

ONLINE TECH TALK

Amazon DocumentDB 5.0 (with MongoDB compatibility) : New Features

Kaarthiik Thota

Sr. DocumentDB Specialist Solution Architect
AWS



Agenda

- Amazon DocumentDB overview
- New features in Amazon DocumentDB 5.0
- Client-side field level encryption (CS-FLE)
- Demo

CS-FLE

New aggregation operators

- Next steps and resources

Amazon DocumentDB



Amazon DocumentDB

Instance based clusters and elastic clusters



Fast and scalable

- Scale compute in minutes
- Storage and I/O autoscaling
- Storage scales to 128 TiB/4PiB
- Scale out to 15 replicas/32 shards for millions of reads and writes
- Globally distributed*



Fully managed

- Built-in high availability
- Backups enabled by default*
- Durable by default
- Security best practices by default
- Automatic patching
- Monitoring and alerting



MongoDB compatible

- Applications, drivers, and tools can be used with little or no change
- Supports hundreds of APIs, operators, and stages
- Continually working backward from customers to deliver the capabilities they need

* Not supported in Elastic clusters

New Features in Amazon DocumentDB 5.0

- Client-side field level encryption
- Storage limit increase to 128 TiB
- MongoDB 5.0 drivers support
- New aggregation operators (\$dateAdd and \$dateSubtract)
- Index support for \$elemMatch

Client Side Field Encryption (CSFLE)



Client-Side Field Level Encryption (CS-FLE)



Selectively encrypt fields in-application

Native integration with **AWS Key Management Service (KMS)** for customer keys

Administrators **cannot read the data** without the data keys

<https://aws.amazon.com/blogs/database/introducing-client-side-field-level-encryption-and-mongodb-5-0-api-compatibility-in-amazon-documentdb/>

Configuring CS-FLE

1. Create the customer key (CK) with AWS KMS
2. Create an IAM policy and associate with the user
3. Generate data encryption key (DEK) using the customer key
4. Perform read and write operations

Demo: CS-FLE

Demo: New aggregation operators

Getting started

Amazon DocumentDB Free Trial



Cost efficient



750 hours – t3.medium instance (2 vCPUs, 4GB RAM)

5GB storage

30 million IOs

5GB backup

<https://aws.amazon.com/documentdb/free-trial/>

Resources



Getting started with CS-FLE



Amazon DocumentDB resources

Thank you!

Kaarthiik Thota

