



mongoDB

Jose Constela, consultor de desarrollo

20 de Diciembre a las 20:00 (Magma Espacio)

Patrocinadores



JC Jose Constela
Software Development Consultant

JS
OURENSE



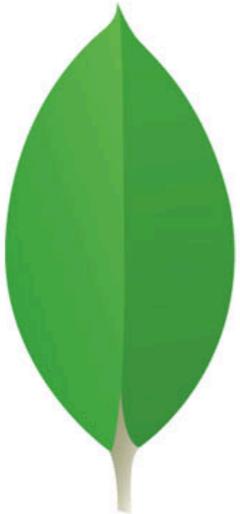
Ayudo a lanzar y a mejorar
productos de startups

Investigación y planificación

Código y arquitectura

AWS

Soporte



mongoDB[®]

Diferencias con xSQL

MySQL	MongoDB
Tablas y filas	Colecciones y documentos
Estructura de tabla	-
Lenguaje estructural	Objetos
JOIN	Embedding
-	_id

(MySQL 5.7.24-Ubuntu0.18.04.1) server/joseconstela_com/wp_posts

SSH conectado

joseconstela_com

TABLAS

- wbk_appointments
- wbk_cancelled_appointments
- wbk_coupons
- wbk_days_on_off
- wbk_email_templates
- wbk_gg_calendars
- wbk_locked_time_slots
- wbk_service_categories
- wbk_services
- wp_bup_bookings
- wp_bup_bookings_meta
- wp_bup_carts
- wp_bup_categories
- wp_bup_filter_staff
- wp_bup_filters
- wp_bup_orders
- wp_bup_service_rates
- wp_bup_service_variable_pric...
- wp_bup_services
- wp_bup_staff_availability
- wp_bup_staff_availability_breaks
- wp_commentmeta
- wp_comments
- wp_ea_error_logs
- wp_links
- wp_options
- wp_postmeta
- wp_posts**
- wp_redirection_404
- wp_redirection_groups
- wp_redirection_items

Campo	Tipo	Longitud	Sin signo	Relle...	Bina...	Permitir...	Cl...	Predeterminado	Extra	Codificación	Juego de caracte...	Comment
ID	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M...		auto_increment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_author	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... 0	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_date	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... 0000-00-00...	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_date_gmt	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0000-00-00...	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_content	LONGTEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
post_title	TEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
post_excerpt	TEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
post_status	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... publish	None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
comment_status	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	open	None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
ping_status	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	open	None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
post_password	VARCHAR	255	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
post_name	VARCHAR	200	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M...	None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
to_ping	TEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
pinged	TEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
post_modified	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0000-00-00...	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_modified_gmt	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0000-00-00...	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_content_filt...	LONGTEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
post_parent	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... 0	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
guid	VARCHAR	255	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
menu_order	INT	11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_type	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... post	None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
post_mime_type	VARCHAR	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode	<input type="checkbox"/>
comment_count	BIGINT	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(MySQL 5.7.24-Ubuntu0.18.04.1) server/joseconstela_com/wp_posts

Filtrar

TABLAS

ID	post_author	post_date	post_date_gmt	post_content	post_title	post_excerpt	post_status	comment_status
2	1	2018-09-20 22:24:15	2018-09-20 22:24:15	[vc_row full_width="stretch_row" c...	Home2		private	closed
8	1	2018-09-20 22:41:13	2018-09-20 22:41:13		descarga		inherit	open
9	1	2018-09-20 22:46:34	2018-09-20 22:46:34		Jose Constela - CV - joseconstela.com		inherit	open
10	1	2018-09-20 22:48:04	2018-09-20 22:48:04		IMG_0834		inherit	open
13	1	2018-09-23 12:44:46	2018-09-23 12:44:46	[vc_row full_width="stretch_row"...	Hero Section Call to Action		publish	closed
14	1	2016-10-04 08:36:17	2016-10-04 08:36:17		01		inherit	open
15	1	2018-09-23 12:44:55	2018-09-23 12:44:55	[vc_row][vc_column width="2/3"]...	About Page		publish	closed
16	1	2016-10-03 12:49:30	2016-10-03 12:49:30		02		inherit	open
17	1	2016-10-03 12:49:31	2016-10-03 12:49:31		01		inherit	open
18	1	2018-09-23 12:45:06	2018-09-23 12:45:06	<p>[vc_row][vc_column][vc_icon]...	Página de ejemplo		inherit	closed
19	1	2018-09-23 12:45:13	2018-09-23 12:45:13	[vc_row][vc_column][vc_icon icon_...	Página de ejemplo		inherit	closed
20	1	2018-09-23 12:50:47	2018-09-23 12:50:47	[vc_row css=".vc_custom_149329...	Three Business Blocks		publish	closed
21	1	2016-10-10 15:17:05	2016-10-10 15:17:05		01		inherit	open
24	1	2018-09-23 12:55:35	2018-09-23 12:55:35		Página de ejemplo		inherit	closed
27	1	2018-09-23 13:06:37	2018-09-23 13:06:37	<p>[vc_row][vc_column width="2...	Página de ejemplo		inherit	closed
28	1	2018-09-23 13:07:30	2018-09-23 13:07:30		cropped-IMG_0834.jpg		inherit	open
30	1	2018-09-23 13:10:11	2018-09-23 13:10:11	[vc_row full_width="stretch_row"...	Hero Section With Feature		publish	closed
31	1	2016-10-04 08:36:57	2016-10-04 08:36:57		01		inherit	open
32	1	2018-09-23 13:13:34	2018-09-23 13:13:34	<p>[vc_row full_width="stretch_r...	Página de ejemplo		inherit	closed
34	1	2018-09-23 13:14:59	2018-09-23 13:14:59	http://joseconstela.com/wp-cont...	cropped-descarga.png		inherit	open
35	1	2018-09-23 13:17:58	2018-09-23 13:17:58	[vc_row full_width="stretch_row"...	Inicio		inherit	closed
39	1	2018-09-23 13:19:10	2018-09-23 13:19:10	[vc_row full_width="stretch_row"...	Home		inherit	closed
41	1	2018-09-23 13:20:38	2018-09-23 13:20:38	[vc_row][vc_column][vc_custom h...	Service List With Intro		publish	closed
42	1	2016-10-04 08:35:16	2016-10-04 08:35:16		01		inherit	open
43	1	2016-10-04 08:35:16	2016-10-04 08:35:16		02		inherit	open
44	1	2018-09-23 13:21:51	2018-09-23 13:21:51	[vc_row full_width="stretch_row"...	Hero Section With Intro		publish	closed
45	1	2016-10-04 08:31:08	2016-10-04 08:31:08		01		inherit	open
46	1	2018-09-23 13:22:09	2018-09-23 13:22:09	<p>[vc_row full_width="stretch_r...	Home		inherit	closed
47	1	2018-09-23 13:27:53	2018-09-23 13:27:53		rawpixel-769367-unsplash		inherit	open
48	1	2018-09-23 13:28:10	2018-09-23 13:28:10	<p>[vc_row full_width="stretch_r...	Home		inherit	closed
49	1	2018-09-23 13:28:45	2018-09-23 13:28:45		startae-team-707026-unsplash		inherit	open
50	1	2018-09-23 13:31:13	2018-09-23 13:31:13		startae-team-707026-unsplash		inherit	open
51	1	2018-09-23 13:31:23	2018-09-23 13:31:23		header		inherit	open

