

# Collecting Data on AWS

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## THE KINESIS FAMILY



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# Overview



## The Amazon Kinesis Family

- The different Kinesis services

## Kinesis Data Analytics

- Analyze streaming data
- Integration with other services

## Kinesis Video Streams



# Why Learn About AWS Data Services?



**Highest Paid Skills (2020)**



**9.3% Salary Growth (2020)**



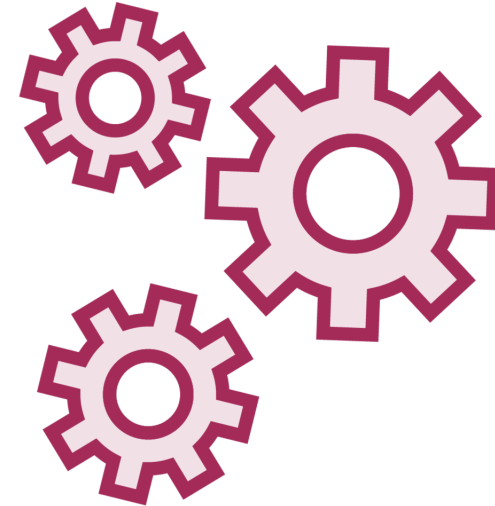
**Preparation for AWS  
Certificates**



# Why Use AWS Data Services?



Public cloud leader



Full platform of integrations and  
other services



# The Amazon Kinesis Family

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What is  
“Amazon Kinesis”?



# The Kinesis Family of Services



**Kinesis Data  
Streams**



**Kinesis Data  
Firehose**



**Kinesis Data  
Analytics**



**Kinesis Video  
Streams**



# Confusing Kinesis Jargon

“Kinesis” or  
“Kinesis streams”  
usually means:

Kinesis Data  
Streams

“Firehose” or  
“delivery streams”  
means:

