

Lab: Create and Deploy an Atlas Cluster

Get Started with MongoDB Atlas

Create a free tier cluster with our fully managed cloud database service in minutes. You'll be using MongoDB Atlas within MongoDB University courses as you complete specific exercises.

Create your free account

Your Company (optional)

How are you using MongoDB? ▼

Your Work Email

First Name

Last Name

Password

8 characters minimum

☐ I agree to the [terms of service](#) and [privacy policy](#).

Get started

Already have an account? [Sign in.](#)

The following 10 easy steps will guide you in creating:

- an Atlas Organization named `MDBU`
- a Project within `MDBU` called `M001`
- a Free Tier Atlas cluster named `Sandbox`

1. Select **Create an Organization**



2. Name your Organization `MDBU`. Make sure that your cloud service is *Atlas*, then hit **Next**.

A screenshot of the "Create Organization" page in MongoDB. At the top, there's a breadcrumb "← Organizations" and the title "Create Organization". Below the title are two tabs: "Name and Service" (active) and "Add Members". A green "Next" button is in the top right. The "Name Your Organization" section has a text input field containing "MDBU". The "Select Cloud Service" section has two radio buttons: "MongoDB Atlas" (selected) and "Cloud Manager".

3. Hit **Create Organization**

A screenshot of the "Create Organization" page in MongoDB, showing the "Add Members and Set Permissions" step. The "Name and Service" tab is active and green. A "Go Back" link and a "Create Organization" button are visible. The "Add Members and Set Permissions" section has a text input field for inviting users.

4. Hit **New Project**

A screenshot of the "Projects" page in MongoDB for the "MDBU" organization. A "New Project" button is in the top right. Below is a search bar "Find a project..." with a magnifying glass icon. At the bottom is a table with columns: "Project Name", "Clusters", "Users", "Teams", "Alerts", and "Actions".

5. Name your Project M001 and hit **Next**

MDBU > PROJECTS

Create a Project

Name Your Project Add Members Next

Name Your Project

Project names have to be unique within the organization (and other restrictions).

M001

Cancel Next

6. Select **Create Project**

MDBU > PROJECTS

Create a Project

✓ Name Your Project Add Members Go Back Create Project

Add Members and Set Permissions


Invite new or existing users via email address...

7. Select **Build a Cluster**

MDBU > M001

Clusters

Find a cluster...



Create a cluster

Choose your cloud provider, region, and specs.

Build a Cluster

Once your cluster is up and running, live migrate an existing MongoDB database into Atlas with our [Live Migration Service](#).

8. Select the left-most option that is **FREE** and hit **Create a cluster**

MONGODB ATLAS

Choose a path. Adjust anytime.

Available as a fully managed service across 50+ regions on AWS, Azure, and Google Cloud

Shared Clusters

For teams learning MongoDB or developing small applications.

- ✓ Highly available auto-healing cluster
- ✓ End-to-end encryption
- ✓ Role-based access control

Create a cluster

Starting at **FREE**

Dedicated Clusters

For teams building applications that need advanced development and production-ready environments.

- ✓ Includes all features from Shared Clusters
- ✓ Auto-scaling
- ✓ Network isolation
- ✓ Realtime performance metrics

Create a cluster

Starting at **\$0.08/hr***
*estimated cost \$0.64/month

Dedicated Multi-Region Clusters

For teams developing world-class applications that require multi-region resiliency or ultra-low latency.

- ✓ Includes all features from Shared and Dedicated Clusters
- ✓ Replicate data across multiple regions
- ✓ Globally distributed read and write operations
- ✓ Control data residency at the document level

Create a cluster

Starting at **\$0.13/hr***
*estimated cost \$0.65/month

[Back](#) [Advanced Configuration Options](#)

9. Select the region that is geographically closest to your location. On the bottom of the page change the cluster name to `Sandbox`. Create the cluster. *This step might take a minute or two to complete.*

- Now that you have an Atlas cluster you need to grant access to your IP Address and create a Database User.
 - Select **Connect** from the cluster view.

- Select the *right-most* option **Allow Access from Anywhere** and confirm your selection by clicking on **Add IP Address**. Allowing access from anywhere is **not* a good security practice. Clusters that are used for production should **not** have this enabled.

Connect to Sandbox

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 firewall access and user security permission below.

1. Whitelist 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: Password: [Show/Hide Password](#)

Create Database User

Close | Choose a connection method

- Create a Database User
 - username: m001-student
 - password: m001-mongodb-basics

Click on **Create Database User**

Connect to Sandbox

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 whitelisted entry in the [IP Whitelist tab](#).

