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Create a MongoDB Atlas cluster V.1

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ABSTRACT

A step-by-step guide on setup process for MongoDB Atlas tailored for data administrators with limited IT knowledge.

Keywords: MongoDB, MongoDB Atlas, database, data administration

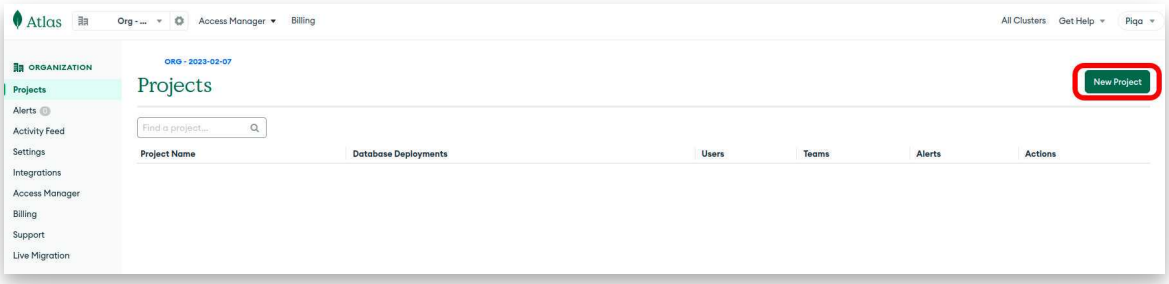
MongoDB Atlas set up

1 **Create an account on [MongoDB website](#).**

2 **Create an organization.** Select *Create a new organization* and name your organization with e.g. the name of the institute or the group responsible for data administration. In the *Select Cloud Service* window, choose *MongoDB Atlas* and proceed to the next step. In the final step, add additional members by sending invitation emails or proceed by selecting *Create Organisation*.

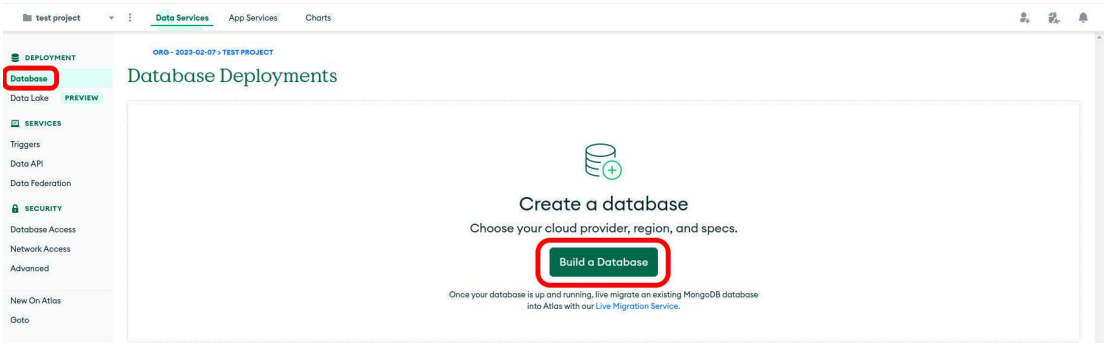
> **Note**
>
> An organization is used for billing purposes and as a way to organize teams of users and projects. One organization can contain multiple projects.
>
> Being a team member of the organization is not required for accessing the database.

3 **Create a project.** Select *New project* and name the project.



> **Note**
>
> The name of a project should be short and descriptive, particularly when multiple projects exist. We recommend naming the project after the working group name or the purpose.
>
> Note that the project name is not the same as the database or collection name.

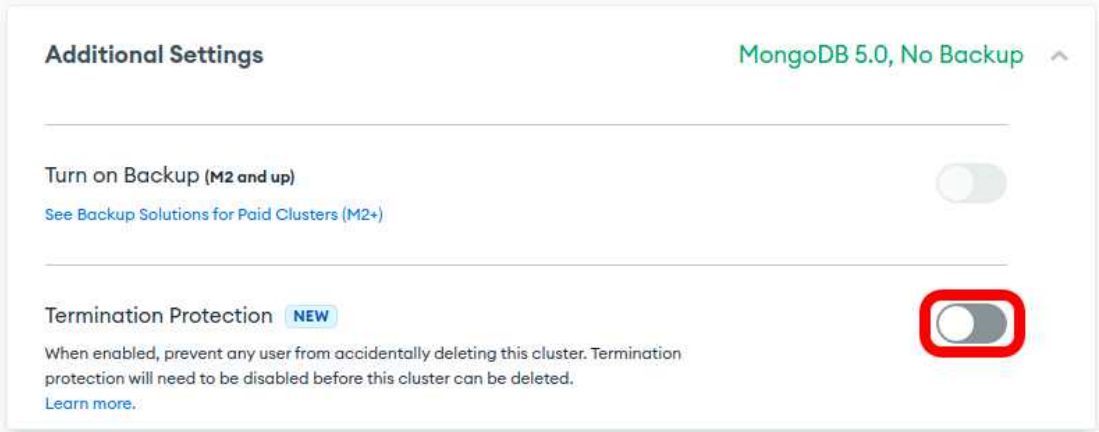
4 **Create a cluster.** Select *Build a database* then *Shared* cluster tier and confirm by *Create.*



