# Microservice



**Client**

know the ports of microservices because also registered as client of Service Registry

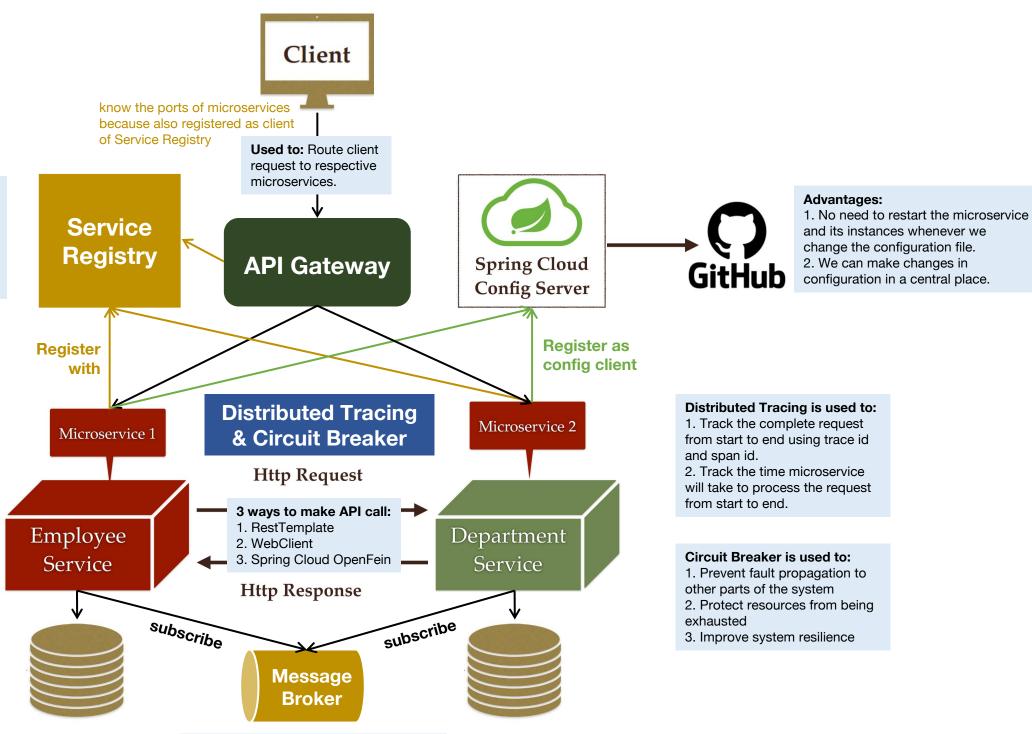**Used to:** Route client request to respective microservices.

**Implemented with:** Spring Cloud Netflix Eureka Server
**Used to:** Register information of all microservices and their instances, track the up and down status of these service instances, and load-balancing.

**Service Registry**

**API Gateway**

**Spring Cloud Config Server**

**GitHub**

**Advantages:**
1. No need to restart the microservice and its instances whenever we change the configuration file.
2. We can make changes in configuration in a central place.

**Register with**

**Register as config client**

Microservice 1

**Distributed Tracing & Circuit Breaker**

Microservice 2

**Distributed Tracing is used to:**
1. Track the complete request from start to end using trace id and span id.
2. Track the time microservice will take to process the request from start to end.

**Http Request**

Employee Service

**3 ways to make API call:**
1. RestTemplate
2. WebClient
3. Spring Cloud OpenFein

Department Service

**Http Response**

**Circuit Breaker is used to:**
1. Prevent fault propagation to other parts of the system
2. Protect resources from being exhausted
3. Improve system resilience

subscribe

subscribe

**Message Broker**

**Can be used to:** Broadcast configuration changes to respective microservices.

# kafka