Running Microservices

- IntelliJ IDEA
- Exported JAR file
- Docker Container

IntelliJ IDEA
+
Local

JAR file
+
Local

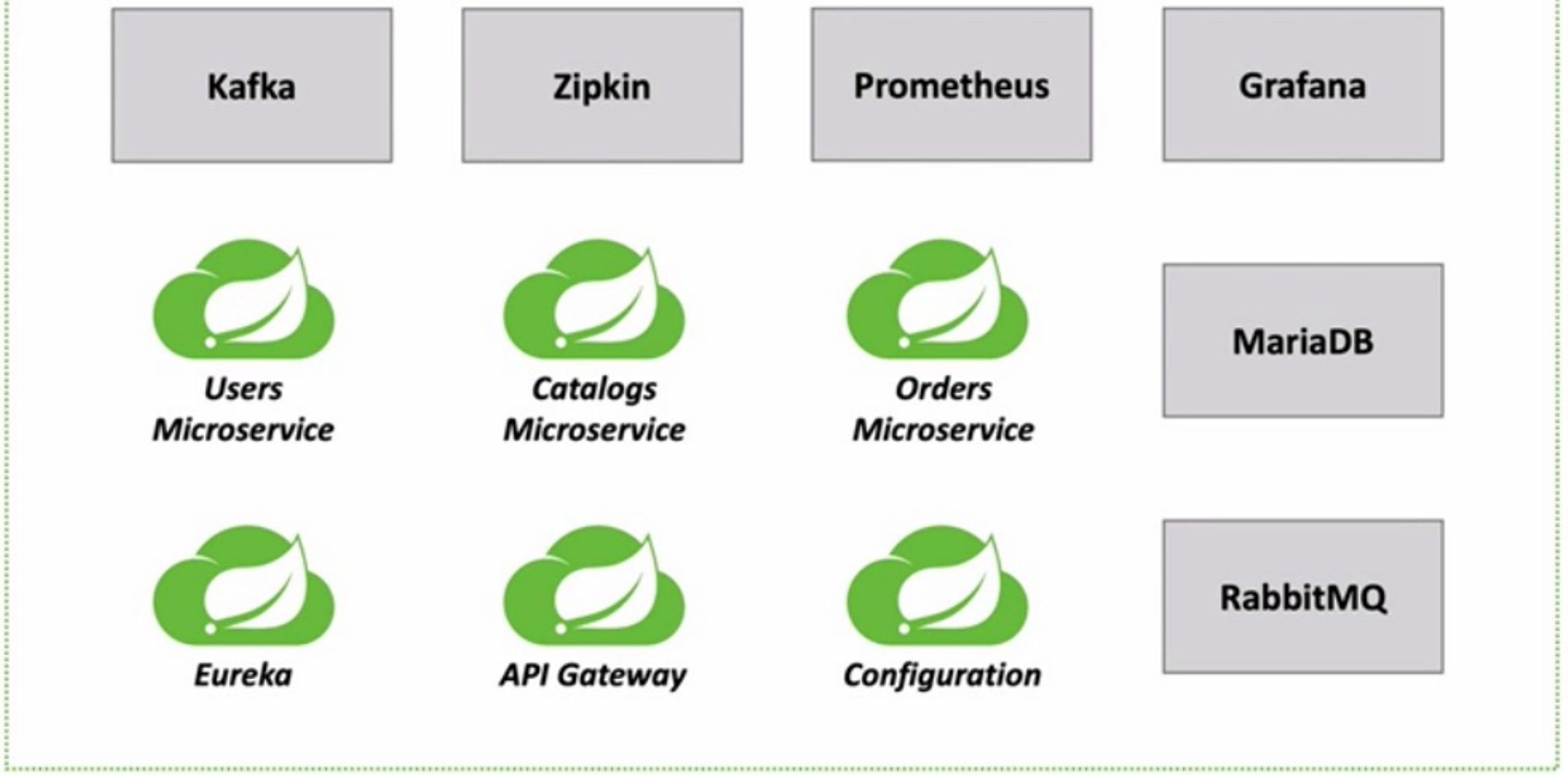
Docker
+
Local

Docker
+
AWS EC2

Docker
+
Docker Swarm Mode
+
AWS EC2

Docker
+
Kubernetes
+
AWS EC2

Running Microservices in Local



