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¿Qué es Mongo DB?

MongoDB es una base de datos de documentos que ofrece una gran escalabilidad y flexibilidad, y un modelo de consultas e indexación avanzado.

¿Cuándo usar Mongo DB?

- Almacena datos en documentos flexibles similares a JSON, por lo que los campos pueden variar entre documentos y la estructura de datos puede cambiarse con el tiempo
- El modelo de documento se asigna a los objetos en el código de su aplicación para facilitar el trabajo con los datos
- Las consultas ad hoc, la indexación y la agregación en tiempo real ofrecen maneras potentes de acceder a los datos y analizarlos
- Es una base de datos distribuida en su núcleo, por lo que la alta disponibilidad, la escalabilidad horizontal y la distribución geográfica están integradas y son fáciles de usar
- MongoDB es de uso gratuito.

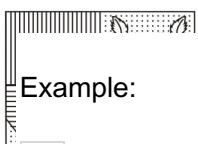


Document Structure

The values in a document can be any data type, including strings, objects, arrays, booleans, nulls, dates, ObjectIds, and more. Here's the syntax for a MongoDB document, followed by an example:

Syntax:

```
{  
  "key": value,  
  "key": value,  
  "key" : value  
}
```



Example:

```
{  
  "_id": 1,  
  "name": "AC3 Phone",  
  "colors" : ["black", "silver"],  
  "price" : 200,  
  "available" : true  
}
```

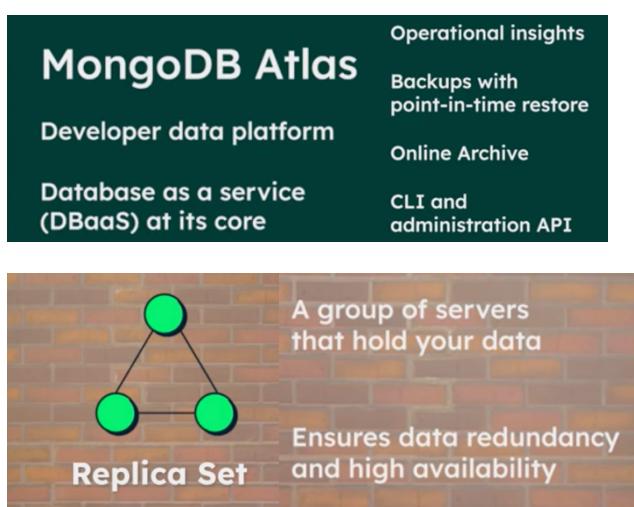
Para sintetizar la estructura de MongoDB se define, de la siguiente manera:



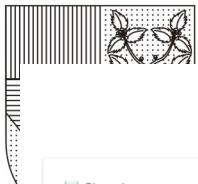
Cada documento es almacenado y visualizado:

Displayed in JSON
Stored in BSON

Comparativa de Mongo DB vs otras BD documentales, da clic [aquí](#) Soraya y Emeraldalda



Tenemos dos escenarios de creación: Serverless y Clusterizados. Soportada por las tres nubes más importantes del mundo AWS, Azure y Google Cloud



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MongoDB Atlas
Fully managed, global cloud database on AWS, Azure, and GCP

The landing page for MongoDB Atlas highlights three deployment models:

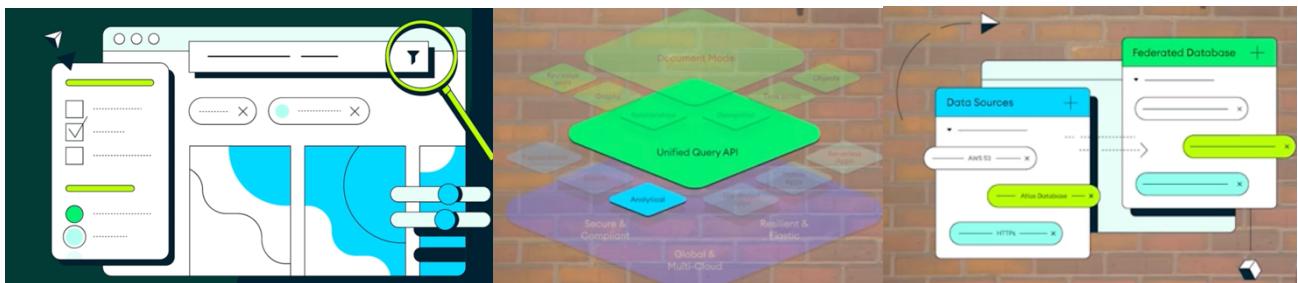
- Shared**: For learning and exploring MongoDB in a cloud environment. Basic configuration options. Includes:
 - 512MB to 5GB of storage
 - Shared RAM
 - Upgrade to dedicated clusters for full functionality
 - No credit card required to start
- Serverless**: For serverless applications with variable or infrequent traffic. Minimal configuration required. Includes:
 - Up to 1TB of storage
 - Resources scale seamlessly to meet your workload
 - Pay only for the operations you run
 - Always-on security and backups
- Dedicated**: For production applications with sophisticated workload requirements. Advanced configuration controls. Includes:
 - 10GB to 4TB of storage
 - 2GB to 768GB RAM
 - Network isolation and fine-grained access controls
 - Multi-region and multi-cloud options available

