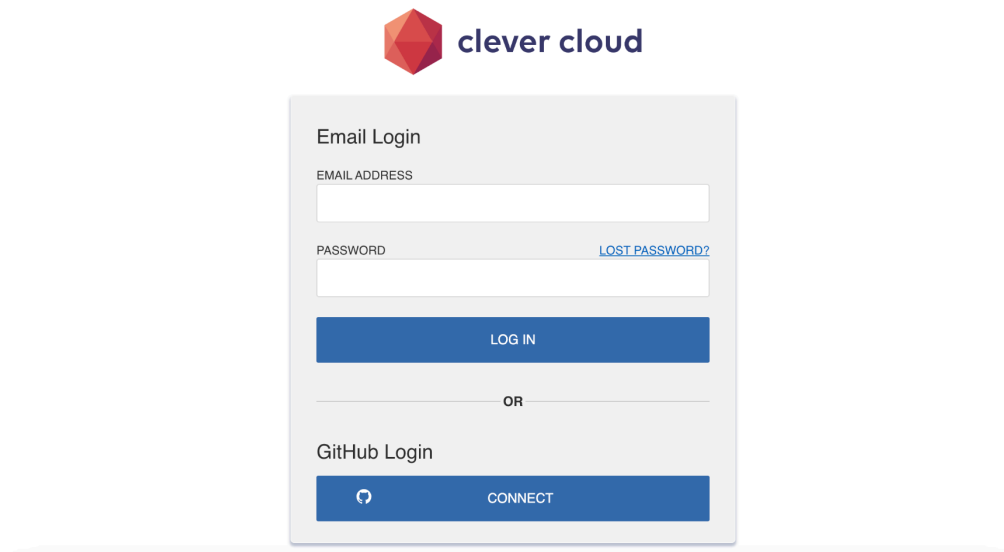


Setup MySQL using Server Cloud

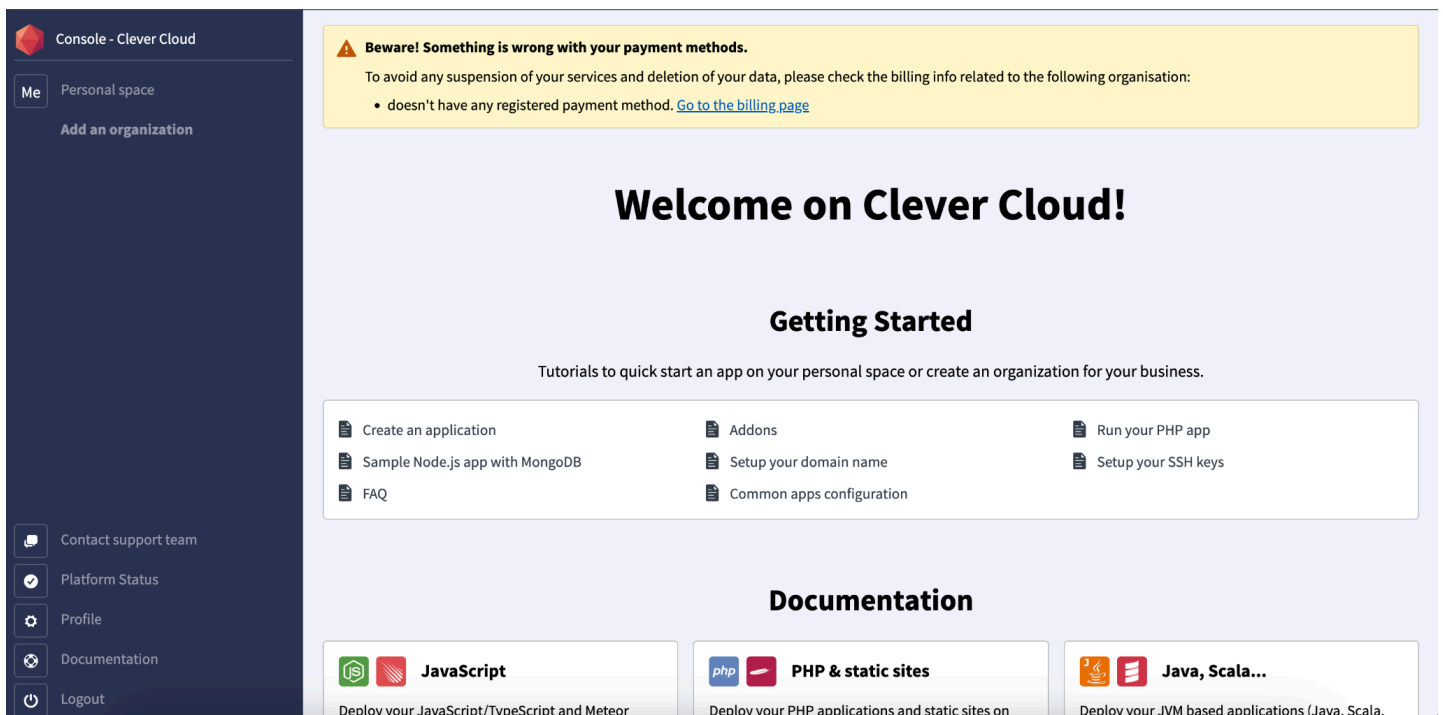
Step 1

Go to <https://api.clever-cloud.com/v2/sessions/login?fromAuthorize=true> and sign up using CMU email address.

