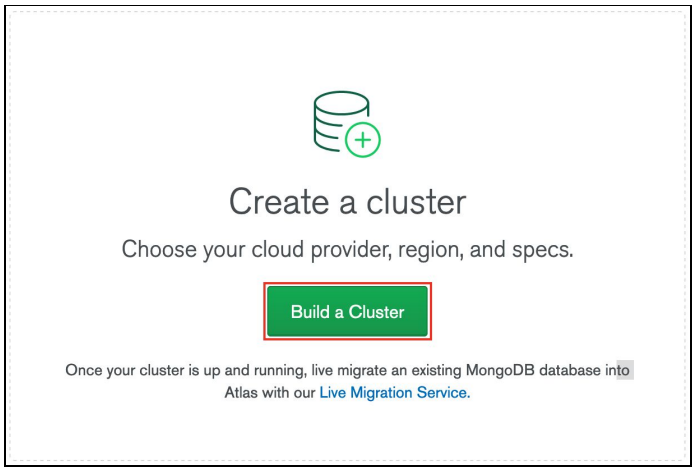
May 19, 2020

Setting Up MongoDB Atlas

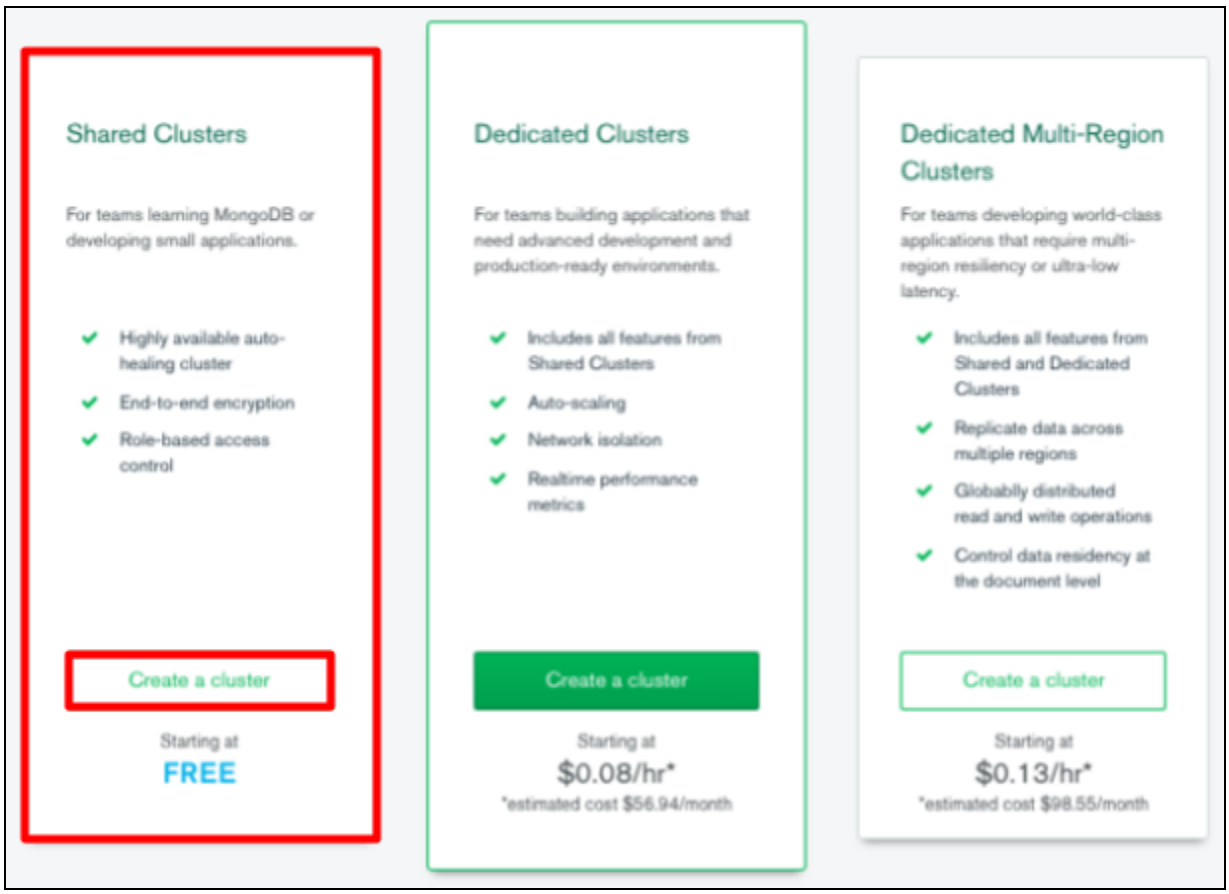
1. After successfully logging into your account, create a new project. This step is only necessary when you begin working on a new project and need to set up a database for it.

Deploy a Free Tier Cluster

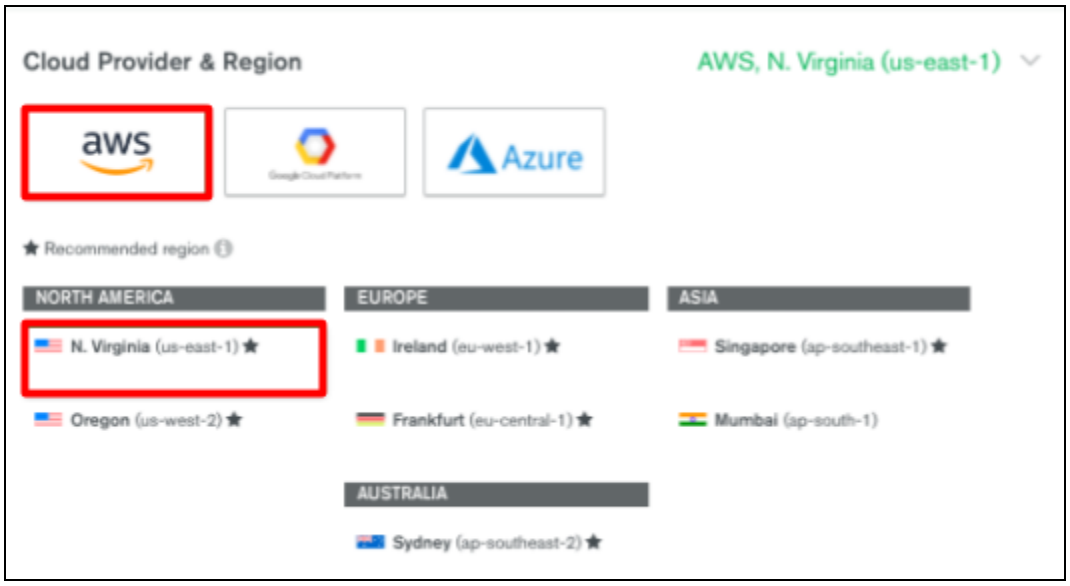
2. Navigate into your desired project and click **Build a Cluster**.



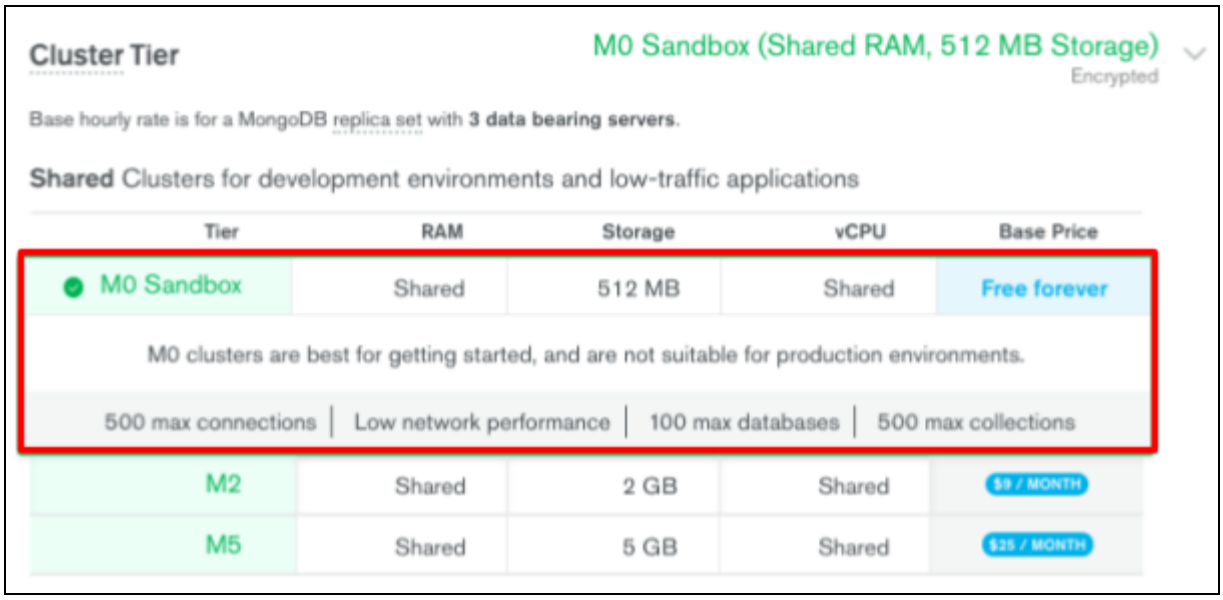
3. Select **Starter Clusters** and click **Create a Cluster**



