

PES2UG23CS285

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6 ‘E’

Ss1

```
[krishankkureti@Krishanks-MacBook-Air ~ % export SRN=PES2UG23CS285
[krishankkureti@Krishanks-MacBook-Air ~ % echo $SRN
PES2UG23CS285
[krishankkureti@Krishanks-MacBook-Air ~ %
[krishankkureti@Krishanks-MacBook-Air ~ % export PS1=[%n@$SRN %1~]## "
[[krishankkureti@PES2UG23CS285 ~] % docker run hello world
Unable to find image 'hello:latest' locally
docker: Error response from daemon: pull access denied for hello, repository does not exist or may require 'docker
login'

Run 'docker run --help' for more information
[[krishankkureti@PES2UG23CS285 ~] % 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.
   (arm64v8)
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

```
[[krishankkureti@PES2UG23CS285 ~] % docker compose version
Docker Compose version v5.0.2
```

Ss3

```
[[krishankkureti@PES2UG23CS285 docker-advanced-lab] % sudo docker ps
[Password:
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS
a41d0e6f78df      rabbitmq:3-management   "docker-entrypoint.s..."   30 seconds ago    Up 30 seconds   4369/tcp, 5671-5
672/tcp, 15671-15672/tcp, 15691-15692/tcp, 25672/tcp   rabbitmq
```

Ss4

```
[krishankkureti@PES2UG23CS285 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
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): Docker!
Sent by unknown-user (standalone): Docker!
Type message (standalone): Yeah!
Sent by unknown-user (standalone): Yeah!
Type message (standalone): █
```

Ss5

```
[krishankkureti@PES2UG23CS285 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:
Received from unknown-user: Hello.
Type message: Hi.
Sent by unknown-user: Hi.
Type message:
Received from unknown-user: Will you be the 6 to
[Type message: your 7?
Sent by unknown-user: your 7?
Type message: █
```

Ss6

```
Last login: Fri Feb 13 14:43:38 on ttys004
krishankkureti@Krishanks-MacBook-Air ~ % 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: Hello.
Sent by unknown-user: Hello.
Type message:
Received from unknown-user: Hi.
[Type message: Will you be the 6 to
Sent by unknown-user: Will you be the 6 to
Type message:
Received from unknown-user: your 7?
Type message: █
```

Ss7

```
[[krishankkureti@PES2UG23CS285 docker-advanced-lab]]% docker stop user-a user-b rabbitmq
user-a
user-b
rabbitmq
[[krishankkureti@PES2UG23CS285 docker-advanced-lab]]% docker rm user-a user-b rabbitmq
user-a
user-b
rabbitmq
[[krishankkureti@PES2UG23CS285 docker-advanced-lab]]% docker network rm chat-net
chat-net
[[krishankkureti@PES2UG23CS285 docker-advanced-lab]]%
```

Ss8