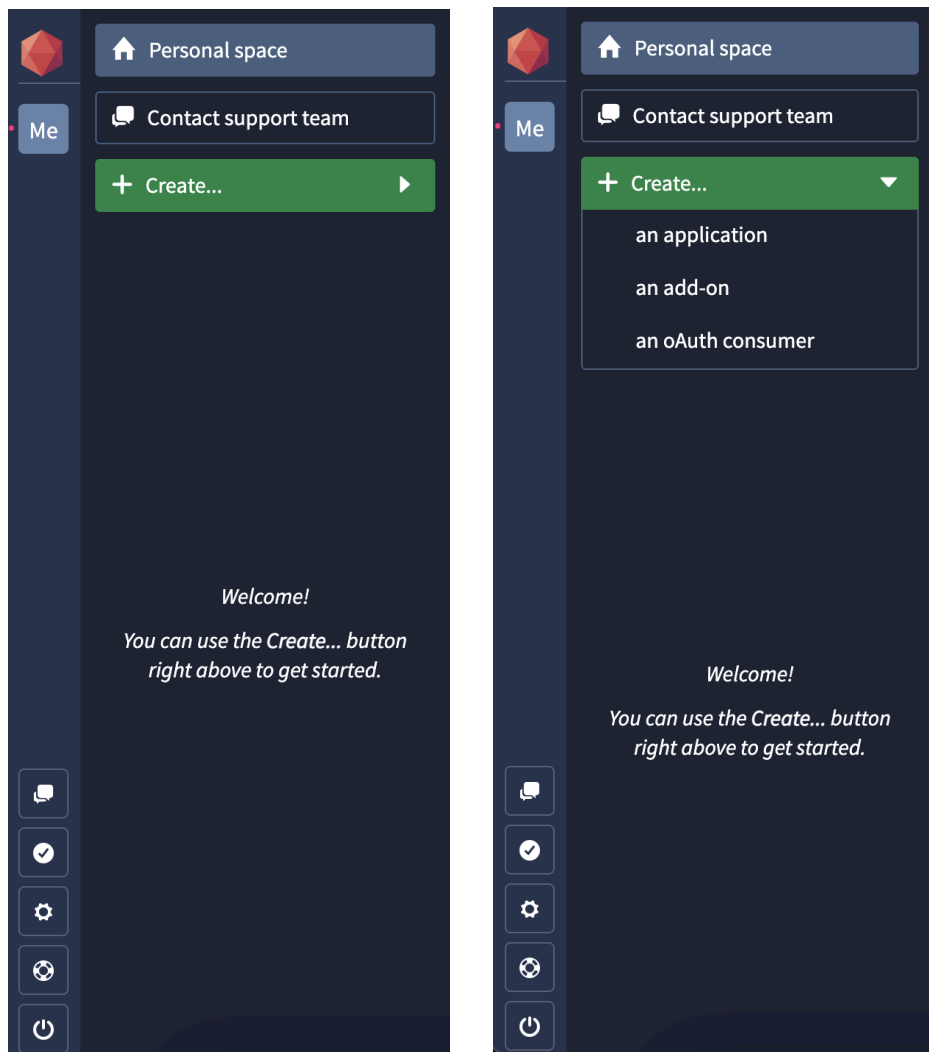


Step 2

Once you've signed in, you should see something like this. There should be "Personal Space" on the leftmost panel. If there isn't, create one.