4. Select your preferred **Cloud Provider & Region**.



5. Select **M0 Sandbox** for cluster tier. It should already be selected by default.



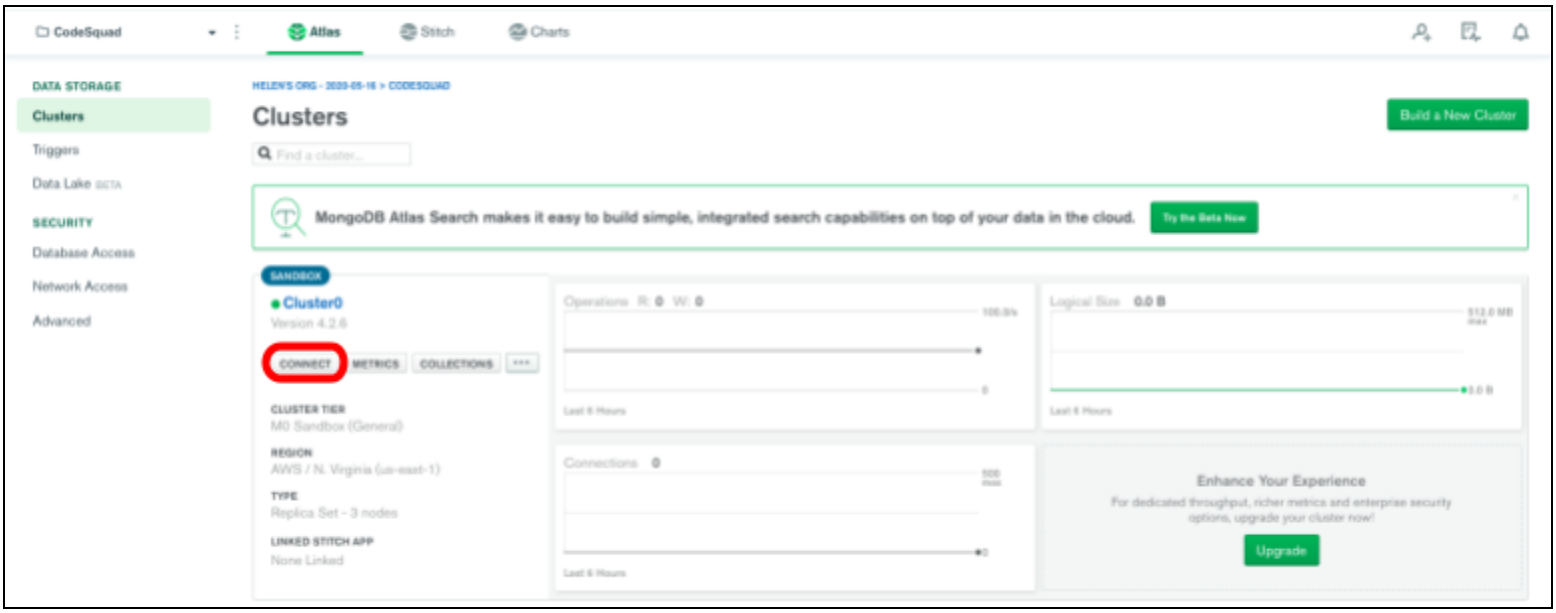
6. Enter a name for your cluster in the **Cluster Name** field. This step is optional since you can use the default name given by Atlas.

7. Click **Create Cluster** to deploy the cluster. It will take a few minutes for the cluster to be created.

Whitelist Your Connection IP Address

An IP address is a unique numeric identifier for a device connecting to a network. In Atlas, you can only connect to a cluster from a trusted IP address. Within Atlas, you can create a list of trusted IP addresses, referred to as a whitelist, that can be used to connect to your cluster and access your data.

8. Add your IP address to whitelist before you connect to your cluster. To add your IP address to the whitelist, first open the **Connect** dialog.



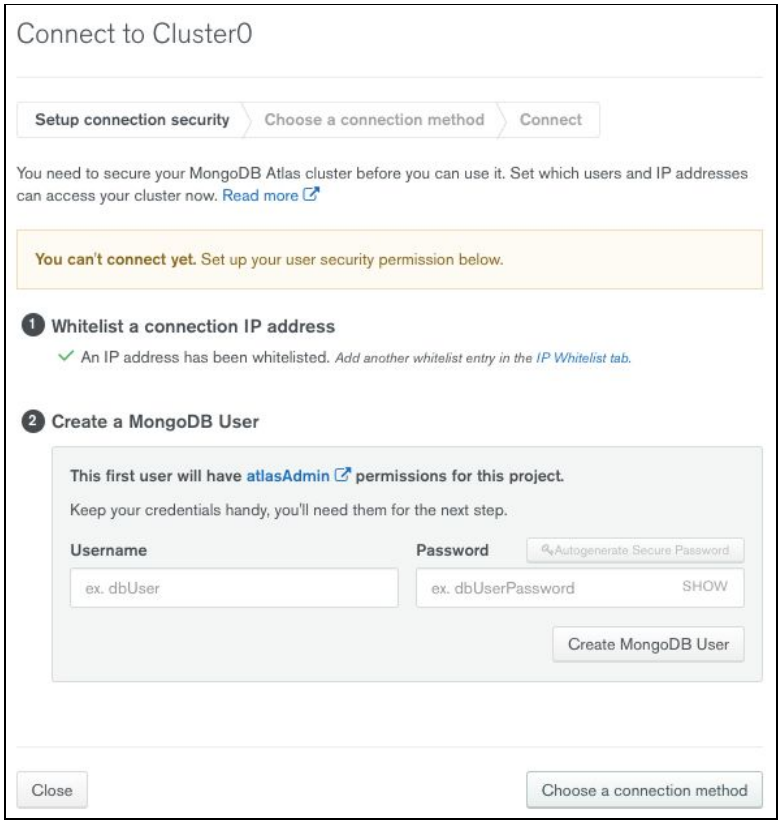
9. Configure your whitelist entry. In the **Whitelist your connection IP address** step, click **Add Your Current IP Address**.

Create a Database User For Your Cluster

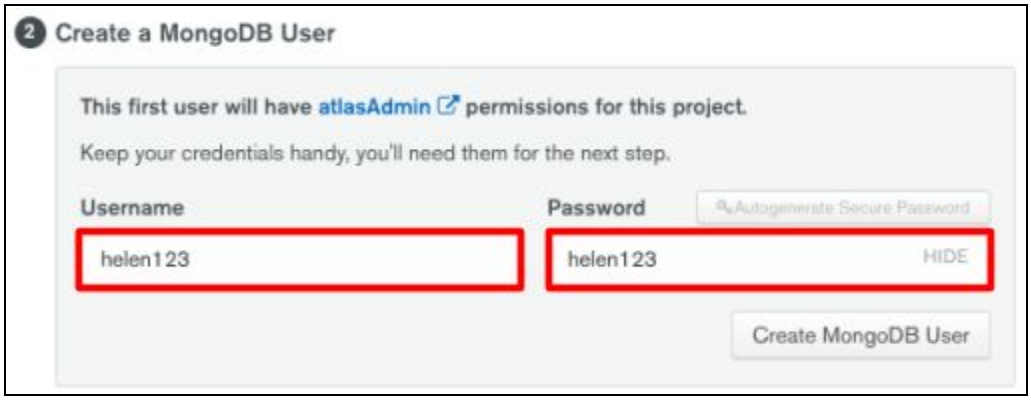
MongoDB Atlas requires clients to authenticate as MongoDB database users to access clusters. Database users are separate from Atlas users:

- *Database users can access databases hosted in Atlas*
- *Atlas users can log into Atlas but do not have access to MongoDB databases*

10. After successfully adding an IP address to your whitelist, you should see something like this:

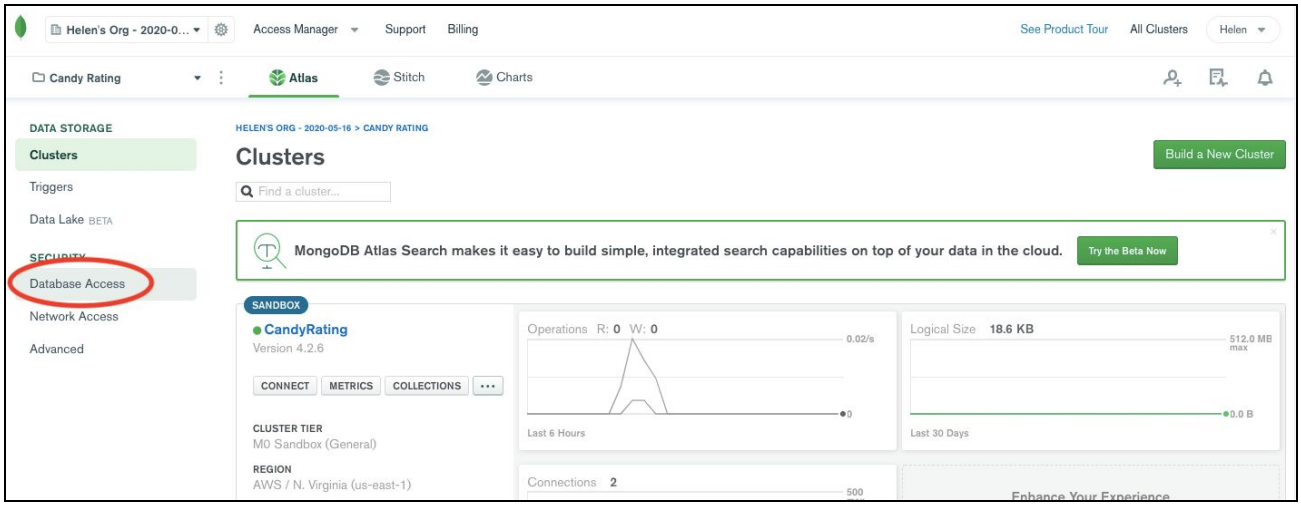


11. In the **Create a MongoDB User** step of the dialog box, enter a **Username** and a **Password** for your database user. This is the username and password combination to access data on your cluster. *Note: try not to use special characters in your password because you will need to encode them later on (https://docs.atlas.mongodb.com/troubleshoot-connection/#special-pass-characters)*



12. Click **Create MongoDB User** to finish creating a database user.

13. The first user that you create will only have **Atlas Admin** permissions. If that is the case what we need to do is change the user permission, otherwise you won't be able to make changes to your database. On the left side column, click



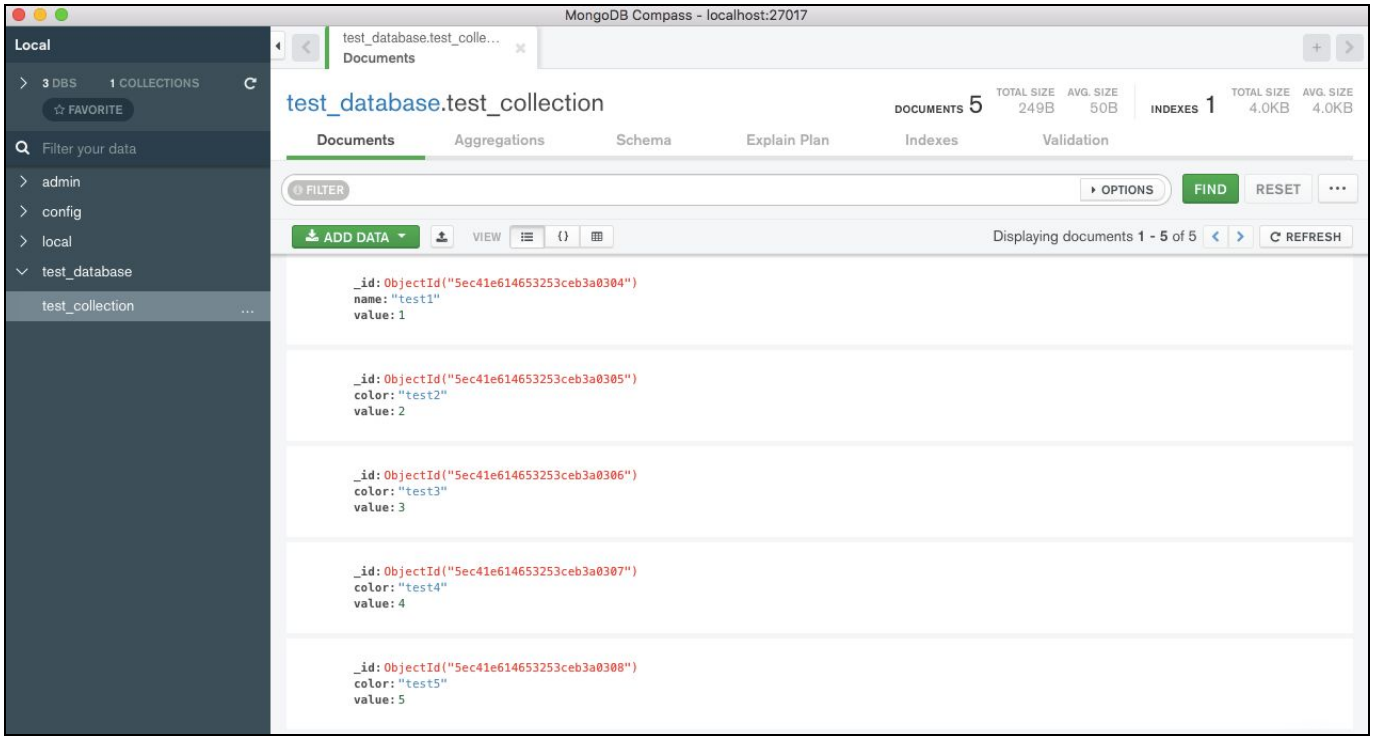
14. Right now you will see that under the MongoDB roles column, it says **atlasAdmin**@admin. You want to Edit this. So click **Edit**.

