# Introduction to Amazon Kinesis Firehose

Ray Zhu, Sr. Product Manager, Amazon Kinesis

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Learn more - http://amzn.to/2c34UfE
Streaming data applications can deliver compelling, near real-time user experiences, but building the back-end infrastructure to collect and process streaming data is difficult. Amazon Kinesis Firehose makes it easy for you to load streaming data into AWS without having to build custom stream processing applications. In this webinar, we will introduce Amazon Kinesis Firehose and discuss how to ingest streaming data into Amazon S3, Amazon Redshift, and Amazon Elasticsearch Service using Amazon Kinesis Firehose. We will also highlight key use cases based on real-world examples from IoT, AdTech, E-Commerce, and Gaming.

Learning Objectives:
· Get an introduction to streaming data and an overview of Amazon Kinesis Firehose
· Learn about common streaming data use cases from IoT, Ad Tech, E-Commerce, and Gaming
· Understand how to use Amazon Kinesis Firehose to load streaming data into Amazon S3, Amazon Redshift, and Amazon Elasticsearch Service

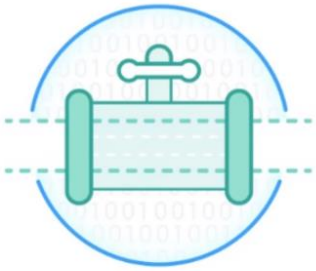
## Agenda

- Streaming Data and Amazon Kinesis
- Kinesis Firehose Overview
- Stream Data to Amazon S3
- Stream Data to Amazon Redshift
- Stream Data to Amazon Elasticsearch Service
- Kinesis Agent
- Kinesis Firehose Monitoring
- Kinesis Firehose Pricing

# Streaming Data Scenarios

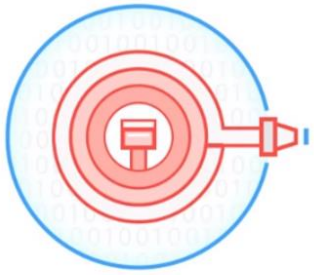
| Scenarios | 1 Accelerated Ingest-Transform-Load | 2 Continual Metrics Generation | 3 Responsive Data Analysis |
|---|---|---|---|
| **Data Types** | IT logs, applications logs, social media / clickstreams, sensor or device data, market data | | |
| **Ad/Marketing Tech** | Publisher, bidder data aggregation | Advertising metrics like coverage, yield, conversion | Analytics on user engagement with ads, optimized bid / buy engines |
| **IoT** | Sensor, device telemetry data ingestion | IT operational metrics dashboards | Sensor operational intelligence, alerts, and notifications |
| **Gaming** | Online customer engagement data aggregation | Consumer engagement metrics for level success, transition rates, CTR | Clickstream analytics, leaderboard generation, player-skill match engines |
| **Consumer Engagement** | Online customer engagement data aggregation | Consumer engagement metrics like page views, CTR | Clickstream analytics, recommendation engines |

# Amazon Kinesis



## Kinesis Streams

Stores data as a continuous replayable stream for custom applications



## Kinesis Firehose

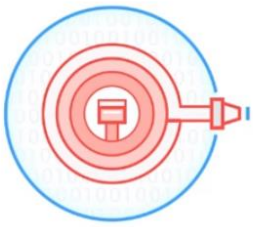
Load streaming data into Amazon S3, Amazon Redshift, and Amazon Elasticsearch Service

## Kinesis Analytics

Analyze data streams using standard SQL queries

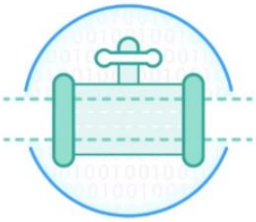
## Match the Services and Use Cases

1. Accelerated Ingest-Transform-Load
2. Continual Metrics Generation
3. Responsive Data Analysis



Kinesis Firehose

Kinesis Analytics



Kinesis Streams

# Kinesis Firehose Overview

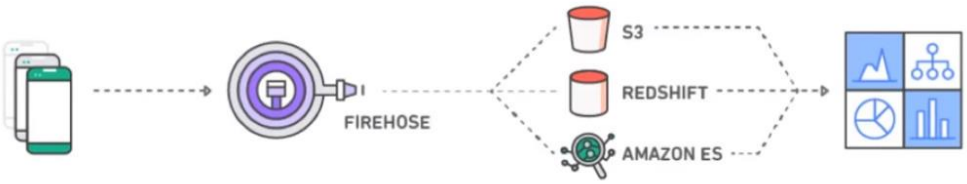
## Key Concepts

1. **Delivery Stream:** The underlying entity of Firehose. Use Firehose by creating a delivery stream to a specified destination and send data to it.

