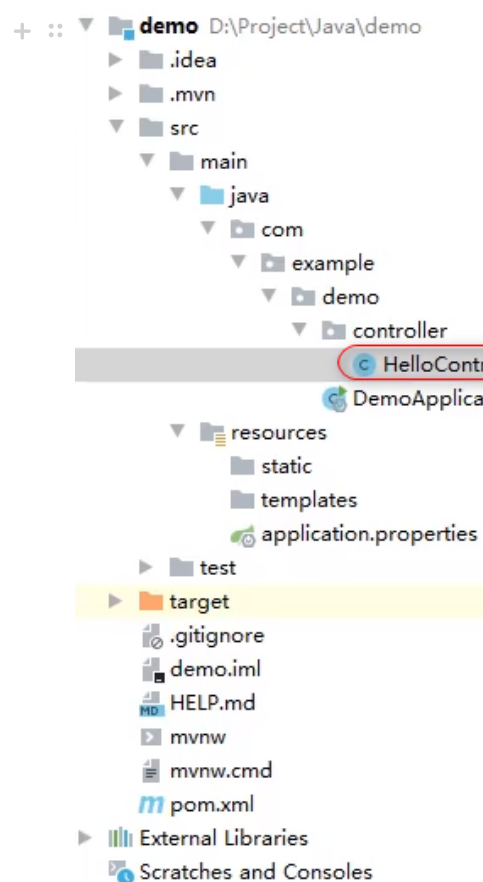


24、Docker Compose实战

1、大纲步骤

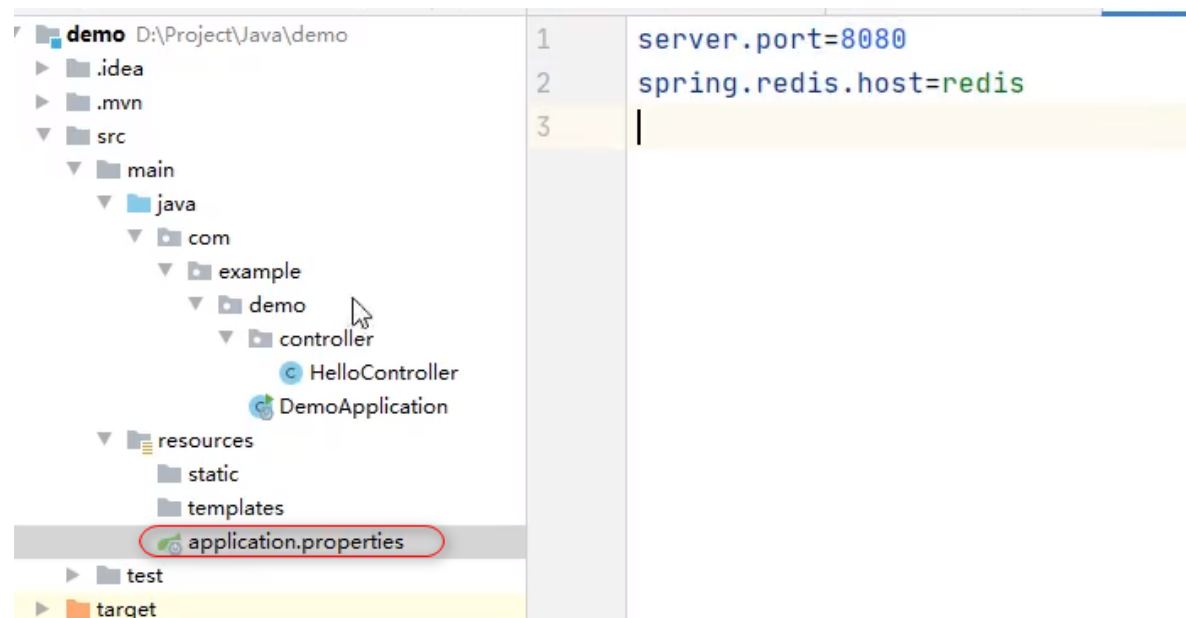
- 1、编写项目微服务
- 2、dockerfile 构建镜像
- 3、docker-compose.yaml 编排项目
- 4、丢到服务器 docker-compose up