(MySQL 5.7.24-Ubuntu0.18.04.1) server/joseconstela_com/wp_posts

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- wp_bup_bookings_meta
- wp_bup_carts
- wp_bup_categories
- wp_bup_filter_staff
- wp_bup_filters
- wp_bup_orders
- wp_bup_service_rates
- wp_bup_service_variable_pric...
- wp_bup_services
- wp_bup_staff_availability
- wp_bup_staff_availability_breaks
- wp_commentmeta
- wp_comments
- wp_ea_error_logs
- wp_links
- wp_options
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Campo	Tipo	Longitud	Sin signo	Relle...	Bina...	Permitir...	Cl...	Predeterminado	Extra	Codificación	Juego de caracte...	Comment
ID	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M...		auto_increment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_author	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... 0		None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_date	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... 0000-00-00...	0000-00-00...	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_date_gmt	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_content	LONGTEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
post_title	TEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
post_excerpt	TEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
post_status	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... publish		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
comment_status	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	open		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
ping_status	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	open		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
post_password	VARCHAR	255	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
post_name	VARCHAR	200	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M...		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
to_ping	TEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
pinged	TEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
post_modified	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0000-00-00...		None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_modified_gmt	DATETIME		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0000-00-00...		None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_content_filt...	LONGTEXT		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
post_parent	BIGINT	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... 0		None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
guid	VARCHAR	255	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
menu_order	INT	11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0		None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
post_type	VARCHAR	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M... post		None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
post_mime_type	VARCHAR	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			None	<input type="checkbox"/>	UTF-8 Unicode	utf8mb4_unicode
comment_count	BIGINT	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0		None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

```
1 CREATE TABLE `wp_posts` (
2     `ID` bigint(20) unsigned NOT NULL AUTO_INCREMENT,
3     `post_author` bigint(20) unsigned NOT NULL DEFAULT '0',
4     `post_date` datetime NOT NULL DEFAULT '0000-00-00 00:00:00',
5     `post_date_gmt` datetime NOT NULL DEFAULT '0000-00-00 00:00:00',
6     `post_content` longtext COLLATE utf8mb4_unicode_520_ci NOT NULL,
7     `post_title` text COLLATE utf8mb4_unicode_520_ci NOT NULL,
8     `post_excerpt` text COLLATE utf8mb4_unicode_520_ci NOT NULL,
9     `post_status` varchar(20) COLLATE utf8mb4_unicode_520_ci NOT NULL DEFAULT 'publish',
10    `comment_status` varchar(20) COLLATE utf8mb4_unicode_520_ci NOT NULL DEFAULT 'open',
11    `ping_status` varchar(20) COLLATE utf8mb4_unicode_520_ci NOT NULL DEFAULT 'open',
12    `post_password` varchar(255) COLLATE utf8mb4_unicode_520_ci NOT NULL DEFAULT '',
13    `post_name` varchar(200) COLLATE utf8mb4_unicode_520_ci NOT NULL DEFAULT '',
14    `to_ping` text COLLATE utf8mb4_unicode_520_ci NOT NULL,
15    `pinged` text COLLATE utf8mb4_unicode_520_ci NOT NULL,
16    `post_modified` datetime NOT NULL DEFAULT '0000-00-00 00:00:00',
17    `post_modified_gmt` datetime NOT NULL DEFAULT '0000-00-00 00:00:00',
18    `post_content_filtered` longtext COLLATE utf8mb4_unicode_520_ci NOT NULL,
19    `post_parent` bigint(20) unsigned NOT NULL DEFAULT '0',
20    `guid` varchar(255) COLLATE utf8mb4_unicode_520_ci NOT NULL DEFAULT '',
21    `menu_order` int(11) NOT NULL DEFAULT '0',
22    `post_type` varchar(20) COLLATE utf8mb4_unicode_520_ci NOT NULL DEFAULT 'post',
23    `post_mime_type` varchar(100) COLLATE utf8mb4_unicode_520_ci NOT NULL DEFAULT '',
24    `comment_count` bigint(20) NOT NULL DEFAULT '0',
25    PRIMARY KEY (`ID`),
26    KEY `post_name`(`post_name`(191)),
27    KEY `type_status_date`(`post_type`,`post_status`,`post_date`,`ID`),
28    KEY `post_parent`(`post_parent`),
29    KEY `post_author`(`post_author`)
30 ) ENGINE=InnoDB AUTO_INCREMENT=293 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_unicode_520_ci;
```



```
use mi_base_de_datos
```

db.mi_coleccion.....

```
1 const mongoose = require('mongoose');
2 mongoose.connect('mongodb://localhost/test');
3
4 const Cat = mongoose.model('Cat', { name: String });
5
6 const kitty = new Cat({ name: 'Zildjian' });
7 kitty.save().then(() => console.log('meow'));
```

```
1 const mongoose = require('mongoose');
2 mongoose.connect('mongodb://localhost/test');
3
4 const Cat = mongoose.model('Cat', { name: String });
5
6 const kitty = new Cat({ name: 'Zildjian' });
7 kitty.save().then(() => console.log('meow'));
```

```
{  
  "_id": "...",  
  "titulo": "Charla MongoDB",  
  "descripcion": "Introducción a MongoDB",  
  "fecha": ISODate("2018-12-15T14:35:01.918Z"),  
  "totalAsistentes": 2,  
  "asistentes": [  
    { "nombre": "Toni" },  
    { "nombre": "Ana" },  
  ]  
}
```

