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10. 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.

Realizada instalação como solicitado. Feito configuração usando Docker compose e Mosquitto. Como evidenciado nos print feito toda configuração para execução do compose e depois dentro do diretório feito o arquivo mosquito.conf para configuração da solução.

```
#####
[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

[1]+  Stopped                  vim docker-compose.yml

1 version: "3"
2
3 services:
4   mosquito:
5     image: eclipse-mosquitto
6     network_mode: host
7     volumes:
8       - ./config:/mosquitto/config
9       - ./data:/mosquitto/data
10      - ./log:/mosquitto/log
~
~
-- INSERT --                                1,13      All

$ cd ..
[node1] (local) root@192.168.0.8 ~/compose
$ docker-compose up
[+] Building 0.0s (0/0)                                docker:default
[+] Running 1/0
✓ Container compose-mosquitto-1 Created              0.0s
Attaching to compose-mosquitto-1
compose-mosquitto-1 | 1701918362: mosquitto version 2.0.18 starting
compose-mosquitto-1 | 1701918362: Config loaded from /mosquitto/config/mosquitto.conf.
compose-mosquitto-1 | 1701918362: Starting in local only mode. Connections will only be possible from clien
ts running on this machine.
compose-mosquitto-1 | 1701918362: Create a configuration file which defines a listener to allow remote acce
ss.
compose-mosquitto-1 | 1701918362: For more details see https://mosquitto.org/documentation/authentication-m

1 persistence true
2 persistence_location /mosquitto/data
3 log_dest file /mosquitto/log/mosquitto.log
4
5 listener 1883
6 allow_anonymous true
```

```
[node1] (local) root@192.168.0.8 ~/compose
$ ls
config          docker-compose.yml
data            log
[node1] (local) root@192.168.0.8 ~/compose/config
$ cat mosquitto.conf
persistence trueroot@192.168.0.8 ~/compose/config
persistence_location /mosquitto/data
log_dest file /mosquitto/log/mosquitto.log

listener 1883
allow_anonymous true
[node1] (local) root@192.168.0.8 ~/compose/config
$ █
```

```
Attaching to compose-mosquitto-1
compose-mosquitto-1 | 1701918362: mosquitto version 2.0.18 starting
compose-mosquitto-1 | 1701918362: Config loaded from /mosquitto/config/mosquitto.conf.
compose-mosquitto-1 | 1701918362: Starting in local only mode. Connections will only be possible from clients running on this machine.
compose-mosquitto-1 | 1701918362: Create a configuration file which defines a listener to allow remote access.
compose-mosquitto-1 | 1701918362: For more details see https://mosquitto.org/documentation/authentication-methods/
compose-mosquitto-1 | 1701918362: Opening ipv4 listen socket on port 1883.
compose-mosquitto-1 | 1701918362: Opening ipv6 listen socket on port 1883.
compose-mosquitto-1 | 1701918362: Error: Address not available
compose-mosquitto-1 | 1701918362: mosquitto version 2.0.18 running
█
```