Kinesis Data  
Firehose

We'll look at both  
in more detail in  
later modules



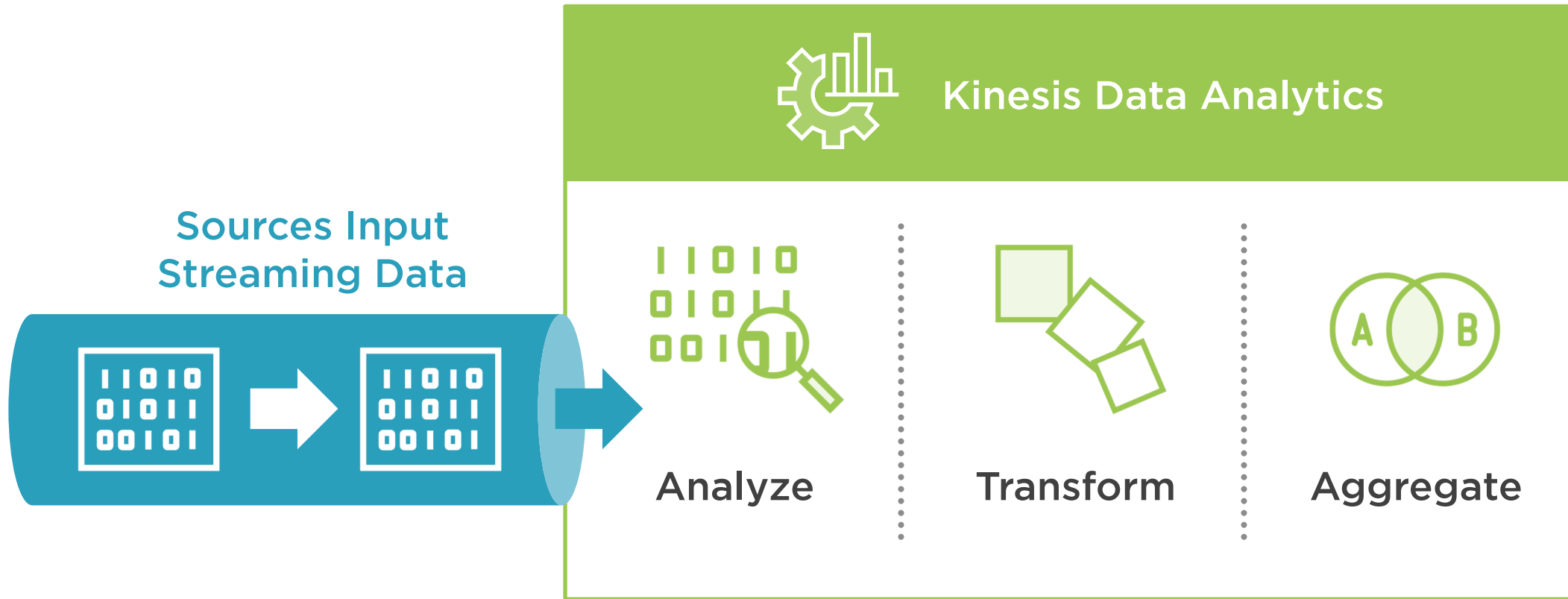


# Kinesis Data Analytics

