Setup MongoDB using Atlas Cloud Cluster

Revised February 2022.

If your Mac, Windows, or Linux operating system does not allow you to set up MongoDB to work with the localhost, then set up a database cluster using MongoDB Atlas cloud server.

Install the database resources

1. If using VS Code, refer to these instructions, or follow along below.
2. In a new VS Code window:
   a. Add the MongoDB for VS Code extension.
   b. Click the Extensions icon on the left vertical menu to see the option to Install and Connect MongoDB.
   c. Click the green Install button, then, you'll see a Leaf icon on the left menu. Click it to set up a Connection.
3. At the MongoDB Atlas website:
   a. Login using your OSU Google credentials.
   b. In the Atlas tab, click the green +Create button, which will walk you through the steps to make a Cluster on the Atlas server.
   i. Click the Shared tab so that you can use one free Sandbox. No credit card will be required. If you choose a Dedicated server, then you'll be charged a monthly fee.
   ii. Choose the Google Cloud provider button.
   iii. Choose one of the free Regions. For students in the USA, that is probably Iowa.
iv. In the **Cluster Tier** dropdown, choose the **M0 Sandbox** because it is free forever. You'll only get one, which is sufficient for this course.

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<tbody>
<tr>
<td>M0 Sandbox</td>
<td>512 MB</td>
<td>Shared</td>
<td>Free forever</td>
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v. In the **Cluster Name** dropdown, update the name to CS 290, or something related.

vi. Click **Create Cluster**.

vii. From the menu at the left, click **Clusters** to see your Sandbox cluster:

![Clusters](image)

c. Click the **Connect** button for your new cluster to set the IP and user:

i. Click **Add your current IP address**.

![Connect](image)

You need to secure your MongoDB Atlas cluster before you can use it. Set which users and IP addresses can access your cluster now. [Read more](#)

You can’t connect yet. Set up your firewall access and user security permission below.

1. **Add a connection IP address**
   - Add Your Current IP Address
   - Add a Different IP Address
   - Allow Access from Anywhere

2. **Create a Database User**
   - This first user will have **atlasAdmin** permissions for this project.
   - Keep your credentials handy, you’ll need them for the next step.
   - **Username**: ex. dbUser
   - **Password**: ex. dbUserPassword

ii. Add a **username** and **password** for yourself as the user.
iii. Choose a connection method > Connect your driver > node.js version 3.6 or higher.

Connect to cluster-cs290

1. Select your driver and version

<table>
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<tr>
<th>DRIVER</th>
<th>VERSION</th>
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<tbody>
<tr>
<td>Node.js</td>
<td>3.6 or later</td>
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</table>

2. Add your connection string into your application code

```javascript
const { MongoClient } = require('mongodb');
const uri = 'mongodb+srv://pamvanlonden:<password>@cluster-cs290.chwzb.mongodb.net/myFirstDatabase?retryWrites=true&w=majority';
const client = new MongoClient(uri, { useNewUrlParser: true, useUnifiedTopology: true });
client.connect(err => {
  const collection = client.db("test").collection("devices");
  // perform actions on the collection object
  client.close();
});
```

1. Copy the resulting **path/address** for use in your code. Copy/paste it to a file for later use.
2. Click the **include full driver code example** and copy/paste it to a file for later use.
3. Click **Close**.

4. In VS Code, click the MongoDB leaf icon.
   a. Click the **Connect String** option and when prompted, paste in the string/path you got earlier.

b. **Revise the password** next to your name in the path.
   Use the password you set up in step 3.C, above.
c. When this works, you'll see the confirmation message.

\[\text{Connected to: cluster-cs290.chwzb.mongodb.net}\]

d. Use **Cmd + Shift + P** for all MongoDB Command Palette options.

5. **Drag your assignment3 folder** to VS Code and use the Terminal to run:
   
   `npm install mongodb mongoose express nodemon --save`

**Test the database connection**

Test the database connection using the **movies** example code provided in **Module 7**.

1. `npm install movies` then `npm start` to view the results of this test in:
   a. The console...see how the movie data was inserted into a document.
   b. View the new 'test' folder in the **Leaf** icon (MongoDB) and all the **documents** you made when starting the app.

2. When running the get request at `localhost:3000`, it should create the DB and collection.
3. It is important to close the connections in the terminal when done working for the day.
   Type: `ctrl+c` to close the app.