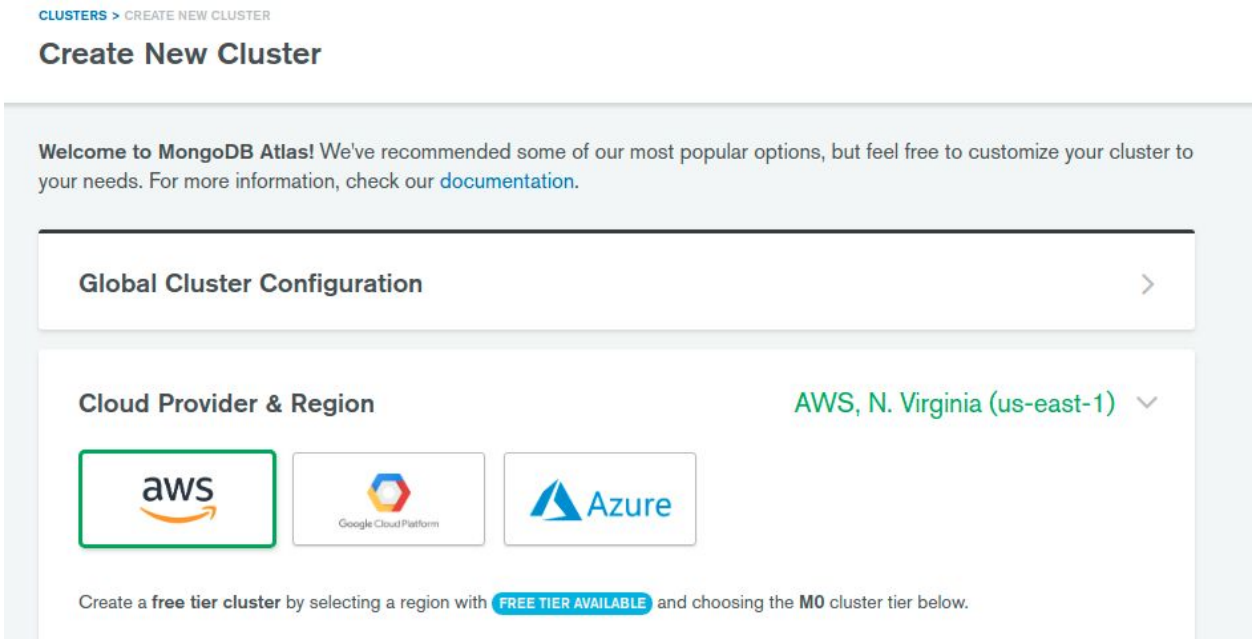
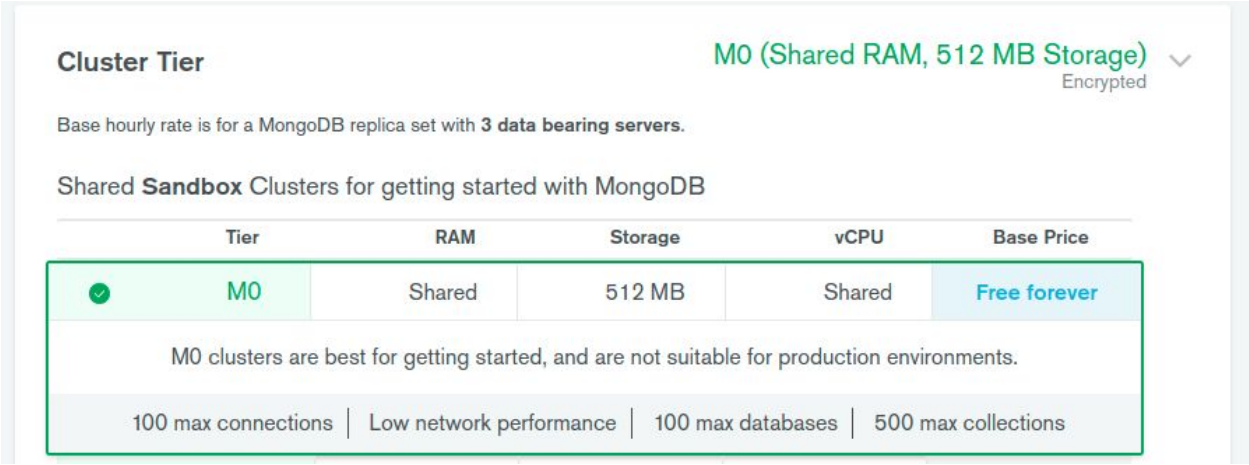
In order to practice exercises with NoSQL databases, we show below the configuration of 2 possible alternatives to interact with MongoDB.

