

19 Spring Cloud初體驗





第十九單元大綱

- 19-1 服務治理Eureka Server配置與設定
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19-1

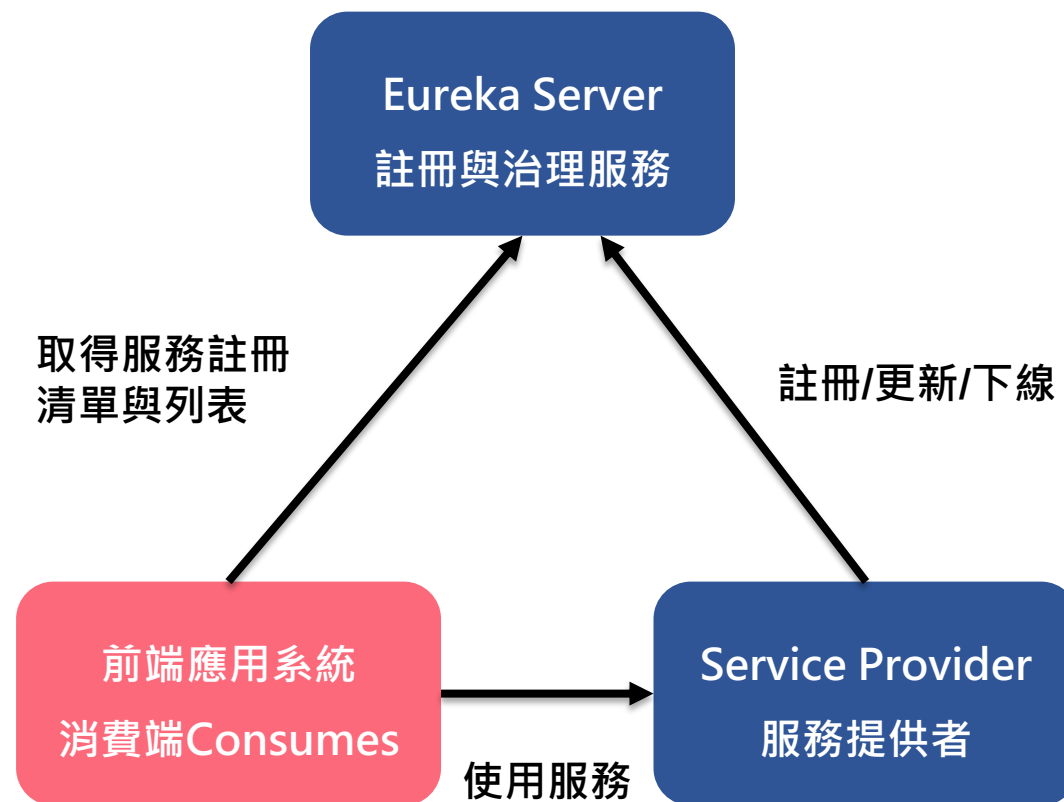
服務治理Eureka Server 配置與設定



當前端Consumes指向後端服務，前端消費端變多，後端服務為多個時，需要進行透過服務管理與註冊。

因應前端請求，取得註冊列表，進行服務呼喚設計

後端服務可以專注服務功能設計，註冊與治理交由另一個服務即可



Spring Cloud Eureka 為 Spring Cloud Netflix 微服務 package 的一部份子模組，是核心模塊之一

主要用來提供各個微服務的服務註冊(Register)以及服務探索(Discovery)

Eureka 主要組件

- Eureka Server 提供 Service 註冊服務
- Eureka Client：提供 Java Client，主要用來簡化與 Eureka Server 的互動。

```
> eureka-client-1.10.17.jar -  
> eureka-core-1.10.17.jar -
```

