

AWS User Group Venezia

Giovedì 16 Maggio

in presenza e in streaming

alle ore 19:00



IoT playground

Alessandro Tiffi
Software Engineer
@ Bitron



Nicola Bonaventura
Mobile Application & Software Developer
@ Sipa



Come analizzare i dati che
arrivano dall'IoT ?

Alessandra Bilardi
Data & Automation Specialist
@ Corley Cloud



Promotori di AWS User Group Venezia #3



Agenda

Speech
Iniziativa
Prossimo incontro
Spritzz





Speech



IoT playground

Alessandro Tiffi - Software Engineer @ Bitron

Nicola Bonaventura - Mobile Application & Software Developer @ Sipa

@AWSUserGroupVenezia #3 #Meetup #AWS



Come analizzare i dati che arrivano dall'IoT?

Alessandra Bilardi - Data & Automation Specialist @ Corley Cloud

@AWSUserGroupVenezia #3 #Meetup #AWS

Alessandra Bilardi

Data & Automation Specialist @ Corley Cloud

- Coderdojo Mentor
- PyData Venice Evangelist
- AWS User Group Venezia Evangelist

✉ alessandra.bilardi@corley.it

🐦 @abilardi

in bilardi

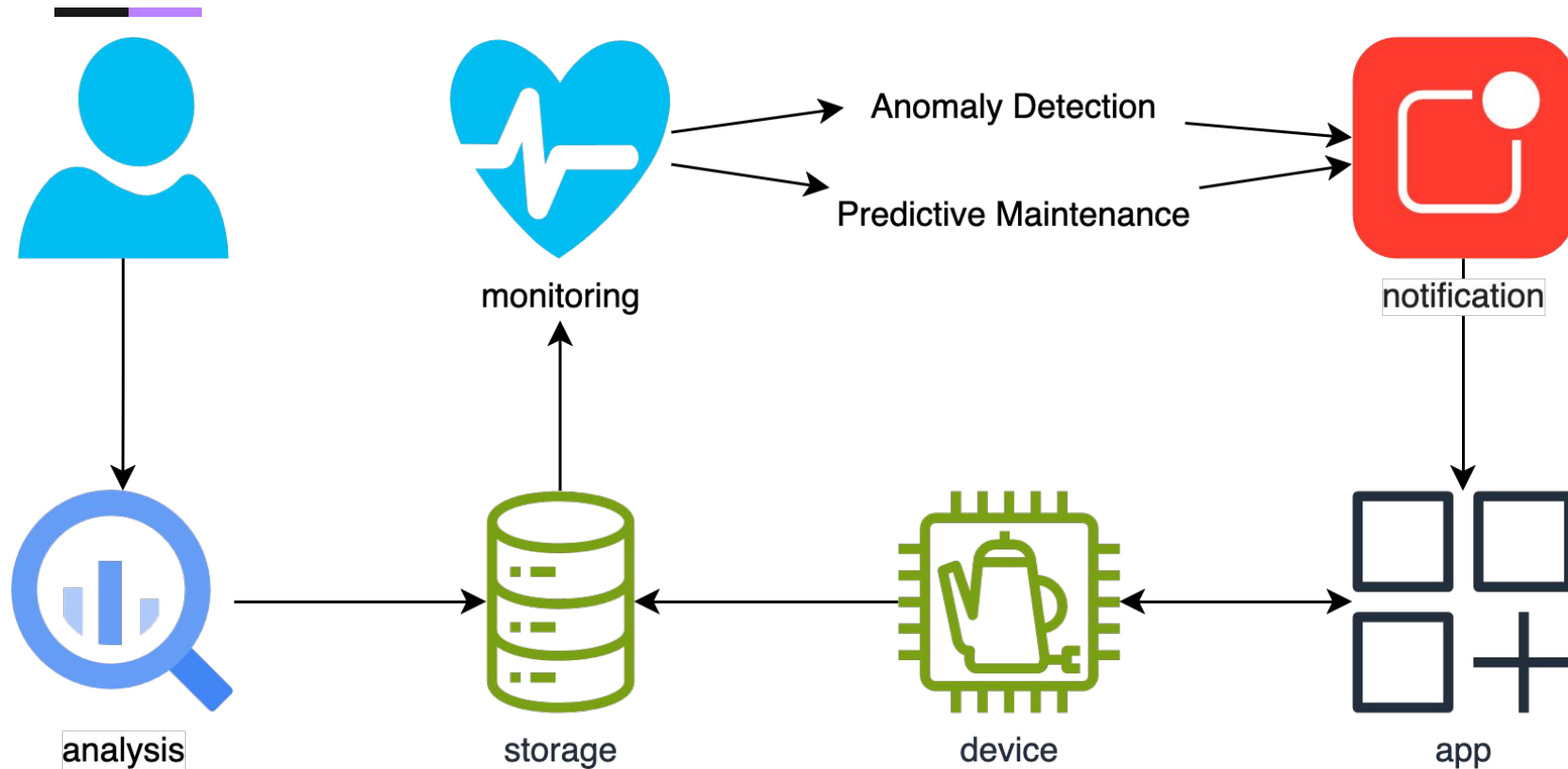


Agenda

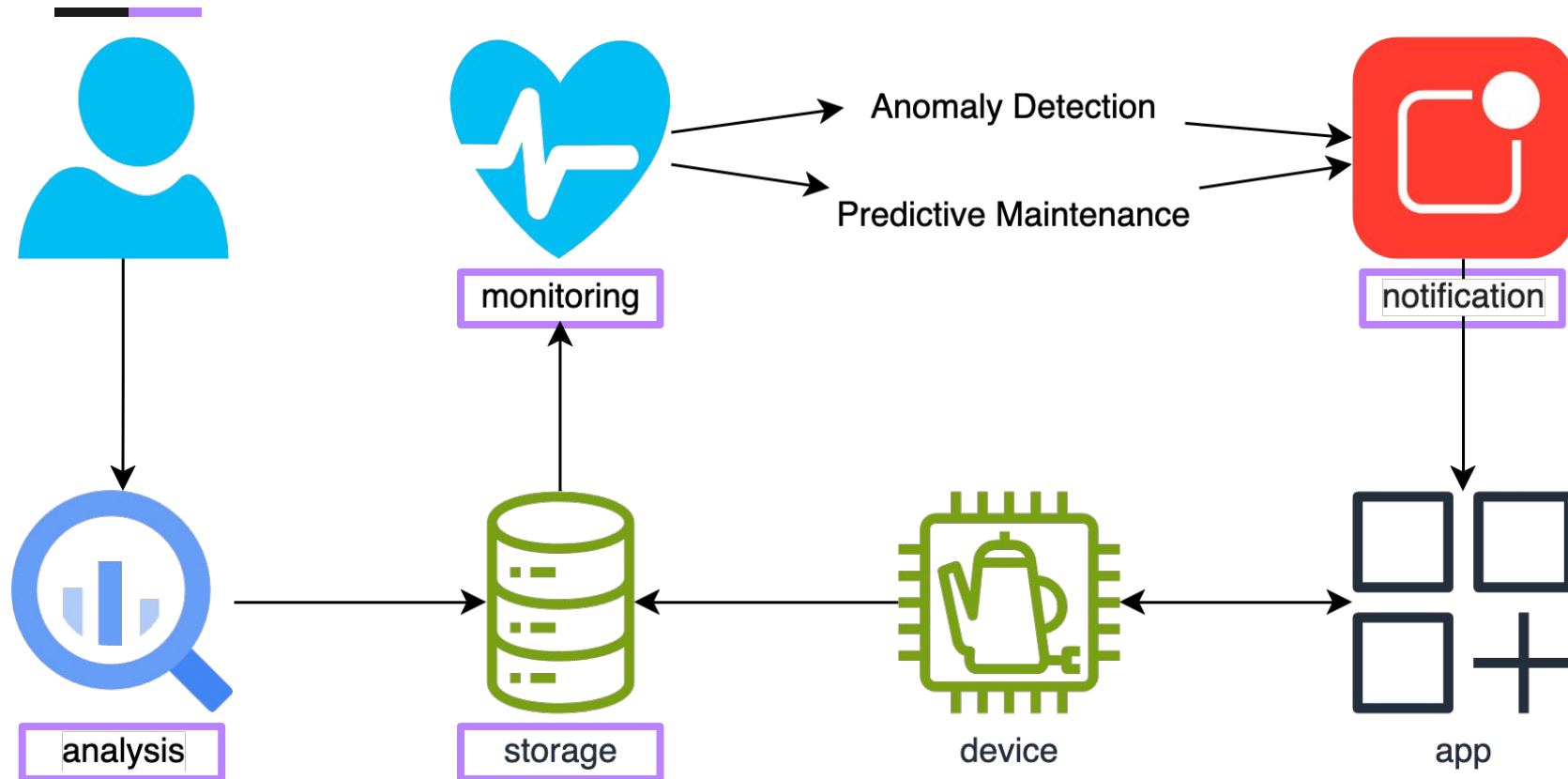
Use Case
AWS Services
Solution
Take Away