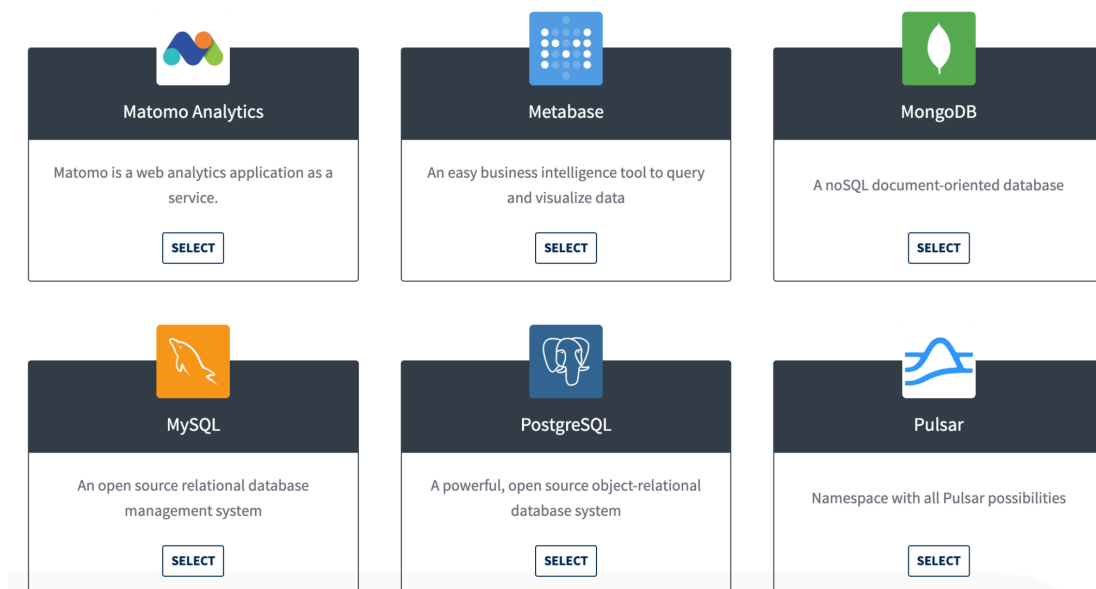


Click on “Personal Space”, then click on “Create” and then click on “an add-on”.



Step 3

Select “MySQL” from the options.



Select the “Dev” plan (free version for testing purposes). Click on “Next” at the bottom.

Add-on creation Provider ▶ Plan ▶ Applications ▶ Information ▶ Options ▶ Invoice

What kind of MySQL do you need?

	PLAN NAME	BACKUPS	LOGS	MAX CONNECTION LIMIT	MAX DB SIZE	MEMORY	METRICS	TYPE	VCPUS	ESTIMATED PRICE (30 DAY)
<input type="radio"/>	DEV	Daily - 7 Retained	No	5	10 MB	Shared	No	Shared	Shared	€0.

Step 4

Name your MySQL add-on as “recitation-30oct-<AndrewID>” like how it’s shown below. Keep the region selected as Paris. Click “Next”.

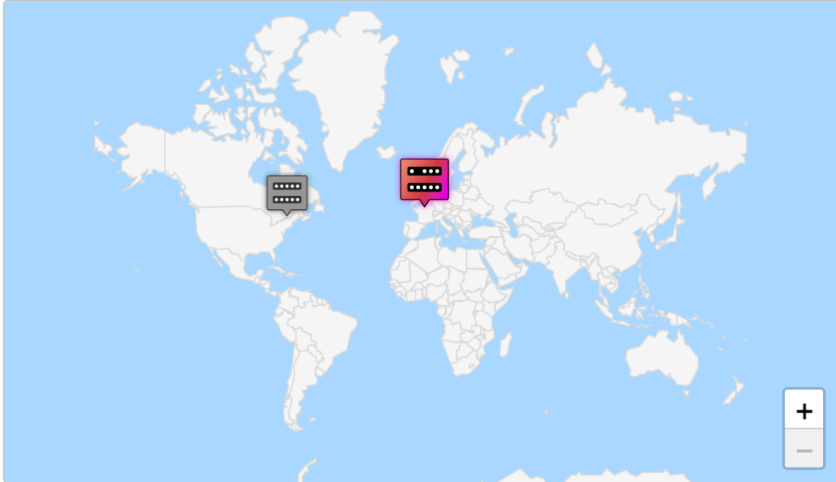
Add-on creation Provider ▶ Plan ▶ Applications ▶ Information ▶ Options ▶ Invoice


What is the name of your MySQL add-on? In which region should it be located?


NAME: *

recitation-30oct-jartwani

ZONE: *



Paris France 
infra:clever-cloud

Montreal Canada 
infra:ovh

NEXT

Step 5

Once your MySQL database is created, you will be able to see a bunch of credentials. Make sure you save all these values somewhere as we’ll be using it during recitation in-class. More specifically, we’ll need *Host, User, Password, Database Name & Port*.

Personal space

Contact support team

Create...

Filter apps, add-ons...

recitation-30oct-jartwani

Addon dashboard

Information

Backups

Migrate / Upgrade

Logs

Metrics

Doc. for MySQL

MySQL by Clever Cloud

Admin

PHPMyAdmin

Documentation

TYPE	PLAN	CLUSTER	VERSION	REGION	STATUS	CREATION DATE	ID
MySQL	Dev	par-mysql-c6	8.0	par	ACTIVE	2024-10-23	mysql_f19ea5ef-1d63-44da-9774-e997b5dc09ec

Database Credentials

Get credentials for manual connections to this database.

