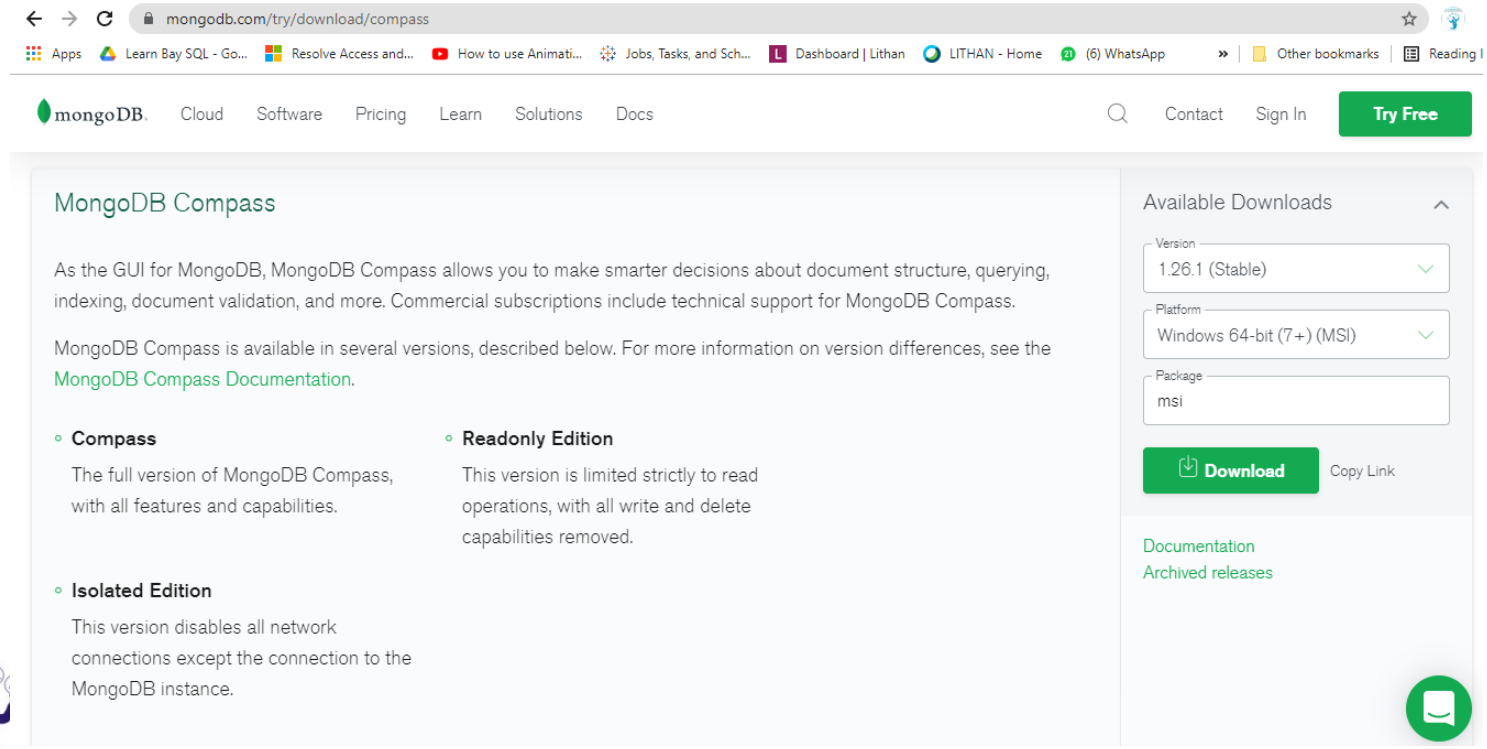
MongoDB Compass

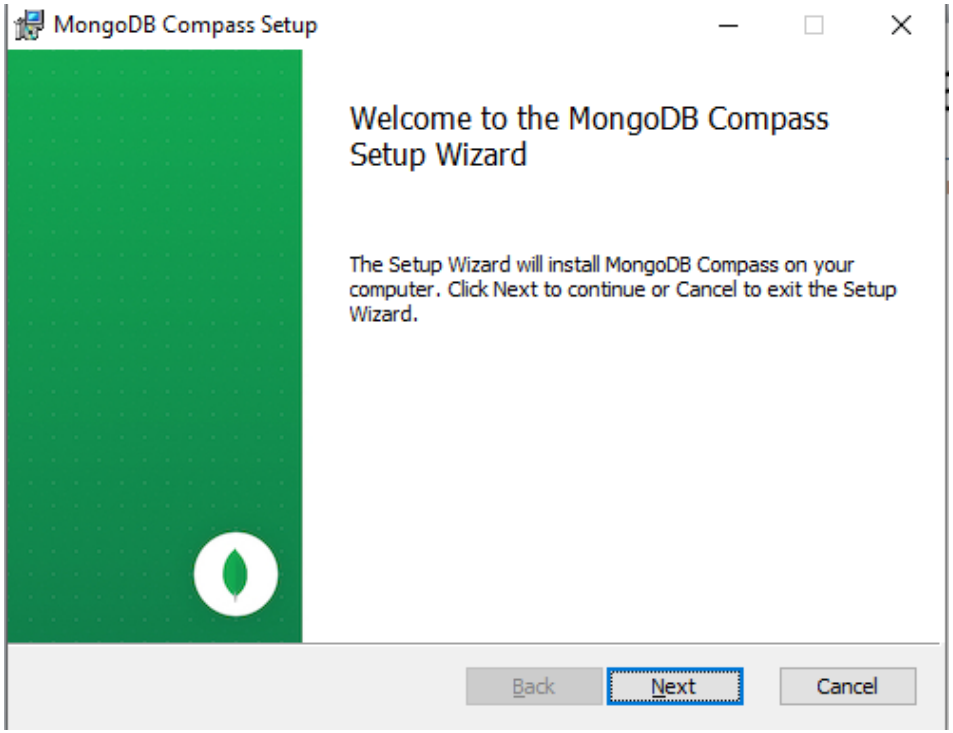
It’s a GUI Interface for handling MongoDb database. It is a convenient tool for performing all CRUD operations without manually writing queries. It helps in many activities such as indexing, document validation, etc.

