Kafka Cluster: Broker & Topic Configuration

Kafka Cluster Overview

The Kafka cluster in this project consists of:

- 1 Zookeeper node (for coordination)

- 3 Kafka brokers (to distribute and replicate messages)

Broker Configuration

Each broker is a separate container, running on its own port. Below are the basic details:

- **Broker 1**

- Container name: kafka-1

- Broker ID: 1

- Port: 29091

- Advertised Listeners:

    - Internal: PLAINTEXT://kafka-1:9092

    - External: PLAINTEXT_HOST://localhost:29091

- **Broker 2**

- Container name: kafka-2

- Broker ID: 2

- Port: 29092

- Advertised Listeners:

    - Internal: PLAINTEXT://kafka-2:9093

    - External: PLAINTEXT_HOST://localhost:29092

- **Broker 3**

- Container name: kafka-3

- Broker ID: 3

- Port: 29093

- Advertised Listeners:

    - Internal: PLAINTEXT://kafka-3:9094

    - External: PLAINTEXT_HOST://localhost:29093

All brokers connect to the same Zookeeper at zookeeper:2181.
Topic auto-creation is disabled to ensure manual topic management.

Topics Configuration

Two Kafka topics are manually created using an initialization container:

Topic 1: test-topic3

- Purpose: Stores logs from the load balancer

- Producer: Java application

- Replication factor: 3

- Partitions: 1

Topic 2: test-topic4

- Purpose: Stores metrics from 10 servers (CPU, memory, etc.)

- Producer: Java application

- Replication factor: 3

- Partitions: 1

Monitoring

You can view brokers and topics using Kafka UI at:

http://localhost:8083