AutoMQ User Manual

Introduction to AutoMQ

AutoMQ is a scalable and easy-to-use messaging platform based on Kafka. It supports efficient message streaming, topic management, and file processing in a Docker-based environment.

System Requirements

Hardware Requirements

• CPU: Minimum 2 cores (4 cores recommended)

• Memory: Minimum 2 GB RAM (4 GB recommended)

• Disk Space: 10 GB free storage

Software Requirements

• Operating System: Ubuntu (preferred) or any Linux-based system

• **Docker**: Version 20.10 or later

• curl: Version 7.68.0 or later

Installing and Starting AutoMQ

Step 1: Pull the AutoMQ Docker Image

Run the following command to pull the AutoMQ Docker image:

docker pull automqinc/automq

```
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\ADMIN> ubuntu
phuc@DESKTOP-DJFD184:~$ docker pull automqinc/automq
Using default tag: latest
latest: Pulling from automqinc/automq
Digest: sha256:lea6dee91842a534fb3c9da42185646392a15e3f5bcbbb6b8fa4f6eece2ac7fb
Status: Image is up to date for automqinc/automq:latest
docker.io/automqinc/automq:latest
phuc@DESKTOP-DJFD184:~$
```

Figure 1: Docker pull command

Step 2: Install and start AutoMQ Cluster

Run this command to install and start AutoMQ Cluster:

```
curl https://download.automq.com/community_edition/standalone_deployment/install_run.sh | bash
```

```
docker.io/automqinc/automq:latest
       ESKTOP-DJFD184:~$ curl https://download.automq.com/community_edition/standalone_deployment/install_run.sh
                                      Average Speed
Dload Upload
35635 0 -
  % Total
               % Received % Xferd
                                                                                   Current
                                                                            Left Speed
-:--:- 36019
                                                         Total
                                                                  Spent
Please enter your password for sudo:
WARN[0000] /tmp/automq-standalone-deployment/docker-compose yaml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion

✓Container localstack Healthy

✓Container aws-cli

 ✓Container controller
✓Container broker2
✓Container broker1
AutoMQ Cluster Overview
                                                             WAL Path
             Port Role
                                 S3 Endpoint
                                                                                                 S3 Bucket S3 Region
localhost
            9092 controller http://10.6.0.2:4566
                 None
    None
                                 http://10.6.0.2:4566
http://10.6.0.2:4566
             9094
                     broker
                                                             /tmp/kraft-combined-logs/s3wal automq-data us-east-1
localhost
            9095
                     broker
                                                             /tmp/kraft-combined-logs/s3wal automq-data us-east-1
Installed Containers
Container Name
                        Description
controller
                        Kafka Controller
broker1
                        Kafka Broker
broker2
                        Kafka Broker
                        You can use the AWS SDK to create an S3 bucket on a local S3 service like LocalStack. A fully functional local AWS cloud stack. Develop and test your cloud & Serverless apps offli
localstack
AutoMQ has been successfully installed. You can now access AutoMQ from the bootstrap server address.
            OP-DJFD184:~$
OP-DJFD184:~$
    Localhost:
    localhost:9094,localhost:9095
phuc@DESKTOP-DJFD184:~$
```

Figure 2: Installing

Managing Topics

4.1 Create a Topic

Run this command to create a Kafka topic named quickstart-events:

```
CMD='docker run --network automq_net automqinc/automq:latest /bin/bash
    -c "/opt/kafka/kafka/bin/kafka-topics.sh --create --topic quickstart
    -events --bootstrap-server broker1:9092,broker2:9092"'; [ "$(uname)"
     = "Linux" ] && eval "sudo $CMD" || eval $CMD
```

```
phuseBDESHIGD-BJED18U:-$ CMD='docker run --network autome_net autome_inc/autome_latest /bin/bach -c "/opt/kafka/bin/kafka-tonics sh --create --tonic quickstart-events --bootstrap-server brokerl:9092_broker2:9092"; [ "$(unam e)" = *Linux" | 5.6 eval "sudo $CMD" | eval $CMD | leval $CMD | lev
```

