

Big Data on Amazon AWS

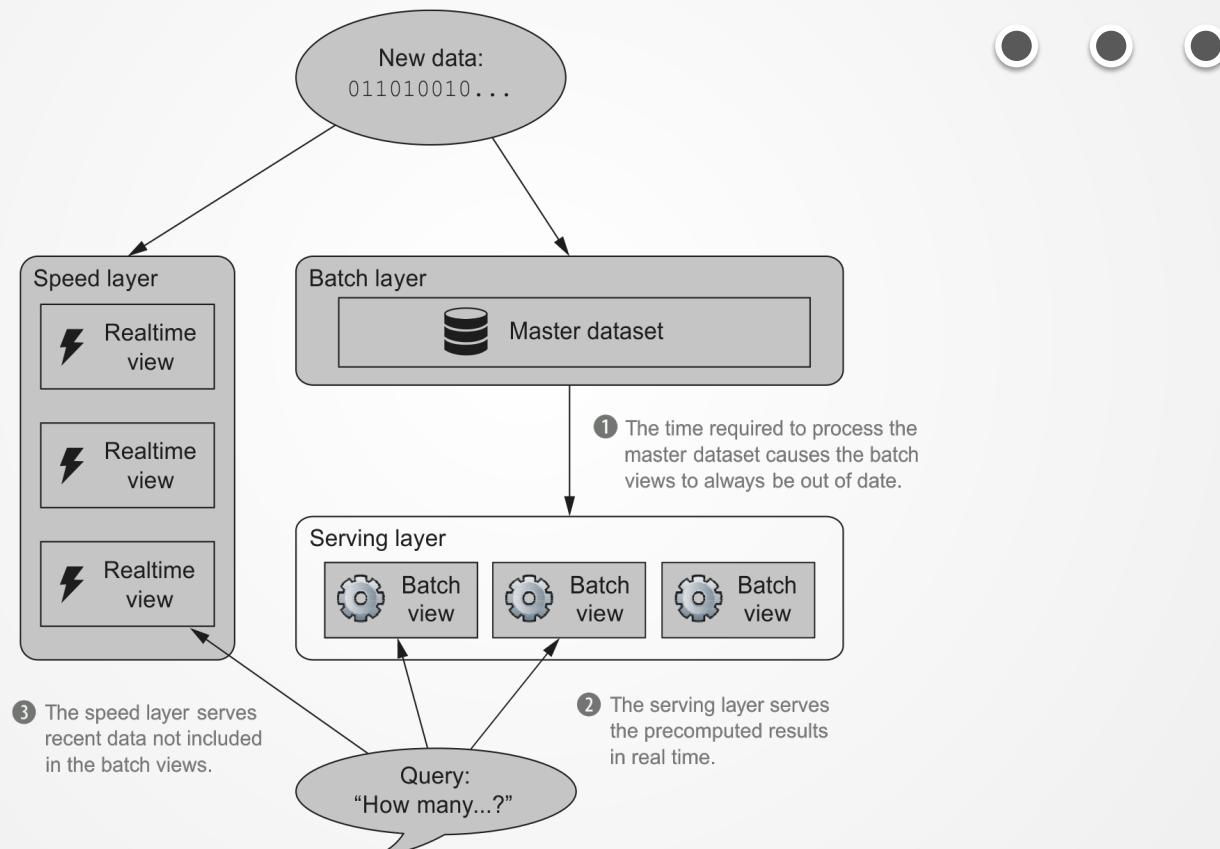
Serving Layer - [Day 3]



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Head of Content & Instructor

What's Serving Layer?

The serving layer is the last component of the batch section of the Lambda Architecture. It's tightly tied to the batch layer because the batch layer is responsible for continually updating the serving layer views.