2、代码

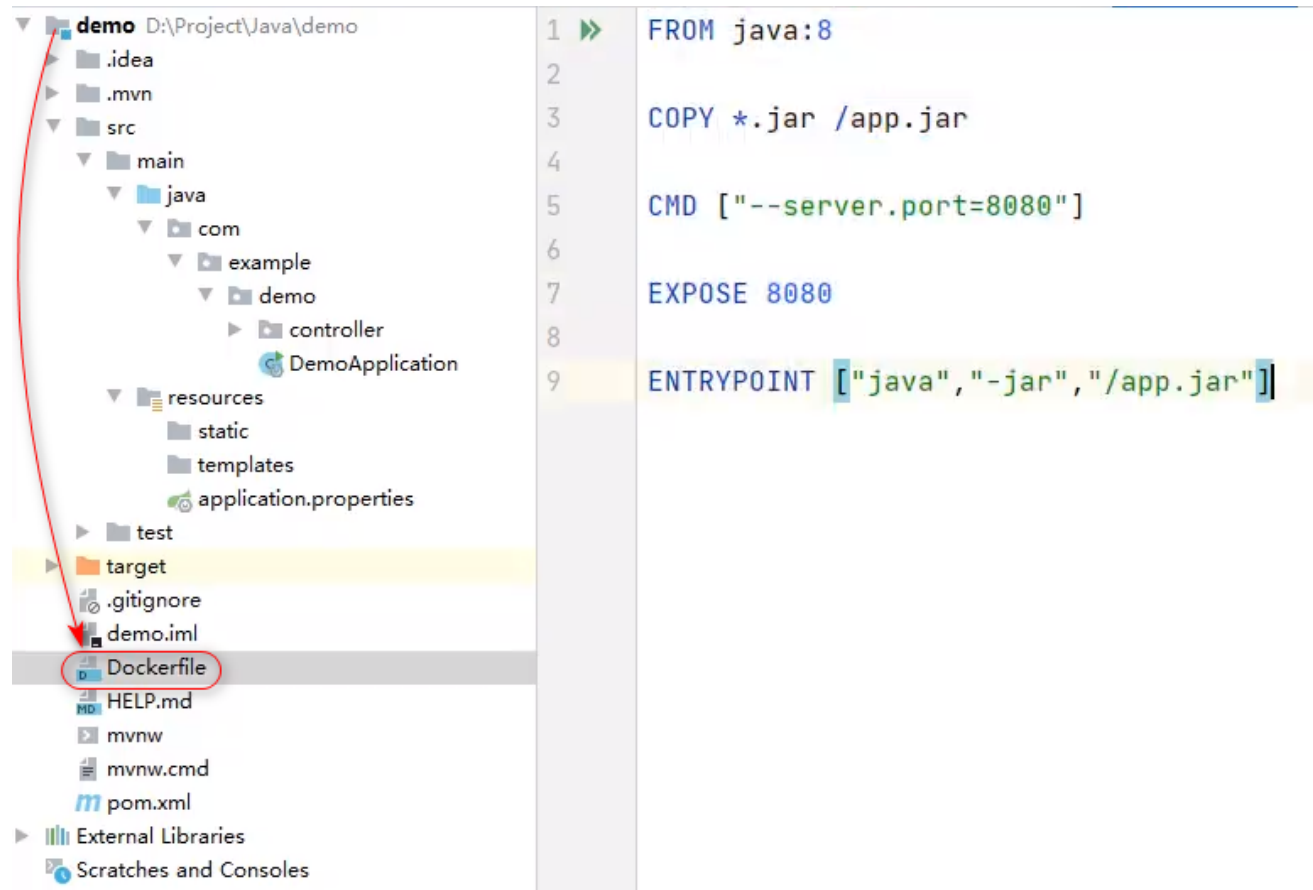


```
1 package com.example.demo.controller;
2
3 import org.springframework.beans.factory.annotation.Autowired;
4 import org.springframework.data.redis.core.StringRedisTemplate;
5 import org.springframework.web.bind.annotation.GetMapping;
6 import org.springframework.web.bind.annotation.RestController;
7
8 @RestController
9 public class HelloController {
10
11     @Autowired
12     StringRedisTemplate redisTemplate;
13
14     @GetMapping("/hello")
15     public String hello(){
16         Long views = redisTemplate.opsForValue().increment(k: "views");
17         return "hello,kuangshen,thank you, views:"+views;
18     }
19
20
```

