



6 Atlas en Producción

COPE
networks

 **mongoDB**®

Oplog

<https://www.mongodb.com/docs/manual/core/replica-set-oplog/>

Log de operaciones

El oplog es una colección (base de datos local) en la que se registran las operaciones en los cluster replica set, siendo la fuente de sincronización de los secundarios.

- Es una colección limitada en tamaño (capped) y que no se puede modificar.
- Todas las operaciones registradas en el oplog son convertidas en idempotentes.



Oplog

El tamaño es establecido por MongoDB al crear el cluster y los valores serán:

- 5% espacio disponible en disco con min 990MB y max 50GB (ventana de operaciones de entre 1 y 2 días)

Puede haber 3 escenarios en los que sea aconsejable aumentar el tamaño predeterminado:

- Actualizaciones a múltiples documentos al mismo tiempo.
- Al mismo tiempo muchas eliminaciones e inserciones.
- Múltiples actualizaciones que no modifican tamaño de las colecciones pero si generan muchos docs en el oplog.

Oplog

Oplog status

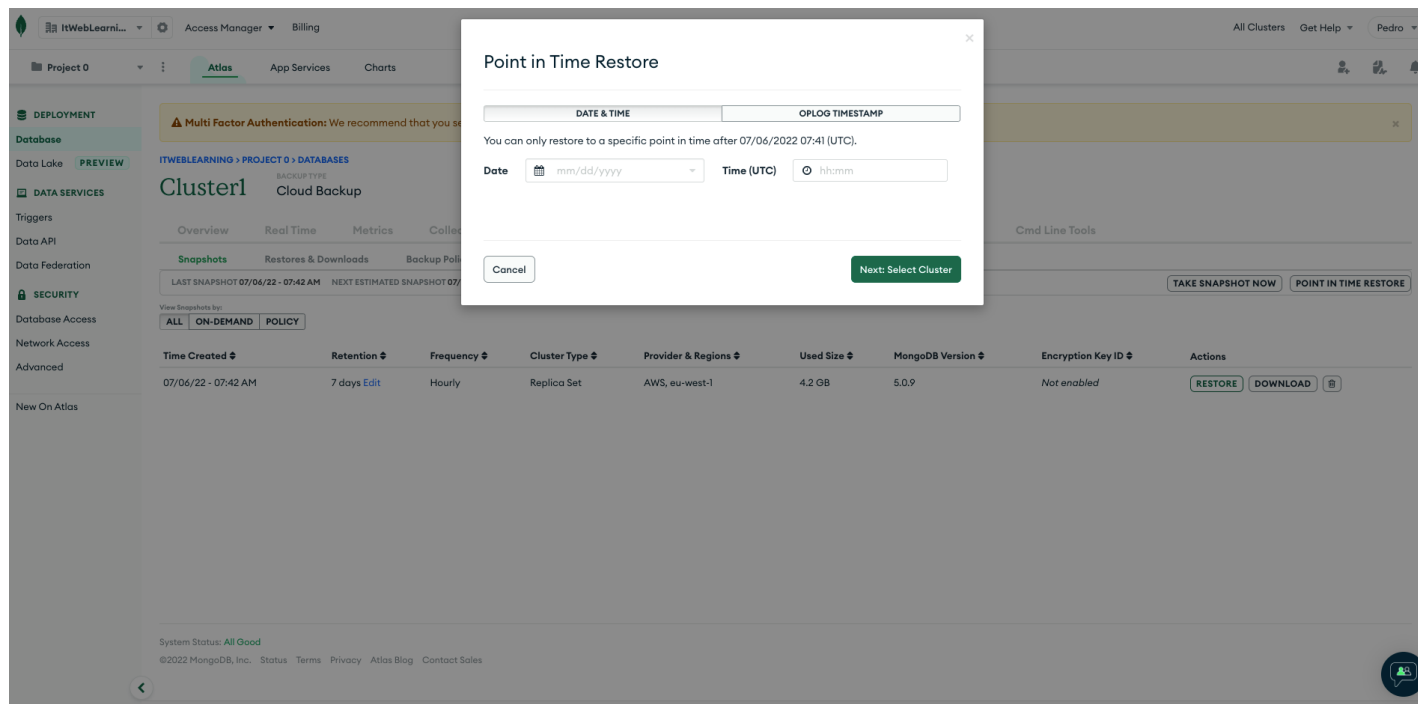
`rs.printReplicationInfo()`

Cambiar el tamaño

<https://www.mongodb.com/docs/manual/tutorial/change-oplog-size/>

Puntos de restauración

Se pueden seleccionar por fecha o marca de tiempo en el oplog



Explain plan

<https://www.mongodb.com/docs/manual/tutorial/analyze-query-plan/>

The screenshot displays the MongoDB Compass web interface. On the left sidebar, the 'sample_mflix' database is selected, and the 'movies' collection is highlighted. The main panel shows the 'Explain Plan' tab for the 'sample_mflix.movies' collection. The query filter is `{year: {$gte: 2000}, "imdb.rating": {$gte: 7}}`. The query options include `PROJECT: {field: 0}`, `SORT: {year: -1, "imdb.rating": -1}`, `MAX TIME MS: 60000`, `COLLATION: {locale: 'simple'}`, `SKIP: 0`, and `LIMIT: 0`. The 'Query Performance Summary' section provides the following details:

- Documents Returned: 5172
- Index Keys Examined: 5195
- Documents Examined: 5172
- Actual Query Execution Time (ms): 23
- Sorted in Memory: no
- Query used the following index: year, imdb.rating

A 'FETCH' summary box at the bottom shows 'nReturned: 5172' and 'Execution Time: 6 ms'. The interface also includes buttons for 'EXPLAIN', 'RESET', and 'VIEW DETAILS AS' (with options for 'VISUAL TREE' and 'RAW JSON').

Queries sorted in memory

Para evitar el uso de ordenación en memoria, el sentido de ordenación de los campos debe ser igual o de sentido inverso que el orden de los índices.

```
db.runners.createIndex({surname1: 1, age: -1})
```

```
db.runners.find({surname1: 'Nadal'}).sort({surname1: 1, age: -1}) // Ok no ordena en memoria
```

```
db.runners.find({surname1: 'Nadal'}).sort({surname1: -1, age: 1}) // Ok no ordena en memoria
```

```
