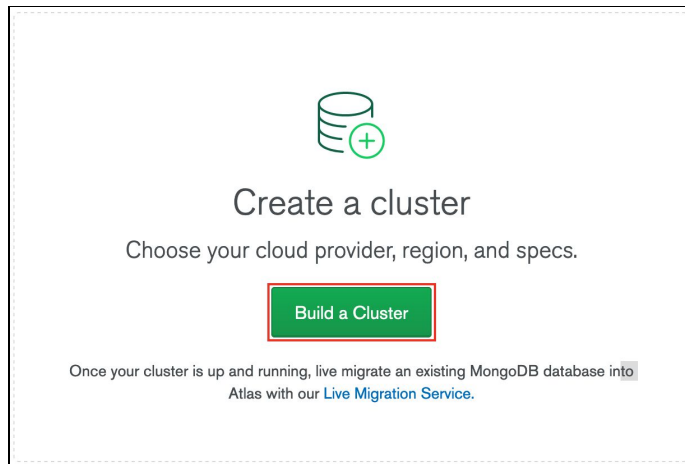


# Setting Up MongoDB Atlas

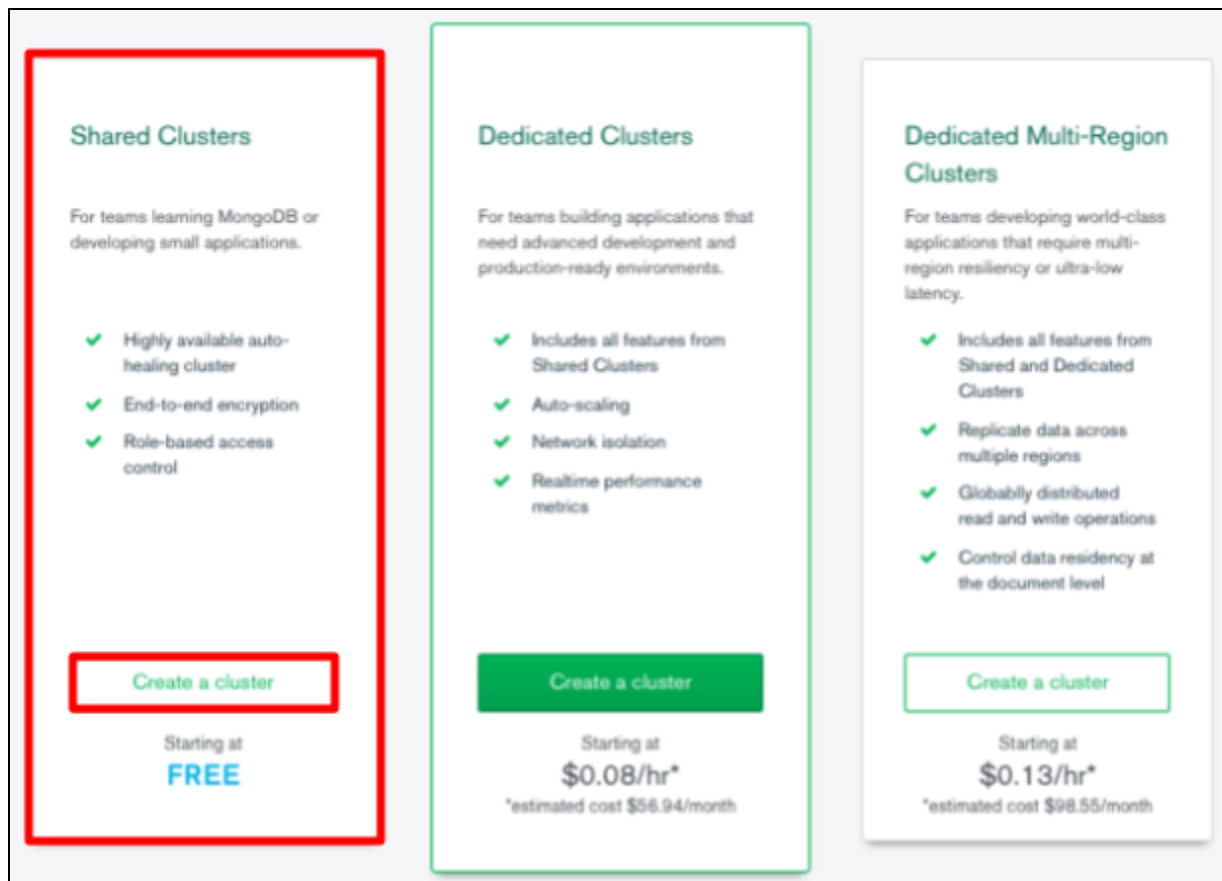
1. After successfully logging into your account, create a new project. This step is only necessary when you begin working on a new project and need to set up a database for it.

## 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**.



Cloud Provider & Region AWS, N. Virginia (us-east-1) ▼




★ Recommended region ⓘ

**NORTH AMERICA**  
 **N. Virginia (us-east-1) ★**  
 **Oregon (us-west-2) ★**

**EUROPE**  
 **Ireland (eu-west-1) ★**  
 **Frankfurt (eu-central-1) ★**

**ASIA**  
 **Singapore (ap-southeast-1) ★**  
 **Mumbai (ap-south-1)**


**AUSTRALIA**  
 **Sydney (ap-southeast-2) ★**

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

Cluster Tier M0 Sandbox (Shared RAM, 512 MB Storage) ▼  
Encrypted

Base hourly rate is for a MongoDB replica set with 3 data bearing servers.

Shared Clusters for development environments and low-traffic applications

Tier	RAM	Storage	vCPU	Base Price
 <b>M0 Sandbox</b>	Shared	512 MB	Shared	<b>Free forever</b>
M0 clusters are best for getting started, and are not suitable for production environments.				
500 max connections   Low network performance   100 max databases   500 max collections				
<b>M2</b>	Shared	2 GB	Shared	<b>\$9 / MONTH</b>
<b>M5</b>	Shared	5 GB	Shared	<b>\$25 / MONTH</b>

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.

Cluster Name Cluster0 ▼

One time only: once your cluster is created, you won't be able to change its name.

Cluster0

Cluster names can only contain ASCII letters, numbers, and hyphens.

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

**FREE**  
Free forever! Your M0 cluster is ideal for experimenting in a limited sandbox. You can upgrade to a production cluster anytime.