4.1 Choose a cloud provider and region. Name your cluster in the *Cluster Name* section.

> **Note**
>
> The server provider and location should be selected based on the preferred data protection policies of the user's country or institution. If the administrator doesn't provide any requirements, a good rule of thumb is to choose the closest cluster to your location.
>
> The available locations are not the same between cloud providers.

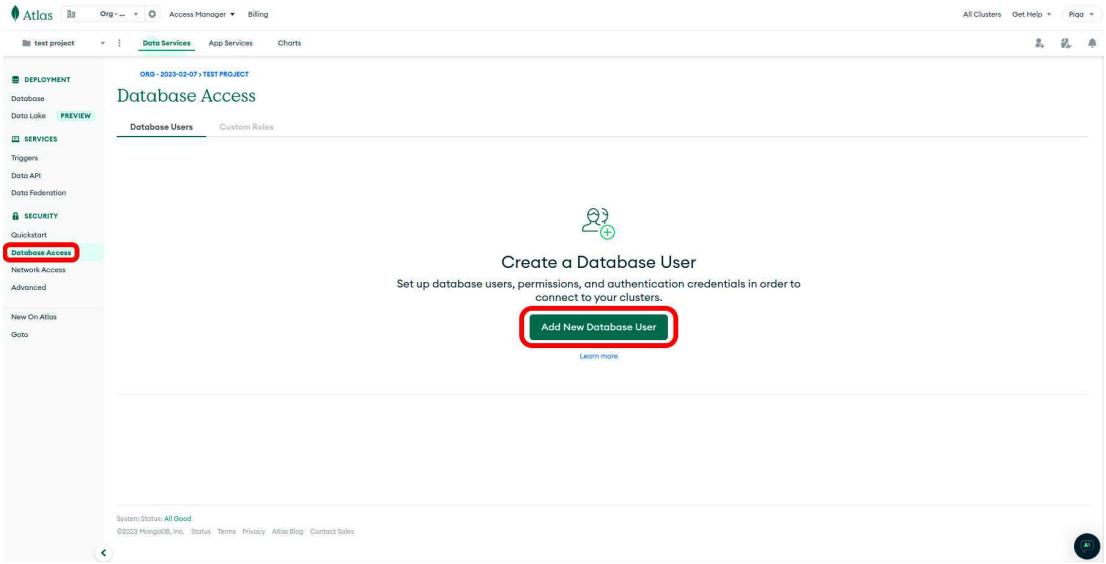
4.2 Go to the *Additional Settings* tab and turn *Termination Protection* and confirm by selecting *Create Cluster.*



