Mongo Atlas for Pymongo

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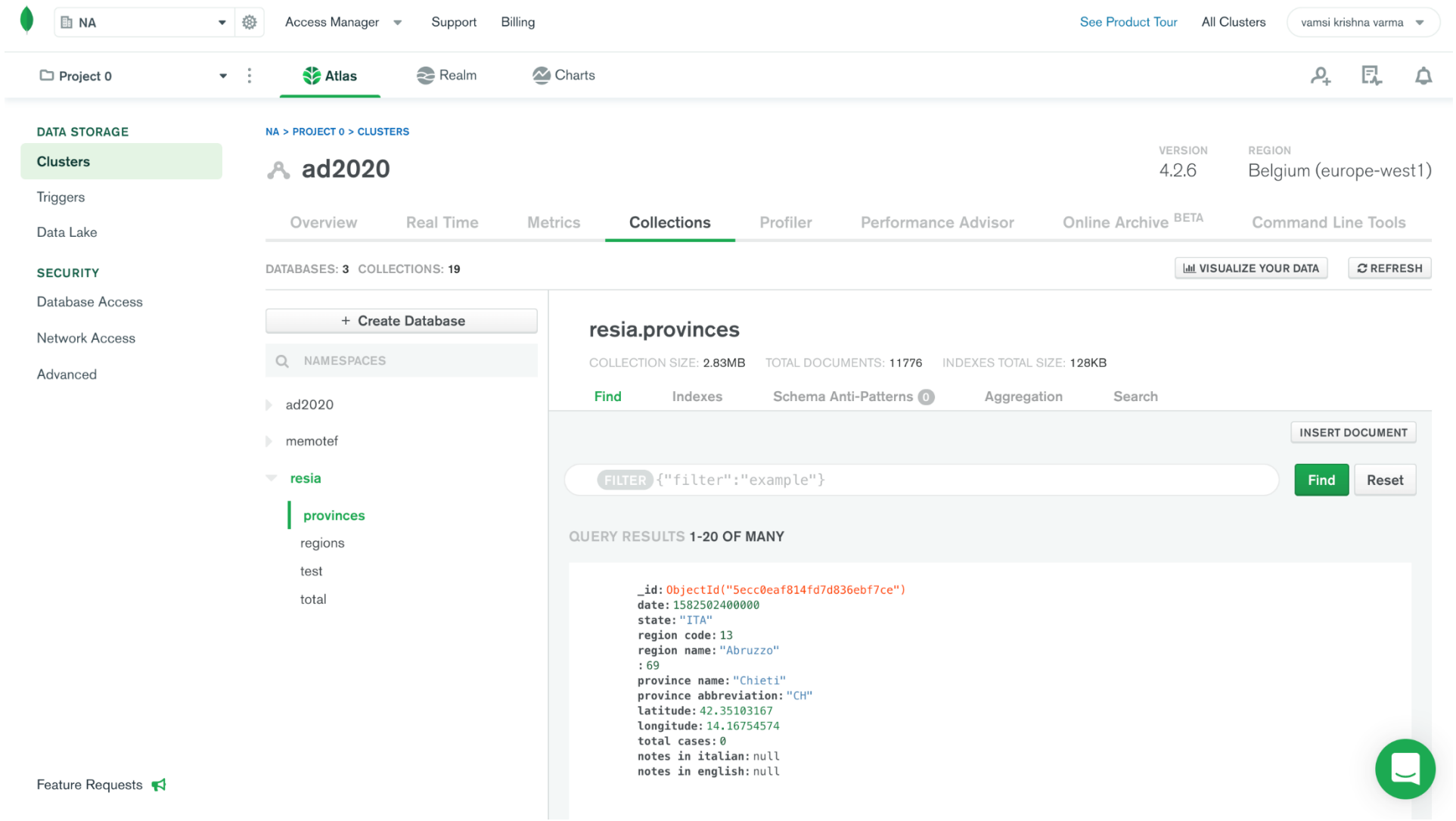
We will discuss following….

- ✓ What is Mongo Atlas
- ✓ Setting up Mongo Atlas for connecting with Pymongo

What is Mongo Atlas

- ✓ MongoDB Atlas is a fully-managed **cloud database** developed by the same people that build MongoDB.
- ✓ Atlas handles all the complexity of deploying, managing, and healing your deployments on the cloud service provider of your choice (AWS, Azure, and GCP).
- ✓ Similar to **Apache Ambari** if you are familiar with Hadoop ecosystem
- ✓ You can setting up Atlas easily by following instructions in this link

Mongo Atlas Dashboard



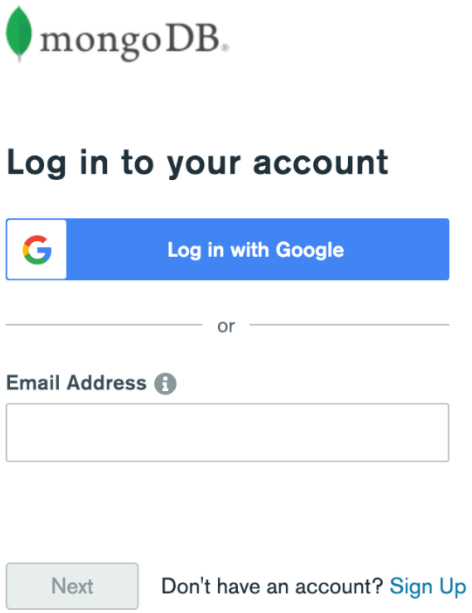
Steps to setup Atlas

- **Part 1:** Create an Atlas Account.
- **Part 2:** Deploy a Free Tier Cluster.
- **Part 3:** Whitelist Your Connection IP Address.
- **Part 4:** Create a Database User for Your Cluster.
- **Part 5:** Connect to Your Cluster.
- **Part 6:** Insert and View Data in Your Cluster.