15. Scroll down to **Database User Privileges**. It currently says **Atlas Admin**.

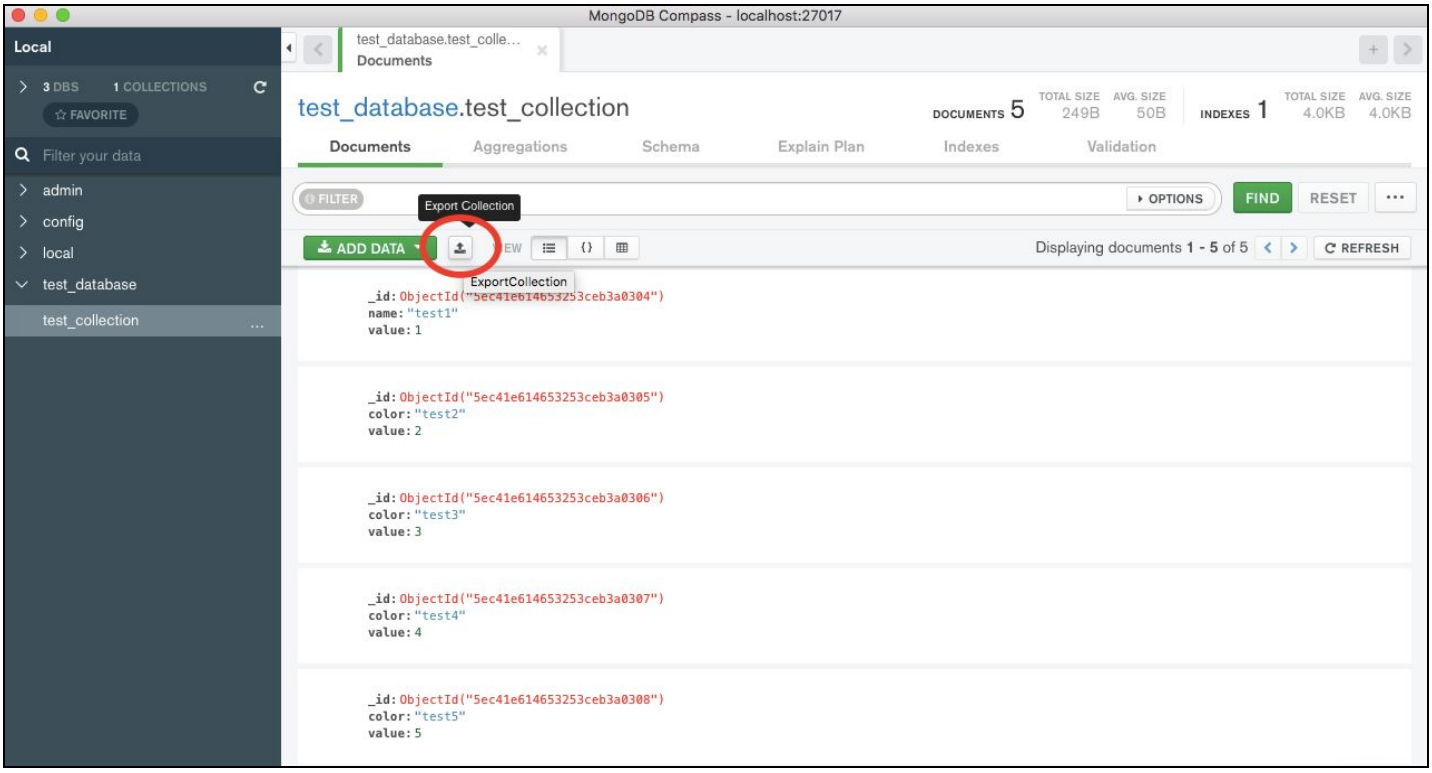
16. In the dropdown menu, select **Read and write to any database**. Click **Update User**.

Migrate Local Data from Compass to Atlas

17. First, we want to export data from our local database in a JSON file format. To do so, navigate to your desired database and click into your desired collection.

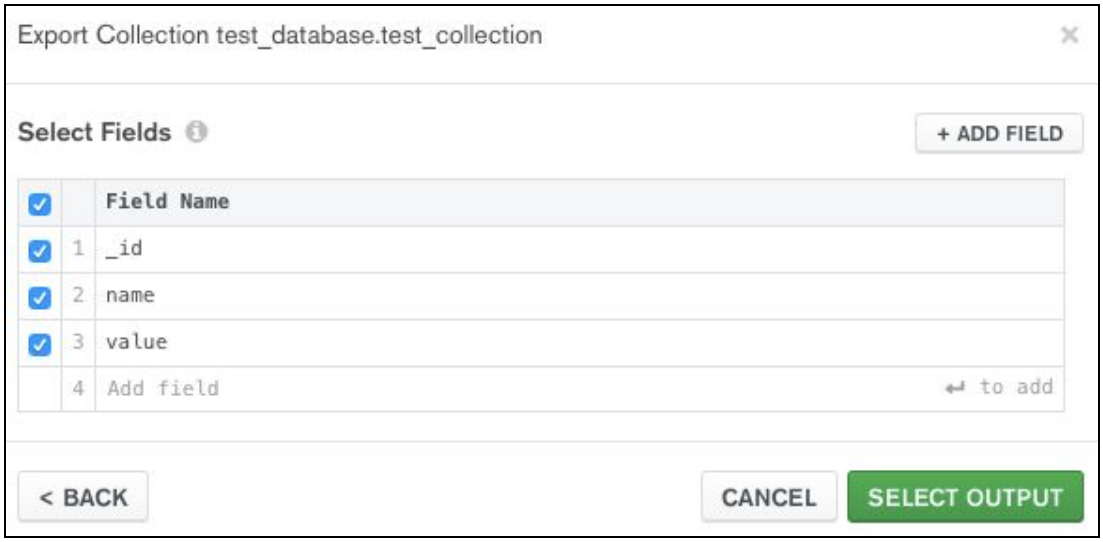


18. Click the **Export Collection** button.

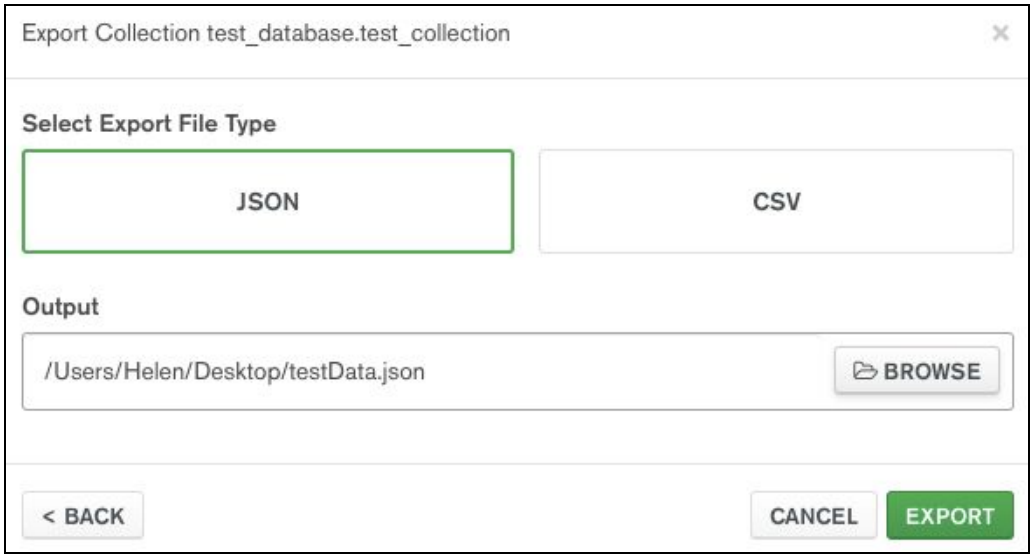


19. Select **Export Full Collection** and click **Select Fields**

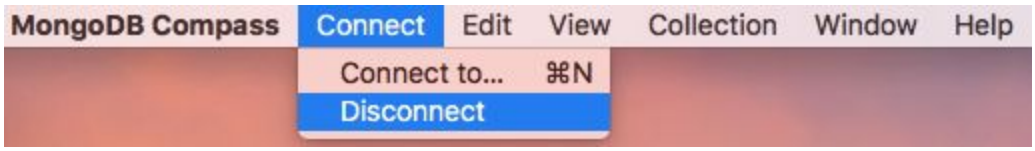
20. By default all the fields should have a check mark next to them. Click **Select Output**.



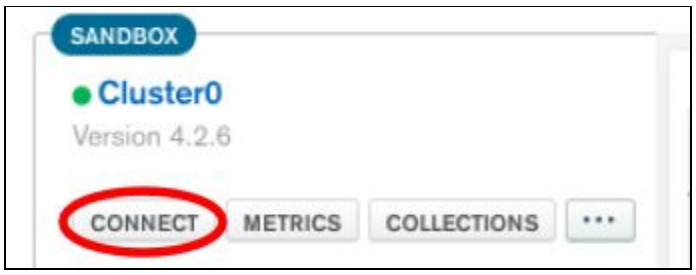
21. Enter where you want to store the output file. Select the **Export File Type**. In our case, we want to choose **JSON**. Click **Export** and then **Close** the dialog box. You should now have a JSON file of your data.