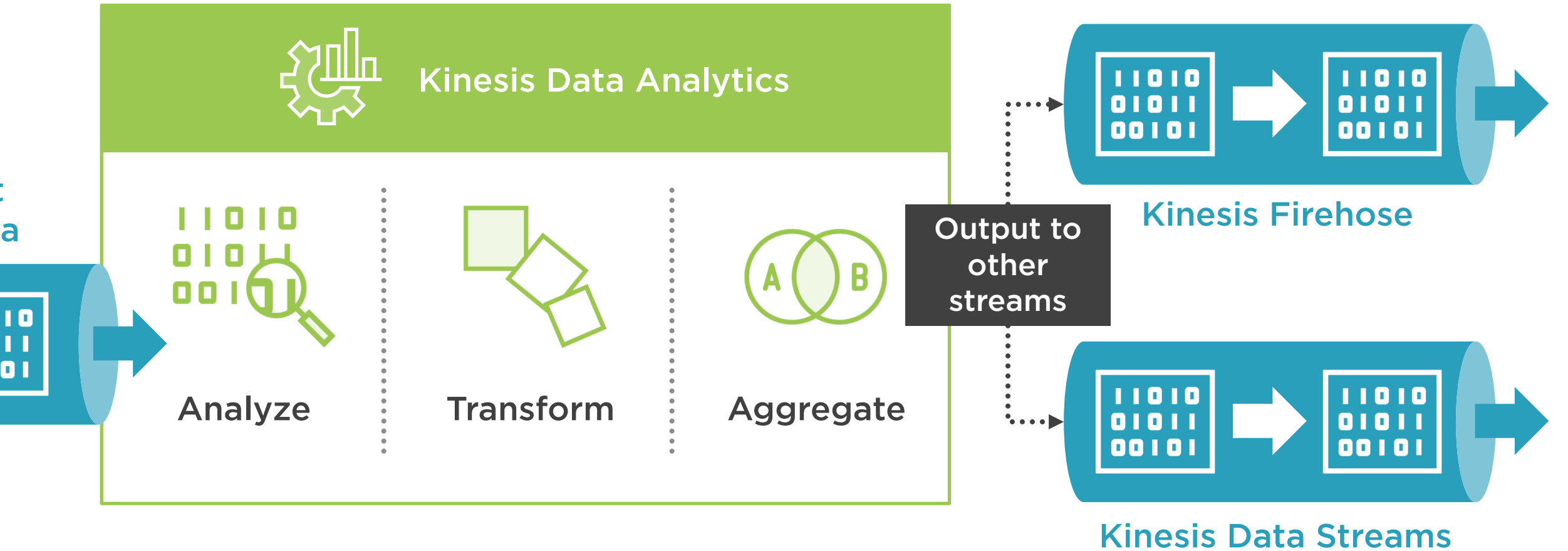
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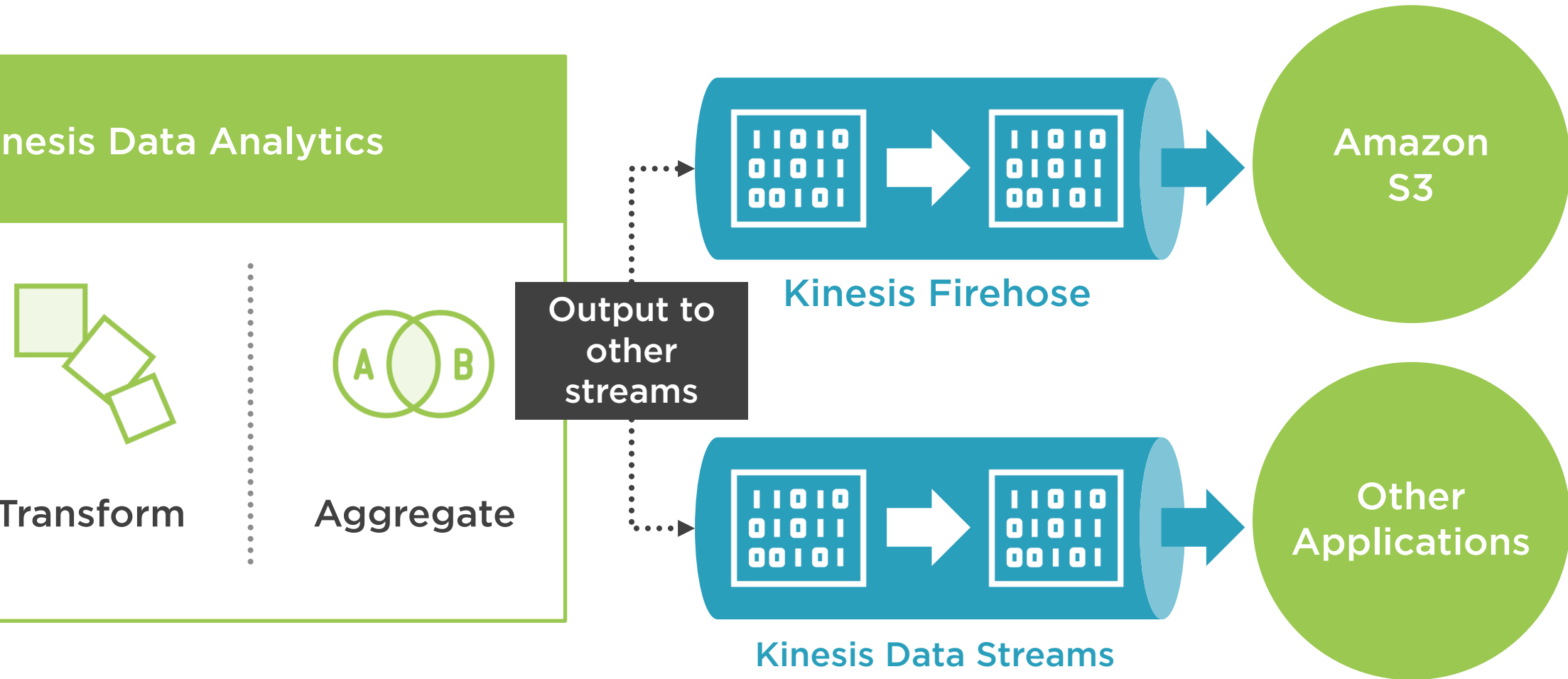
# What Is Kinesis Data Analytics?