db.runners.find({surname1: 'Nadal'}).sort({surname1: 1, age: 1}) // Warning ordena en memoria
```

Covered Queries

Las consultas mas eficientes que se pueden llegar a hacer porque solo se necesita acceder al índice:

- Todos los campos de la consulta forman parte de un mismo índice
- Todos los campos devueltos en la consulta están en ese mismo índice

Performance advisor

The screenshot displays the MongoDB Atlas Performance Advisor interface. At the top, a navigation bar includes 'Project 0', 'Atlas', 'App Services', and 'Charts'. A left sidebar lists various services: DEPLOYMENT, Database (with 'Data Lake' and 'PREVIEW' buttons), DATA SERVICES, Triggers, Data API, Data Federation, SECURITY, Database Access, Network Access, Advanced, and New On Atlas. The main content area features a blue banner stating: 'We are deploying your changes: 13 of 16 servers complete (current action: syncing pause state on 3 servers, configuring MongoDB)'. Below this, the 'Cluster1' details are shown, including 'VERSION 5.0.9', 'REGION AWS Paris (eu-west-3)', 'CLUSTER TIER M10', and 'ENCRYPTED STORAGE true'. A horizontal menu at the bottom of the main area includes 'Overview', 'Real Time', 'Metrics', 'Collections', 'Search', 'Profiler', 'Performance Advisor' (which is highlighted), 'Backup', 'Online Archive', and 'Cmd Line Tools'. The 'Optimize Performance' section explains that Atlas automatically analyzes slow query logs, index usage statistics, and database metadata to provide recommendations. It contains three recommendation cards: 'Create Indexes' (No recommendations for now), 'Drop Indexes' (No recommendations for now), and 'Improve Schemas' (No recommendations for now). Each card includes a brief explanation of the recommendation and a 'View Docs' link.

ItWebLearn... Access Manager Billing All Clusters Get Help Pedro

Project 0 Atlas App Services Charts

DEPLOYMENT

Database

Data Lake PREVIEW

DATA SERVICES

Triggers

Data API

Data Federation

SECURITY

Database Access

Network Access

Advanced

New On Atlas

We are deploying your changes: 13 of 16 servers complete (current action: syncing pause state on 3 servers, configuring MongoDB)

ITWEBLEARNING > PROJECT 0 > DATABASES

Cluster1

VERSION 5.0.9 REGION AWS Paris (eu-west-3) CLUSTER TIER M10 ENCRYPTED STORAGE true

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

Optimize Performance

Atlas automatically analyzes your cluster using slow query logs, index usage statistics, and database metadata to provide recommendations for how you can optimize performance. [Learn More](#)

Create Indexes ✓

No recommendations for now.

Atlas will recommend indexes to create to improve read performance for collections with slow running queries. To see more information about slow queries, visit [Profiler](#).

