

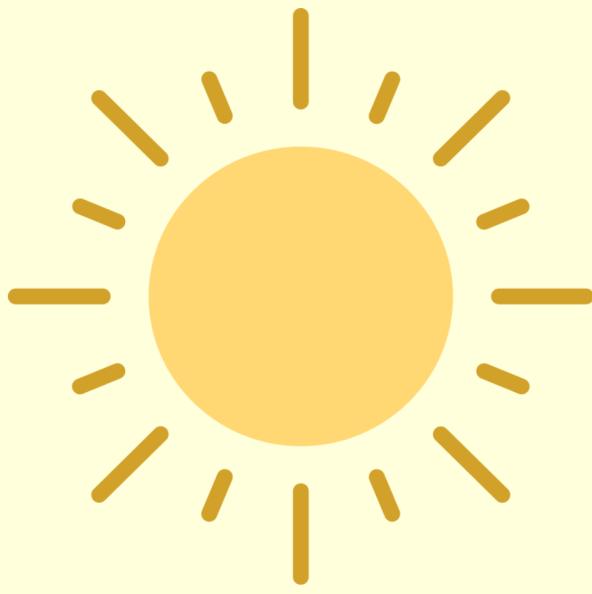
CEO of Ecofar agency



Allade A. Kébir
Data Engineer & Ops

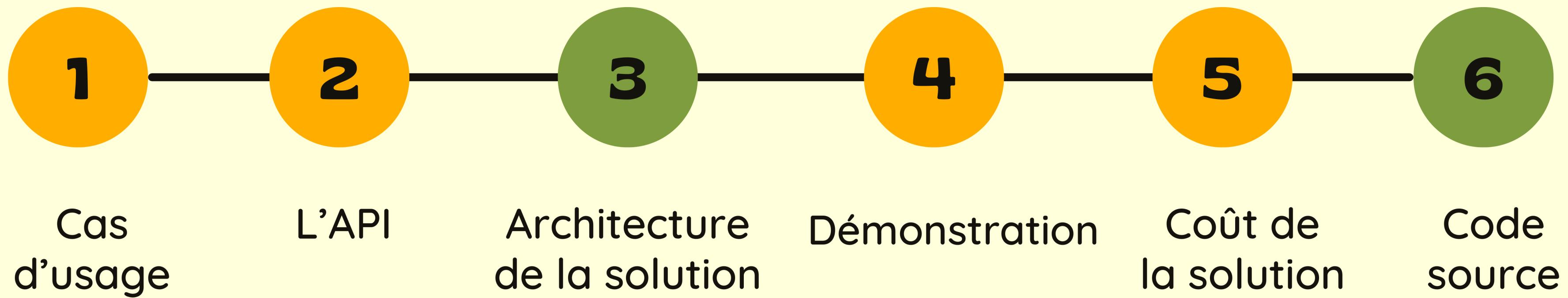


Chikki Hajar
Data Engineer



Projet Data Pipeline

Plan



Cas d'usage

Le suivi climatique de l'agriculture

- Gestion de l'Eau
- Prévision des risques
- Surveillance des maladies des plantes
- Prise de Décision Informée

