

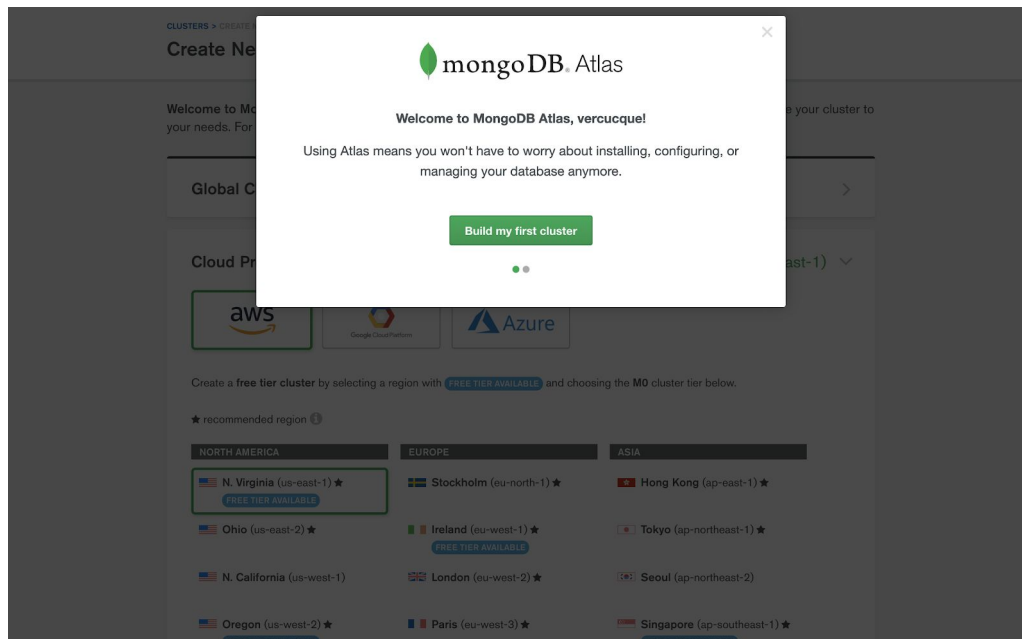
SOMMAIRE

- I. Create Cluster
- II. Schéma
- III. REST API and Node.js

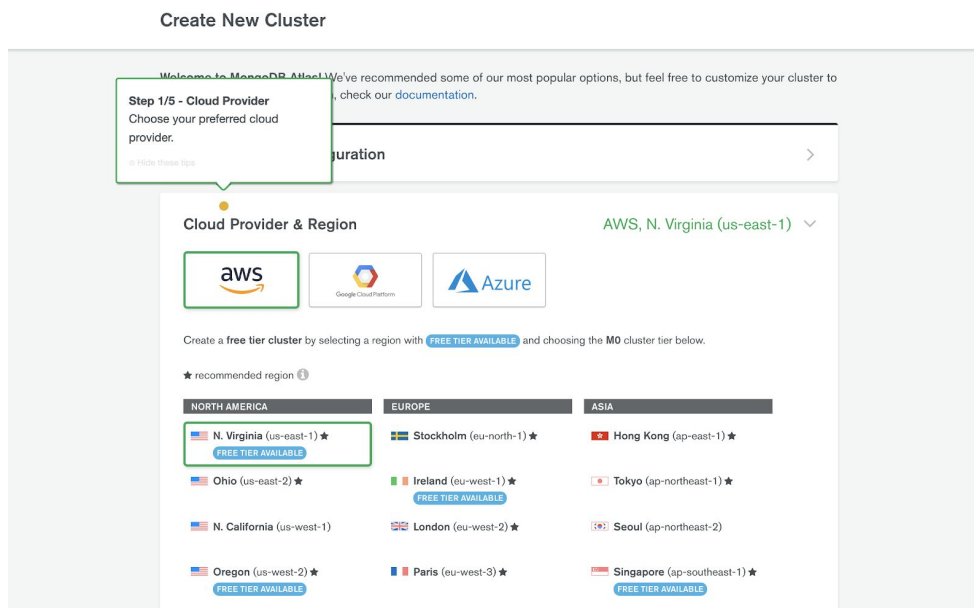
I. Create new MongoDB Cluster

To start, login to MongoDB Atlas (<https://cloud.mongodb.com>) or register.