Export Environment Variables

Host

bplalcxsg0yf7dm4igbe-mysql.services.clever-cloud.com

Database Name

bplalcxsg0yf7dm4igbe

User

un43jyyilfhqn7mu

Password

.....

Port

3306

Connection URI

.....

MySQL CLI

Setup MongoDB using MongoDB Atlas

Step 1

Sign in using “Google” and then select your CMU email address.

MongoDB.

Log in to your account

Don't have an account? [Sign Up](#)

Google

GitHub

Or with email and password

Email Address

Next

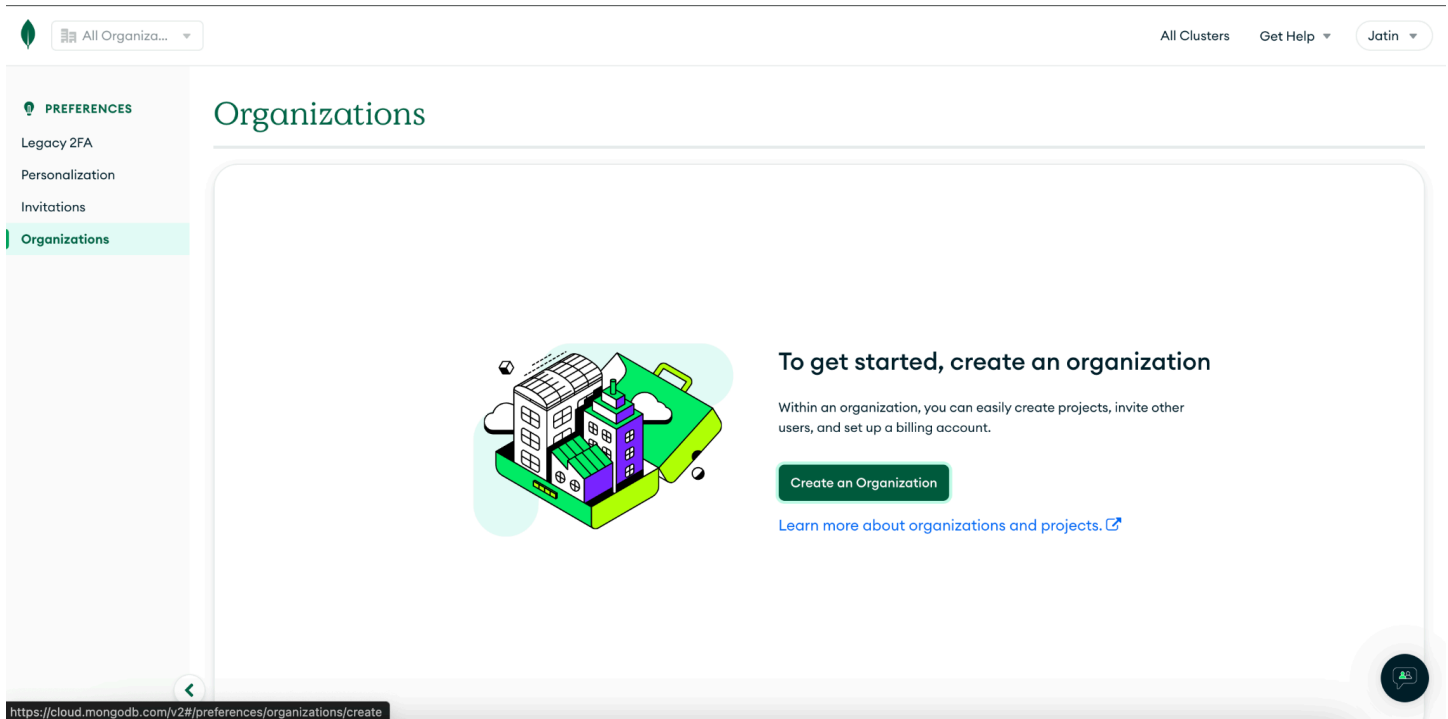
MongoDB 8.0 is here

Up to 32% higher throughput, improved horizontal scaling, expanded queryable encryption capabilities, and more.