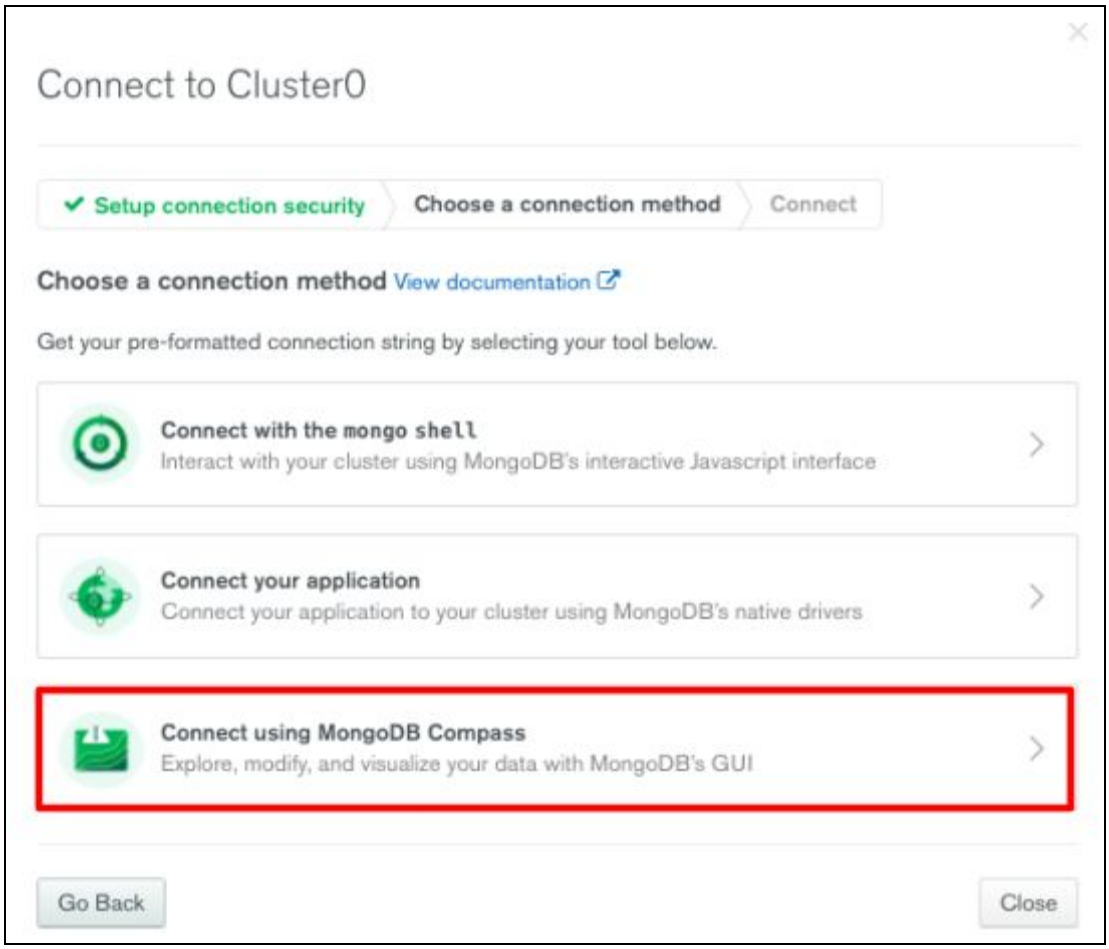
22. Now we want to disconnect our localhost database on Compass.



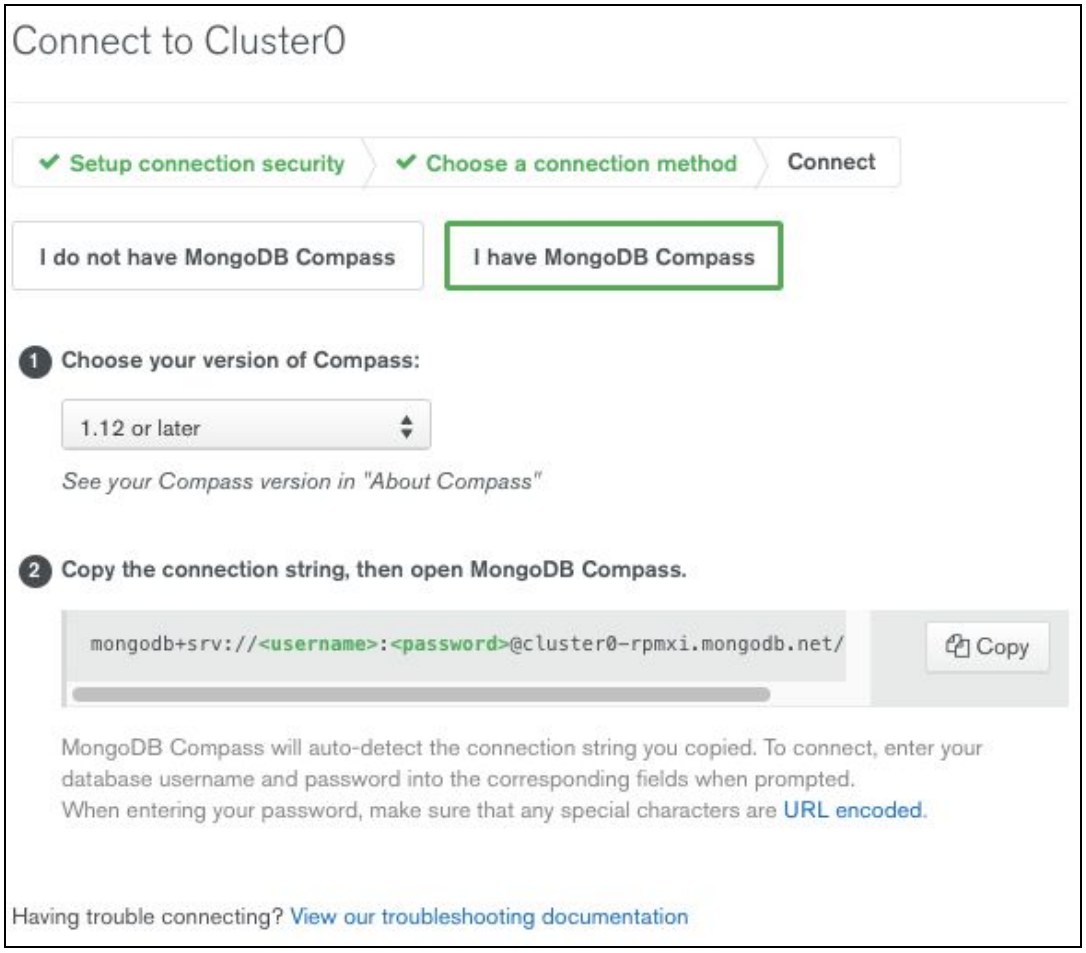
23. It is now time to connect Atlas and Compass. Head over back to Atlas and in your Clusters page, click the **Connect** dialog button.



24. Select **Connect using MongoDB Compass**.

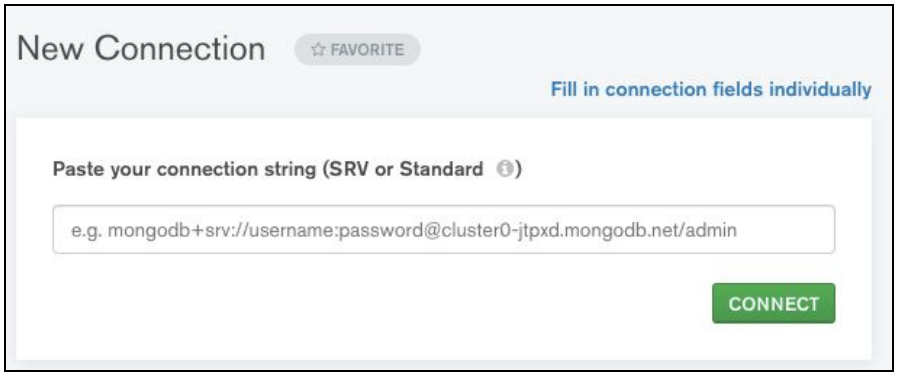


25. You should already have Compass installed, so click **I have MongoDB Compass**. Select the appropriate version which should be **1.12 or later**. In step 2 of the dialog box, you will see an option to **copy the connection string**. Copy that connection string.