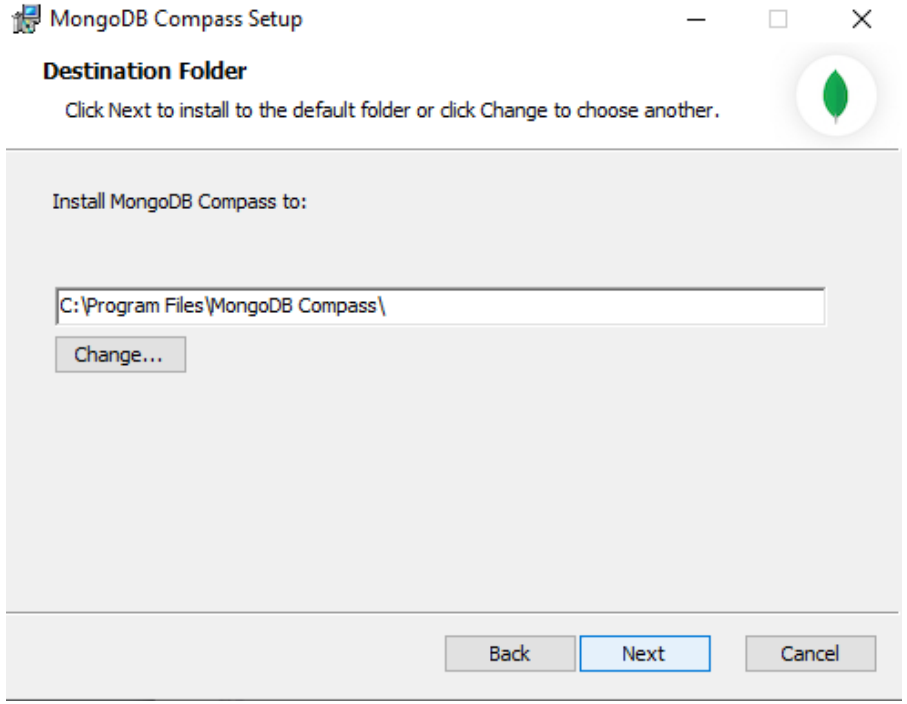
https://www.mongodb.com/try/download/compass



MongoDB Compass

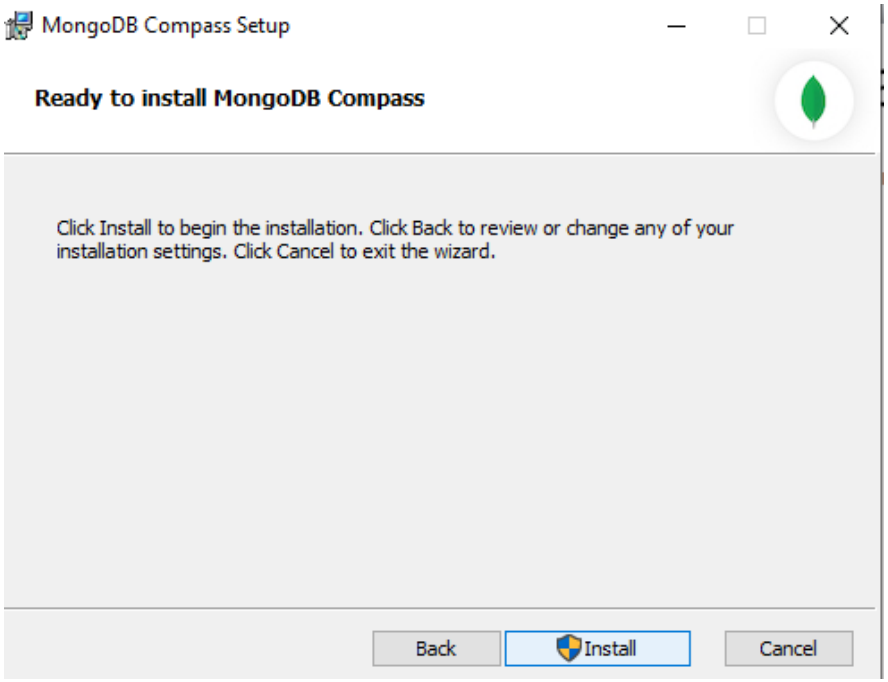
Double click on the downloaded file to initiate the installation:

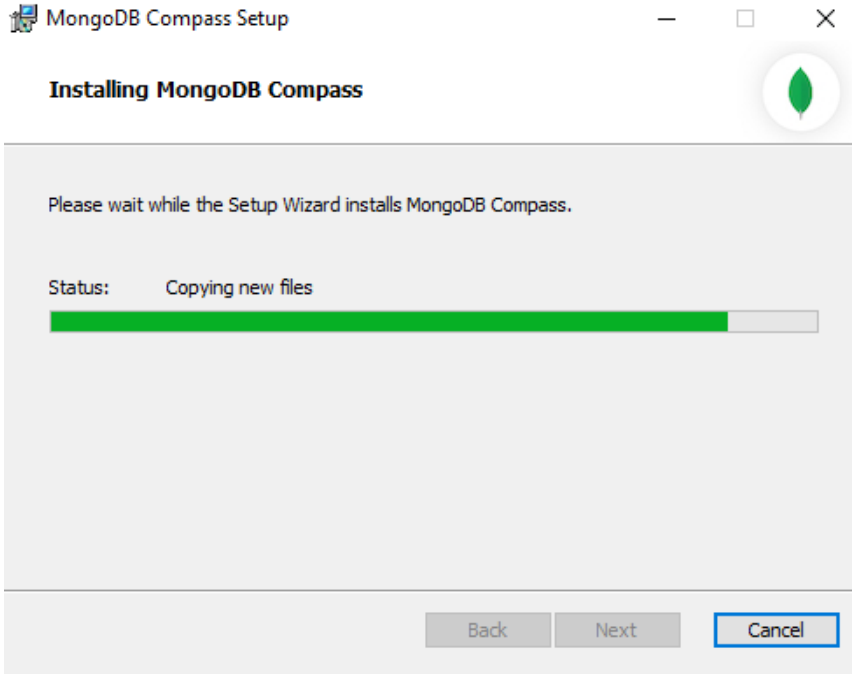




MongoDB Compass

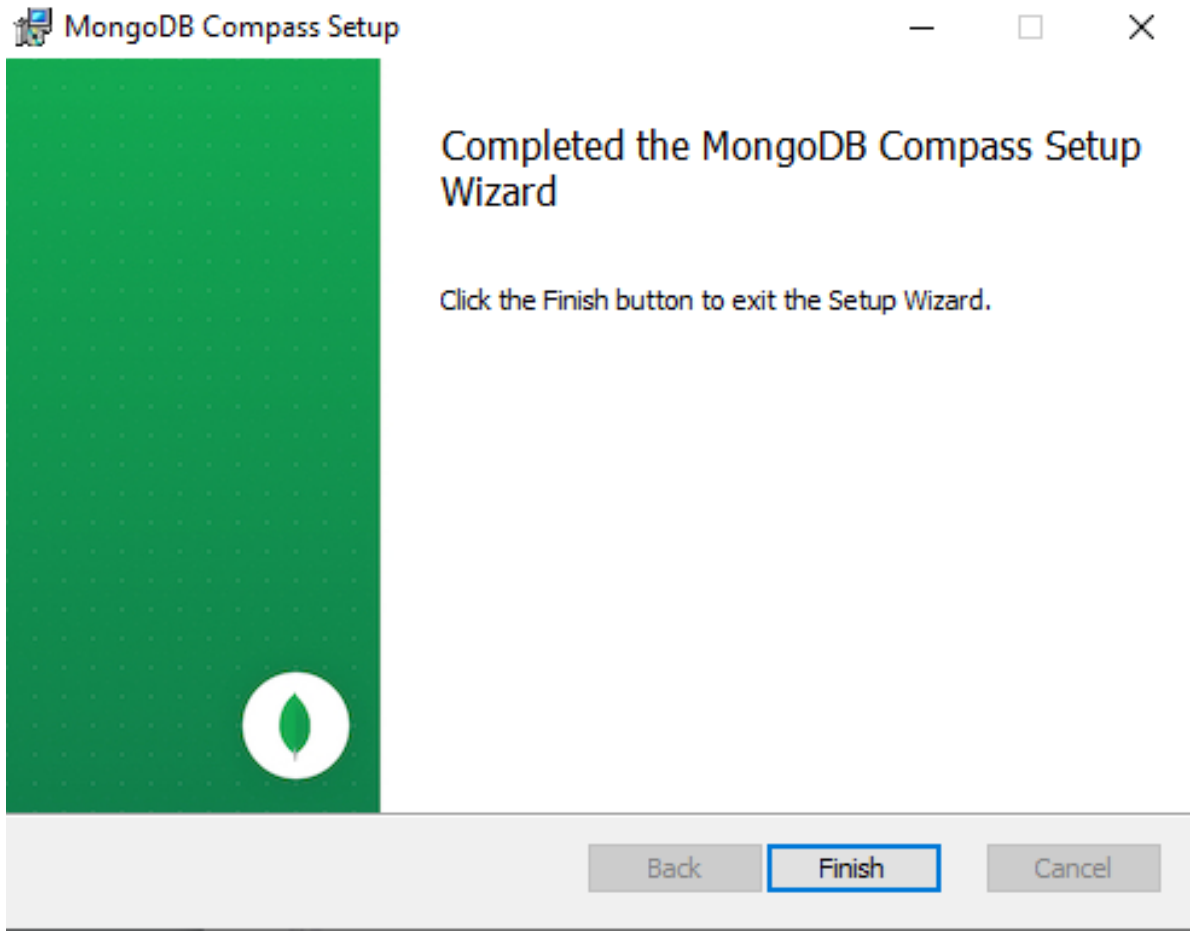
Click on Install proceed with the installation:





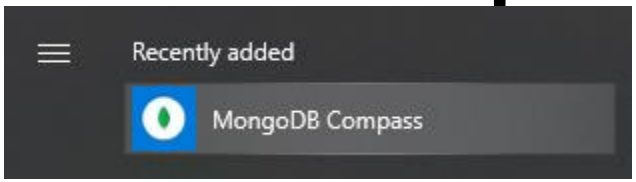
MongoDB Compass

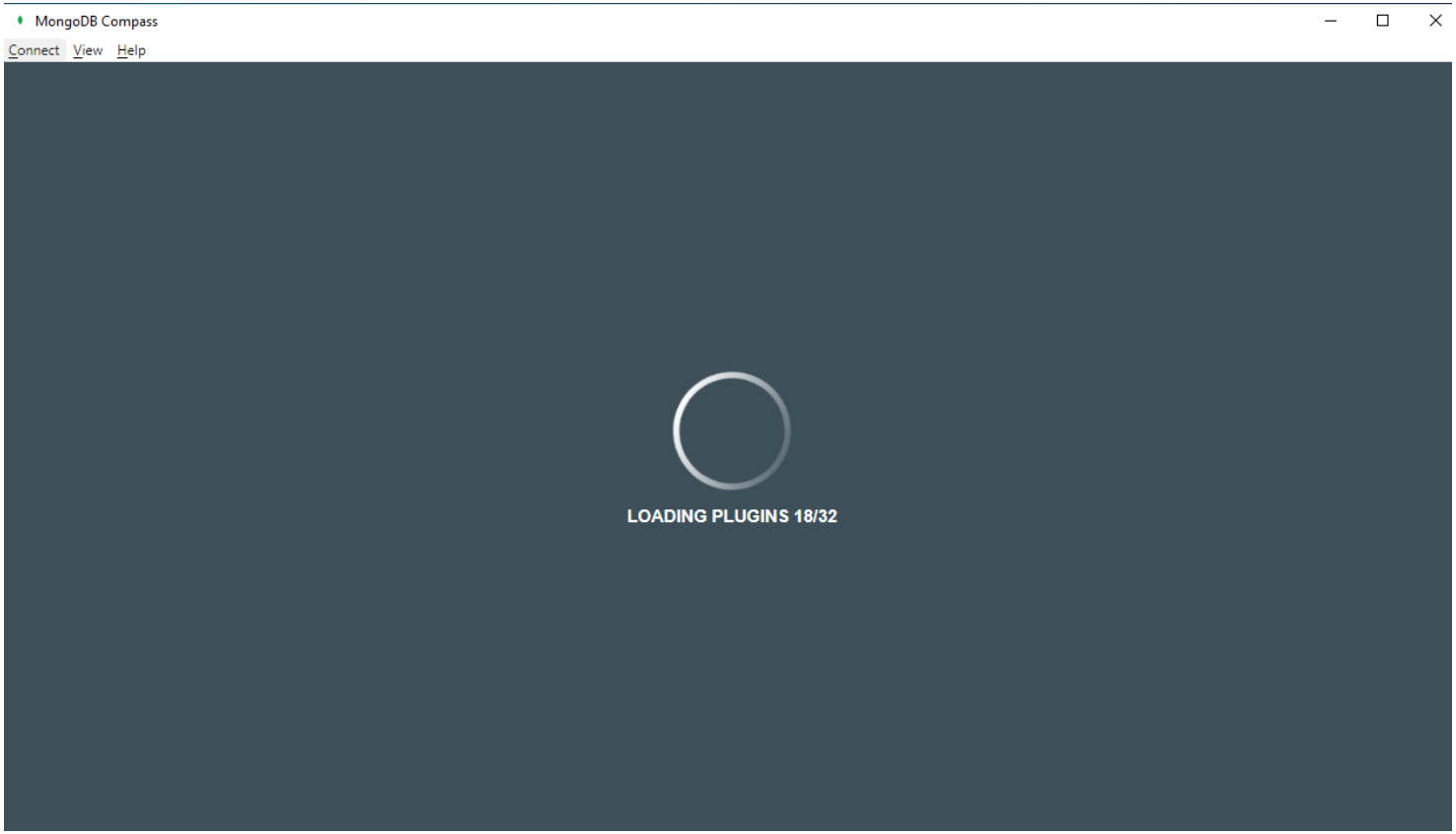
Click on Finish to complete the installation:



MongoDB Compass

Go to Start Menu and click on

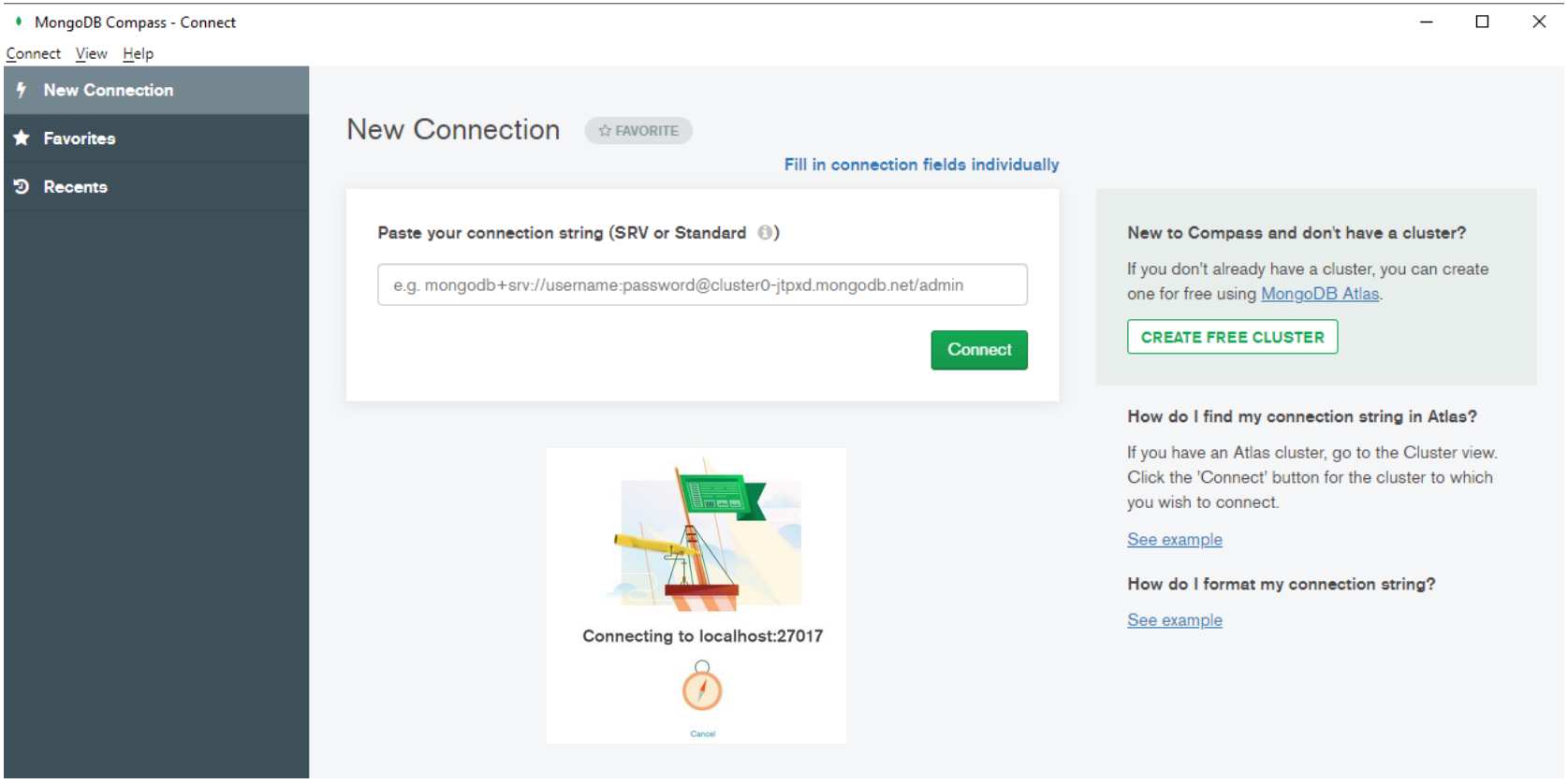




MongoDB Compass

Connect to the cluster (server). We will be connecting to the local host.

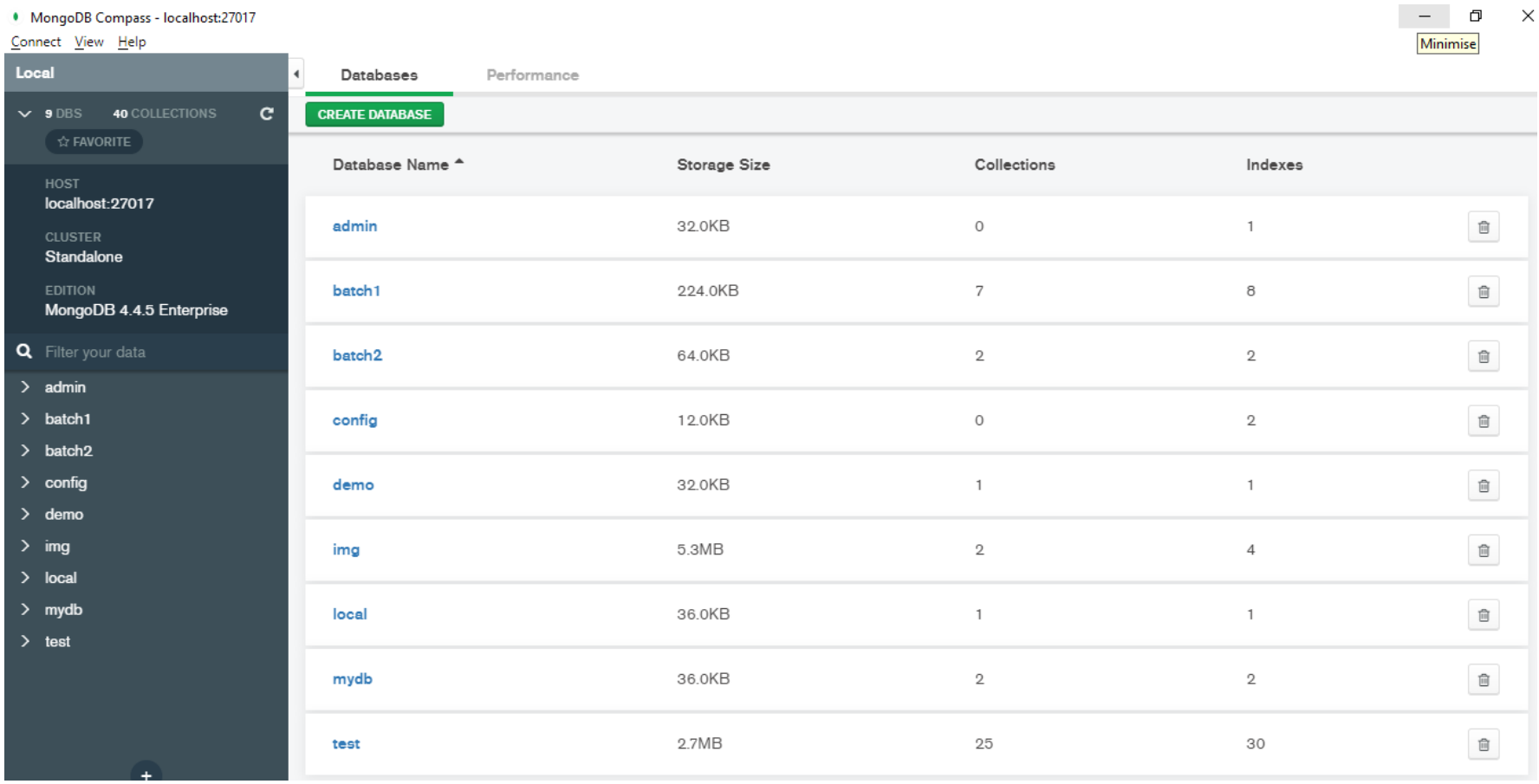
Provide the connection string and click on connect