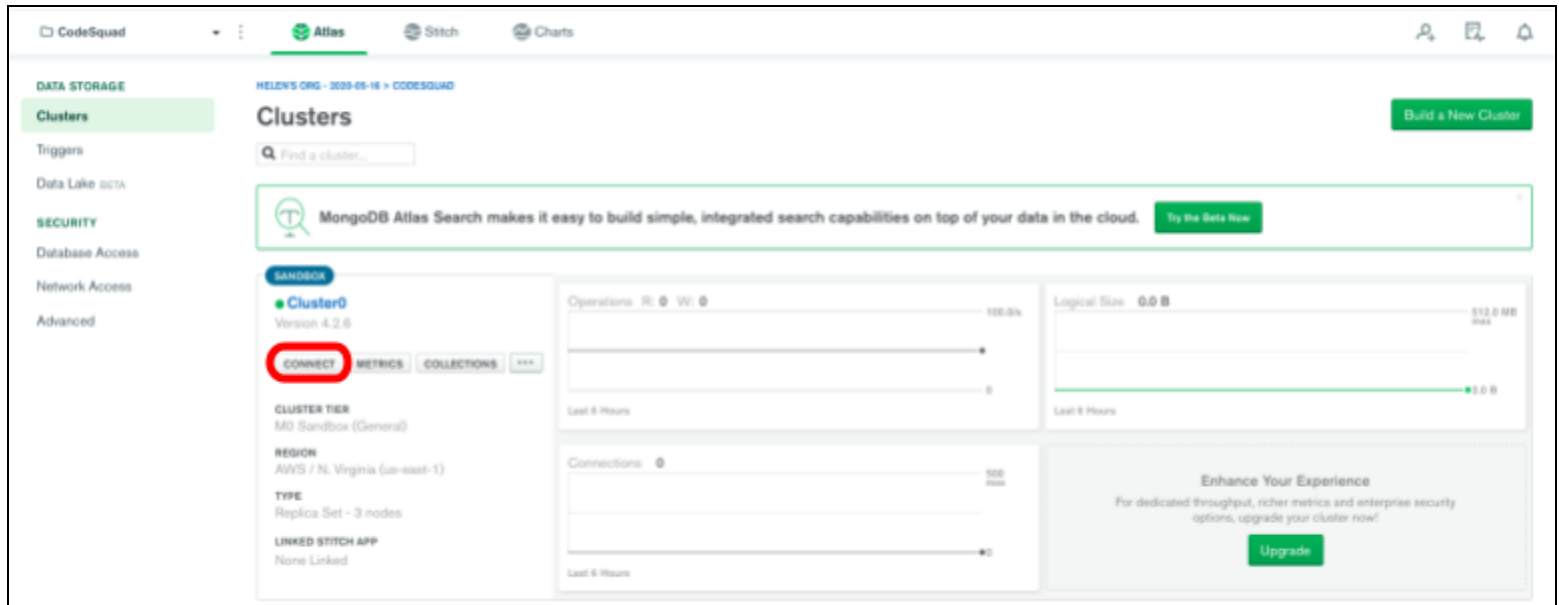
[Back](#)

**Create Cluster**

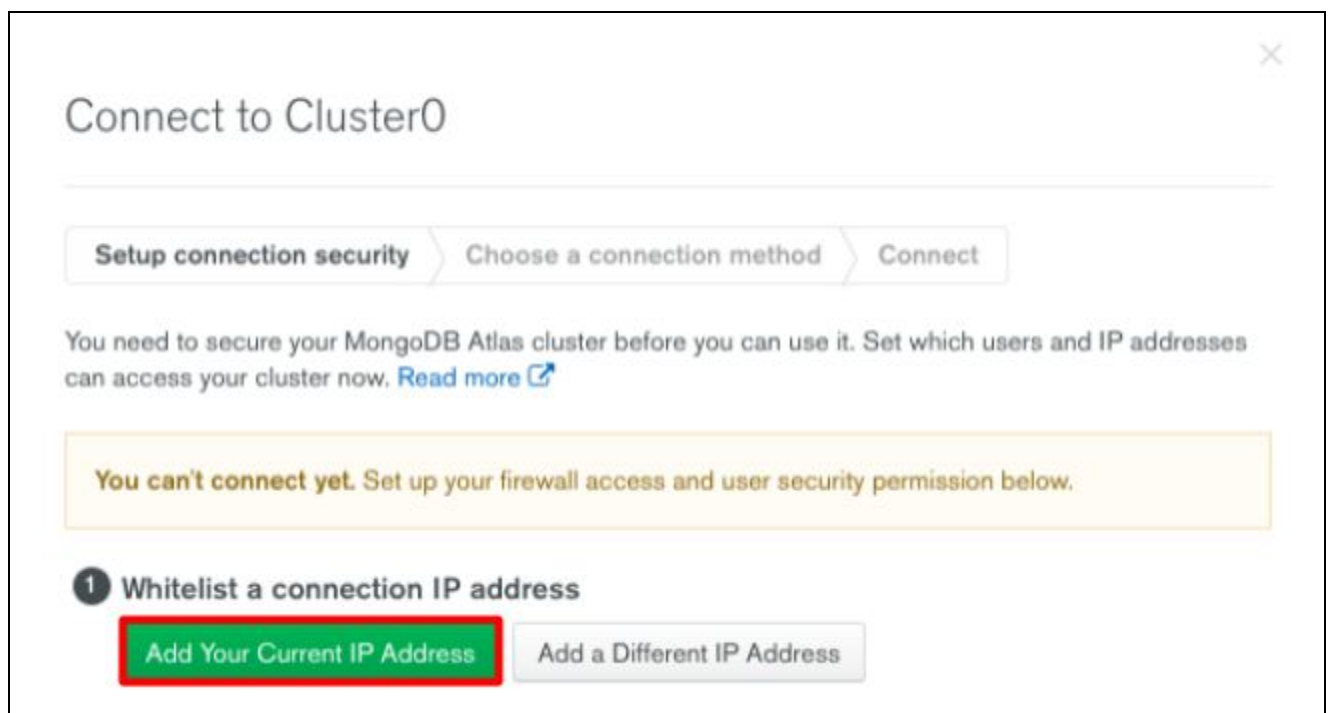
# Whitelist Your Connection IP Address

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**.

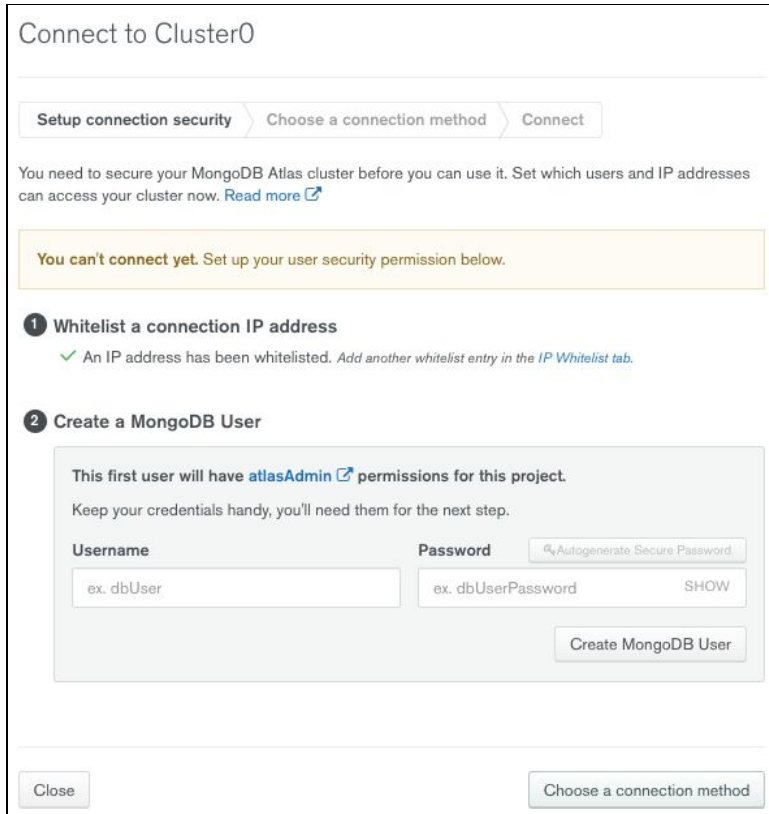


# Create a Database User For Your Cluster

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:



Connect to Cluster0

Setup connection security > Choose a connection method > Connect

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 user security permission below.