Antes de seguir ...

```
↳ ~ mongo --quiet
> show dbs
admin 0.000GB
config 0.000GB
local 0.000GB
> use blog
switched to db blog
> db.posts.insert({titulo:"Hola mundo"})
WriteResult({ "nInserted" : 1 })
> db.posts.find()
{ "_id" : ObjectId("5bf160cd9badb8514dba583e"), "titulo" : "Hola mundo" }
> db.posts.insert({_id:123, titulo:"Hola mundo 123!"})
WriteResult({ "nInserted" : 1 })
> db.posts.find()
{ "_id" : ObjectId("5bf160cd9badb8514dba583e"), "titulo" : "Hola mundo" }
{ "_id" : 123, "titulo" : "Hola mundo 123!" } ~mongo --quiet
>
>
> db.posts.update({_id:123}, {$set: {contenido: "Contenido del post"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.posts.find()
{ "_id" : ObjectId("5bf160cd9badb8514dba583e"), "titulo" : "Hola mundo" }
{ "_id" : 123, "titulo" : "Hola mundo 123!", "contenido" : "Contenido del post" }
>
```

[0] 1:zsh 2:mongod- 3:mongo*

"MacBook-Pro-de-Jose.1" 13:56 18-nov-18

{ _id }

`ObjectId(<hexadecimal>)`

objectId("5c14e9bc8f94820305ab5616")

ObjectId("5c14e9bc8f94820305ab5616")

- 4-bytes segundos desde la época de Unix

`ObjectId("5c14e9bc8f94820305ab5616")`

- 4-bytes segundos desde la época de Unix
- 5-bytes aleatorios

`ObjectId("5c14e9bc8f94820305ab5616")`

- 4-bytes segundos desde la época de Unix
- 5-bytes aleatorios
- 3-bytes contador empezando desde aleatorio

ObjectId("5c14e9bc8f94820305ab5616")

ObjectId("5c14e9bd8f94820305ab5617")

ObjectId("5c14e9be8f94820305ab5618")

ObjectId("5c14e9bf8f94820305ab5619")

`ObjectId(<hexadecimal>).getTimestamp()`

```
{  
  "_id": ObjectId('...'),  
  "titulo": "Conversación privada",  
  "mensajes": [  
    {  
      "_id": ObjectId('...'),  
      "mensaje": "Hola! ¿Qué tal?"  
    },  
    {  
      "_id": ObjectId('...'),  
      "mensaje": "¡Bien, gracias!"  
    }  
  ]  
}
```

```
↳ ~ mongo --quiet
> show dbs
admin 0.000GB
config 0.000GB
local 0.000GB
> use blog
switched to db blog
> db.posts.insert({titulo:"Hola mundo"})
WriteResult({ "nInserted" : 1 })
> db.posts.find()
{ "_id" : ObjectId("5bf160cd9badb8514dba583e"), "titulo" : "Hola mundo" }
> db.posts.insert({_id:123, titulo:"Hola mundo 123!"})
WriteResult({ "nInserted" : 1 })
> db.posts.find()
{ "_id" : ObjectId("5bf160cd9badb8514dba583e"), "titulo" : "Hola mundo" }
{ "_id" : 123, "titulo" : "Hola mundo 123!" } ~mongo --quiet
>
>
> db.posts.update({_id:123}, {$set: {contenido: "Contenido del post"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.posts.find()
{ "_id" : ObjectId("5bf160cd9badb8514dba583e"), "titulo" : "Hola mundo" }
{ "_id" : 123, "titulo" : "Hola mundo 123!", "contenido" : "Contenido del post" }
>
```

[0] 1:zsh 2:mongod- 3:mongo*

"MacBook-Pro-de-Jose.1" 13:56 18-nov-18

.MétodosDeColecciones

- .aggregate()
- .bulkWrite()
- .copyTo()
- .count()
- .countDocuments()
- .estimatedDocumentCount()
- .createIndex()
- .createIndexes()
- .dataSize()
- .deleteOne()
- .deleteMany()
- .distinct()
- .drop()
- .dropIndex()
- .dropIndexes()
- .ensureIndex()
- .explain()
- .find()
- .findAndModify()
- .findOne()
- .findOneAndDelete()
- .findOneAndReplace()
- .findOneAndUpdate()
- .getIndexes()
- .getShardDistribution()
- .getShardVersion()
- .group()
- .insert()
- .insertOne()
- .insertMany()
- .isCapped()
- .latencyStats()
- .mapReduce()
- .reIndex()
- .remove()
- .renameCollection()
- .replaceOne()
- .save()
- .stats()
- .storageSize()
- .totalIndexSize()
- .totalSize()
- .update()
- .updateOne()
- .updateMany()
- .watch()
- .validate()