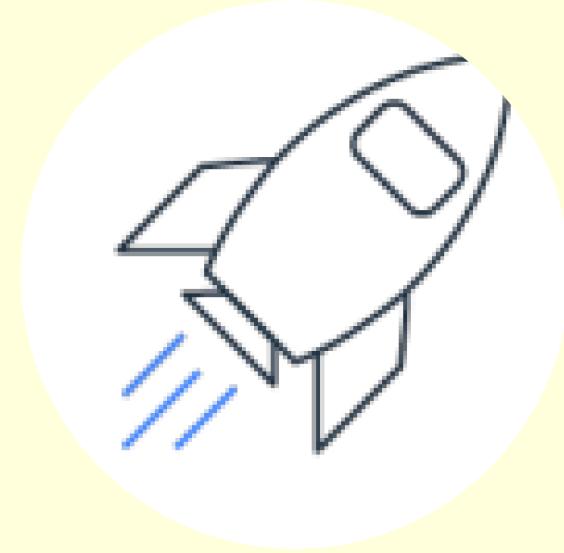


L'API

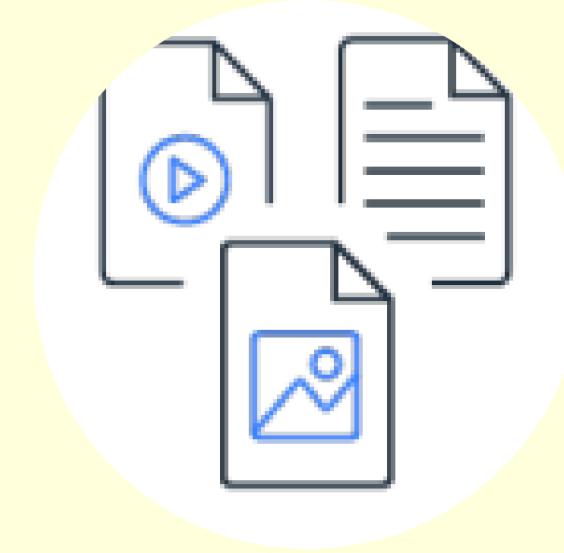
- 114/200000 villes
- Des données en temps réel
- Des données structurées
- **JSON, XML, HTML**
- Un service en ligne fiable et authentique