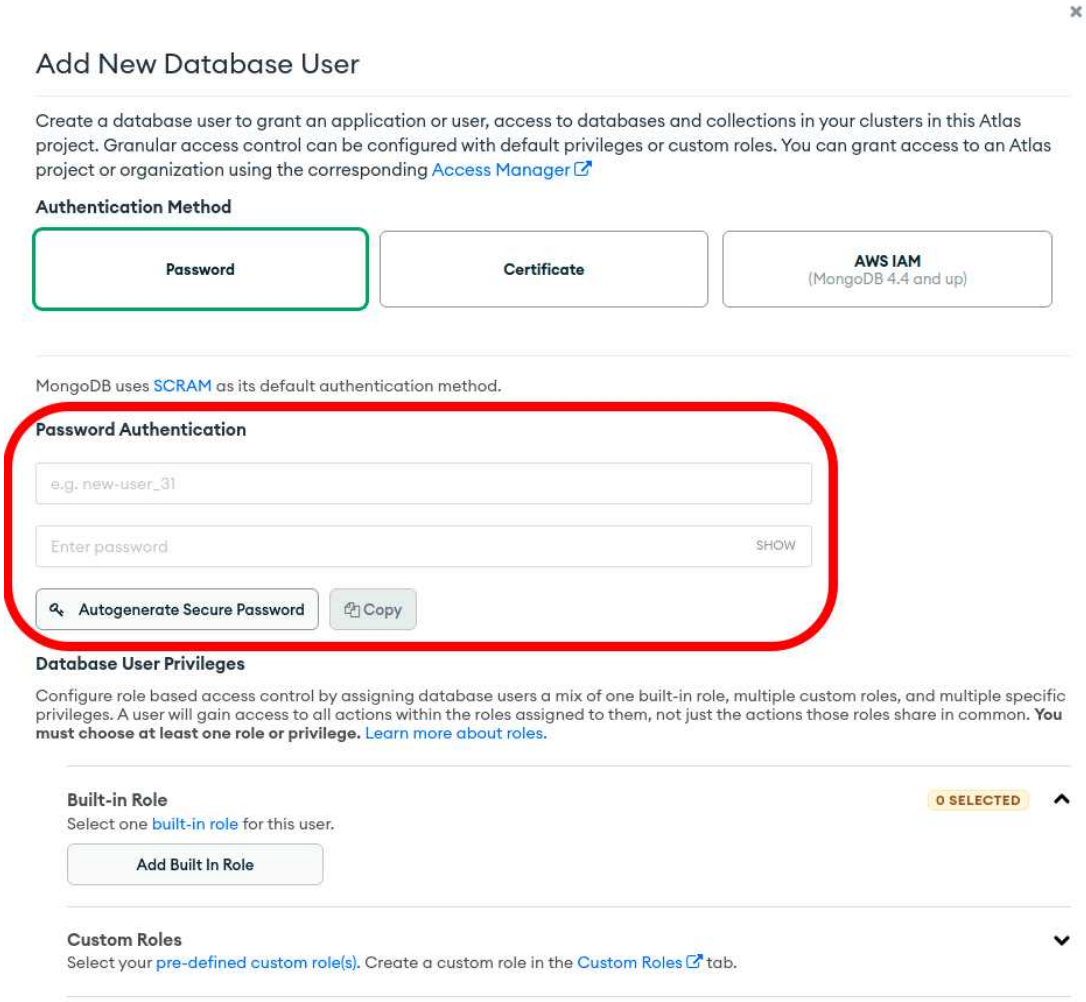
Note

Termination Protection prevents accidental cluster deletion.

5 **Create user profiles.** Go to the *Database access* tab and select *Add New Database User.*



5.1 In the *Password Authentication* section, enter the name of the user (users can be created for each person accessing the database or for a specific function) and create a password. The password can either be autogenerated or entered manually.

