



Kineses Data Analytics



Brock Tubre
INSTRUCTOR

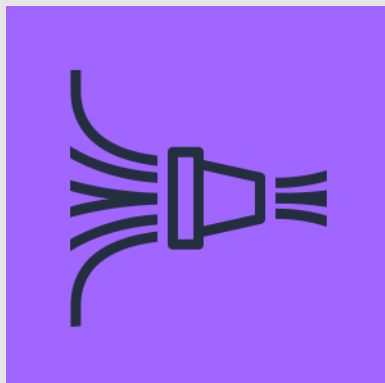
The Kinesis Family



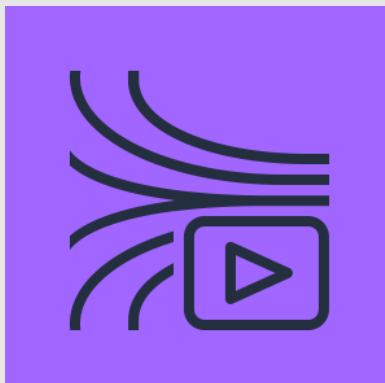
Kinesis



Kinesis
Data Streams



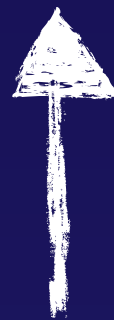
Kinesis
Data Firehose



Kinesis
Video Streams



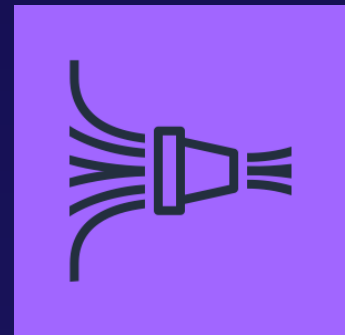
Kinesis
Data Analytics



Streaming Input



**Kinesis Data
Streams**

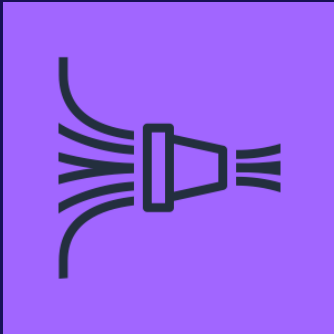


**Kinesis Data
Firehose**

Streaming Input



Kinesis Data
Streams



Kinesis Data
Firehose



Kinesis Data Analytics



Kinesis
Data Analytics

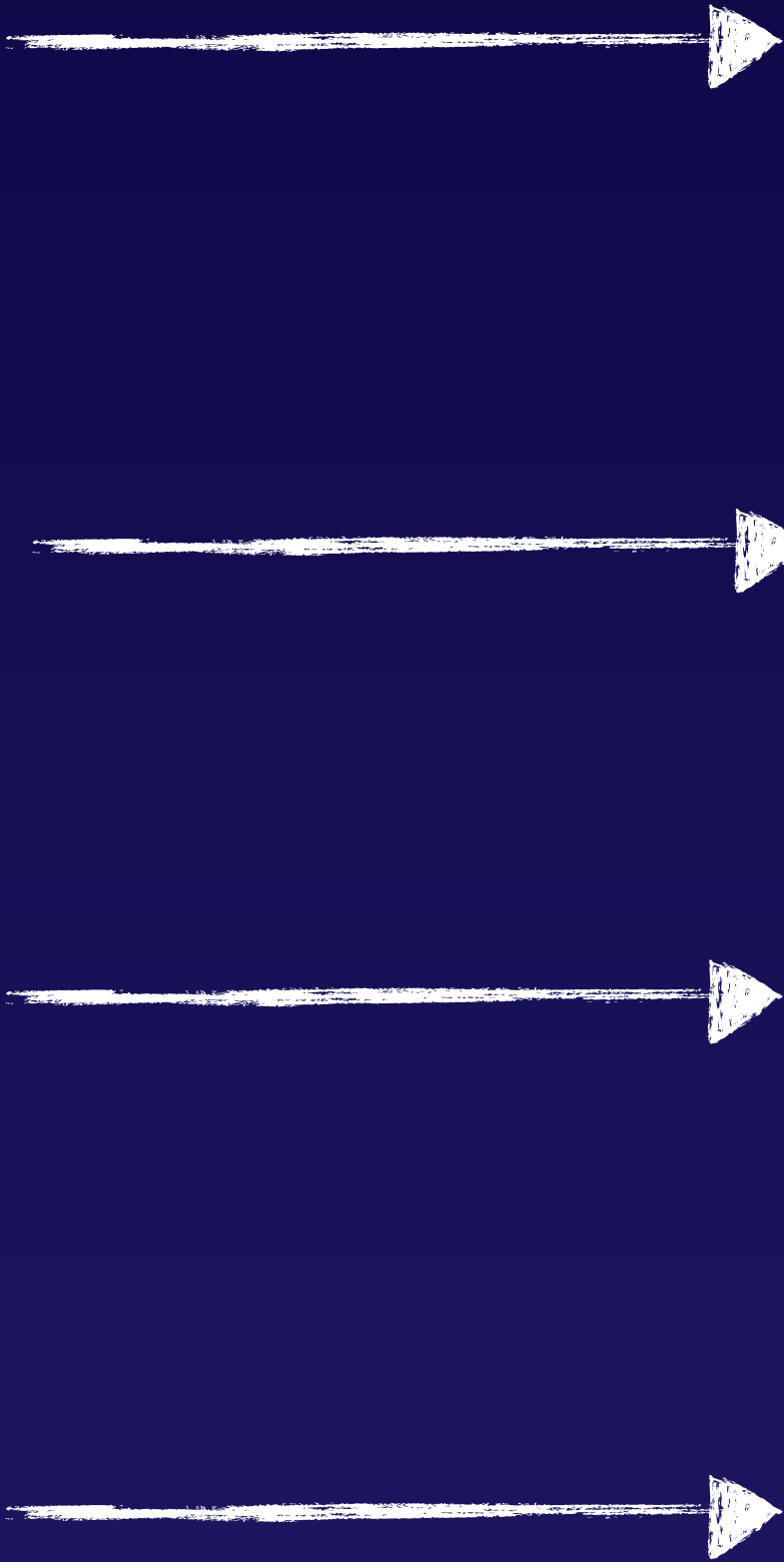
Streaming Input



Kinesis Data Streams



Kinesis Data Firehose



Kinesis Data Analytics




Kinesis Data Analytics



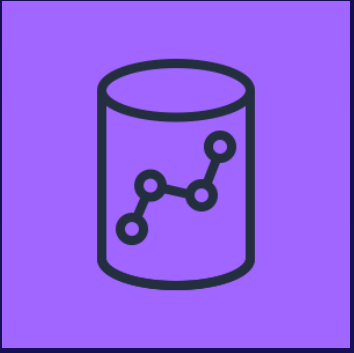
Kinesis Data Analytics




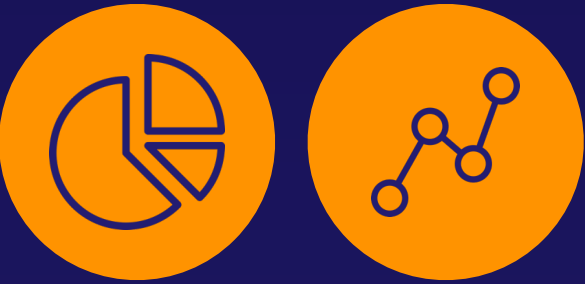
Storage and Visuals



S3



Redshift



Amazon Kinesis

Dashboard

Data Streams

Data Firehose

Data Analytics

Video Streams

External resources

What's new

Kinesis Analytics applications > website-kinesis-analytics > SQL editor

?

Real-time analytics

Save and run SQL

Add SQL from templates

Download SQL

SQL reference guide

Kinesis data generator tool

1

SELECT STREAM ROWTIME FROM SOURCE_SQL_STREAM_001

...

Application status: RUNNING

Source data

Real-time analytics

Destination

Streaming data

SOURCE_SQL_STREAM_001

Reference data (optional)

Connect reference data

The streaming data below is a sample from Kinesis Firehose delivery stream [website-capture-sandbox-delivery-stream](#)

Actions

Filter by column name

ROWTIME TIMESTAMP	type VARCHAR(16)	x INTEGER	y INTEGER	url VARCHAR(8)	APPROXIMATE_ARRIVAL TIMESTAMP
2019-04-01 10:38:45.768	mousemove	806	8	/about	2019-04-01 10:38:44.117
2019-04-01 10:38:45.768	mousemove	806	8	/about	2019-04-01 10:38:44.127
