Version: 1.0

Date: December 30, 2021
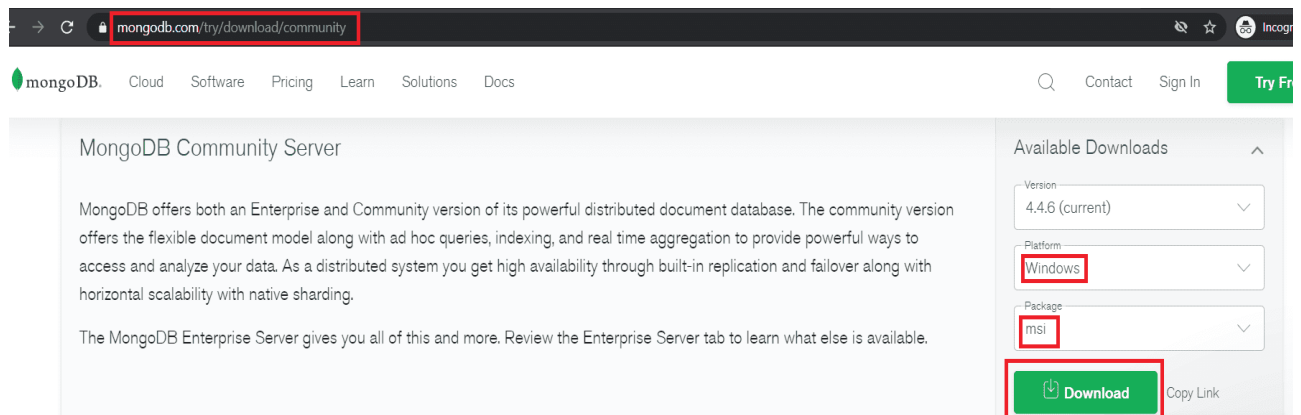
Installation and Configuration of MongoDB Document Server

Contents

MongoDB Installation on Windows

- Download the MongoDB from here, select MSI and platform as Windows and click on Download. The URL for Community Edition is at:
  mongodb.com/try/download/community