Serving Layer on AWS



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Amazon Athena

- Serverless
- Using SQL to run Ad-hoc Queries
- Analyze Data Directly S3
- Pay only for Data Scanned
- Query Editor
- NO ETL Required

Amazon OpenSearch Service

- Setup and Configuration
- In-place Upgrades
- Event Monitoring and Alerting
- Support for multiple Query Languages
- Integration with Open source tools

Amazon TimeStream

- Serverless auto-scaling architecture
- Data Storage Tiering
- Purpose-Built adaptive query engine
- Built-in time series Analytics
- Always-encrypted data

Amazon Redshift

- Analyze Data Structured or Semi-Structured
- MPP
- Easy Analytics for Everyone
- Query Editor
- API To Interact with Amazon Redshift
- Fault Tolerant

Amazon DocumentDB

- Low-latency global
- Use MongoDB drivers and tools
- Highly Durable
- Scalable

Amazon RDS

- Managed relational Database Service
- Automatic Software Patching
- Performance SSD
- Scalability in Minutes
- Automated backups

Amazon DynamoDB

- NoSQL Database
- Key-value document
- Microsecond latency with DynamoDB Accelerator
- Read / Write capacity modes
- Serverless
- Auto Scaling

Amazon Keyspaces

- Apache Cassandra
- Compatible with CQL
- On-demand capacity mode
- Serverless
- Performance at scale

