链滴

SpringCloud Alibaba 微服务实战十五 - SpringCloud 容器化部署

作者：jianzh5

原文链接：https://ld246.com/article/1585219736834

来源网站：链滴

SpringCloud Alibaba系列文章已经写了16篇了，基本框架大体完成，业务相关的逻辑还需要根据项本身的业务进行梳理改造。

今天将是本系列的最后一篇 - SpringCloud容器化部署（理论上最后一篇，不排除后面会对相关组件行升级）

看在写了这么多的份上是不是应该点个**在看**呢?

开启Docker远程访问

由于我是在windows上进行开发没有安装docker，所以需要找一台安装好docker的服务器并开启远访问。使用mac的同学请忽略。

- 打开docker配置文件

vi /lib/systemd/system/docker.service

- 开放2376端口

找到ExecStart=/usr/bin/dockerd所在行，在后面追加-H tcp://0.0.0.0:2376 -H unix:///var/run/docker.sock，修改完成的效果如下：

```
ExecStart=/usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock -H tcp://0.0.0.0:2376 -H unix:///var/run/docker.sock
```

- 重启docker服务

```
systemctl daemon-reload
systemctl restart docker.service
```

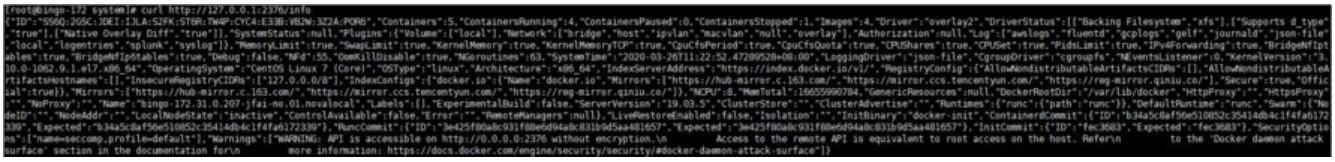
- 使用netstat查看端口

netstat -nptl

```
[root@bingo-172 system]# netstat -nptl
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 127.0.0.1:25            0.0.0.0:*               LISTEN      1619/master
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      1686/sshd
tcp6       0      0 ::1:25                  :::*                    LISTEN      1619/master
tcp6       0      0 :::9600                 :::*                    LISTEN      21620/docker-proxy
tcp6       0      0 :::5601                 :::*                    LISTEN      21592/docker-proxy
tcp6       0      0 :::2376                 :::*                    LISTEN      21415/dockerd
tcp6       0      0 :::9100                 :::*                    LISTEN      21683/docker-proxy
tcp6       0      0 :::9200                 :::*                    LISTEN      21578/docker-proxy
tcp6       0      0 :::5044                 :::*                    LISTEN      21637/docker-proxy
tcp6       0      0 :::9300                 :::*                    LISTEN      21566/docker-proxy
tcp6       0      0 :::22                   :::*                    LISTEN      1686/sshd
```

- 访问/info，确定端口正常开放

curl http://127.0.0.1:2376/info



docker-maven-plugin 构建 docker镜像

在开始打包之前一定要先在bom和common模块执行mvn clean install 命令，否则打包不成功。

看过本系列文章的人一定也知道docker 和 docker-compose的相关指令了，这里就不再说明。

- 在需要构建组件的模块引入docker-maven-plugin插件

```
<plugin>
    <groupId>com.spotify</groupId>
    <artifactId>docker-maven-plugin</artifactId>
    <version>1.2.2</version>
    <configuration>
        <imageName>${project.artifactId}</imageName>
        <imageTags>
            <imageTag>latest</imageTag>
        </imageTags>
        <!--指定Dockerfile路径-->
        <dockerDirectory>${project.basedir}/src/main/docker</dockerDirectory>
        <dockerHost>http://xxx.xx.xx.xx:2376</dockerHost>
        <resources>
            <resource>
                <targetPath>/</targetPath>
                <!--${project.basedir}/target-->
                <directory>${project.build.directory}</directory>
                <!--${project.artifactId}-${project.version}-->
                <include>${project.build.finalName}.jar</include>
            </resource>
        </resources>
    </configuration>
</plugin>
```

这里端口与前面开放的端口保持一致。

- 在模块的 src/main/docker 目录下建立Dockerfile文件

```
FROM openjdk:8-jdk-alpine
VOLUME /tmp
ADD cloud-gateway-1.0.0.jar app.jar
RUN sh -c 'touch /app.jar'
ENTRYPOINT ["java","-Djava.security.egd=file:/dev/./urandom","-jar","/app.jar"]
```

