Amazon Kinesis

Amazon Web Services

Amazon Kinesis

Amazon Kinesis is a web service that enables you to ingest, process and analyse large streaming data. With this data you can identify trends, insights and conclude information to meet your business objectives. Typical use cases include the ability to ingest and analyse data in real time such as application logs, website interaction, and IoT and Geospatial data

Amazon Kinesis

Amazon Kinesis currently offers four services:

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

Amazon Kinesis

Amazon Kinesis Data Streams

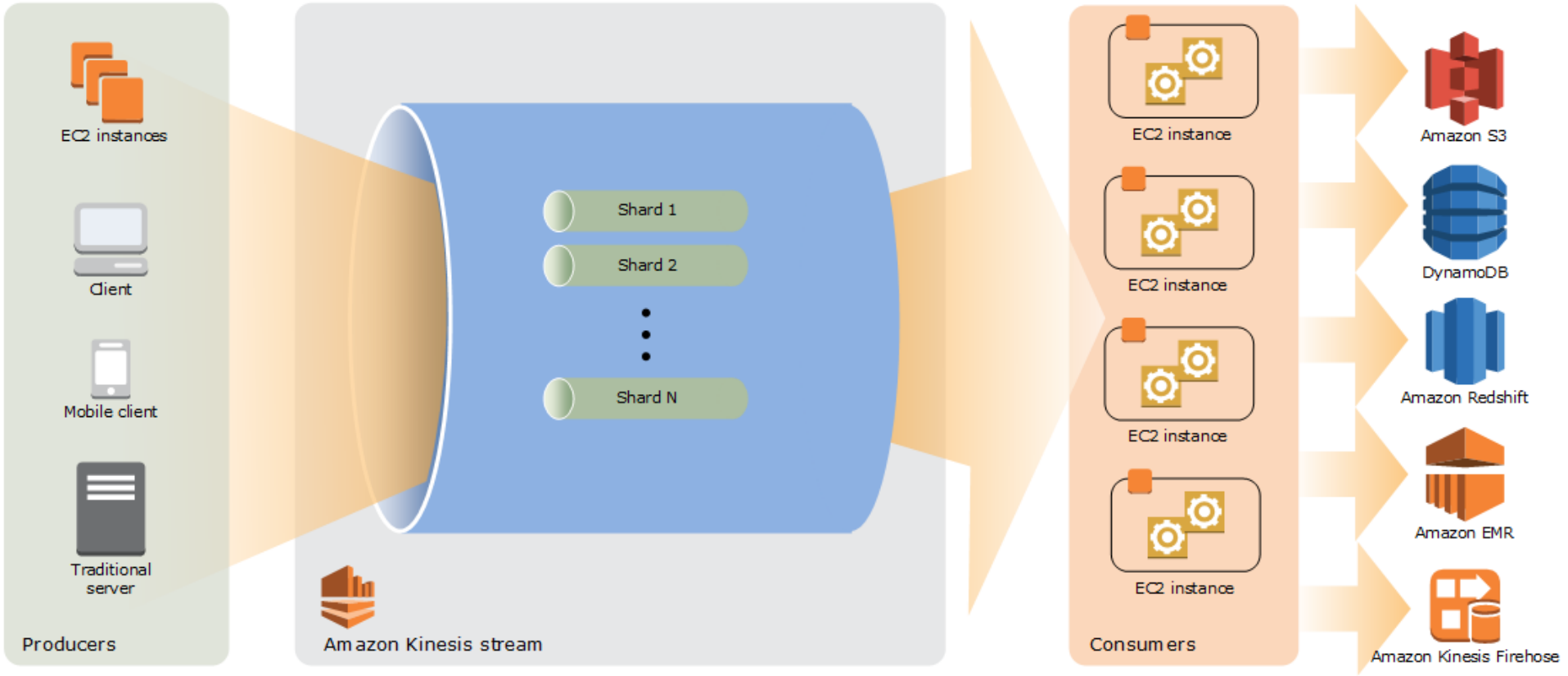
Amazon Kinesis Streams is durable and scalable data streaming services. Data records are processed and sent to dashboards, used to generate alerts, dynamically change pricing and advertising strategies, or send data to a variety of other AWS services

Typical use case for using Kinesis Data Streams:

- Accelerated log and data feed intake and processing - producers push data directly into a stream to prevent the data from being lost if the front end or application server fails
- Real-time metrics and reporting - metrics and reporting for system and application logs as the data is streaming in
- Real-time data analytics - process website clickstreams in real time, and t ze site usability engagement

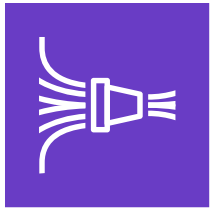
Amazon Kinesis Data Streams

Amazon Kinesis Streams



Amazon Kinesis Firehose

Amazon Kinesis Firehose enables you to load massive amounts of real-time streaming data to destinations such as Amazon S3, Redshift or Elasticsearch, and Splunk, enabling near real-time analytics with existing business intelligence tools and dashboards. You configure your data producers to send data to Kinesis Firehose and it automatically delivers the data to the destination that you specified. It can also batch, compress, transform, and encrypt the data before loading it, minimizing the amount of storage used at the destination and increasing security.