Servicios:



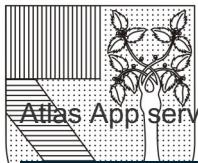
[Atlas Search](#) [Atlas Data Federation](#) [Atlas Charts](#) [Atlas Data Lake](#) [Atlas App Services](#)

Mongo Search, Query and aggregation services



Dashboard tool (Atlas charts)





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Atlas App services (APIs)



1. Register at: <https://www.mongodb.com/>

Event MongoDB is going on a world tour! Gather your team and head to your nearest MongoDB.local. Learn more >

MongoDB Products Solutions Resources Company Pricing

All Clusters Get Help Juan Carlos

Project Organization... Access Manager Billing

Organization 1982038

Deployments

View All Organizations

Deployments

Deployments

Services

Triggers

Data API

Data Federation

Search

Security

Backup

Database Access

Network Access

Advanced

New On Atlas

Dot

Create a database

Choose your cloud provider, region, and specs.

Build a Database

Once your database is up and running, live migrate on existing MongoDB database into Atlas with our Live Migration Service.

Organizations

Group and define users and teams

Grant access to projects

Projects

Define and organize resources

Create separate projects for development, testing, and production

¿Qué función tienen las organizaciones y los proyectos dentro de MongoDB?



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Deploy your database

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 <small>For production applications with sophisticated workload requirements.</small> STORAGE 10 GB RAM 2 GB vCPU 2 vCPUs	SERVERLESS \$0.10/1M reads <small>For application development and testing, or workloads with variable traffic.</small> STORAGE Up to 1TB RAM Auto-scale vCPU Auto-scale	M0 FREE <small>For learning and exploring MongoDB in a cloud environment.</small> STORAGE 512 MB RAM Shared vCPU Shared
--	---	---

Provider: **AWS** [Google Cloud](#) [Azure](#)

Region: ★ Recommended region [?](#)
N. Virginia (us-east-1) ★

FREE

[Create](#)

[Access Advanced Configuration](#)

Ahora configuraremos el usuario “admin” de conexión, así como las IPs a las que habilitaremos acceso al ambiente:

Security Quickstart

To access data stored in Atlas, you'll need to create users and set up network security controls. [Learn more about security setup](#)

How would you like to authenticate your connection?

Your first user will have permission to read and write any data in your project.

[Username and Password](#) [Certificate](#)

Create a database user using a username and password. Users will be given the *read and write to any database privilege* by default. You can update these permissions and/or create additional users later. Ensure these credentials are different to your MongoDB Cloud username and password. You can manage existing users via the [Database Access Page](#).

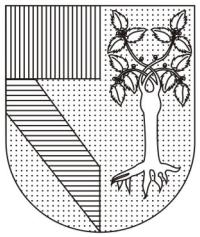
Username: jcagarciaAdmin
Password: [Autogenerate Secure Password](#) [Copy](#)

[Create User](#)

This password contains special characters which will be URL-encoded.

Username	Authentication Type
jcagarcia	Password EDIT REMOVE

User: jcagarciaAdmin
Pwd: pfkUDHhzjxJTa1F



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✓ Where would you like to connect from?

Enable access for any network(s) that need to read and write data to your cluster.

My Local Environment

Use this to add network IP addresses to the IP Access List. This can be modified at any time.

