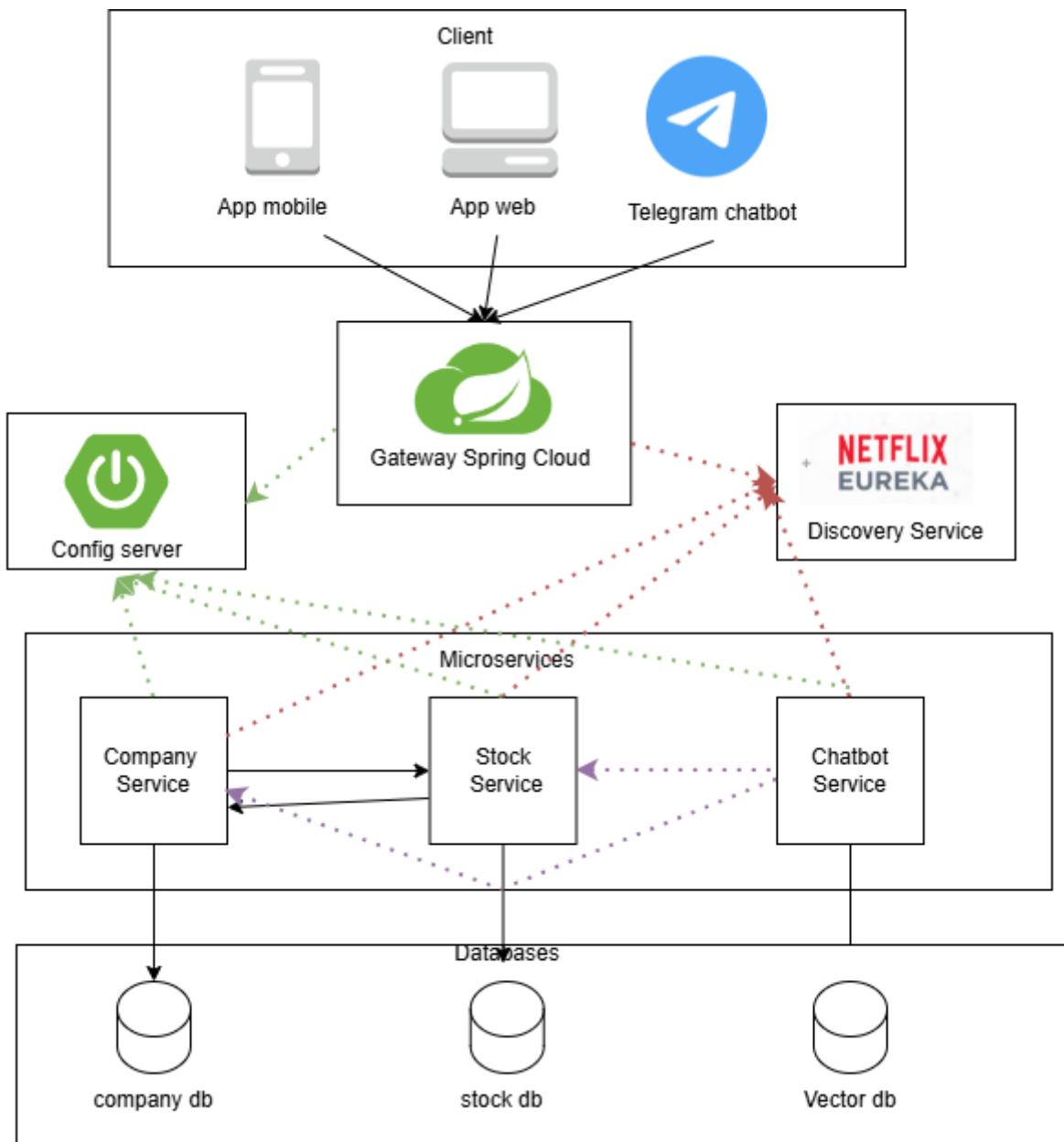

***Test ADRIA : Système Distribué de Gestion de Cotations
Boursières***

Fait par :

