



MongoDB

Donald Stolz dstolz@student.42.us.org

Summary: Setup a MongoDB cloud account and cluster.

Contents

I	Introduction	2
II	Instructions	3

Chapter I

Introduction

When building applications, whether it's a social media app or a todo list, different types of data often need to be stored. MongoDB is one versatile option for storing data. It's an open source, non-relational database that uses a document model allowing for flexibility in the structuring of your data. It's also highly scalable, dynamic, and the leading NoSQL database.

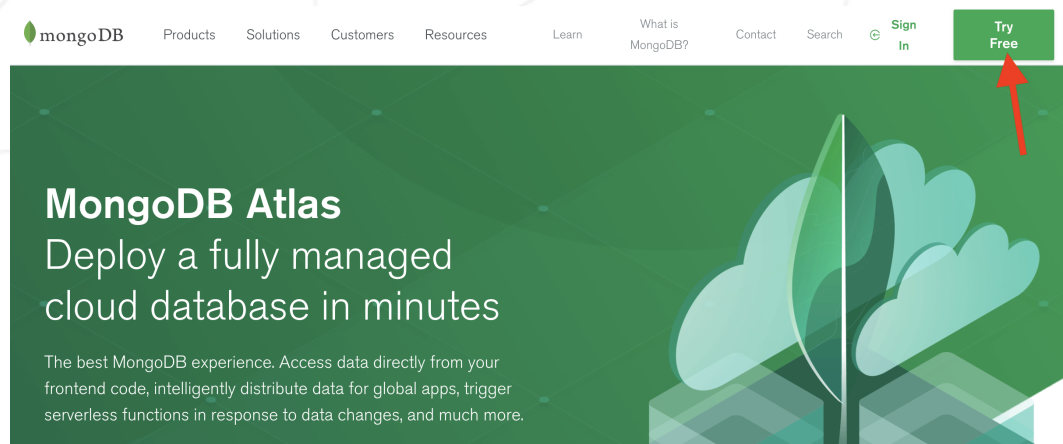
Additional Resources:

- [What is MongoDB](#)
- [NoSQL vs. SQL, what's the difference?](#)
- [Should you use MongoDB?](#)

Chapter II

Instructions

First head to <https://www.mongodb.com/>



Fill out the simple form to create an account

Cloud Server Tools

MongoDB Atlas

Global Cloud Database

Deploy, operate, and scale a MongoDB database in the cloud with just a few clicks. Fully elastic and highly available by default, MongoDB Atlas is the easiest way to try out the latest version of the database, **MongoDB 4.0**.

- Secure from the start
- Fully managed backups
- Comprehensive monitoring and customizable alerts
- Easily migrate existing deployments with minimal downtime
- Cloud-only features, like real-time triggers and global clusters

[Click here](#) to learn more about MongoDB Atlas.

Google Cloud Platform AWS Azure

No download necessary

Deploy a free cluster now

Email address

First name Last name

Password

- ✓ 8 character minimum
- ✓ One number
- ✓ One letter
- ✓ One special character

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

Get started free

Once you start creating a new cluster the only piece of the form you should change is the Cluster Name, at the bottom

CLUSTERS > CREATE NEW CLUSTER




Create New Cluster

Welcome to MongoDB Atlas! We've recommended some of our most popular options, but feel free to customize your cluster to your needs. For more information, check our [documentation](#).

Global Cluster Configuration

















Cloud Provider & Region

AWS, N. Virginia (us-east-1) ▾



Create a **free tier** cluster by selecting a region with **FREE TIER AVAILABLE** and choosing the **M0** cluster tier below.

★ recommended region ⓘ

NORTH AMERICA	EUROPE	AUSTRALIA
 N. Virginia (us-east-1) ★ FREE TIER AVAILABLE	 Stockholm (eu-north-1) ★	 Sydney (ap-southeast-2) ★
 Ohio (us-east-2) ★	 Ireland (eu-west-1) ★	ASIA
 N. California (us-west-1)	 London (eu-west-2) ★	 Tokyo (ap-northeast-1) ★
 Oregon (us-west-2) ★	 Paris (eu-west-3) ★	 Seoul (ap-northeast-2)
 Montreal (ca-central-1)	 Frankfurt (eu-central-1) ★ FREE TIER AVAILABLE	 Singapore (ap-southeast-1) ★ FREE TIER AVAILABLE
	SOUTH AMERICA	 Mumbai (ap-south-1) FREE TIER AVAILABLE
	 Sao Paulo (sa-east-1)	


Select **Multi-Region**, **Workload Isolation**, and **Replication Options** (M10+ clusters)
Increase region availability, configure tagged analytics nodes, and optimize for local service areas. [Read more](#)

☐ NO

Cluster Tier

M0 (Shared RAM, 512 MB Storage) ▾
Encrypted

Additional Settings

MongoDB 4.0, No Backup ▾

Cluster Name

One time only: once your cluster is created, you won't be able to change its name.