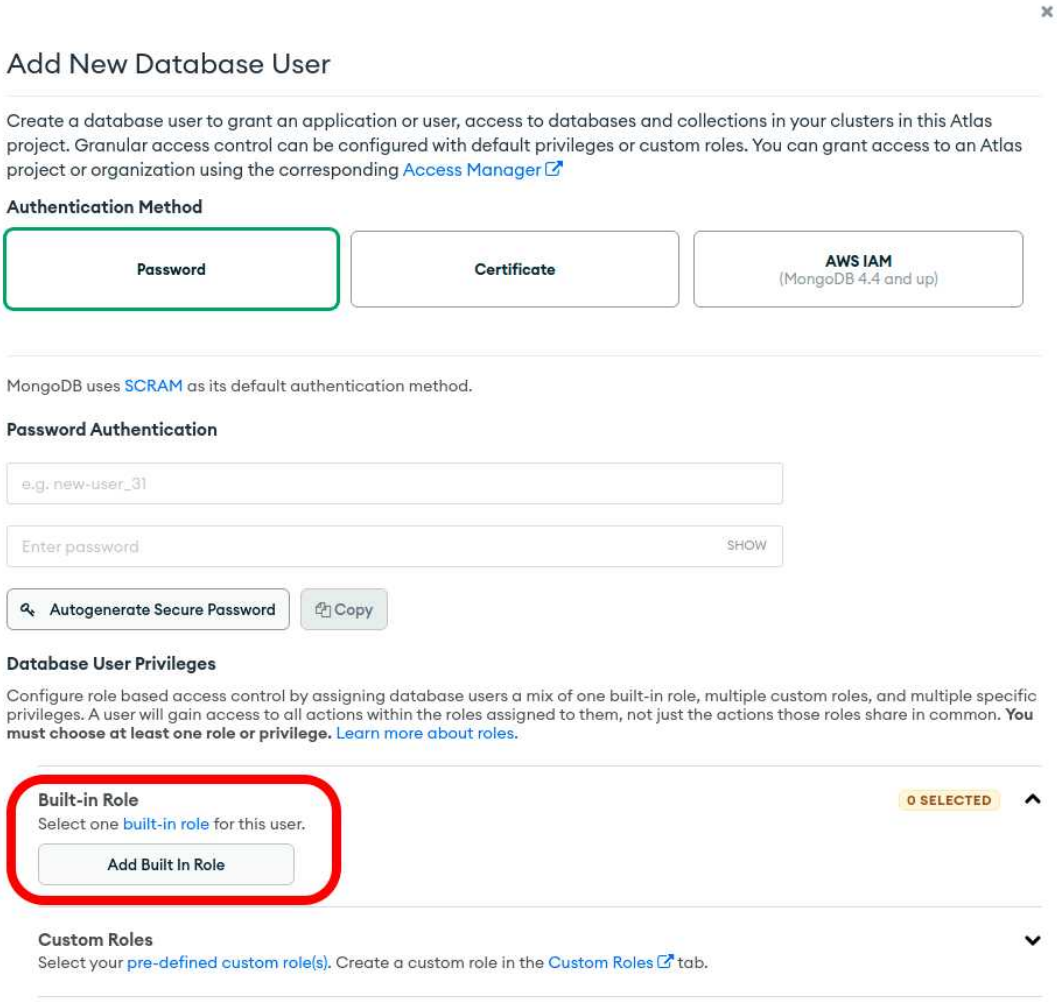


Safety information

After creating the account, remember to copy the credentials as the passwords will be hidden for security reasons.

5.2 In *the Database User Privileges* section assign roles to the user, you can use pre-prepared template roles such as Admin, Read/Write, and Read from the *Built-in Role* section.

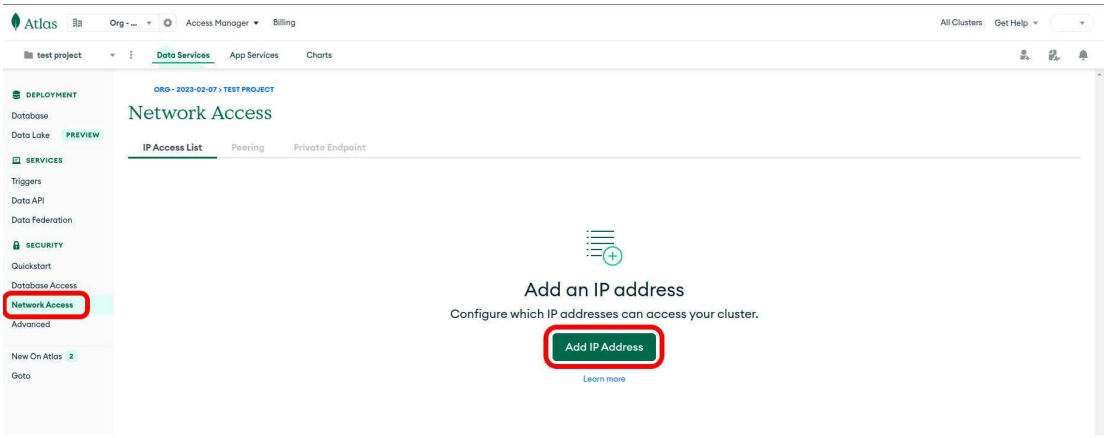
If there are multiple databases or collections, you can assign roles to specific elements of the cluster to fine-tune access in the *Specific Privileges* section.



Note

To ensure security and stability, we recommend creating at least one user for each Built-in Role. It should be avoided to use of the Admin role for routine tasks.

6 **Limit IP addresses.** Go to the *Network Access* tab.