1 Whitelist a connection IP address

✓ An IP address has been whitelisted. Add another whitelist entry in the [IP Whitelist tab](#).

2 Create a MongoDB User

This first user will have [atlasAdmin](#) permissions for this project.

Keep your credentials handy, you'll need them for the next step.


Username Password [Autogenerate Secure Password](#)

ex. dbUser ex. dbUserPassword SHOW

Create MongoDB User

Close Choose a connection method

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>)*



2 Create a MongoDB User

This first user will have [atlasAdmin](#) permissions for this project.

Keep your credentials handy, you'll need them for the next step.

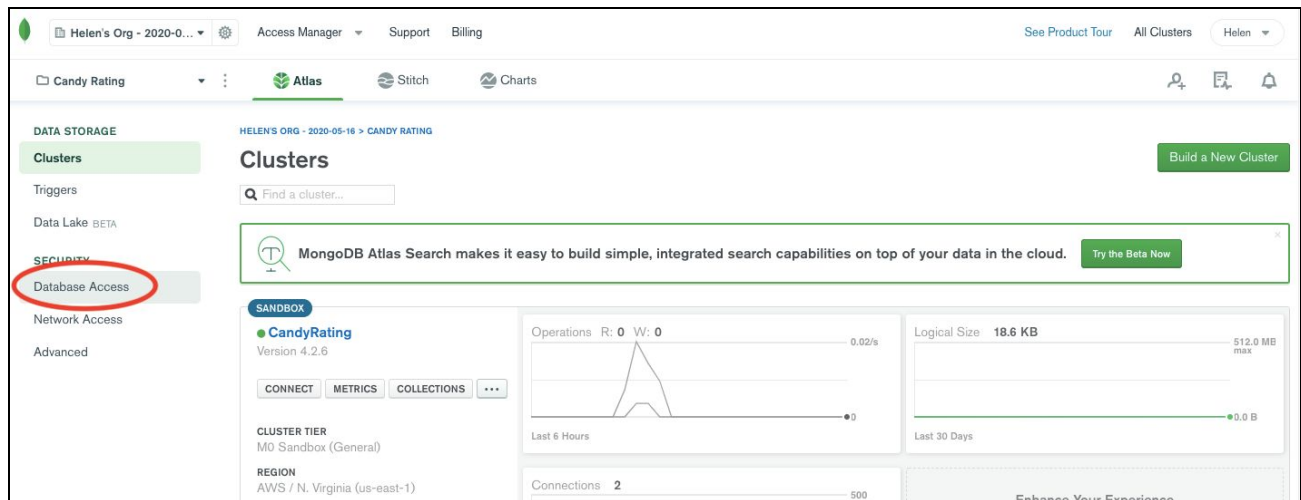
Username Password [Autogenerate Secure Password](#)

helen123 helen123 HIDE

Create MongoDB User

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**.