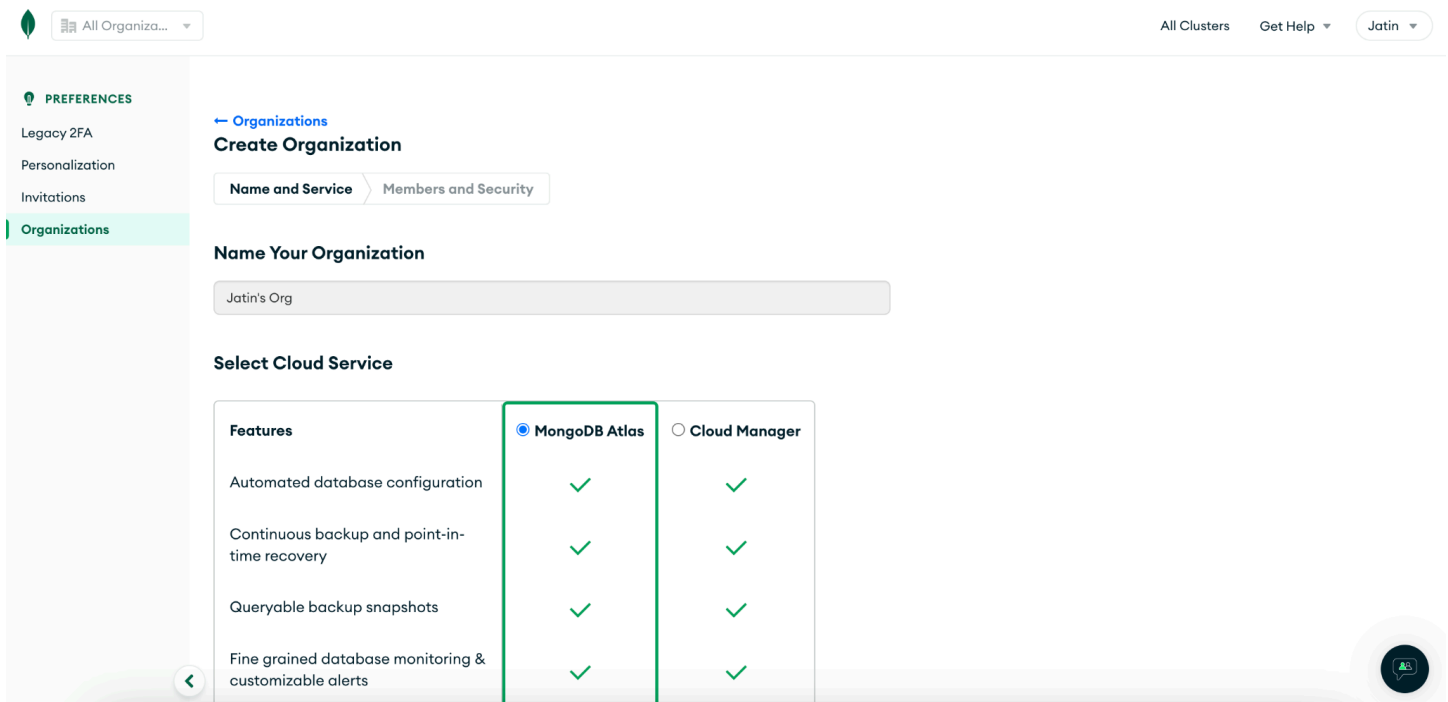
See everything that's new →

Step 2

Click on “Create an Organization”



In the **Name and Service** tab, start by giving a name to your organization. It could be anything. Make sure you select “MongoDB Atlas” while selecting Cloud Service. Click on “Next” at the bottom.



In the **Members & Security** tab, keep whatever is selected as is. Don't change anything and click on "Create Organization".

CREATE ORGANIZATION

← Organizations

✓ Name and Service Members and Security

Add Members and Set Permissions

Invite new or existing users via email address...

Give your members access permissions below.

jartwani@andrew.cmu.edu (you) Organization Owner

Require IP Access List for the Atlas Administration API ☒

This will force all Atlas Administration API operations for your organization to originate from an IP Address added to your Access List by the API Key. [Docs](#)

Back Cancel Create Organization

Organization Permissions

- Organization Owner**
Provides root access to the organization, including: access to administer organization settings, users, and teams; access to delete the organization, and all permissions granted to the roles below.
- Organization Project Creator**
Provides project creation access as well as permissions granted to the Organization Member role.
- Organization Billing Admin**
Provides access to administer billing information for the organization as well as permissions granted to the Organization Member role.
- Organization Billing Viewer**
Provides access to view billing information for the organization as well as permissions granted to the Organization Member role.

Step 3

Once you're inside your newly created organization, click on "New Project"

JATIN'S ORG

Projects

New Project

Find a project...

Project Name	Clusters	Tags	Users	Teams	Alerts	Actions
--------------	----------	------	-------	-------	--------	---------

System Status: All Good Last Login: 128.237.82.211
©2024 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

In the **Name Your Project** tab, name your Project as "Recitation-30Oct". Don't add anything in the Add Tags (optional) section. Click on "Next"

Jatin's Org

Access Manager

Billing

All ClustersGet HelpJatin

ORGANIZATION

Projects

Alerts

Activity Feed

Settings

Integrations

Access Manager

Billing

Support

Live Migration

JATIN'S ORG > PROJECTS

Create a Project

Name Your ProjectAdd Members

Name Your Project

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

Recitation-30Oct

Add Tags (Optional)

Use tags to efficiently label and categorize your projects. A project can have a maximum of 50 tags. You can modify tags for the project later. [Learn more](#)

Key	Value	Actions
Select a key or enter your own	Select a value or enter your own	
+ Add tag		
		0 TAGS

CancelNext

In the **Add Members** tab, don't change anything and then click on "Create Project". However, make sure your role is set as the Project Owner.

