

MongoDB Atlas-Creating a Cluster

This lesson introduces MongoDB Atlas and shows how to create a cluster step by step.

WE'LL COVER THE FOLLOWING ^

- MongoDB Atlas: Definition
- Create a Cluster

MongoDB Atlas: Definition

MongoDB Atlas is Mongo's response to our advanced world. In its essence, MongoDB Atlas is a **Database as a Service (DaaS)**, i.e., MongoDB is hosted on the cloud.

The general idea is that the developer will no longer need to take care of database management and have an operating and distributed database cluster. Also, with Mongo AtlasDB, you can use all of the MongoDB features inside of serverless architecture.

Create a Cluster

The first step on your MongoDB Atlas journey would be to create an account on [MongoDB cloud](#) service. Once you do that, the cluster creation dialogue will be automatically opened.

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

Select **Multi-Region**, **Workload Isolation**, and **Replication Options** (M10+ clusters)

☐ NO

Increase region availability, configure tagged analytics nodes, and optimize for local service areas. [Read more](#)

Cluster Tier

M30 (8 GB RAM, 40 GB Storage) >
120 IOPS, Encrypted, Auto-expand Storage

Additional Settings

MongoDB 4.0, Backup >
Continuous Backup


Cluster Name

Cluster0 >

We were very inspired when we created our account, so we named our first cluster FirstCluster. Also, since the guys at MongoDB were cool, and gave us some free coupons, I created the cluster on one of the servers in Frankfurt for 0.09\$ per hour.

MongoDB allows you to create a Free Tier cluster if you want to test out MongoDB Atlas. You can deploy only one Free Tier cluster per Atlas project.

Dedicated Clusters for development environments and low-traffic applications

Tier	RAM	Storage	vCPU	Base Price
✓ M10	2 GB	10 GB	1 vCPU	from \$0.08/hr
Storage	10 GB is included in the base price			
	10 GB  100 GB			<input type="text" value="20"/> GB
	<input checked="" type="checkbox"/> Auto-expand storage when disk usage reaches 90% ⓘ			
IOPS	100 IOPS			
Additional Info	350 max connections Low to Moderate network performance			
M20	4 GB	20 GB	2 vCPUs	from \$0.20/hr

After that, you will be allowed to change additional settings such as selecting the MongoDB version, turning on back up, cluster name, etc. If you need to know more about clusters, nodes, and configuring MongoDB check out one of the [previous](#) chapters.

Additional Settings

MongoDB 4.0, Backup 
Continuous Backup

Select a Version

MongoDB 4.0 

All clusters launch with the WiredTiger™ storage engine.

Turn on Backup (M10 and up)

YES ☒

You can easily enable or disable backups at any time after deploying.

Select a version

[Compare Backup Solutions](#)

Continuous

Point-in-time data recovery and granular data restores

\$1.50 - \$2.50/GB per month

Price depends on *database size* and *backup retention schedule*.

Cloud Provider Snapshots

Localized backup storage with snapshot image restores

\$0.14/GB month

Price depends on *region*, *snapshot size*, and *number of snapshots*.

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

Enable this feature to allow your BI Connector (M10 and up) to connect to relational business intelligence tools (e.g. Tableau, MicroStrategy, Qlik).

BI Connector **\$1.59/day** for sustained monthly usage
pricing for M10 or **\$4.15/day**, up to \$48.69/month maximum

Encryption using your Key Management (M10 and up)

☐ NO

By default, all MongoDB Atlas cluster storage and backups are encrypted at rest. Enable this feature to configure an [additional layer of encryption](#) using your configured AWS KMS, Azure Key Vault, or Google Cloud KMS.

This feature supports only Cloud Provider Snapshot backups.

More Configuration Options

Set Olog Size

Set the maximum size of this cluster's oplog.
[View documentation](#)

MB 15,360 MB available

Set Minimum TLS Protocol Version

Configure this cluster to only accept connections using selected protocols below. [View documentation](#)

TLS 1.1 and above

Enforce Index Key Limit

Documents can only be updated or inserted if, for all indexed fields, the corresponding index entries do not exceed 1024 bytes.