3、application.properties



3、Dockerfile文件



The screenshot shows an IDE with a project structure on the left and a Dockerfile on the right. The project structure is for a Java project named 'demo' located at 'D:\Project\Java\demo'. It includes folders for '.idea', '.mvn', 'src' (with 'main' and 'test' subfolders), 'resources' (with 'static', 'templates', and 'application.properties'), and 'target'. A red arrow points from the 'demo' folder in the project structure to the 'demo' folder in the Dockerfile. The Dockerfile contains the following instructions:

```
1 FROM java:8
2
3 COPY *.jar /app.jar
4
5 CMD ["--server.port=8080"]
6
7 EXPOSE 8080
8
9 ENTRYPOINT ["java", "-jar", "/app.jar"]
```

4、docker-compose.yml文件


```
<plugin>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-maven-plugin</artifactId>
  <executions>
    <execution>
      <goals>
        <goal>repackage</goal>
      </goals>
    </execution>
  </executions>
</plugin>
```

6、将打好的jar包，Dockerfile文件，docker-compose.yml通过ftp都上传到linux的/home/kuangapp目录下



名称	大小	类型	修改时间
..			
demo-0.0.1-SNAPS...	4KB	Executabl...	2020/7/24 星期五, ;
docker-compose.yml	183 Bytes	YML 文件	2020/7/24 星期五, ;
Dockerfile	120 Bytes	文件	2020/7/24 星期五, ;

7、通过docker-compose up命令，可以一键构建运行镜像，创建出容器

- docker-compose up -d --build #重新构建镜像，运行镜像，创建出容器（后端启动）

```
[root@kuangshen kuangapp]# ll
total 19464
-rw-r--r-- 1 root root 19922944 Jul 24 21:56 demo-0.0.1-SNAPSHOT.jar
-rw-r--r-- 1 root root      183 Jul 24 21:49 docker-compose.yml
-rw-r--r-- 1 root root      120 Jul 24 21:49 Dockerfile
[root@kuangshen kuangapp]# docker-compose up --build
Building kuangapp
Step 1/5 : FROM java:8
---> d23bdf5b1b1b
Step 2/5 : COPY *.jar /app.jar
---> eb43472fb33b
Step 3/5 : CMD ["--server.port=8080"]
---> Running in 5b97f329d577
```

8、测试访问

```
[root@kuangshen ~]# curl localhost:8080
{"timestamp":"2020-07-24T13:58:27.302+0000","status":404,"error":"Not Found","message":"No message available","path":"/"}[root@kuangshen ~]# curl localhost:8080/hello
hello,kuangshen,thank you, views:1[root@kuangshen ~]# curl localhost:8080/hello
hello,kuangshen,thank you, views:2[root@kuangshen ~]# curl localhost:8080/hello
hello,kuangshen,thank you, views:3[root@kuangshen ~]# docker-compose --help

Commands:
  build           Build or rebuild services
  config          Validate and view the Compose file
  create          Create services
  down            Stop and remove containers, networks, images, and volumes
  events          Receive real time events from containers
  exec            Execute a command in a running container
  help            Get help on a command
  images          List images
  kill            Kill containers
  logs            View output from containers
  pause           Pause services
  port            Print the public port for a port binding
  ps              List containers
  pull            Pull service images
  push            Push service images
  restart         Restart services
  rm              Remove stopped containers
  run             Run a one-off command
  scale           Set number of containers for a service
  start           Start services
  stop            Stop services
  top             Display the running processes
  unpause         Unpause services
  up              Create and start containers
  version         Show the Docker-Compose version information

[root@kuangshen ~]#
```

未来项目只要有 docker-compose 文件。按照这个规则，启动编排容器。!