每个模块需要自行修改 ADD 指令

- 在模块下执行如下命令构建docker镜像

```
mvn clean package docker:build -DskipTests
```

执行效果如下：

```
[INFO] Building image auth-service
Step 1/5 : FROM openjdk:8-jdk-alpine

Pulling from library/openjdk
e7c96db7181b: Pulling fs layer
f910a506b6cb: Pulling fs layer
c2274a1a0e27: Pulling fs layer
f910a506b6cb: Downloading [==================================================>]     238B/238B
f910a506b6cb: Verifying Checksum
f910a506b6cb: Download complete
e7c96db7181b: Downloading [>                                                  ]  32.63kB/2.757MB
e7c96db7181b: Downloading [=========>                                        ]  534.2kB/2.757MB
e7c96db7181b: Downloading [==========>                                       ]  566.1kB/2.757MB
e7c96db7181b: Downloading [==========>                                       ]  600.8kB/2.757MB
e7c96db7181b: Downloading [============>                                     ]  705.1kB/2.757MB
e7c96db7181b: Downloading [=============>                                    ]  736.9kB/2.757MB
c2274a1a0e27: Downloading [>                                                  ]  528.5kB/70.73MB
e7c96db7181b: Downloading [=============>                                    ]  768.8kB/2.757MB
e7c96db7181b: Downloading [================>                                 ]  835.4kB/2.757MB
e7c96db7181b: Downloading [================>                                 ]  865.8kB/2.757MB
e7c96db7181b: Downloading [==================>                               ]    957kB/2.757MB
e7c96db7181b: Downloading [==================>                               ]  987.4kB/2.757MB
e7c96db7181b: Downloading [====================>                             ]   1.09MB/2.757MB
e7c96db7181b: Downloading [=====================>                            ]  1.119MB/2.757MB
```

- 构建完成后登陆服务器查看docker 镜像

```
docker images
```

```
[root@bingo-172 ~]# docker images
REPOSITORY                  TAG                 IMAGE ID            CREATED             SIZE
cloud-gateway               latest              8f1cca46eddf        31 seconds ago      221MB
account-service             latest              36b9c0f967e2        3 minutes ago       245MB
auth-service                latest              c2ee694ae3aa        4 hours ago         159MB
```

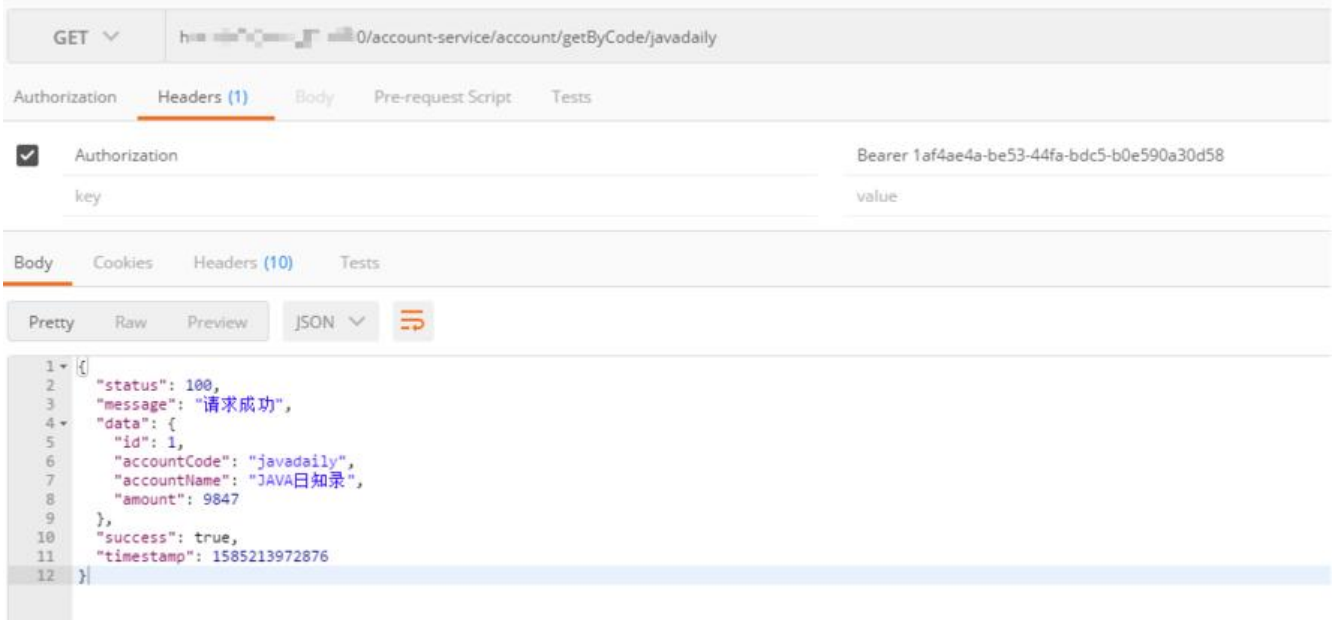
- 启动镜像，带上 --rm 指令便于删除容器。

```
docker run -d -p 5000:5000  --rm auth-service
docker run -d -p 8010:8010  --rm account-service
docker run -d -p 8090:8090  --rm cloud-gateway
```