NOTE: Mongo server must be running on your system to connect to the host

MongoDB Compass

Once connected you will be able to see all the databases in the mongo



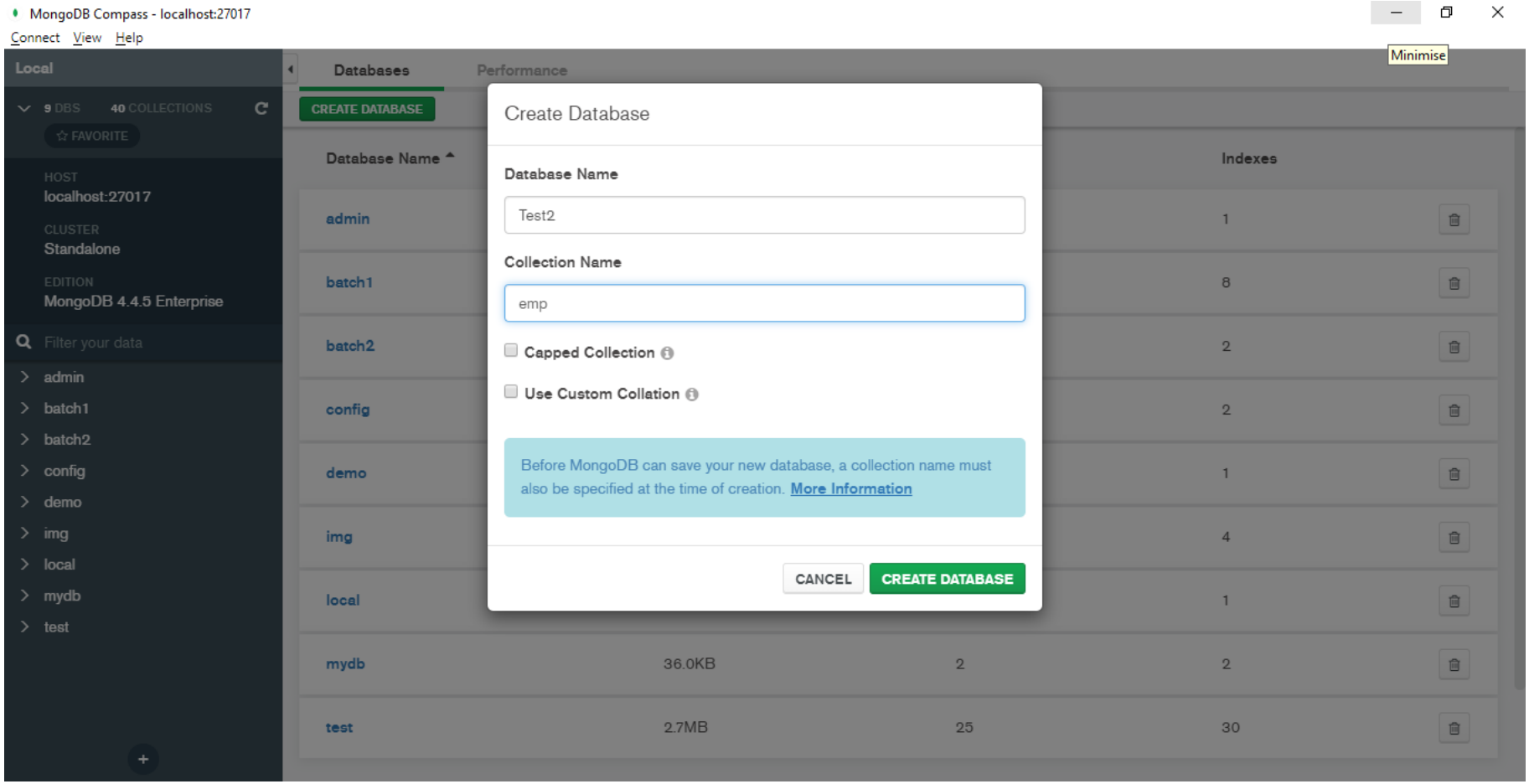
MongoDB Compass

MongoDb Compass allows us to perform below operations:

- Create Database
- Create Collection
- Perform CRUD operations
- Add data to collection
  - Import File
  - Insert Document
- Use Options
  - Filter
  - Project
  - Sort
- Aggregations
- Indexes
- Validation