More details in this link

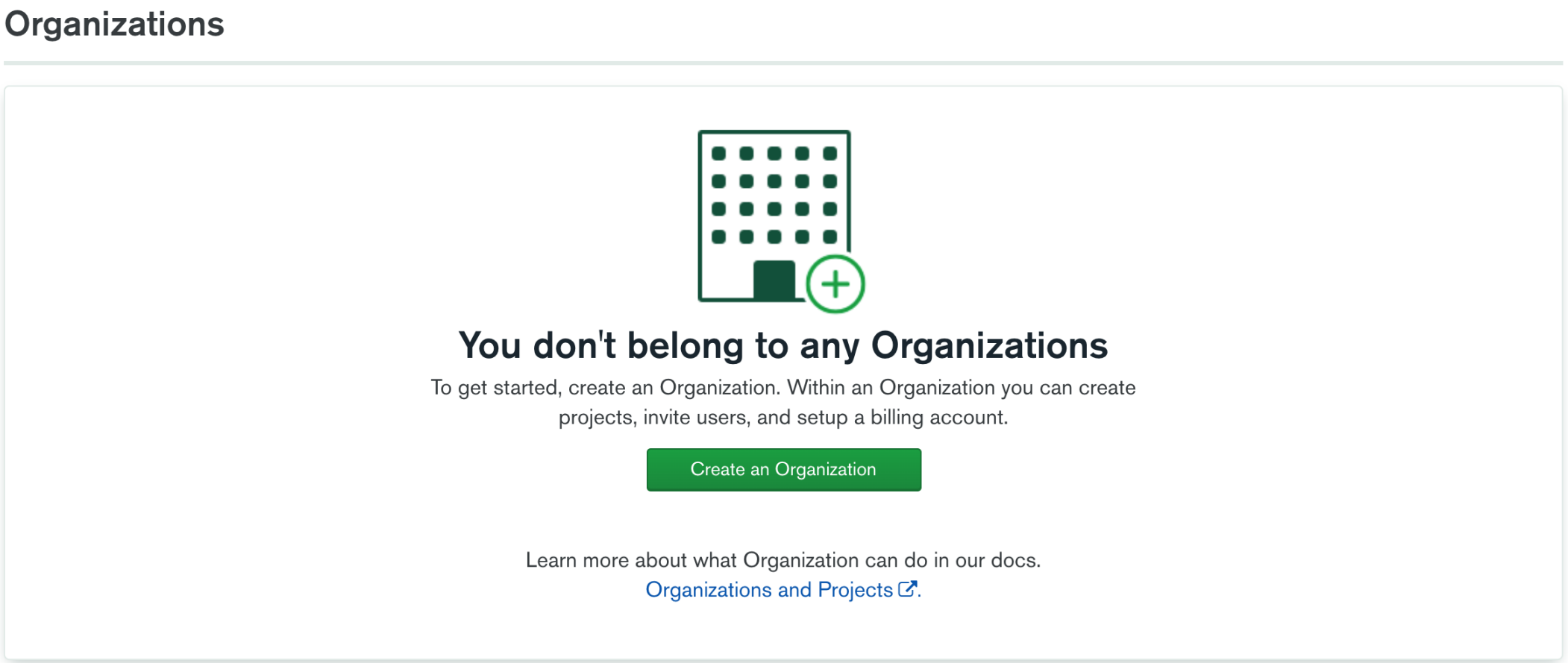
Create account

You can signup using your email address or your existing Gmail account from this link



Create Organization

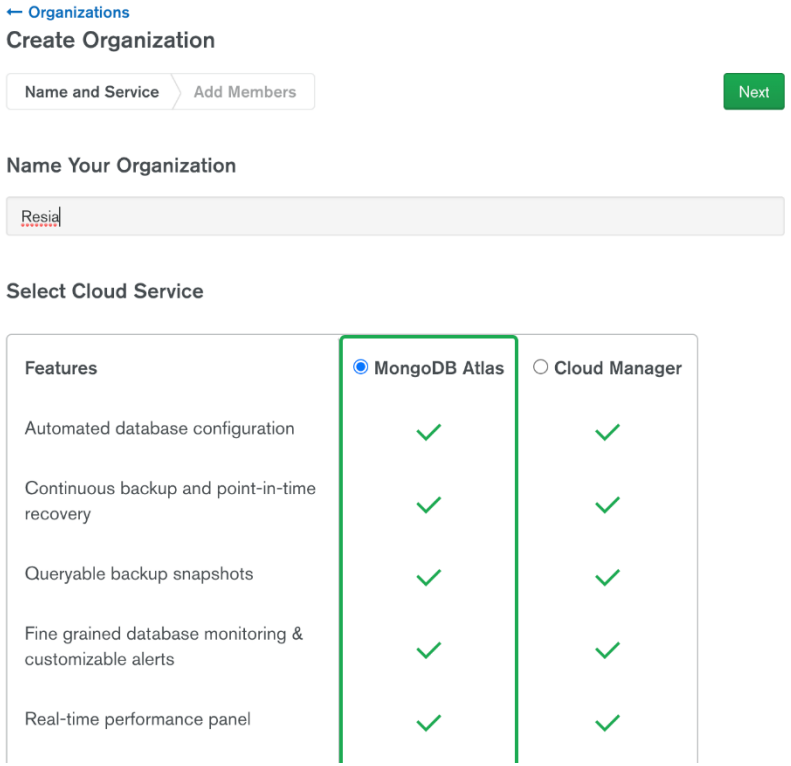
Once you login to your Mongo DB account after login, you will see something like this



Click on Create an Organization

Create Organization

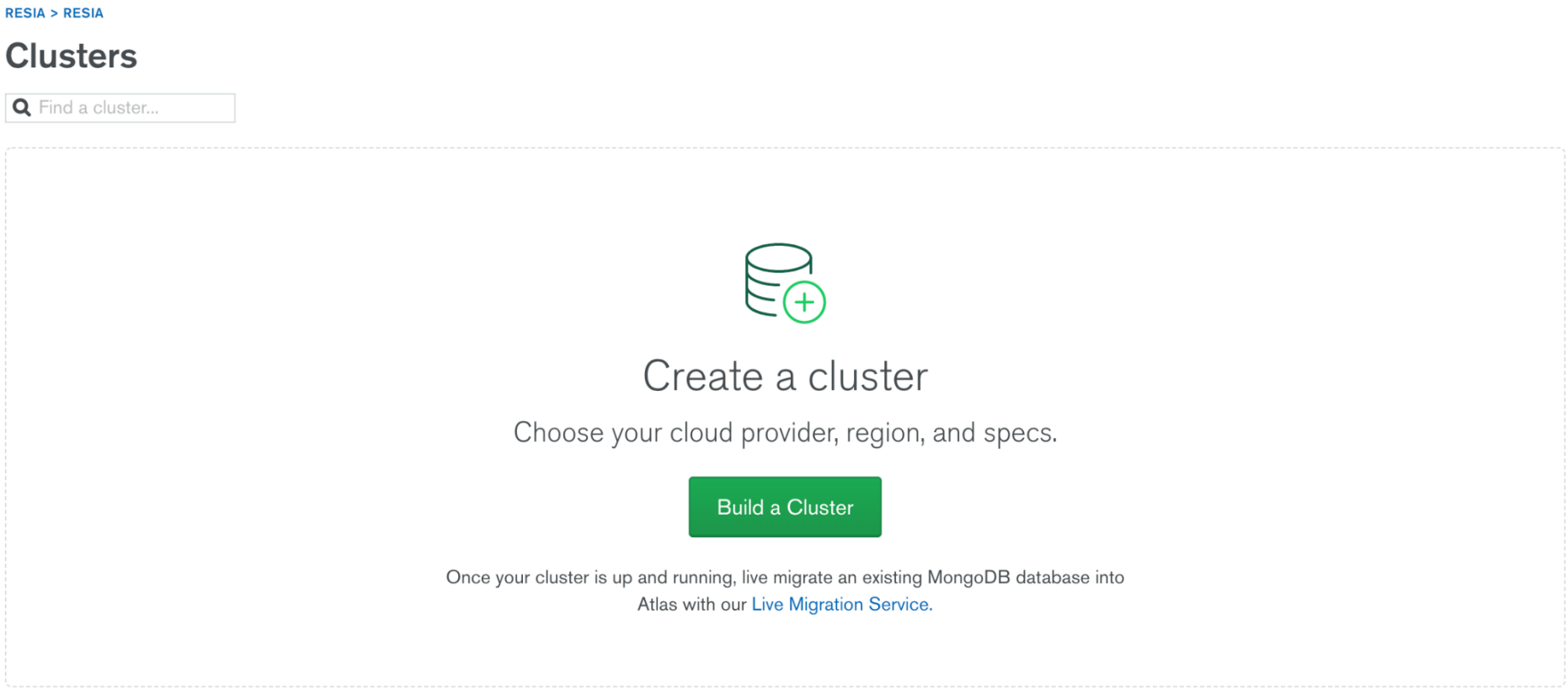
Give name of the organization, this can be any string. Ensure that MongoDB Atlas is selected and click on Next



