

Exp 6 Implementation of Database as a Service with MongoDB Atlas

12/08/24

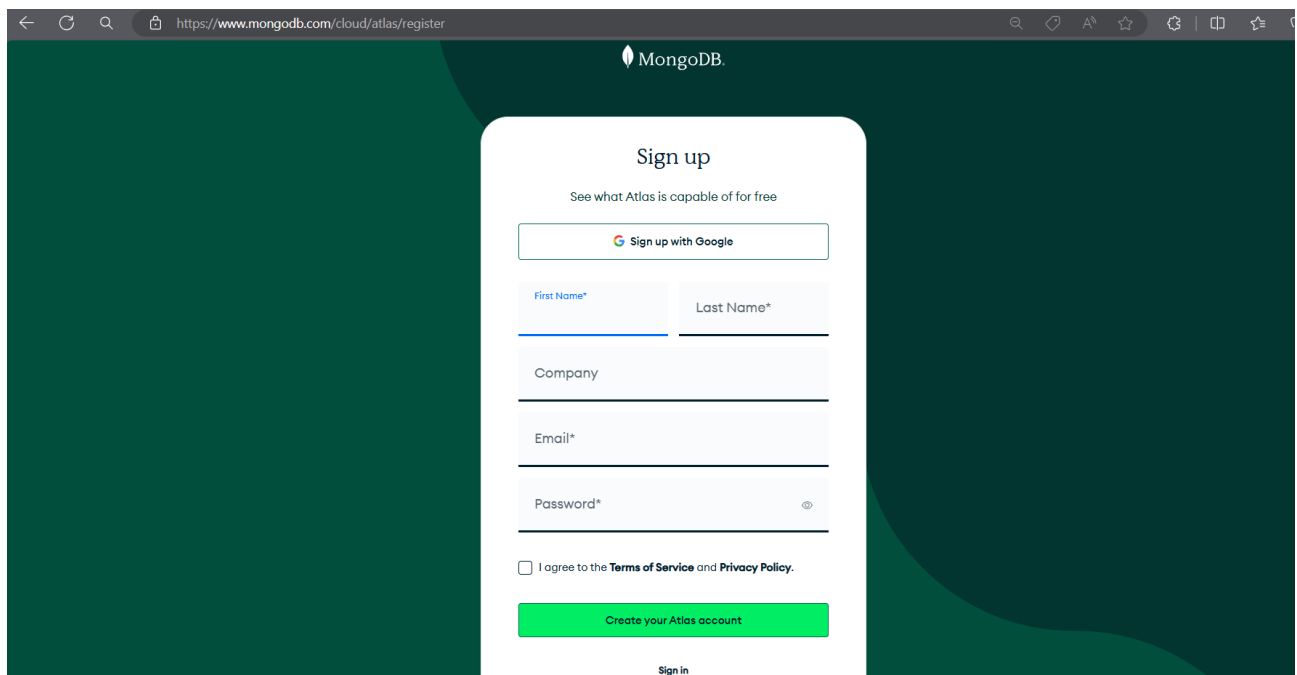
AIM:

To create the cluster in the Mongo DB (open source database) and also create the database in the cluster and performing following operations:

- 1) Insert One Record
- 2) Insert Many Records
- 3) List all the Records
- 4) List the Particular Record
- 5) Update the Record
- 6) Delete the Record

PROCEDURE:

- **STEP 1:** Create a Account in the Mongo DB Atlas using your gmail account.



The screenshot shows the MongoDB Atlas registration page in a web browser. The URL in the address bar is <https://www.mongodb.com/cloud/atlas/register>. The page has a dark green background with a white registration form in the center. The form is titled "Sign up" and includes the text "See what Atlas is capable of for free". It features a "Sign up with Google" button, followed by input fields for "First Name*", "Last Name*", "Company", "Email*", and "Password*". Below these fields is a checkbox for "I agree to the Terms of Service and Privacy Policy." and a green "Create your Atlas account" button. A "Sign in" link is located at the bottom of the form.

➤ **STEP 2:** Give details about your project.



Welcome to Atlas. Let's build something great.

Help us tailor your experience by taking a minute to answer the questions below.

GETTING TO KNOW YOU

What is your primary goal?

Build a project I have in mind

How long have you been developing software with MongoDB?

I've never developed software with MongoDB before

GETTING TO KNOW YOUR PROJECT

What programming language are you primarily building on MongoDB with?

JavaScript / Node.js

What type(s) of data will your project use?