- `aggregate()`
- `bulkWrite()`
- `copyTo()`
- `count()`
- `countDocuments()`
- `estimatedDocumentCount()`
- `createIndex()`
- `createIndexes()`
- `dataSize()`
- `deleteOne()`
- `deleteMany()`
- `distinct()`
- `drop()`
- `dropIndex()`
- `dropIndexes()`
- `ensureIndex()`
- `explain()`
- `find()`
- `findAndModify()`
- `findOne()`
- `findOneAndDelete()`
- `findOneAndReplace()`
- `findOneAndUpdate()`
- `getIndexes()`
- `getShardDistribution()`
- `getShardVersion()`
- `group()`
- ~~`insert()`~~
- `insertOne()`
- `insertMany()`
- `isCapped()`
- `latencyStats()`
- `mapReduce()`
- `reIndex()`
- `remove()`
- `renameCollection()`
- `replaceOne()`
- `save()`
- `stats()`
- `storageSize()`
- `totalIndexSize()`
- `totalSize()`
- ~~`update()`~~
- `updateOne()`
- `updateMany()`
- `watch()`
- `validate()`

docs.mongodb.com

index.js — charla-mongodb

EXPLORER

CHARLA-MONGODB

- rutas
- index.js
- listas.js
- package.json

index.js

```
1  /**
2  * Cargar módulos
3  */
4  const fs = require('fs'),
5      app = require('express')(),
6      bodyParser = require('body-parser'),
7      MongoClient = require('mongodb').MongoClient
8
9 /**
10 * Saludar
11 */
12 app.get('/', (req, res) => res.send('🦄 Funciona!'))
13
14 /**
15 * Programa principal
16 */
MongoClient.connect('mongodb://localhost', { // Connectar a MongoDB
17   useNewUrlParser: true
18 })
19   .then((client) => {
20     // Exponer la base de datos a las rutas de express
21     app.use((req, res, next) => {req.mongo = client.db('js_ourense'); next()})
22
23     // Cargar las rutas de Express de forma dinámica
24     fs.readdir(`${__dirname}/rutas`, (err, files) => {
25       files.map(file => {
26         const controller = require(`${__dirname}/rutas/${file}`)
27         const endpoint = `/${file.replace('.js', '')}`
28         if (controller.get) app.get(endpoint, controller.get)
29         if (controller.post) app.post(endpoint, controller.post)
30       })
31     })
32   })
33 }
```

OUTLINE

Ln 39, Col 5 Spaces: 2 UTF-8 LF JavaScript

```
db.collection.insertOne(doc)
```

```
db.collection.insertMany( [doc] )
```

```
db.collection.find(doc)
```

```
db.collection.find(doc, proj )
```

```
db.collection.findOne(doc)
```

Operadores selectores

Selectores de comparación

\$eq	=
\$gt	>
\$gte	>=
\$in	Está en
\$lt	<
\$lte	<=
\$ne	!=
\$nin	No está en

Selectores lógicos

\$and	Y
\$not	No
\$nor	Ni x, ni y, ...
\$or	0

Selectores de elementos

\$exists

Existe

\$type

Es entero (o punto
flotante, o cadena
de texto, etc)

Evaluación Geoespaciales Arrays

\$expr

\$jsonSchema

\$mod

\$regex

\$text

\$where

\$geoIntersects

\$geoWithin

\$near

\$nearSphere

\$all

\$elemMatch

\$size

Bits

Comments

\$bitsAllClear

\$bitsAllSet

\$comment

\$bitsAnyClear

\$bitsAnySet

Operadores de proyección

Operadores de proyección

\$	Primer elemento del array
\$elemMatch	Primer elemento que coincide con \$elemMatch
\$meta	Puntuación asignada en \$text
\$slice	Limita los elementos de los array

\$elemMatch

```
{  
  type: <GeoJSON type>,  
  coordinates: <coordinates>  
}
```

```
db.collection.updateOne(doc, update)
```

```
db.collection.updateOne(doc, update, options)
```

```
db.collection.remove(doc, justOne)
```

```
db.collection.remove(doc, options)
```



GeoJSON

GeoJSON

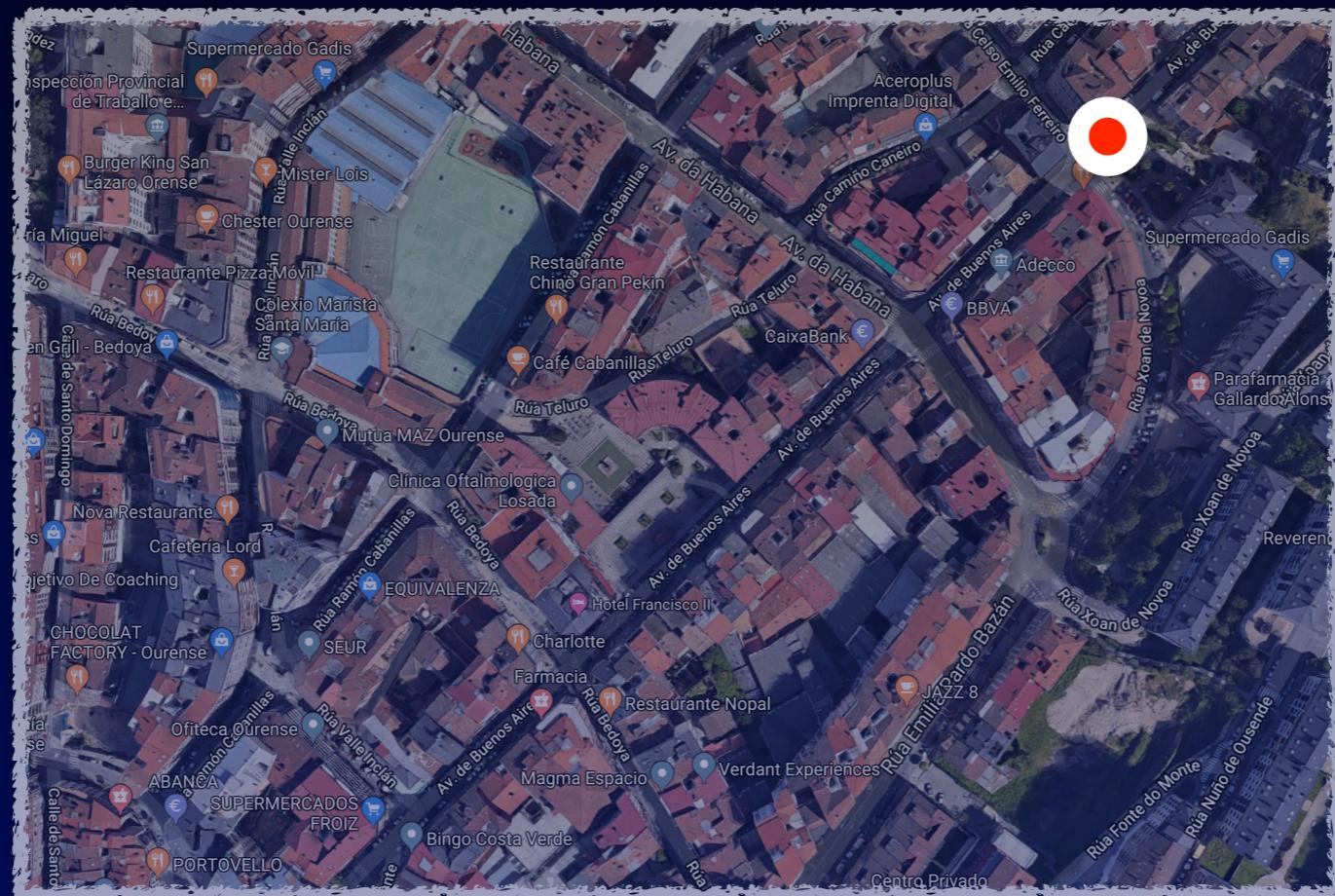
```
{  
  type: <GeoJSON type>,  
  coordinates: <coordinates>  
}
```

