* An interactive query service that makes it easy to analyze data **directly** in S3 using standard SQL.

### **Features**

* Athena is **serverless**.
* Has a built-in query editor.
* Uses *Presto*, an open source, distributed SQL query engine optimized for low latency, ad hoc analysis of data.
* Athena supports a wide variety of data formats such as CSV, JSON, ORC, Avro, or Parquet.
* Athena automatically executes queries in **parallel**, so that you get query results in seconds, even on large datasets.
* Athena uses Amazon S3 as its underlying data store, making your data highly available and durable.
* Athena integrates with Amazon QuickSight for easy data visualization.
* Athena integrates out-of-the-box with AWS Glue.

Athena uses a managed **Data Catalog** to store information and schemas about the databases and tables that you create for your data stored in S3.

### **Partitioning**

* By partitioning your data, you can restrict the amount of data scanned by each query, thus improving performance and reducing cost.
* Athena leverages *Hive* for partitioning data.
* You can partition your data by any key.

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### **Queries**

* You can query geospatial data.
* You can query different kinds of logs as your datasets.
* Athena stores query results in S3.
* Athena retains query history for 45 days.
* Athena does not support user-defined functions, *INSERT INTO* statements, and stored procedures.
* Athena supports both simple data types such as INTEGER, DOUBLE, VARCHAR and complex data types such as MAPS, ARRAY and STRUCT.
* Athena supports querying data in Amazon S3 Requester Pays buckets.

### **Security**

* Control access to your data by using IAM policies, access control lists, and S3 bucket policies.
* If the files in the target S3 bucket is encrypted, you can perform queries on the encrypted data itself.

### **Pricing**

* You pay only for the queries that you run. You are charged based on the amount of data scanned by each query.
* You are not charged for failed queries.
* You can get significant cost savings and performance gains by compressing, partitioning, or converting your data to a columnar format, because each of those operations reduces the amount of data that Athena needs to scan to execute a query.