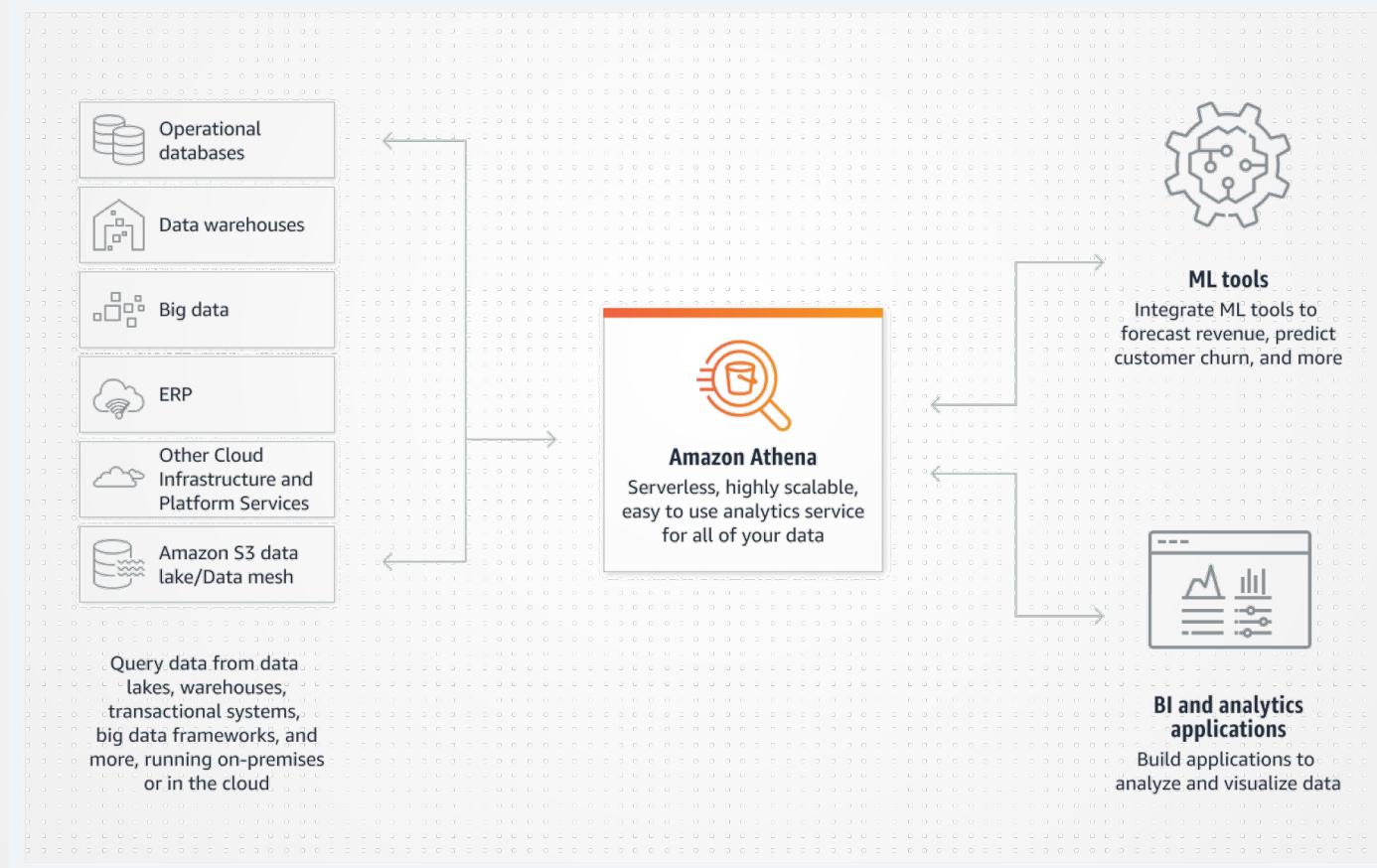
Amazon Kinesis

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

Amazon Athena



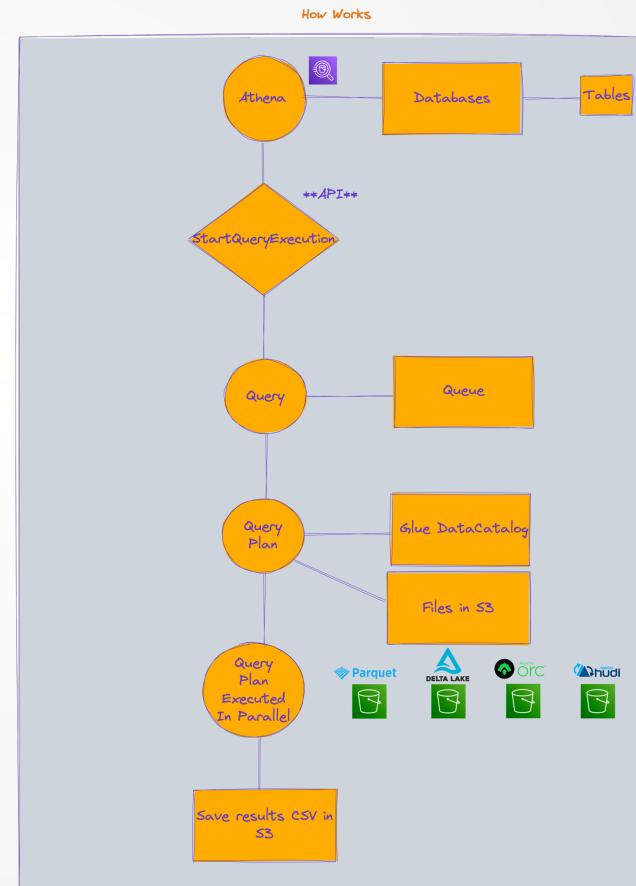
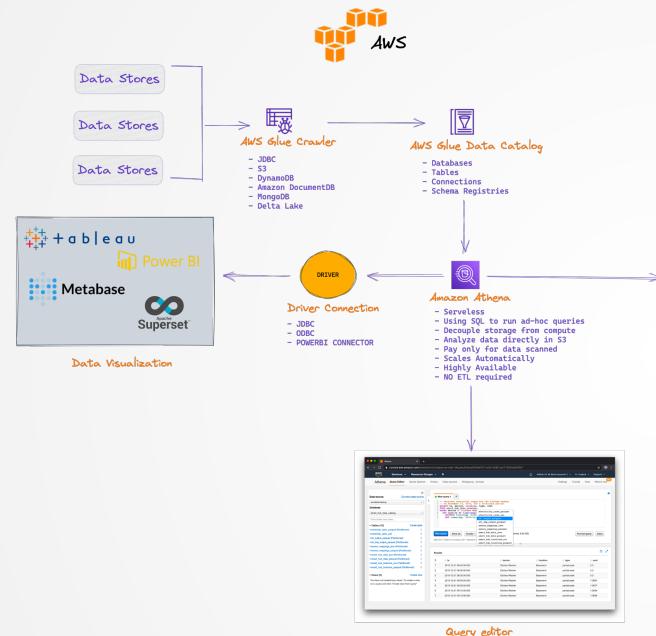
Amazon Athena is an interactive query service that makes it easy to analyze data in Amazon S3 using standard SQL. Athena is serverless, so there is no infrastructure to manage, and you pay only for the queries that you run.



