Microservices Deployment

## Build Jar files for each spring boot application

We need to change the application configuration file as per our requirements. Server port, Eureka and MySQL configuration details should be updated before building jars.

Execute following command for building jar:

Go to maven project directory on command prompt and execute below command:

|  |
| --- |
| mvn clean install |

Jar file is created in *target* directory.

## Create Dockerfile

Once jar files are created we need to create *Dockerfile* for the same.

|  |
| --- |
| FROM openjdk:8-jdk-alpine  WORKDIR /  ADD ms-turbine-service-0.0.1-SNAPSHOT.jar app.jar  EXPOSE 8089  CMD ["java","-jar","app.jar"] |

Change the jar file name with your jar file name on 3rd line and save the file.

## Build Image

Execute below command for creating image for the *Dockerfile*.

|  |
| --- |
| sudo docker build -t eureka-server . |

Change file name of image as per requirement.

## Run Container

Execute below command for starting the container.

|  |
| --- |
| sudo docker run --net=host -d -p 8084:8084 turbine-services |

First port number represents Host port no and Second port number represents Docker port number.

***--net=host*** is used for binding container to host network directly.

## Note:

* Order of Execution of containers: Mysql -> Eureka -> Zuul -> User -> Order -> Item -> Turbine(Optional)
* Basic Authentication Credentials for API:

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* Swagger API Documentation URL:

User API: <http://localhost:7071/swagger-ui.html>

Order API: <http://localhost:7072/swagger-ui.html>

Item API: <http://localhost:7073/swagger-ui.html>

## Current URL Configurations:

|  |  |  |
| --- | --- | --- |
| Service Name | URL | Zuul-Router |
| Eureka Server | <http://localhost:9091> |  |
| Zuul Service | <http://localhost:8084> |  |
| User Service | <http://localhost:7071/users> | <http://localhost:8084/users/users> |
| Order Service | <http://localhost:7072/orders> | <http://localhost:8084/orders/orders> |
| Item Service | <http://localhost:7073/items> | <http://localhost:8084/items/items> |
| Turbine Service | <http://localhost:8089/hystrix> |  |

## Docker Executed Commands:

* MySQL Service – It should have *Dockerfile* and *sql* file

|  |
| --- |
| cd mysql-dockerfile-directory  sudo docker build -t mysql-service .  sudo docker run --net=host -d -p 3306:3306 mysql-service |

* Eureka Server – It should have *Dockerfile* and Jar file

|  |
| --- |
| cd eureka-dockerfile-directory  sudo docker build -t eureka-server .  sudo docker run --net=host -d -p 9091:9091 eureka-server |

* Zuul Service – It should have *Dockerfile* and *Jar* file

|  |
| --- |
| cd zuul-dockerfile-directory  sudo docker build -t zuul-service .  sudo docker run --net=host -d -p 8084:8084 zuul-service |

* User Service – It should have *Dockerfile* and *Jar* file

|  |
| --- |
| cd user-dockerfile-directory  sudo docker build -t user-service .  sudo docker run --net=host -d -p 7071:7071 user-service |

* Order Service – It should have *Dockerfile* and *Jar* file

|  |
| --- |
| cd order-dockerfile-directory  sudo docker build -t order-service .  sudo docker run --net=host -d -p 7072:7072 order-service |

* Item Service – It should have *Dockerfile* and *Jar* file

|  |
| --- |
| cd item-dockerfile-directory  sudo docker build -t item-service .  sudo docker run --net=host -d -p 7073:7073 item-service |

* Turbine Service – It should have *Dockerfile* and *Jar* file

|  |
| --- |
| cd turbine-dockerfile-directory  sudo docker build -t turbine-service .  sudo docker run --net=host -d -p 8089:8089 turbine-service |