GeoJSON

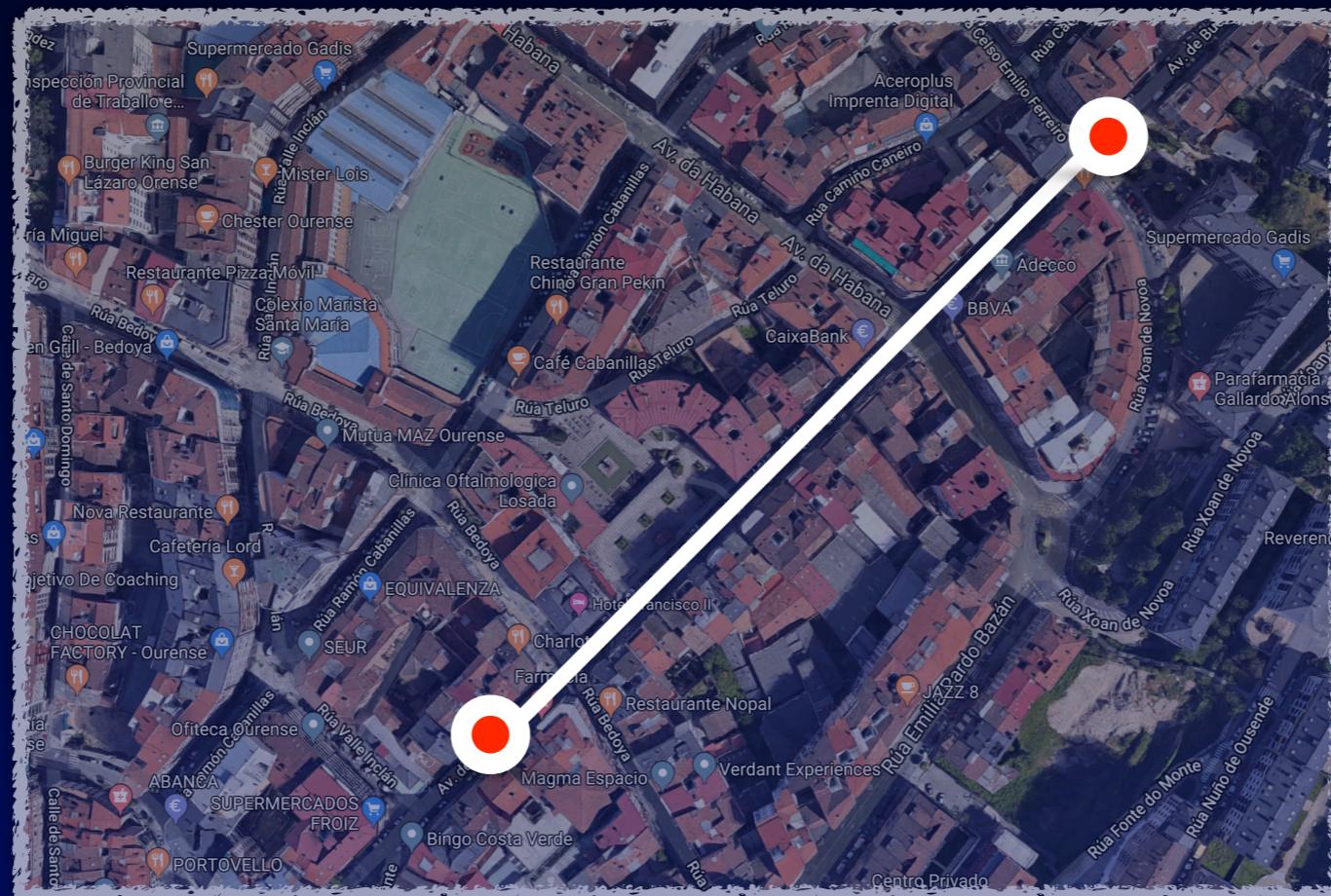
```
{  
  type: <GeoJSON type>  
  coordinates: <co  
}  
}
```