Amazon Athena



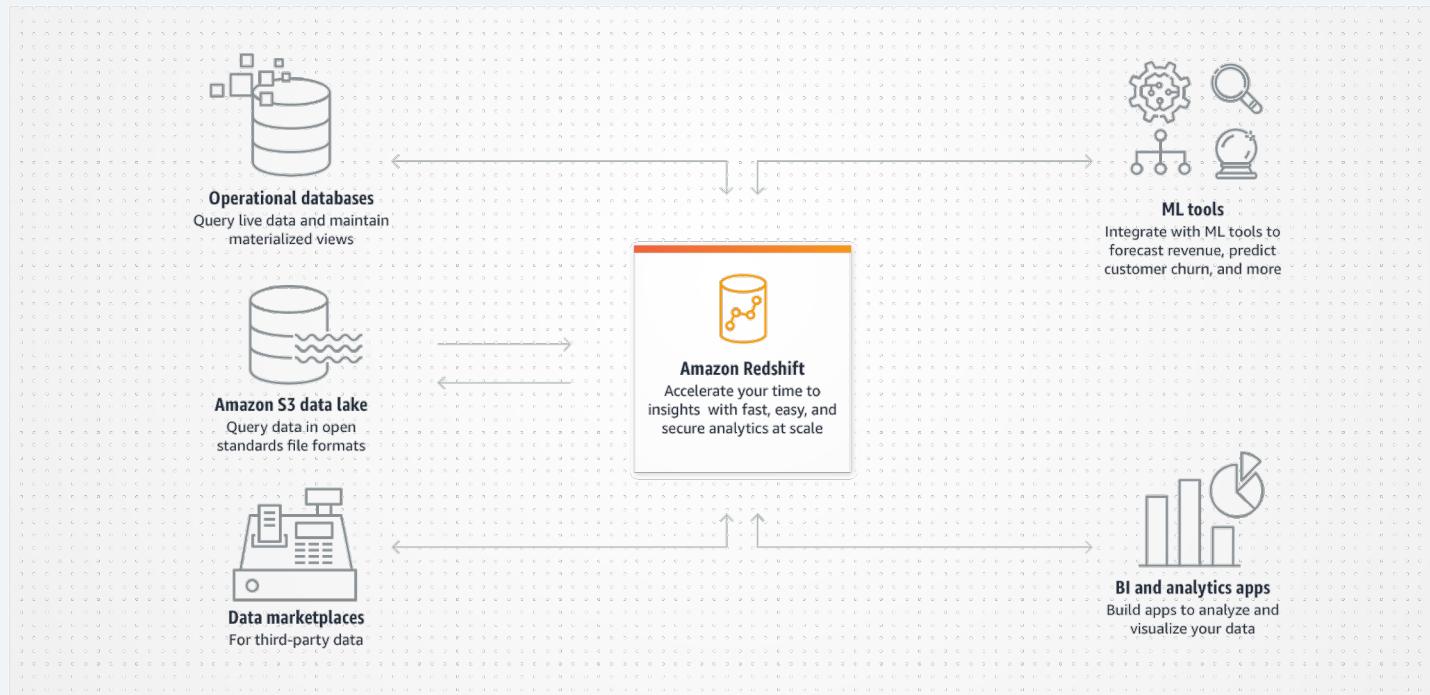
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Amazon Redshift



