

# MESSAGE BROKER

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# PLAN

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1 – Introduction

2 – Architecture

3 – Environnement Technique

4 – Démo

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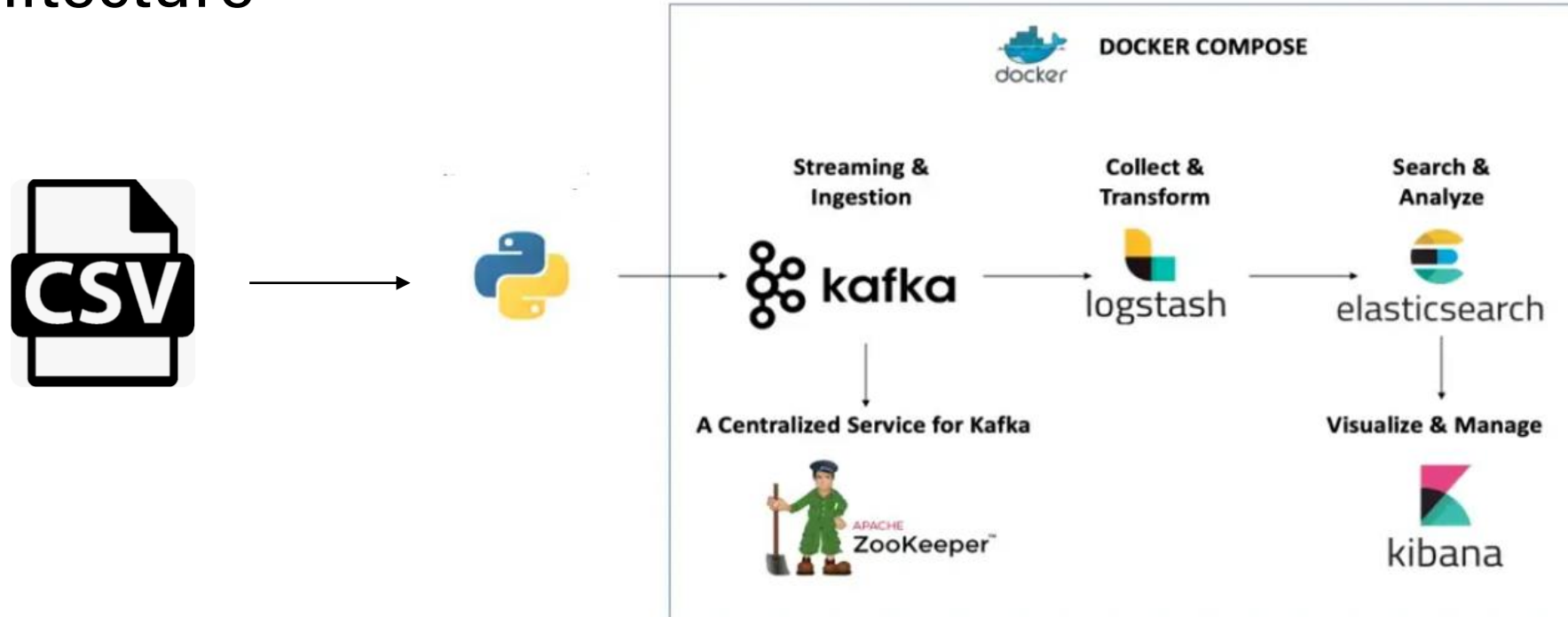
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# Introduction

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# Architecture



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# Environnement Technique

1 – Python

2 – Docker

3 – Apache Kafka

4 – ELK Stack



# Docker images

kafka

```
version: '3'
services:
  zookeeper:
    image: zookeeper
    container_name: zookeeper
    hostname: zookeeper
    ports:
      - "2181:2181"
    environment:
      ZOO_MY_ID: 1
  kafka:
    image: wurstmeister/kafka
    container_name: kafka
    ports:
      - "9092:9092"
    environment:
      KAFKA_ADVERTISED_HOST_NAME: 192.168.56.1
      KAFKA_ZOOKEEPER_CONNECT: zookeeper:2181
      KAFKA_BROKER_ID: 1
  kafka-manager:
    image: hlebalbau/kafka-manager:stable
    container_name: kafka-manager
    restart: always
    ports:
      - "9000:9000"
    environment:
      ZK_HOSTS: "zookeeper:2181"
      APPLICATION_SECRET: "random-secret"
    command: -Dpidfile.path=/dev/null
```

# Configuration de logstash

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```
C: > logstash-8.5.2-windows-x86_64 > logstash-8.5.2 > ⚙ logstash.conf
1  input {
2    kafka {
3      bootstrap_servers => "localhost:9092"
4      topics => ["my_topic"]
5    }
6  }
7
8  output {
9    elasticsearch {
10     hosts => ["localhost:9200"]
11     index => "my_topic"
12     workers => 1
13   }
14 }
```

## ElasticSearch et Kibana

```
1 version: '3.3'
2 services:
3   elasticsearch:
4     image: elasticsearch:7.17.7
5     container_name: elasticsearch
6     restart: always
7     volumes:
8     - elasticsearch-data:/usr/share/elasticsearch/data/
9     environment:
10      xpack.security.enabled : 'false'
11      discovery.type: single-node
12     ulimits:
13       memlock:
14         soft: -1
15         hard: -1
16       soft: 65536
17       hard: 65536
18     cap_add:
19     - IPC_LOCK
20     ports:
21     - '9200:9200'
```

```
22
23   kibana:
24     image: kibana:7.17.7
25     container_name: kibana
26     restart: always
27     ports:
28     - '5601:5601'
29     environment:
30     - ELASTICSEARCH_URL=http://elasticsearch:9200/
31     depends_on:
32     - elasticsearch
33
34   metricbeat:
35     image: docker.elastic.co/beats/metricbeat:7.17.7
36     environment:
37     - ELASTICSEARCH_URL=http://elasticsearch:9200/
38
39     depends_on:
40     - elasticsearch
41
42   volumes:
43     elasticsearch-data:
```



# Producer kafka

```
C: > Users > chaou > Desktop > projet3 > producer.py
1 import sys
2 import csv
3 from kafka import KafkaProducer
4
5
6
7 def producer():
8     producer = KafkaProducer([
9         bootstrap_servers=['192.168.56.1:9092'],
10         value_serializer=lambda v: json.dumps(v).encode('utf-8')])
11
12     with open('C:/Users/chaou/Desktop/projet3/data.csv') as file:
13
14         reader = csv.DictReader(file, delimiter=";")
15         for row in reader:
16             producer.send(topic='my_topic', value=row)
17             time.sleep(1)
18             print(row)
19             producer.flush()
20
21 if __name__ == '__main__':
22
23     while 1 == 1:
24         producer()
```

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# Démo

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**MERCI DE VOTRE ATTENTION**