- Double click msi file and click 'Next' to start the setup the MongoDB.
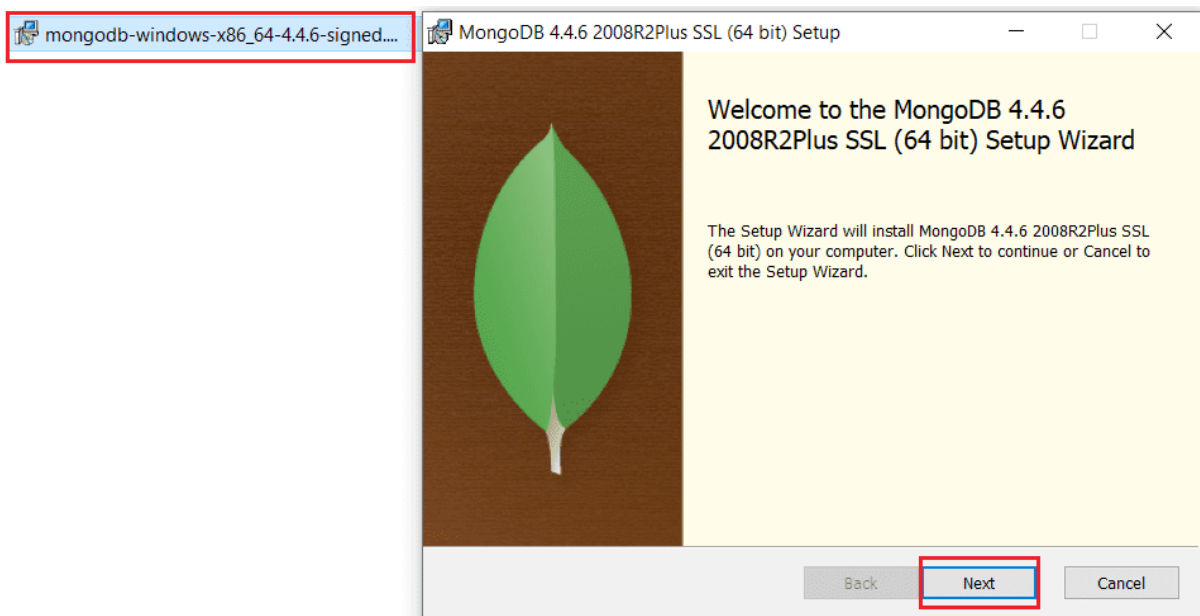
- Select Complete setup as given below:
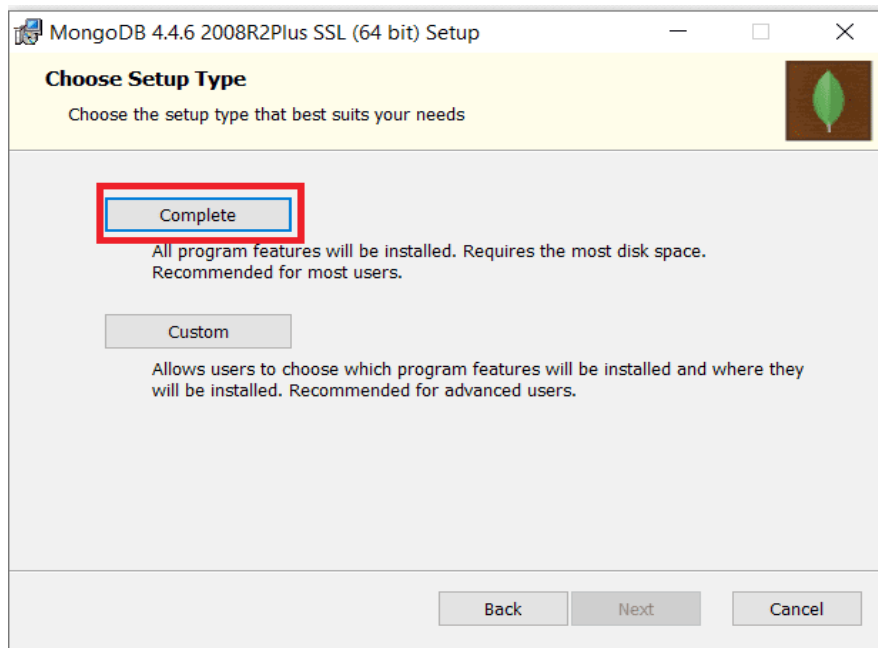
- Select "Run service as Network Service user" and copy Data Directory path for future reference.
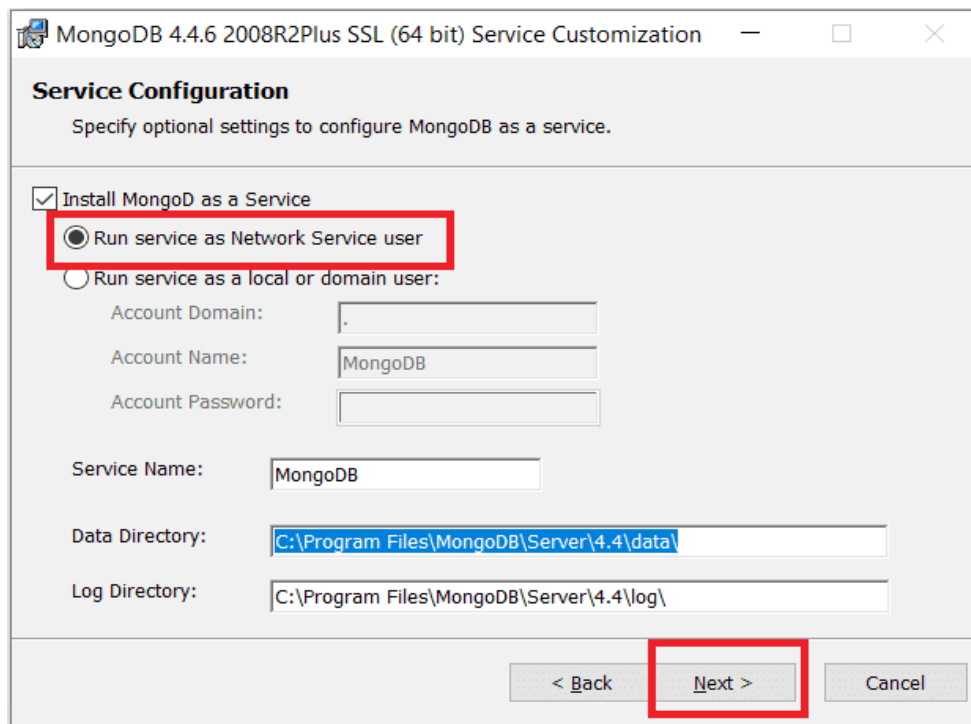