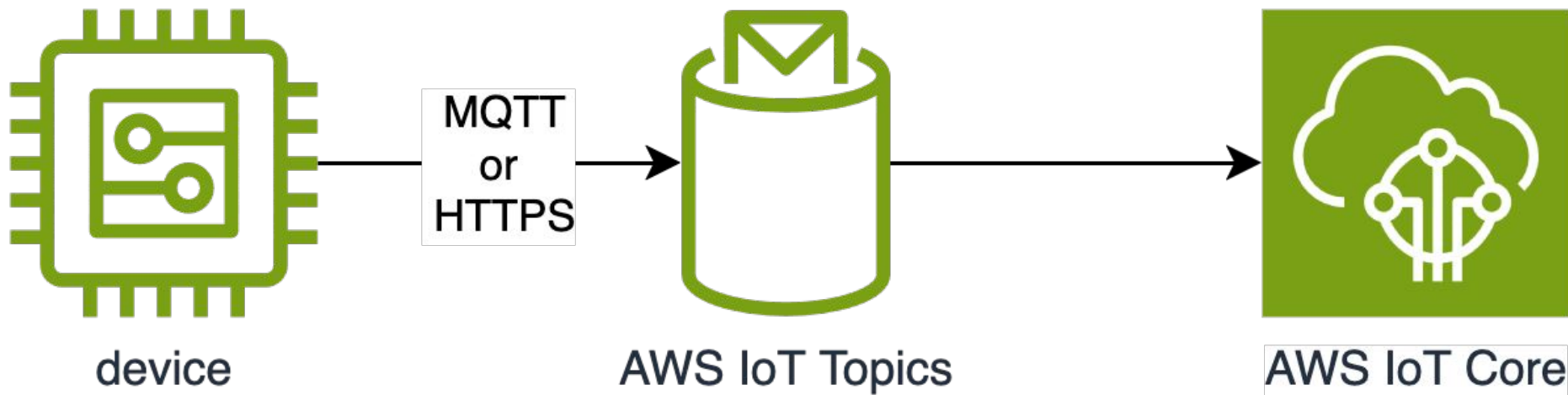
Use Case



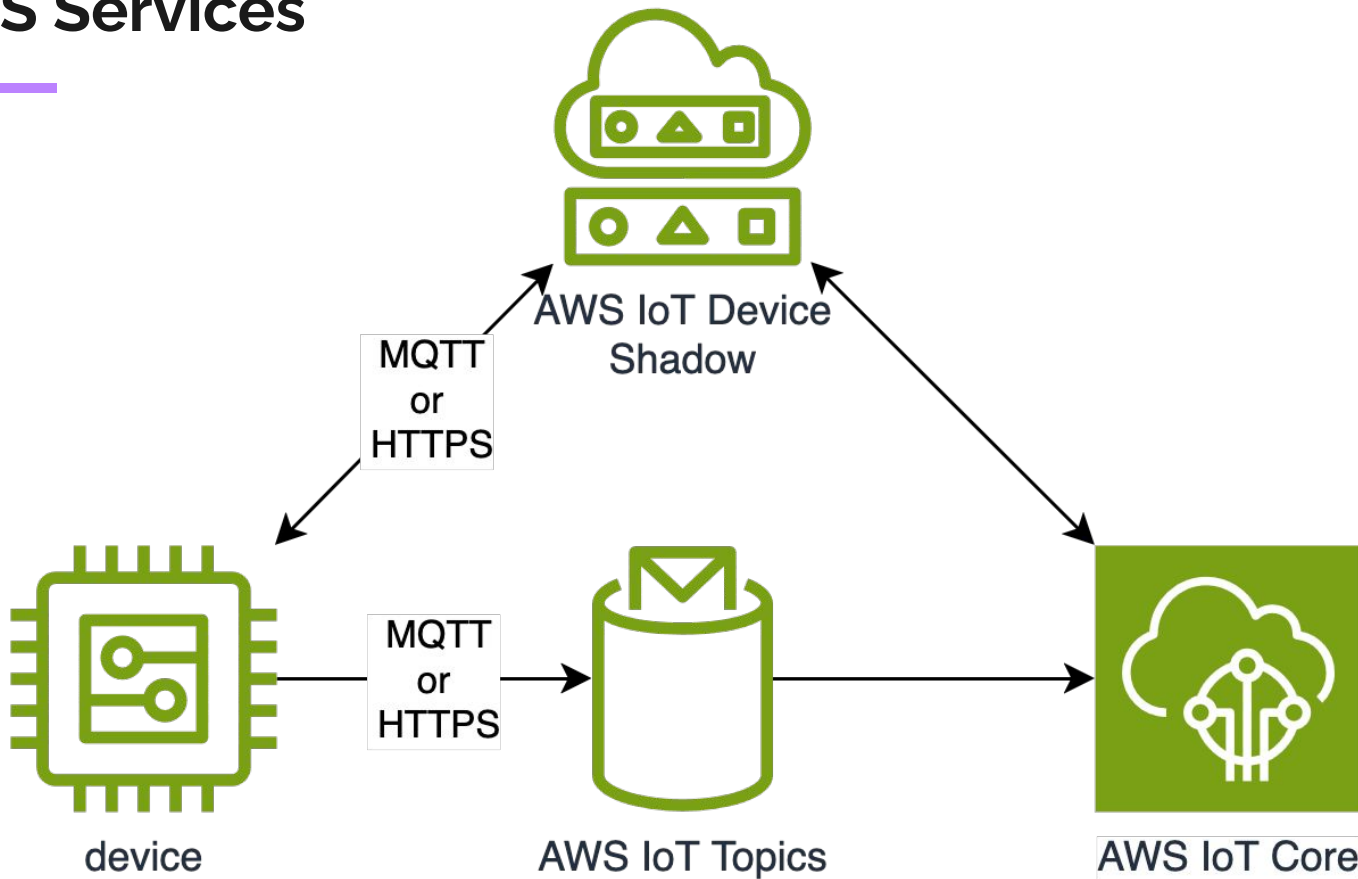
Use Case



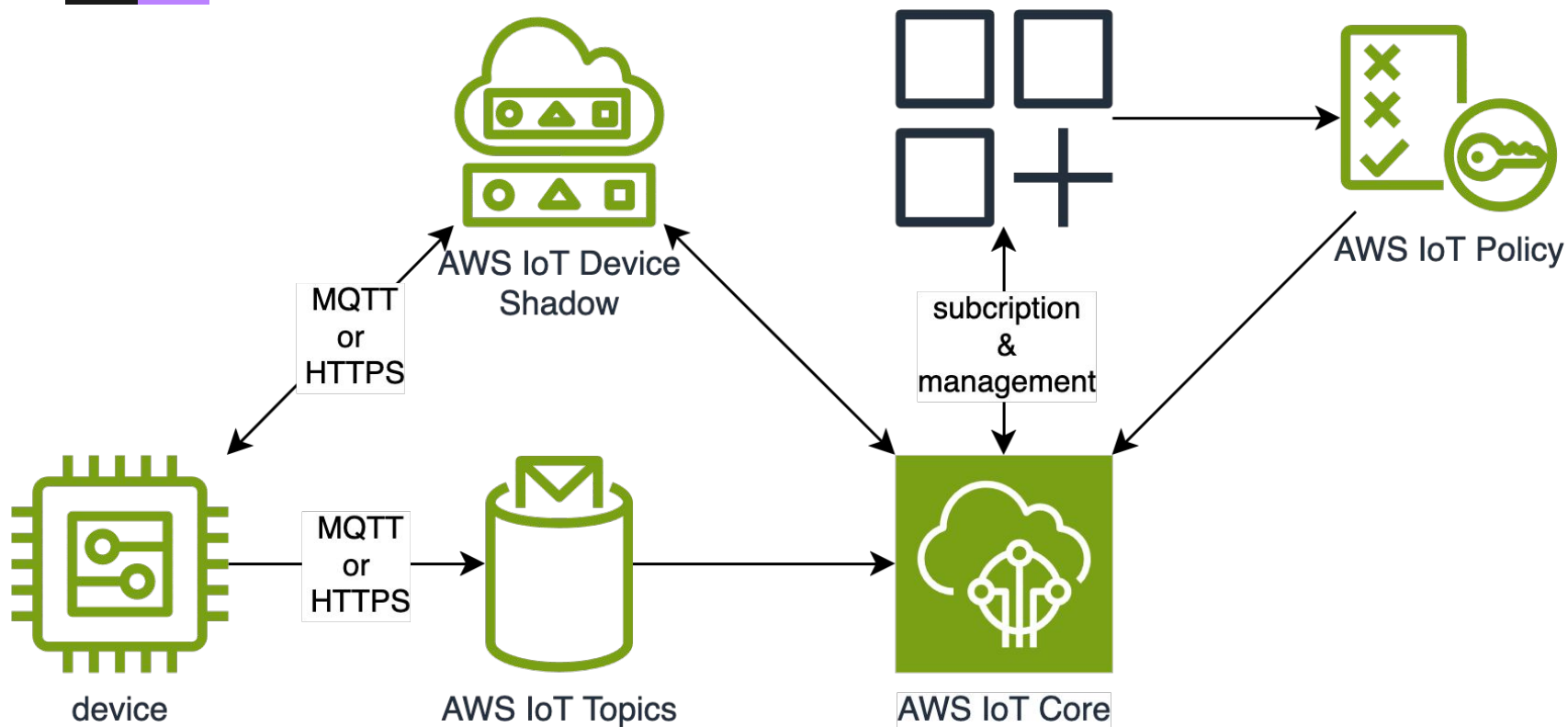
AWS Services

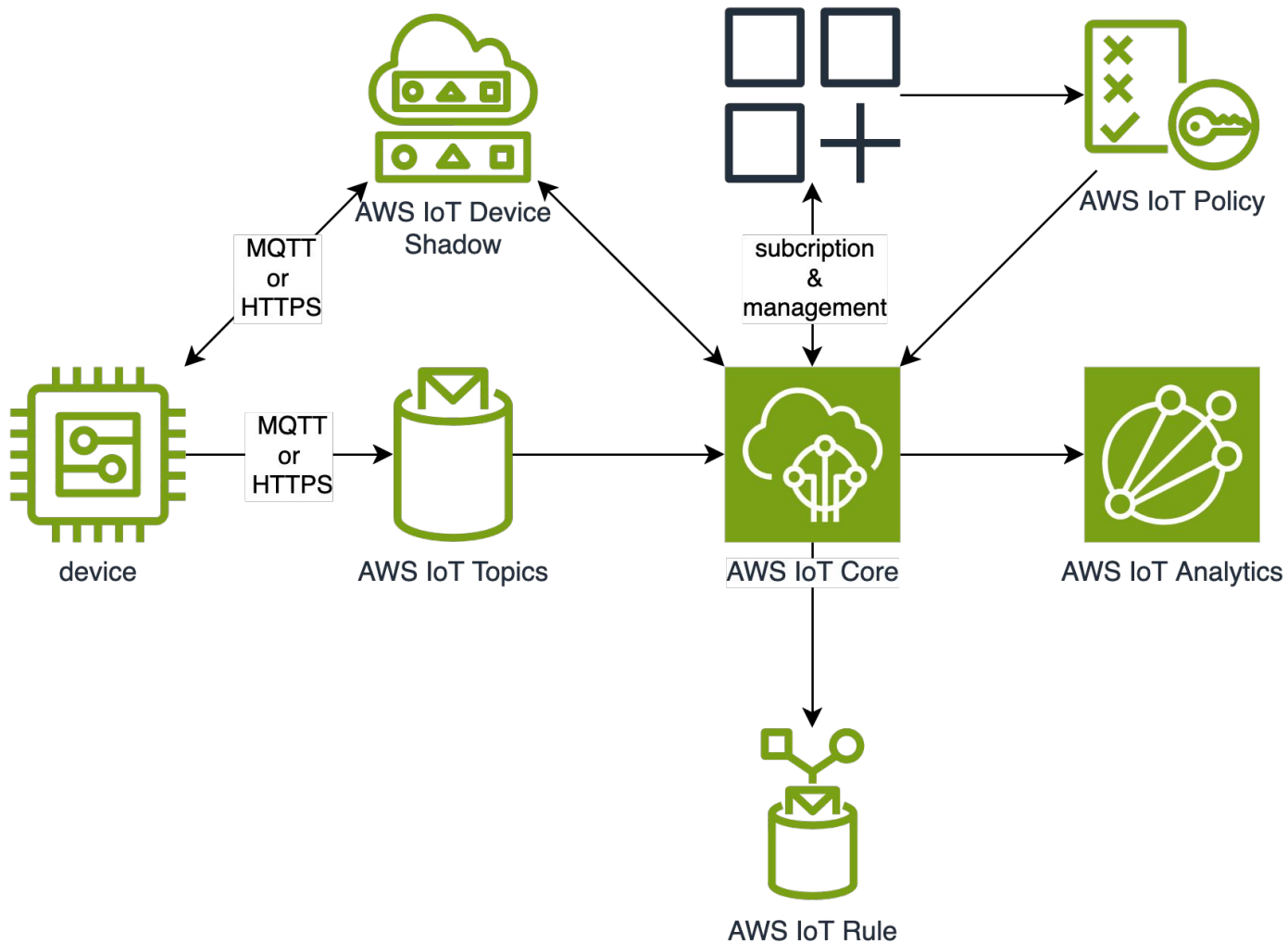


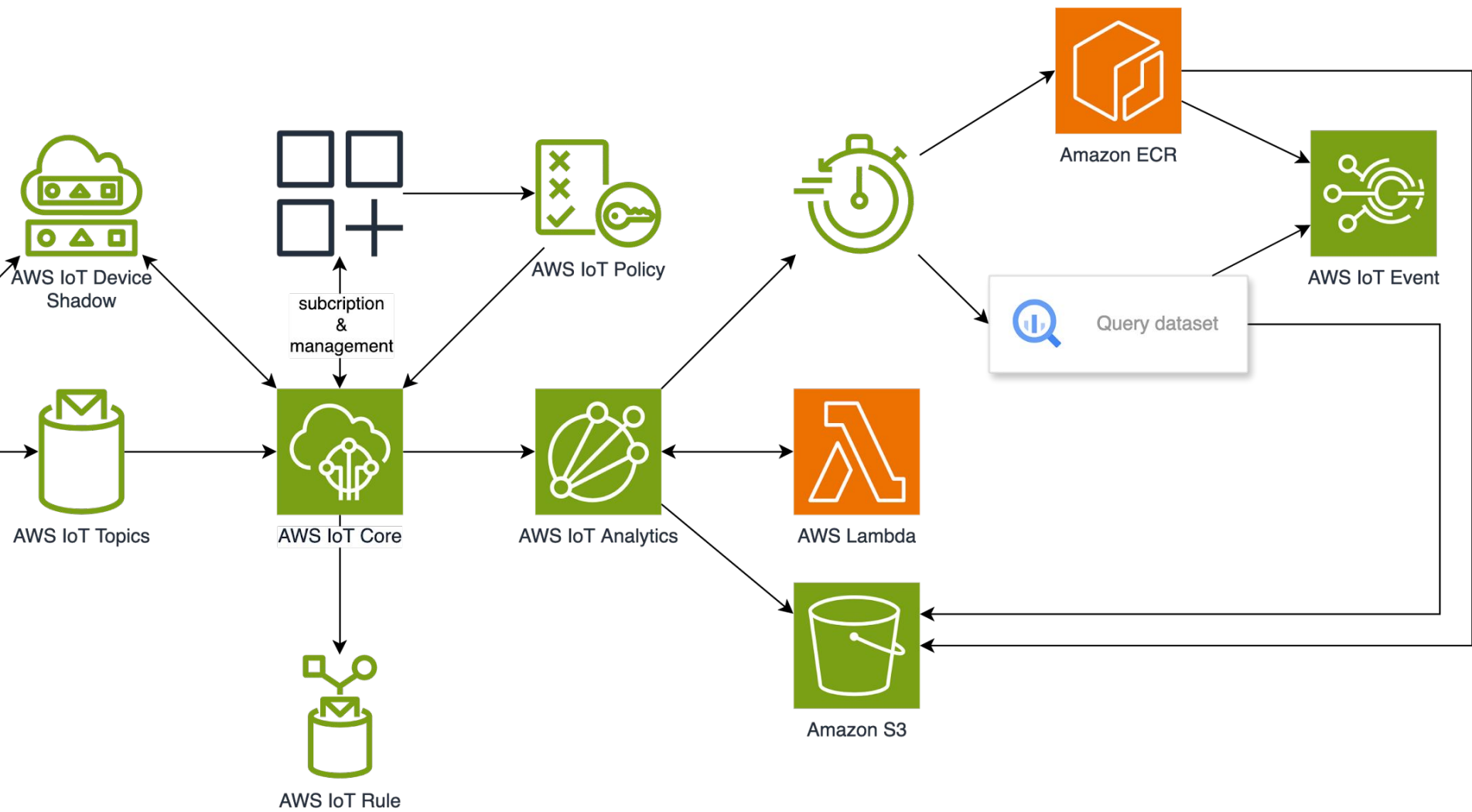
AWS Services