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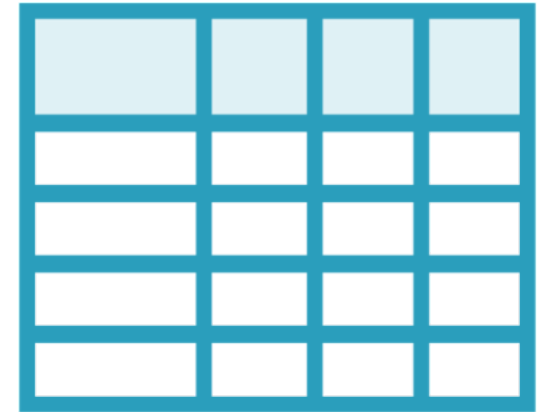
# Kinesis Data Analytics Sources



**Kinesis  
Data Streams**



**Kinesis  
Data Firehose  
Delivery Streams**



**S3  
Reference  
Data**



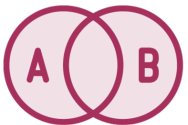
# Examples of Analyzing Streaming Data



Finding most popular products for a given period



Machine learning anomaly detection



Joining reference data and streaming data for more complex analysis



# Examples of Transforming Streaming Data



Unstructured Apache  
Log data to JSON  
or CSV



Parsing data with  
a regex

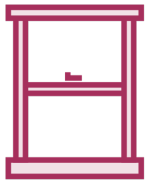


Splitting strings with a  
separator character.  
e.g. a comma or pipe  
(, or |)

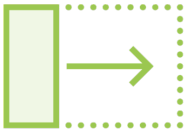
# Examples of Aggregating Streaming Data



Common aggregations like SUMs, COUNTs, GROUP BYs



Tumbling window aggregations (“every 60 seconds”)

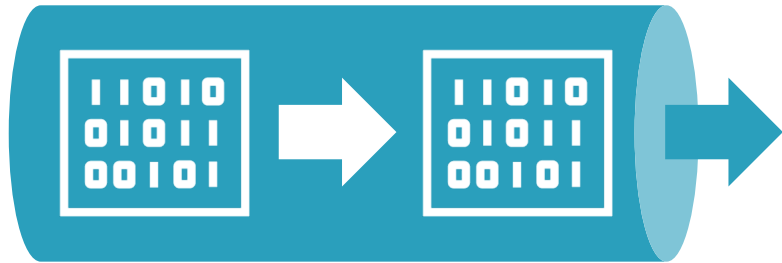


Sliding window aggregations (“the last 60 seconds”)





