

CC LAB - 4

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Section: CSE(E)

SRN: PES2UG23CS312

- **SS1:**

```
madeline@Madeline-Laptop:~$ export SRN=PES2UG23CS312
madeline@Madeline-Laptop:~$ echo $SRN
PES2UG23CS312
madeline@Madeline-Laptop:~$ export PS1="[\u@\${SRN} \W]\$ "
[madeline@PES2UG23CS312 ~]$ 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:**

```
[madeline@PES2UG23CS312 ~]$ docker-compose --version
Docker Compose version v5.0.2
[madeline@PES2UG23CS312 ~]$
```

- **SS3:**

```
[madeline@PES2UG23CS312 docker-advanced-lab]$ docker run -d --name rabbitmq rabbitmq:3-management
Unable to find image 'rabbitmq:3-management' locally
3-management: Pulling from library/rabbitmq
3fadcc669ef11: Pull complete
d63c4408fdb7: Pull complete
efa05c660812: Pull complete
20043066d3d5: Pull complete
7084ac8f4ab6: Pull complete
f4e7f62f4b80: Pull complete
beb0bd870d438: Pull complete
d686b50ce172: Pull complete
14e6209d5fa8: Pull complete
5e1c03b67a78: Pull complete
7ec4c696b8bb: Download complete
16ef6fb12768c: Download complete
Digest: sha256:e582c0bc7766f3342496d8485efb5aldf782b5ce3886ad017e2eaae442311f69
Status: Downloaded newer image for rabbitmq:3-management
1dbe97b9633cd662b003a622bf4c82bc1e952ce0e6df9c79f64dfa94b8738f45
[madeline@PES2UG23CS312 docker-advanced-lab]$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED            STATUS              PORTS               NAMES
1dbe97b9633c        rabbitmq:3-management   "docker-entrypoint.s..."   2 minutes ago    Up 2 minutes     4369/tcp, 5671-5672/tcp, 15671-15672/tcp, 15691-15692/tcp, 25672/tcp   rabbitmq
[madeline@PES2UG23CS312 docker-advanced-lab]$
```

- **SS4:**

```
[madeline@PES2UG23CS312 docker-advanced-lab]$ 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

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
```

- SS5:

```
[madeline@PES2UG23CS312 docker-advanced-lab]$ 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: hi
Sent by unknown-user: hi
Type message:
Received from unknown-user: hello friend
Type message: hope you are enjoying the lab :)
Sent by unknown-user: hope you are enjoying the lab :)
Type message:
Received from unknown-user: no it's pretty boring :(
Type message:
```

- SS6:

```
madeline@Madeline-Laptop:~$ 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

--- No Previous Chat History ---

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

- SS7:

```
[madeline@PES2UG23CS312 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
[madeline@PES2UG23CS312 docker-advanced-lab]$
```