Atlas

Visit https://www.mongodb.com/cloud/atlas
Sign up for MongoDB Atlas (create new user if you need)

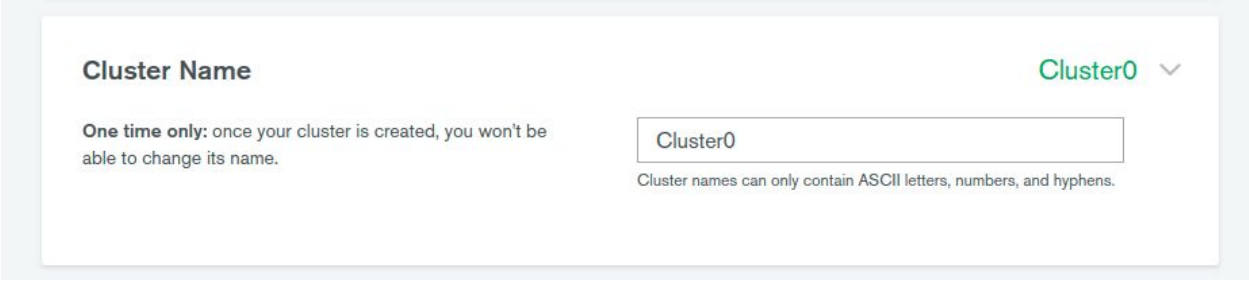


Select cluster tier.



It is important to keep in mind that you must select M0 which is the free tier.

Type Cluster Name



Press Create Cluster button

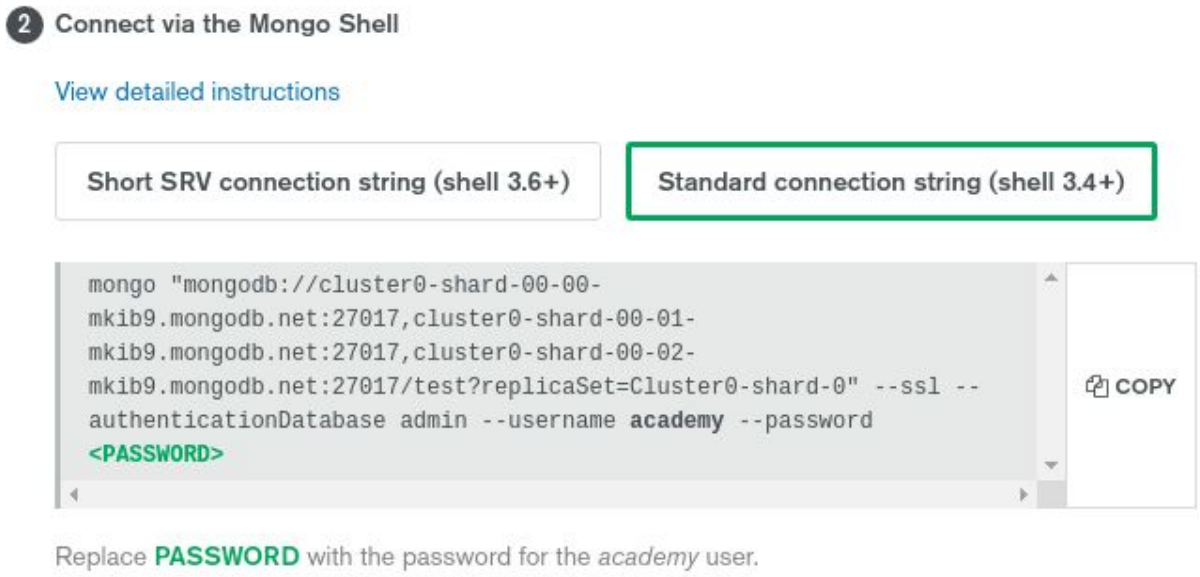
When the cluster is already created, you need to connect to it.