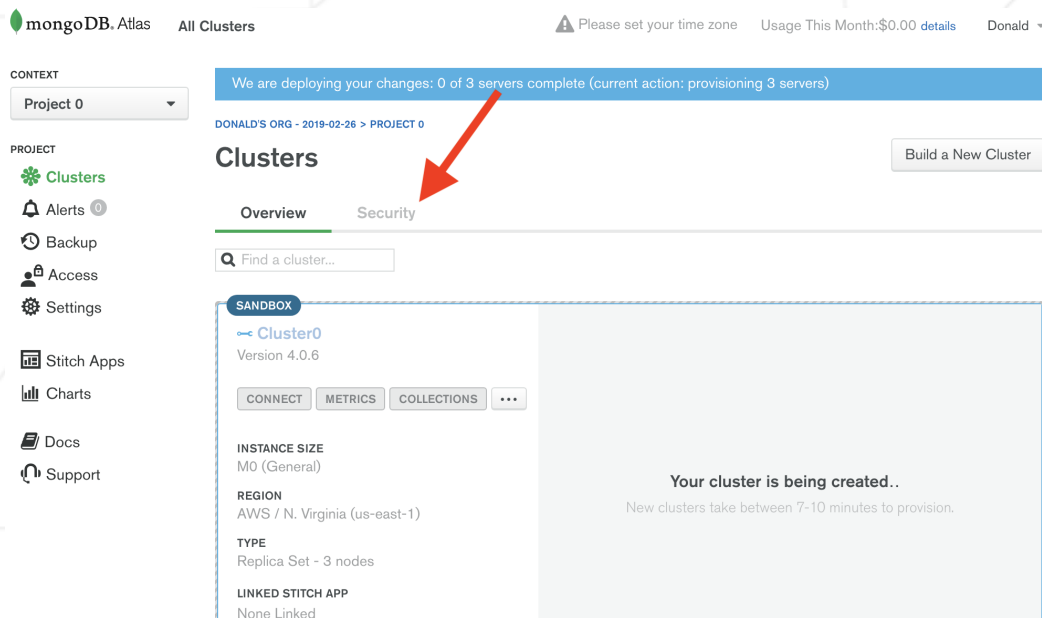
H2S

Cluster names can only contain ASCII letters, numbers, and hyphens.

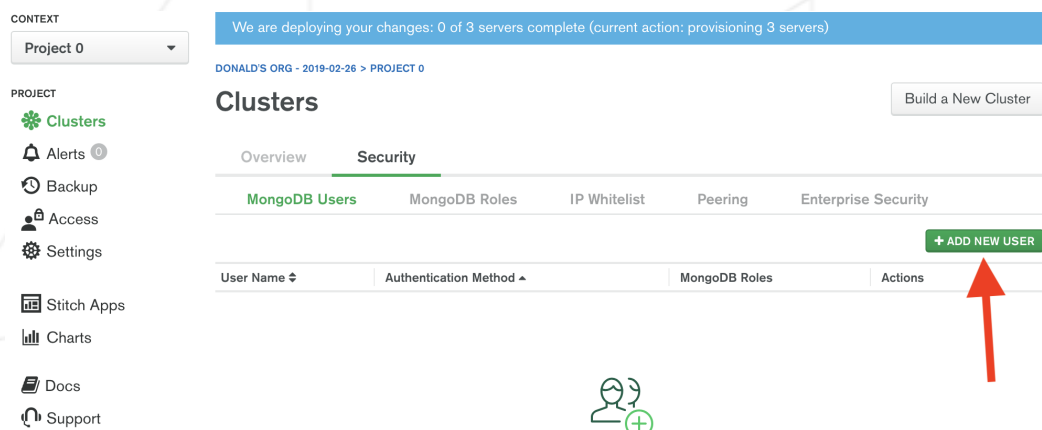
FREE Free forever! Your M0 cluster is ideal for experimenting in a limited sandbox. You can upgrade to a production cluster anytime.

Cancel Create Cluster

Now create a database user. This will allow you to connect to your cluster as a specific user. You can set up different permissions and authentication credentials for different users (for example if someone is allowed to read the data in your database but not modify it).



The screenshot shows the MongoDB Atlas interface. At the top, there's a status bar indicating deployment progress: "We are deploying your changes: 0 of 3 servers complete (current action: provisioning 3 servers)". Below this, the "Clusters" page is displayed with the "Overview" tab selected. A red arrow points to the "Security" tab in the left sidebar. The main content area shows details for "Cluster0" (Version 4.0.6) with buttons for "CONNECT", "METRICS", and "COLLECTIONS". Below these, it lists "INSTANCE SIZE" (M0 (General)), "REGION" (AWS / N. Virginia (us-east-1)), "TYPE" (Replica Set - 3 nodes), and "LINKED STITCH APP" (None Linked). A large grey box on the right states "Your cluster is being created.. New clusters take between 7-10 minutes to provision."



