**Mongo DB**

Course contents

**2 days outline**

**Database Administration**

 Database status

 Troubleshooting issues

 Current Operations

 Rotating log files

 Users and Roles

 Copy and Clone database

 DB and Collection Stats

 Explain plan

 Profiling

 Changing configuration files

 Upgrading the database

**Backup and Security**

 Concept of backups

 mongoexport/mongoimport

 mongodump/mongorestore

 Oplog backups

 LVM Backups

 Backups using MMS/Ops Manager

 Purpose of security

 Authentication and authorization

 Role based access control

Replication

 Concept of replication

 ReplicaSet member roles

 Voting and Electing primary

 Role of Oplog in replication

 Read and Write Concern

 Arbiter,Hidden and Delayed replica node

 Priority settings

 Replicaset nodes health check

 Concept of resyncing the nodes

 Rollbacks during failover

 Keyfile authentication

Scalability

 Concept of Scalability

 Sharding concept

 Shardkey and Chunks

 Choosing shardkey

 Sharding components

 Types of Sharding

 Balanced data distribution

 Sharded and Non-sharded collection

 Sharded Replicaset

 Tag aware sharding

**Monitoring and Other Tools**

 MMS Manager

 Ops Manager

 Mongo utility commands

 Mongo developer tools

 Mongodb Atlas

 Mongodb client drivers

 Schema designing

 Performance analysis and optimization

 refactoring on migrations and index creations on container initialization

 Security Performance improvements for writes and reads.

 Transactions

 Upgrading all environments with latest mongo DB versions in order to get benefit of improvements.

 **Working for sharding and replication for multiple regions and deployment in AWS Cloud. = not mandatory**

 Monitoring of machines and configuration servers for multiple regions .

 Different types Storage engines and their usage.

note : entire training will happen with case study and practical and theory ratio will be 65:35