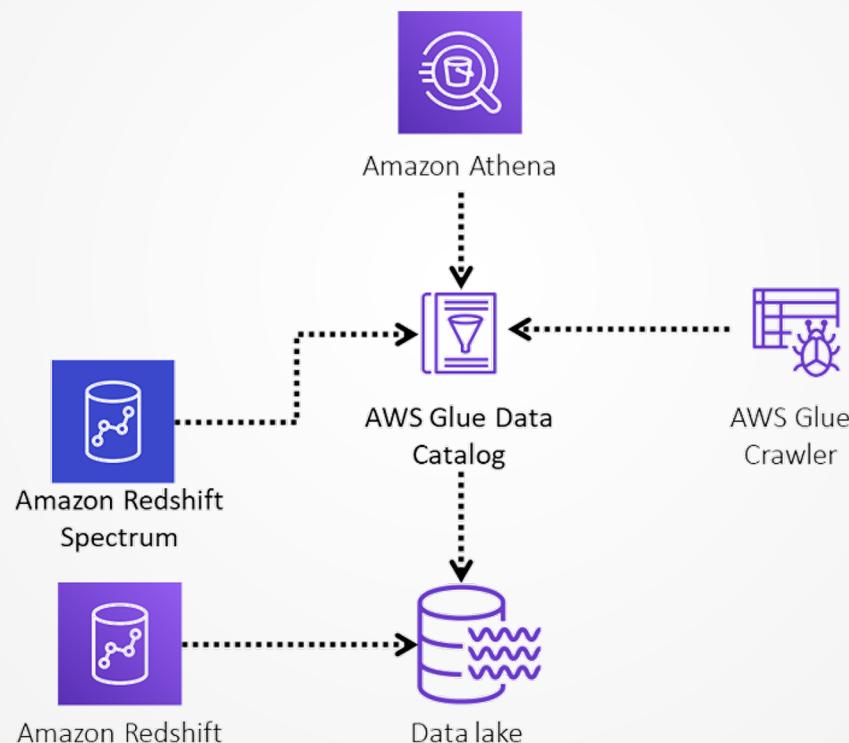
Amazon Redshift uses SQL to analyze structured and semi-structured data across data warehouses, operational databases, and data lakes, using AWS-designed hardware and machine learning to deliver the best price performance at any scale.



Amazon Redshift



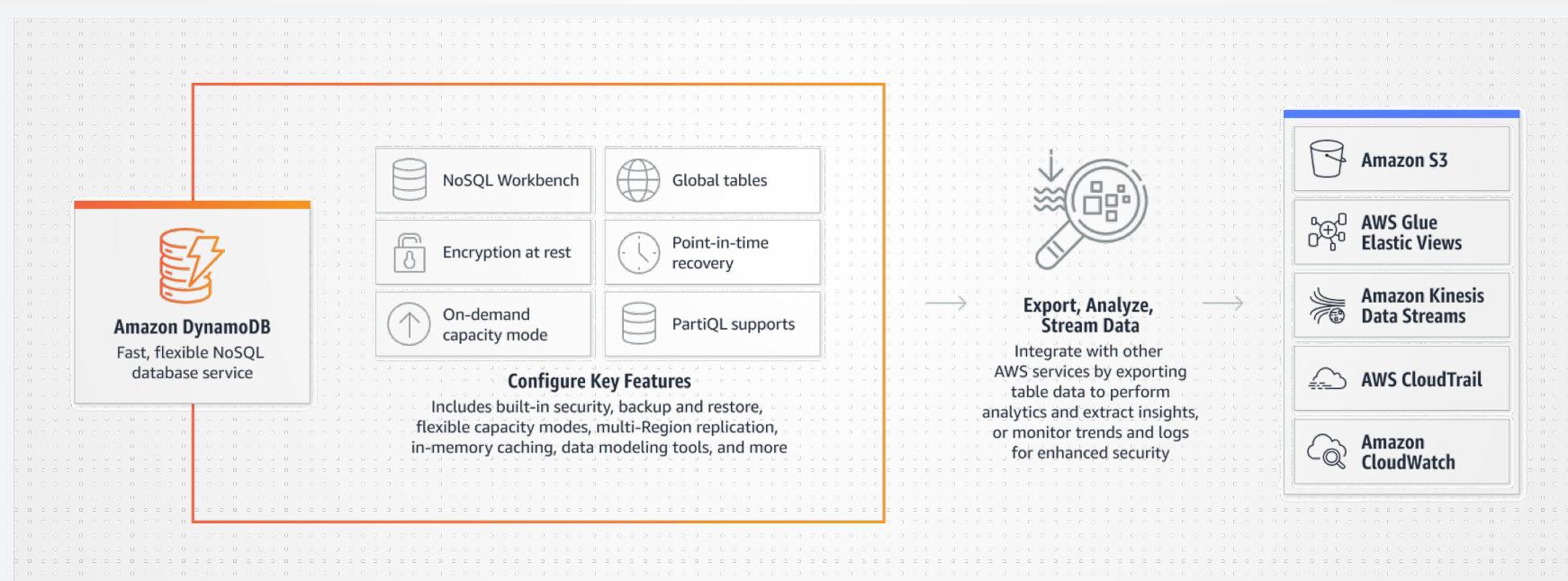
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Amazon DynamoDB