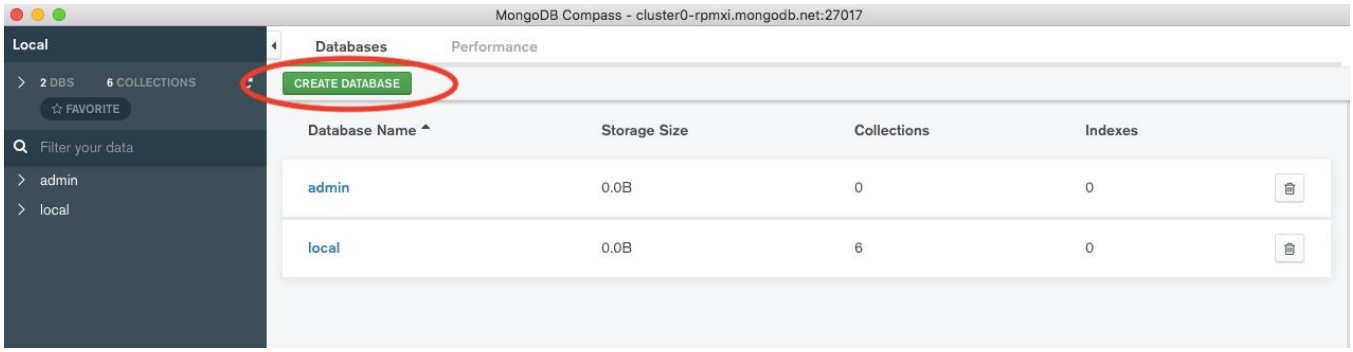


26. Now that we have the connection string from Atlas, open back up Compass and in the navigation bar, select **Connect** and then **Connect to…**

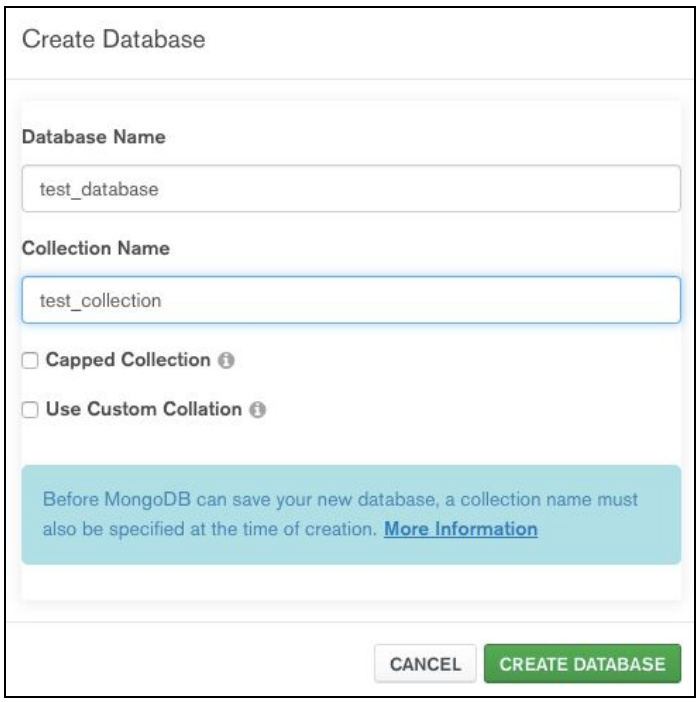
27. Paste your connection string from Atlas into this input box in Compass. Replace **<username>** with your Atlas database username and **<password>** with your Atlas database password. Then click **Connect**.



28. After you click Connect, you should ***not*** see any data in Compass. This is because Compass is currently linked to your MongoDB Atlas account, which has no data at the moment. What we need to do is ***import*** that JSON file from Step 17 into Compass. We can do so by first clicking **Create Database**.

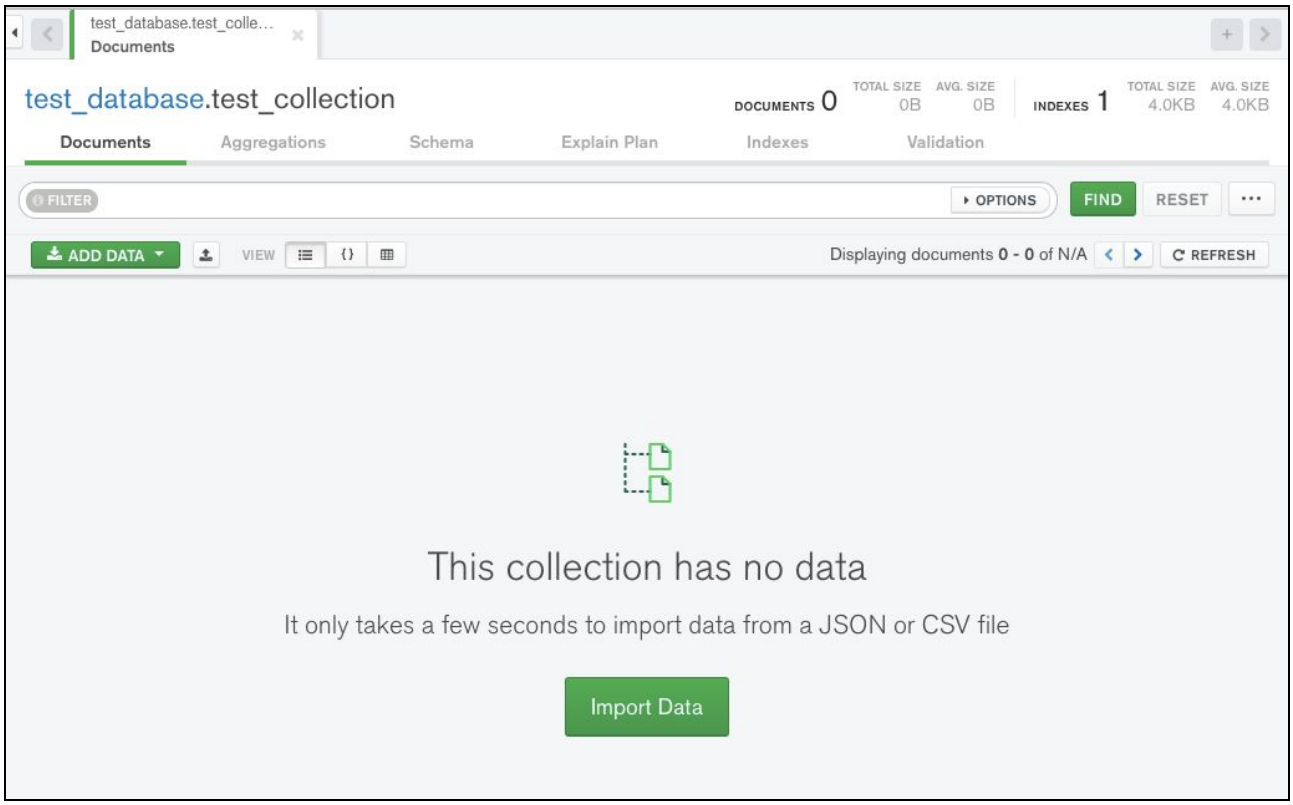


29. Enter in the same **Database Name** and **Collection Name** as in your local database. In my example, I named my database 'test_database' and collection 'test_database' on my local database, so I will do the same here. Click **Create Database**