2019-04-01 10:38:45.768	mousemove	790	31	/about	2019-04-01 10:38:44.144
2019-04-01 10:38:45.768	mousemove	747	90	/about	2019-04-01 10:38:44.152
2019-04-01 10:38:45.768	mousemove	733	115	/about	2019-04-01 10:38:44.153





**Kinesis
Data Analytics**

When should you use Kinesis Data Analytics?

- Run SQL queries on streaming data.
- Construct applications that provide insight on your data.
- Create metrics, dashboards, monitoring, notifications, and alarms.
- Output query results into S3 (other AWS datasources).

- **Responsive real-time analytics**

Example: Send real-time alarms or notifications when certain metrics reach predefined threshold.

- **Stream ETL jobs**

Example: Stream raw sensor data then, clean, enrich, organize, and transform it before it lands into data warehouse or data lake.

Task at hand	Which Kinesis service to use?	Why?
Need to stream Apache log files directly from (100) EC2 instances and store them into Redshift.	Kinesis Firehose	Firehose is for easily streaming data directly to a final destination. First the data is loaded into S3, then copied into Redshfit.
Need to stream live video coverage of a sporting event to distribute to customers in near real-time.	Kinesis Video Streams	Kinesis Video Streams processes real-time streaming video data (audio, images, radar) and can be fed into other AWS services.
Need to transform real-time streaming data and immediately feed into a custom ML application.	Kinesis Streams	Kinesis Streams allows for streaming huge amounts of data, process/transform it, and then store it or feed into custom applications or other AWS services.
Need to query real-time data, create metric graphs, and store output into S3.	Kinesis Analytics	Kinesis Analytics gives you the ability to run SQL queries on streaming data, then store or feed the output into other AWS services.