Amazon DynamoDB is a fully managed, serverless, key-value NoSQL database designed to run high-performance applications at any scale. DynamoDB offers built-in security, continuous backups, automated multi-Region replication, in-memory caching, and data export tools.



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Amazon
DynamoDB



On-demand Capacity Mode

Built-in Support For ACID Transactions

On-demand Backup

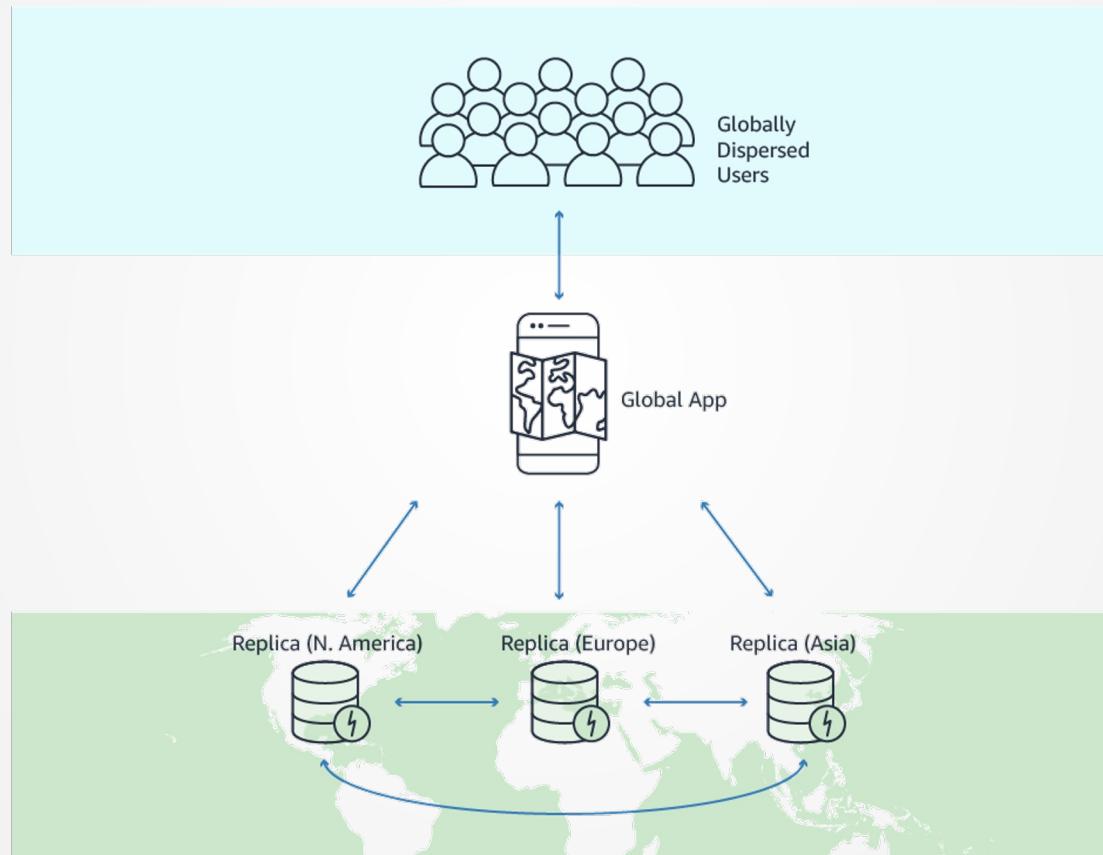
Point-in-time Recovery

Encryption At Rest

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Hands on