Go to create new cluster (or build my first cluster) :



The first step in the deployment process will be to choose a cloud provider and a region.



Choosing one of these cloud providers does not mean that you also need an account for the cloud provider. This is where your cluster will be hosted under the control of MongoDB. After determining which cloud provider you want to use, you must define its specifications. For our case, select the free configuration at 512 MB.

Cluster Tier M0 (Shared RAM, 512 MB Storage) Encrypted ▼

Base hourly rate is for a MongoDB replica set with 3 data bearing servers.

Shared Clusters ⓘ

M0	Shared RAM	512 MB Storage	Shared VCPUs	FREE
M2	Shared RAM	2 GB Storage	Shared VCPUs	from \$0.012/hr
M5	Shared RAM	5 GB Storage	Shared VCPUs	from \$0.035/hr

Dedicated Development Clusters ⓘ

M10	2 GB RAM	10 GB Storage	0.2 vCPUs	from \$0.08/hr
M20	4 GB RAM	20 GB Storage	0.4 vCPUs	from \$0.20/hr

Dedicated Production Clusters ⓘ

M30	8 GB RAM	40 GB Storage	2 vCPUs	from \$0.54/hr
> M40	16 GB RAM	80 GB Storage	4 vCPUs	from \$1.04/hr
> M50	32 GB RAM	160 GB Storage	8 vCPUs	from \$2.00/hr
> M60	64 GB RAM	320 GB Storage	16 vCPUs	from \$3.95/hr
M80 <small>LOW CPU</small>	122 GB RAM	750 GB Storage	16 vCPUs	from \$5.61/hr
M100	160 GB RAM	1000 GB Storage	40 vCPUs	from \$9.16/hr
> M200	256 GB RAM	1500 GB Storage	64 vCPUs	from \$14.59/hr
M400 <small>LOW CPU</small>	488 GB RAM	3000 GB Storage	64 vCPUs	from \$22.40/hr

PREVIOUS: CLOUD PROVIDER & REGION NEXT: ADDITIONAL SETTINGS

After choosing your cluster specifications, you will be prompted to select the additional features you want. (do not select anything for our case)

Advanced Settings

Shard your cluster (M30 and up) NO

Sharding supports high throughput and large datasets, and can be increased as data requirements grow. Sharded clusters cannot be converted to replica sets.

Enable Business Intelligence Connector (M10 and up) NO

The BI Connector allows you to visualize your data on relational business intelligence tools (e.g. Tableau, MicroStrategy, Qlik).

Encryption using your Key Management (M10 and up) NO

By default, all MongoDB Atlas cluster storage and backups are encrypted. To configure an additional layer of encrypted AWS KMS, Azure Key Vault, or Cloud Provider Snapshot backups.

Step 4/5 - Name your cluster
Give your cluster a name

Hide these tips

Cluster Name ClusterMDS ▼

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

ClusterMDS

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

Additional features in your cluster include things like backups and data sharing.

The final step in the deployment process is to name your cluster. Here we choose the name: ClusterMDS.

Then click Create Cluster.

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Enable Business Intelligence Connector (M10 and up) ☐ NO

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Encryption using your Key Management (M10 and up) ☐ NO

By default, all MongoDB Atlas cluster storage and backups are encrypted. You can also configure an additional layer of encryption using a supported AWS KMS, Azure Key Vault, or Google Cloud Provider Snapshot backups.

Step 4/5 - Name your cluster
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ClusterMDS

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

Creating your cluster after the backup may take a few minutes.

mongoDB Atlas All Clusters

Please set your time zone Usage This Month: \$0.00 details verucouque

CONTEXT Project 0 We are deploying your changes: 0 of 3 servers complete (current action: provisioning 3 servers)

VERUCOUQUES ORG - 2019-06-18 > PROJECT 0

Clusters Build a New Cluster

Find a cluster...

SANDBOX ClusterMDS Version 4.0.10

CONNECT METRICS COLLECTIONS ...

INSTANCE SIZE M0 Sandbox (General)

REGION AWS / N. Virginia (us-east-1)

Your cluster is being created.
New clusters take between 7-10 minutes to provision.