Depending on the security protocols three approaches can be chosen:

1. *Allow Access From Anywhere*
2. Specify IP addresses in *Access List Entry* (the current machine can be added by selecting *Add Current IP Address*)
3. Select the IP address range in CIDR notation in *Access List Entry*

Note

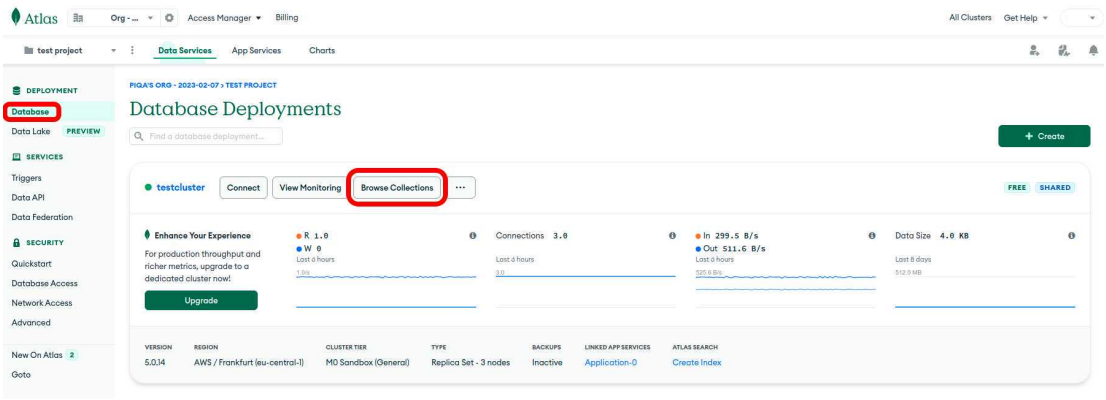
CIDR notation examples:
188.225.0.1/32 will allow access only for 188.225.0.1 address
188.225.0.1/24 will allow access for range 188.225.0.XXX
188.225.0.1/16 will allow access for range 188.225.XXX.XXX

Optionally it is possible to use online tools to convert IP address lists to CIDR notation
Example: ARIN

Safety information

Allow Access From Anywhere is not recommended, as it may result in unauthorized access to the cluster.

7 **Create a database and a collection.** Go to the *Database* tab, choose *Browse Collections* and then *Add My Own Data*. Name your first database and collection.



