



How to setup MongoDB Database in your AWS EC2 Instance.



What is MongoDB ?

- In order to setup a MongoDB database in your AWS EC2 instance, we will need to understand what is MongoDB database and why it is such a popular database.
- MongoDB is a No-SQL Database means, which stores data in JSON like document format. It is highly scalable and flexible, designed for high performance and ease of development.

- **Use Cases of MongoDB:**

- Real time analytics
- E-commerce platforms
- Content management
- IoT Application Development

```
1 {  
2   "_id": {  
3     "$oid": "677eba6816e07a917a3a2522"  
4   },  
5   "first_name": "User",  
6   "last_name": "user",  
7   "city": "city",  
8   "username": "username",  
9   "email": "user@example.com",  
10  "password": "$2b$12$PusJnjlNWHT/6LGv931XQenSJ3KT8iZ8Mq1BaMwGa0yDV40BlIr8.",  
11  "role": "admin",  
12  "is_active": true  
13 }
```



Features of MongoDB

- MongoDB is document oriented, means it stored data in "key" : "value" pair, with BSON(binary Json) format, which allows us to store data in nested structure.
- MongoDB is schema free, means there is no fixed structure, making it flexible for dynamic data models.
- Scalability: MongoDB supports horizontal scaling via sharding.
- It supports high performance by indexing and in-memory processing for fast queries.
- MongoDB supports the replica sets for replication of data and fault tolerance.
- Aggregation is supported in MongoDB, and it performs high level powerful queries for analytics.



How to setup MongoDB in your AWS EC2 Instance

- Pre-requisites
 - You should have running an AWS EC2 instance supported with Ubuntu Linux OS, with at least free tier limits, and 8 GB of attached EBS volumes.
 - You can also create a fresh AWS EC2 instance with the help of my previous tutorial of How to setup AWS EC2 instance?
- Steps Involved:
 - Login to you AWS EC2 instance via ssh, as shown in the video and run the commands on it.
 - These commands are also available in github repository in markdown file, along with this pdf notes.