Jatin's Org

Access Manager

Billing

All ClustersGet HelpJatin

ORGANIZATION

Projects

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Settings

Integrations

Access Manager

Billing

Support

Live Migration

JATIN'S ORG > PROJECTS

Create a Project

✓ Name Your ProjectAdd Members

Add Members and Set Permissions

Invite new or existing users via email address...

Give your members access permissions below.

jartwani@andrew.cmu.edu (you)Project Owner

BackCancelCreate Project

Project Member Permissions

Project Owner

Has full administration access

Project Cluster Manager

Can update clusters

Project Data Access Admin

Can access and modify a cluster's data and indexes, and kill operations

Project Data Access Read/Write

Can access a cluster's data and indexes, and modify data

Project Data Access Read Only

Can access a cluster's data and indexes

Project Search Index Editor

Can view and manage a cluster's search indexes

Project Read Only

Step 4

Now, we have to create a new cluster within our newly created Project. Click on "Create"

Atlas Jatin's Org Access Manager Billing All Clusters Get Help Jatin

Recitation-30Oct Data Services Charts

Overview JATIN'S ORG > RECITATION-30OCT

Overview

Create a cluster
Choose your cloud provider, region, and specs.

+ Create

Toolbar

Featured Resources

GENERAL

[Get Started with Atlas](#)

[Reference MongoDB Documentation](#)

[Develop Applications with the Developer Center](#)

[Ask the MongoDB Community](#)

New On Atlas

8 NEW

Learn about the latest feature enhancements on Atlas.

System Status: All Good

Choose the free plan and name your cluster as “recitation-30oct-<AndrewID” as shown below.

Deploy your cluster

Use a template below or set up advanced configuration options. You can also edit these configuration options once the cluster is created.

Option	Price	Description
<input type="radio"/> M10	\$0.08/hour	For production applications with sophisticated workload requirements.
<input type="radio"/> Serverless	\$0.10/1M reads	For application development and testing, or workloads with variable traffic.
<input checked="" type="radio"/> M0	Free	For learning and exploring MongoDB in a cloud environment.

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

Name
You cannot change the name once the cluster is created.

recitation-30oct-jartwani

☒ Automate security setup

☒ Preload sample dataset

I'll do this later Go to Advanced Configuration **Create Deployment**

Most of the settings would already be selected for you. There's no need to change anything else. Click on “Create Deployment”




Name
You cannot change the name once the cluster is created.

recitation-30oct-jartwani



☒ Automate security setup ⓘ


☒ Preload sample dataset ⓘ

Provider

Region

 **N. Virginia (us-east-1)** ★ 

★ Recommended ⓘ  Low carbon emissions ⓘ

Tag (optional)
Create your first tag to categorize and label your resources; more tags can be added later. [Learn more.](#)