公司：docker-compose。直接启动。

网上开源项目：docker-compose 一键搞定。

10、自己项目的实战

```
[lizinan@iz2ze7g9h65aj7fw098uctz coral]$ pwd
/docker/coral
[lizinan@iz2ze7g9h65aj7fw098uctz coral]$ ll
total 32
drwxr-xr-x 5 lizinan dev 4096 Dec 13 11:29 coral-bms-parent
drwxr-xr-x 4 lizinan dev 4096 Feb 26 15:38 coral-ccts-parent
drwxr-xr-x 7 lizinan dev 4096 Feb 24 19:50 coral-nct-parent
-rw-r--r-- 1 lizinan dev 4800 Mar 11 15:21 docker-compose.yml
-rw-r--r-- 1 lizinan dev 482 Nov 17 10:51 README.md
drwxr-xr-x 8 lizinan dev 4096 Mar 10 09:57 scm-express
drwxr-xr-x 8 lizinan dev 4096 Feb 17 12:49 sp-parent
[lizinan@iz2ze7g9h65aj7fw098uctz coral]$
```



docker-compose.yml

5 KB

再切换到/docker/coral/coral-nct-parent工程目录下

```
[lizinan@iz2ze7g9h65aj7fw098uctz coral]$ cd coral-nct-parent/
[lizinan@iz2ze7g9h65aj7fw098uctz coral-nct-parent]$ ll
total 32
drwxr-xr-x 4 lizinan dev 4096 Mar 11 17:38 blade-gateway
drwxr-xr-x 4 lizinan dev 4096 Mar 11 17:38 nct-common
drwxr-xr-x 5 lizinan dev 4096 Mar 2 13:10 nct-service
drwxr-xr-x 4 lizinan dev 4096 Feb 24 15:47 nct-service-api
-rw-r--r-- 1 lizinan dev 8776 Feb 24 17:50 pom.xml
-rw-r--r-- 1 lizinan dev 769 Feb 24 15:47 README.md
[lizinan@iz2ze7g9h65aj7fw098uctz coral-nct-parent]$
```

- 执行如下命令



```
git pull
```

```
mvn clean install dockerfile:build dockerfile:tag dockerfile:push -Dmaven.test.skip=true
```

- 再切换到使用/docker/coral目录下，因为所有工程都在此目录下，使用docker-compose进行运行所有需要的镜像


```
[lizinan@iz2ze7g9h65aj7fw098uctz coral]$ ll
total 32
drwxr-xr-x 5 lizinan dev 4096 Dec 13 11:29 coral-bms-parent
drwxr-xr-x 4 lizinan dev 4096 Feb 26 15:38 coral-ccts-parent
drwxr-xr-x 7 lizinan dev 4096 Feb 24 19:50 coral-nct-parent
-rw-r--r-- 1 lizinan dev 4800 Mar 11 15:21 docker-compose.yml
-rw-r--r-- 1 lizinan dev 482 Nov 17 10:51 README.md
drwxr-xr-x 8 lizinan dev 4096 Mar 10 09:57 scm-express
drwxr-xr-x 8 lizinan dev 4096 Feb 17 12:49 sp-parent
[lizinan@iz2ze7g9h65aj7fw098uctz coral]$
```

┌
docker-compose up -d #构建、运行所有镜像
docker-compose up -d nct-wlhy #构建、运行某个nct-wlhy镜像
docker-compose up -d --build nct-wlhy #重新构建、运行nct-wlhy镜像
docker logs -f --tail 10 nct-wlhy-01 #查看运行中的nct-wlhy-01容器
└