Click on Create an Organization

Create Cluster

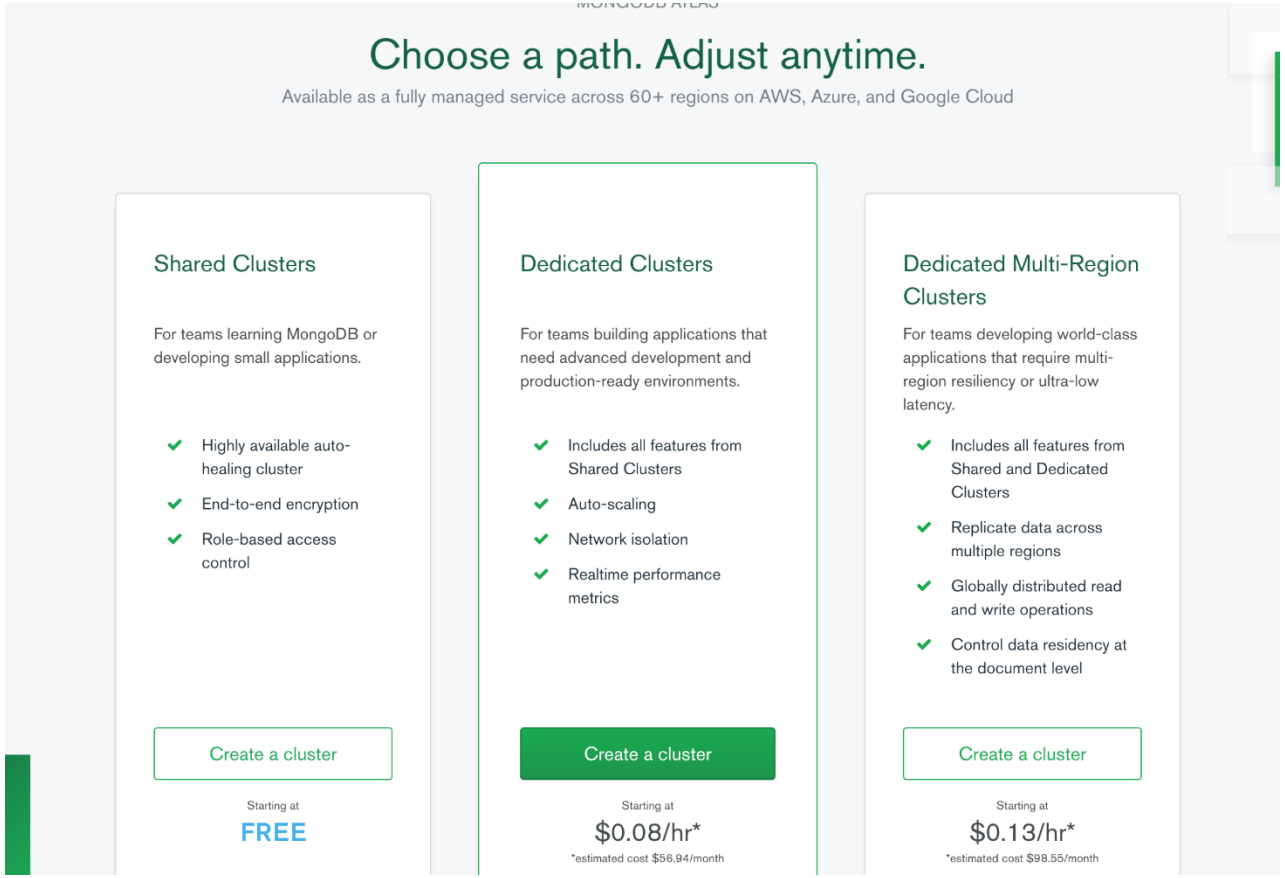
Next up we create a cluster, Look for Create a new cluster button



Click on Create an Organization

Choose Cluster type

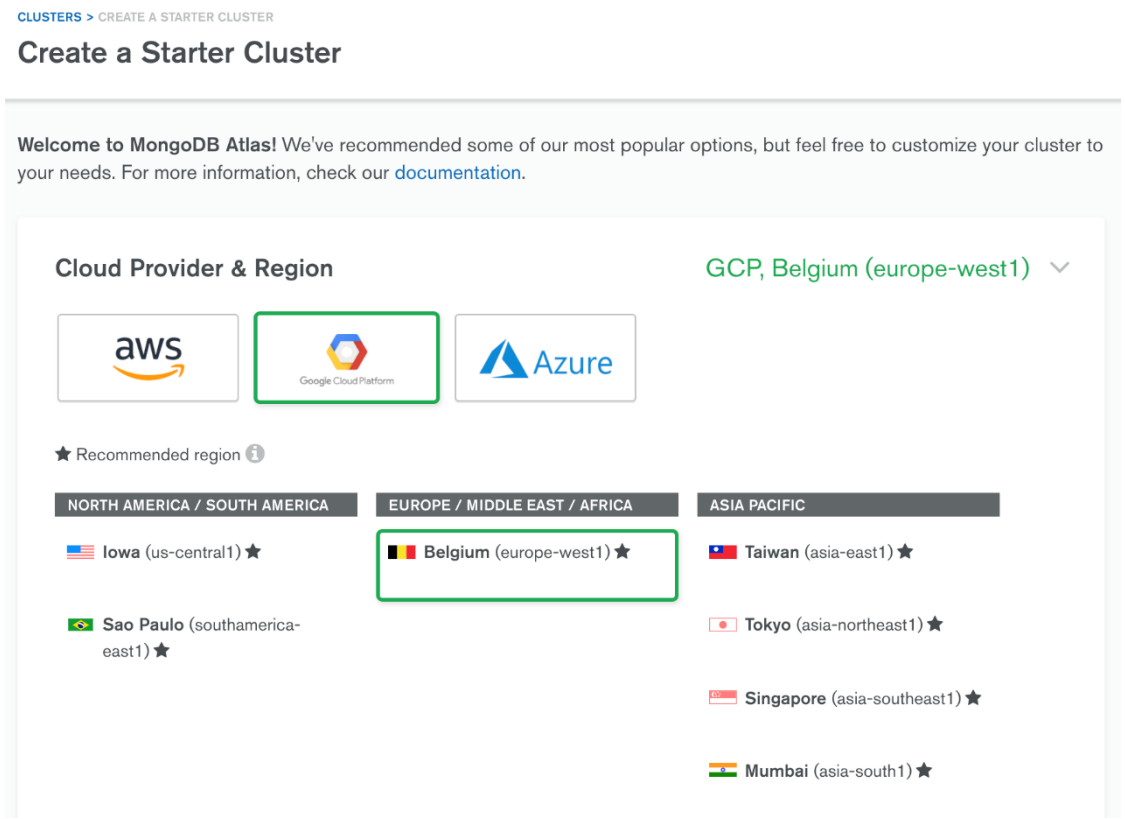
For our practice, Shared Cluster(it is free and provides 512 MB of database space) is enough