2. Create a Database User

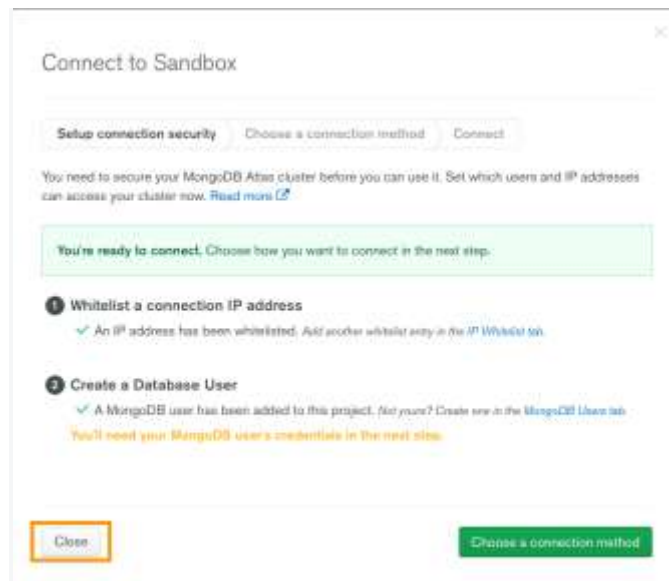
This first user will have **atlasAdmin** permissions for this project. Keep your credentials handy, you'll need them for the next step.

Username: Password: [Show/Hide Password](#)

Create Database User

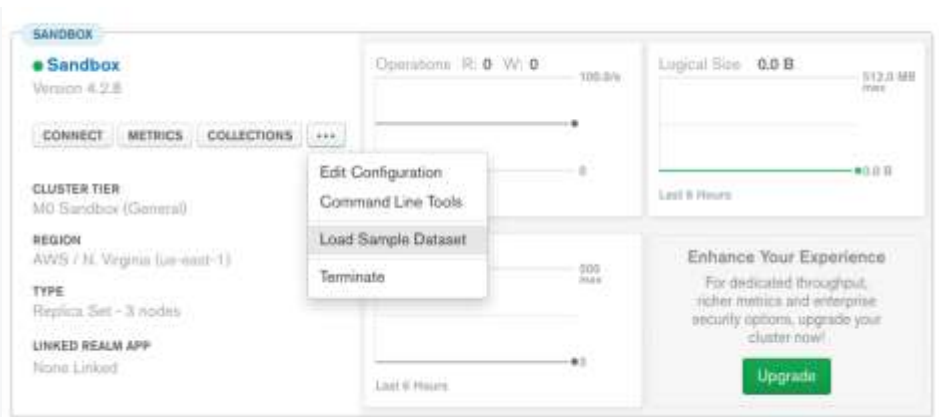
Close | Choose a connection method

- **Close** the Connection menu at the *lower left corner* of the window.



Load the Sample Dataset

Select the "..." option in the cluster menu -> choose the "**Load Sample Dataset**" option, then confirm your choice.



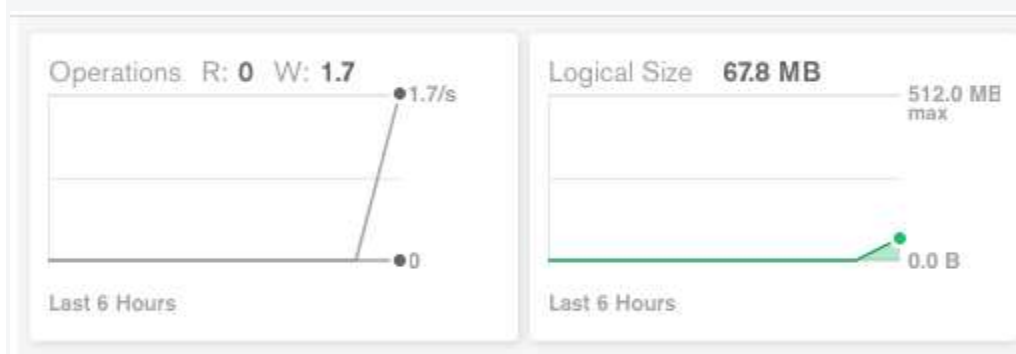
Load Sample Dataset

We've created a sample dataset to help you test features on Sandbox.

[Sample Dataset](#)
Size: ~350 MB

Please confirm that you want to load this sample dataset.

When the dataset is loaded the graph labeled "**Logical Size**" on the right side of the screen should go up and display the size of the dataset that is above zero and below 512 MB. Your graph may look different than the picture below.



Did the logical size of the dataset and the number of operations increase in your cluster view *similar* to how it did in this image?

Connect MongoDB with Python PyMongo