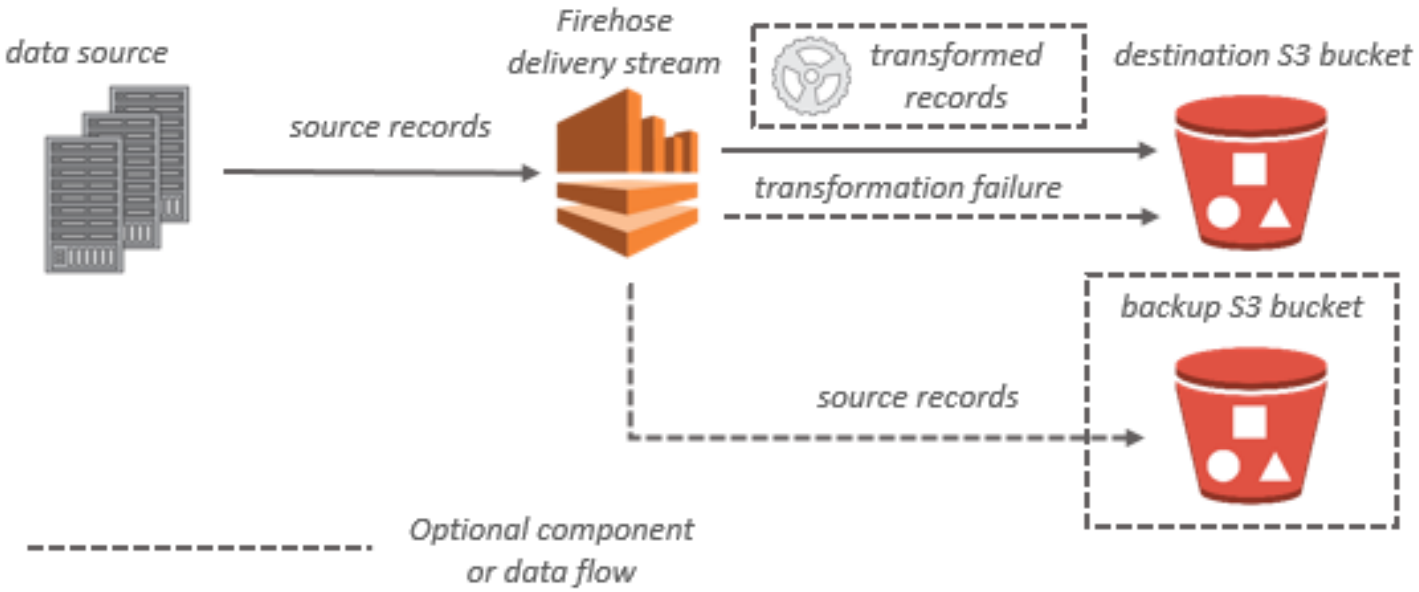


Amazon Kinesis Data Firehose

Amazon Kinesis Firehose

Data Flow

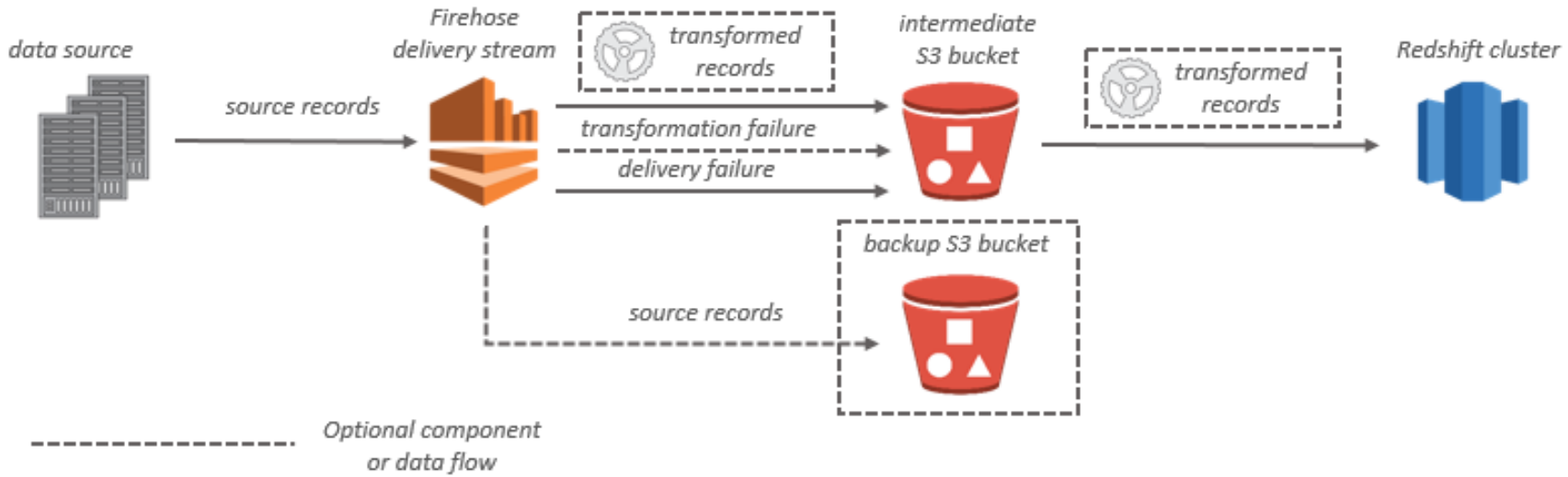
- S3 Destination



Amazon Kinesis Firehose

Data Flow

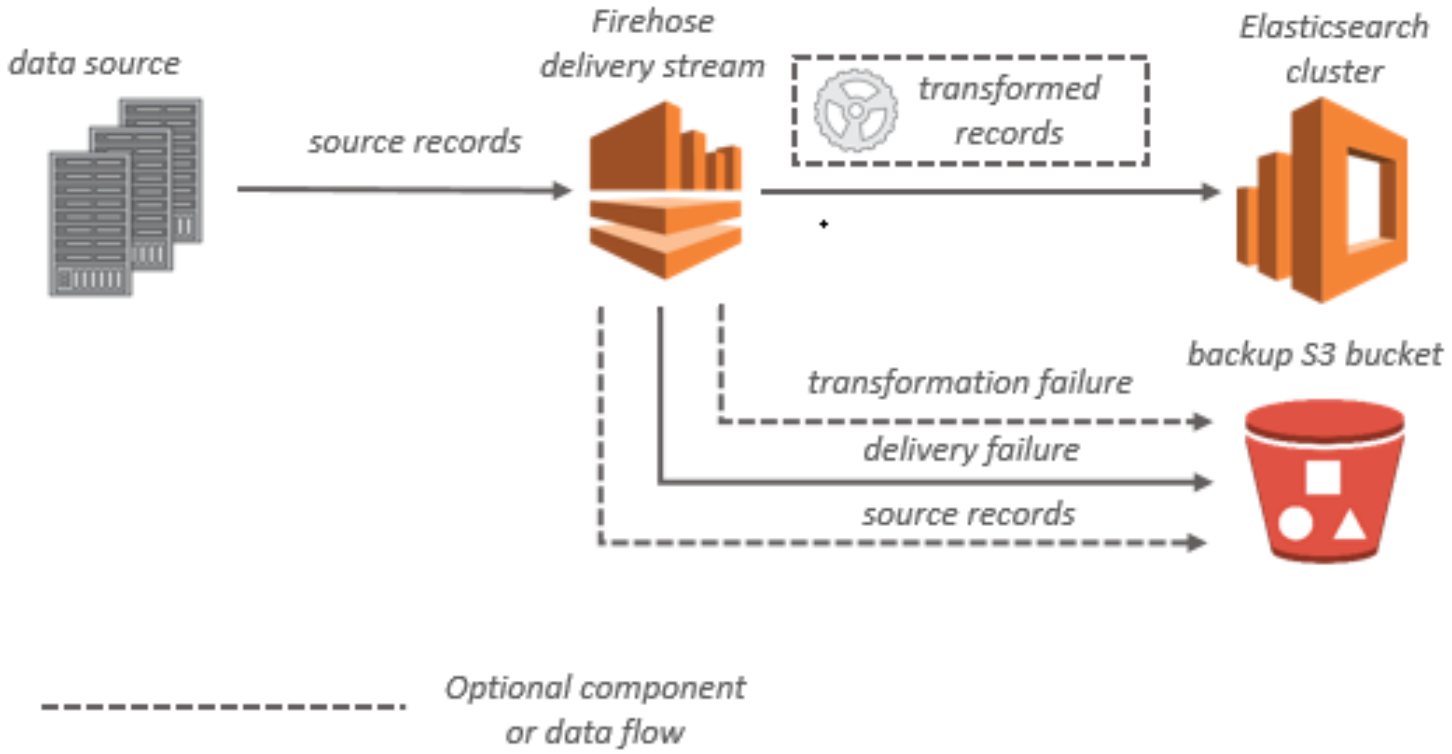
- Redshift Destination - For data destined for Amazon Redshift, the data is first delivered to an S3 bucket and then an Amazon Redshift COPY command to load data from your S3 bucket to your Amazon Redshift cluster.