Click on Create a Cluster

Configure Cluster

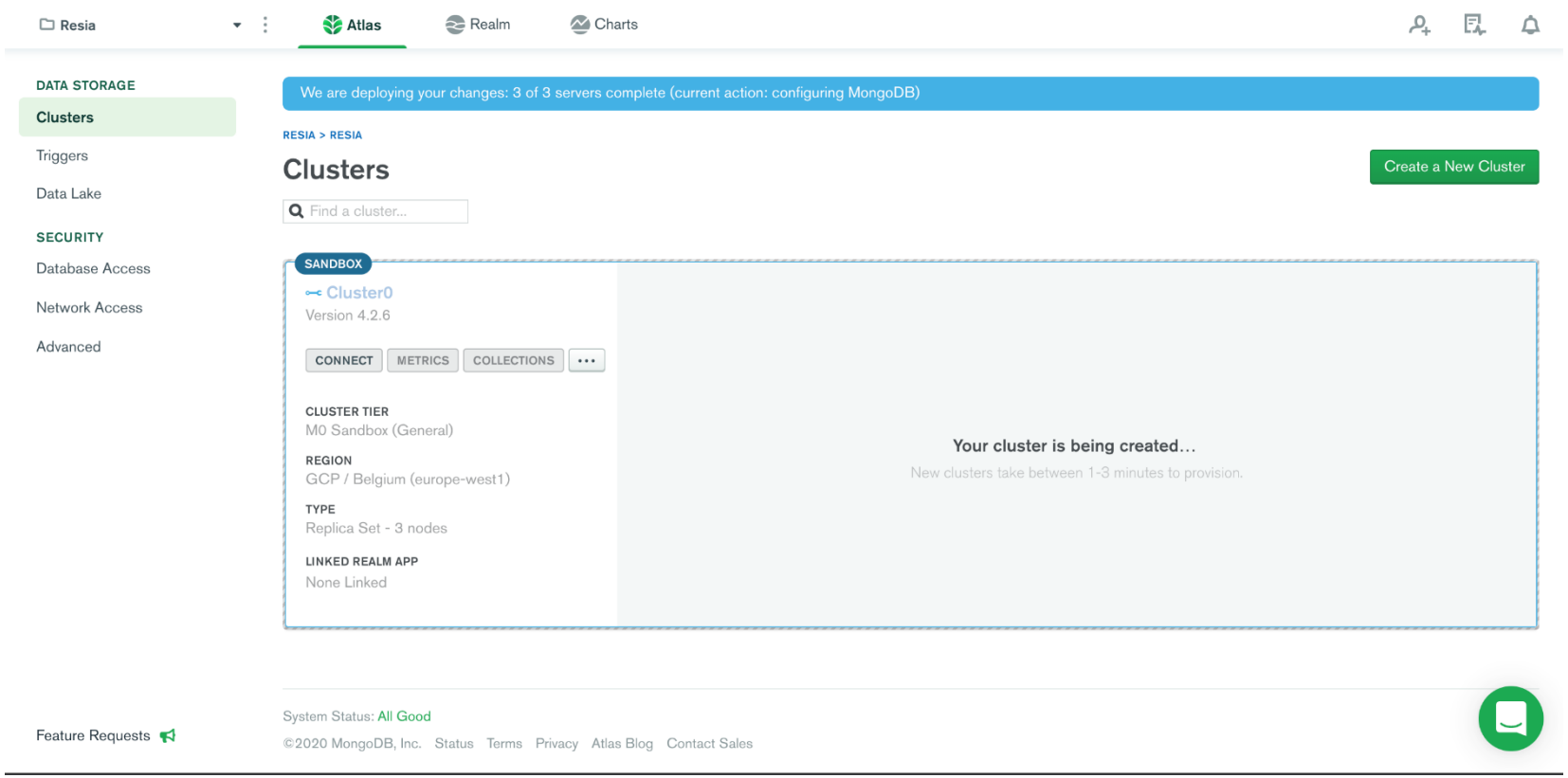
This step is important when you are deploying your applications based on MongoDB on other cloud providers like GCP, AWS and Azure etc..,



Click on Create a Cluster

Cluster Dashboard

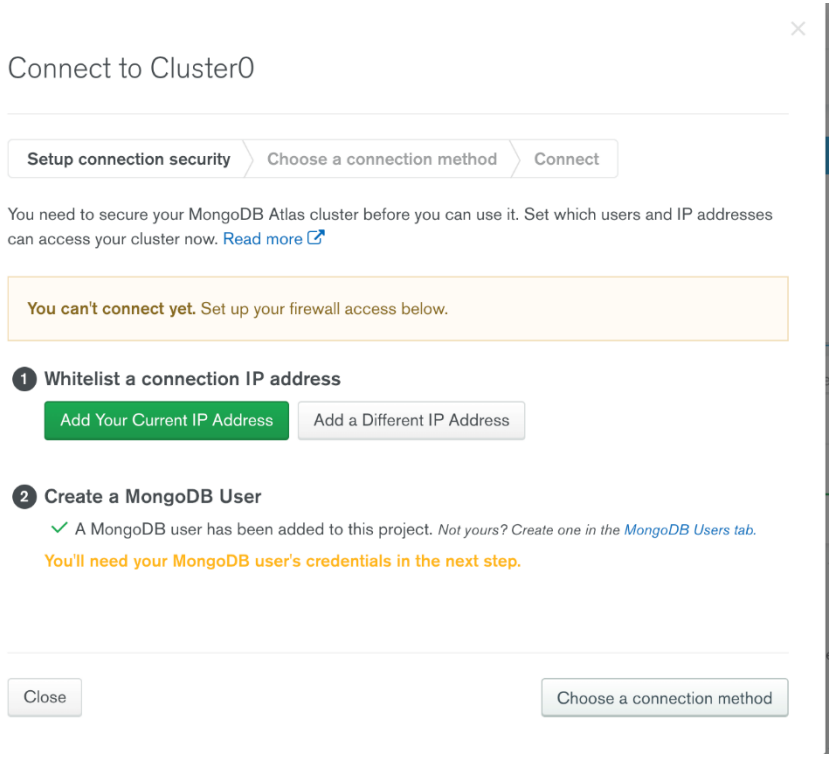
Once you are done with above steps you will be directed to Cluster dashboard page. In this page there are many options for configuring your cluster



Connect to Cluster

Here we configure our cluster so that we can access our Mongo DB from outside that is from PyMongo