Cloud Environment

Use this to configure network access between Atlas and your cloud or on-premise environment. Specifically, set up IP Access Lists, Network Peering, and Private Endpoints.

Add entries to your IP Access List

Only on IP address you add to your Access List will be able to connect to your project's clusters. You can manage existing IP entries via the [Network Access Page](#).

IP Address	Description
<input type="text" value="Enter IP Address"/>	<input type="text" value="Enter description"/>
<input type="button" value="Add My Current IP Address"/>	

This IP address has already been added.

IP Access List	Description	EDIT	REMOVE
170.81.141.194/32	UP	<input type="button" value="EDIT"/>	<input type="button" value="REMOVE"/>
177.249.163.36/32	Home-IP	<input type="button" value="EDIT"/>	<input type="button" value="REMOVE"/>

Atlas Organization... Access Manager Billing

All Clusters Get Help Juan Carlos

Project 0 Data Services App Services Charts

DEPLOYMENT ORGANIZATION 1982038 > PROJECT 0

Database Deployments PREVIEW + Create

Find a database deployment...

ClusterJCGS2023 Connect View Monitoring Browse Collections ...

FREE SHARED

ClusterJCGS2023 Loading...

VERSION	REGION	CLUSTER TIER	TYPE	BACKUPS	LINKED APP SERVICES	ATLAS SEARCH
5.0.15	AWS / N. Virginia (us-east-1)	M0 Sandbox (General)	Replica Set - 3 nodes	Inactive	None Linked	Create Index

New On Atlas Goto

ORGANIZATION 1982038 > PROJECT 0

Database Deployments

Find a database deployment...

ClusterJCGS2023 Connect View Monitoring Browse Collections ...

...

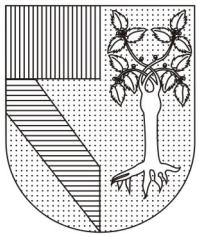
Edit Configuration
Command Line Tools
Load Sample Dataset
Terminate

Load Sample Dataset

We've created a sample dataset to help you test features on ClusterJCGS2023.

Sample Dataset
Size: ~350 MB





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Hagamos ahora una nueva DB, usando:

Atlas Data Explorer
Interact and manage data from Atlas UI

DEPLOYMENT

Database PREVIEW

SERVICES

Triggers

Data API

Data Federation

Search

SECURITY

Quickstart

Backup

Database Access

Network Access

Advanced

ORGANIZATION 1982038 > PROJECT 0

Database Deployments

Find a database deployment...

+ Create

ClusterJCGS2023 Connect View Monitoring Browse Collections ...

Enhance Your Experience

R: 0 W: 0 Last 6 hours 100.0/s

Connections: 0 Last 6 hours 100.0

In: 0.0 B/s Out: 0.0 B/s Last 6 hours 100.0 B/s

Data Size: 335.6 MB Last 17 hours 512.0 MB

VERSION REGION CLUSTER TIER TYPE BACKUPS LINKED APP SERVICES ATLAS SEARCH

5.0.15 AWS / N. Virginia (us-east-1) M0 Sandbox (General) Replica Set - 3 nodes Inactive None Linked Create Index

ORGANIZATION 1982038 > PROJECT 0 > DATABASES

ClusterJCGS2023

VERSION: 5.0.15 REGION: AWS N. Virginia (us-east-1)

Overview Real Time Metrics Collections Search Profiler Performance Advisor Online Archive Cmd Line Tools

DATABASES: 10 COLLECTIONS: 23

+ Create Database

Search Namespaces

blog

posts

sample_airbnb

sample_analytics

sample_geospatial

blog.posts

STORAGE SIZE: 4KB LOGICAL DATA SIZE: 0B TOTAL DOCUMENTS: 0 INDEXES TOTAL SIZE: 4KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

Filter Type a query: { field: 'value' } Reset Apply More Options

QUERY RESULTS: 0

INSERT DOCUMENT

Create Database

Database name: blog

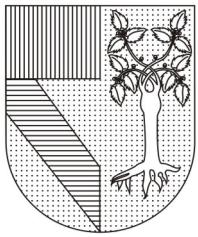
Collection name: posts

Additional Preferences

Capped Collection

Time Series Collection

Cancel Create



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ORGANIZATION 1982038 > PROJECT 0 > DATABASES