Select or enter key : Select or enter value

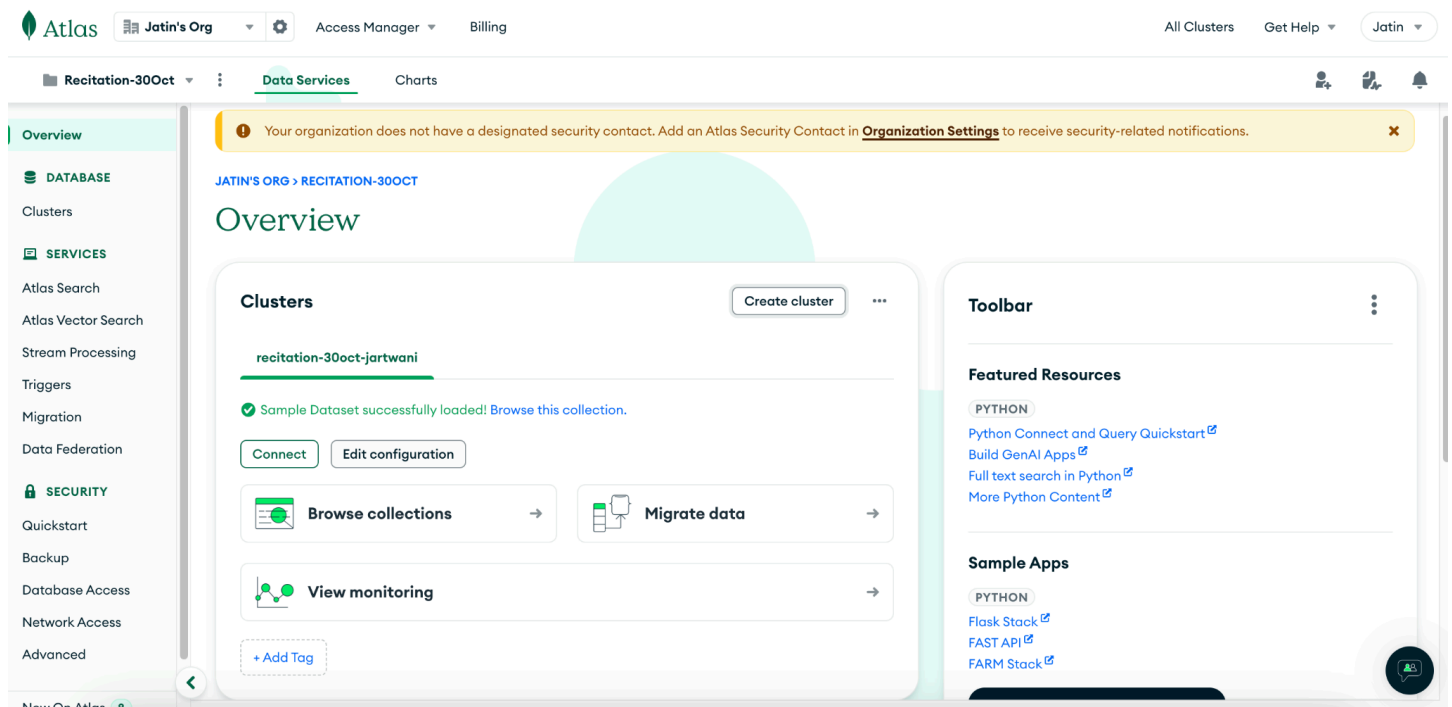
I'll do this later

Go to Advanced Configuration

Create Deployment

Step 5

Once your cluster is ready, click on “Connect”



The screenshot shows the Atlas Recitation-30Oct cluster overview page. The top navigation bar includes the Atlas logo, 'Jatin's Org', and links to 'Access Manager' and 'Billing'. The main header shows 'Recitation-30Oct' and 'Data Services'. A yellow banner at the top states: 'Your organization does not have a designated security contact. Add an Atlas Security Contact in [Organization Settings](#) to receive security-related notifications.'

The 'Overview' section displays the cluster name 'recitation-30oct-jartwani' and a status message: 'Sample Dataset successfully loaded! [Browse this collection.](#)'. Below this are buttons for 'Connect' and 'Edit configuration'. There are also buttons for 'Browse collections', 'Migrate data', and 'View monitoring'. A '+ Add Tag' button is at the bottom.

The right sidebar contains a 'Toolbar' and 'Featured Resources' section. The 'Featured Resources' section lists links for 'Python Connect and Query Quickstart', 'Build GenAI Apps', 'Full text search in Python', and 'More Python Content'. The 'Sample Apps' section lists links for 'Flask Stack', 'FAST API', and 'FARM Stack'.

Create a username and password. Use your AndrewID as the username. For the password, preferably use something random (just for this recitation) and not an actual password that you use for other stuff. Click on “Create Database User” once you’re happy with the username & password.



Connect to recitation-30oct-jartwani



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](#)

1. Add a connection IP address

✓ Your current IP address (74.109.239.25) has been added to enable local connectivity. Only an IP address you add to your Access List will be able to connect to your project's clusters. Add more later in [Network Access](#).

2. Create a database user

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

i You'll need your database user's credentials in the next step. Copy the database user password.

Username

jartwani

Password

..... SHOW

Copy

Create Database User

Close

Choose a connection method

Click on "Close" once the database user has been created.



Connect to recitation-30oct-jartwani



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](#)

1. Add a connection IP address

✓ Your current IP address (74.109.239.25) has been added to enable local connectivity. Only an IP address you add to your Access List will be able to connect to your project's clusters. Add more later in [Network Access](#).