- Wissal lamouadene
- GLSID 3

1 . Architecture Technique du Projet

1.1 Vue d'Ensemble de l'Architecture :



1.2 Stack Technologique

- **Backend:** Spring Boot 3, Spring Cloud, Java 17

- **Frontend Web:** React 18/Angular 16, TypeScript
- **Mobile:** Flutter 3, Dart
- **Base de données:** PostgreSQL, Redis (cache)
- **Service Discovery:** Eureka Server
- **API Gateway:** Spring Cloud Gateway
- **Sécurité:** Keycloak, OAuth2, JWT
- **Communication:** OpenFeign, Resilience4J
- **IA:** LangChain, MCP Protocol
- **DevOps:** Docker, Jenkins, Kubernetes

1.3. Développement des Services Discovery et Gateway

a. Discovery Service :

Configuration principale:

```
@SpringBootApplication
@EnableEurekaServer
public class DiscoveryServiceApplication {
    public static void main(String[] args) {
        SpringApplication.run(DiscoveryServiceApplication.class, args);
    }
}
```

Fichier application.yml:

```
server:
  port: 8761

eureka:
  client:
    register-with-eureka: false
    fetch-registry: false
  server:
    enable-self-preservation: false
```

The screenshot shows the Spring Eureka dashboard with the following sections:

- System Status**: Displays environment (test), data center (default), current time (2025-11-17T11:35:36 +0100), uptime (01:33), lease expiration enabled (false), renew threshold (8), and renew last min (8).
- EMERGENCY! EUREKA MAY BE INCORRECTLY CLAIMING INSTANCES ARE UP WHEN THEY'RE NOT. RENEWALS ARE LESSER THAN THRESHOLD AND HENCE THE INSTANCES ARE NOT BEING EXPIRED JUST TO BE SAFE.**
- DS Replicas**: Instances currently registered with Eureka:

Application	AMs	Availability Zones	Status
COMPANY-SERVICE	n/a (1)	(1)	UP (1) - localhost:company-service:8083
CONFIG-SERVICE	n/a (1)	(1)	UP (1) - localhost:config-service:8088
GATEWAY	n/a (1)	(1)	UP (1) - Gateway:8090
STOCK-SERVICE	n/a (1)	(1)	UP (1) - localhost:stock-service:8084
- General Info**: System metrics:

Name	Value
total-avail-memory	96mb
num-of-cpus	12
current-memory-usage	37mb (38%)
server-uptime	01:33
registered-replicas	4 replicas
localhost:8761	-

b. Gateway Service

Configuration des routes:

```

spring:
  cloud:
    gateway:
      routes:
        - id: company-service
          uri: lb://COMPANY-SERVICE
          predicates:
            - Path=/api/companies/**

          filters:
            - name: CircuitBreaker
              args:
                name: companyService
                fallbackUri: forward:/fallback/company

        - id: stock-service
          uri: lb://STOCK-SERVICE
          predicates:
            - Path=/api/stocks/**
```

filters:

- name: CircuitBreaker

args:

- name: stockService

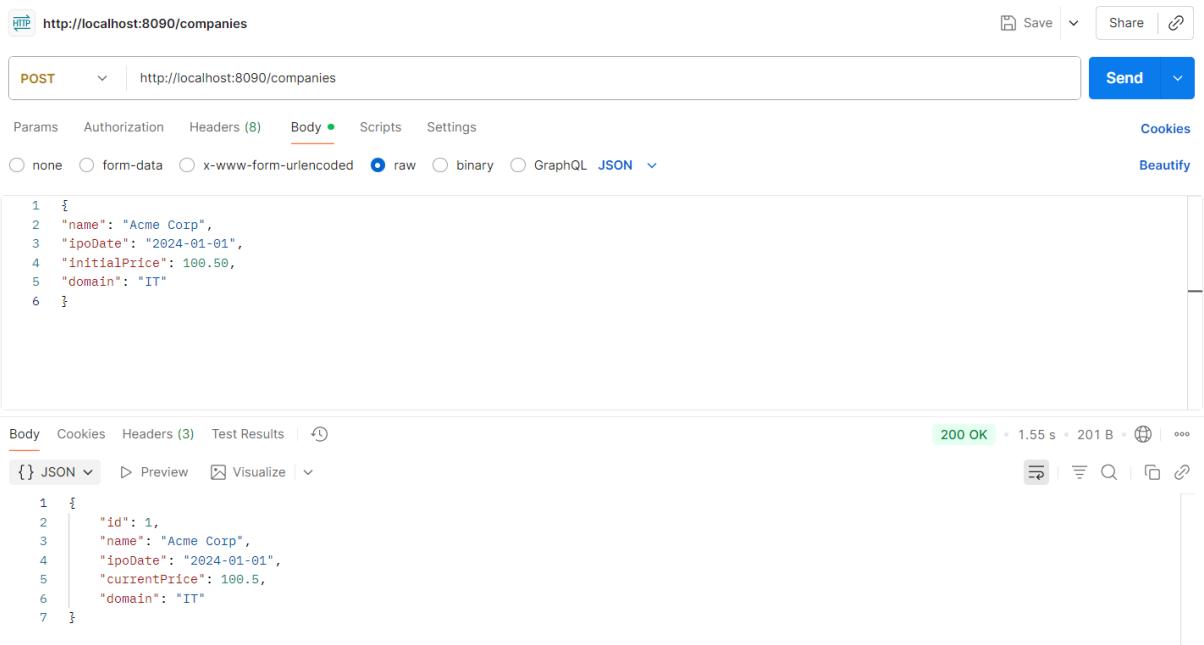
- fallbackUri: forward:/fallback/stock

b. Test des services:

Tester les APIs :

/companies :

1. Ajouter une entreprise



The screenshot shows the Postman application interface. The URL in the header is `http://localhost:8090/companies`. The method is set to `POST`. The `Body` tab is selected, showing the following JSON payload:

```

1  {
2    "name": "Acme Corp",
3    "ipoDate": "2024-01-01",
4    "initialPrice": 100.50,
5    "domain": "IT"
6  }

```

The response at the bottom indicates a `200 OK` status with a response time of `1.55 s` and a size of `201 B`.

2. Modifier une entreprise:

PUT http://localhost:8090/companies/2/price

Body (8) Body JSON

```
1 {
2   "price": 112.75
3 }
```

200 OK 107 ms 211 B

```
1 {
2   "id": 2,
3   "name": "Maroc Telecom",
4   "ipoDate": "2024-11-21",
5   "currentPrice": 112.75,
6   "domain": "Telecom"
7 }
```

3. Afficher les entreprises :

POST http://localhost:8090/companies

Body (8) Body JSON

```
1 {
2   "name": "Acme Corp",
3   "ipoDate": "2024-01-01",
4   "initialPrice": 100.5,
5   "domain": "IT"
6 }
```

200 OK 1.55 s 201 B

```
1 {
2   "id": 1,
3   "name": "Acme Corp",
4   "ipoDate": "2024-01-01",
5   "currentPrice": 100.5,
6   "domain": "IT"
7 }
```

/stocks :

1. Ajouter une cotation :

HTTP <http://localhost:8090/companies>

POST <http://localhost:8090/companies>

Params Authorization Headers (8) Body Scripts Settings Cookies Beautify

none form-data x-www-form-urlencoded raw binary GraphQL [JSON](#) [v](#)

```

1  {
2    "name": "Acme Corp",
3    "ipoDate": "2024-01-01",
4    "initialPrice": 100.50,
5    "domain": "IT"
6  }