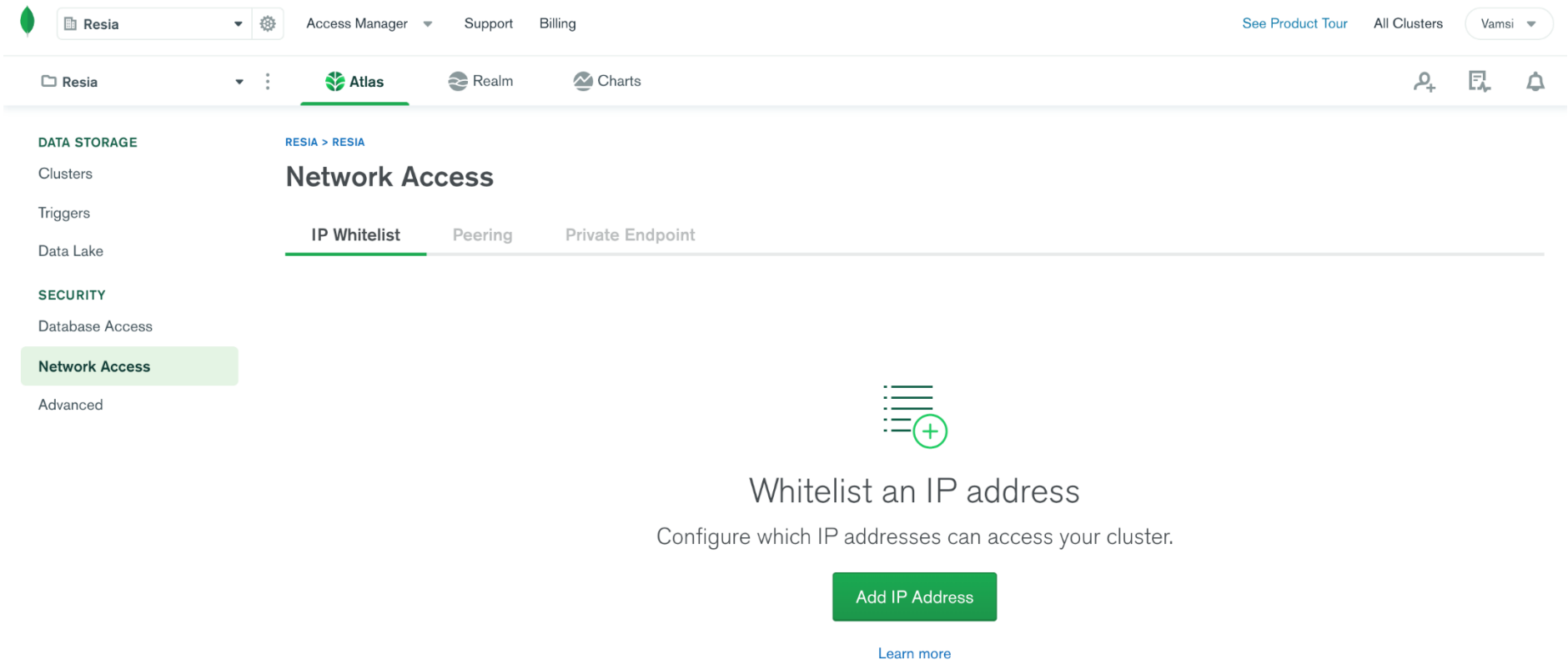
Click on Connect button and create a DB user in the below pop up window



You have to set up your firewall access to connect to your cluster from outside

Whitelist IP’s

From Cluster dashboard click on Network access option and Click on Add IP Address button in the bottom



Whitelist IP’s

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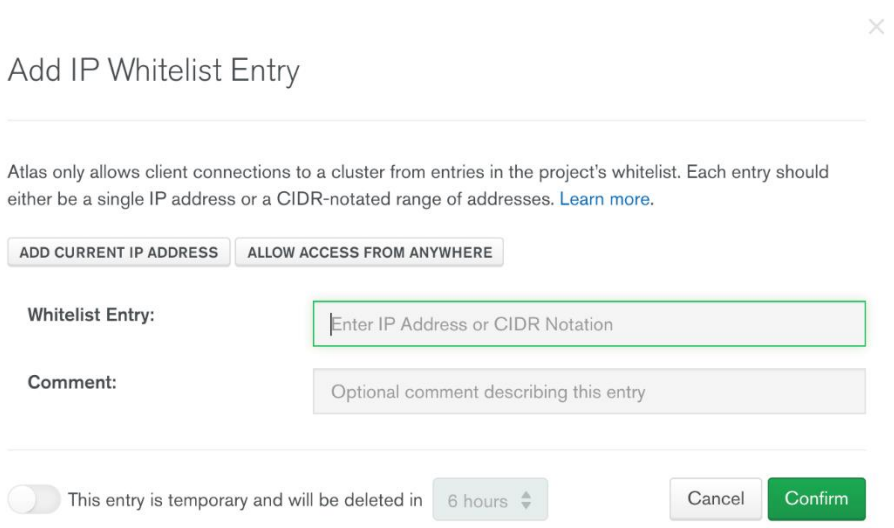
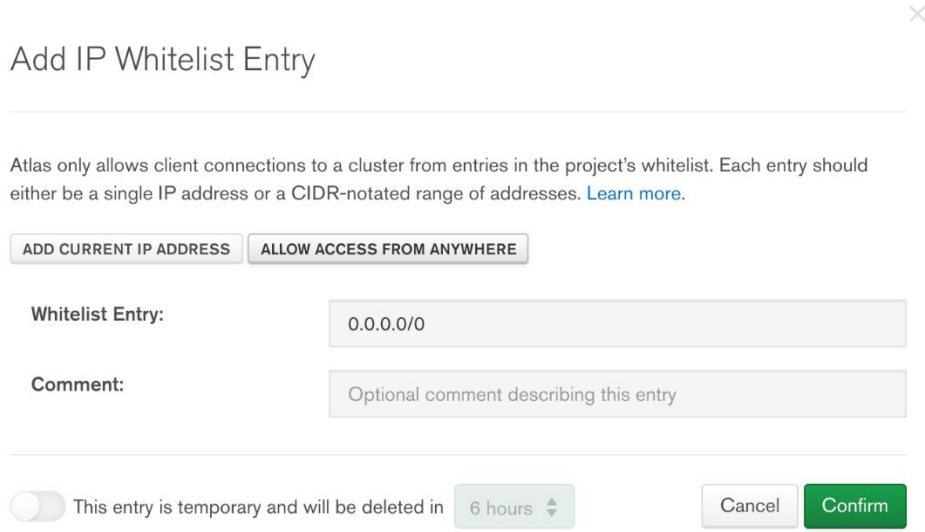