2. **Record:** The data of interest that your data producer sends to a delivery stream. A record can be as large as 1000 KB.

3. **Data Producers:** Producers send records to a Delivery Stream. For example, a web server sends log data to a delivery stream is a data producer.

# Data Flow Overview




*Capture and submit streaming data to Firehose*

*Firehose loads streaming data continuously into Amazon S3 ,Redshift, or Elasticsearch Service*

*Analyze streaming data using your favorite analytical tools*

**Zero administration:** Capture and deliver streaming data into Amazon S3, Redshift, and Elasticsearch Service without writing an application or managing infrastructure.

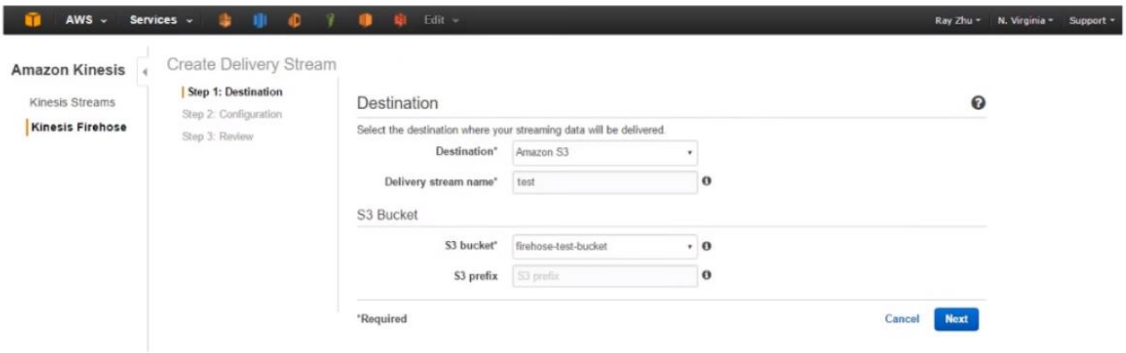
**Direct-to-data store integration:** Batch, compress, and encrypt streaming data for delivery into data destinations in as little as 60 secs using simple configurations.

**Seamless elasticity:** Seamlessly scale to match data throughput without intervention.

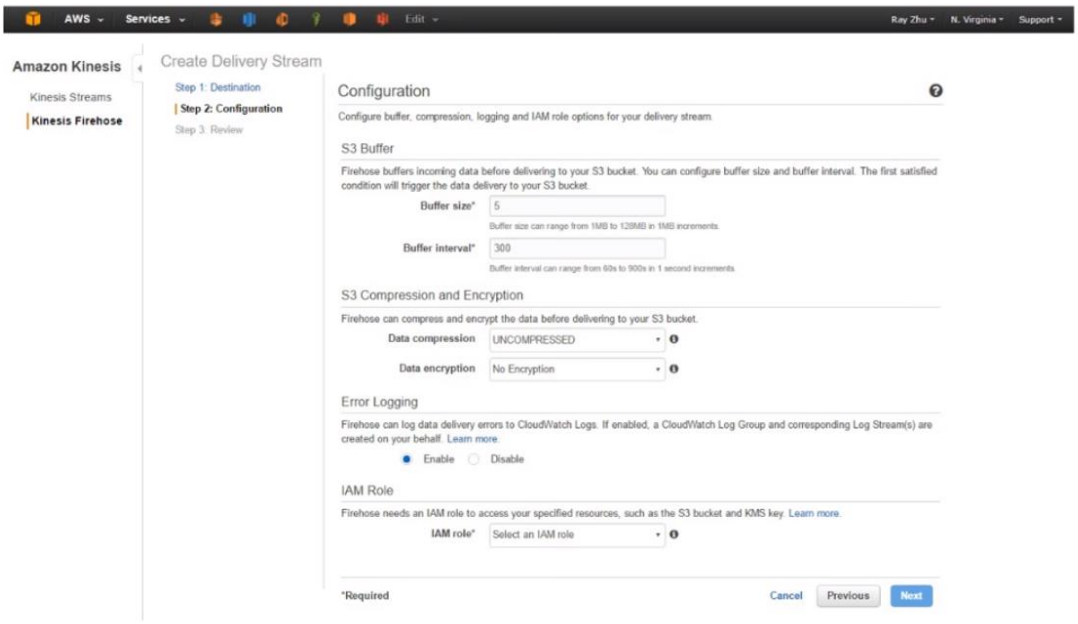
# Stream Data to S3

Let us see how to configure a Firehose delivery stream through the Firehose console. We are going to see how to use the S3 as our streaming destination