```

Body Cookies Headers (3) Test Results [v](#)

200 OK [1.55 s](#) [201 B](#) [Cookies](#) [Beautify](#)

{ } JSON [Preview](#) [Visualize](#)

```

1  {
2    "id": 1,
3    "name": "Acme Corp",
4    "ipoDate": "2024-01-01",
5    "currentPrice": 100.5,
6    "domain": "IT"
7  }

```

2 .Afficher les cotations :

HTTP <http://localhost:8090/stocks>

GET <http://localhost:8090/stocks>

Params Authorization Headers (6) Body Scripts Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL

This request does not have a body.

Body Cookies Headers (3) Test Results [v](#)

200 OK [50 ms](#) [668 B](#) [Cookies](#) [Beautify](#)

{ } JSON [Preview](#) [Visualize](#)

```

1  [
2    {
3      "id": 1,
4      "date": "2025-11-17T10:30:00",
5      "openValue": 110.0,
6      "highValue": 115.0,
7      "lowValue": 108.5,
8      "closeValue": 114.2,
9      "volume": 8500,
10     "companyId": 1
11   },
12   {
13     "id": 2,
14     "date": "2025-11-17T10:30:00",
15     "openValue": 120.0,
16     "highValue": 130.0,
17     "lowValue": 108.5,
18     "closeValue": 114.2,
19     "volume": 8800,
20     "companyId": 2
21   },
22   {
23     "id": 3,
24     "date": "2025-11-17T10:30:00",
25   }
]

```

3. Les interfaces :

3.1 Afficher les entreprises :

The screenshot shows a web browser window with the URL `localhost:5173/companies`. The page title is "Stock Market". On the right, there are navigation links for "Companies" and "Stocks". The main area is titled "Companies". It features a "Create Company" form on the left with fields for Name, IPO Date (with a date picker), Initial Price, and Domain. On the right is a "Filter" section with a dropdown for "Domain" set to "All". Below these are two tables. The first table lists companies with columns: ID, NAME, IPO DATE, DOMAIN, CURRENT PRICE, and ACTIONS (with "Update Price" and "Delete" buttons). The second table lists stocks with columns: ID, NAME, IPO DATE, DOMAIN, CURRENT PRICE, and ACTIONS (with "Update Price" and "Delete" buttons). The data in both tables includes entries for Acme Corp, Maroc Telecom, Adria, and Safari.

ID	NAME	IPO DATE	DOMAIN	CURRENT PRICE	ACTIONS
1	Acme Corp	2024-01-01	IT	114.20	<button>Update Price</button> <button>Delete</button>
2	Maroc Telecom	2024-11-21	Telecom	114.20	<button>Update Price</button> <button>Delete</button>
3	Adria	2024-11-21	BT	114.20	<button>Update Price</button> <button>Delete</button>
4	Safari	2024-11-21	IT	200.00	<button>Update Price</button> <button>Delete</button>

ID	NAME	IPO DATE	DOMAIN	CURRENT PRICE	ACTIONS
1	Acme Corp	2024-01-01	IT	114.20	<button>Update Price</button> <button>Delete</button>
2	Maroc Telecom	2024-11-21	Telecom	114.20	<button>Update Price</button> <button>Delete</button>
3	Adria	2024-11-21	BT	114.20	<button>Update Price</button> <button>Delete</button>
4	Safari	2024-11-21	IT	200.00	<button>Update Price</button> <button>Delete</button>

3.2 Filter les entreprises :

This screenshot shows the same web application interface as the previous one, but with a filter applied. In the "Filter" section on the right, the "Domain" dropdown is set to "IT". The table below shows only the companies that belong to the IT domain: Acme Corp and Safari.