[View Docs](#)

Drop Indexes ✓

No recommendations for now.

Atlas will recommend unused, redundant, and hidden indexes to drop for the 20 most active collections here. To see index usage by collection, visit the Indexes tab in [Collections](#).

[View Docs](#)

Improve Schemas ✓

No recommendations for now.

Atlas will recommend schema improvements for the 20 most active collections here. To see schema recommendations by collection, visit the Schema Suggestions tab in [Collections](#).

[View Docs](#)

Real Time

ITWEBLEARNING > PROJECT 0 > DATABASES

Cluster1

VERSION
5.0.9

REGION
AWS Paris (eu-west-3)

CLUSTER TIER
M10

ENCRYPTED STORAGE
true

Overview

Real Time

Metrics

Collections

Search

Profiler

Performance Advisor

Backup

Online Archive

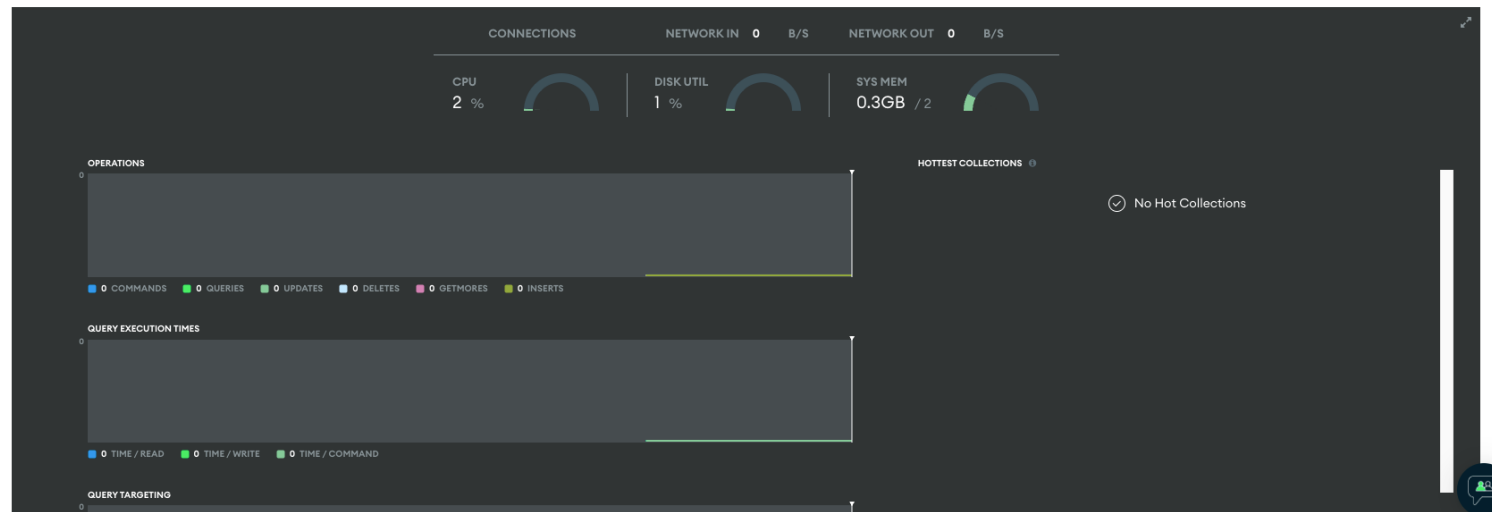
Cmd Line Tools

PAUSE

10 : 08 : 16

TABLE

GRAPH



Alerts

Se establecen a nivel de proyecto

The screenshot shows the 'Create a New Alert' dialog box in the Cortex Networks management console. The background shows the 'Project Alerts' section for 'Project 0'.

Create a New Alert

1 Alert if

TARGET ID	HOST TYPE ID	CONDITION/METRIC ID
Host >	of any type >	Host is down
Replica Set >	of type Standalone >	Host has index suggestions
Sharded Cluster >	of type Primary >	Search process ran out of memory
App Services >	of type Secondary >	Insufficient disk space to support rebuilding search indexes
Serverless >	of type Arbiter >	Asserts: Msa is...

2 For ☒ Any Host ☐ Hosts where...

3 Send to

Project: ☐ All Roles send if condition lasts at least 0 mins, resend after 60 mins

☒ Email ☐ SMS

Select Role(s):

☐ Project Owner ☐ Cluster Manager ☐ Data Access Admin ☐ Data Access Read/Write ☐ Data Access Read Only ☐ Search Index Editor ☐ Read Only

Add

Save

Gracias por tu atención

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