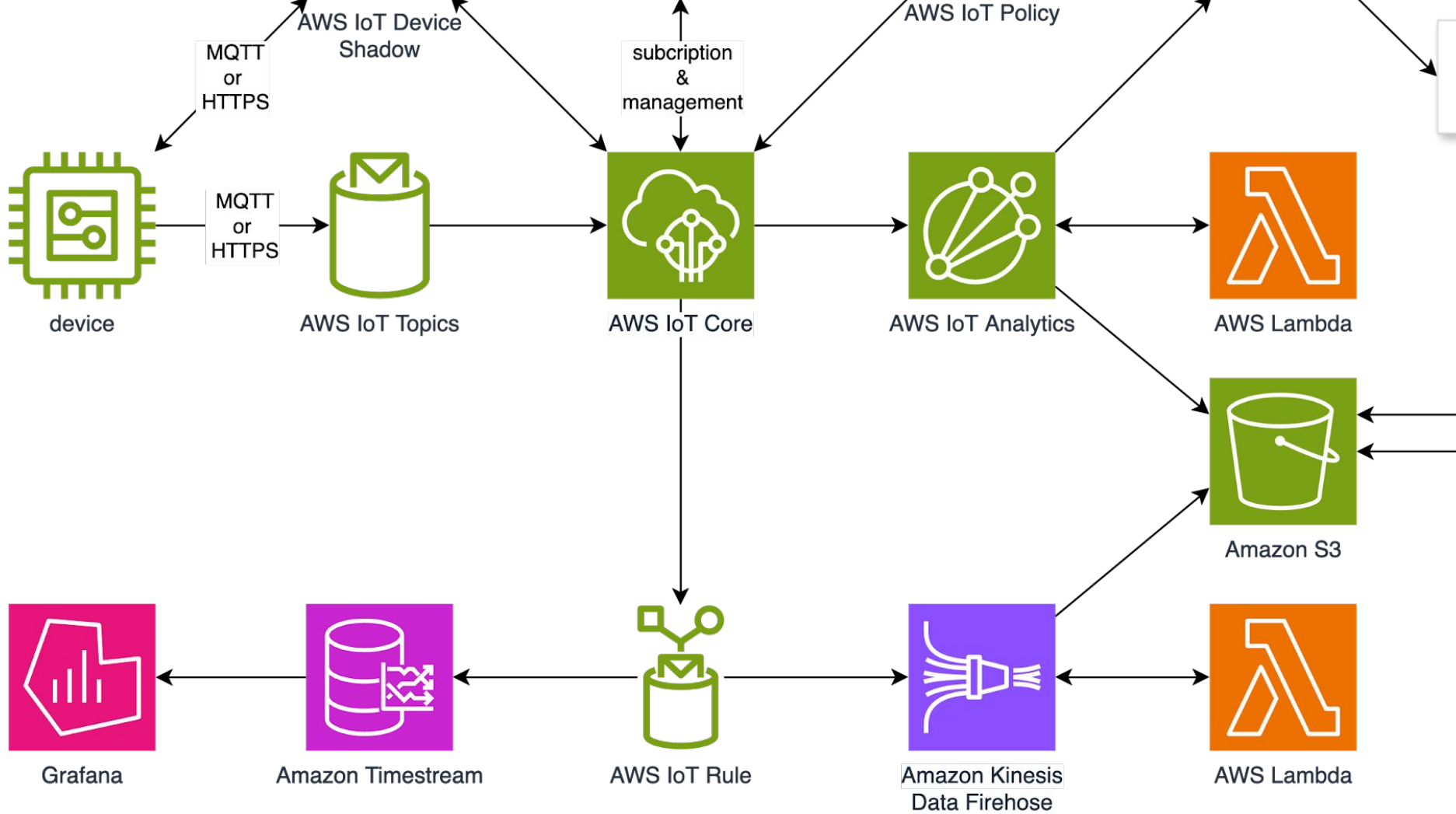


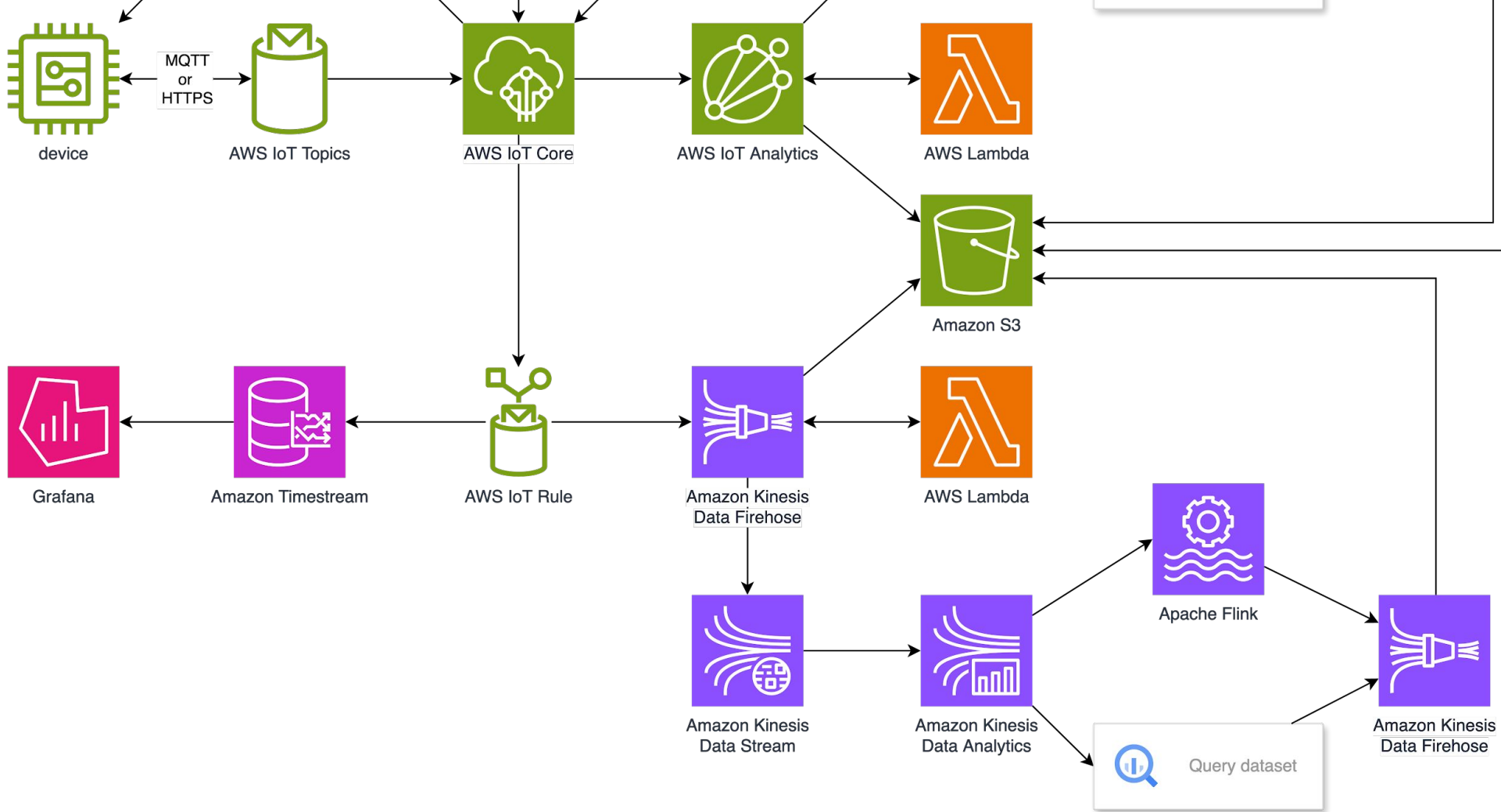
AWS Services

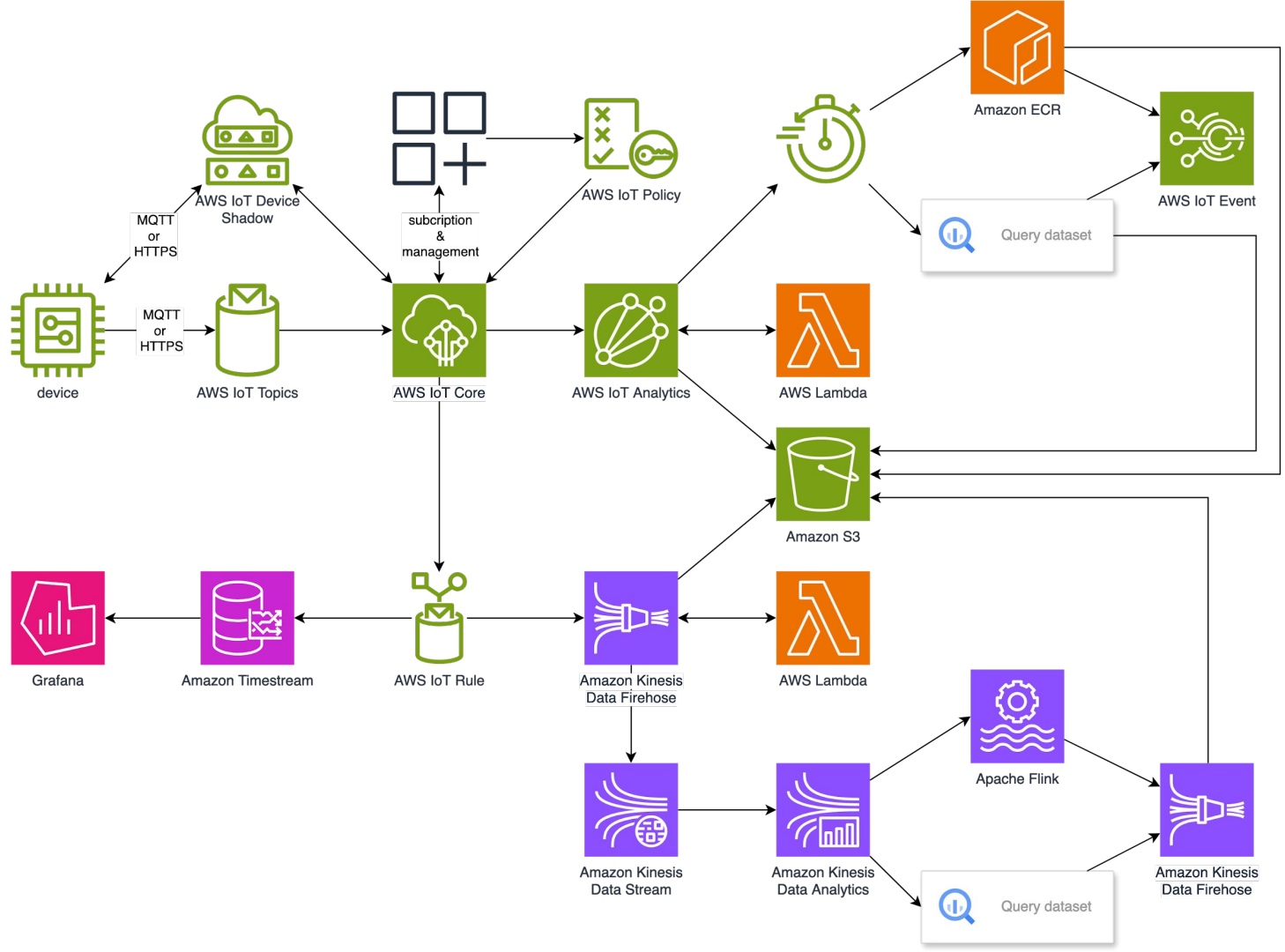




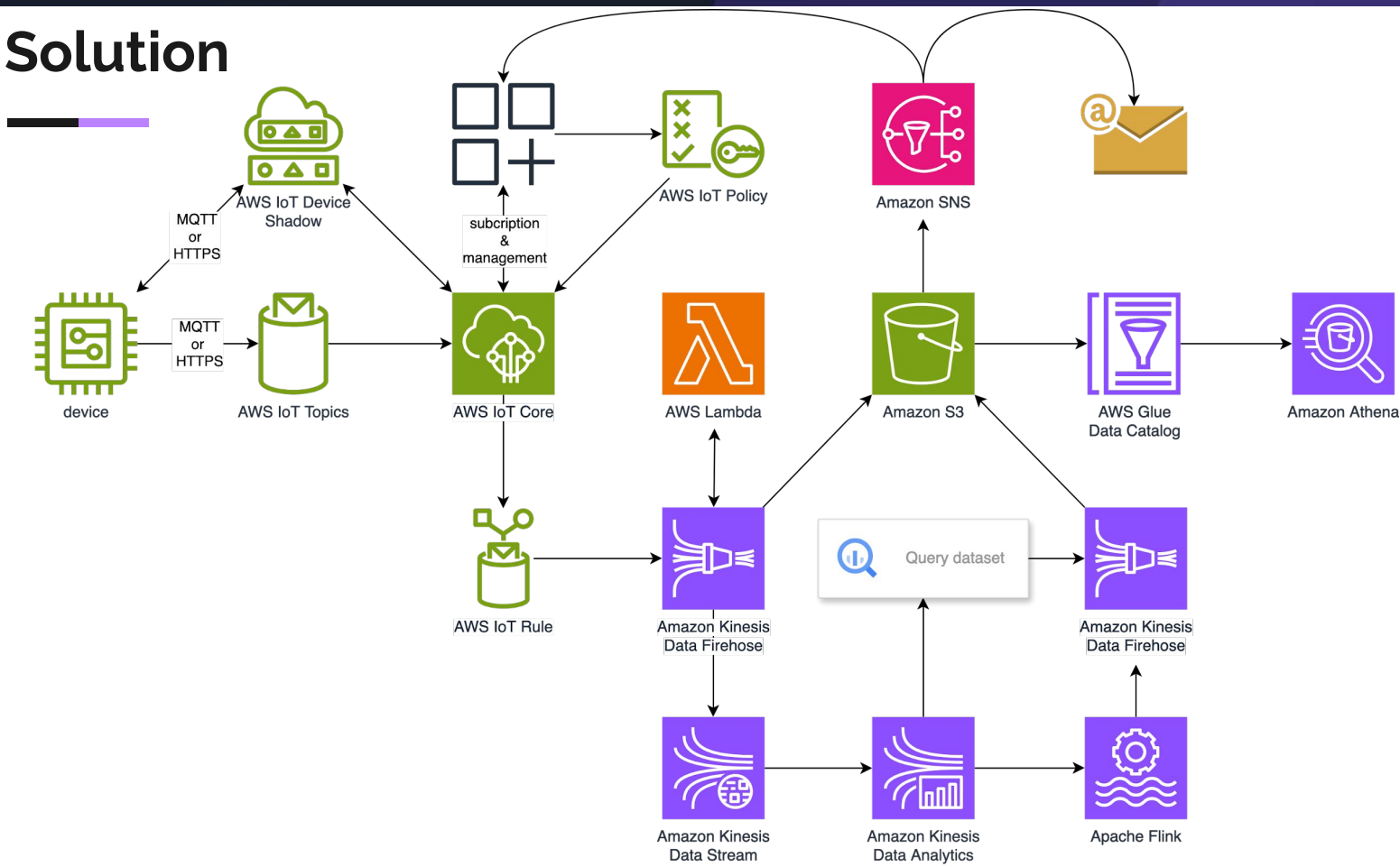








Solution



Real-time analytics

[Save and run SQL](#)[Add SQL from templates](#)[Download SQL](#)[SQL reference guide](#)[Kinesis data generator tool](#)

```
9  -- "-----" "-----" "-----"
10 -- STREAM (in-application): a continuously updated entity that you can SELECT from and INSERT into like a TABLE
11 -- PUMP: an entity used to continuously 'SELECT ... FROM' a source STREAM, and INSERT SQL results into an output STREAM
12 -- Create output stream, which can be used to send to a destination
13 CREATE OR REPLACE STREAM "DESTINATION_SQL_STREAM" (ticker_symbol VARCHAR(4), sector VARCHAR(12), change REAL, price REAL);
14 -- Create pump to insert into output
15 CREATE OR REPLACE PUMP "STREAM_PUMP" AS INSERT INTO "DESTINATION_SQL_STREAM"
16 -- Select all columns from source stream
17 SELECT STREAM ticker_symbol, sector, change, price
18 FROM "SOURCE_SQL_STREAM_001"
19 -- LIKE compares a string to a string pattern ( _ matches all char, % matches substring)
20 -- SIMILAR TO compares string to a regex, may use ESCAPE
21 WHERE sector SIMILAR TO '%TECH%';
```