Dependency Hierarchy

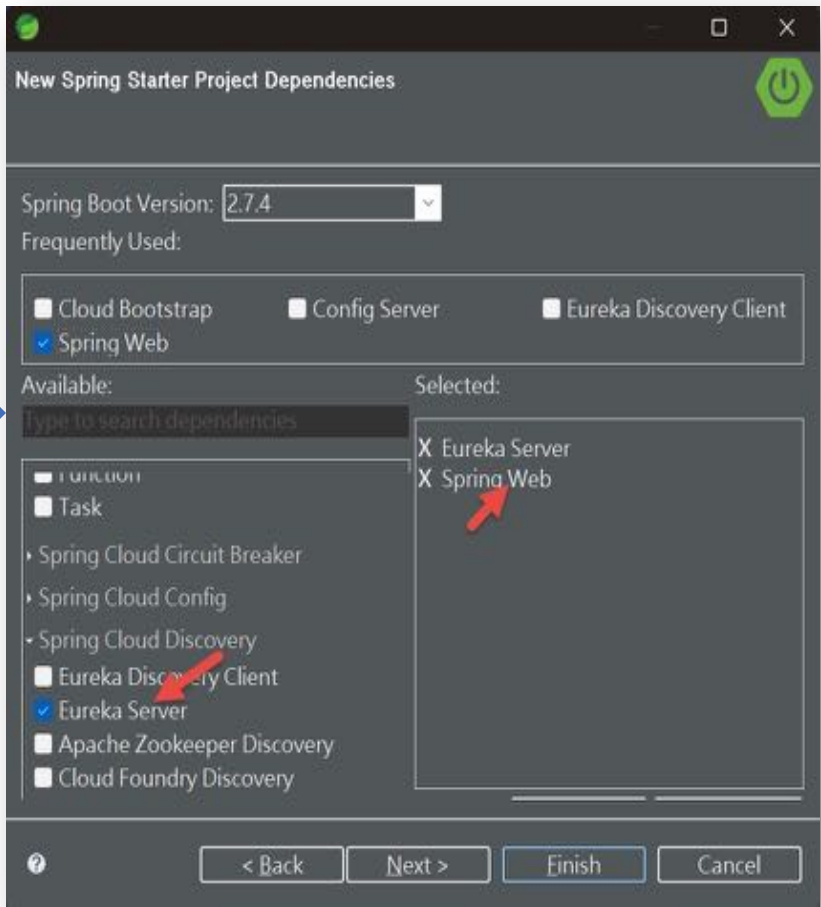
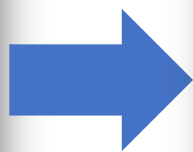
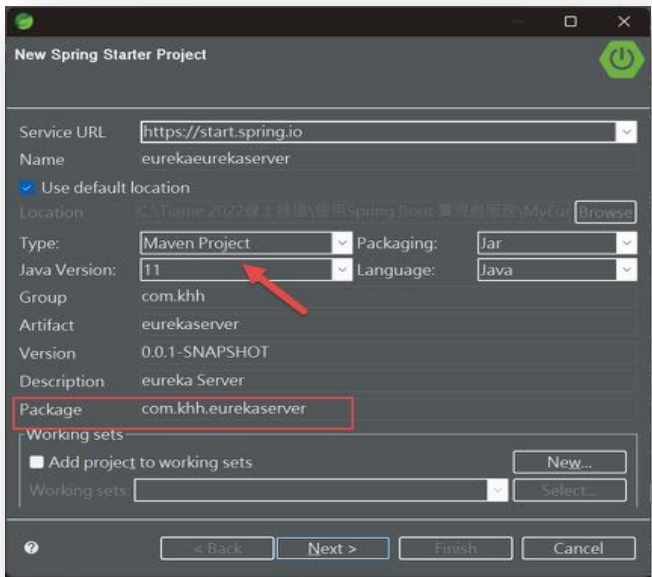
```
spring-cloud-starter-eureka-server : 1.4.7.RELEASE [compile]  
  spring-cloud-starter-netflix-eureka-server : 3.1.4 (managed from 1.4.7.RELEASE)
```

STS建立Spring Starter 專案

配置Spring Cloud Config

• Config Server

配置Spring Web



配置spring-cloud-starter-netflix-eureka-server

配置spring-boot-starter-web

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

Spring Boot Maven專案application.properties配置

配置server.port

- 配置Web(Eureka Server)應用系統port

eureka.instance.hostname=localhost

- 配置server主機名稱

eureka.client.register-with-eureka=false

- 一般狀態下Eureka主機無須註冊自己

eureka.client.fetch-registry=false

- 控制客戶端是否將嘗試連接到 Eureka 服務器以下載其他服務端點上的訊息

eureka.client.serviceUrl.defaultZone=http://\${eureka.instance.hostname}:\${server.port}/ericeureka



application.properties配置



```
server.port=1112
eureka.instance.hostname=localhost
eureka.client.register-with-eureka=false
eureka.client.fetch-registry=false
#Eureka Server name
eureka.client.serviceUrl.defaultZone=http://${eureka.instance.hostname}:${server.port}/e
```

#Eureka Server name

eureka.client.serviceUrl.defaultZone=http://\${eureka.instance.hostname}:\${server.port}/ericeureka