2. Create a database user

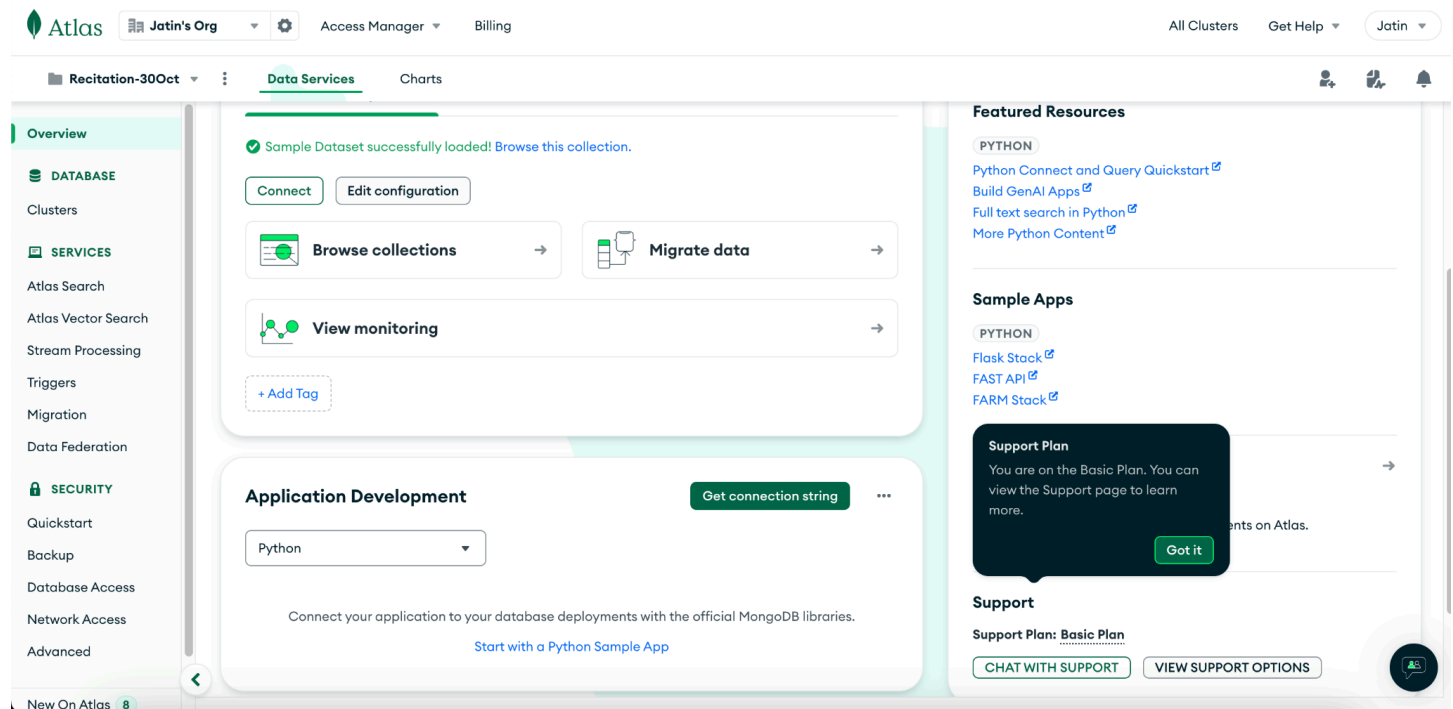
✓ A database user has been added to this project. Create another user later in [Database Access](#).

You'll need your database user's credentials in the next step.

Close

Choose a connection method

Next, click on “Get connection string” within the **Application Development** section.



Copy the connection string and replace `<db_password>` with the password you just created for your database user and save it somewhere. We will be using this connection for the recitation in-class.

Connecting with MongoDB Driver

1. Select your driver and version

We recommend installing and using the latest driver version.

Driver	Version
Python	3.12 or later

2. Install your driver

Run the following on the command line

Note: Use appropriate Python 3 executable

```
python -m pip install "pymongo[srv]"
```

[View MongoDB Python Driver installation instructions.](#)

3. Add your connection string into your application code

Use this connection string in your application

☐ View full code sample

```
mongodb+srv://jartwani:<db_password>@recitation-30oct-jartwa.futpb.mongodb.net/?  
retryWrites=true&w=majority&appName=recitation-30oct-jartwani
```

Replace `<db_password>` with the password for the **jartwani** database user. Ensure any option params are [URL encoded](#).

Step 6

Make sure within the **Network Access** tab on the left panel, the IP address is set to 0.0.0.0/0 (to ensure you can access your MongoDB server from anywhere). If not, edit and set it to 0.0.0.0/0

Atlas

Jatin's Org

Access Manager

Billing

All ClustersGet HelpJatin

Recitation-30Oct

Data Services

Charts

Overview

DATABASE

Clusters

SERVICES

Atlas Search

Atlas Vector Search

Stream Processing

Triggers

Migration

Data Federation

SECURITY

Quickstart

Backup

Database Access

Network Access

Advanced

We are deploying your changes: 0 of 3 servers complete (current action: stopping 3 servers)

JATIN'S ORG > RECITATION-30OCT

Network Access

IP Access ListPeeringPrivate Endpoint

+ADD IP ADDRESS

You will only be able to connect to your cluster from the following list of IP Addresses:

IP Address	Comment	Status	Actions
0.0.0.0/0 (includes your current IP address)	Created as part of the Auto Setup process	Active	EDITDELETE

System Status: All Good

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