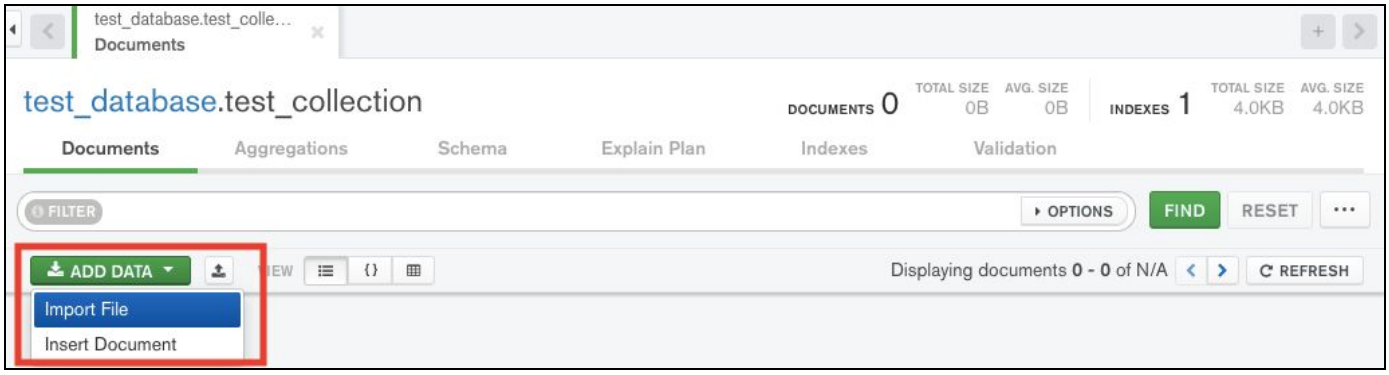


30. You should now see your database listed. Click into the database you just created and click into your collection.

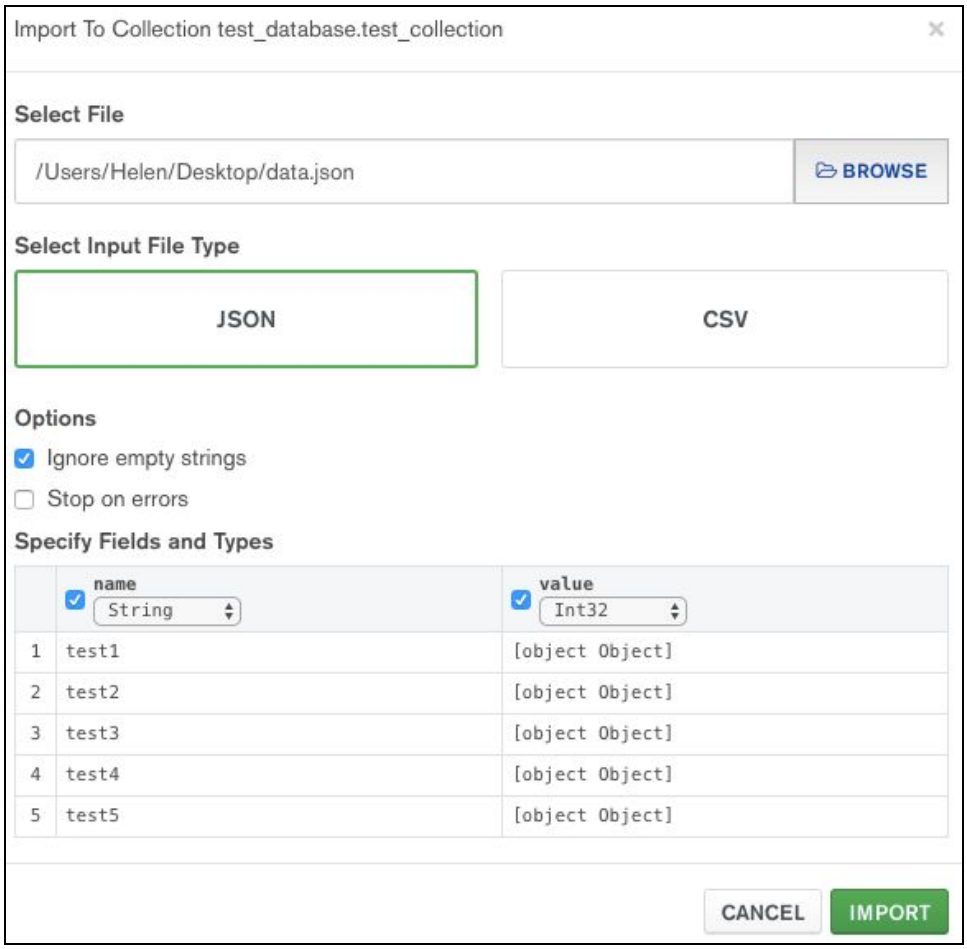
31. You should see that the collection currently has no data.



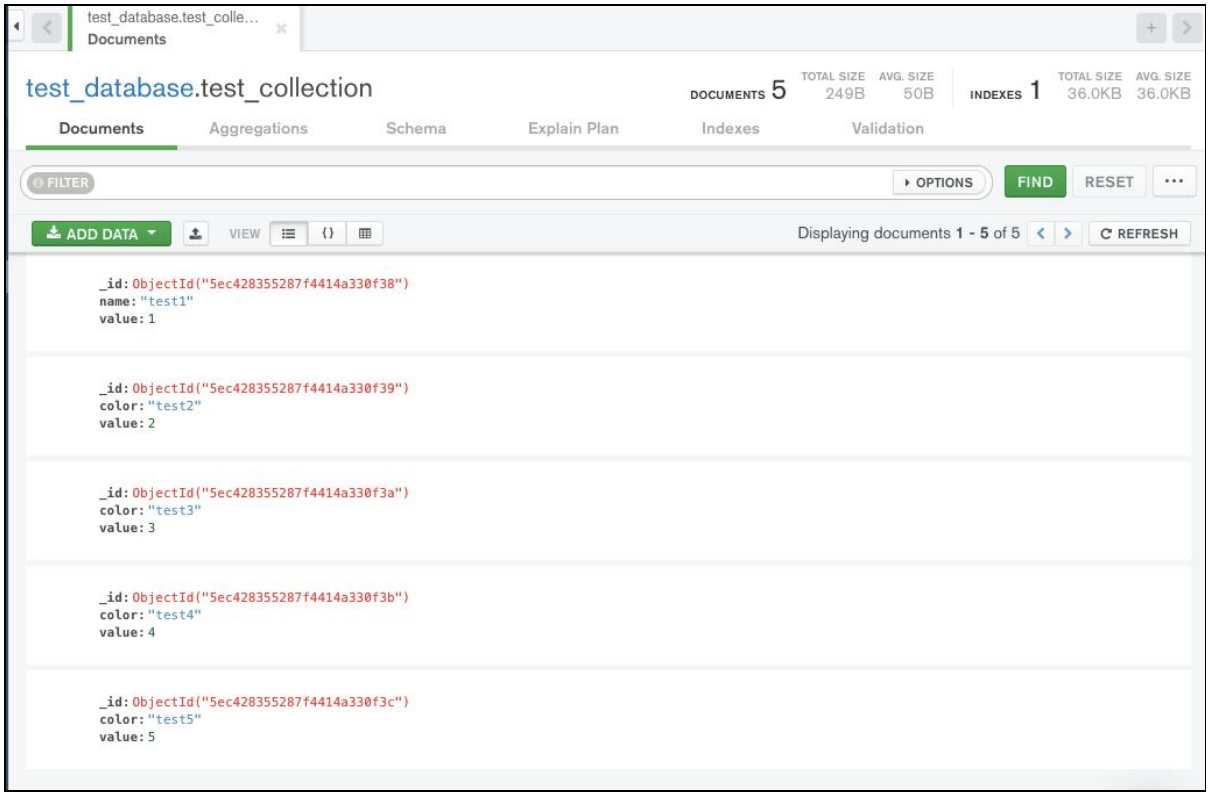
32. Now click **Add Data** and select **Import File** in the dropdown.



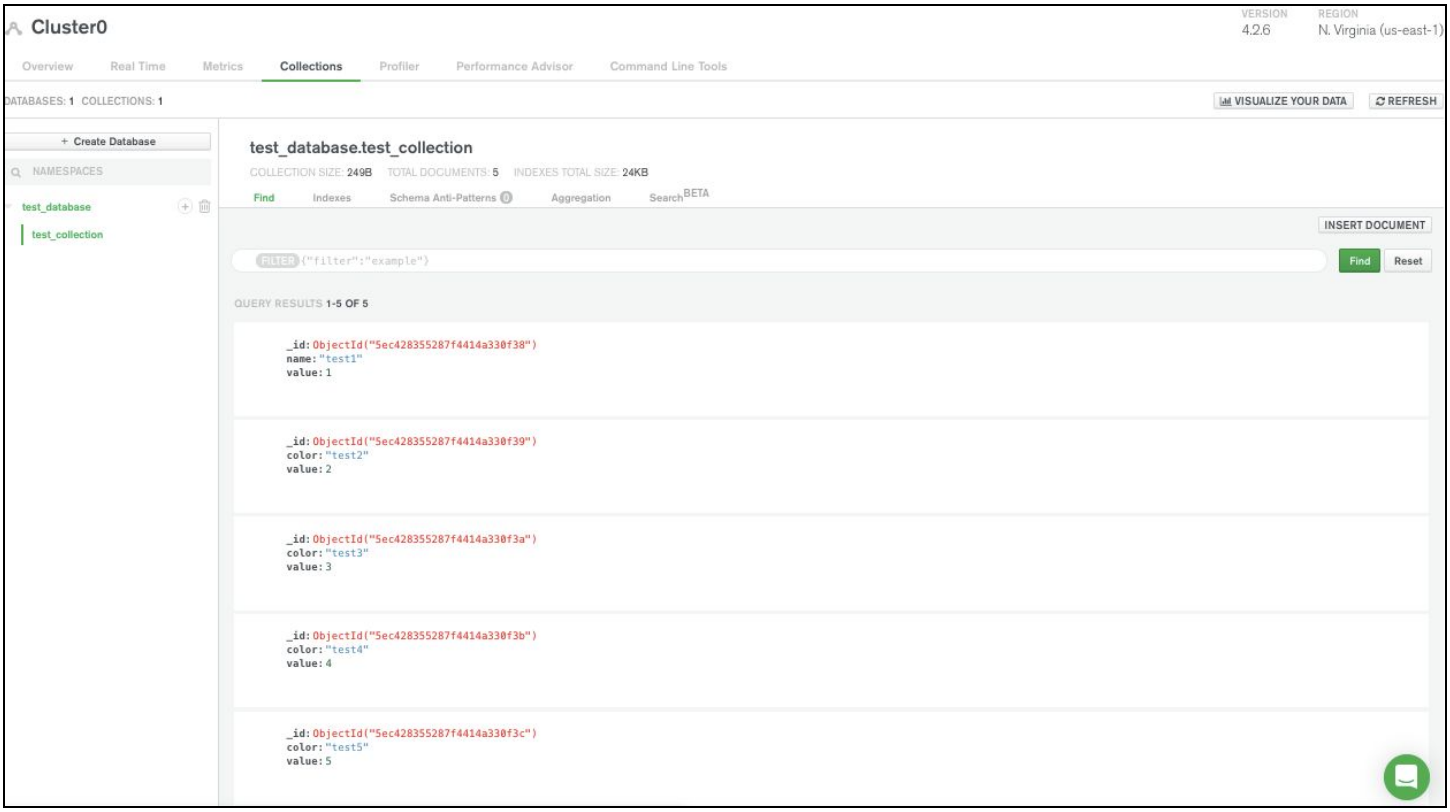
33. Import the JSON file that you had exported earlier.