Application status: RUNNING

[Source data](#)[Real-time analytics](#)[Destination](#)

Streaming data

[SOURCE_SQL_STREAM_001](#)

The streaming data below is a sample from Kinesis data stream [kinesis-analytics-demo-stream](#)

Reference data (optional) ⓘ

[Connect reference data](#)[Actions](#)

| ROWTIME TIMESTAMP | TICKER_SYMBOL VARCHAR(4) | SECTOR VARCHAR(16) | CHANGE REAL | PRICE REAL | PARTITION_KEY VARCHAR(512) | SEQUENCE_NUMBER BIGINT |
|-------------------------|-----------------------------|-----------------------|----------------|---------------|-------------------------------|---------------------------|
| 2019-03-06 21:21:35.409 | WSB | RETAIL | 0.3 | 9.6 | PartitionKey | 495 |
| 2019-03-06 21:21:35.409 | ASD | FINANCIAL | 1.24 | 67.64 | PartitionKey | 495 |
| 2019-03-06 21:21:35.409 | DFT | RETAIL | 2.5 | 72.65 | PartitionKey | 495 |
| 2019-03-06 21:21:35.409 | AMZN | TECHNOLOGY | 9.08 | 781.46 | PartitionKey | 495 |

Data source

[Connect data source](#)

AwsDataCatalog

Database

sampledb

Filter tables and views...

▼ Tables (2)

[Create table](#)[elb_logs](#)[superstore](#)

▼ Views (0)

[Create view](#)

You have not created any views. To create a view, run a query and click "Create view from query"

✓ New query 1

New query 2 ✕



```
1 select * from superstore;
```

Run query

Save as

Create ▾

(Run time: 0.34 seconds, Data scanned: 0.08 KB)

Format query

Clear

Use Ctrl + Enter to run query, Ctrl + Space to autocomplete

Athena engine version 1

[Release versions](#)

Results

| | order ▾ | product ▾ | qty ▾ | amount ▾ |
|---|---------|-----------|-------|----------|
| 1 | | product | | |
| 2 | 1 | car | 2 | 5000 |
| 3 | 2 | bikes | 1 | 2000 |
| 4 | 3 | cookies | 10 | 80 |
| 5 | 4 | phone | 1 | 5 |



Take Away

- AWS IoT Core
- AWS IoT Analytics
- AWS IoT Rule
- AWS Lambda
- Amazon Kinesis
- Amazon S3
- Amazon Athena



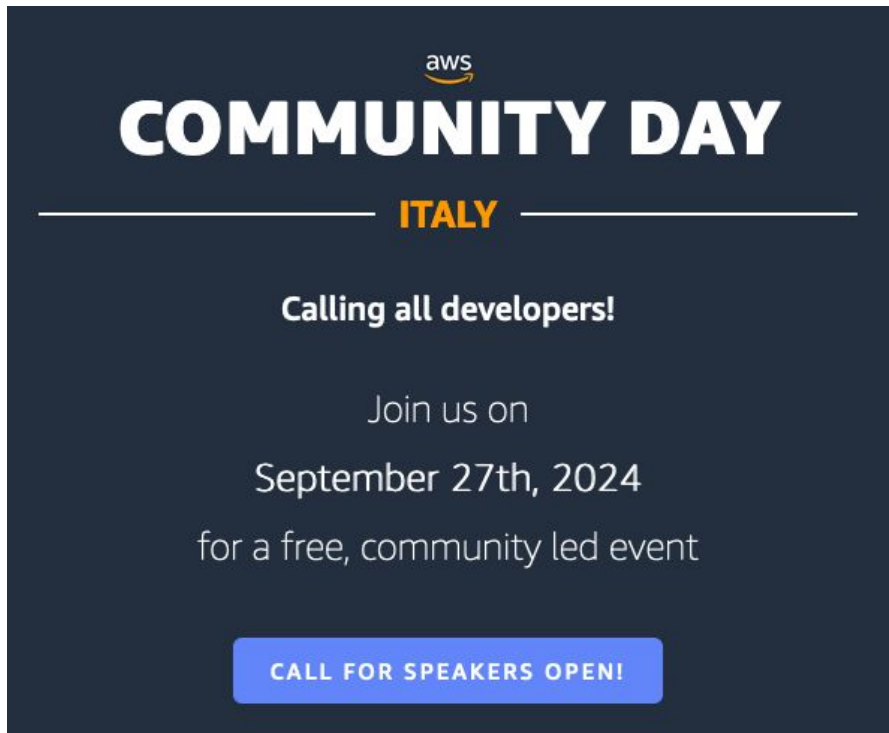
Questions ?

@AWSUserGroupVenezia #3 #Meetup #AWS

Iniziativa - AWS Community Day - Italy

<https://www.awscommunityday.it/>

- venerdì 27 settembre 2024
- location: Roma

A dark blue rectangular graphic with white and orange text. At the top is the AWS logo. Below it, 'COMMUNITY DAY' is written in large white capital letters. Underneath that, 'ITALY' is written in orange capital letters, flanked by horizontal lines. The text 'Calling all developers!' is centered below. Further down, 'Join us on' is followed by 'September 27th, 2024' and 'for a free, community led event'. At the bottom is a blue button with white text that says 'CALL FOR SPEAKERS OPEN!'.

Prossimo incontro

- giovedì 19 settembre ore 19:00

Proposte





Spritz



Thanks for participating.

@AWSUserGroupVenezia #3 #Meetup #AWS