Create Bridge Network

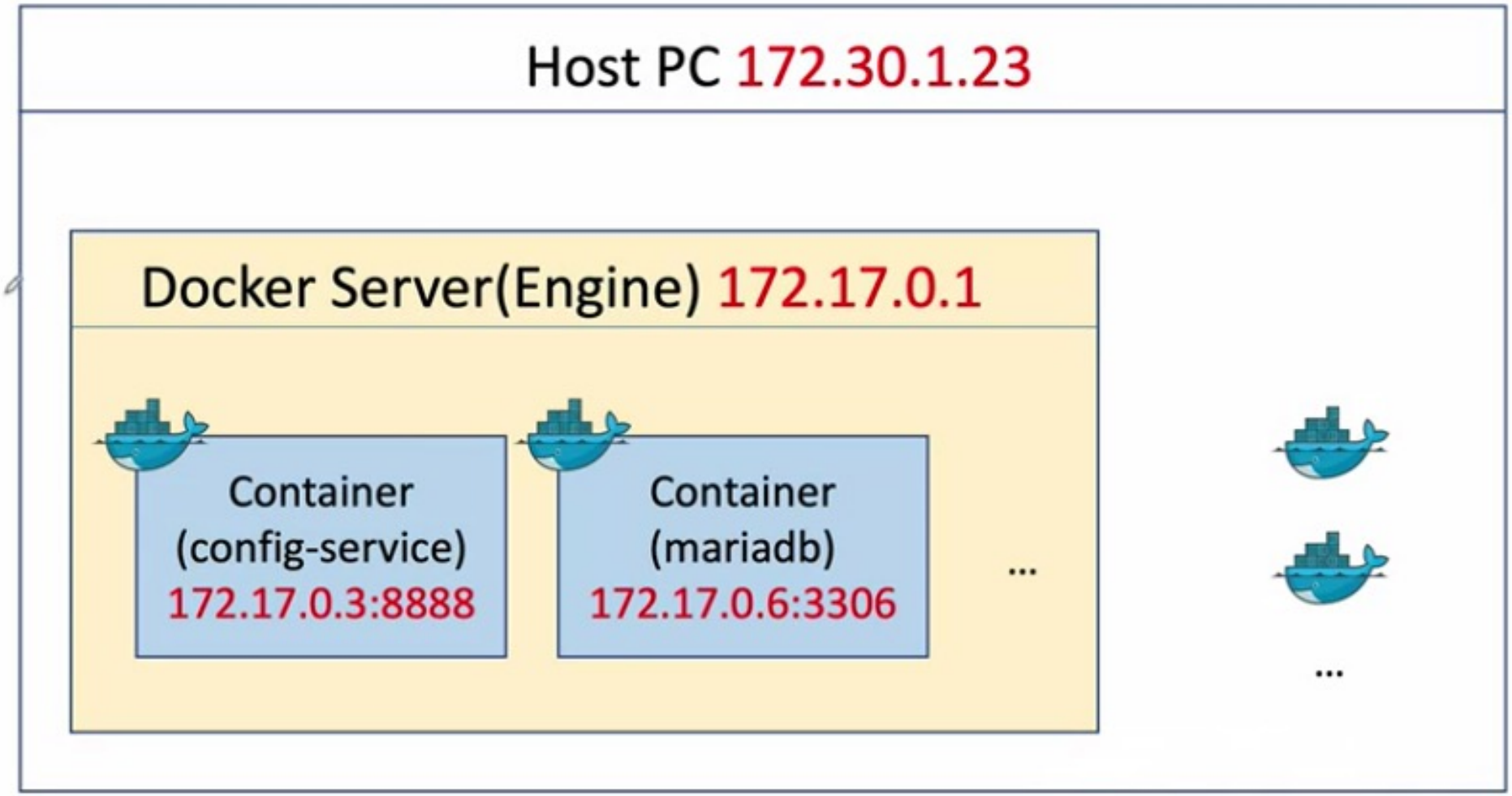
- ***Bridge network***
  - $ docker network create --driver bridge [브릿지 이름]
- ***Host network***
  - 네트워크를 호스트로 설정하면 호스트의 네트워크 환경을 그대로 사용
  - 포트 포워딩 없이 내부 어플리케이션 사용
- ***None network***
  - 네트워크를 사용하지 않음
  - lo 네트워크만 사용, 외부와 단절