ClusterJCGS2023

Overview Real Time Metrics Collections Search Profiler Performance Advisor Online Archive Cmd Line Tools

DATABASES: 10 COLLECTIONS: 23

+ Create Database Search Namespaces

blog

LOGICAL DATA SIZE: 0B STORAGE SIZE: 4KB INDEX SIZE: 4KB TOTAL COLLECTIONS: 1

Collection Name Documents Logical Data Size Avg Document Size Storage Size Indexes Index Size Avg Index Size

Collection Name	Documents	Logical Data Size	Avg Document Size	Storage Size	Indexes	Index Size	Avg Index Size
posts	0	0B	0B	4KB	1	4KB	4KB

CREATE COLLECTION

+ Create Collection

Database name: blog
Collection name: comments
Additional Preferences: Copped Collection, Time Series Collection

Create

ORGANIZATION 1982038 > PROJECT 0 > DATABASES

ClusterJCGS2023

Overview Real Time Metrics Collections Search Profiler Performance Advisor Online Archive Cmd Line Tools

DATABASES: 10 COLLECTIONS: 24

+ Create Database Search Namespaces

blog

comments

posts

sample_airbnb

blog.posts

STORAGE SIZE: 4KB LOGICAL DATA SIZE: 0B TOTAL DOCUMENTS: 0 INDEXES TOTAL SIZE: 4KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

Filter Type a query: { field: 'value' } Reset Apply More Options

INSERT DOCUMENT

Agregemos campos a la colección y también podemos personalizar el tipo de dato:

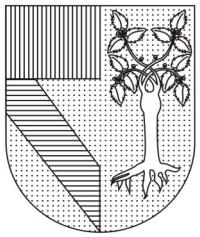
Insert Document

To Collection posts

1 _id: 64353d15c101c9717d9485c2
2 "name": "JC"
3 age: 31

Array
Binary
Boolean
Code
Date
Decimal128
Double
Int32
Int64
MaxKey
MinKey
Null
Object
ObjectId
BSONRegExp
String
BSONSymbol
Timestamp
Undefined

QUERY RESULTS: 0



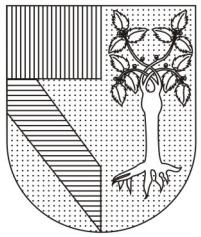
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Connect to MongoDB data base:

The screenshot shows the MongoDB Atlas interface for a database deployment named "ClusterJCGS2023". The left sidebar includes sections for Deployment (Database, Data Lake, Services, Triggers, Data API, Data Federation, Search, Security, Quickstart, Backup, Database Access, Network Access, Advanced), and "New On Atlas". The main content area displays cluster metrics: R: 0, W: 0 (Last 6 hours), Connections: 0 (Lost 6 hours), In: 0.0 B/s, Out: 0.0 B/s (Lost 4 hours), and Data Size: 335.6 MB (Lost 2 days). It also lists cluster details: Version 5.0.15, Region AWS / N. Virginia (us-east-1), Cluster Tier M0 Sandbox (General), Type Replica Set - 3 nodes, Backups Inactive, Linked App Services None Linked, and Atlas Search Create Index.

This screenshot is identical to the one above, showing the MongoDB Atlas interface for the same database deployment "ClusterJCGS2023". The cluster status is "All Good". The metrics and configuration details are identical to the first screenshot.



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Connect to ClusterJCGS2023

[Setup connection security](#) [Choose a connection method](#) [Connect](#)

Choose a connection method [View documentation](#)

Get your pre-formatted connection string by selecting your tool below.

- [!\[\]\(67498f4429b07796de483219b69f0741_img.jpg\) Connect with the MongoDB Shell
Interact with your cluster using MongoDB's interactive Javascript interface](#)
- [!\[\]\(866da5c4ddff265c03bedbd993418151_img.jpg\) Connect your application
Connect your application to your cluster using MongoDB's native drivers](#)
- [!\[\]\(9bc3553387f54bf288027fcd98836da8_img.jpg\) Connect using MongoDB Compass
Explore, modify, and visualize your data with MongoDB's GUI](#)
- [!\[\]\(947dc235db10e7ddaad653d07469d613_img.jpg\) Connect using VS Code
Connect to a MongoDB host in Visual Studio Code](#)

[Go Back](#)

[Close](#)