# Kinesis Data Analytics Outputs



**The AWS Console**

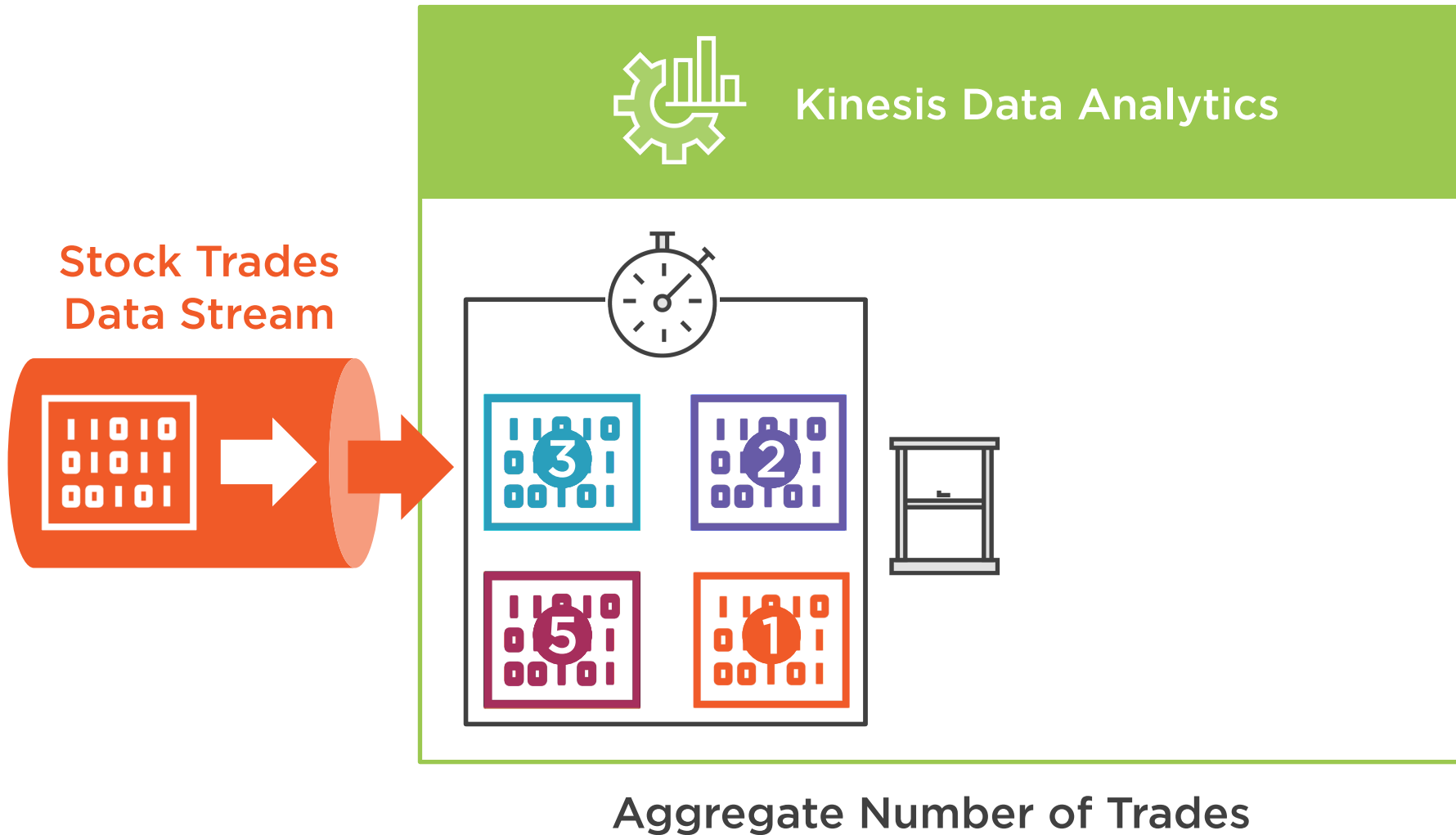
**Kinesis Data Streams**

**Kinesis Data Firehose Delivery Streams**

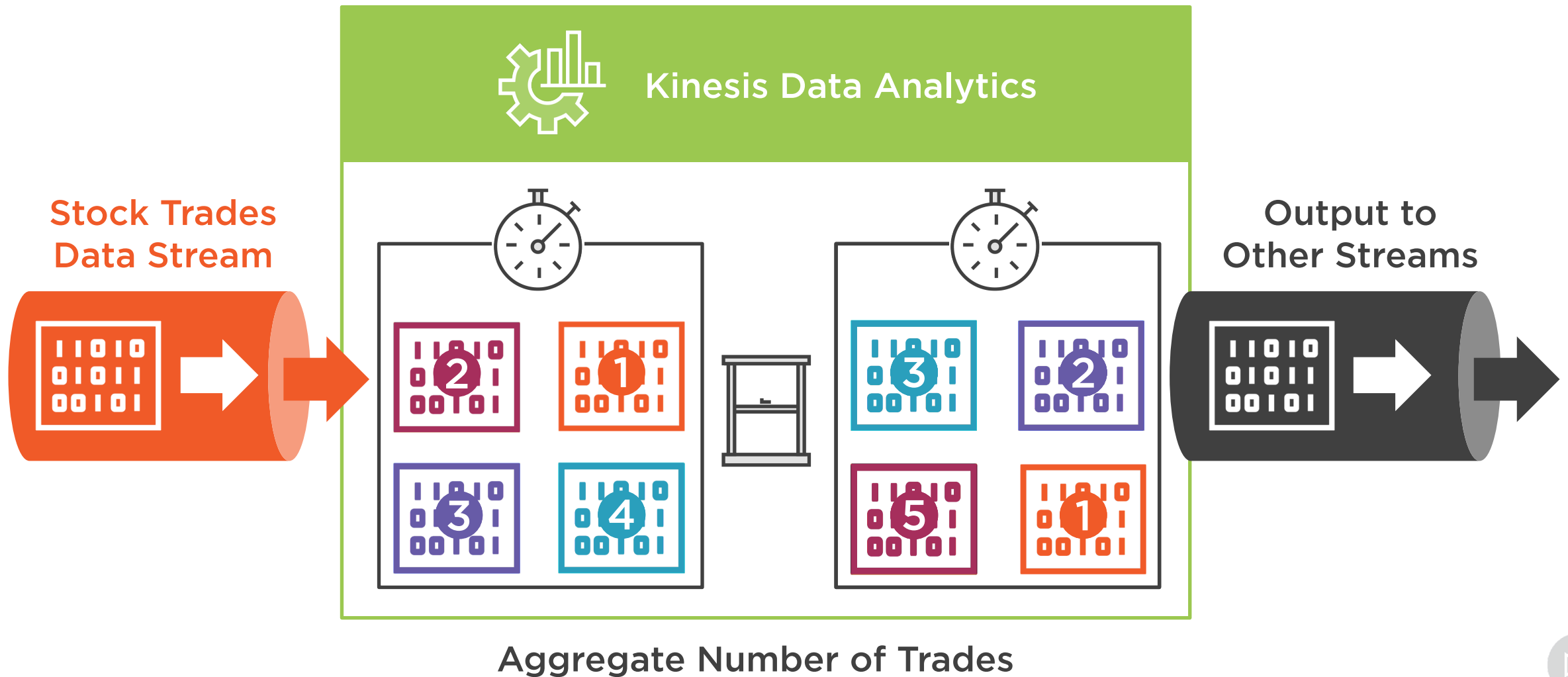
**AWS Lambda Functions**

**Outputs can then send to S3, Redshift,  
Splunk and elsewhere**

# Kinesis Data Analytics In Action



# Kinesis Data Analytics In Action



# Amazon Kinesis Video Streams

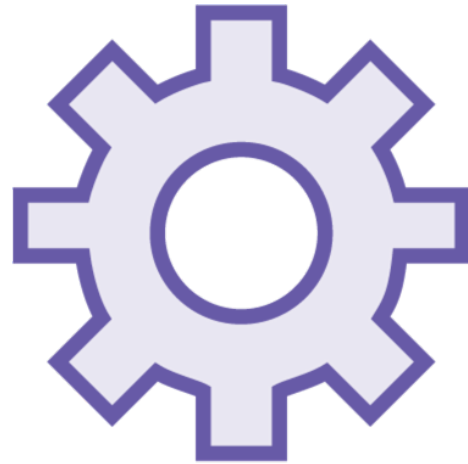
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# Purpose of Kinesis Video Streams