- Uncheck Mongo Compass checkbox, and Select Next.
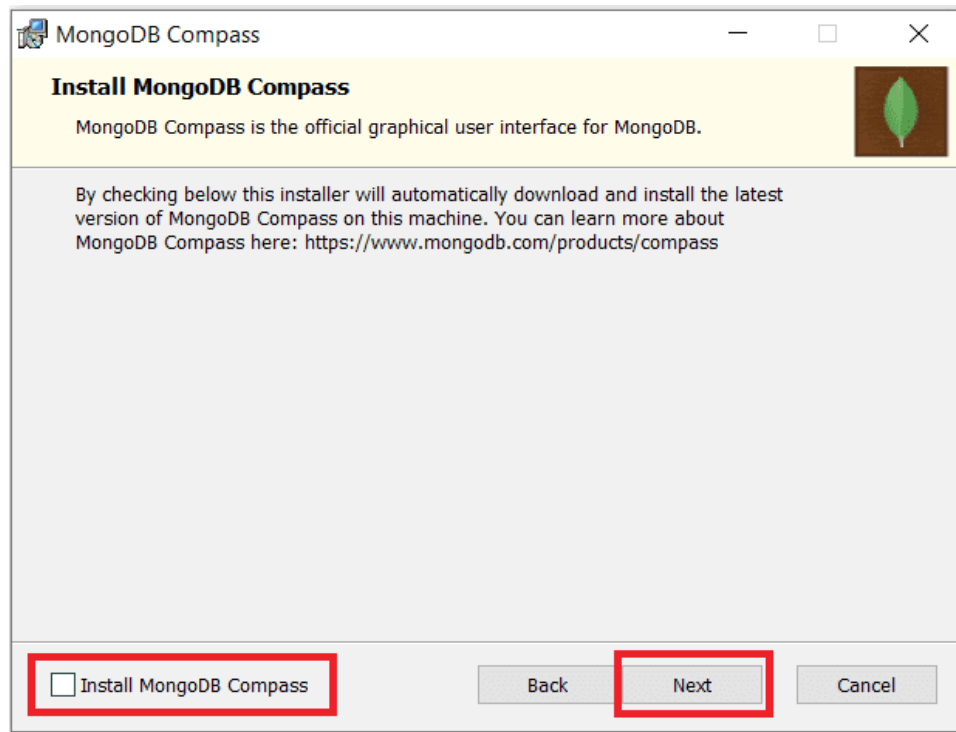
- Click Install to start installation.
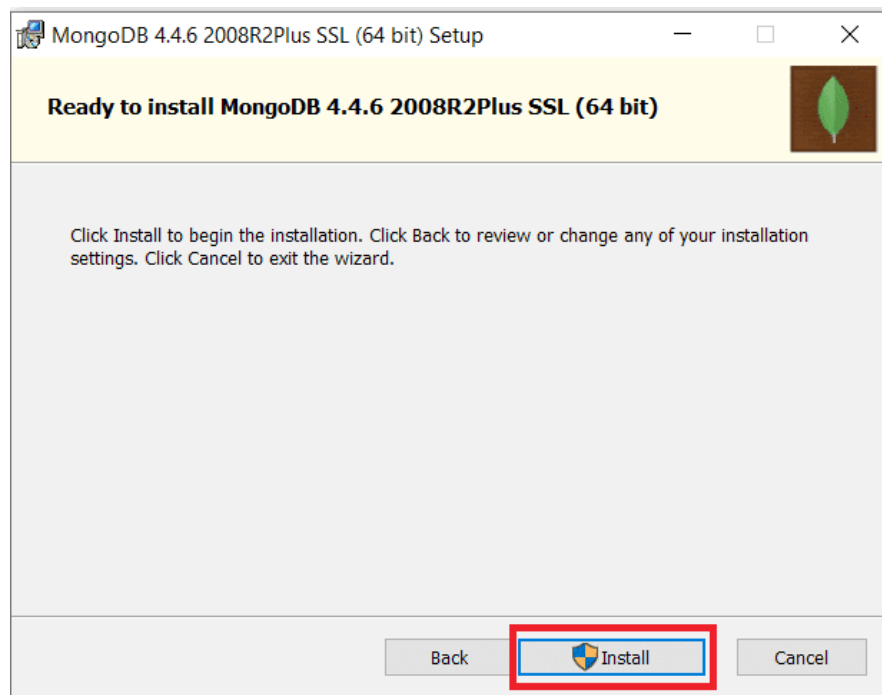
- Click Finish to complete the setup.
- Add MongoDB environment variable to the path:
  - o Visit Advanced system settings and Choose the Environment variable button

