

AWS Kinesis

Can be used as alternative to Kafka.

Services in it –

- Kinesis can take in streams from multiple sources.
- Kinesis Analytics
- Kinesis firehose to store data to S3 buckets , Redshift, ElasticSearch, Splunk

Streams –

Processed in shards. Data is divided into shards and then processed. Data is retained for only 24 hours.

Kinesis producers are ways to input data.

- SDK
- Kinesis producer library
- Kinesis agents
- 3rd party like spark

Kinesis Data Streams vs Firehose

- Streams
 - Going to write custom code (producer / consumer)
 - Real time (~200 ms latency for classic, ~70 ms latency for enhanced fan-out)
 - Must manage scaling (shard splitting / merging)
 - Data Storage for 1 to 7 days, replay capability, multi consumers
 - Use with Lambda to insert data in real-time to ElasticSearch (for example)
- Firehose
 - Fully managed, send to S3, Splunk, Redshift, ElasticSearch
 - Serverless data transformations with Lambda
 - Near real time (lowest buffer time is 1 minute)
 - Automated Scaling
 - No data storage

Kinesis Data Streams vs SQS

	Kinesis Data Streams	Kinesis Data Firehose	Amazon SQS Standard	Amazon SQS FIFO
Managed by AWS	yes	yes	yes	yes
Ordering	Shard / Key	No	No	Specify Group ID
Delivery	At least once	At least once	At least once	Exactly Once
Replay	Yes	No	No	No
Max Data Retention	7 days	No	14 days	14 days
Scaling	Provision Shards: 1MB/s producer 2MB/s consumer	No limit	No limit	~3000 messages per second with batching (soft limit)
Max Object Size	1MB	128 MB at destination	256KB (more if using extended lib)	256KB (more if using extended lib)