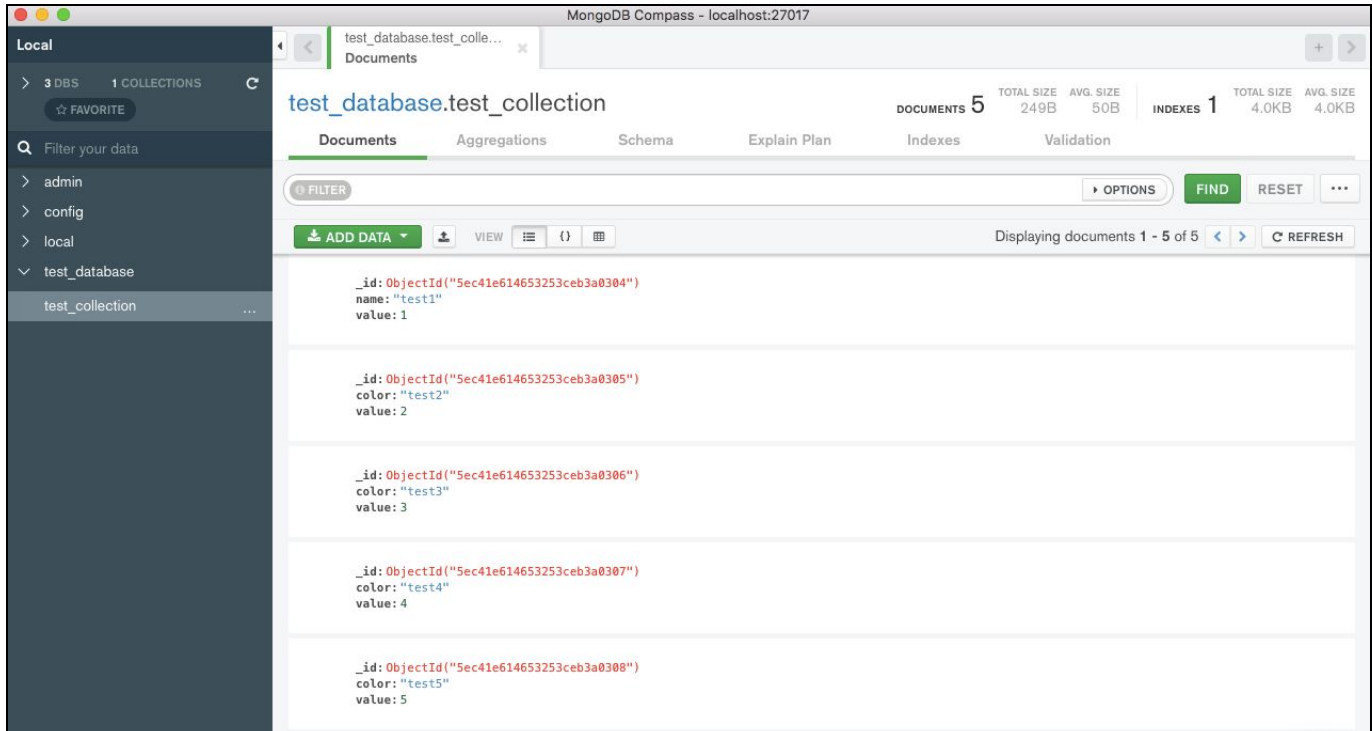


16. In the dropdown menu, select **Read and write to any database**. Click **Update User**.

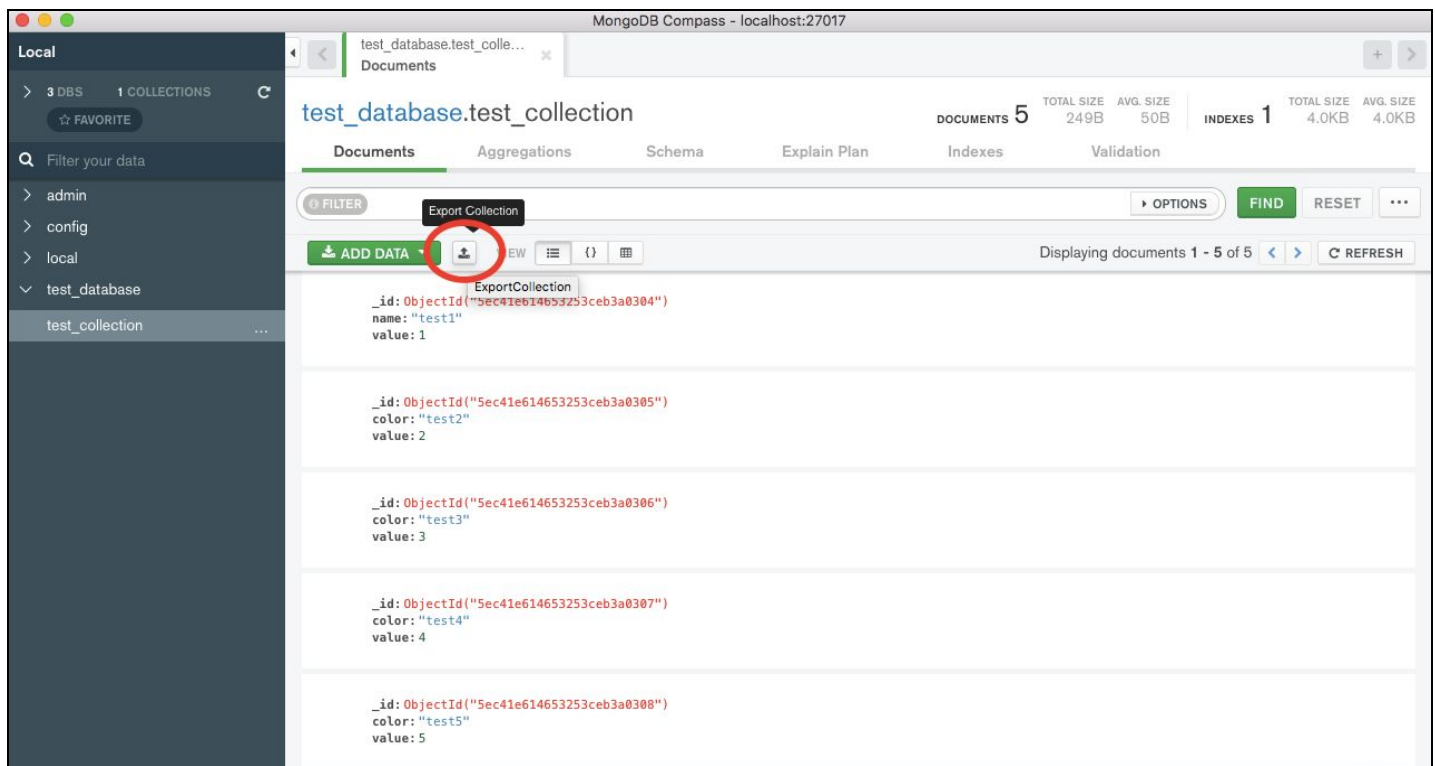


# Migrate Local Data from Compass to Atlas

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**

Export Collection test\_database.test\_collection

☐ Export query with filters — 5 results (Recommended)

```
db.test_collection.find({})
```

☒ **Export Full Collection**

CANCEL SELECT FIELDS

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

Export Collection test\_database.test\_collection

Select Fields ⓘ + ADD FIELD

	Field Name
<input checked="" type="checkbox"/>	1 _id
<input checked="" type="checkbox"/>	2 name
<input checked="" type="checkbox"/>	3 value
<input type="checkbox"/>	4 Add field ↗ to add

< BACK CANCEL 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.

Export Collection test\_database.test\_collection

Select Export File Type

JSON CSV

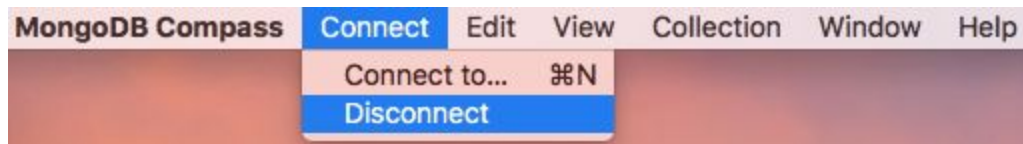
Output

/Users/Helen/Desktop/testData.json BROWSE

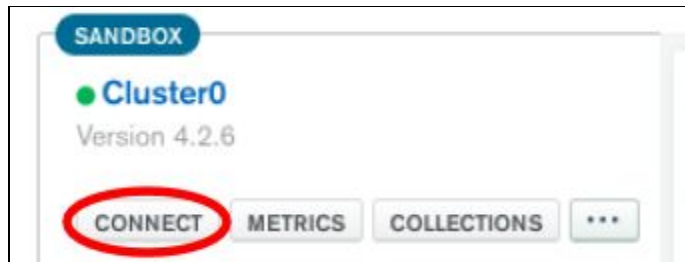
< BACK CANCEL EXPORT



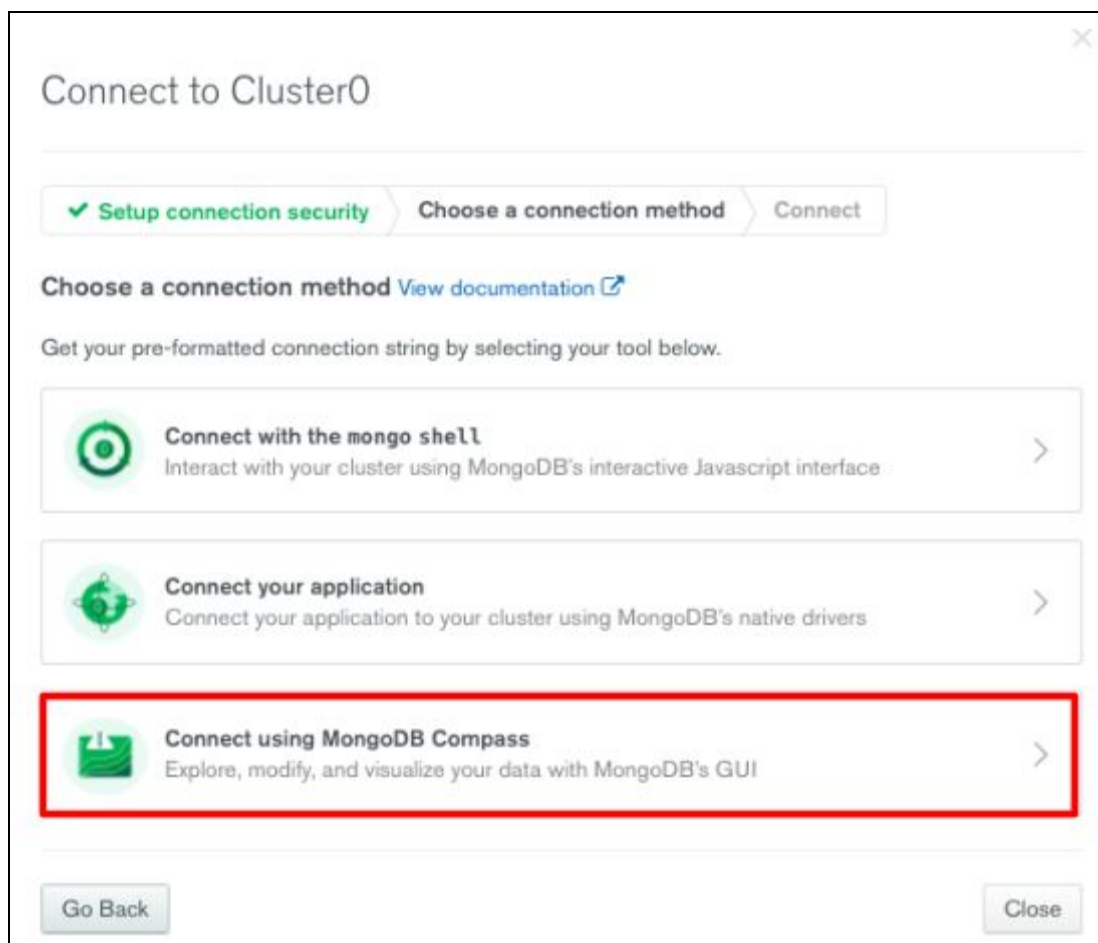
22. Now we want to disconnect our localhost database on Compass.