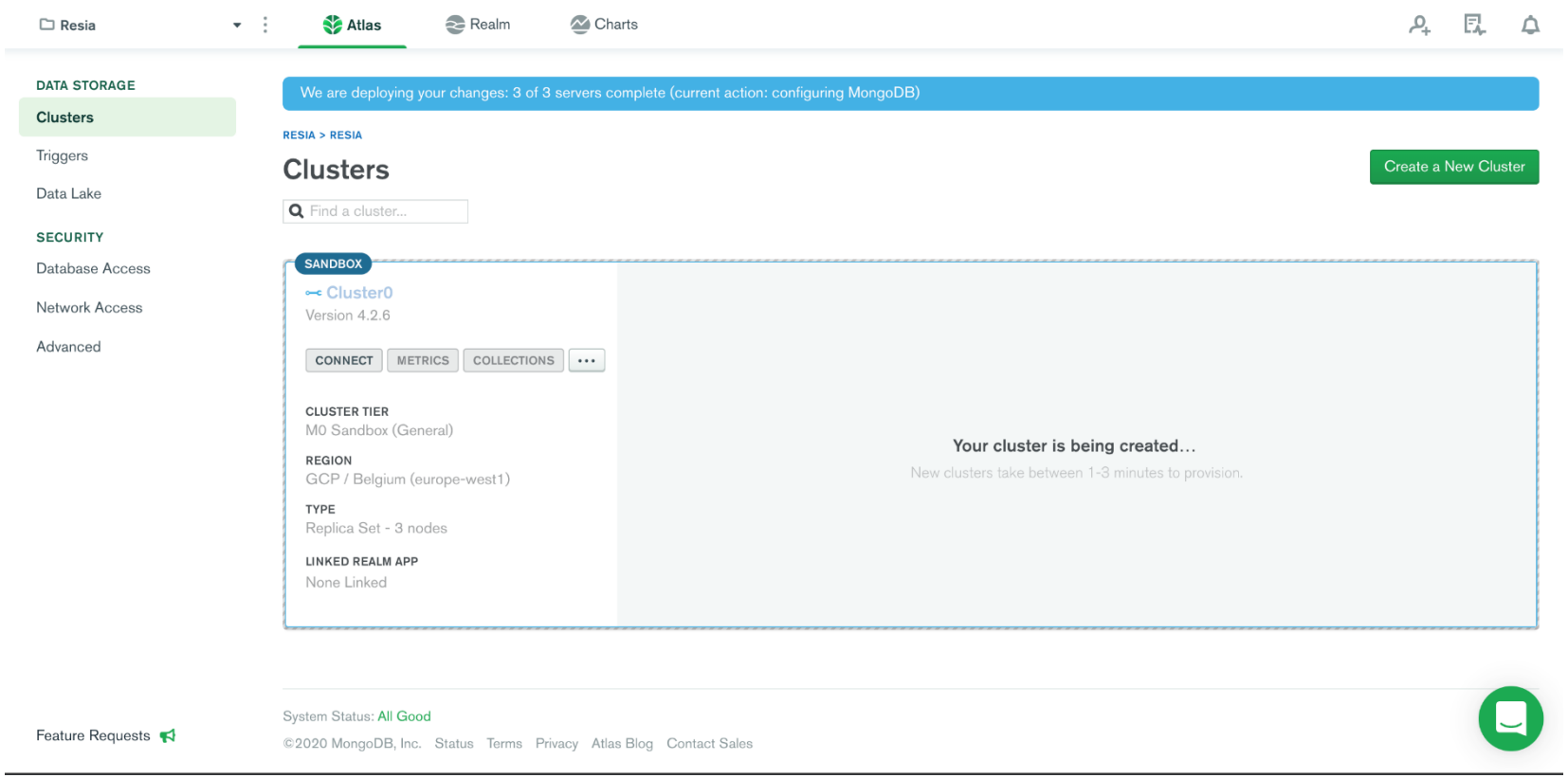


You can give the IP address manually or
you can select access from Anywhere (which opens up our DB to the entire web) – we will use this for practice but It’s a good practice to **limit** your DB access to a certain IP address when you are deploying your application.

Click on **Confirm** button. It takes some **time** to activate this option.

Connect to cluster

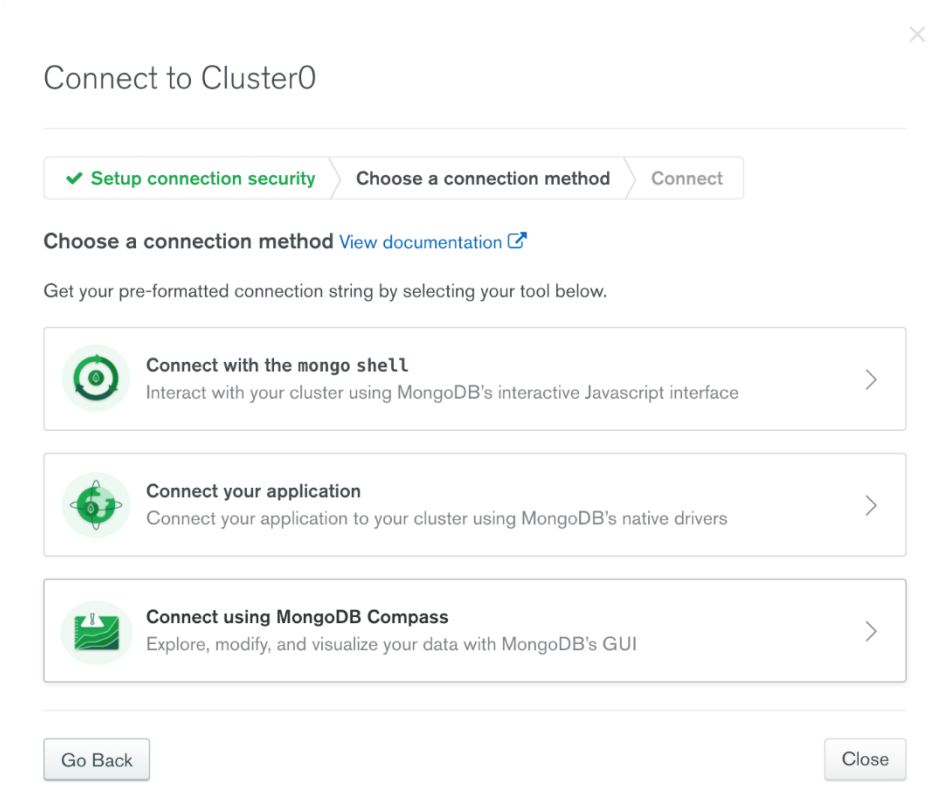
Once the IP whitelisting is active, Click on Clusters button on left and click on Connect button



Connect to cluster

Once the IP whitelisting is active, Click on Clusters button on left and click on Connect button

