



AVALIAÇÃO 10 - MQTT

Nome: Lara Ingrid Lima Moraes, Edvaldo Sousa e Ana Vitória

O MQTT (Message Queuing Telemetry Transport) é um protocolo leve que implementa o modelo de transporte PUB/SUB(publish/subscribe). Esse modelo é usado em aplicações de mensageria. O MQTT é principalmente usado em aplicações IOT(Internet das Coisas).

Essa atividade tem como objetivo implementar uma aplicação MQTT usando o Docker-Compose.

Evidenciar o funcionamento da aplicação usando prints.

Sugerimos usar o Play With Docker com o Docker-Compose.

Observar os links de artigos apresentando esse tema anexos abaixo.

Trabalho com equipes de no máximo três alunos.

1. Instalação MQTT com docker-compose

```
# The FWD team.                                     #
#####
[node1] (local) root@192.168.0.8 ~
$ apk add docker-compose
fetch https://dl-cdn.alpinelinux.org/alpine/v3.18/main/x86_64/APKINDEX.tar.gz
fetch https://dl-cdn.alpinelinux.org/alpine/v3.18/community/x86_64/APKINDEX.tar.gz
(1/3) Installing docker-cli (23.0.6-r7)
(2/3) Installing docker-bash-completion (23.0.6-r7)
(3/3) Installing docker-cli-compose (2.17.3-r8)
Executing busybox-1.36.1-r2.trigger
OK: 543 MiB in 165 packages
[node1] (local) root@192.168.0.8 ~
$ vi docker-compose.yml
[node1] (local) root@192.168.0.8 ~
$ cat docker-compose.yml
version: '3'

services:
  mqtt-broker:
    image: eclipse-mosquitto
    ports:
      - "1883:1883"
[node1] (local) root@192.168.0.8 ~
$ docker-compose up -d
[+] Running 4/4
  ✓ mqtt-broker 3 layers [||||] 0B/0B Pulled 1.0s
  ✓ c926b61bad3b Pull complete 0.1s
  ✓ a87e6a8c3b38 Pull complete 0.1s
  ✓ 4e2ff55c815a Pull complete 0.1s
[+] Building 0.0s (0/0) docker:default
[+] Running 2/2
  ✓ Network root default Created 0.0s
  ✓ Container root-mqtt-broker-1 Started 0.1s
```

2. Instalação MQTT com arquivo mosquitto.conf

```
docker-compose.yml x
Save Reload
1 version: '3'
2
3 services:
4   mqtt-broker:
5     image: eclipse-mosquitto:2.0.18
6     volumes:
7       - /mosquitto/config:/mosquitto/config
8       - /mosquitto/data:/mosquitto/data
9       - /mosquitto/log:/mosquitto/log
10    ports:
11      - 1883:1883
12
```

```
[node1] (local) root@192.168.0.8 ~
$ mkdir -p /mosquitto/config
[node1] (local) root@192.168.0.8 ~
$ vi /mosquitto/config/mosquitto.conf
[node1] (local) root@192.168.0.8 ~
$ cat /m
cat: can't open '/m': No such file or directory
[node1] (local) root@192.168.0.8 ~
$ cat /mosquitto/config/mosquitto.conf
[node1] (local) root@192.168.0.8 ~
$ cat docker-compose.yml
version: '3'

services:
  mqtt-broker:
    image: eclipse-mosquitto
    ports:
      - "1883:1883"
[node1] (local) root@192.168.0.8 ~
$ docker compose up
[+] Running 1/1
  ✓ mqtt-broker Pulled                                0.3s
[+] Building 0.0s (0/0)                                docker:default
  ✓ Container root-mqtt-broker-1 Recreated              0.4s
Attaching to root-mqtt-broker-1
root-mqtt-broker-1 | 1701987504: mosquitto version 2.0.18 starting
root-mqtt-broker-1 | 1701987504: Config loaded from /mosquitto/config/mosquitto.conf.
root-mqtt-broker-1 | 1701987504: Starting in local only mode. Connections will only be possible from clients running on this machine.
root-mqtt-broker-1 | 1701987504: Create a configuration file which defines a listener to allow remote access.
root-mqtt-broker-1 | 1701987504: For more details see https://mosquitto.org/documentation/authentication-methods/
root-mqtt-broker-1 | 1701987504: Opening ipv4 listen socket on port 1883.
root-mqtt-broker-1 | 1701987504: Opening ipv6 listen socket on port 1883.
root-mqtt-broker-1 | 1701987504: Error: Address not available
root-mqtt-broker-1 | 1701987504: mosquitto version 2.0.18 running
```