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.

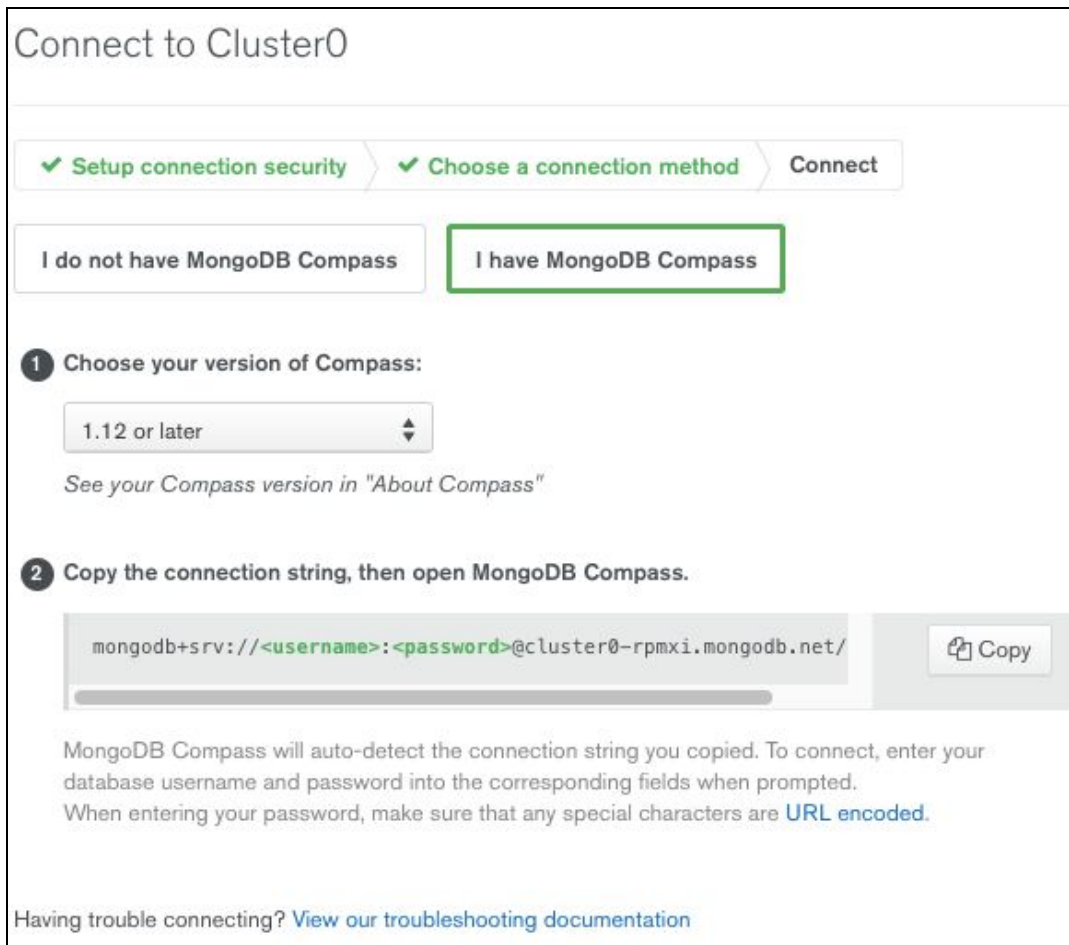


24. Select **Connect using MongoDB Compass**.





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.



Connect to Cluster0

✓ Setup connection security > ✓ Choose a connection method > Connect

I do not have MongoDB Compass | **I have MongoDB Compass**

1 Choose your version of Compass:

1.12 or later

See your Compass version in "About Compass"

2 Copy the connection string, then open MongoDB Compass.

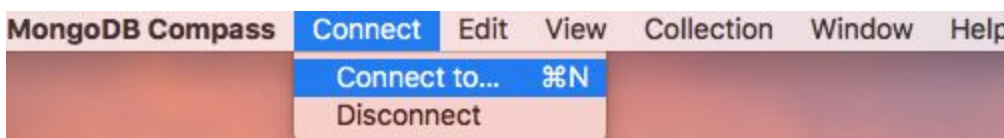
mongodb+srv://<username>:<password>@cluster0-rpmxi.mongodb.net/

Copy

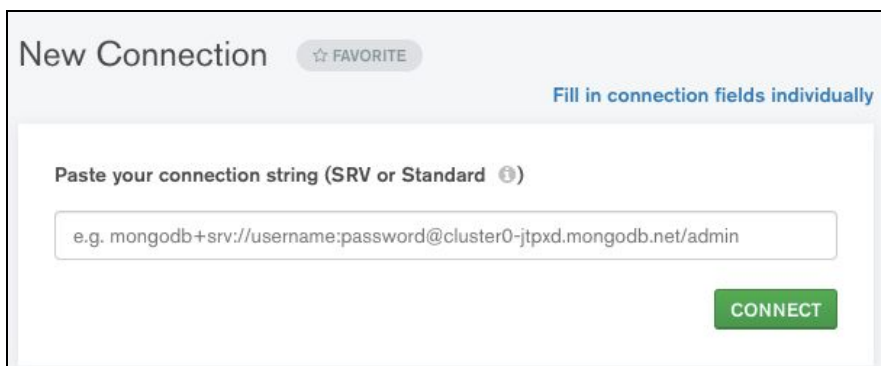
MongoDB Compass will auto-detect the connection string you copied. To connect, enter your database username and password into the corresponding fields when prompted. When entering your password, make sure that any special characters are [URL encoded](#).