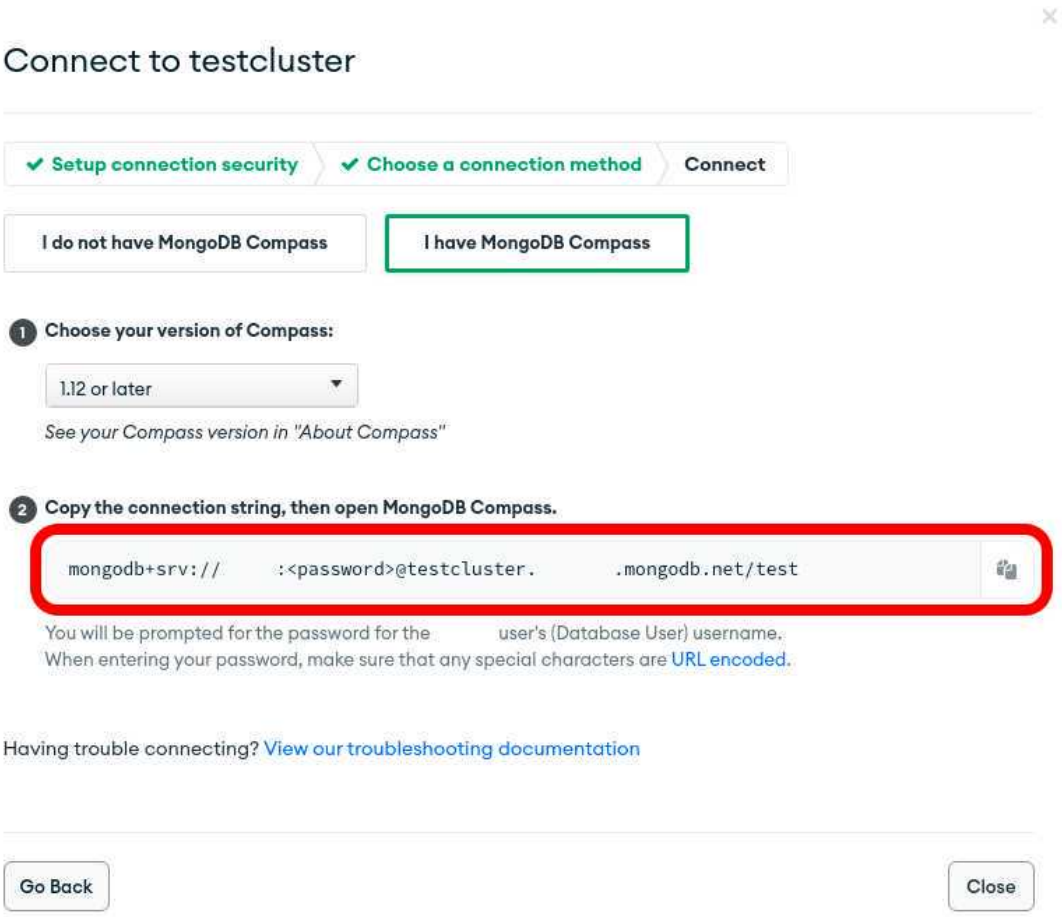
Note

To ensure compatibility and clarity, avoid using special characters(e.g.: “$,(,§,%”) or non-standard English characters in the database and collection names. It's also recommended to keep the names concise.

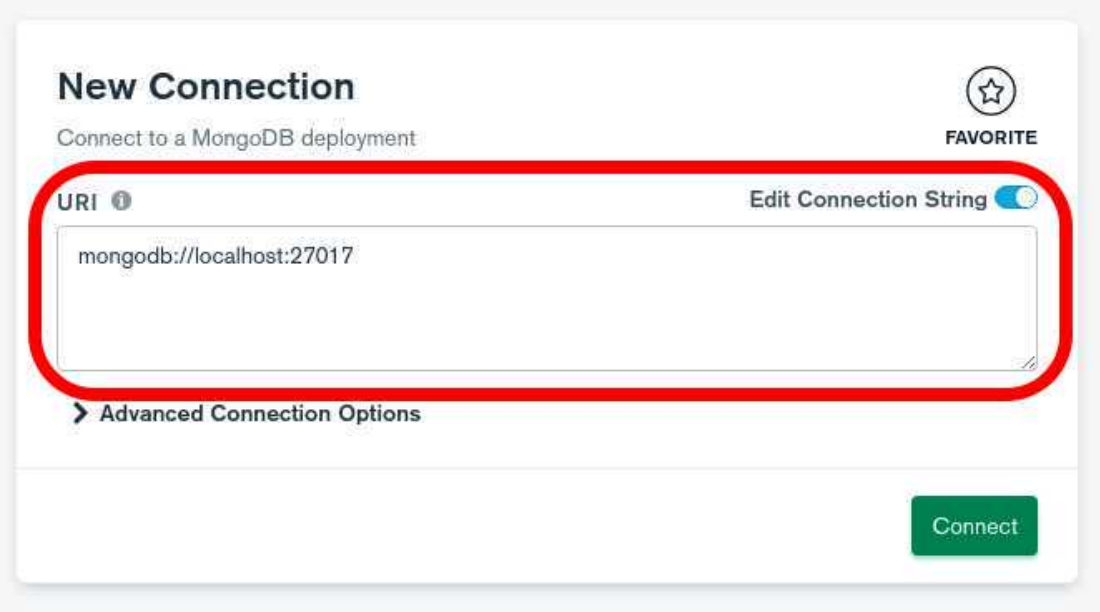
Note that you can always add additional databases and collections later on.

MongoDB Compass Access

8 **Obtaining connection string.** Go to the *Database* tab, pick *Connect* and then choose *Connect using MongoDB Compass.* Finally copy the connection string.



9 **Database access via MongoDB Compass.** Download and install MongoDB Compass from MongoDB website. Copy the connection string obtained in go to step #8 MongoDB Compass Access, and paste it in the URI box in MongoDB Compass, making sure to replace <username> and <password> with your credentials. Alternatively, you can fill in the username and password under the *Advanced Connection Options* section.



Note

Connection strings with usernames and passwords can be saved by selecting *Favourite* in the upper right corner of the window.

Please note that the *Favorite* option will also save your username and password. If you want to save connection strings on a shared computer, it is recommended to remove your credentials before saving and enter them later in the *Advanced Connection Options* section.

Data import

10 **Data import.** Data import can be performed in two ways by using:

- MongoDB Compass
- Command line

Step 10 includes a Step case.