LON, LAT

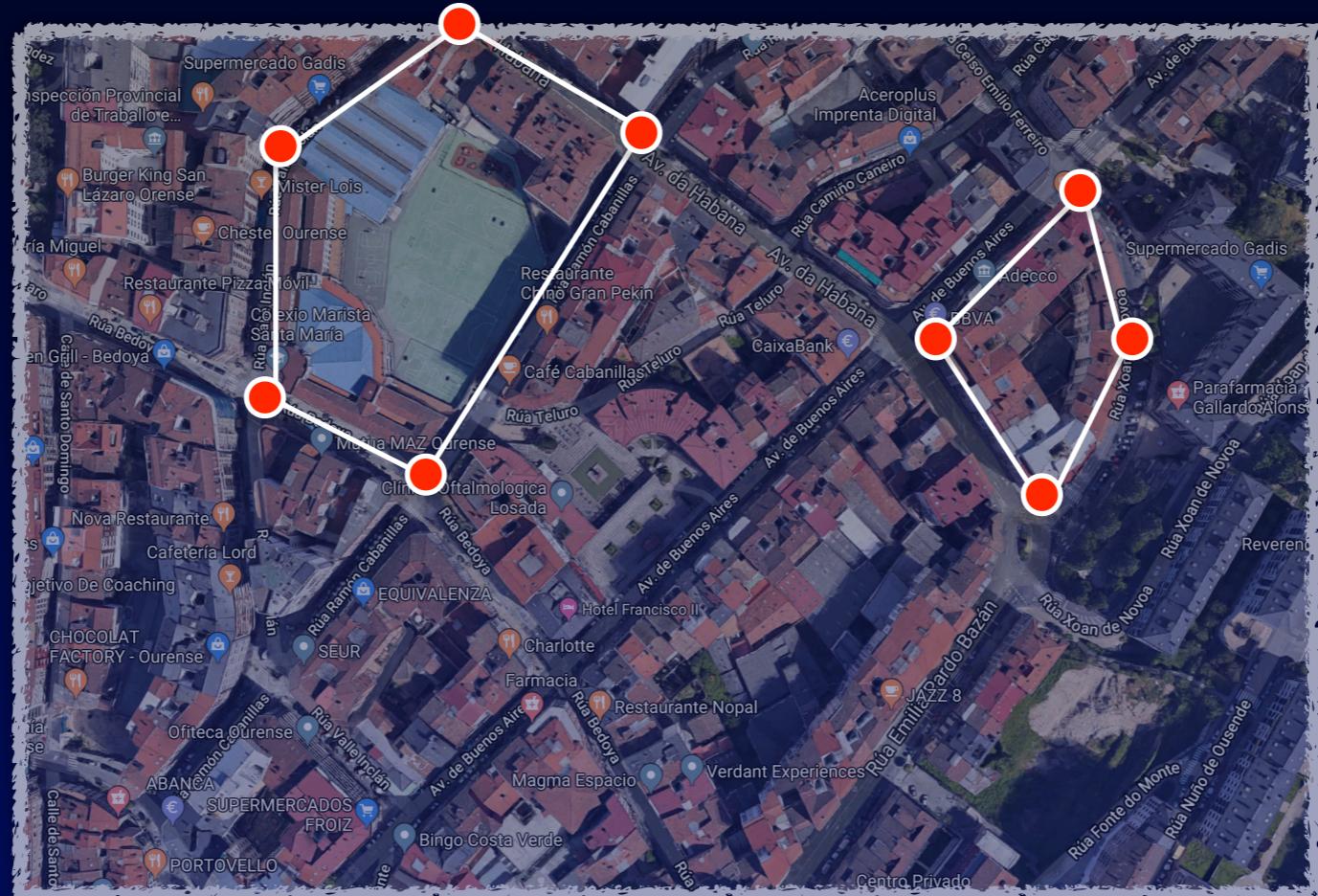
```
{  
  type: "Point", // MultiPoint  
  coordinates: [ 40, 5 ]  
}
```



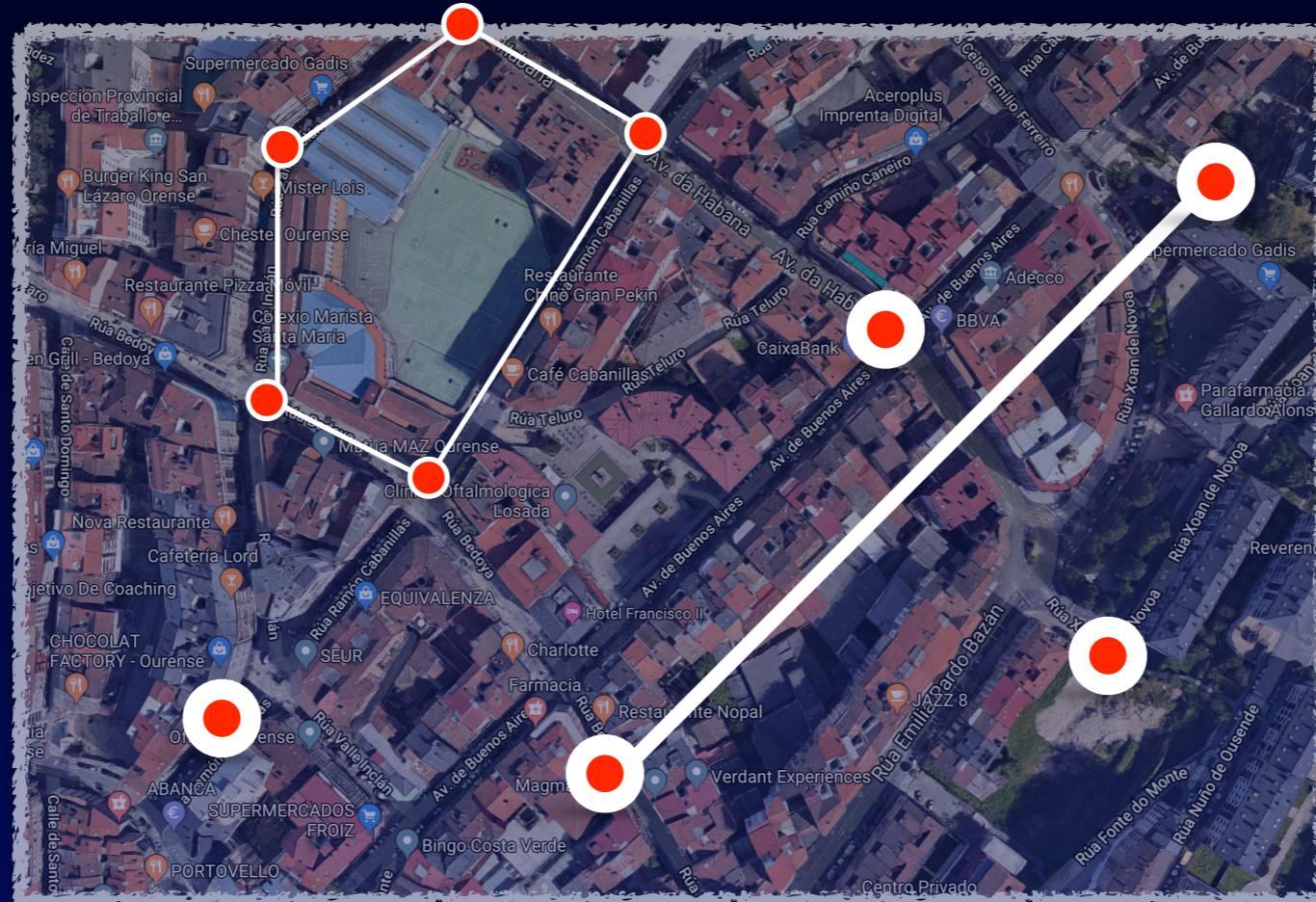
```
{  
  type: "LineString", // MultiLineString  
  coordinates: [ [ 40, 5 ], [ 10, 24 ] ]  
}
```



```
{  
  type: "Polygon", // MultiPolygon  
  coordinates: [  
    [ [ 2, 2 ], [ 2, 10 ], [ 10, 2 ], [ 10, 10 ] ]  
  ]  
}
```



```
{  
  type: "GeometryCollection",  
  geometries: [ GeoJSON ]  
}
```



