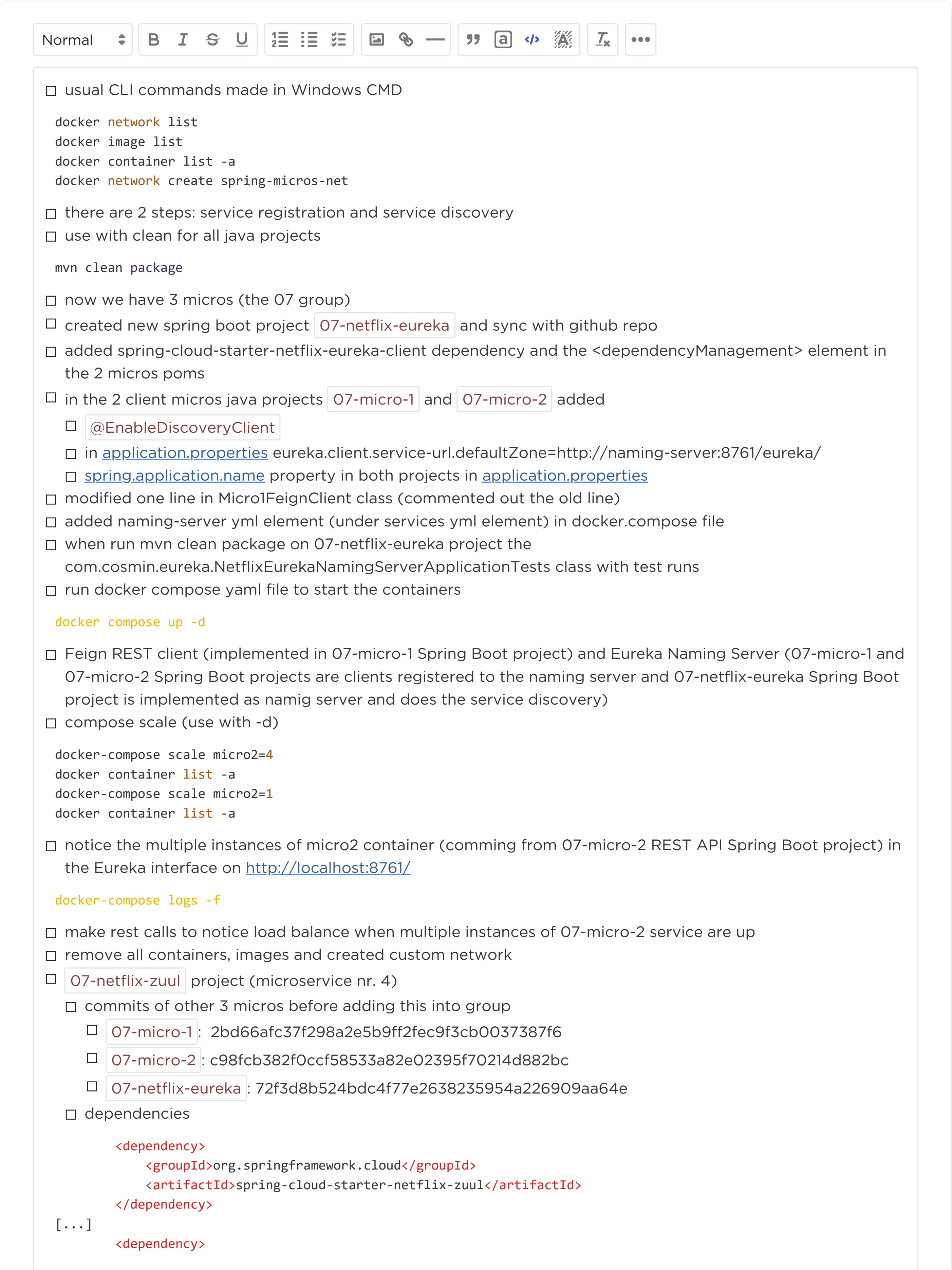
Docker Udemy



- □ usual CLI commands made in Windows CMD

```
docker network list
docker image list
docker container list -a
docker network create spring-micros-net
```

- □ there are 2 steps: service registration and service discovery
- □ use with clean for all java projects

```
mvn clean package
```