- 查看是否正常启动

```
[root@bingo-172 ~]# docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS                              NAMES
6b3d9e795444        cloud-gateway       "java -Djava.securit…"   2 seconds ago       Up 2 seconds        0.0.0.0:8090->8090/tcp             cocky_elion
02be2efb4f64        account-service     "java -Djava.securit…"   33 seconds ago      Up 33 seconds       0.0.0.0:8010->8010/tcp             romantic_babbage
c1ddcc2c5b67        auth-service        "java -Djava.securit…"   About a minute ago  Up About a minute   0.0.0.0:5000->5000/tcp             keen_noether
```

- 使用postman进行测试



服务正常响应!

使用docker-compose启动

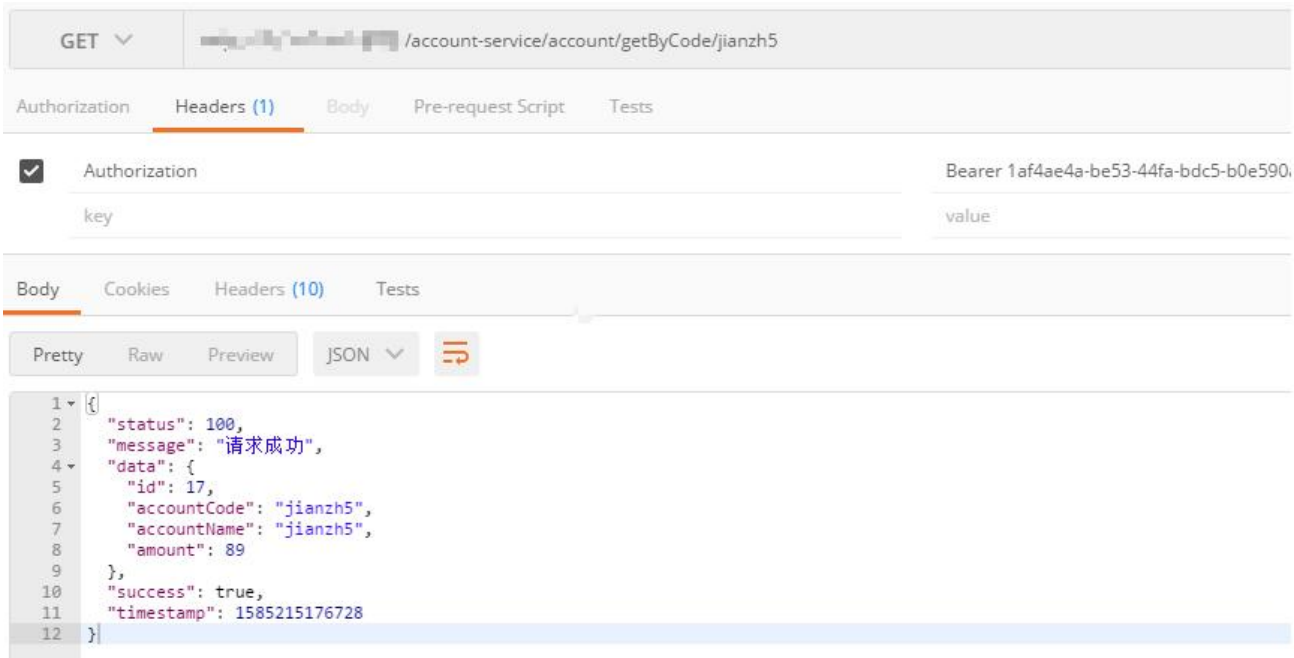
- 建立 cloud-service.yml 文件，编写服务编排镜像

```
version: "3"
services:
  auth-service:
    container_name: auth-service
    image: auth-service:latest
    ports:
      - "5000:5000"
    restart: always

  cloud-gateway:
    container_name: cloud-gateway
    image: cloud-gateway:latest
    ports:
      - "8090:8090"
    restart: always

  account-service:
    container_name: account-service
    image: account-service:latest
    ports:
      - "8010:8010"
    restart: always
```

- 将文件上传至服务器，使用如下脚本启动

```
docker-compose -f cloud-service up
```

- 使用postman进行测试



服务正常响应!

SpringCloud的容器化部署还是比较简单的，你也来试试好了!