Press Connect button, and add your Ip to Whitelist

Next, create user and password

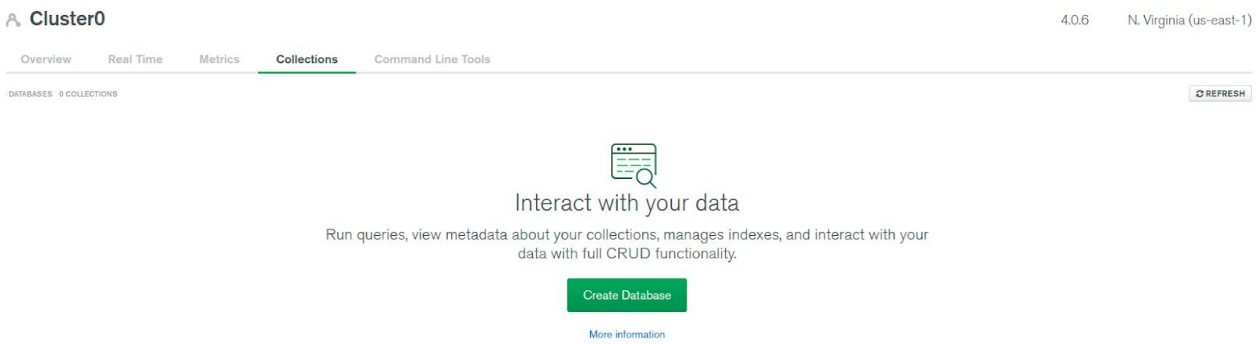
Press button in order to choose Choose a connection method. Select **Connect with the Mongo Shell**.

Select **Connect via the Mongo Shell** and Standard connection String. Copy the line as the image below shows



Use this connection string in CLI or some front end application.

To create a database, press Collection button, you will see as the image below shows



Press Create Database button

After creating the database, you can interact creating collections.

Connect to Database
Try to use a front end application, like NoSQLbooster or DBeaver
You can connect using command line as well.

mLab

Visit https://mlab.com site and create a subscription. You can create account without credit card information. You can use free layer when you will proceed to create a database.

Create new database

Press Create new button

Select Cloud Provider that you prefer.
Select Plan type, select Sandbox, which is the platform's free layer.

According to the provider you have selected, the regions in which you can host the database will be shown.
Press Continue button
Select the region
Press Continue button
Type database name
Press Continue button
Verify the data, and press **Submit Order** (Check that total price says free)

Connect to Database
Try to use a front end application, like NoSQLbooster or DBeaver
You can connect using command line as well.

Exercises

Download and Unzip restaurants.zip.

This is the structure for restaurants collection


```
{
  "address": {
     "building": "1007",
     "coord": [ -73.856077, 40.848447 ],
     "street": "Morris Park Ave",
     "zipcode": "10462"
  },
  "borough": "Bronx",
  "cuisine": "Bakery",
  "grades": [
     { "date": { "$date": 1393804800000 }, "grade": "A", "score": 2 },
     { "date": { "$date": 1378857600000 }, "grade": "A", "score": 6 },
     { "date": { "$date": 1358985600000 }, "grade": "A", "score": 10 },
     { "date": { "$date": 1322006400000 }, "grade": "A", "score": 9 },
     { "date": { "$date": 1299715200000 }, "grade": "B", "score": 14 }
  ],
  "name": "Morris Park Bake Shop",
  "restaurant_id": "30075445"
}
```


Create restaurants collection in MongoDB

Import restaurans.json to restaurants collection

Execute the following queries:

- Write a MongoDB query to display all the documents in the collection restaurants
- Write a MongoDB query to display the fields restaurant_id, name, borough and cuisine for all the documents in the collection restaurant.
- Write a MongoDB query to display the fields restaurant_id, name, borough and zip code, but exclude the field _id for all the documents in the collection restaurant.

- Write a MongoDB query to display all the restaurant which is in the borough Bronx
- Write a MongoDB query to display the first 5 restaurant which is in the borough Bronx.

- Write a MongoDB query to find the restaurants who achieved a score more than 90.
- Write a MongoDB query to find the restaurants that achieved a score, more than 80 but less than 100

- Write a MongoDB query to find the restaurants that do not prepare any cuisine of 'American' and their grade score more than 70 and latitude less than -65.754168

- Write a MongoDB query to find the restaurants which do not prepare any cuisine of 'American' and achieved a score more than 70 and located in the longitude less than -65.754168.

- Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'Wil' as first three letters for its name.

- Write a MongoDB query to find the restaurant name, borough, longitude and latitude and cuisine for those restaurants which contain 'Mad' as first three letters of its name.