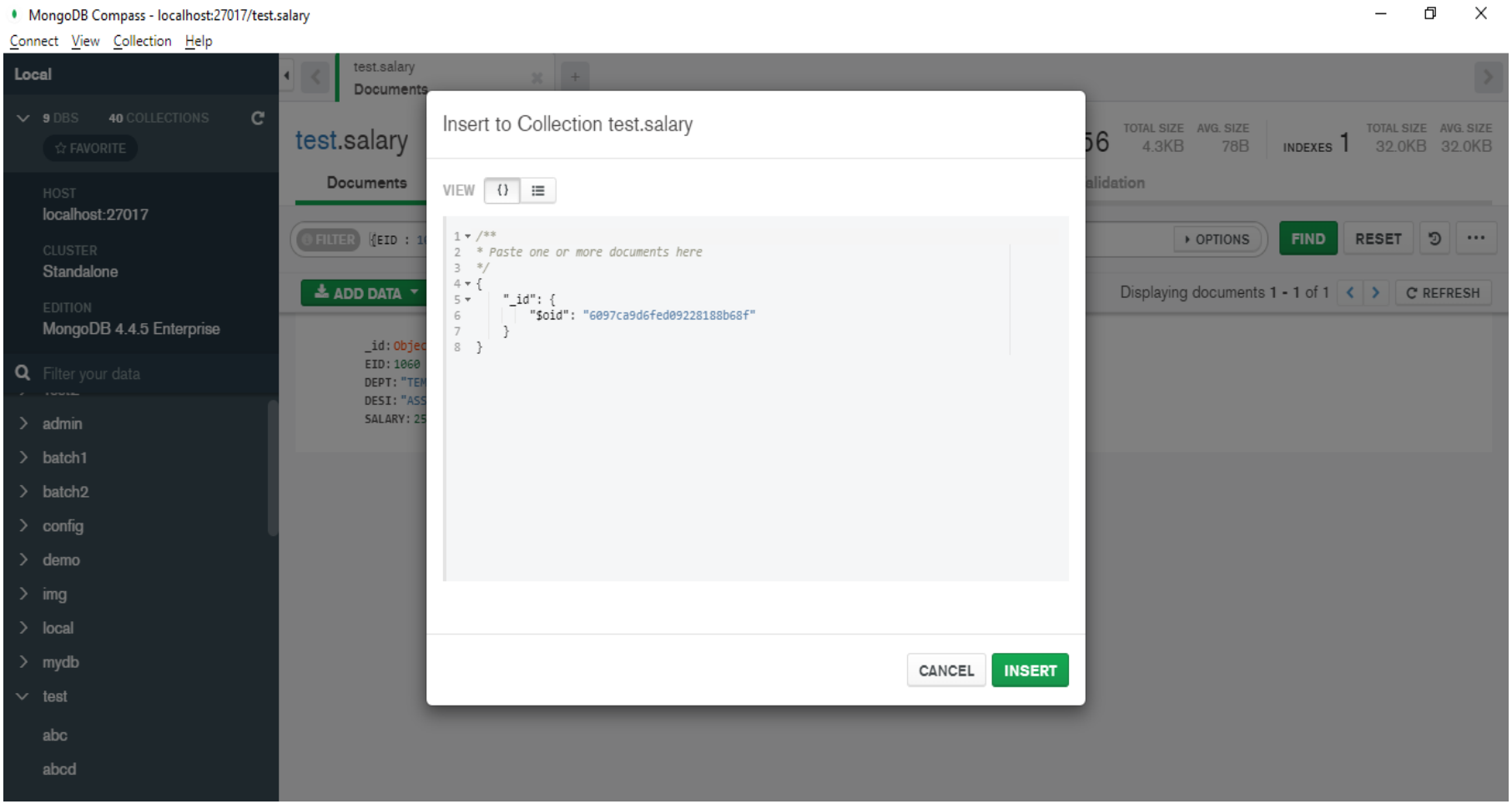
MongoDB Compass

Create Database



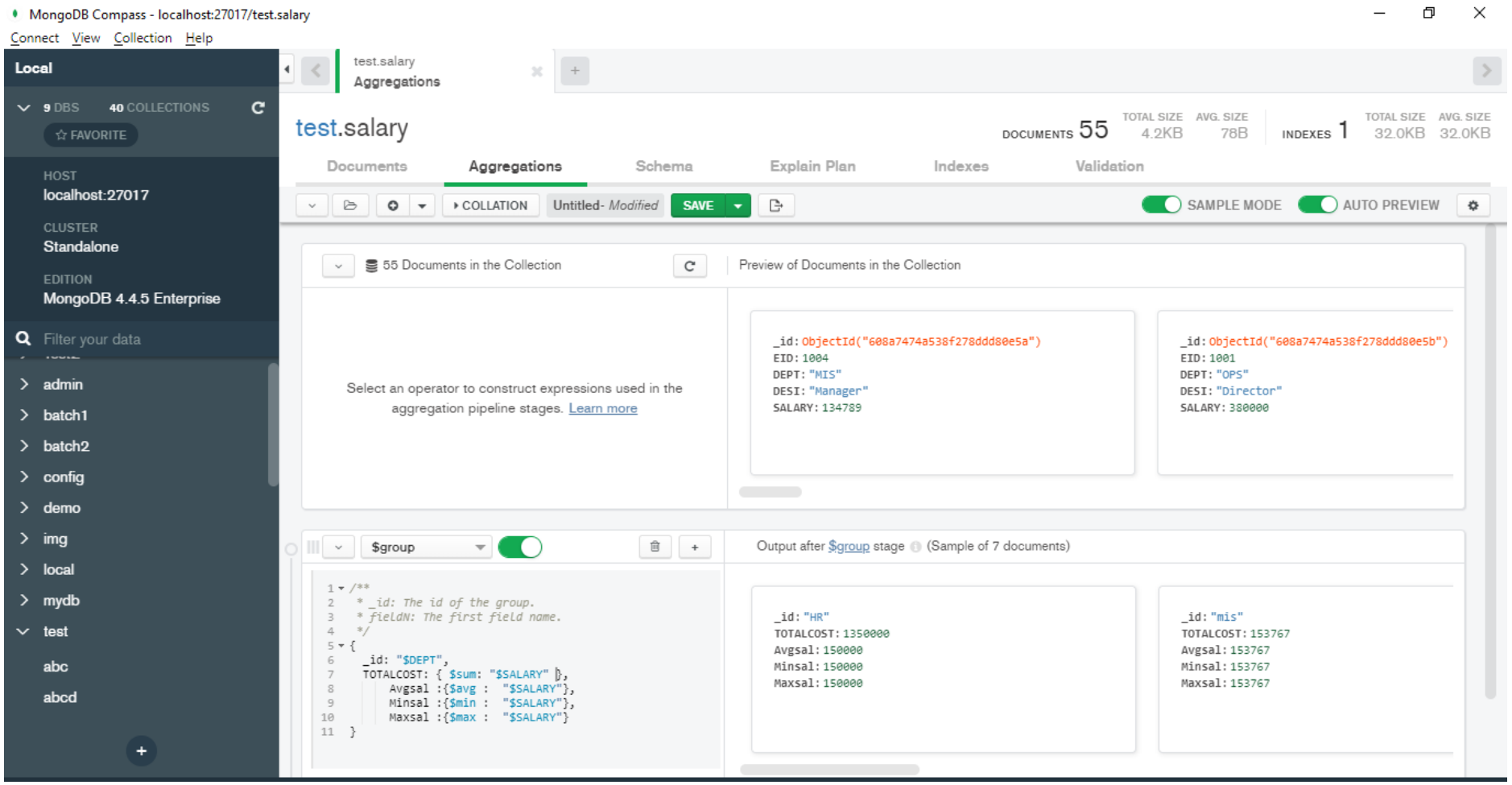
MongoDB Compass

Add data to collection



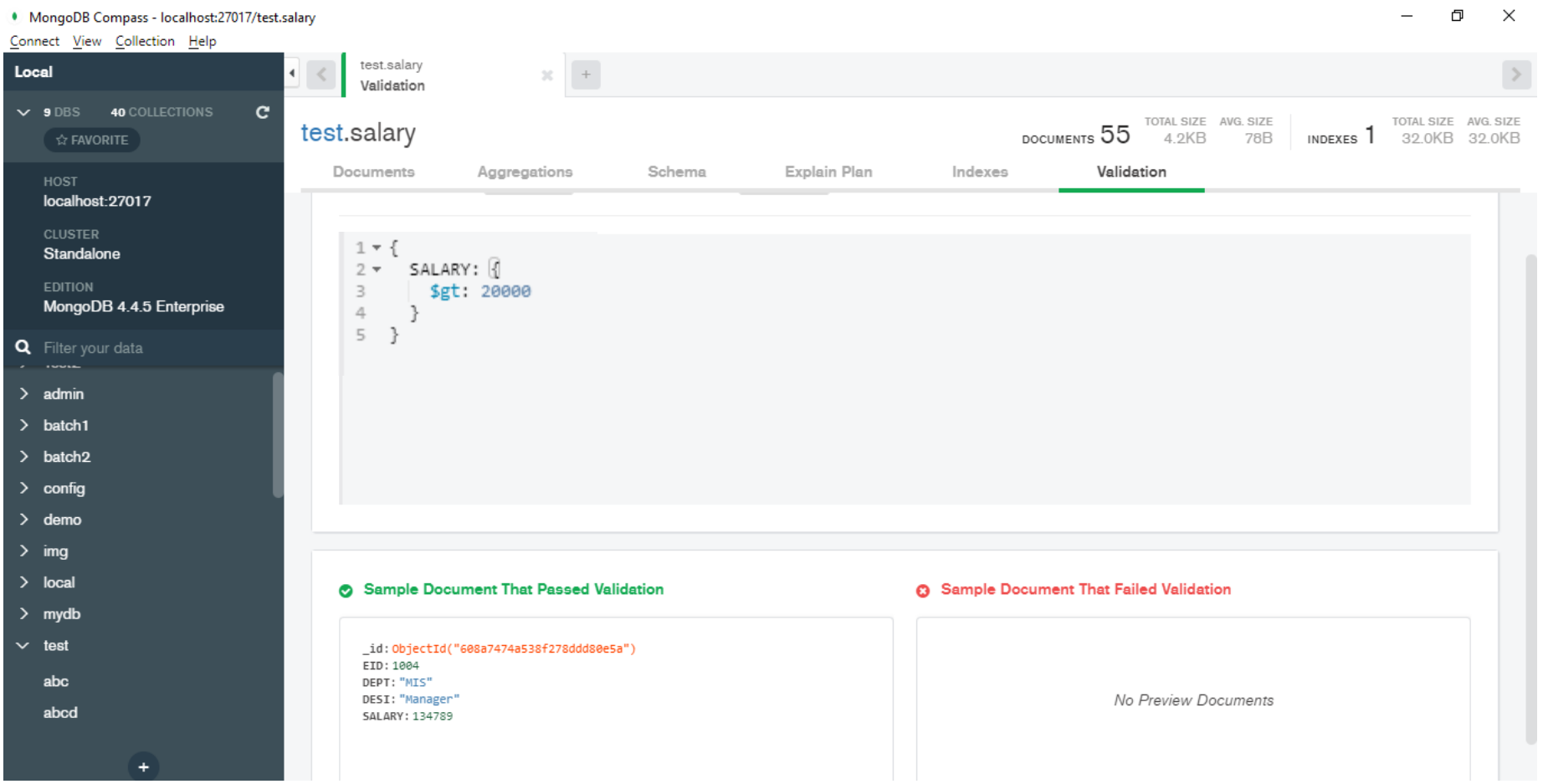
MongoDB Compass

Aggregations



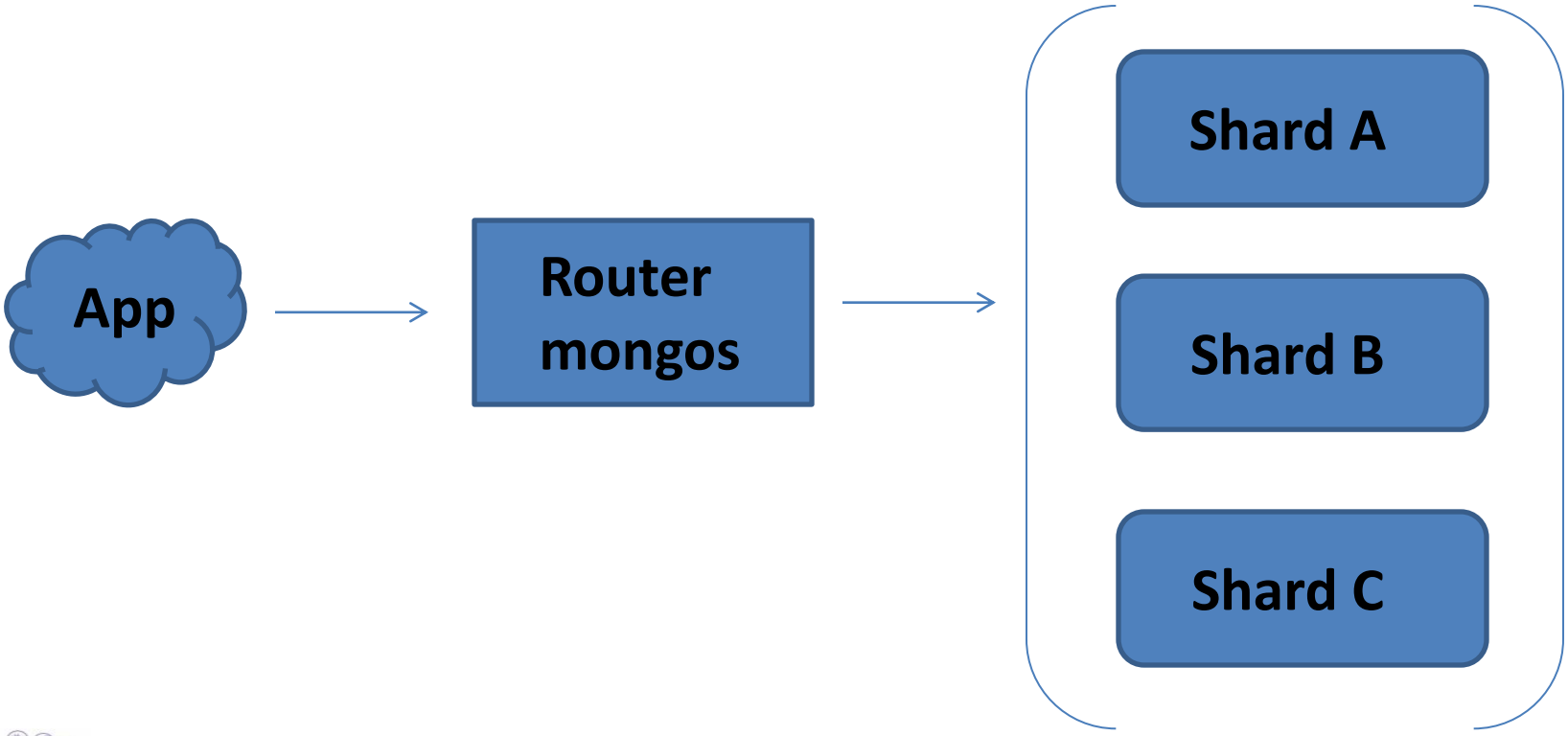
MongoDB Compass

Validations



Sharding MongoDB

Sharding is the process of partitioning your data across multiple servers. It is a type of database partitioning that separates very large database into faster, smaller and more easily manageable parts called shards.



Sharding MongoDB

MongoDB uses the shard key to distribute the collection's documents across shards. The shard key consists of a field or multiple fields in the documents.

Why Sharding ?