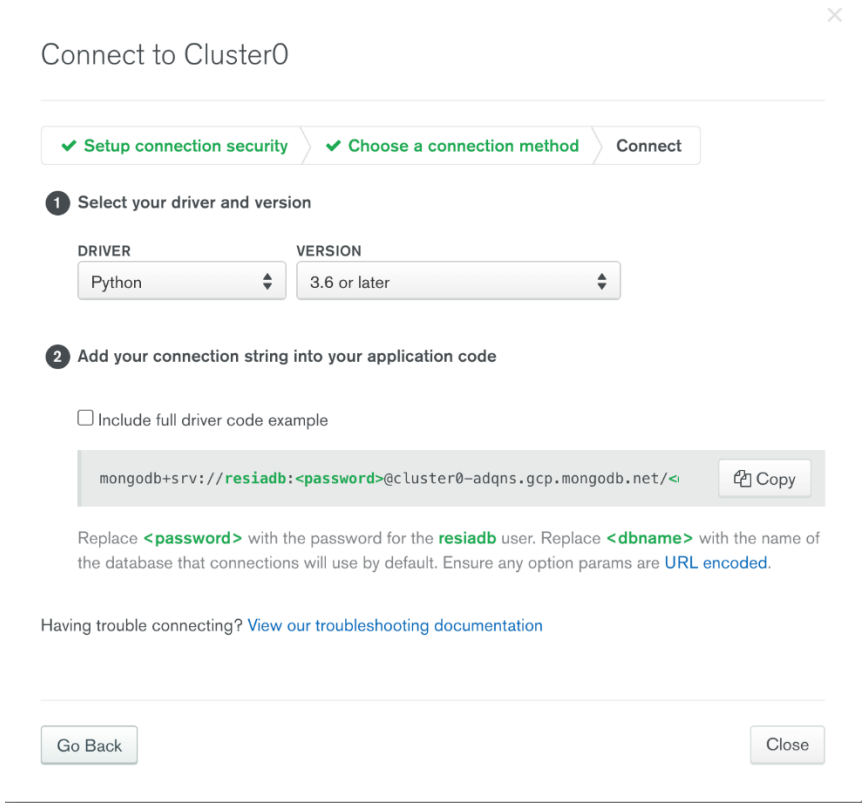
We can connect to our DB from Mongo shell, from other applications (PyMongo for Python or from other programming languages), from MongoDB compass.



Click on Connect your application option

Connection string for Python

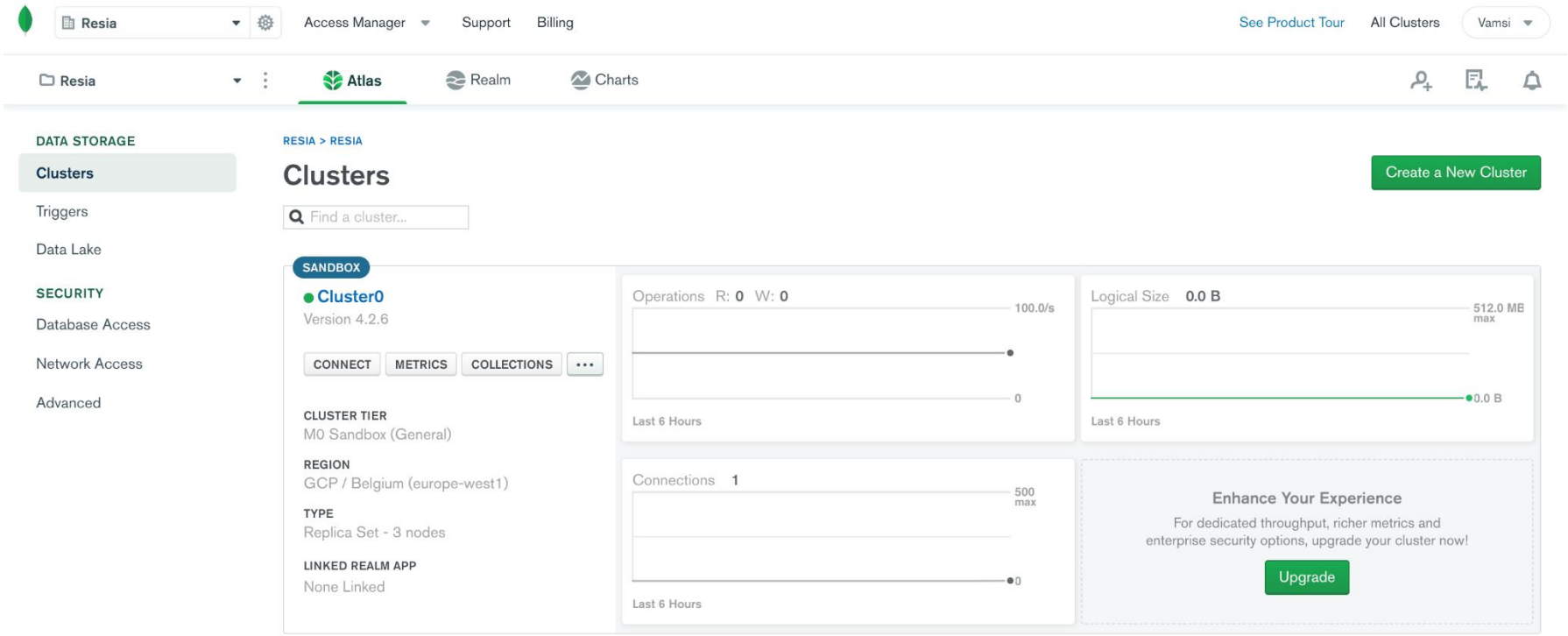
Select Python and version, then you can see a connection string generated, copy that connection string and use it in our PyMongo code.