  - o Select the Path and choose Edit.

o Click New, and add the path to the MongoDB installation folder. Click OK a few times and you're good.
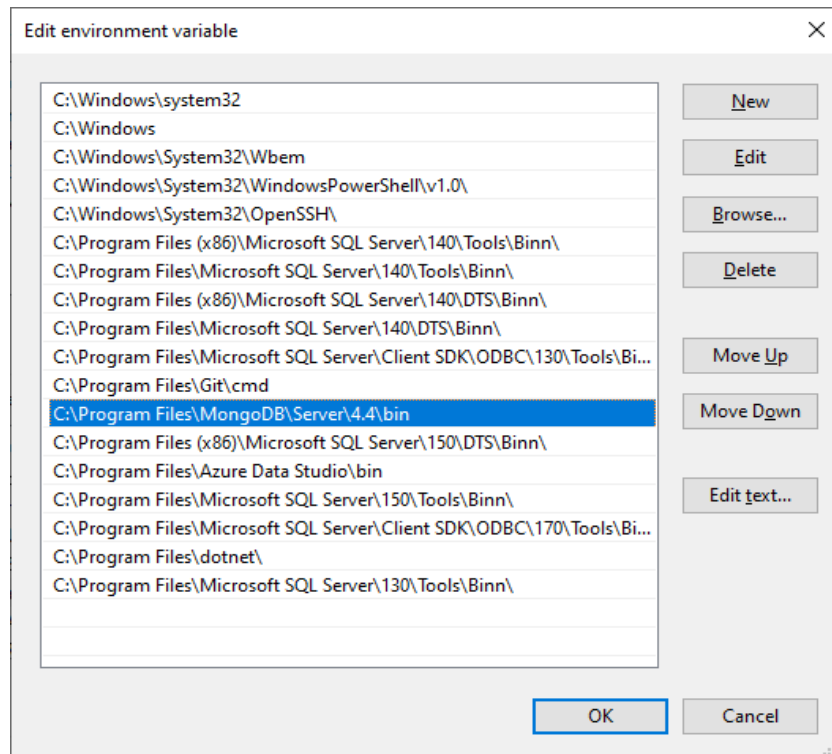
Test the MongoDB through Command line

- Go to "C:\Program Files\MongoDB\Server\4.0\bin" and double click on mongo.exe.

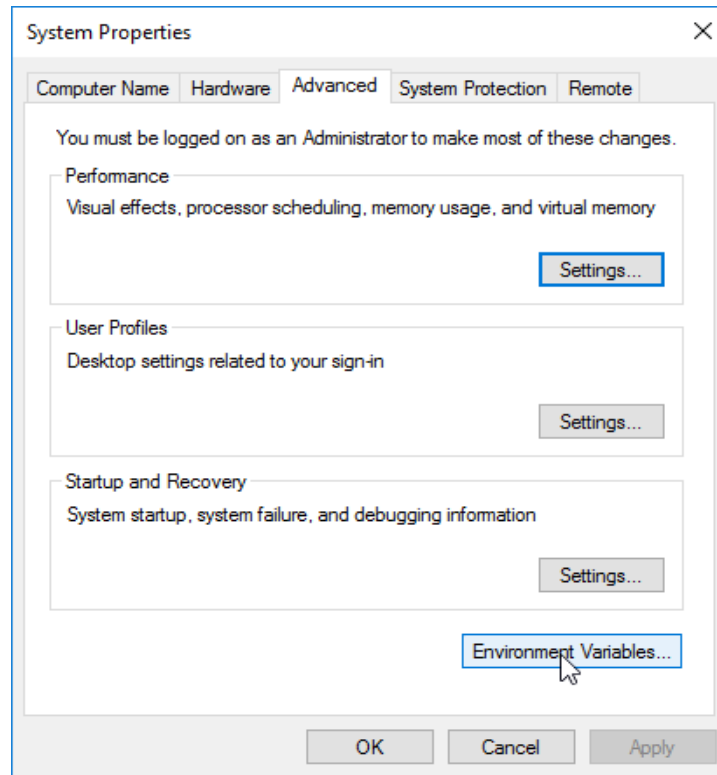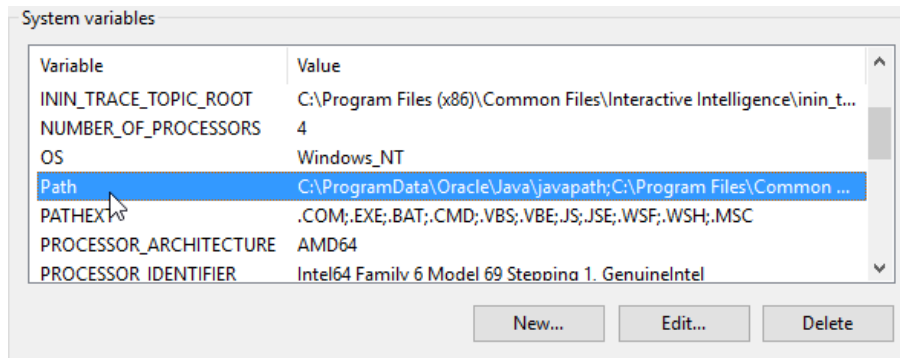| Name	Type	Size
InstallCompass.ps1	Windows PowerSh...	
mongo.exe	Application	
mongod.cfg	CFG File	
mongod.exe	Application	
mongod.pdb	PDB File	
mongos.exe	Application	
mongos.pdb	PDB File	