You can choose as many as you want

Other ✕

Please specify the types of data. [Optional]

Input text

Will your application include any of the following architectural models?

You can choose as many as you want

Serverless... ✕

Finish

- **Step 3:** Next it asks you to deploy your cluster. Templates, cluster name, provider and region are selected here.

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.

☐ **M10** **\$0.08/hour**

For production applications with sophisticated workload requirements.

STORAGE	RAM	vCPU
10 GB	2 GB	2 vCPUs

☐ **Serverless**

For application development and testing, or workloads with variable traffic.

STORAGE	RAM	vCPU
Up to 1TB	Auto-scale	Auto-scale

☒ **M0** **Free**

For learning and exploring MongoDB in a cloud environment.

STORAGE	RAM	vCPU
512 MB	Shared	Shared

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

Configurations

Name

You cannot change the name once the cluster is created.

Provider



Region

Mumbai (ap-south-1) ★

★ Recommended ⓘ Low carbon emissions ⓘ

Quick setup

☒ Automate security setup ⓘ

☒ Preload sample dataset ⓘ

I'll do this later

Go to Advanced Configuration

Create Deployment

Overview

ANBU'S ORG - 2024-09-01 > PROJECT 0

Overview

Clusters

Create cluster ...

football-club-portal

Connect Edit configuration

Data Size: 134.43 MB

Browse collections →

Migrate data →

View monitoring →

+ Add Tag

Application Development

Connect new ...

Drivers Dev Tools

nodejs|Mongoose | v6.8.0|8.6.0
football-club-portal

Toolbar

Featured Resources

NODEJS

Aggregations in Node.js

Semantic Search with Atlas Vector Search

More Javascript Content

Sample Apps

NODEJS

MERN Stack

MEAN Stack

Remix Stack

Search in JavaScript

Change Stream Publishing

New On Atlas

4 NEW

Learn about the latest feature enhancements on Atlas.

DEPLOYMENT

Database

Data Lake

SERVICES

Device & Edge Sync

Triggers

Data API

Data Federation

Atlas Search

Stream Processing

Migration

SECURITY

Quickstart

Backup

Database Access

Network Access

Advanced

New On Atlas 4

Goto

- **Step 4:** Then, the connection set up process is done.

Connect to football-club-portal



Connecting with MongoDB Driver

1. Select your driver and version

We recommend installing and using the latest driver version.

Driver

Version

Node.js

5.5 or later

2. Install your driver

Run the following on the command line

```
npm install mongodb
```



[View MongoDB Node.js 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://anbu:<db_password>@football-club-portal.nvomu.mongodb.net/?  
retryWrites=true&w=majority&appName=football-club-portal
```



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

RESOURCES

[Get started with the Node.js Driver](#)

[Node.js Starter Sample App](#)

[Access your Database Users](#)

[Troubleshoot Connections](#)

Go Back

Done

➤ **STEP 5:** Create a folder for your application and start building it.

```

PS C:\Cloud\E7\football club portal> npm install

up to date, audited 13 packages in 3s

found 0 vulnerabilities
PS C:\Cloud\E7\football club portal> npm init -y
Wrote to C:\Cloud\E7\football club portal\package.json:

{
  "name": "football-club-portal",
  "version": "1.0.0",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC",
  "description": ""
}

```

```

PS C:\Cloud\E6\football-club-portal> npm install mongoose

up to date, audited 164 packages in 4s

26 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
PS C:\Cloud\E6\football-club-portal> npm install express

up to date, audited 164 packages in 2s

26 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
PS C:\Cloud\E6\football-club-portal> npm install express-openid-connect

up to date, audited 164 packages in 3s

26 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
PS C:\Cloud\E6\football-club-portal> npm install express mongoose body-parser ejs

up to date, audited 164 packages in 2s

26 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
PS C:\Cloud\E6\football-club-portal> npm install mongodb