**Stream**



**Process**



**Store**

# Kinesis Video Stream Libraries



## Producer Libraries

To help send video data to AWS

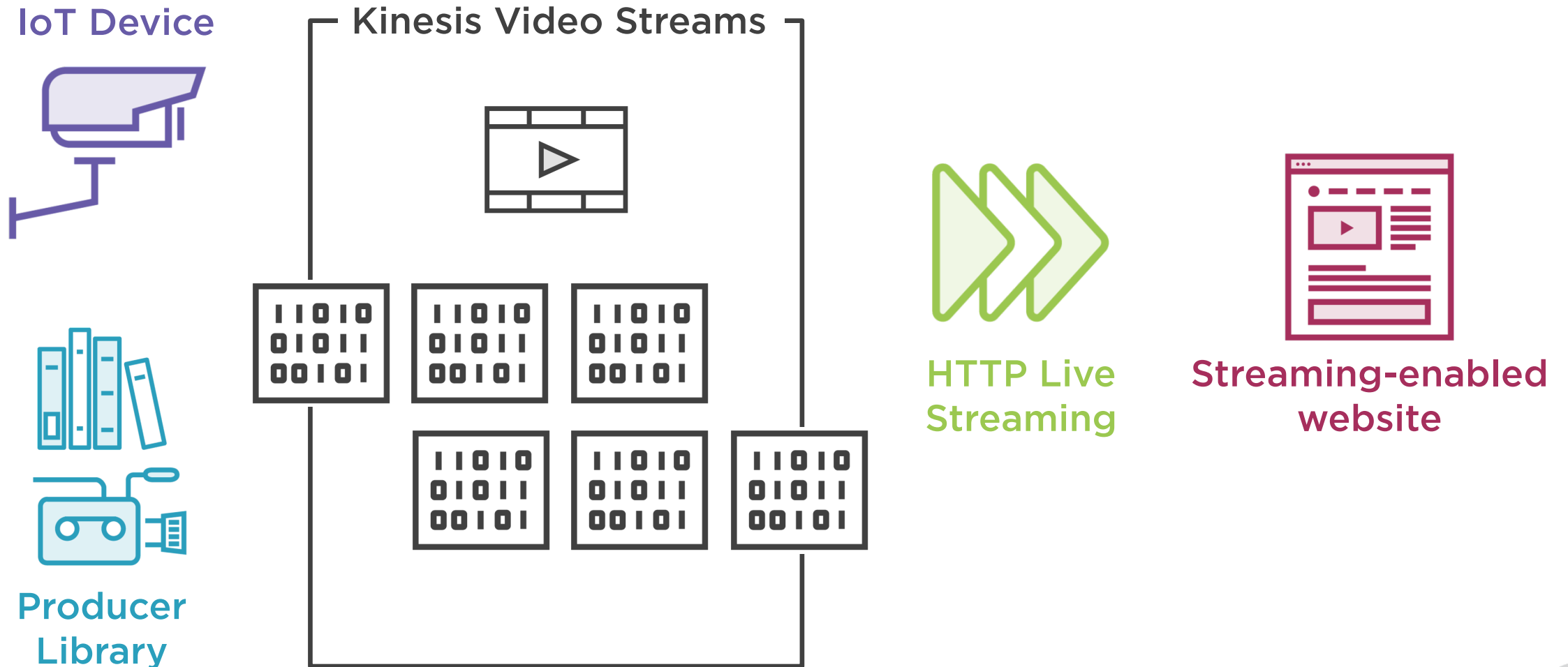


## Consumer Libraries

Tools to parse information from  
the video streams

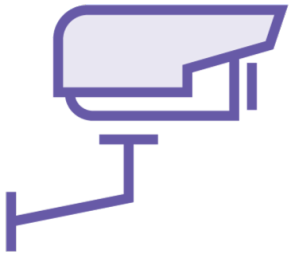


# Streaming Video in a Webpage

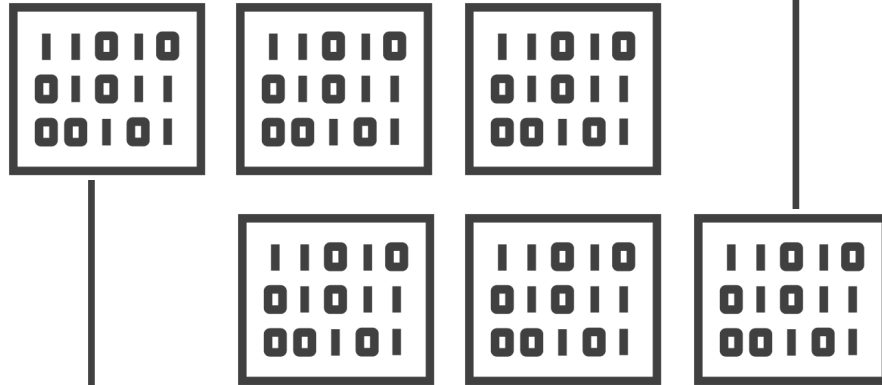
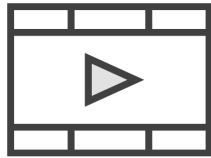


# Object Detection

IoT Device



Kinesis Video Streams



Producer  
Library



Amazon  
SageMaker



Alert





# Summary



## **“Amazon Kinesis” services**

- Data Streams and Firehose
- Kinesis Data Analytics
- Kinesis Video Streams





Up next:  
Amazon Kinesis Data Streams