$ docker network create ***ecommerce-network***

$ docker network ls

```
docker network ls
NETWORK ID     NAME                DRIVER    SCOPE
2879c2a94c9f   bridge              bridge    local
22e70794e399   ecommerce-network   bridge    local
de014ae20e46   host                host      local
2624444d0133   none                null      local
```

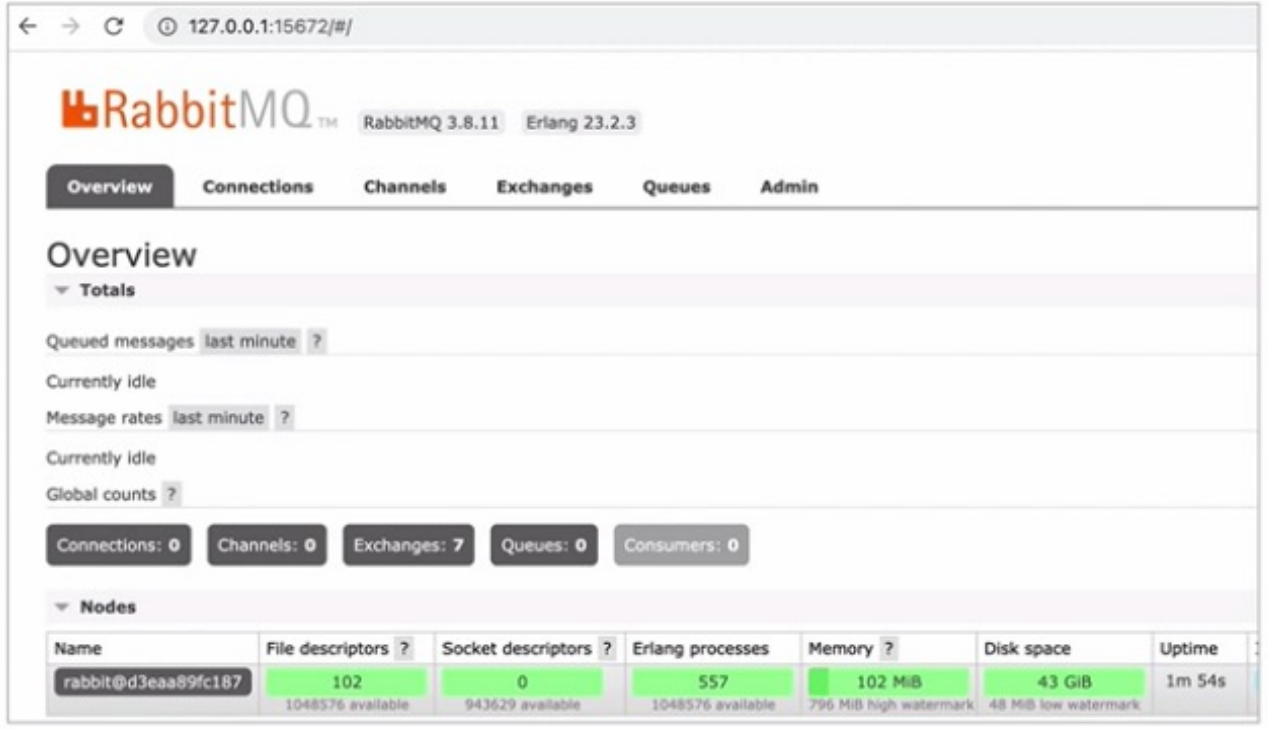
Create Bridge Network



Run RabbitMQ

```
$ docker run -d --name rabbitmq --network ecommerce-network \
        -p 15672:15672 -p 5672:5672 -p 15671:15671 -p 5671:5671 -p 4369:4369 \
        -e RABBITMQ_DEFAULT_USER=guest \
        -e RABBITMQ_DEFAULT_PASS=guest rabbitmq:management
```