MongoDB Compass

Command line

step case

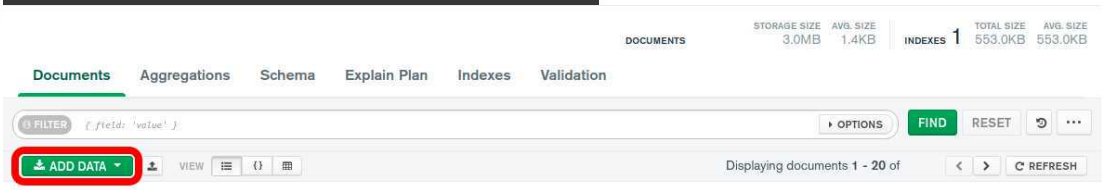
MongoDB Compass

10.1 Prepare a CSV file for the input.

The input file opened in a text editor should look like the given example:

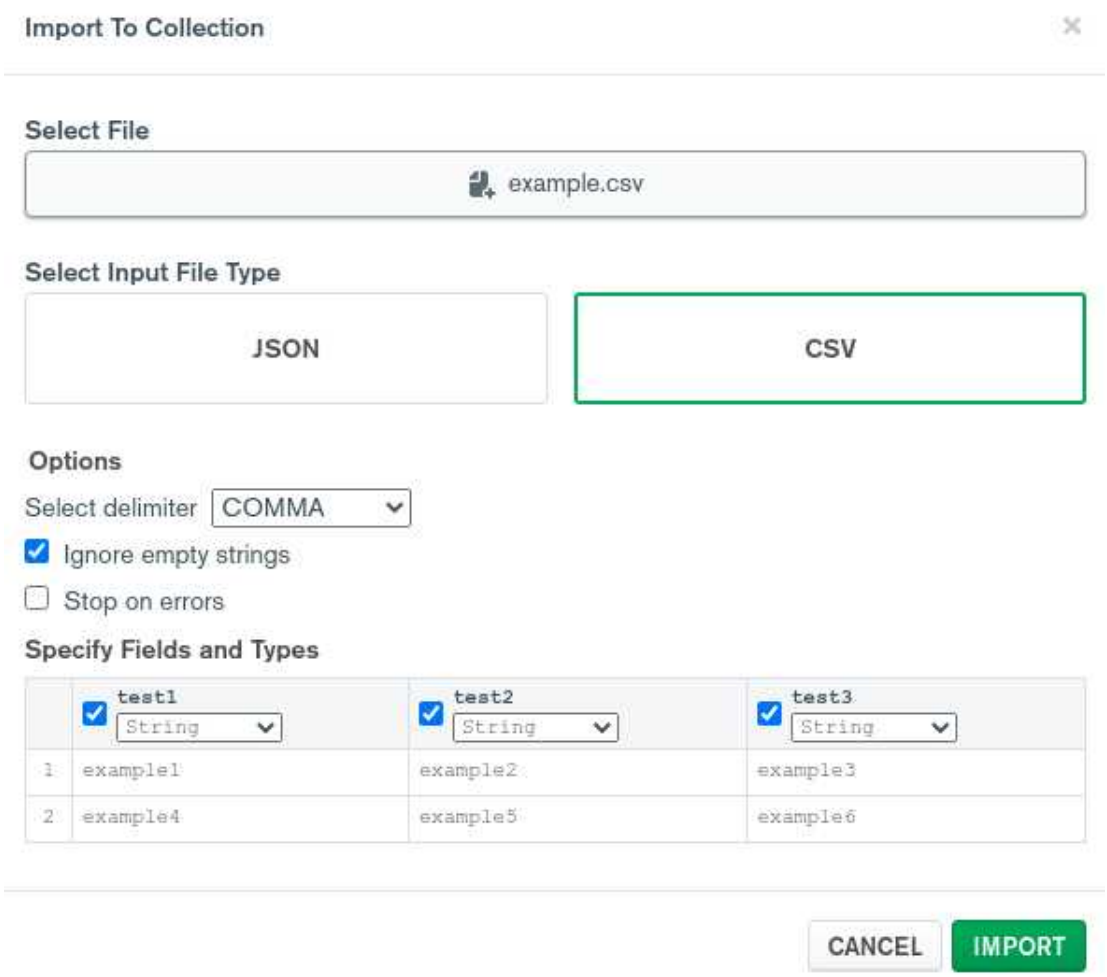
```
Header1,Header2,Header3
Value1,Value2,Value3
Value4,Value5,Value6
```