Having trouble connecting? [View our troubleshooting documentation](#)

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**.



New Connection ☆ FAVORITE

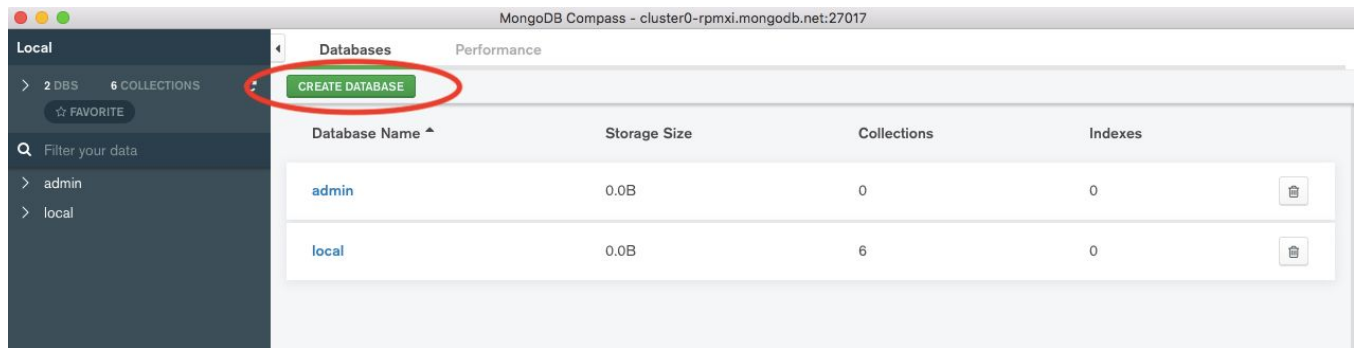
Fill in connection fields individually

Paste your connection string (SRV or Standard ⓘ)

e.g. mongodb+srv://username:password@cluster0-jtpxd.mongodb.net/admin

CONNECT

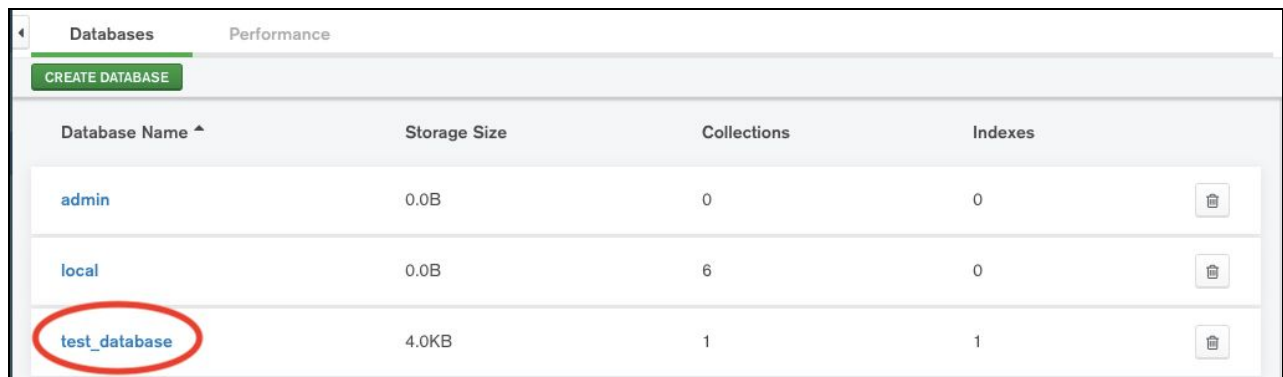
28. After you click Connect, you should **not** see any data in Compass. This is because Compass is currently linked to your MongoDB Atlas account, which has no data at the moment. What we need to do is **import** that JSON file from Step 17 into Compass. We can do so by first clicking **Create Database**.



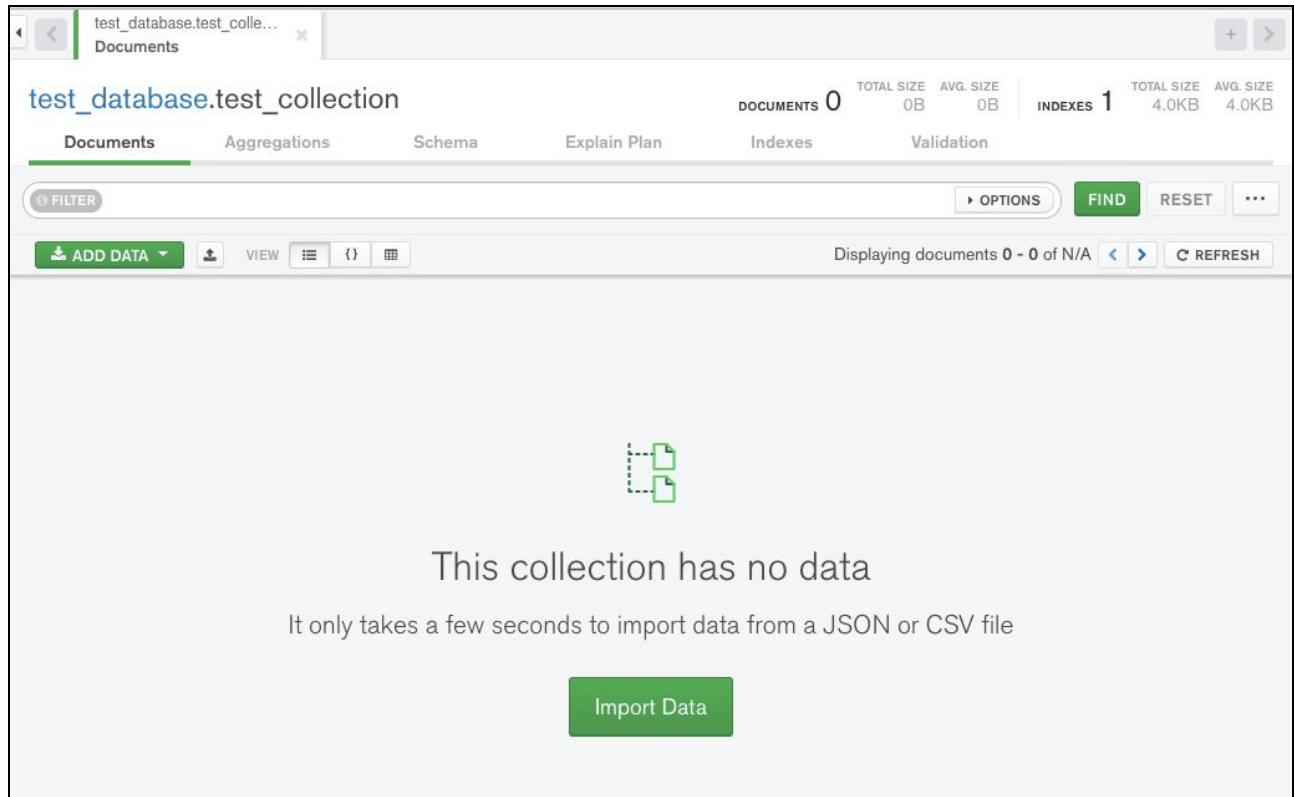
29. Enter in the same **Database Name** and **Collection Name** as in your local database. In my example, I named my database 'test\_database' and collection 'test\_collection' on my local database, so I will do the same here. Click **Create Database**

The 'Create Database' dialog box is shown. It has two input fields: 'Database Name' with the value 'test\_database' and 'Collection Name' with the value 'test\_collection'. There are two checkboxes: 'Capped Collection' and 'Use Custom Collation', both of which are unchecked. A blue informational message states: 'Before MongoDB can save your new database, a collection name must also be specified at the time of creation. [More Information](#)'. At the bottom, there are 'CANCEL' and 'CREATE DATABASE' buttons.