This PC > Windows-SSD (C:) > Program Files > MongoDB > Server > 4.4 > bin
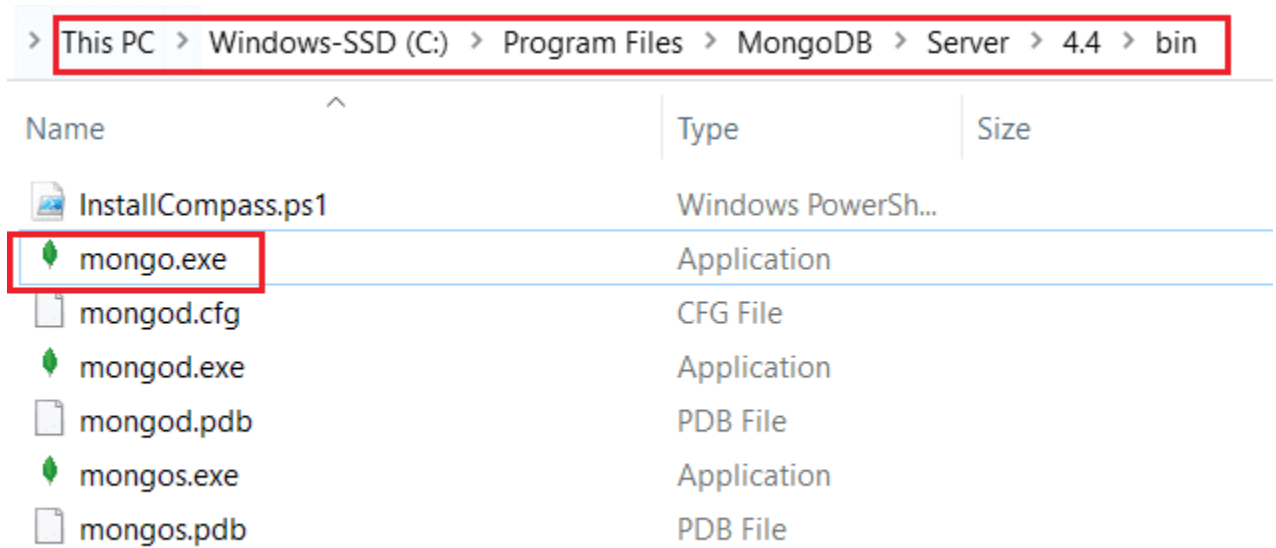
- Type following javascript program into command prompt window, which will print the output as below: var myMsg='Hello TechGeekNext User'; printjson(myMsg);

```
C:\Program Files\MongoDB\Server\4.4\bin\mongo.exe                                    —    □    ✕

MongoDB shell version v4.4.6
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("c654682a-5a46-45b8-a8f0-25942288c565") }
MongoDB server version: 4.4.6
---
The server generated these startup warnings when booting:
        2021-05-28T18:03:24.089+05:30: Access control is not enabled for the database. Read and write access to data and
 configuration is unrestricted
---
---
        Enable MongoDB's free cloud-based monitoring service, which will then receive and display
        metrics about your deployment (disk utilization, CPU, operation statistics, etc).

        The monitoring data will be available on a MongoDB website with a unique URL accessible to you
        and anyone you share the URL with. MongoDB may use this information to make product
        improvements and to suggest MongoDB products and deployment options to you.

        To enable free monitoring, run the following command: db.enableFreeMonitoring()
        To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
> var myMsg='Hello TechGeekNext User';
> printjson(myMsg);
"Hello TechGeekNext User"
>
```
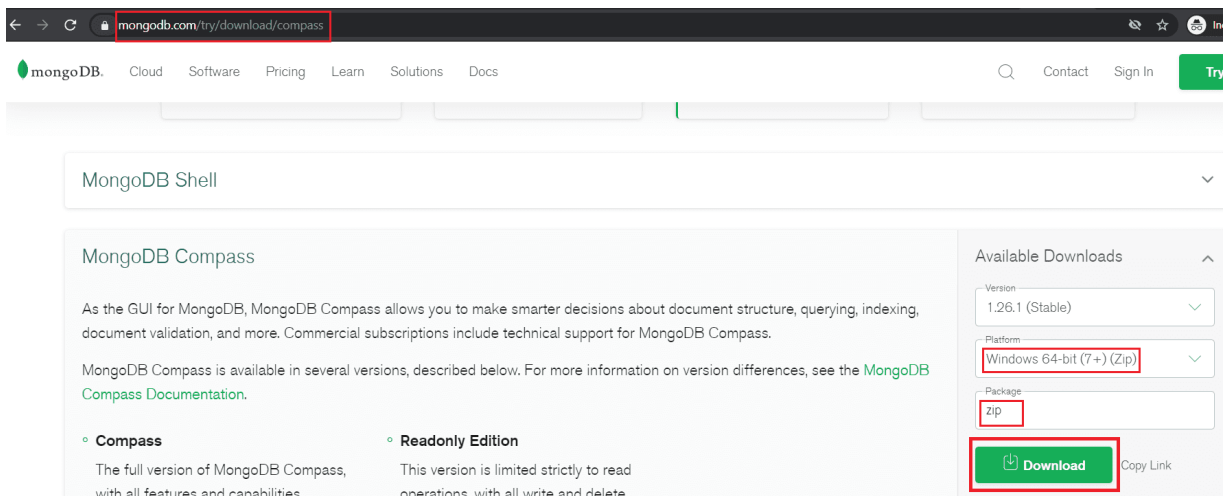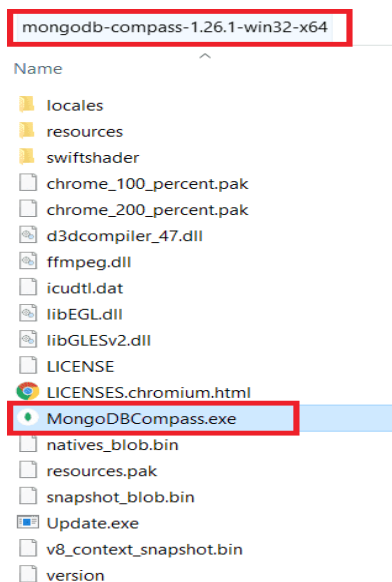
Test using MongoDB UI (MongoDB Compass)