ID	NAME	IPO DATE	DOMAIN	CURRENT PRICE	ACTIONS
1	Acme Corp	2024-01-01	IT	114.20	<button>Update Price</button> <button>Delete</button>
4	Safari	2024-11-21	IT	200.00	<button>Update Price</button> <button>Delete</button>

3.3 Créer une entreprise :

Create Company

Name	<input type="text" value="INWI"/>
IPO Date	<input type="text" value="21/01/2024"/> <input type="button" value=""/>
Initial Price	<input type="text" value="300"/>
Domain	<input type="text" value="Telecom"/>

Filter

Domain	<input type="text" value="All"/>
--------	----------------------------------

ID	NAME	IPO DATE	DOMAIN	CURRENT PRICE	ACTIONS
1	Acme Corp	2024-01-01	IT	114.20	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>
2	Maroc Telecom	2024-11-21	Telecom	114.20	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>
3	Adria	2024-11-21	BT	114.20	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>
4	Safari	2024-11-21	IT	200.00	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>
5	INWI	2024-01-21	Telecom	300.00	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>

3.4 Modifier le prix :

Create Company

Name	<input type="text" value="INWI"/>
IPO Date	<input type="text" value="21/01/2024"/> <input type="button" value=""/>
Initial Price	<input type="text" value="300"/>
Domain	<input type="text" value="Telecom"/>

Filter

Domain	<input type="text" value="All"/>
--------	----------------------------------

Update Price for #1

ID	NAME	IPO DATE	CURRENT PRICE	ACTIONS
1	Acme Corp	2024-01-01	114.20	<input type="button" value="Save"/> <input type="button" value="Cancel"/>
2	Maroc Telecom	2024-11-21	Telecom	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>
3	Adria	2024-11-21	BT	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>
4	Safari	2024-11-21	IT	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>
5	INWI	2024-01-21	Telecom	<input type="button" value="Update Price"/> <input type="button" value="Delete"/>

3.5. Afficher les cotations :

Stock Market
Companies
Stocks

Stocks

Add Stock Quote

Company: Acme Corp

Date/Time (optional):

Open: 0

High: 0

Low: 0

Close: 0

Volume: 0

Add

Filter

Company: All

ID	COMPANY	DATE	OPEN	HIGH	LOW	CLOSE	VOLUME	ACTIONS
1	Acme Corp	2025-11-17T10:30:00	110.00	115.00	108.50	114.20	8500	Delete
2	Maroc Telecom	2025-11-17T10:30:00	120.00	130.00	108.50	114.20	8888	Delete
3	Adria	2025-11-17T10:30:00	120.00	130.00	108.50	114.20	999	Delete
4	Acme Corp	2025-11-17T10:30:00	120.00	130.00	108.50	114.20	1000	Delete

3.6. Filtrer les cotations selon l'entreprise :

Stock Market

Companies

Stocks

Stocks

Add Stock Quote

Company

Acme Corp

Date/Time (optional)

jj/mm/aaaa -- :--

Open

0

High

0

Low

0

Close

0

Volume

0

Add

Filter

Company

Acme Corp

ID	COMPANY	DATE	OPEN	HIGH	LOW	CLOSE	VOLUME	ACTIONS
1	Acme Corp	2025-11-17T10:30:00	110.00	115.00	108.50	114.20	8500	Delete
4	Acme Corp	2025-11-17T10:30:00	120.00	130.00	108.50	114.20	1000	Delete

3.7 . Ajouter un cotation :

Stock Market

Companies Stocks

Stocks

Add Stock Quote

Company: Maroc Telecom

Date/Time (optional): 07/11/2025 14:12

Open: 11

High: 10

Low: 05

Close: 8

Volume: 100

Add

Filter

Company: Maroc Telecom

ID	COMPANY	DATE	OPEN	HIGH	LOW	CLOSE	VOLUME	ACTIONS
2	Maroc Telecom	2025-11-17T10:30:00	120.00	130.00	108.50	114.20	8888	Delete
5	Maroc Telecom	2025-11-07T14:12:00	11.00	10.00	5.00	8.00	100	Delete

3.8 . chatbot :