```
by app rabbitmq
rabbitmq-1 | 2026-02-13 09:24:17.882154+00:00 [info] <0.254.0> Running boot step direct_client defined by app rabbit
rabbitmq-1 | 2026-02-13 09:24:17.882181+00:00 [info] <0.254.0> Running boot step rabbit_federation_exchange defined
y app rabbitmq_federation
rabbitmq-1 | 2026-02-13 09:24:17.882237+00:00 [info] <0.254.0> Running boot step rabbit_management_load_definitions
defined by app rabbitmq_management
rabbitmq-1 | 2026-02-13 09:24:17.882325+00:00 [info] <0.688.0> Resetting node maintenance status
rabbitmq-1 | 2026-02-13 09:24:17.957989+00:00 [warning] <0.717.0> Deprecated features: `management_metrics_collection`:
: Feature `management_metrics_collection` is deprecated.
rabbitmq-1 | 2026-02-13 09:24:17.957989+00:00 [warning] <0.717.0> By default, this feature can still be used for now
rabbitmq-1 | 2026-02-13 09:24:17.957989+00:00 [warning] <0.717.0> 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 09:24:17.957989+00:00 [warning] <0.717.0> To continue using this feature when it is not per-
mitted by default, set the following parameter in your configuration:
rabbitmq-1 | 2026-02-13 09:24:17.957989+00:00 [warning] <0.717.0>     "deprecated_features.permit.management_metrics
collection = true"
rabbitmq-1 | 2026-02-13 09:24:17.957989+00:00 [warning] <0.717.0> To test RabbitMQ as if the feature was removed, se-
this in your configuration:
rabbitmq-1 | 2026-02-13 09:24:17.957989+00:00 [warning] <0.717.0>     "deprecated_features.permit.management_metrics
collection = false"
rabbitmq-1 | 2026-02-13 09:24:19.209247+00:00 [info] <0.754.0> Management plugin: HTTP (non-TLS) listener started on
port 15672
rabbitmq-1 | 2026-02-13 09:24:19.209353+00:00 [info] <0.784.0> Statistics database started.
rabbitmq-1 | 2026-02-13 09:24:19.209387+00:00 [info] <0.783.0> Starting worker pool 'management_worker_pool' with 3
processes in it
rabbitmq-1 | 2026-02-13 09:24:19.213416+00:00 [info] <0.802.0> Prometheus metrics: HTTP (non-TLS) listener started o-
port 15692
rabbitmq-1 | 2026-02-13 09:24:19.213518+00:00 [info] <0.688.0> Ready to start client connection listeners
rabbitmq-1 | 2026-02-13 09:24:19.214317+00:00 [info] <0.846.0> started TCP listener on [::]:5672
rabbitmq-1 | 2026-02-13 09:24:19.270911+00:00 [info] <0.688.0> Server startup complete; 5 plugins started.
rabbitmq-1 | 2026-02-13 09:24:19.270911+00:00 [info] <0.688.0> * rabbitmq_prometheus
rabbitmq-1 | 2026-02-13 09:24:19.270911+00:00 [info] <0.688.0> * rabbitmq_federation
rabbitmq-1 | 2026-02-13 09:24:19.270911+00:00 [info] <0.688.0> * rabbitmq_management
rabbitmq-1 | 2026-02-13 09:24:19.270911+00:00 [info] <0.688.0> * rabbitmq_management_agent
rabbitmq-1 | 2026-02-13 09:24:19.270911+00:00 [info] <0.688.0> * rabbitmq_web_dispatch
rabbitmq-1 | completed with 5 plugins.
rabbitmq-1 | 2026-02-13 09:24:19.290813+00:00 [info] <0.9.0> Time to start RabbitMQ: 3473 ms
```

View in Docker Desktop View Config Enable Watch Detach

Ss9

```
[krishankkureti@Krishanks-MacBook-Air ~ % cd docker-advanced-lab
cd: no such file or directory: docker-advanced-lab
[krishankkureti@Krishanks-MacBook-Air ~ % cd Downloads
[krishankkureti@Krishanks-MacBook-Air Downloads % cd docker-advanced-lab
[krishankkureti@Krishanks-MacBook-Air docker-advanced-lab % docker compose run --rm user-a
WARN[0000] /Users/krishankkureti/Downloads/docker-advanced-lab/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] 1/1 1/1
  ✓ Container docker-advanced-lab-rabbitmq-1 Running          0.0s
Image docker-advanced-lab-user-a Building
[+] Building 2.3s (13/13) FINISHED
=> [internal] load local bake definitions          0.0s
=> => reading from stdin 5788          0.0s
=> [internal] load build definition from Dockerfile          0.0s
=> => transferring dockerfile: 323B          0.0s
=> [internal] load metadata for docker.io/library/python:3.9-slim          2.1s
=> [auth] library/python:pull token for registry-1.docker.io          0.0s
=> [internal] load .dockerrcignore          0.0s
=> => transferring context: 2B          0.0s
=> [1/5] FROM docker.io/library/python:3.9-slim@sha256:2d97f6910b16bd338          0.0s
=> => resolve docker.io/library/python:3.9-slim@sha256:2d97f6910b16bd338          0.0s
=> [internal] load build context          0.0s
=> => transferring context: 29B          0.0s
=> CACHED [2/5] RUN pip install pika          0.0s
=> CACHED [3/5] WORKDIR /app          0.0s
=> CACHED [4/5] COPY chat.py .
=> CACHED [5/5] RUN mkdir -p /app/data          0.0s
=> exporting to image          0.0s
=> => exporting layers          0.0s
=> => exporting manifest sha256:e8677318002512fab9a70e9db9f31814cfdf5661          0.0s
=> => exporting config sha256:fc66191894af81d4ef3d6b3415548bc5dcf51b3495          0.0s
=> => exporting attestation manifest sha256:0bceeeec394f4bc97b603af34e1f2          0.0s
=> => exporting manifest list sha256:4f0590ca49c3926e848e839f72244c0f40e          0.0s
=> => naming to docker.io/library/docker-advanced-lab-user-a:latest          0.0s
=> => unpacking to docker.io/library/docker-advanced-lab-user-a:latest          0.0s
=> resolving provenance for metadata file          0.0s
Image docker-advanced-lab-user-a Built
Container docker-advanced-lab-user-a-run-9f975e66dd68 Creating
Container docker-advanced-lab-user-a-run-9f975e66dd68 Created