Volume



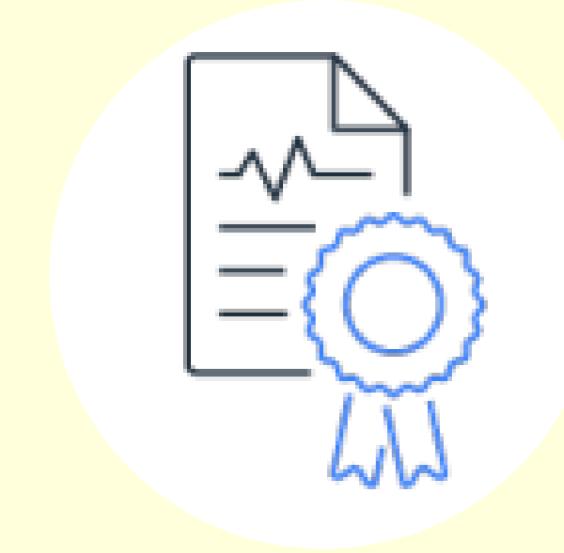
Vélocité



Variété



<https://openweathermap.org/>



Véracité

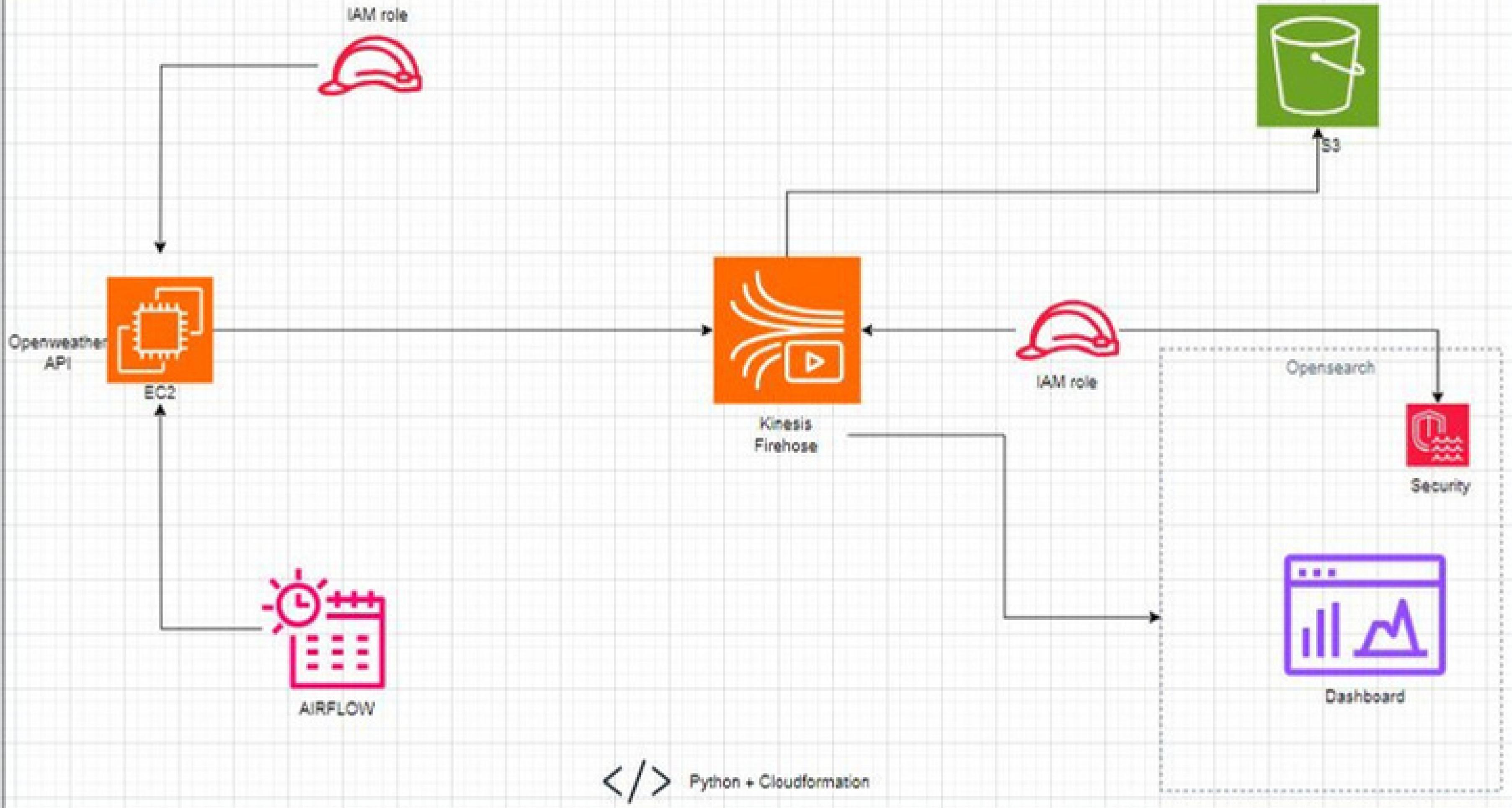


Valeur

Architecture de la solution