Amazon Kinesis Firehose

Data Flow

- EastiSearch Destination



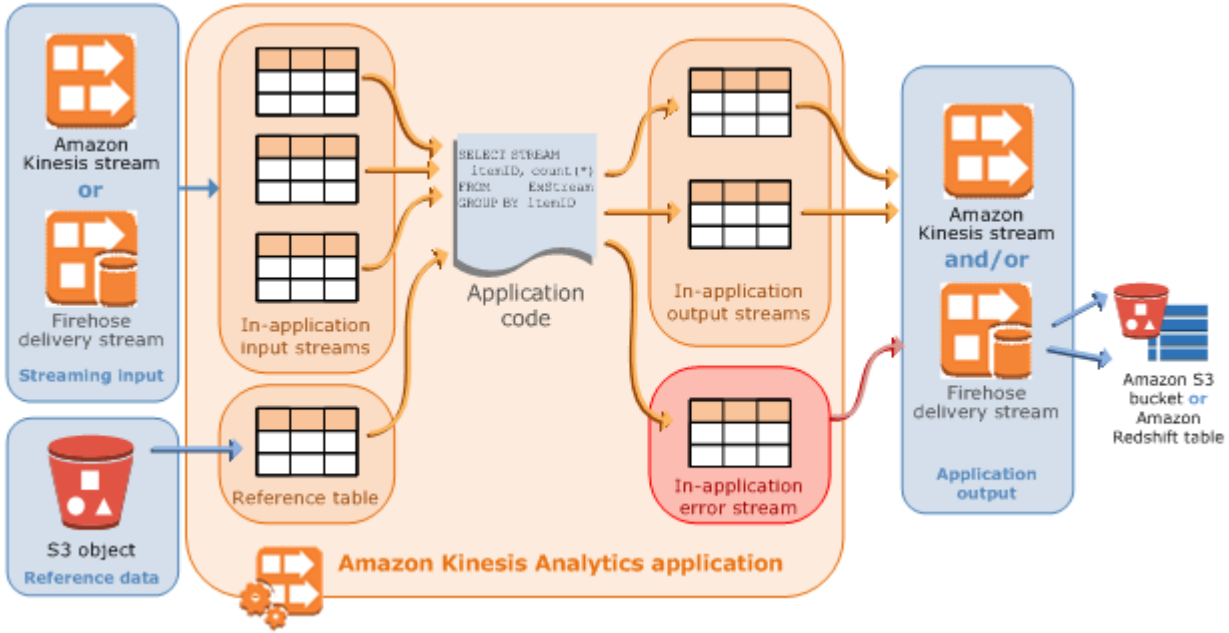
Amazon Kinesis Data Analytics

Amazon Kinesis Analytics can be used to process streaming data using SQL queries in real time. You can perform time series analytics, feed real-time dashboards, and create real-time metrics. With your SQL queries, you can construct applications that transform and gain insights into your data. Amazon Kinesis Data Analytics reduces the complexity of building, managing, and integrating streaming applications with other AWS services. SQL users can easily query streaming data or build entire streaming applications using templates and an interactive SQL editor.

Amazon Kinesis Data Analytics

Amazon Kinesis Analytics

Amazon Kinesis Analytics applications will continuously read and process streaming data in real-time. Using SQL queries you will process the incoming streaming data and produce output. Output is then sent to a destination.



- **Input** – source of streaming data that can include Kinesis Stream or Firehose that is an in-application input stream
- **Application code** – SQL statements that process input and produce output. You can write SQL statements against in-application streams, reference tables, and you can write JOIN queries to combine data from both of these sources.
- **Output** – In application code, query results go to in-application output streams

Amazon Kinesis Video Streams

Amazon Kinesis Video Streams makes it easy to securely stream video from connected devices to AWS for analytics, machine learning (ML), playback, and other processing. Kinesis Video Streams automatically provisions and elastically scales all the infrastructure needed to ingest streaming video data from millions of devices. It also durably stores, encrypts, and indexes video data in your streams, and allows you to access your data through easy-to-use APIs.

Amazon Kinesis Video Streams

Next Video