That’s it, we have configured Mongo Atlas for PyMongo

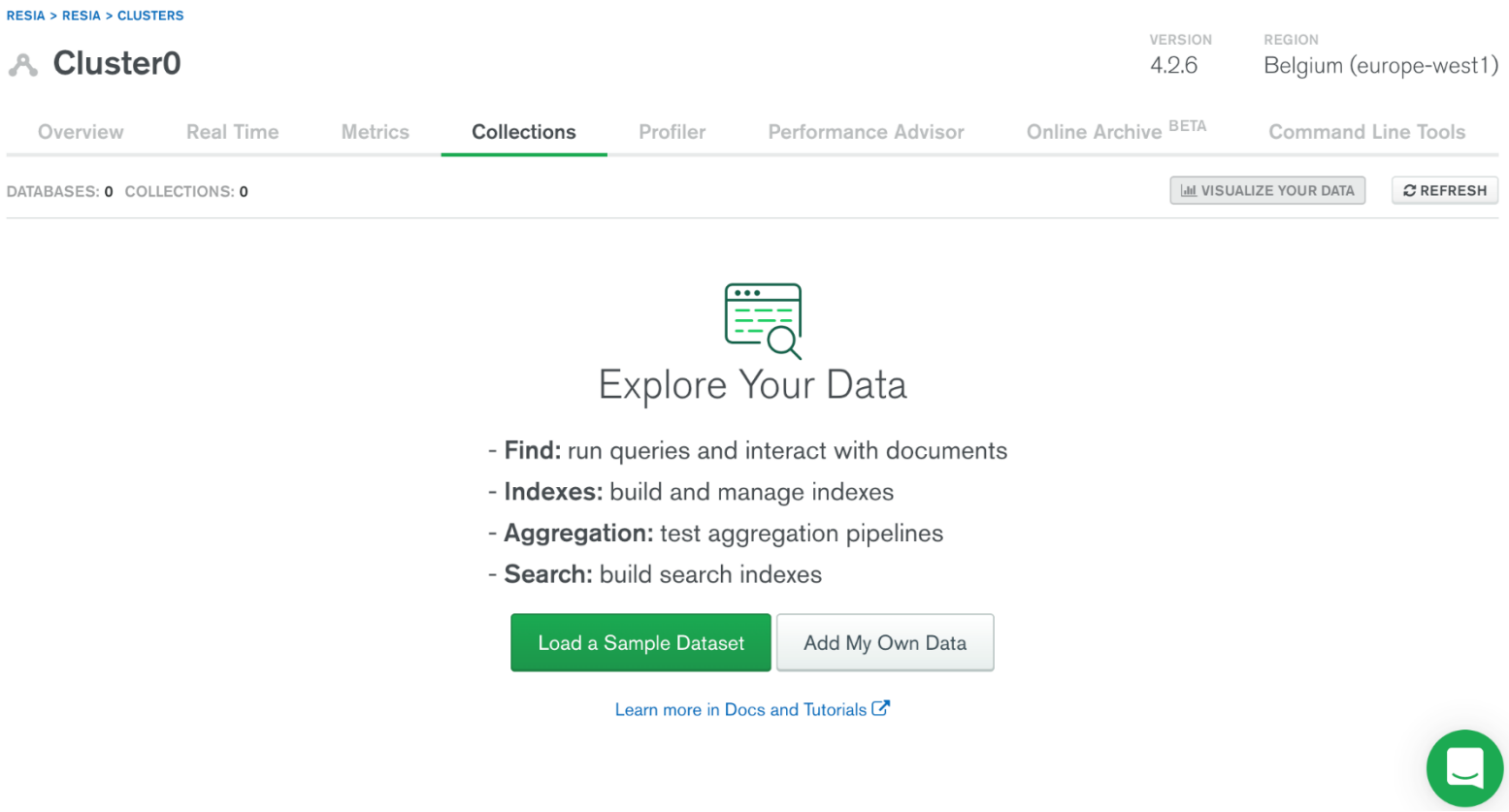
Create a sample database

From Cluster dashboard click on Collections button



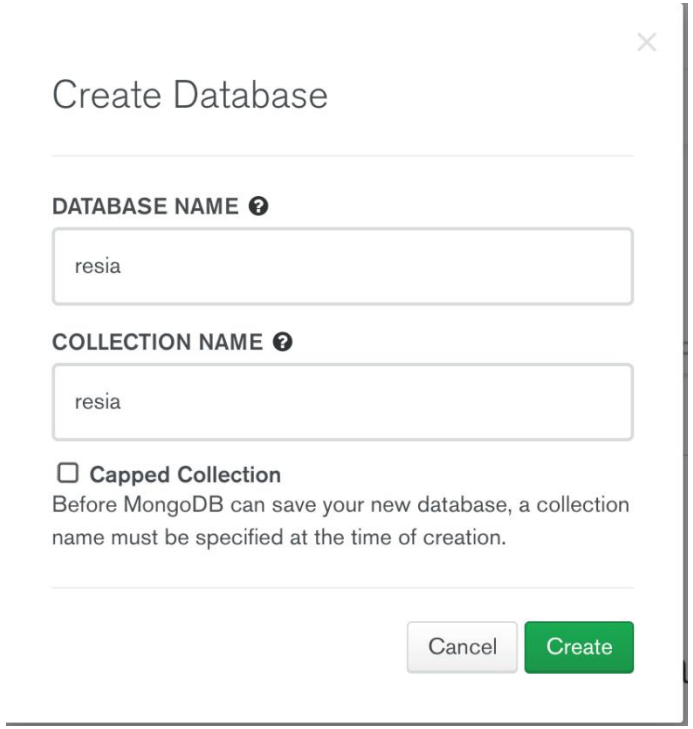
Create a sample database

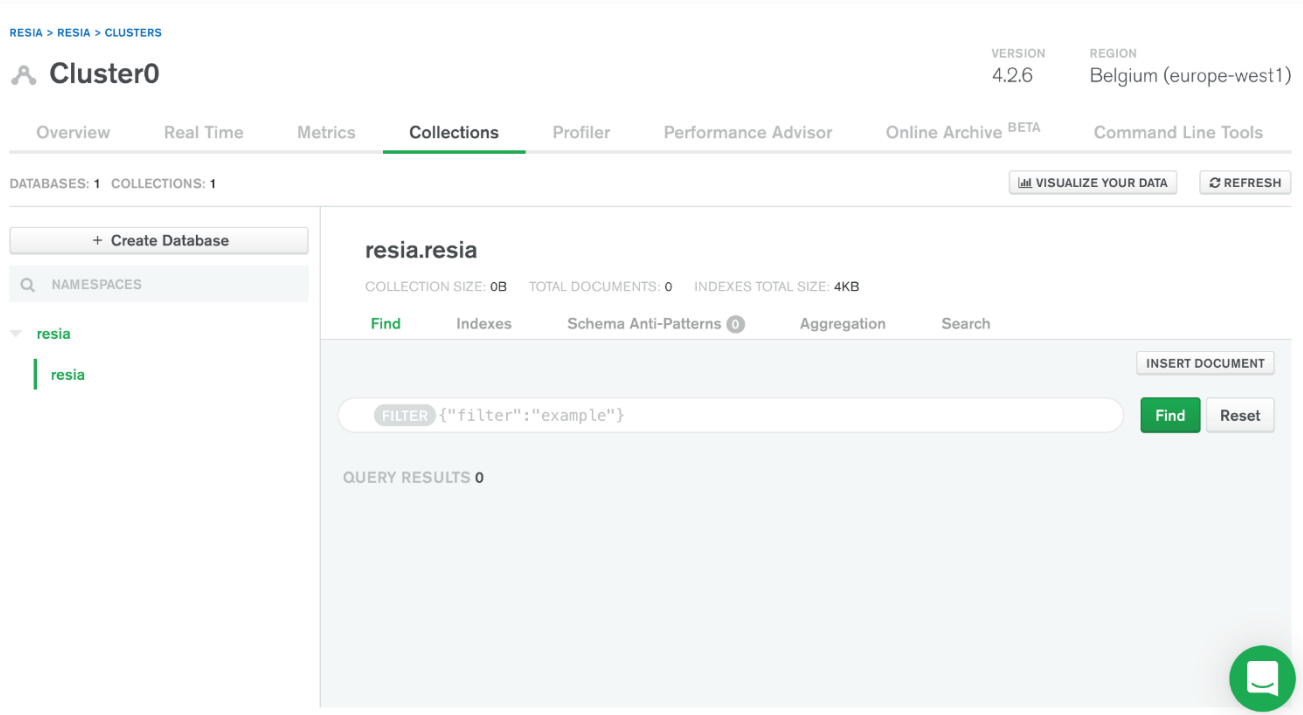
Click on Add My Own Data button (as Sample Dataset is around 350 MB and with a free account we have only 512 MB space.)



Create a sample database

Give some name to Database and Collection and click on Create.
That's it we have configured our cluster and database for accessing from PyMongo





This is our Mongo DB dashboard with information of all databases and collections

References:

- ✓ https://docs.atlas.mongodb.com/

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