<https://wwwlatlong.net/>

<https://docs.mongodb.com/manual/tutorial/geospatial-tutorial/>

bulk
operations

MongoDB

Aplicación

Servicio de terceros

A

B

C

D

E

F

G

H

I

J

K

L

M

N

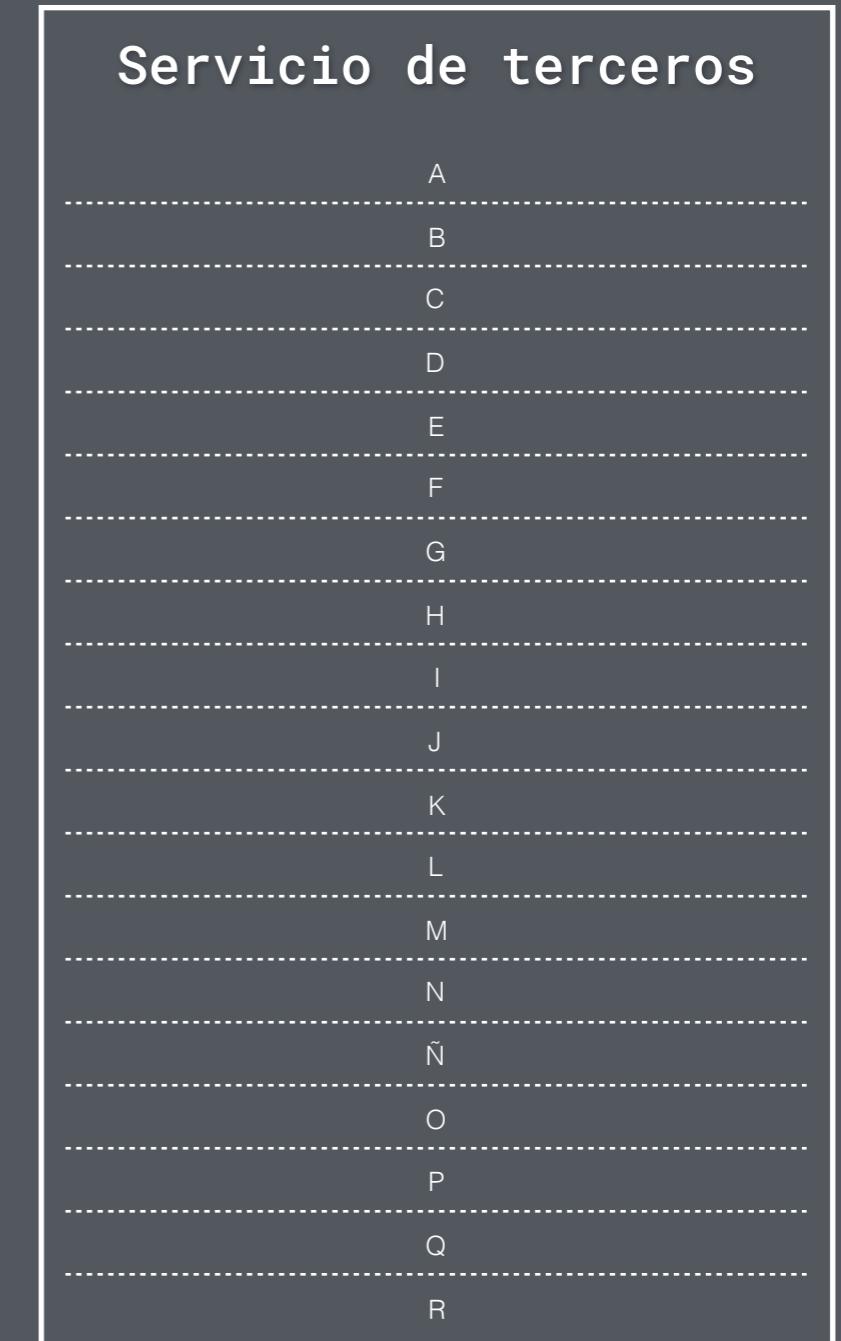
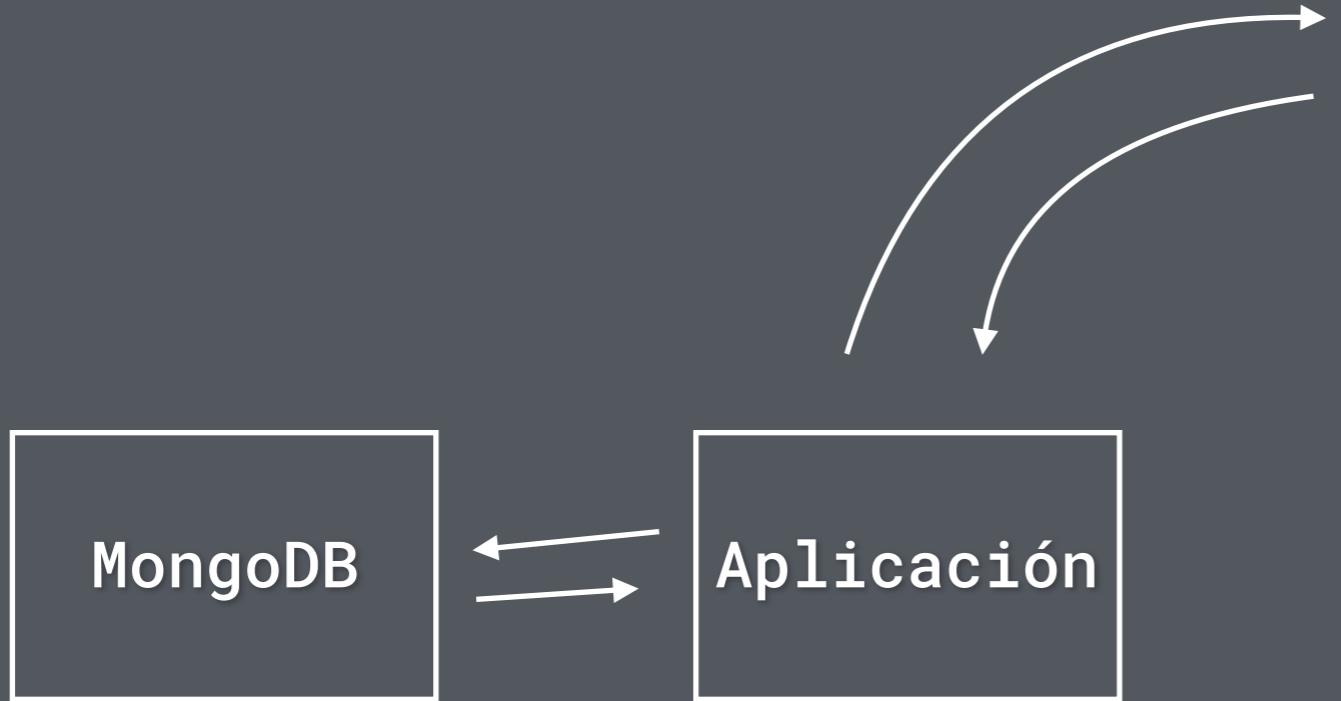
Ñ