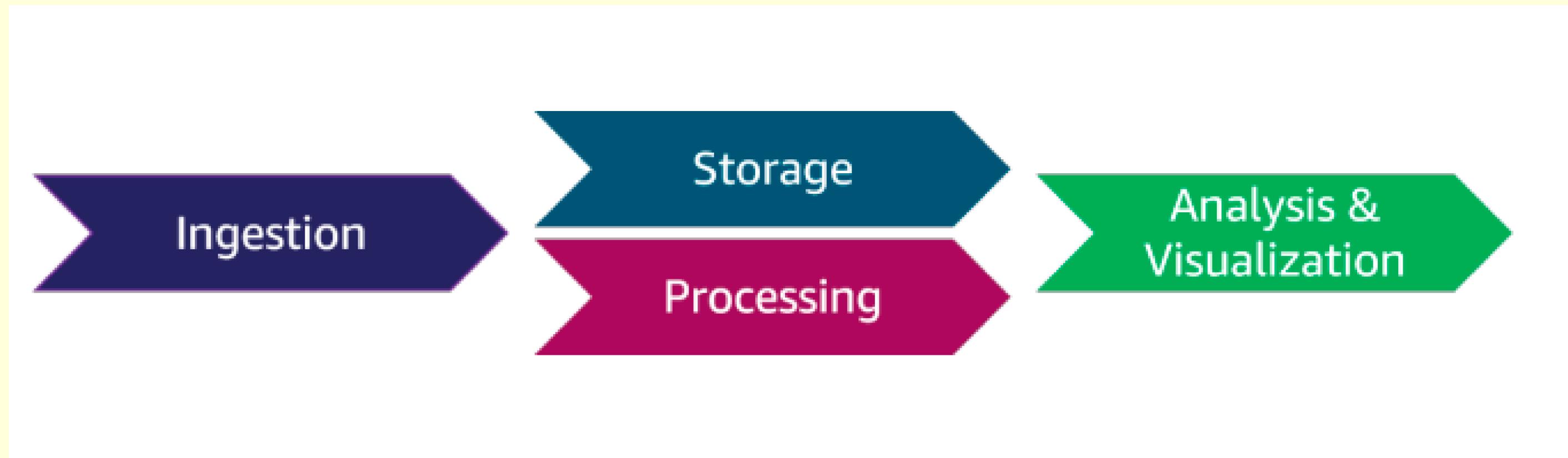
AWS Cloud DataPipeline for 23/01/2024



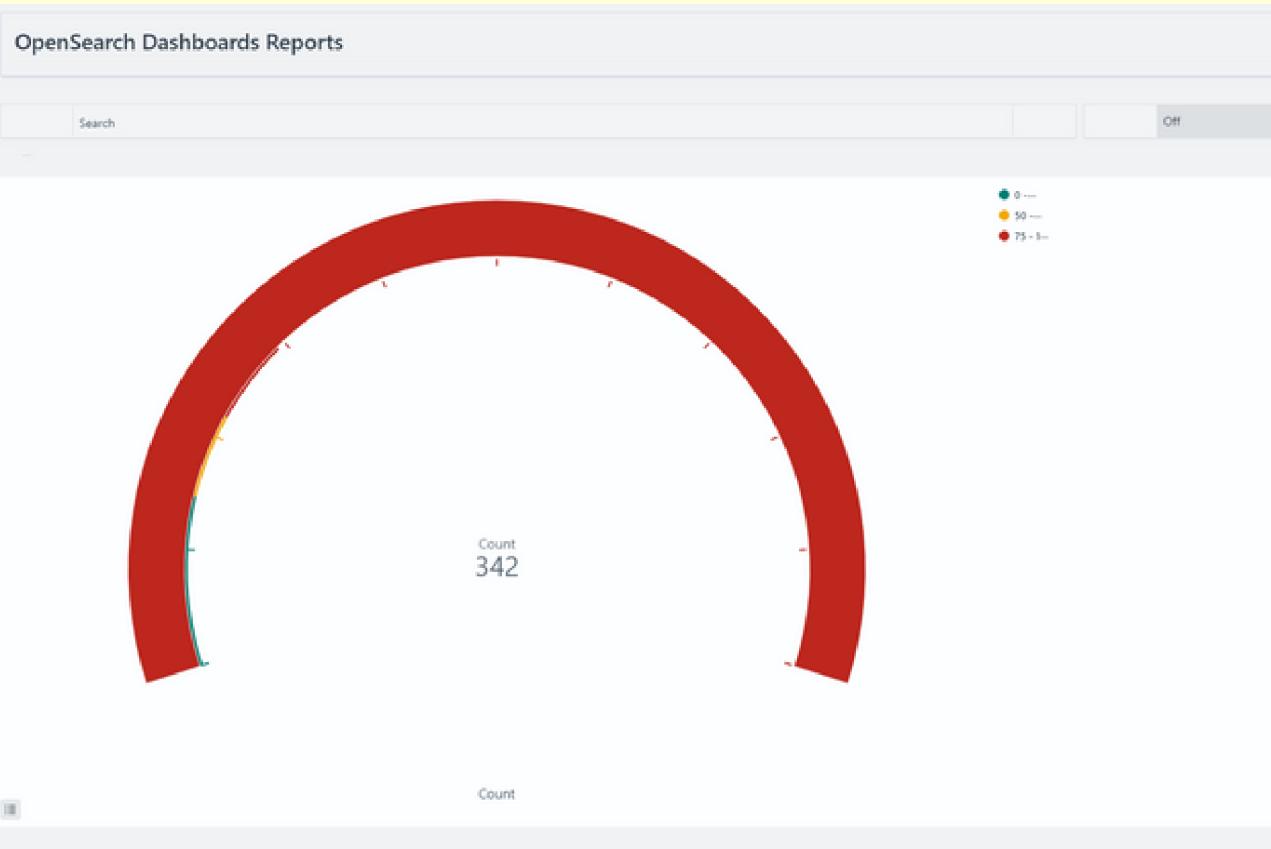
EC2

Kinesis Firehose + S3

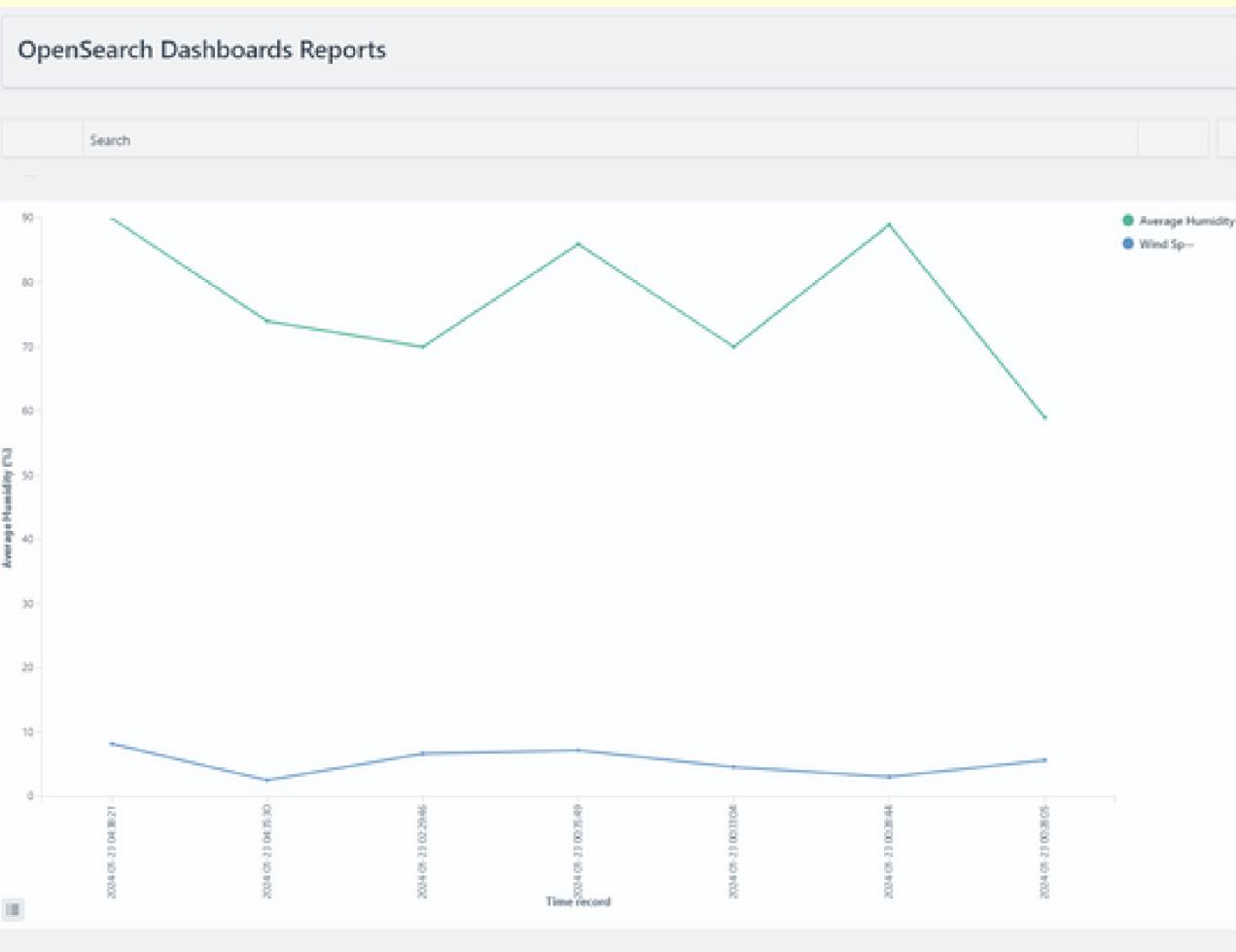