Connect to Atlas

Follow this checklist to get started.

20%

Build your first cluster

Create your first database user

Whitelist your IP address

Load Sample Data (Optional)

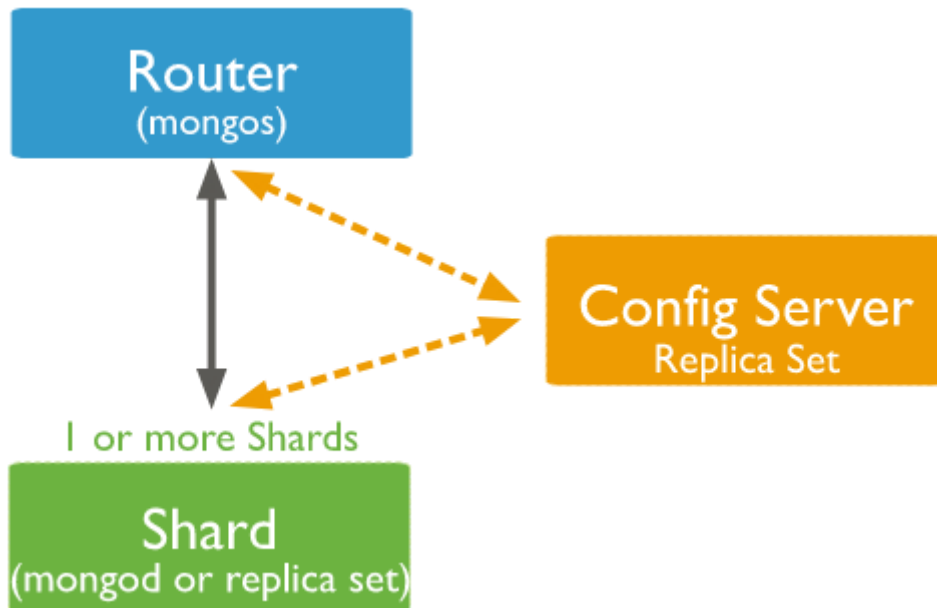
Connect to your cluster

No thanks

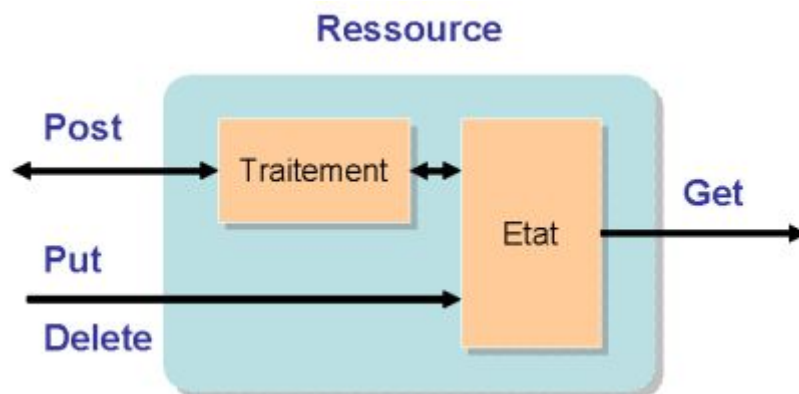
Creation completed.

II. Schématisation :

-Schéma du cluster MongoDB :



-Schéma l'architecture de l'API REST :



III. Application REST API avec Node.js :

a) Assuming you already have Node.js installed on your computer, we can create a project from the command line by doing the following:

- `npm init -y`

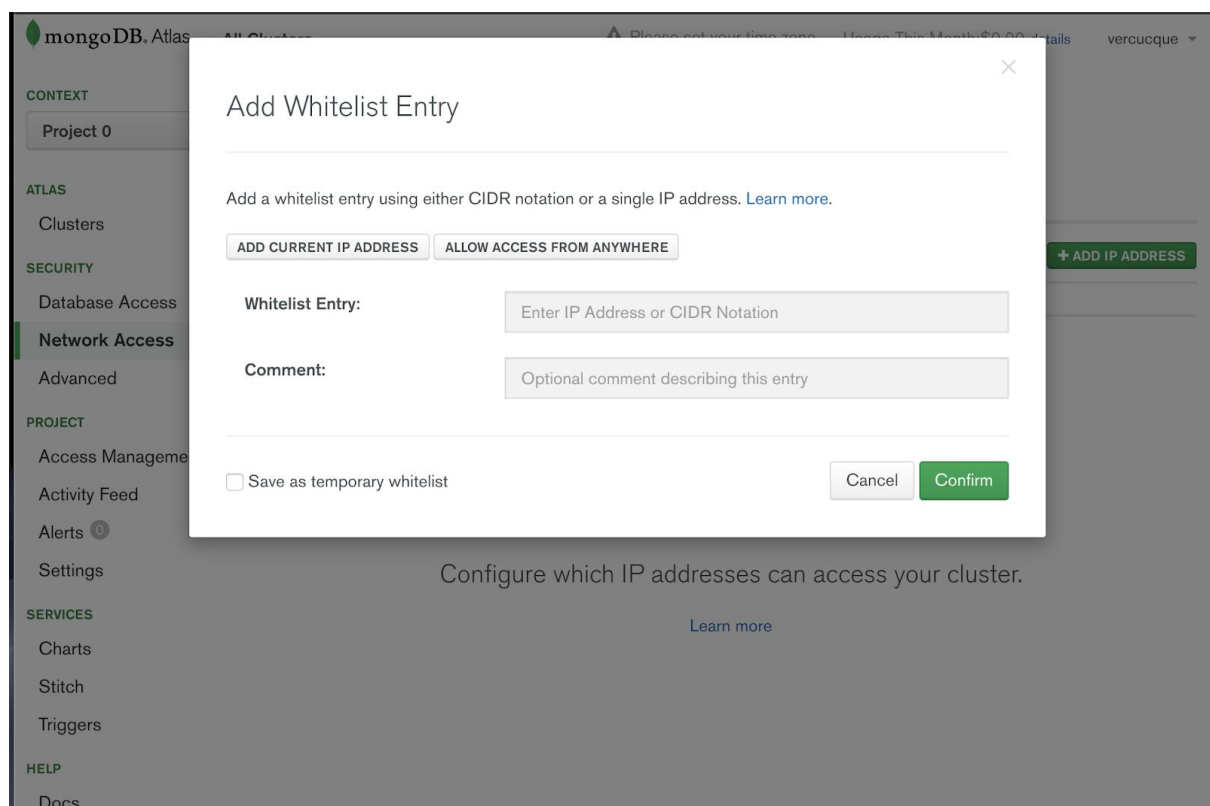
The command above will create a `package.json` file. All our code will exist in a different file called `app.js`, so be sure to create it manually.

There are not many project dependencies to develop an API with MongoDB and Express. To download it, run the following:

- `npm install express --save`
- `npm install body-parser --save`
- `npm install nodemon --save`
- `npm install mongoose --save`
- `npm install mongodb --save`

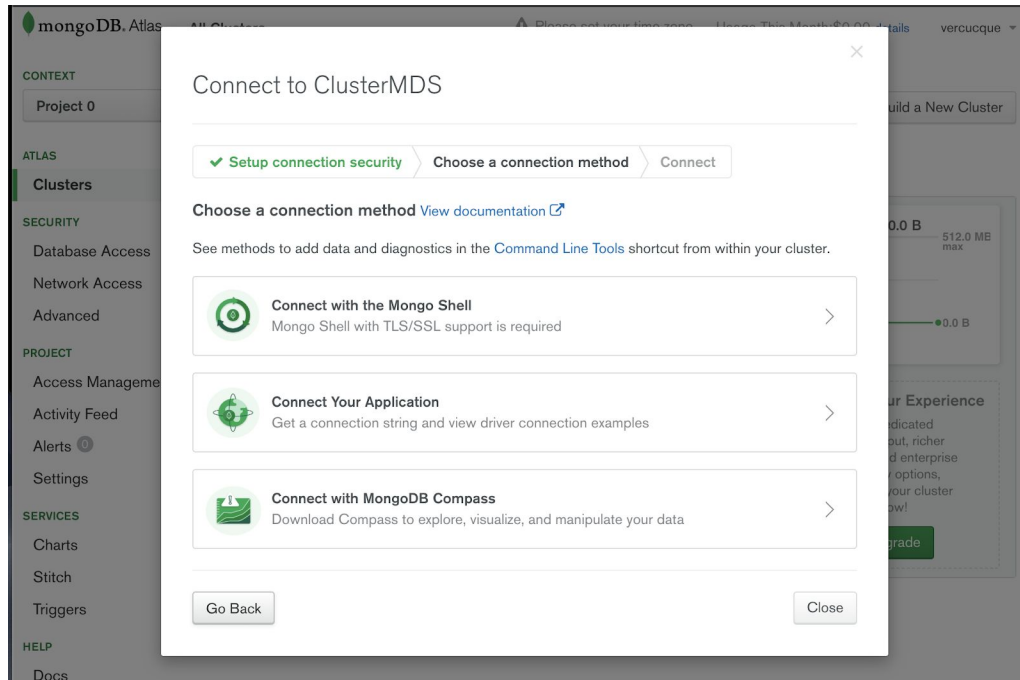
b) Configure Connect cluster with “Allow access from anywhere”