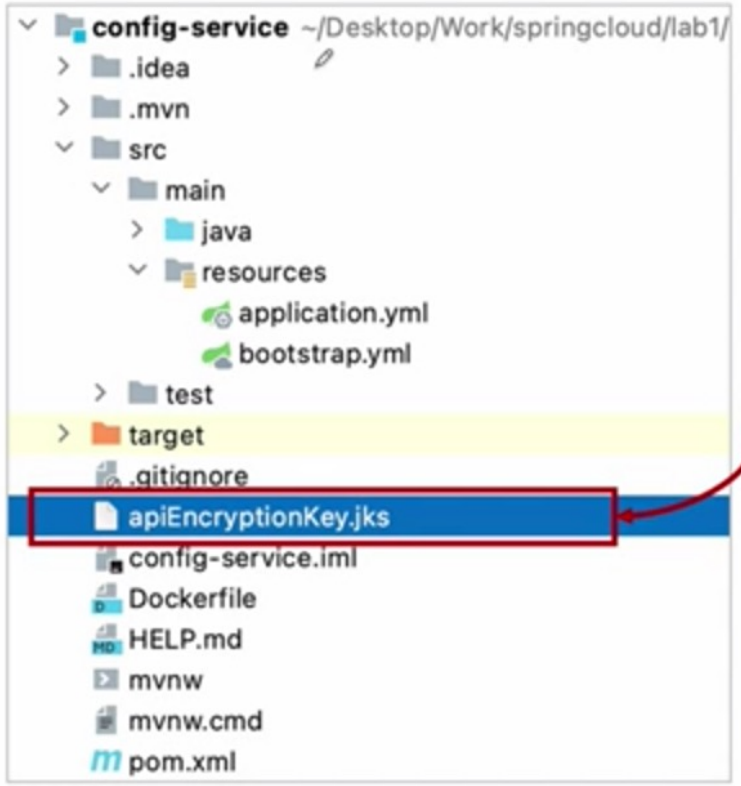
```
Starting RabbitMQ 3.8.11 on Erlang 23.2.3
Copyright (c) 2007-2020 VMware, Inc. or its affiliates.
Licensed under the MPL 2.0. Website: https://rabbitmq.com

 ##  ##      RabbitMQ 3.8.11
 ##  ##
 ##########  Copyright (c) 2007-2020 VMware, Inc. or its affiliates.
 ######  ##
 ##########  Licensed under the MPL 2.0. Website: https://rabbitmq.com

 Doc guides: https://rabbitmq.com/documentation.html
 Support:    https://rabbitmq.com/contact.html
 Tutorials:  https://rabbitmq.com/getstarted.html
 Monitoring: https://rabbitmq.com/monitoring.html
```



Create Config Server Docker Image

```
FROM openjdk:17-ea-11-jdk-slim
VOLUME /tmp
COPY apiEncryptionKey.jks apiEncryptionKey.jks
COPY target/config-service-1.0.jar ConfigService.jar
ENTRYPOINT ["java", "-jar", "ConfigService.jar"]
```

```
<groupId>com.example</groupId>
<artifactId>config-service</artifactId>
<!--    <version>0.0.1-SNAPSHOT</version>-->
<version>1.0</version>
<name>config-service</name>
```



- ***copy to docker container***

Create Config Server Docker Image

```
encrypt:
#  key: abcdefghijklmnopqrstuvwxyz0123456789
  key-store:
#    location: file://${user.home}/Desktop/Work/keystore/apiEncryptionKey.jks
    location: file:/apiEncryptionKey.jks
    password: test1234
    alias: apiEncryptionKey
```

- ***change the path***

$ mvn clean compile package –DskipTests=true

```
[INFO] --- maven-surefire-plugin:2.22.2:test (default-test) @ config-service ---
[INFO] Tests are skipped.
[INFO]
[INFO] --- maven-jar-plugin:3.2.0:jar (default-jar) @ config-service ---
[INFO] Building jar: /Users/dowonlee/Desktop/Work/springcloud/lab1/config-service/target/config-service-1.0.jar
[INFO]
[INFO] --- spring-boot-maven-plugin:2.4.2:repackage (repackage) @ config-service ---
[INFO] Replacing main artifact with repackaged archive
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  3.616 s
[INFO] Finished at: 2021-03-08T09:05:27+09:00
[INFO] ------------------------------------------------------------------------
```