OpenSearch



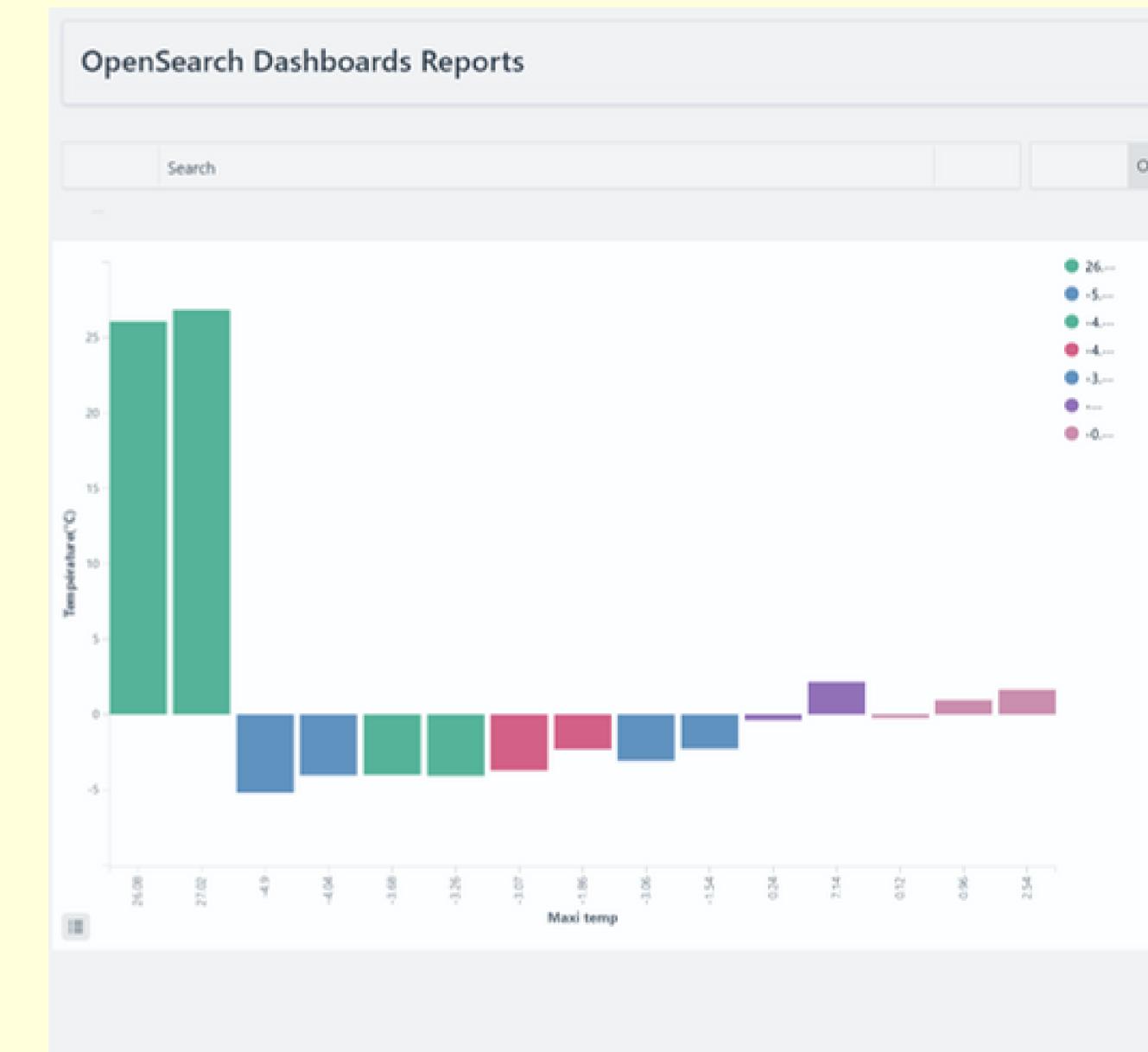
Démonstration



Total des données



évolution de l'humidité et la vitesse du vent



évolution de la température

La moyenne de la température et de l'humidité

93

92

90

2024-01-23 13:42:00 - Humidity (%)

2024-01-23 13:03:33 - Humidity (%)

2024-01-22 00:50:32 - Humidity (%)

90

90

81

2024-01-23 11:27:47 - Humidity (%)