up to date, audited 164 packages in 3s

26 packages are looking for funding
  run `npm fund` for details

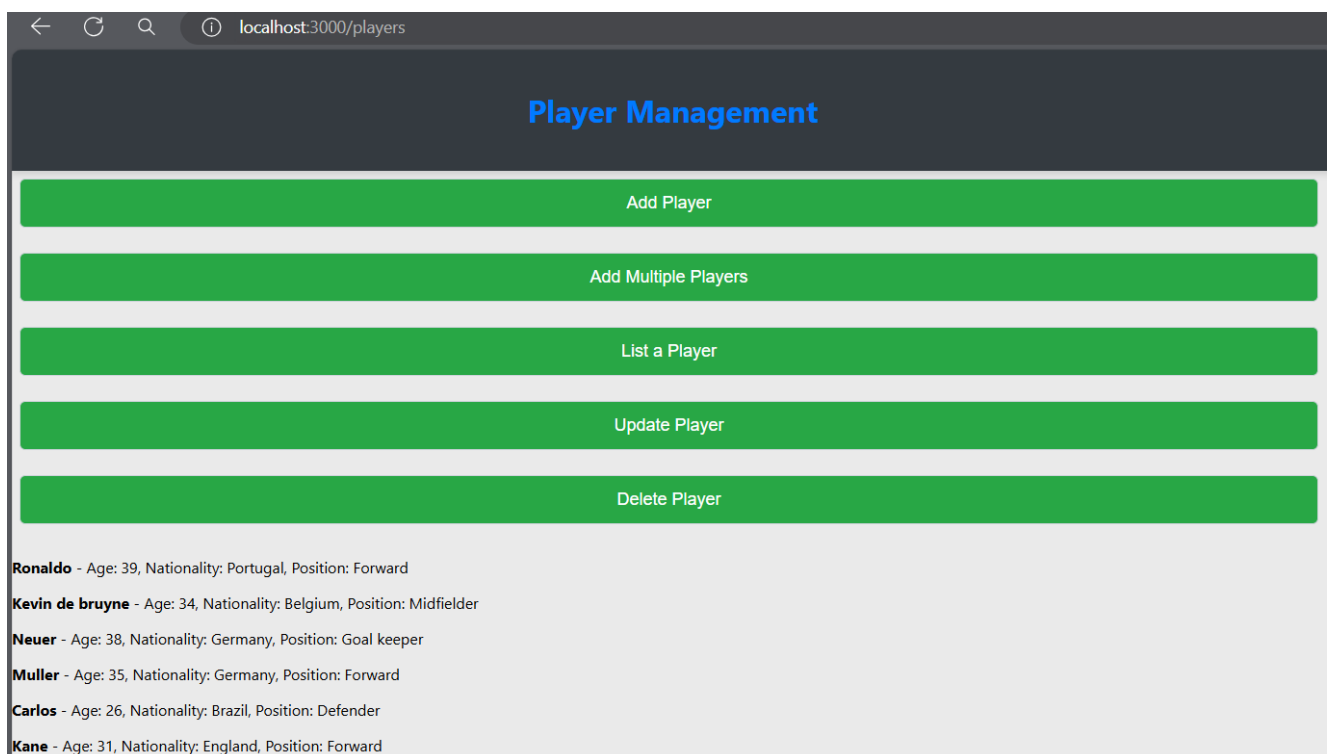
found 0 vulnerabilities

```

- **Step 6: After building your application , run the server.**

```
PS C:\Cloud\E6\football-club-portal> node app.js
Server is running on http://localhost:3000
Connected to MongoDB Atlas
```

Visit : <http://localhost:3000/>



It displays all the players stored in the database and also you can add a player and multiple players, list a specific player using id, update player's details using id and delete a player using id.

- **Step 7 :** The records can be seen in your mongodb atlas: Browse collections> Collections>test>players. Also any operations done at the application will be reflected here.

The screenshot displays the MongoDB Atlas web interface. The top navigation bar includes the Atlas logo, the organization name 'Anbu's Org', and links for Access Manager, Billing, All Clusters, Get Help, and the user profile 'Anbu'. The left sidebar shows the navigation menu with sections for Overview, DEPLOYMENT, SERVICES, and SECURITY. The main content area is divided into two panels. The top panel, titled 'Overview', shows the 'football-club-portal' cluster with a data size of 134.43 MB. It includes buttons for 'Connect', 'Edit configuration', 'Browse collections', 'Migrate data', and 'View monitoring'. The bottom panel, titled 'Collections', shows the 'test.players' collection with 6 documents. It includes a search bar, a 'Filter' button, and a 'Query Results' section displaying two documents. The first document is for a player named 'Ronaldo' (age 39, Portugal, Forward) and the second is for 'Kevin de bruyne' (age 34, Belgium, Midfielder).

RESULT:

Thus, the creation of the cluster in the Mongo DB (open source database), creation of database in the cluster and performing following operations: Insert One Record , Insert Many Records, List all the Records ,List the Particular Record ,Update the Record and Delete the Record have been executed successfully.