## Stream Data to S3

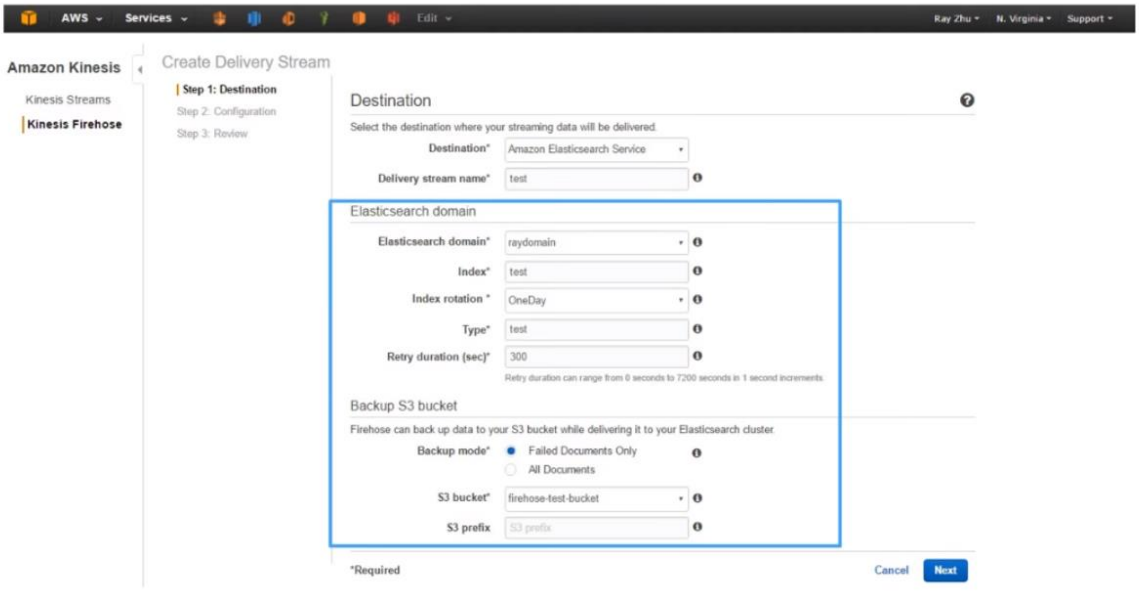


# Stream Data to S3

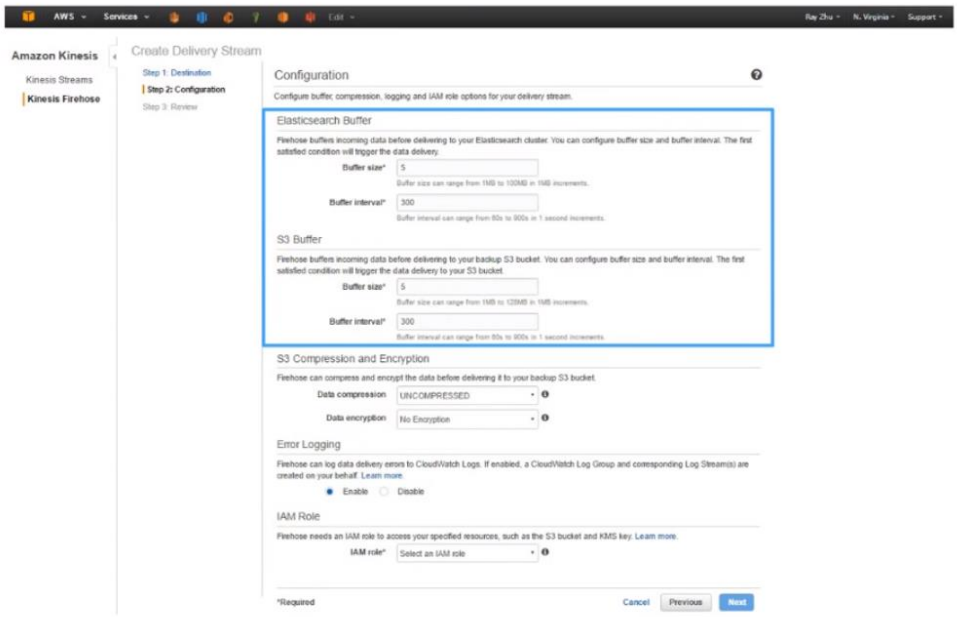



# Stream Data to Elasticsearch

## Stream Data to Elasticsearch

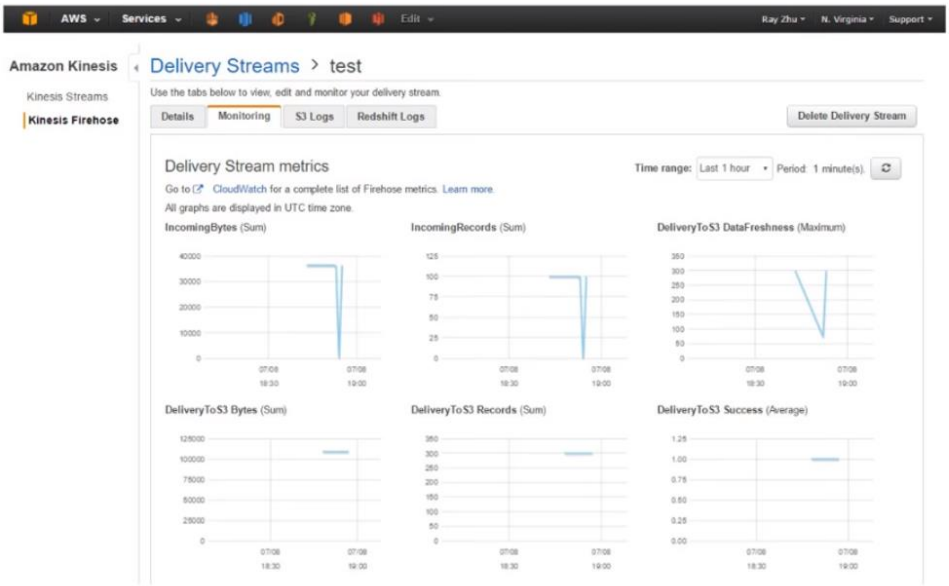


# Stream Data to Elasticsearch

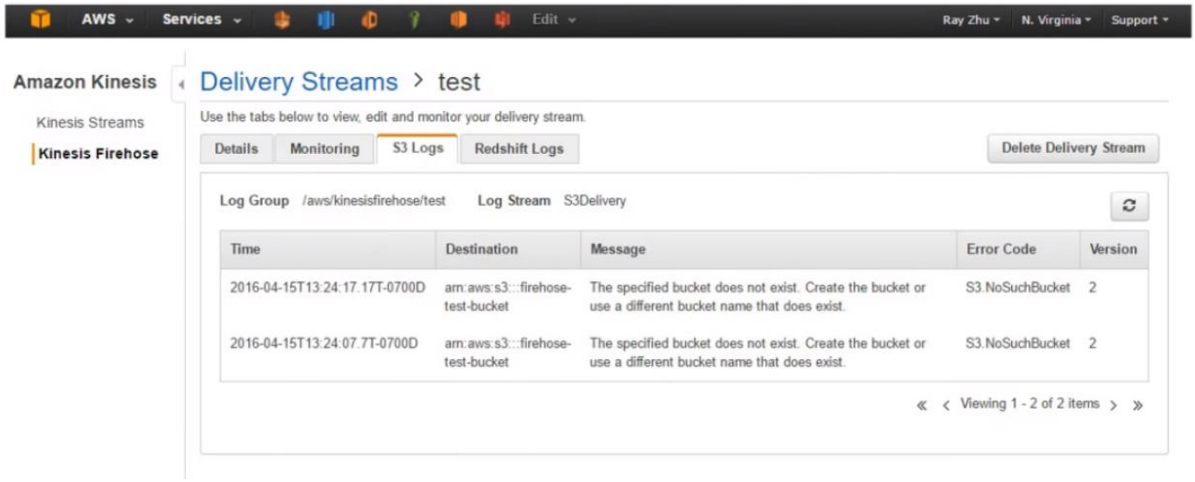



# Kinesis Firehose Monitoring

## Monitor with CloudWatch Metrics



# Monitor with CloudWatch Logs




# Kinesis Firehose Pricing

## Firehose Pricing

| Dimension | Value |
| --- | --- |
| Per 1 GB of data ingested | $0.035 |

* Records that are smaller than 5KB are rounded up to 5KB for billing

# Thank you!

Q&A