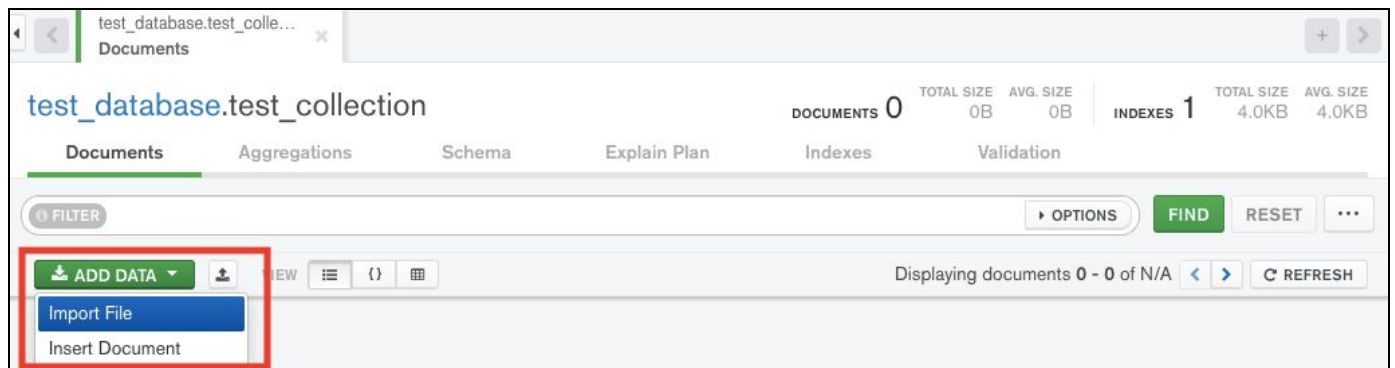
30. You should now see your database listed. Click into the database you just created and click into your collection.



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.

Import To Collection test\_database.test\_collection

Select File

/Users/Helen/Desktop/data.json

BROWSE

Select Input File Type

JSON

CSV

Options

☒ Ignore empty strings

☐ Stop on errors

Specify Fields and Types

	name	value
	<input checked="" type="checkbox"/> String	<input checked="" type="checkbox"/> Int32
1	test1	[object Object]
2	test2	[object Object]
3	test3	[object Object]
4	test4	[object Object]
5	test5	[object Object]

CANCEL

IMPORT

34. You should see data populated now.

test\_database.test\_colle... Documents

test\_database.test\_collection

DOCUMENTS 5 TOTAL SIZE 249B AVG. SIZE 50B INDEXES 1 TOTAL SIZE 36.0KB AVG. SIZE 36.0KB

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER

OPTIONS FIND RESET ...

ADD DATA VIEW {}

Displaying documents 1 - 5 of 5 REFRESH

```
_id: ObjectId("5ec428355287f4414a330f38")
name: "test1"
value: 1
```

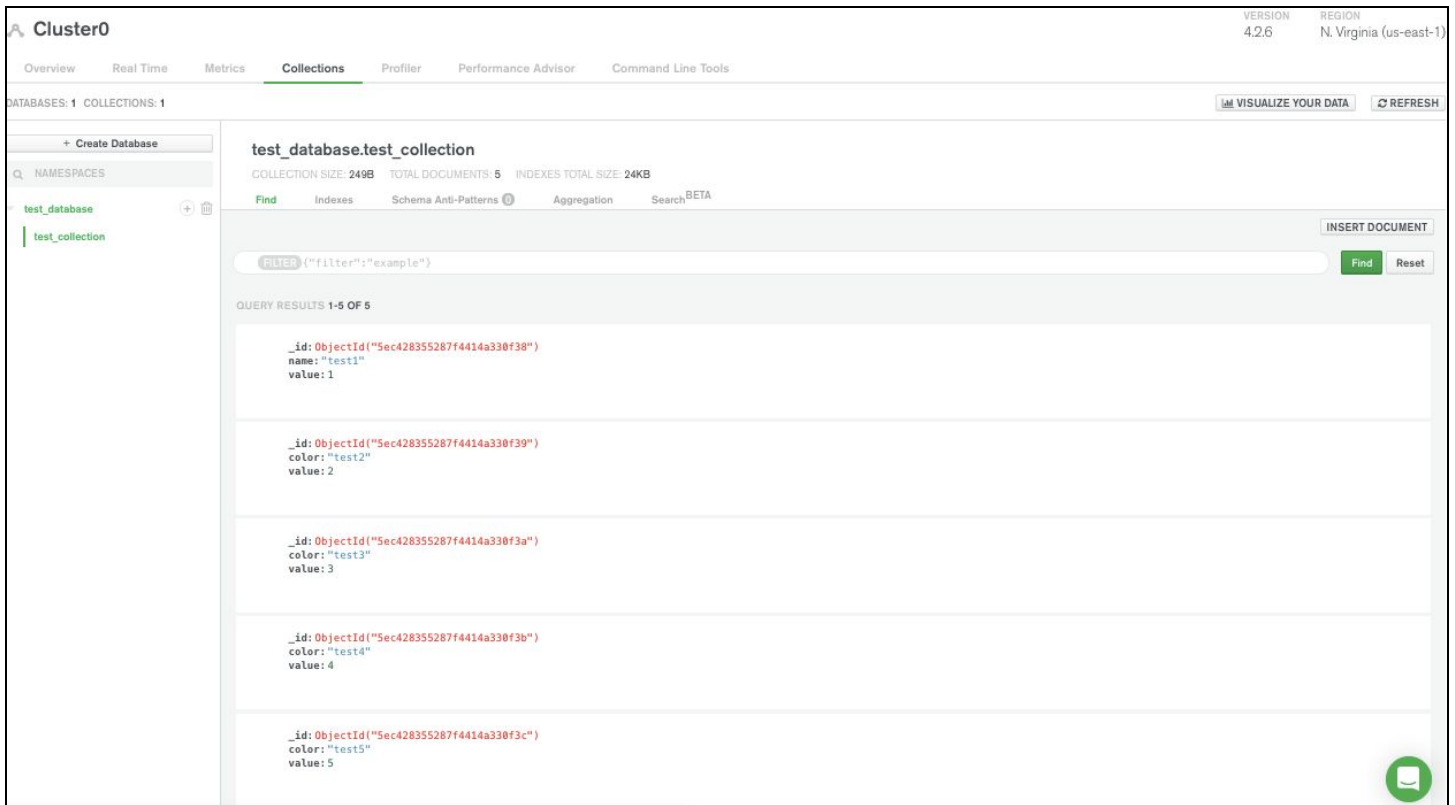
```
_id: ObjectId("5ec428355287f4414a330f39")
color: "test2"
value: 2
```

```
_id: ObjectId("5ec428355287f4414a330f3a")
color: "test3"
value: 3
```

```
_id: ObjectId("5ec428355287f4414a330f3b")
color: "test4"
value: 4
```

```
_id: ObjectId("5ec428355287f4414a330f3c")
color: "test5"
value: 5
```