34. You should see data populated now.



35. If you head over to your Atlas, you will see the data appear in your **Collections**.



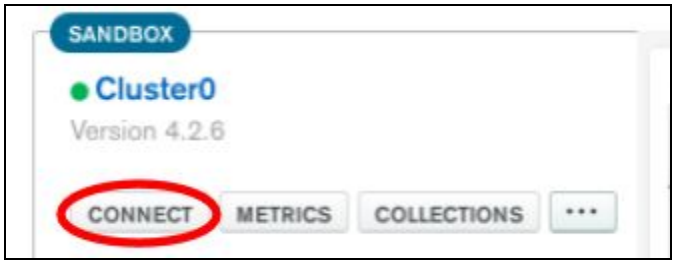
36. You have successfully migrated local data from Compass to Atlas! But your application is still connected to your local database. We now need to connect your application to Atlas as well.

Connect to Your Cluster to Your Application

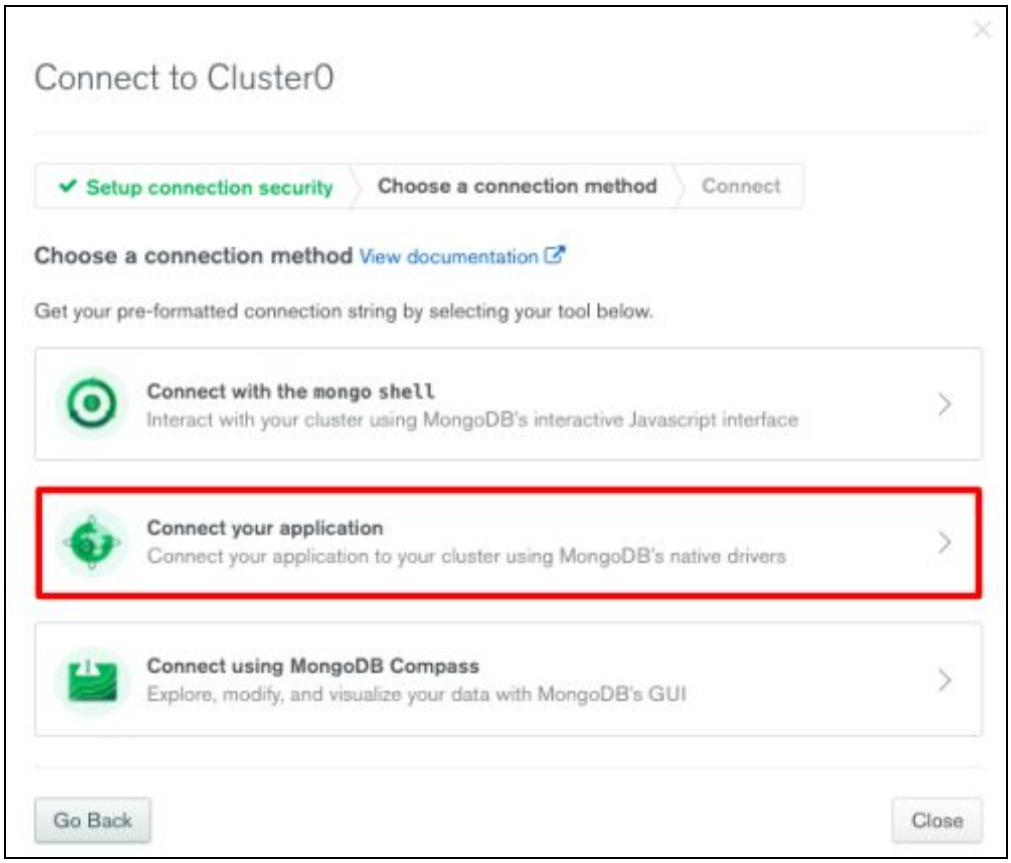
Now that you have a database user for your cluster and you have migrated data from your local machine to Atlas, we need to connect your application to the cluster. Before we can proceed, there are some prerequisites to connecting your cluster:

- Must have an Atlas account with an active cluster
- Must have a whitelisted IP address
- Must have a MongoDB database user for your cluster

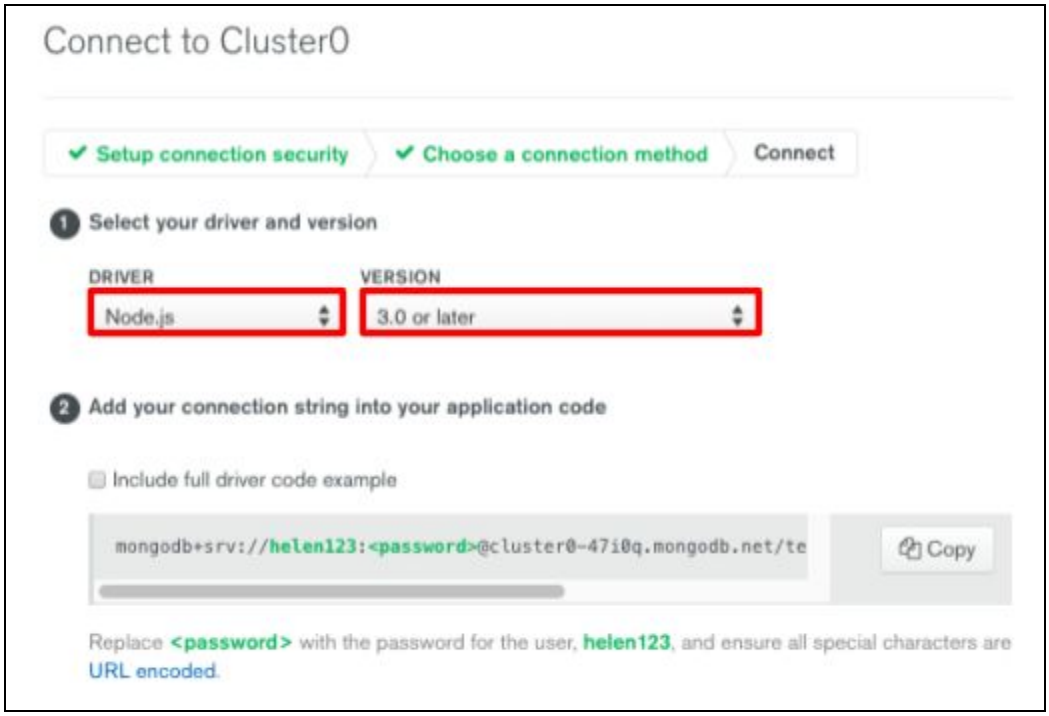
37. After adding a whitelisted IP address and creating a database user for your cluster, click the **Connect** dialog button (refer to step 8 find this button).



38. Select **Connect your application**.



39. Select **Node.js** for the driver and **3.0 or later** for the version.



40. The **connection string** from step 2 of the image above is what you will need in order to connect your Node.js application to Atlas. Replace the URL string in your **index.js** file with this connection string, making sure to change your <username> and <password> with your Atlas database user information.