Figure 3: Create topic

4.2 List Existing Topics

Run this command to view all available topics:

```
docker run --network automq_net automqinc/automq:latest /bin/bash -c "/
    opt/kafka/kafka/bin/kafka-topics.sh --list --bootstrap-server
    broker1:9092,broker2:9092"
```

```
phuc@DESKTOP-DJFD184:~$ docker run --network automq_net automqinc/automq:latest
  /bin/bash -c "/opt/kafka/kafka/bin/kafka-topics.sh --list --bootstrap-server b
  roker1:9092, broker2:9092"
  __auto_balancer_metrics
  __consumer_offsets
  quickstart-events
  phuc@DESKTOP-DJFD184:~$
```

Figure 4: Listing

4.3 Delete a Topic

To delete the quickstart-events topic, run:

```
opt/kafka/kafka/bin/kafka-topics.sh --delete --topic quickstart-
events --bootstrap-server broker1:9092, broker2:9092"
```

Sending Messages

5.1 Send a Simple Message

Run this command to start a Kafka console producer and send a message to the quickstart-events topic:

CMD='docker run -it --network automq_net automqinc/automq:latest /bin/

Figure 5: Send and Recieve Message

Once the producer is running, type your message (e.g., Hello World!) and press **Enter** to send it.

5.2 Send the Content of a File

To send the content of a file (e.g., smae_results.txt in /home/Username), run:

```
CMD='docker run -it --network automq_net -v $(pwd):/mnt automqinc/
automq:latest /bin/bash -c "cat /mnt/smae_results.txt | /opt/kafka/
kafka/bin/kafka-console-producer.sh --topic quickstart-events --
bootstrap-server broker1:9092,broker2:9092"'; [ "$(uname)" = "Linux"
] && eval "sudo $CMD" || eval $CMD
```

```
phuc@DESKTDP-DJFD188!:-$
phuc@DESKTDP-DJFD188!
```

Figure 6: smae_results.txt

5.3 Send a CSV File

To send the content of a CSV file (e.g., imputed_data.csv), run:

```
CMD='docker run -it --network automq_net -v $(pwd):/mnt automqinc/
automq:latest /bin/bash -c "cat /mnt/imputed_data.csv | /opt/kafka/
kafka/bin/kafka-console-producer.sh --topic quickstart-events --
bootstrap-server broker1:9092,broker2:9092"'; [ "$(uname)" = "Linux"
] && eval "sudo $CMD" || eval $CMD
```

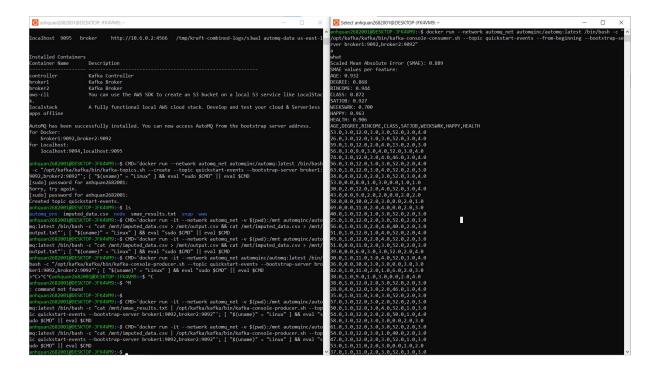


Figure 7: txt & csv file

Consuming Messages

Run this command to start a Kafka console consumer and read messages from the quickstart-events topic:

```
docker run --network automq_net automqinc/automq:latest /bin/bash -c "/
opt/kafka/kafka/bin/kafka-console-consumer.sh --topic quickstart-
events --from-beginning --bootstrap-server broker1:9092,broker2:9092
"
```

This will display all messages sent to the topic from the beginning.

Figure 8: Recive message

Stopping and Uninstalling AutoMQ

To stop and uninstall the AutoMQ cluster, run the following command:

```
curl https://download.automq.com/community_edition/
standalone_deployment/stop_uninstall.sh | bash
```

Figure 9: Stop and Uninstalling AutoMQ

Additional Tips

• Verify Installation: After installation, ensure all containers are running using:

```
1 docker ps
2
```

• Check Logs: To troubleshoot, check logs for a specific container (e.g., controller):

```
docker logs <container_name>
```

Troubleshooting

Common Issues and Solutions

Issue	Solution
Docker containers fail to start	Ensure Docker is installed and running. Restart
	Docker if necessary.
Messages not being consumed	Check topic configuration and ensure messages
	are sent to the correct topic.
File content not being sent	Verify file path and ensure correct volume mount-
	ing in the Docker command.
AutoMQ cluster not starting prop-	Review installation logs and check network set-
erly	tings.

Resources and Support

• **Documentation**: AutoMQ Official Documentation