

CLOUD COMPUTING LAB-4

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SEC: A

Git hub link: <https://github.com/PES2UG23CS925/Cloud-Computing-lab>

SS1:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ 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/
```

SS2:

SS3:

```
aakanika@akanika-OptiPlex-5090:~/mnt/c/Users/aakan/sem-6/cc/PES2UG2CS925/Docker_Lab_advanced$ sudo docker ps
```

SS4:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/cc/PES2UG23CS925/Docker_lab_aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/cc/PES2UG23CS925/Docker_lab_advanced$ sudo docker run -it --name user-a chat-app
--- 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
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):
```

SS5:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925/Docker_lab_advanced$ docker run -it --name user-a --network chat-net -e RABBIT_HOST=rabbitmq -e QUEUE_NAME=queue_a -e TARGET_QUEUE=queue_b chat-app
--- No Previous Chat History ---

--- Chat Started (unknown-user connecting to rabbitmq) ---
Type message: hello
Sent by unknown-user: hello
Type message:
Received from unknown-user: hello friend
Type message: hope you're enjoying the lab :)
Sent by unknown-user: hope you're enjoying the lab :)
Type message:
Received from unknown-user: no it's pretty boring :(
Type message:
```

SS6:

```
Type message: aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925/Docker_docker run -it --name user-b --network chat-net -e RABBIT_HOST=rabbitmq -e QUEUE_NAME=queue_b -e TARGET_QUEUE=queue_a chat-app queue_a a chat-app
--- No Previous Chat History ---

--- Chat Started (unknown-user connecting to rabbitmq) ---
Type message:
Received from unknown-user: hello
Type message: hello friend
Sent by unknown-user: hello friend
Type message:
Received from unknown-user: hope you're enjoying the lab :(
Type message: no it's pretty boring :(
Sent by unknown-user: no it's pretty boring :(
Type message: |
```

SS7:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/cc/PES2UG23CS925/Docker_lab_advanced$ docker stop user-a user-b rabbitmq
user-a
user-b
rabbitmq
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/cc/PES2UG23CS925/Docker_lab_advanced$ docker rm user-a user-b rabbitmq docker
user-a
user-b
rabbitmq
```

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sems-6/cc/PES2UG23CS925/Docker_lab_advanced$ sudo docker network rm chat-net
chat-net
```

SS8:

```
rabbitmq-1 | 2026-02-03 09:25:59.701836+00:00 [info] <0.254.0> Running boot step pre_flight defined by app rabbit
rabitmq-1 | 2026-02-03 09:25:59.701857+00:00 [info] <0.254.0> Running boot step notify_cluster defined by app rabbit
rabitmq-1 | 2026-02-03 09:25:59.701874+00:00 [info] <0.254.0> Running boot step networking defined by app rabbit
rabitmq-1 | 2026-02-03 09:25:59.703884+00:00 [info] <0.254.0> Running boot step rabbit_quorum_queue_periodic_membership_reconciliation defined by app rabbit
it
rabitmq-1 | 2026-02-03 09:25:59.703796+00:00 [info] <0.254.0> Running boot step definition_import_worker_pool defined by app rabbit
rabitmq-1 | 2026-02-03 09:25:59.703864+00:00 [info] <0.315.0> Starting worker pool 'definition_import_pool' with 14 processes in it
rabitmq-1 | 2026-02-03 09:25:59.704132+00:00 [info] <0.254.0> Running boot step cluster_name defined by app rabbit
rabitmq-1 | 2026-02-03 09:25:59.704210+00:00 [info] <0.254.0> Initialising internal cluster ID to 'rabbitmq-cluster-id-EVKXgx70AWL201wxPOiddQ'
rabitmq-1 | 2026-02-03 09:25:59.710176+00:00 [info] <0.254.0> Running boot step virtual_host_reconciliation defined by app rabbit
rabitmq-1 | 2026-02-03 09:25:59.710571+00:00 [info] <0.254.0> Running boot step direct_client defined by app rabbit
rabitmq-1 | 2026-02-03 09:25:59.710571+00:00 [info] <0.254.0> Running boot step rabbit_federation_exchange defined by app rabbitmq_federation
rabitmq-1 | 2026-02-03 09:25:59.710674+00:00 [info] <0.254.0> Running boot step rabbit_management_load_definitions defined by app rabbitmq_management
rabitmq-1 | 2026-02-03 09:25:59.711834+00:00 [info] <0.790.0> Resetting node maintenance status
rabitmq-1 | 2026-02-03 09:25:59.886705+00:00 [warning] <0.729.0> Deprecated features: 'management_metrics_collection': Feature 'management_metrics_collection' is deprecated.
rabitmq-1 | 2026-02-03 09:25:59.886705+00:00 [warning] <0.729.0> By default, this feature can still be used for now.
rabitmq-1 | 2026-02-03 09:25:59.886705+00:00 [warning] <0.729.0> Its use will not be permitted by default in a future minor RabbitMQ version and the feature will be removed from a future major RabbitMQ version; actual versions to be determined.
rabitmq-1 | 2026-02-03 09:25:59.886705+00:00 [warning] <0.729.0> To continue using this feature when it is not permitted by default, set the following parameter in your configuration:
rabitmq-1 | 2026-02-03 09:25:59.886705+00:00 [warning] <0.729.0> "deprecated_features.permit.management_metrics_collection = true"
rabitmq-1 | 2026-02-03 09:25:59.886705+00:00 [warning] <0.729.0> To test RabbitMQ as if the feature was removed, set this in your configuration:
rabitmq-1 | 2026-02-03 09:25:59.886705+00:00 [warning] <0.729.0> "deprecated_features.permit.management_metrics_collection = false"
rabitmq-1 | 2026-02-03 09:26:03.074049+00:00 [info] <0.766.0> Management plugin: HTTP (Non-TLS) listener started on port 15672
rabitmq-1 | 2026-02-03 09:26:03.074211+00:00 [info] <0.796.0> Statistics database started.
rabitmq-1 | 2026-02-03 09:26:03.074381+00:00 [info] <0.795.0> Starting worker pool 'management_worker_pool' with 3 processes in it
rabitmq-1 | 2026-02-03 09:26:03.083323+00:00 [info] <0.814.0> Prometheus metrics: HTTP (Non-TLS) listener started on port 15692
rabitmq-1 | 2026-02-03 09:26:03.083612+00:00 [info] <0.700.0> Ready to start client connection listeners
rabitmq-1 | 2026-02-03 09:26:03.087868+00:00 [info] <0.858.0> started TCP listener on [:]:5672
rabitmq-1 | completed with 5 plugins.
rabitmq-1 | 2026-02-03 09:26:03.185596+00:00 [info] <0.700.0> Server startup complete; 5 plugins started.
rabitmq-1 | 2026-02-03 09:26:03.185596+00:00 [info] <0.700.0> * rabbitmq_prometheus
rabitmq-1 | 2026-02-03 09:26:03.185596+00:00 [info] <0.700.0> * rabbitmq_federation
rabitmq-1 | 2026-02-03 09:26:03.185596+00:00 [info] <0.700.0> * rabbitmq_management
rabitmq-1 | 2026-02-03 09:26:03.185596+00:00 [info] <0.700.0> * rabbitmq_management_agent
rabitmq-1 | 2026-02-03 09:26:03.185596+00:00 [info] <0.700.0> * rabbitmq_web_dispatch
rabitmq-1 | 2026-02-03 09:26:03.332037+00:00 [info] <0.9.0> Time to start RabbitMQ: 9179 ms
|
```

View in Docker Desktop View Config Enable Watch Detach

SS9:

```
[aakanksha@aakanksha:/mnt/c/Users/aakan/sems-6/cc/PES2UG23CS925/Docker_lab_advanced]$ sudo docker compose run --rm user-a
WARN[0000] /mnt/c/Users/aakan/sems-6/cc/PES2UG23CS925/Docker_lab_advanced/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
WARN[0000] No services to build
[+] 1/1t 1/1
  ✓ Container docker_lab_advanced-rabbitmq-1 Running          0.0s
Image docker_lab_advanced-user-a Building
[+] Building  FINISHED
--> [internal] load local build definitions               0.0s
--> [internal] load build definition from Dockerfile      0.0s
--> [internal] load metadata for docker.io/library/python:3.9-slim 3.1s
--> [internal] load dockerignore                         0.1s
--> [internal] transfer context: 2B                      0.0s
--> [1/5] FROM docker.io/library/python:3.9-slim@sha256:2d97f6910b16b 0.0s
--> [2/5] WORKDIR /app                                  0.0s
--> [3/5] COPY chat.py ,                                0.0s
--> [4/5] RUN mkdir -p /app/data                        0.0s
--> [5/5] export IMAGE=chat                            0.0s
--> exporting to image                                 0.2s
--> exporting layers                                    0.0s
--> exporting manifest sha256:86379d3c6972bc77ea9ba0d5697a5a5869cf 0.0s
--> exporting config sha256:b611328805580uccb8a1c6ec649de973eb2735 0.0s
--> exporting attestation manifest sha256:8dc87fd3db96c8dd6df6f69c 0.0s
--> exporting manifest list sha256:8edbf783b275d35b67fe375b57a024b 0.0s
--> naming to docker.io/library/docker_lab_advanced-user-a:latest 0.0s
--> unpacking to docker.io/library/docker_lab_advanced-user-a:late 0.0s
--> resolving provenance for metadata file             0.0s
Image docker_lab_advanced-user-a Built
Container docker_lab_advanced-user-a-run-e40945c7831b Creating
Container docker_lab_advanced-user-a-run-e40945c7831b Created
--- N Previous Chat History ---
--- Chat Started (user-a connecting to rabbitmq) ---
Type message:
Received from user-b: hello
Type message: wazzaaaaaa
Sent by user-a: wazzaaaaaa
Type message:
```

SS10:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925/Docker_lab_advanced$ sudo docker compose run --rm user-b
[sudo] password for aakanksha:
WARN[0000] /mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925/Docker_lab_advanced/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
WARN[0000] No services to build
[+] 1/1it 1/11
  ✓ Container docker_lab_advanced-rabbitmq-1 Running          0.0s
Image docker_lab_advanced-user-b Building
[+] Building 3.4s (12/12) FINISHED
  => [internal] load local build definitions           0.0s
  ==> reading from stdin 598B                         0.0s
  => [internal] load build definition from Dockerfile       0.0s
  => [internal] transfering dockerfile: 323B             0.0s
  => [internal] validating metadata for docker.io/library/python:3.9-slim   0.0s
  => [internal] load dockerfile metadata                0.0s
  => [internal] load dockerfile context                 0.0s
  => [internal] transfering context: 20B               0.0s
  => [1/5] FROM docker.io/library/python:3.9-slim@sha256:2d97f6910b16b 0.0s
  ==> resolve docker.io/library/python:3.9-slim@sha256:2d97f6910b16b 0.0s
  => [internal] load build context                   0.0s
  ==> transfering context: 20B                         0.0s
  => CACHED [2/5] COPY chat.py .                      0.0s
  => CACHED [3/5] WORKDIR /app                       0.0s
  => CACHED [4/5] RUN mkdir -p /app/data            0.0s
  => exporting to image                                0.0s
  => exporting layers                                 0.0s
  => exporting manifest sha256:bec88ae242784a73d367b9a5e05e4a8b48e9 0.0s
  => exporting config sha256:d2f5c7f852fc6391500f2555c15396df5f71d1 0.0s
  => exporting attestation manifest sha256:f4e94934ff54bfc3fd9a5539 0.0s
  => exporting manifest list sha256:a034c720f376393945104adcb97d66 0.0s
  => naming to docker.io/library/docker_lab_advanced-user-b:latest 0.0s
  => unpacking to docker.io/library/docker_lab_advanced-user-b:latest 0.0s
  => resolving provenance for metadata file           0.0s
Image docker_lab_advanced-user-b Built
Container docker_lab_advanced-user-b-run-led6el3462f3 Creating
Container docker_lab_advanced-user-b-run-led6el3462f3 Created

--- No Previous Chat History ---

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

SS11:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925/Docker_lab_advanced$ sudo docker compose run --rm user-a
WARN[0000] /mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925/Docker_lab_advanced/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential co nfusion
WARN[0000] No services to build
[+] 1/1it 1/1
  ✓ Container docker_lab_advanced-rabbitmq-1 Running          0.0s
WARN[0000] No services to build
Container docker_lab_advanced-user-a-run-5ec1e5c8b673 Creating
Container docker_lab_advanced-user-a-run-5ec1e5c8b673 Created

--- Chat History ---
Sent by user-b: hello
Received from user-b: hello
Sent by user-a: wazzzaaaaaa
Received from user-a: wazzzaaaaaa
--- End of History ---

--- Chat Started (user-a connecting to rabbitmq) ---
Type message:
Received from user-b: wow
Type message: we have the history saved, docker volumes are so fun
Sent by user-a: we have the history saved, docker volumes are so fun
Type message:
```

SS12:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925/Docker_lab_advanced$ sudo docker compose run --rm user-b
WARN[0000] /mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925/Docker_lab_advanced/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
WARN[0000] No services to build
[+] 1/1it 1/11
  ✓ Container docker_lab_advanced-rabbitmq-1 Running          0.0s
WARN[0000] No services to build
Container docker_lab_advanced-user-b-run-c0823719333f Creating
Container docker_lab_advanced-user-b-run-c0823719333f Created

--- Chat History ---
Sent by user-b: hello
Received from user-b: hello
Sent by user-a: wazzzaaaaaa
Received from user-a: wazzzaaaaaa
--- End of History ---

--- Chat Started (user-b connecting to rabbitmq) ---
Type message: wow
Sent by user-b: wow
Type message:
Received from user-a: we have the history saved, docker volumes are so fun
Type message:
```