Scalable - data is growing continuously

High Availability

Ability to control data distribution

Application Transparent

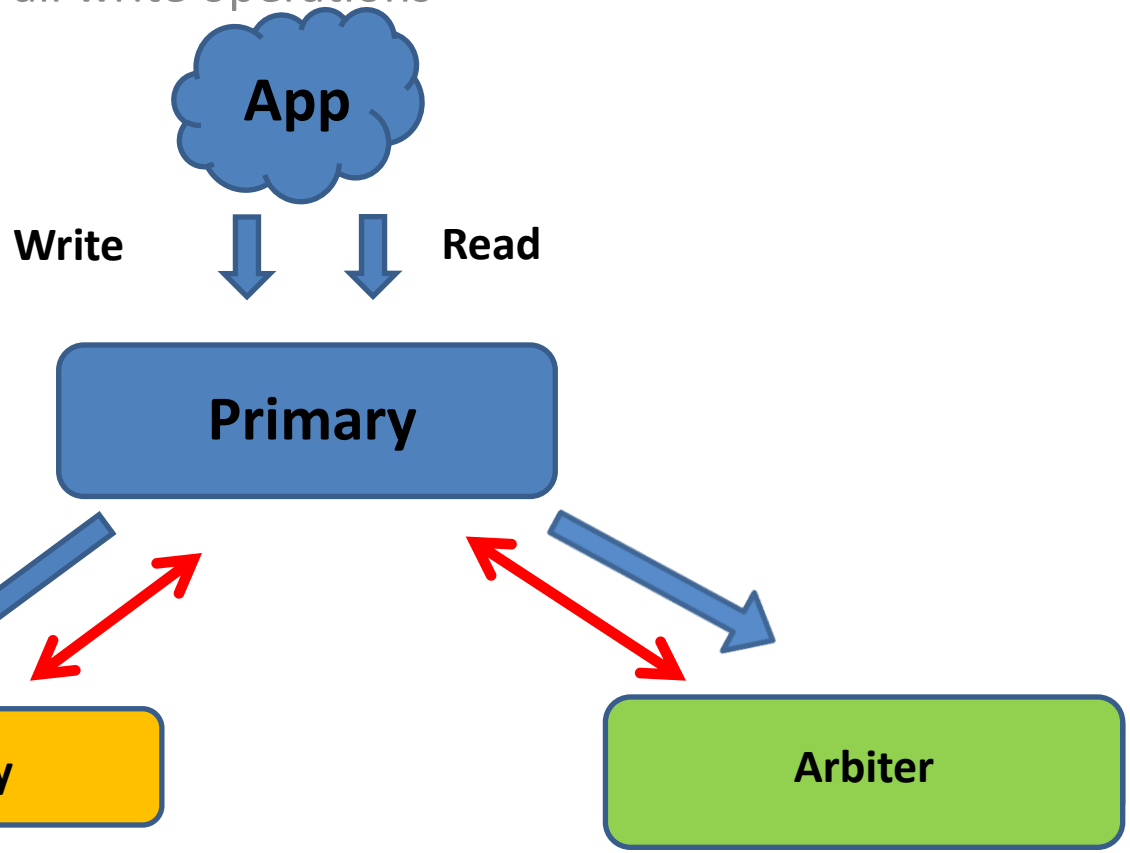
Cost effective

No database downtime

Replication in MongoDB

A replica set is a group of mongod instances (server) that maintain the same data set. A replica set contains several data bearing nodes and optionally one arbiter node. Of the data bearing nodes, one and only one member is deemed the primary node, while the other nodes are deemed secondary nodes.

The primary node receives all write operations



Replication in MongoDB

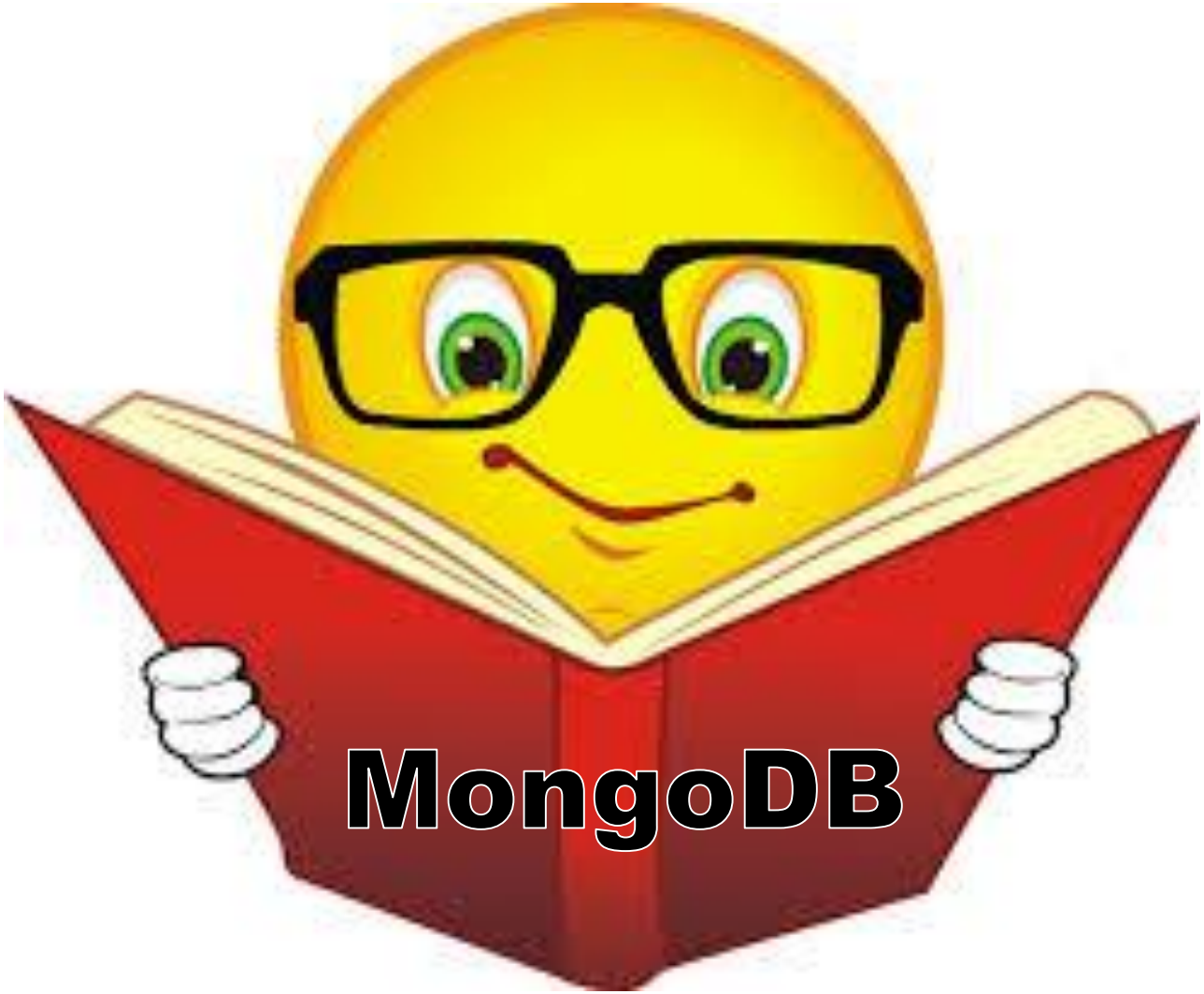
Major features of replica:

Asynchronous Replication -Secondary replicate the primary's and apply the operations to their data sets asynchronously.

Automatic Failover (electionTimeoutMillis period (10 seconds by default))

Read Preference - can specify a read preference to send read operations to secondaries.

Mirrored Reads – operations can be in the cache of secondary.


MongoDB

Thanks!

EVERY **ENDING**
IS REALLY JUST A
NEW BEGINNING

Rajeev Garg
Data Analytics Trainer