2024-01-23 11:43:00 - Humidity (%)

2024-01-22 12:26:05 - Humidity (%)

76

9.41

9.27

9.9

2024-01-23 01:28:16 - Humidity (%)

2024-01-23 13:42:00 - temp (°C)

2024-01-23 13:03:33 - temp (°C)

2024-01-22 00:50:32 - temp (°C)

8.86

8.93

12.31

8.66

2024-01-23 11:27:47 - temp (°C)

2024-01-23 11:43:00 - temp (°C)

2024-01-22 12:26:05 - temp (°C)

2024-01-23 01:28:16 - temp (°C)

91

91

90

2024-01-23 10:27:40 - Humidity (%)

2024-01-23 10:42:06 - Humidity (%)

2024-01-21 23:50:50 - Humidity (%)

90

90

80

2024-01-23 12:05:00 - Humidity (%)

2024-01-23 12:40:14 - Humidity (%)

2024-01-23 00:28:50 - Humidity (%)

75

8.7

8.93

11.83

2024-01-22 11:28:43 - Humidity (%)

2024-01-23 10:27:40 - temp (°C)

2024-01-23 10:42:06 - temp (°C)

2024-01-21 23:50:50 - temp (°C)

9.51

9.76

6.81

10.06

2024-01-23 12:05:00 - temp (°C)

2024-01-23 12:40:14 - temp (°C)

2024-01-23 00:28:50 - temp (°C)

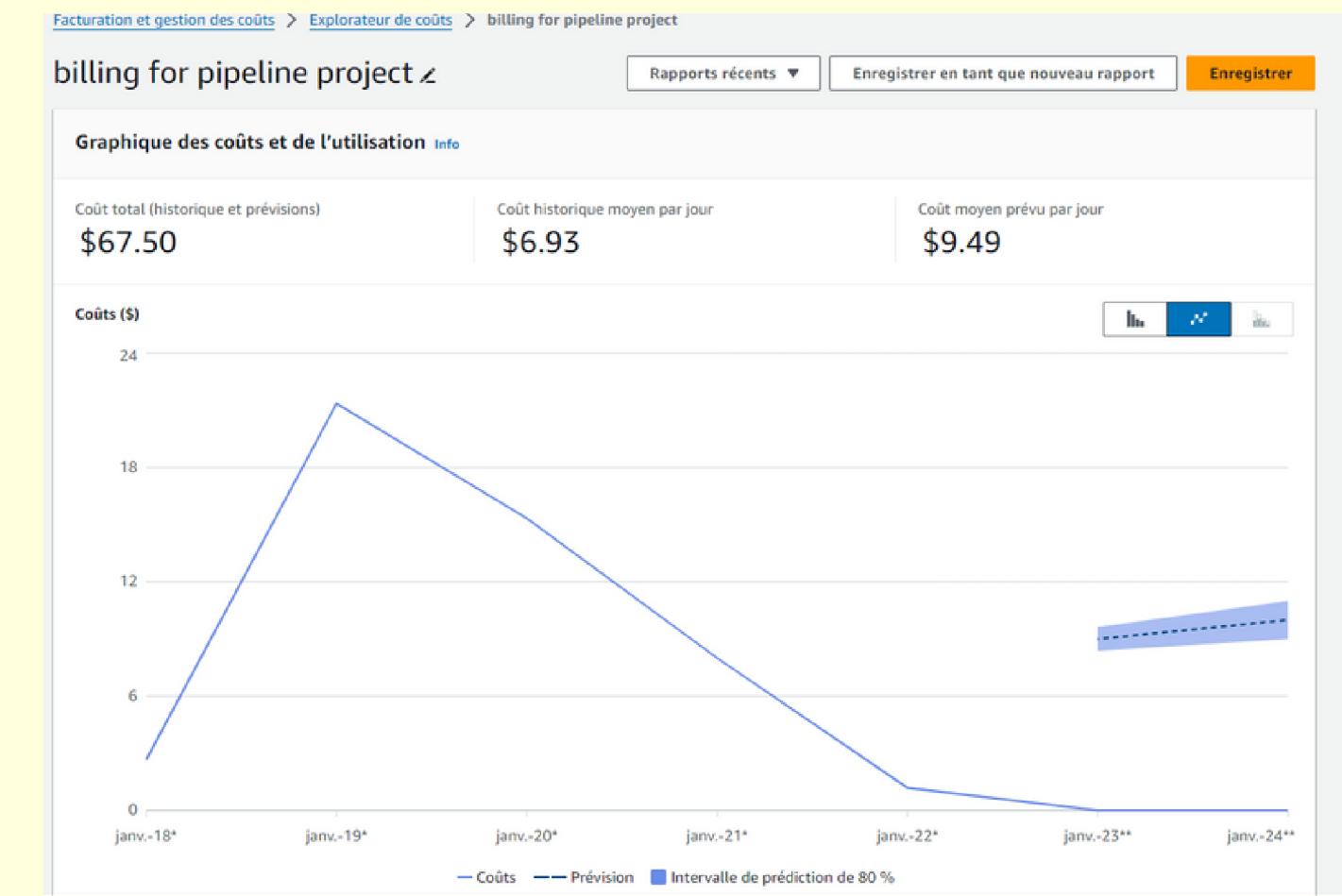
2024-01-22 11:28:43 - temp (°C)

