**Create Eureka Discovery Server and register microservices**

**EurekaDiscoveryServerApplication.java:**

**package** com.cognizant.eureka\_discovery\_server;

**import** org.springframework.boot.SpringApplication;

**import** org.springframework.boot.autoconfigure.SpringBootApplication;

**import** org.springframework.cloud.netflix.eureka.server.EnableEurekaServer;

@SpringBootApplication

@EnableEurekaServer

**public class** EurekaDiscoveryServerApplication {

**public static void** main(String[] args) {

SpringApplication.run(EurekaDiscoveryServerApplication.class, args);

}

}

**application.properties:**

server.port=8761

eureka.client.register-with-eureka=false

eureka.client.fetch-registry=false

logging.level.com.netflix.eureka=OFF

logging.level.com.netflix.discovery=OFF

**pom.xml:**

<project xmlns="http://maven.apache.org/POM/4.0.0"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0

http://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<groupId>com.cognizant</groupId>

<artifactId>eureka-discovery-server</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>eureka-discovery-server</name>

<description>Eureka Discovery Server</description>

<packaging>jar</packaging>

<parent>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-parent</artifactId>

<version>3.2.4</version>

<relativePath/> <!-- lookup parent from repository -->

</parent>

<properties>

<java.version>21</java.version>

<spring-cloud.version>2023.0.1</spring-cloud.version>

</properties>

<dependencies>

<dependency>

<groupId>org.springframework.cloud</groupId>

<artifactId>spring-cloud-starter-netflix-eureka-server</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-actuator</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>test</scope>

</dependency>

</dependencies>

<dependencyManagement>

<dependencies>

<dependency>

<groupId>org.springframework.cloud</groupId>

<artifactId>spring-cloud-dependencies</artifactId>

<version>${spring-cloud.version}</version>

<type>pom</type>

<scope>import</scope>

</dependency>

</dependencies>

</dependencyManagement>

<build>

<plugins>

<plugin>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-maven-plugin</artifactId>

</plugin>

</plugins>

</build>

</project>

**AccountServiceApplication.java:**

**package** com.cognizant.account\_service;

**import** org.springframework.boot.SpringApplication;

**import** org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

**public** **class** AccountServiceApplication {

**public** **static** **void** main(String[] args) {

SpringApplication.*run*(AccountServiceApplication.**class**, args);

}

}

**AccountController.java:**

**package** com.cognizant.account\_service.controller;

**import** org.springframework.web.bind.annotation.GetMapping;

**import** org.springframework.web.bind.annotation.RestController;

**import** java.util.Map;

@RestController

**public** **class** AccountController {

@GetMapping("/account")

**public** Map<String, Object> getAccount() {

**return** Map.*of*(

"number", "ACC0012345",

"type", "savings",

"balance", 100000,

"branch", "Hyderabad"

);

}

}

**application.properties:**

spring.application.name=account-service

server.port=8001

eureka.client.service-url.defaultZone=http://localhost:8761/eureka

eureka.client.register-with-eureka=true

eureka.client.fetch-registry=true

**ApiGatewayApplication.java:**

**package** com.cognizant.apigateway;

**import** org.springframework.boot.SpringApplication;

**import** org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

**public class** ApiGatewayApplication {

**public static void** main(String[] args) {

SpringApplication.*run*(ApiGatewayApplication.class, args);

}

}

**LogFilter.java:**

**package** com.cognizant.apigateway;

**import** org.slf4j.Logger;

**import** org.slf4j.LoggerFactory;

**import** org.springframework.cloud.gateway.filter.GatewayFilterChain;

**import** org.springframework.cloud.gateway.filter.GlobalFilter;

**import** org.springframework.core.Ordered;

**import** org.springframework.stereotype.Component;

**import** org.springframework.web.server.ServerWebExchange;

**import** reactor.core.publisher.Mono;

@Component

**public** **class** LogFilter **implements** GlobalFilter, Ordered {

**private** **static** **final** Logger ***logger*** = LoggerFactory.*getLogger*(LogFilter.**class**);

@Override

**public** Mono<Void> filter(ServerWebExchange exchange, GatewayFilterChain chain) {

***logger***.info("Request received at path: {}", exchange.getRequest().getPath());

**return** chain.filter(exchange);

}

@Override

**public** **int** getOrder() {

**return** 0; // Highest priority

}

}

**application.properties:**

spring.application.name=api-gateway

server.port=9090

eureka.client.service-url.defaultZone=http://localhost:8761/eureka

eureka.instance.prefer-ip-address=true

spring.cloud.gateway.discovery.locator.enabled=true

spring.cloud.gateway.discovery.locator.lower-case-service-id=true

logging.level.org.springframework.cloud.gateway=INFO

**GreetServiceApplication.java:**

**package** com.cognizant.greet\_service;

**import** org.springframework.boot.SpringApplication;

**import** org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

**public** **class** GreetServiceApplication {

**public** **static** **void** main(String[] args) {

SpringApplication.*run*(GreetServiceApplication.**class**, args);

}

}

**GreetController.java:**

**package** com.cognizant.greet\_service.controller;

**import** org.springframework.web.bind.annotation.GetMapping;

**import** org.springframework.web.bind.annotation.RestController;

@RestController

**public** **class** GreetController {

@GetMapping("/greet")

**public** String greet() {

**return** "Hello World";

}

}

**application.properties:**

spring.application.name=greet-service

server.port=8081

eureka.client.service-url.defaultZone=http://localhost:8761/eureka

eureka.client.register-with-eureka=true

eureka.client.fetch-registry=true

**Output:**



