advanced-lab-user-b Built
Container docker-advanced-lab-user-b-run-d8fda8becb25 Creating
Container docker-advanced-lab-user-b-run-d8fda8becb25 Created

--- No Previous Chat History ---

--- Chat Started (user-b connecting to rabbitmq) ---
Type message:
Received from user-a: hello
Type message:
```

```
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab
abbitMQ not ready, retrying... (3/5)
abbitMQ not ready, retrying... (3/5)
abbitMQ not ready, retrying... (4/5)
abbitMQ not ready, retrying... (4/5)
abbitMQ not ready, retrying... (5/5)
abbitMQ not ready, retrying... (5/5)

RROR: Could not connect to RabbitMQ at rabbitmq
RROR: Could not connect to RabbitMQ at rabbitmq

alling back to standalone mode...
=====
TANDALONE MODE (No RabbitMQ)
=====

-- Chat History --
ent by user-a (standalone): hello
ent by user-a (standalone): welcome
ent by user-a: hello sir final check
eceived from user-a: hello sir final check
ent by user-a: wyd
eceived from user-a: wyd
ent by user-b: doing good sir
eceived from user-b: doing good sir
-- End of History --

essages will not be sent to any other container.
```

```
atharv_mittal@PES2UG23CS103: ~/docker-advanced-lab
rabbitmq-1 exited with code 0
atharv_mittal@PES2UG23CS103:~/docker-advanced-lab$ docker compose run --rm user-b
WARN[0000] /home/atharv_mittal/docker-advanced-lab/docker-compose.yml: the attribute `version` is obsolete, it will be
ignored, please remove it to avoid potential confusion
[+] 1/1t 1/11
✓ Container docker-advanced-lab-rabbitmq-1 Running 0.0s
Container docker-advanced-lab-user-b-run-dde6ef198f1d Creating
Container docker-advanced-lab-user-b-run-dde6ef198f1d Created

--- Chat History ---
Sent by user-a (standalone): hello
Sent by user-a (standalone): welcome
Sent by user-a: hello sir final check
Received from user-a: hello sir final check
Sent by user-a: wyd
Received from user-a: wyd
Sent by user-b: doing good sir
Received from user-b: doing good sir
--- End of History ---

--- Chat Started (user-b connecting to rabbitmq) ---
RabbitMQ not ready, retrying... (1/5)
RabbitMQ not ready, retrying... (1/5)
RabbitMQ not ready, retrying... (2/5)
RabbitMQ not ready, retrying... (2/5)
RabbitMQ not ready, retrying... (3/5)
RabbitMQ not ready, retrying... (3/5)
RabbitMQ not ready, retrying... (4/5)
RabbitMQ not ready, retrying... (4/5)
Type message:
```