Paris

London

Coût de la solution

Coût par service :



Répartition des coûts et de l'utilisation

Télécharger à

Trouver des données sur les coûts et l'utilisation

Service	Service total	janv.-18*	janv.-19*	janv.-20*	janv.-21*	janv.-22*
Total des coûts	\$48.51	\$2.66	\$21.35	\$15.33	\$8.00	\$1.18
OpenSearch Service	\$48.51	\$2.66	\$21.35	\$15.33	\$8.00	\$1.18
Kinesis Firehose	\$0.00	-	\$0.00	\$0.00	\$0.00	-
Instances EC2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
S3	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Code Source

IaC :

```
1 AWSTemplateFormatVersion: "2010-09-09"
2 Resources:
3   OpenweatherVM:
4     Type: "AWS::EC2::Instance"
5     Properties:
6       ImageId: "ami-i-0db78f2bb91ee35f9"
7       InstanceType: "t2.micro"
8       KeyName: "Ingest-Vm-connect.pem"
9       IamInstanceProfile: "MonInstanceProfile"
10  OpenweatherStorage:
11    Type: "AWS::S3::Bucket"
12    Properties:
13      BucketName: "openweather-storage"
14
15  WeatherAnalyticsFirehose:
16    Type: "AWS::KinesisFirehose::DeliveryStream"
17    Properties:
18      DeliveryStreamName: "weather-analytics"
19      S3DestinationConfiguration:
20        BucketARN: !GetAtt OpenweatherStorage.Arn
21        RoleARN: !GetAtt WeatherAnalyticsFirehoseRole.Arn
22  WeatherAnalyticsFirehoseRole:
23    Type: "AWS::IAM::Role"
24    Properties:
25      RoleName: "KinesisFirehoseServicePolicy-weather-analytics-us-east-1"
26      AssumeRolePolicyDocument:
27        Version: "2012-10-17"
28        Statement:
29          - Effect: "Allow"
30            Principal:
31              Service: "firehose.amazonaws.com"
32              Action: "sts:AssumeRole"
33      Policies:
34        - PolicyName: "WeatherAnalyticsFirehosePolicy"
35        PolicyDocument:
36          Version: "2012-10-17"
37          Statement:
38            - Effect: "Allow"
39              Action: "s3:PutObject"
40              Resource: !Sub "${OpenweatherStorage.Arn}/*"
```

GitHub :

DevKebir/Stream-weather-data-pipeline

Building a data pipeline with EC2 - Kinesis firehose- Opensearch & backup to S3

1 Contributor 0 Issues 0 Stars 0 Forks

DevKebir/Stream-weather-data-pipeline: Building a data pipeline with EC2 - Kinesis firehose- Opensearch &...

Building a data pipeline with EC2 - Kinesis firehose- Opensearch & backup to S3 - GitHub - DevKebir/Stream-weather-data-pipeline: Building a data pipeline with EC2 - Kinesis firehose- Ope...

[GitHub](#)