MongoDB Compass is a MongoDB Management Tool. There are many tools present in market for managing MongoDB. MongoDB Compass is one such non-commercial tool.
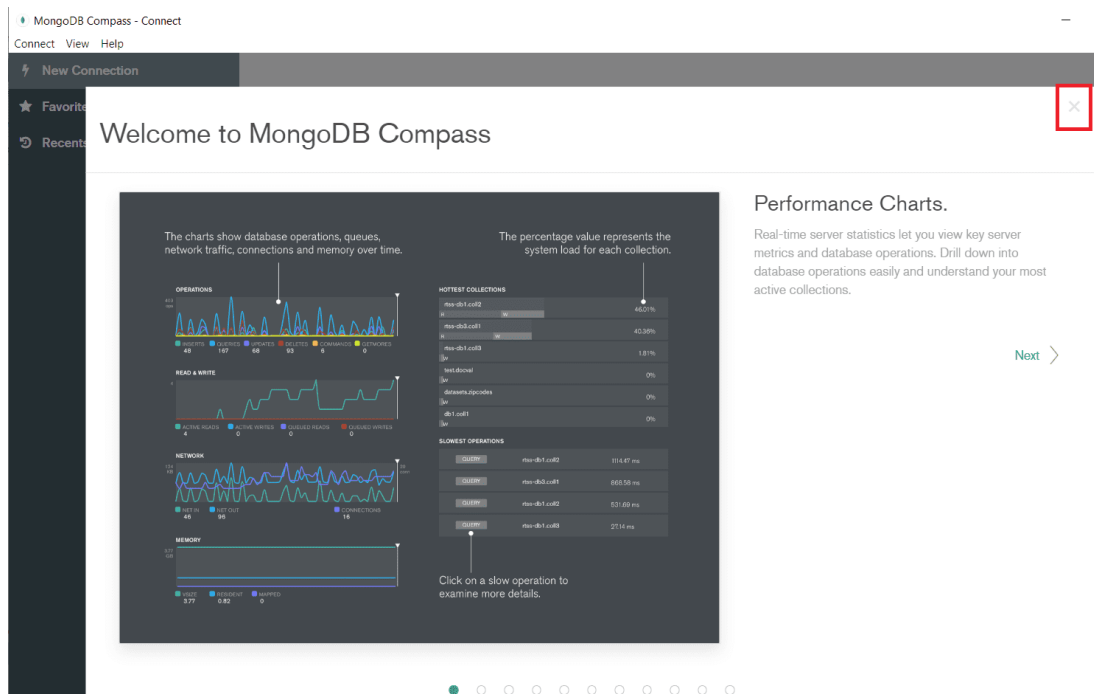
- Download the MongoDB Compass from here https://www.mongodb.com/try/download/compass, select zip Package , platform as Windows and click on Download.

- Extract mongodb-compass-1.26.1-win32-x64.zip and double click on the downloaded MongoDBCompass.exe file.

- Compass will open Welcome screen.