- □ now we have 3 micros (the 07 group)
- □ created new spring boot project `07-netflix-eureka` and sync with github repo
- □ added spring-cloud-starter-netflix-eureka-client dependency and the <dependencyManagement> element in the 2 micros poms
- □ in the 2 client micros java projects `07-micro-1` and `07-micro-2` added
  - □ `@EnableDiscoveryClient`
  - □ in application.properties eureka.client.service-url.defaultZone=http://naming-server:8761/eureka/
  - □ spring.application.name property in both projects in application.properties
- □ modified one line in Micro1FeignClient class (commented out the old line)
- □ added naming-server yml element (under services yml element) in docker.compose file
- □ when run mvn clean package on 07-netflix-eureka project the com.cosmin.eureka.NetflixEurekaNamingServerApplicationTests class with test runs
- □ run docker compose yaml file to start the containers

```
docker compose up -d
```

- □ Feign REST client (implemented in 07-micro-1 Spring Boot project) and Eureka Naming Server (07-micro-1 and 07-micro-2 Spring Boot projects are clients registered to the naming server and 07-netflix-eureka Spring Boot project is implemented as namig server and does the service discovery)
- □ compose scale (use with -d)

```
docker-compose scale micro2=4
docker container list -a
docker-compose scale micro2=1
docker container list -a
```

- □ notice the multiple instances of micro2 container (comming from 07-micro-2 REST API Spring Boot project) in the Eureka interface on http://localhost:8761/

```
docker-compose logs -f
```

- □ make rest calls to notice load balance when multiple instances of 07-micro-2 service are up
- □ remove all containers, images and created custom network
- □ `07-netflix-zuul` project (microservice nr. 4)
  - □ commits of other 3 micros before adding this into group
    - □ `07-micro-1`: 2bd66afc37f298a2e5b9ff2fec9f3cb0037387f6
    - □ `07-micro-2`: c98fcb382f0ccf58533a82e02395f70214d882bc
    - □ `07-netflix-eureka`: 72f3d8b524bdc4f77e2638235954a226909aa64e
  - □ dependencies

```
        <dependency>
            <groupId>org.springframework.cloud</groupId>
            <artifactId>spring-cloud-starter-netflix-zuul</artifactId>
        </dependency>
[...]
        <dependency>
```

```
            <groupId>org.springframework.cloud</groupId>
            <artifactId>spring-cloud-starter-netflix-eureka-client</artifactId>
        </dependency>
```

- □ anotations

```
@EnableZuulProxy
@EnableDiscoveryClient
```

- □ container will sit between REST client and REST API
- □ in application.properties declares
  - □ the app name

```
spring.application.name=netflix-zuul-api-gateway-server
```

  - □ url of the eureka naming server microservice

```
eureka.client.service-url.defaultZone=http://naming-server:8761/eureka/
```

- □ Added microservice 4 in docker compose file
- □ git sync

□ see logs of all 4 microservices in one window

```
docker-compose logs -f
```

□ commits of other the 4 micros for this status

- □ `07-micro-1` : 567917fade01fea5d738b6df7ad9ab3faac4b86f
- □ `07-micro-2` : ad3ed17f6b6a7000d393e3d251f246a465dd8fc1
- □ `07-netflix-eureka` : 72f3d8b524bdc4f77e2638235954a226909aa64e
- □ `07-netflix-zuul` : 25c630d4e3cdfc2e8d30f5829b9e20f6aa870bec

□ Using rabbitmq:**latest** (set in the docker compose file) image version or tag instead of rabbitmq:3.5.3

□ reproduce

- □ start all 6 containers (id, image used, container name)

```
6b948303e74e   cosdin/07-micro-1:0.0.1-SNAPSHOT                       07-micro-1_micro1_1
8b81a261930f   cosdin/07-micro-2:0.0.1-SNAPSHOT                       07-micro-1_micro2_1
661cc05af456   cosdin/netflix-zuul-api-gateway-server:0.0.1-SNAPSHOT  07-micro-1_zuul-api-gateway_1
1f425751fbbf   openzipkin/zipkin                                      zipkin
2b3f80bb2448   cosdin/netflix-eureka-naming-server:0.0.1-SNAPSHOT     07-micro-1_naming-server_1
bdccf9d3661d   rabbitmq:latest                                        07-micro-1_rabbitmq_1
```

- □ check eureka page http://localhost:8761/ it should have 3 services registered: 07-MICRO-1, 07-MICRO-2, NETFLIX-ZUUL-API-GATEWAY-SERVER
- □ test with postman