



# Kinesis

The **Kinesis** family provides us with Amazon's set of offerings related to real-time data streaming, allowing us to collect, process, and analyze data continuously at any scale. It's ideal for applications that require real-time analytics, such as monitoring logs, processing IoT data, and running machine learning models. The Kinesis services enable us to ingest large streams of data and process it with quite low latency, providing immediate insights and actions. There are four main services within the Kinesis family, which are shown below:

**Amazon Kinesis Data Streams (KDS):** Used to build custom pipelines and applications that process or analyze streaming data, it provides us with the ability to continuously capture gigabytes of data per second from hundreds of sources like website clickstreams for example.

**Amazon Kinesis Firehose:** Responsible for simplifying the process of loading streaming data into data lakes, warehouses and analytics services into AWS data stores at a **near real-time** pace, it can automatically scale to match the throughput of our data streams. However, it should be mentioned that Kinesis Firehose is a more limited service compared to KDS in terms of supported destinations as Firehose mostly being used to send data to S3, Redshift or Elasticsearch.

**Amazon Kinesis Video Streams:** Similar to KDS but used specifically for securely streaming media streams (like video or audio) from connected devices to AWS data sources.

**Amazon Kinesis Data Analytics:** Sometimes also referred to as Amazon Managed Service for Apache Flink, it processes data streams in real time with SQL or Apache Flink, two popular languages for data analysis and processing.