- Check all checkbox and click on 'Start Using Compass'.
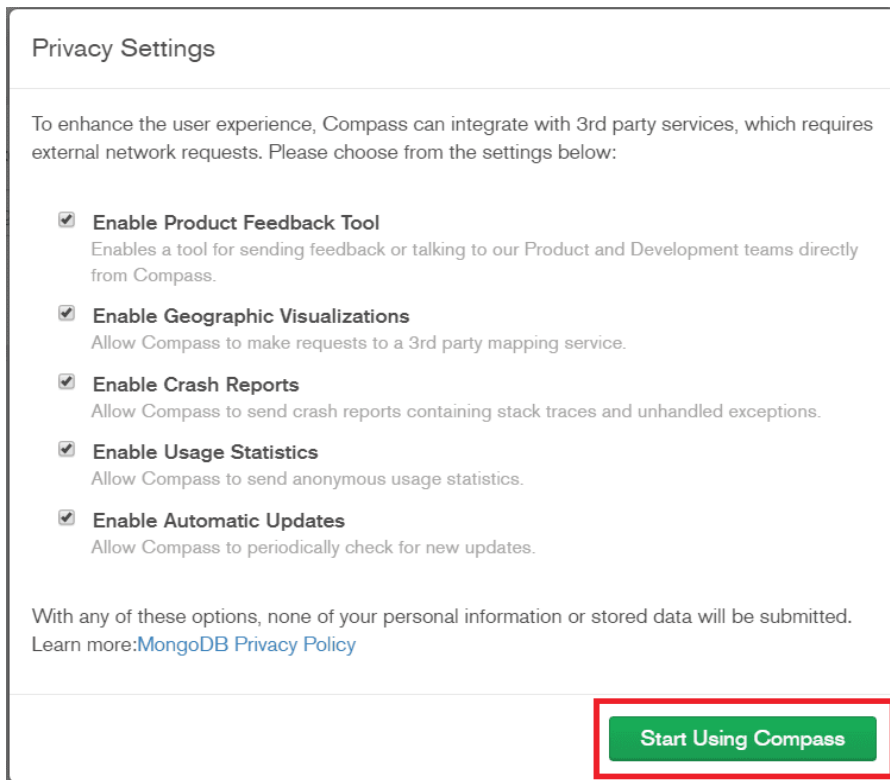
- Enter the connection String (mongodb://127.0.0.1:27017) to conect to MongoDB which we started from above step using mongo.exe.

- Once you connect to MongoDB, you can see the home screen with all databases.

- You can create the database from here too, for test purposes.

Using MongoDB

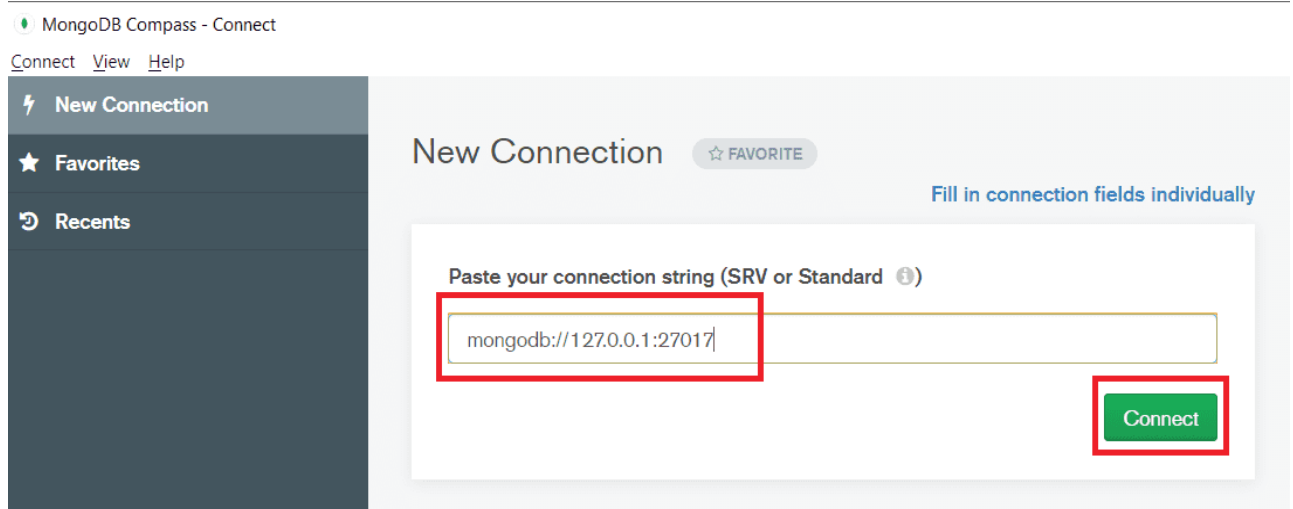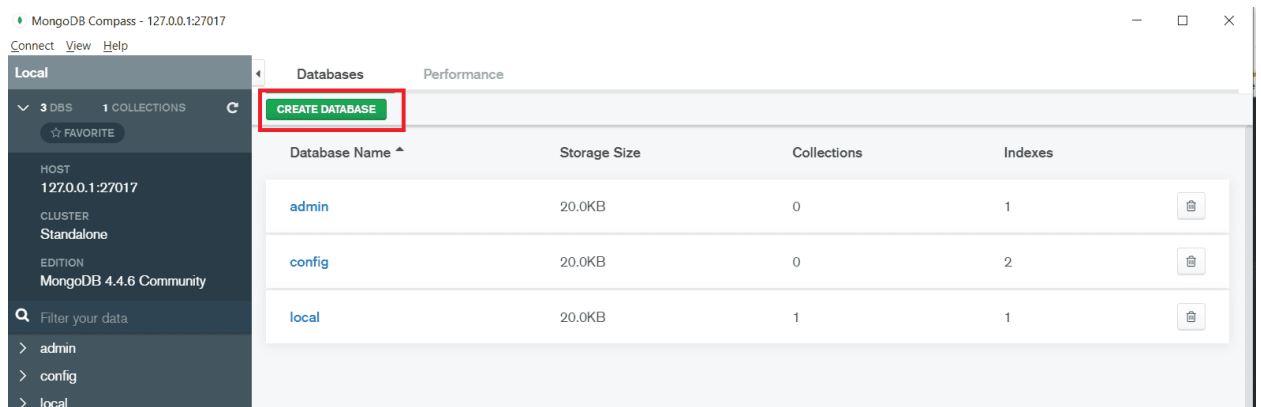If using Windows, MongoDB is installed at *C:\Program Files\MongoDB* by default. Add *C:\Program Files\MongoDB\Server\<version_number>\bin* to the Path environment variable. This change enables MongoDB access from anywhere on your development machine.