10.2 Connect to the database as explained in the section go to step #8 MongoDB Compass Access. Select *Add Data*.

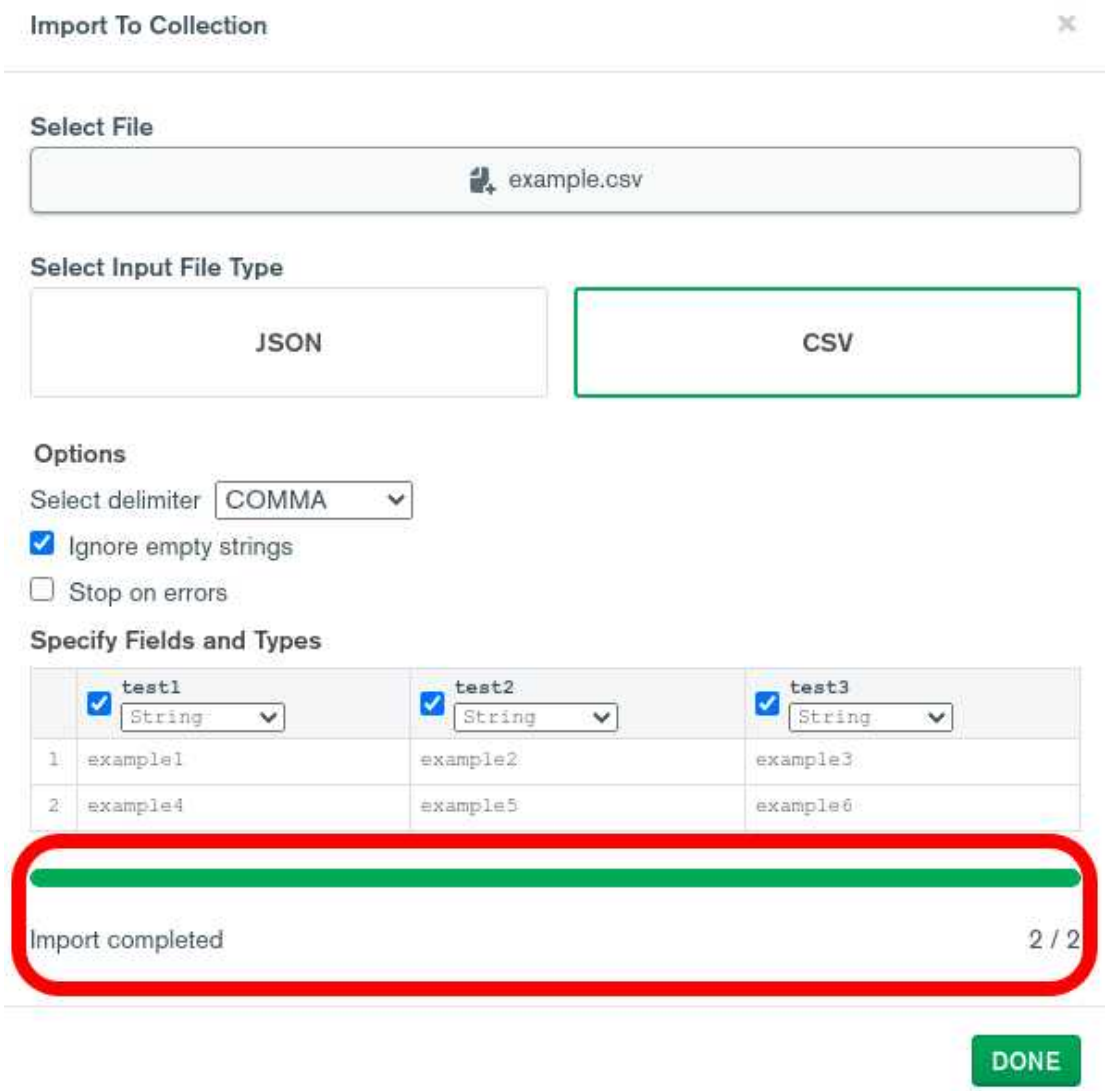


Select *Import File* and choose the file that you want to upload data from. Pick *CSV* in the *Select Input File Type* section.

10.3 If the file is in the proper format, the *Specify Fields and Types* table should appear, which provides an overview of the imported data and allows for the specification of key types. Once you have verified the information, pick *Import* to complete the process



10.4 Upon successful import, you should see a confirmation message stating *Import completed*. Verify the number of documents imported to ensure that the import was successful


Import To Collection
Select File
example.csv
Select Input File Type
JSON
CSV
Options
Select delimiter COMMA
Ignore empty strings
Stop on errors
Specify Fields and Types
test1 String
test2 String
test3 String
1 example1 example2 example3
2 example4 example5 example6
Import completed 2 / 2
DONE