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



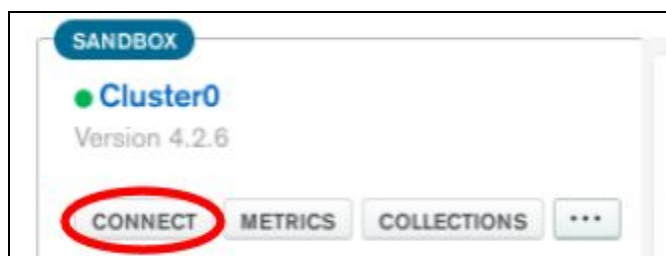
36. You have successfully migrated local data from Compass to Atlas! But your application is still connected to your local database. We now need to connect your application to Atlas as well.

## Connect to Your Cluster to Your Application

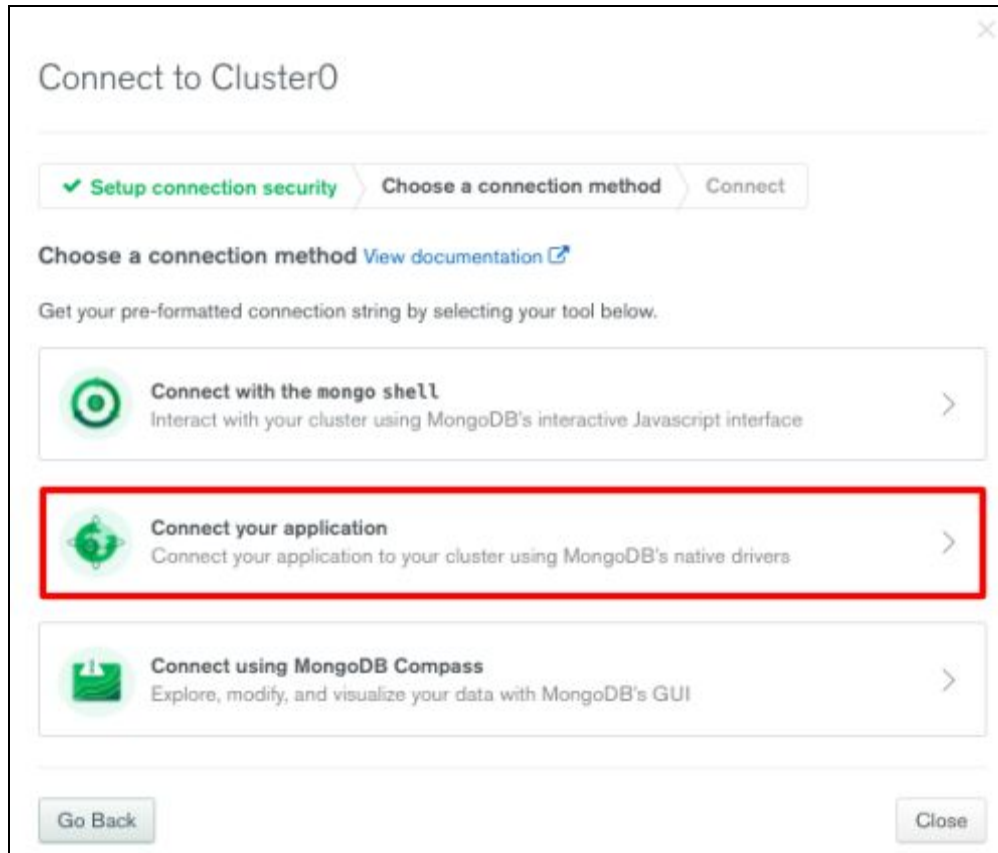
Now that you have a database user for your cluster and you have migrated data from your local machine to Atlas, we need to connect your application to the cluster. Before we can proceed, there are some prerequisites to connecting your cluster:

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

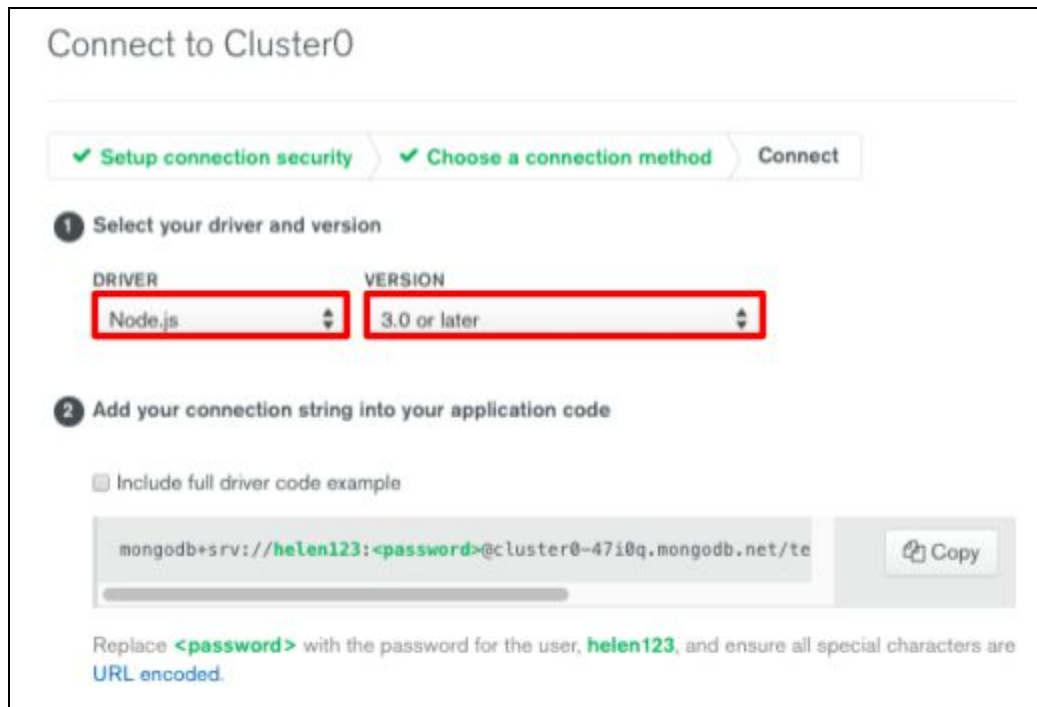
37. After adding a whitelisted IP address and creating a database user for your cluster, click the **Connect** dialog button (refer to step 8 find this button).



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.