Use the mongo Shell in the following steps to create a database, make collections, and store documents.

- Choose a directory on your development machine for storing the data. For example, *C:\BooksData* on Windows. Create the directory if it doesn't exist. The mongo Shell doesn't create new directories.

- Open a command shell. Run the following command to connect to MongoDB on default port 27017. Remember to replace <data_directory_path> with the directory you chose in the previous step.

  mongod --dbpath <data_directory_path>

- Open another command shell instance. Connect to the default test database by running the following command:

  mongo

- Run the following command in a command shell:

  use BookstoreDb

  A database named BookstoreDb is created if it doesn't already exist. If the database does exist, its connection is opened for transactions.

- Create a Books collection using following command:

  db.createCollection('Books')

  The following result is displayed:

  { "ok" : 1 }

- Define a schema for the Books collection and insert two documents using the following command:

  db.Books.insertMany([{'Name':'Design Patterns','Price':54.93,'Category':'Computers','Author':'Ralph Johnson'}, {'Name':'Clean Code','Price':43.15,'Category':'Computers','Author':'Robert C. Martin'}])

The following result is displayed:

```
{
    "acknowledged" : true,
    "insertedIds" : [
    ObjectId("5bfd996f7b8e48dc15ff215d"),
    ObjectId("5bfd996f7b8e48dc15ff215e")
  ]
}
```

- View the documents in the database using the following command:

```
db.Books.find({}).pretty()
```

The following result is displayed:

```
{
  "_id" : ObjectId("5bfd996f7b8e48dc15ff215d"),
  "Name" : "Design Patterns",
  "Price" : 54.93,
  "Category" : "Computers",
  "Author" : "Ralph Johnson"
}
{
  "_id" : ObjectId("5bfd996f7b8e48dc15ff215e"),
  "Name" : "Clean Code",
  "Price" : 43.15,
  "Category" : "Computers",
  "Author" : "Robert C. Martin"
}
```

The schema adds an autogenerated _id property of type ObjectId for each document.

The database is ready. You can start creating the ASP.NET Core web API.

Configure MongoDB for Remote Connection

Follow these steps, to allow remote access to MongoDB server:

- Set up your user:

  For this example, we'll set up a user named cbsuser and give that user read & write access to the `cbs` database.

  use cbsdb.createUser({

  user: 'cbsuser',

  pwd: 'yourSecretPassword',

  roles: [{ role: 'readWrite', db:'cbs'}]

  })

- Enable auth and open MongoDB access up to all Ips:

  Edit your MongoDB config file located at

  <install directory>\bin\mongod.cfg

  Look for the net line and comment out the bindIp line under it, which is currently limiting MongoDB connections to localhost:

  # network interfaces

  net:

     port: 27017

     bindIp: 0.0.0.0 <- update this line

- Open port 27017 on your Server:

  From the windows firewall, you need to add an inbound rule to open TCP port 27017 to allow remote access.

- Last step: restart mongo daemon (mongod):

  Finally, restart your mongo db server and try to connect remotely.

References

https://docs.mongodb.com/

https://www.configserverfirewall.com/mongodb/mongodb-allow-remote-connections/

https://indianceo.medium.com/how-to-connect-to-your-remote-mongodb-server-68725a8e53f