**Mongodb – Scalability**

Scalability is not just about speed, it’s about 3 different criteria, and they are

1. Cluster scale

* Distributing database across 100+ nodes

1. Performance scale

* Handling 1,00,000+ read /& writes while maintaining strict SLA’s

1. Data scale

* Storing 1 billion + documents in the database

There are many Organization pushed the limits to scalability

**Mongodb Atlas** is providing high-scale Cloud based database with operations and security best practices built in. Easily deploy and scale at the public cloud of your choice.

**Mongodb Ops Manager**, it helps automate and monitor the database on your self-managed environment. Mongodb OPS Manager is available for Mingodb Cloud Manager

**Mongodb Cloud Manager vs Mongodb Atlas?**

Cloud Manager is useful when you want to manager your infrastructure, but still you want to automate backups and monitoring.  
Atlas, goes one step further by automating the infrastructure. It is a true database as a service by Mongodb. All you have to worry about is how to use mongodb, it hide all the complexity of managing server.

**Performance best practices:**

Mongodb is designed to meet the demands for all the modern Applications.

Data modeling will help to achieve the **best way of handling data**

Distributed design, intelligently allowing you to **put data where you want it**

A unified experience that **run anywhere**, this will eliminate the vendor lock-in

**WiredTiger storage engine**

**Encrypted storage engine**

**In-memory storage engine**

**MMAPv1 storage engine (deprecated)**

**Hardware level performance**

* Ensure your working set fits in RAM
* Configure compression for storage and I/O-intensive workloads
* Combine multiple storage & compression types
* Dedicate each server to a single role in the system
* Use multiple query routers
* Exploit multiple cores
* Network Compression

**Software level performance**

* Issue updates to only modify fields that have changed
* Avoid negation in queries
* Use covered queries when possible (explain())
* Update multiple array elements in a single operation(arrayFilters)
* Use the most recent drivers from MongoDB
* Use hash-based sharding when appropriate