On Atlas, go to the tab : Network Access → Add Ip Address → Allow access from anywhere → confirm

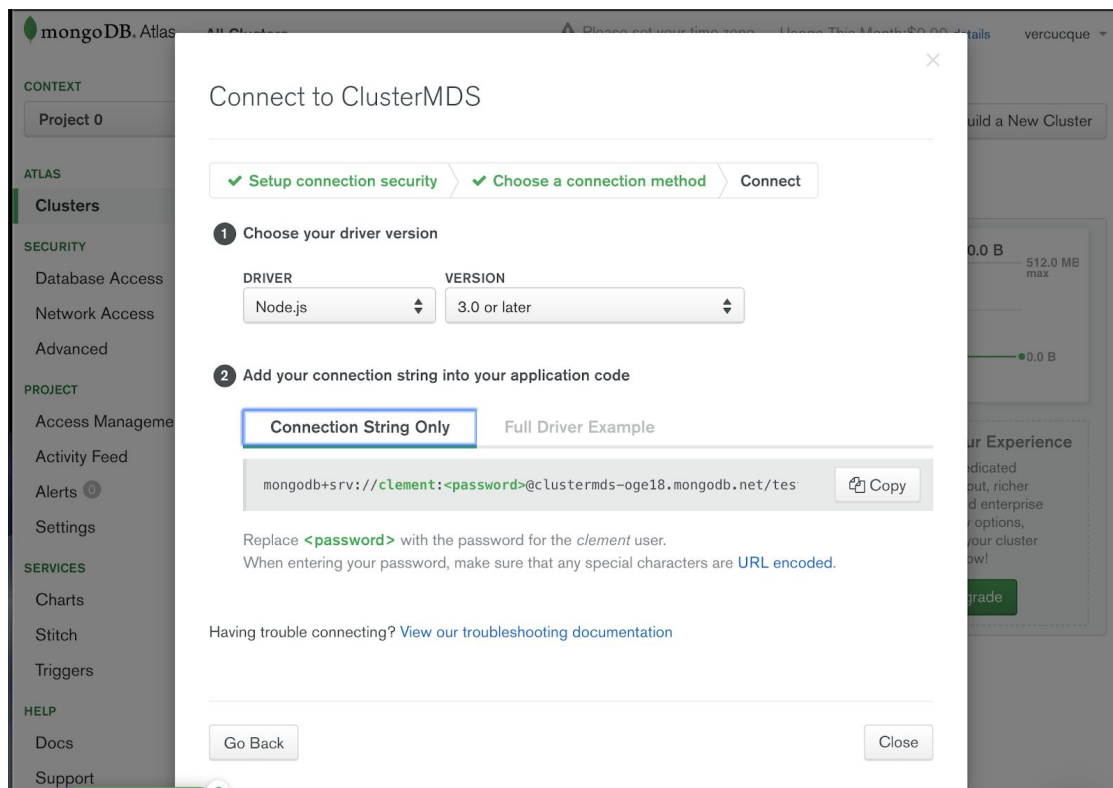


Then return to your cluster.

Click on connect → Connect your application.



Select the right driver and version (Node.js v3.0 or later).



Copy the cluster link and put it in the db.js file instead of the "YourClusterURL".

Replace "<password>" with the password of the user clement. (replace clement by the right user)