Boot 類別配置EnableEurekaServer

在專案Boot Class中配置@EnableEurekaServer

```
package com.khh.eurekaserver;

import org.springframework.boot.SpringApplication;

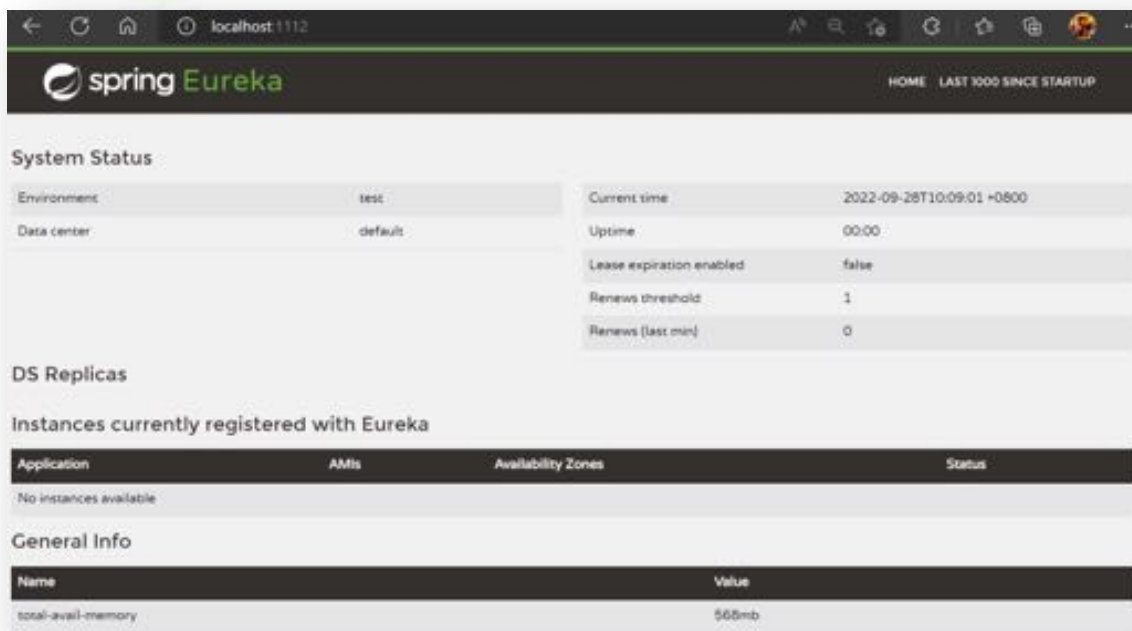
@SpringBootApplication
@EnableEurekaServer
public class EurekaEurekaServerApplication {

    public static void main(String[] args) {
        SpringApplication.run(EurekaEurekaServerApplication.class, args);
    }

}
```

```
c.k.e.EurekaEurekaServerApplication : Starting EurekaEurekaServerApplication using Java
c.k.e.EurekaEurekaServerApplication : No active profile set, falling back to 1 default
o.s.cloud.context.scope.GenericScope : BeanFactory id=5ef2ebd4-4c2a-3ced-8e25-2274e622e
o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 1112 (http)
o.apache.catalina.core.StandardService : Starting service [Tomcat]
org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.65]
```

```
o.s.c.n.e.s.EurekaServiceRegistry : Registering application UNKNOWN with eureka with
o.s.c.n.e.server.EurekaServerBootstrap : isAws returned false
o.s.c.n.e.server.EurekaServerBootstrap : Initialized server context
c.n.e.r.PeerAwareInstanceRegistryImpl : Got 1 instances from neighboring DS node
c.n.e.r.PeerAwareInstanceRegistryImpl : Renew threshold is: 1
c.n.e.r.PeerAwareInstanceRegistryImpl : Changing status to UP
e.s.EurekaServerInitializerConfiguration : Started Eureka Server
o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 1112 (http) with cont
.s.c.n.e.s.EurekaAutoServiceRegistration : Updating port to 1112
```



The screenshot shows the Spring Eureka Server web interface. The browser address bar indicates the URL is localhost:1112. The page has a dark header with the 'spring Eureka' logo and navigation links for 'HOME' and 'LAST 1000 SINCE STARTUP'. The main content area is divided into three sections: 'System Status', 'DS Replicas', and 'General Info'. 'System Status' displays a table with environment details like 'test' and 'default', and system metrics such as 'Current time', 'Uptime', and 'Lease expiration enabled'. 'DS Replicas' shows a table with columns for 'Application', 'AMIs', 'Availability Zones', and 'Status', currently displaying 'No instances available'. 'General Info' shows a table with 'Name' and 'Value' for 'total-avail-memory'.

System Status

Environment	test	Current time	2022-09-28T10:09:01 +0800
Data center	default	Uptime	00:00
		Lease expiration enabled	false
		Renews threshold	1
		Renews (last min)	0

DS Replicas

Instances currently registered with Eureka

Application	AMIs	Availability Zones	Status
No instances available			

General Info

Name	Value
total-avail-memory	568mb



This section provides a detailed view of the 'General Info' and 'Instance Info' from the previous screenshot. 'General Info' lists various system metrics including memory, CPU, and uptime. 'Instance Info' shows the specific IP address and status of the current Eureka server instance.

General Info

Name	Value
total-avail-memory	568mb
num-of-cpus	20
current-memory-usage	118mb (20%)
server-uptime	00:00
registered-replicas	
unavailable-replicas	
available-replicas	

Instance Info

Name	Value
ipAddr	192.168.0.100
status	UP



總結：19-1 服務治理Eureka Server配置與設定

將Spring Boot Web專案配置Spring Cloud Eureka Server環境，並且配置啟動EurekaServer組態。接下來我們看看前端API Provider如何註冊Eureka Server。