- SS8:

```
rabbitmq-1 | 2026-02-13 09:39:43.978908+00:00 [info] <0.254.0> Running boot step networking defined by app rabbit
rabbitmq-1 | 2026-02-13 09:39:43.979206+00:00 [info] <0.254.0> Running boot step rabbit_quorum_queue_periodic_membership_reconciliation defined by app rabbit
rabbitmq-1 | 2026-02-13 09:39:43.984030+00:00 [info] <0.254.0> Running boot step definition_import_worker_pool defined by app rabbit
rabbitmq-1 | 2026-02-13 09:39:43.984408+00:00 [info] <0.315.0> Starting worker pool 'definition_import_pool' with 12 processes in it
rabbitmq-1 | 2026-02-13 09:39:43.986769+00:00 [info] <0.254.0> Running boot step cluster_name defined by app rabbit
rabbitmq-1 | 2026-02-13 09:39:43.987081+00:00 [info] <0.254.0> Initialising internal cluster ID to 'rabbitmq-cluster-id-UlczvsGpwbgHHLTcnHOpw'
rabbitmq-1 | 2026-02-13 09:39:43.999167+00:00 [info] <0.254.0> Running boot step virtual_host_reconciliation defined by app rabbit
rabbitmq-1 | 2026-02-13 09:39:44.000504+00:00 [info] <0.254.0> Running boot step direct_client defined by app rabbit
rabbitmq-1 | 2026-02-13 09:39:44.001213+00:00 [info] <0.254.0> Running boot step rabbit_federation_exchange defined by app rabbitmq_federation
rabbitmq-1 | 2026-02-13 09:39:44.001920+00:00 [info] <0.254.0> Running boot step rabbit_management_load_definitions defined by app rabbitmq_management
agentment
rabbitmq-1 | 2026-02-13 09:39:44.002687+00:00 [info] <0.696.0> Resetting node maintenance status
rabbitmq-1 | 2026-02-13 09:39:44.000728+00:00 [warning] <0.725.0> Deprecated features: 'management_metrics_collection': Feature 'management_metrics_collection' is deprecated.
rabbitmq-1 | 2026-02-13 09:39:44.000728+00:00 [warning] <0.725.0> By default, this feature can still be used for now.
rabbitmq-1 | 2026-02-13 09:39:44.000728+00:00 [warning] <0.725.0> 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.
rabbitmq-1 | 2026-02-13 09:39:44.000728+00:00 [warning] <0.725.0> To continue using this feature when it is not permitted by default, set the following parameter in your configuration:
rabbitmq-1 | 2026-02-13 09:39:44.000728+00:00 [warning] <0.725.0> "deprecated_features.permit.management_metrics_collection = true"
rabbitmq-1 | 2026-02-13 09:39:44.000728+00:00 [warning] <0.725.0> To test RabbitMQ as if the feature was removed, set this in your configuration:
rabbitmq-1 | 2026-02-13 09:39:44.000728+00:00 [warning] <0.725.0> "deprecated_features.permit.management_metrics_collection = false"
rabbitmq-1 | 2026-02-13 09:39:53.975718+00:00 [info] <0.762.0> Management plugin: HTTP (non-TLS) listener started on port 15672
rabbitmq-1 | 2026-02-13 09:39:53.975976+00:00 [info] <0.792.0> Statistics database started.
rabbitmq-1 | 2026-02-13 09:39:53.976068+00:00 [info] <0.791.0> Starting worker pool 'management_worker_pool' with 3 processes in it
rabbitmq-1 | 2026-02-13 09:39:53.988892+00:00 [info] <0.810.0> Prometheus metrics: HTTP (non-TLS) listener started on port 15692
rabbitmq-1 | 2026-02-13 09:39:53.989123+00:00 [info] <0.696.0> Ready to start client connection listeners
rabbitmq-1 | 2026-02-13 09:39:53.992812+00:00 [info] <0.854.0> started TCP listener on [:]:5672
rabbitmq-1 | completed with 5 plugins.
rabbitmq-1 | 2026-02-13 09:39:54.202816+00:00 [info] <0.696.0> Server startup complete; 5 plugins started.
rabbitmq-1 | 2026-02-13 09:39:54.202816+00:00 [info] <0.696.0> * rabbitmq_prometheus
rabbitmq-1 | 2026-02-13 09:39:54.202816+00:00 [info] <0.696.0> * rabbitmq_federation
rabbitmq-1 | 2026-02-13 09:39:54.202816+00:00 [info] <0.696.0> * rabbitmq_management
rabbitmq-1 | 2026-02-13 09:39:54.202816+00:00 [info] <0.696.0> * rabbitmq_management_agent
rabbitmq-1 | 2026-02-13 09:39:54.202816+00:00 [info] <0.696.0> * rabbitmq_web_dispatch
rabbitmq-1 | 2026-02-13 09:39:54.260801+00:00 [info] <0.9.0> Time to start RabbitMQ: 26335 ms
```

- SS9:

```
madeline@Madeline-Laptop:~/docker-advanced-lab$ docker compose run --rm user-a
WARN[0000] /home/madeline/docker-advanced-lab/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] 1/1 1/11
✓ Container docker-advanced-lab-rabbitmq-1 Running
Container docker-advanced-lab-user-a-run-39ae1e7e656b Creating
Container docker-advanced-lab-user-a-run-39ae1e7e656b Created
0.0s
--- No Previous Chat History ---
--- Chat Started (user-a connecting to rabbitmq) ---
Type message:
Received from user-b: hey
Type message: hi
Sent by user-a: hi
Type message:
Received from user-b: How are you
Type message: I am good
Sent by user-a: I am good
Type message:
0.0s
```

- SS10:

```
madeline@Madeline-Laptop:~/docker-advanced-lab$ docker compose run --rm user-b
WARN[0000] /home/madeline/docker-advanced-lab/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] 1/1 1/11
✓ Container docker-advanced-lab-rabbitmq-1 Running
Container docker-advanced-lab-user-b-run-66951b21740b Creating
Container docker-advanced-lab-user-b-run-66951b21740b Created
0.0s
--- No Previous Chat History ---
--- Chat Started (user-b connecting to rabbitmq) ---
Type message: hey
Sent by user-b: hey
Type message:
Received from user-a: hi
Type message: How are you
Sent by user-b: How are you
Type message:
Received from user-a: I am good
Type message:
0.0s
```

- SS11:

```
--- End of 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)  
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 rabbitmq  
  
ERROR: Could not connect to RabbitMQ at rabbitmq  
  
Falling back to standalone mode...  
=====  
STANDALONE MODE (No RabbitMQ)  
=====  
  
--- Chat History ---  
Sent by user-a: hello  
Received from user-a: hello  
Sent by user-b: hey  
Received from user-b: hey  
Sent by user-a: how are you  
Received from user-a: how are you  
Sent by user-b: i am fine  
Received from user-b: i am fine  
--- End of History ---  
  
Messages will not be sent to any other container.  
  
Type message (standalone):
```

- SS12:

```
madeline@Madeline-Laptop:~/docker-advanced-lab$ docker compose run --rm user-b  
WARN[0000] /home/madeline/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-ad47cf47d2d Creating  
Container docker-advanced-lab-user-b-run-ad47cf47d2d Created  
  
--- Chat History ---  
Sent by user-a: hello  
Received from user-a: hello  
Sent by user-b: hey  
Received from user-b: hey  
Sent by user-a: how are you  
Received from user-a: how are you  
Sent by user-b: i am fine  
Received from user-b: i am fine  
--- End of History ---  
  
--- Chat Started (user-b connecting to rabbitmq) ---  
Type message:
```