The screenshot shows the MongoDB Atlas interface with the "Security" tab selected. The "MongoDB Users" sub-tab is active. A red arrow points to the "+ ADD NEW USER" button. Below the button, there's a table with columns: "User Name", "Authentication Method", "MongoDB Roles", and "Actions".

User Name	Authentication Method	MongoDB Roles	Actions
-----------	-----------------------	---------------	---------



Create a database user

Set up database users, permissions, and authentication credentials in order to connect to your clusters.

[Learn more](#)

Add New User

SCRAM Authentication

SCRAM is MongoDB's default authentication method.



e.g. new-user_31

SHOW

Autogenerate Secure Password

User Privileges

Atlas admin

Read and write to
any database

Only read any
database

Select Custom
Role

[Add Default Privileges](#)

☐ Save as temporary user

Cancel

Add User

Clusters

Build a New Cluster

Overview

Security

MongoDB Users

MongoDB Roles

IP Whitelist

Peering

Enterprise Security

+ ADD NEW USER

User Name	Authentication Method	MongoDB Roles	Actions
dstolz	SCRAM	readWriteAnyDatabase@admin	<p>EDIT</p> <p>DELETE</p>

After creating a user you will need to whitelist your IP address

DONALD'S ORG - 2019-02-26 > PROJECT 0

Clusters

Build a New Cluster

Overview **Security**

MongoDB Users MongoDB Roles **IP Whitelist** Peering Enterprise Security

+ ADD IP ADDRESS

IP Address	Comment	Status	Actions
------------	---------	--------	---------

Add Whitelist Entry

Add a whitelist entry using either CIDR notation or a single IP address. [Learn more.](#)

ADD CURRENT IP ADDRESS ALLOW ACCESS FROM ANYWHERE

Whitelist Entry: 64.62.224.29

Comment: Optional comment describing this entry

☐ Save as temporary whitelist

Cancel Confirm

Once we have a user and our IP address is whitelisted we can get the address for connecting our app.

The screenshot shows the MongoDB Atlas interface. On the left is a sidebar with navigation options: Clusters, Alerts, Backup, Access, Settings, Stitch Apps, Charts, Docs, and Support. The main area is titled 'Clusters' and shows details for 'Cluster0' (Version 4.0.6). A red arrow points to the 'CONNECT' button in the cluster's header. To the right of the cluster details are performance metrics: Operations (R: 0, W: 0), Logical Size (0.0 B), and Connections (0). An 'Upgrade' button is also visible.

The 'Connect to Cluster0' dialog box is shown. It has a progress bar at the top with three steps: 'Setup connection security' (completed), 'Choose a connection method' (current), and 'Connect'. Below the progress bar, there's a section titled 'Choose a connection method' with a link to 'View documentation'. A descriptive text says: 'See methods to add data and diagnostics in the Command Line Tools shortcut from within your cluster.' There are three options listed: 'Connect with the Mongo Shell' (Mongo Shell with TLS/SSL support is required), 'Connect Your Application' (circled in red, with the text 'Get a connection string and view driver connection examples'), and 'Connect with MongoDB Compass' (Download Compass to explore, visualize, and manipulate your data). At the bottom, there are buttons for '< Setup connection security' and 'Close'.

This is the address we will need for connecting to our database.

Connect to Cluster0

✓ Setup connection security

✓ Choose a connection method

Connect

1

Copy the connection string compatible with your driver version:

Check which MongoDB versions your driver version is compatible with

See documentation on how to check the version of your driver

Short SRV connection string (For drivers compatible with MongoDB 3.6+)

Standard connection string (For drivers compatible with MongoDB 3.4+)

Copy the SRV address:

mongodb+srv://dstolz:<PASSWORD>@cluster0-4bipl.mongodb.net/test?
retryWrites=true

COPY

Note: If using the node.js driver make sure you specify the name of your database after making your connection ([example](#)), otherwise your collections will all appear in a database called "test". Alternatively you can replace "test" in the connection string with a different default database name

2

Replace **PASSWORD** with the password for the *dstolz* user

Replace **PASSWORD** with the password for the *dstolz* user. Please note that any special characters in your password (% , @ , and :) will need to be URL encoded.

View your list of users or reset a password

3

View driver connection examples

Failed connections can result from old versions of drivers. Check your driver version and view connection examples for your platform:

Java

Python

Ruby

Node

View all MongoDB Driver Connection Examples

◀ Choose a connection method

Close

That's all for this project, but we will cover more MongoDB in the NodeJS course where you'll be using MongoDB to store your todo list items.