If disabled (**failIndexKeyTooLong=false**), documents with indexed fields exceeding the index limit will be inserted or modified successfully, but not indexed. [View documentation](#)

☒ YES

Require Indexes for All Queries

Do not run queries that require a collection scan; return an error instead. [View documentation](#)

☐ NO

Allow Server-Side JavaScript

Operations that perform server-side execution of JavaScript are allowed (e.g. **\$where** query operator, **mapReduce**, etc.).
[View documentation](#)

☒ YES

Cluster Name

FirstCluster >

Finally, click the *Create Cluster* option at the end of the page to deploy your first Atlas cluster.

Cluster Tier	M30 (8 GB RAM, 40 GB Storage) > 120 IOPS, Encrypted, Auto-expand Storage
Additional Settings	MongoDB 4.0, Backup > Continuous Backup
Cluster Name	Cluster0 >

\$0.54/hour

Pay-as-you-go! You will be billed hourly and can terminate your cluster anytime. Excludes variable [data transfer](#), [backup](#), and taxes.

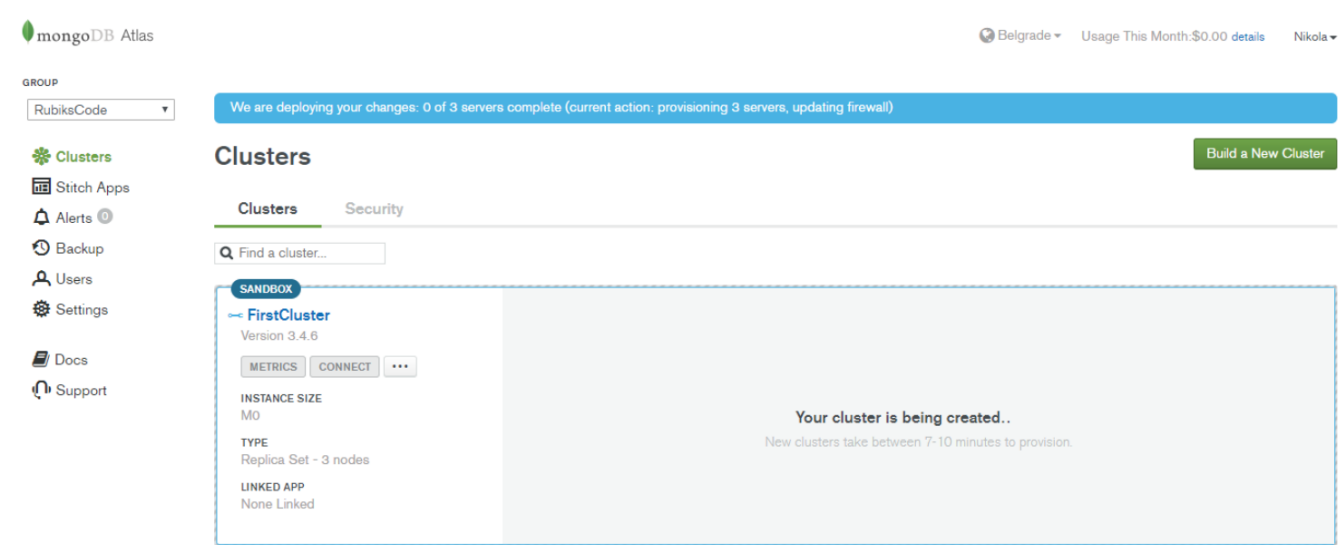
Cancel

Create Cluster

If you did not choose the free cluster option then clicking on *Create Cluster*

will open up billing information for you to fill out before your cluster is created.

And then voila, the Atlas cluster is created:



Now that your cluster has been created, in the next lesson, you'll learn how to connect to MongoShell using this cluster.