--- No Previous Chat History ---

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

Ss10

```
[krishankkureti@Krishanks-MacBook-Air ~ % cd Downloads ]  
[krishankkureti@Krishanks-MacBook-Air Downloads % cd docker-advanced-lab ]  
[krishankkureti@Krishanks-MacBook-Air docker-advanced-lab % docker compose run --]  
rm user-b  
WARN[0000] /Users/krishankkureti/Downloads/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  
Image docker-advanced-lab-user-b Building  
[+] Building 1.3s (12/12) FINISHED  
=> [internal] load local bake definitions 0.0s  
=> => reading from stdin 578B 0.0s  
=> [internal] load build definition from Dockerfile 0.0s  
=> => transferring Dockerfile: 323B 0.0s  
=> [internal] load metadata for docker.io/library/python:3.9-slim 1.1s  
=> [internal] load .dockerignore 0.0s  
=> => transferring context: 2B 0.0s  
=> [1/5] FROM docker.io/library/python:3.9-slim@sha256:2d97f6910b16bd338 0.0s  
=> => resolve docker.io/library/python:3.9-slim@sha256:2d97f6910b16bd338 0.0s  
=> [internal] load build context 0.0s  
=> => transferring context: 29B 0.0s  
=> CACHED [2/5] RUN pip install pika 0.0s  
=> CACHED [3/5] WORKDIR /app 0.0s  
=> CACHED [4/5] COPY chat.py . 0.0s  
=> CACHED [5/5] RUN mkdir -p /app/data 0.0s  
=> exporting to image 0.0s  
=> => exporting layers 0.0s  
=> => exporting manifest sha256:8ffd677dd6fec94412241a4af21328890063d680 0.0s  
=> => exporting config sha256:e4cafcd7b26987075bcb3bc5da3500d3a981d3ad30 0.0s  
=> => exporting attestation manifest sha256:c537f7de4da6bc05ca168c3a9fc5 0.0s  
=> => exporting manifest list sha256:37b42949c4ce29585408edf8068a847c788 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-f5c9c09ec16a Creating  
Container docker-advanced-lab-user-b-run-f5c9c09ec16a Created  
  
--- No Previous Chat History ---  
  
--- Chat Started (user-b connecting to rabbitmq) ---  
Type message: █
```

Ss11

```
[krishankkureti@Krishanks-MacBook-Air docker-advanced-lab % docker compose run --rm user-a ]  
WARN[0000] /Users/krishankkureti/Downloads/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-a-run-0ecf6ad0391f Creating  
Container docker-advanced-lab-user-a-run-0ecf6ad0391f Created  
  
--- Chat History ---  
Sent by user-a: A bunch of messages  
Received from user-a: A bunch of messages  
Sent by user-b: spoon feeding  
Received from user-b: spoon feeding  
Sent by user-a: Auto-save is so cool  
Received from user-a: Auto-save is so cool  
Sent by user-b: I know right.  
Received from user-b: I know right.  
--- End of History ---  
  
--- Chat Started (user-a connecting to rabbitmq) ---  
Type message: █
```

Ss12

```
[krishankkureti@Krishanks-MacBook-Air docker-advanced-lab % docker compose run --]
rm user-b
WARN[0000] /Users/krishankkureti/Downloads/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-ff4b049e9002 Creating
Container docker-advanced-lab-user-b-run-ff4b049e9002 Created

--- Chat History ---
Sent by user-a: A bunch of messages
Received from user-a: A bunch of messages
Sent by user-b: spoon feeding
Received from user-b: spoon feeding
Sent by user-a: Auto-save is so cool
Received from user-a: Auto-save is so cool
Sent by user-b: I know right.
Received from user-b: I know right.
--- End of History ---

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