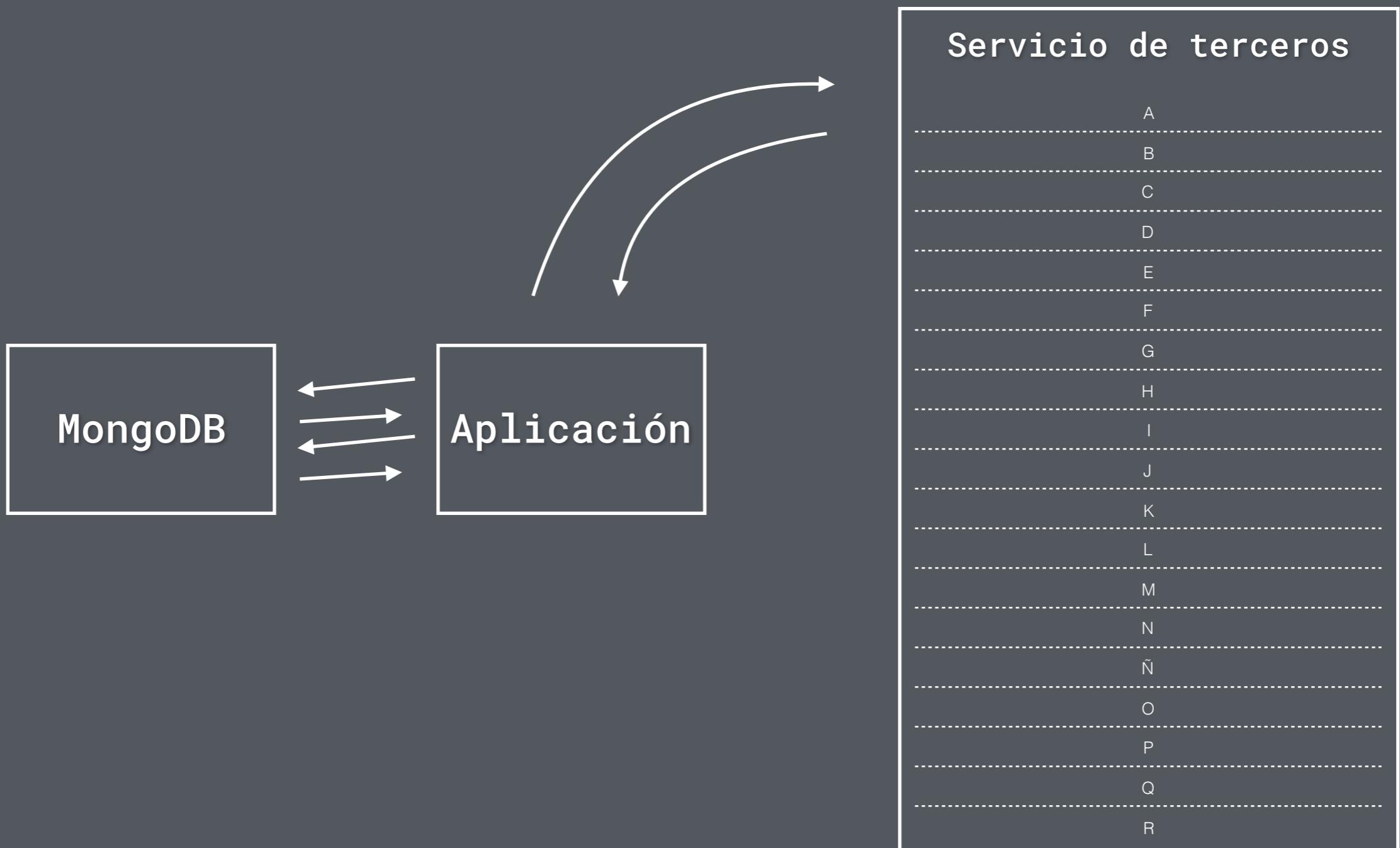
O

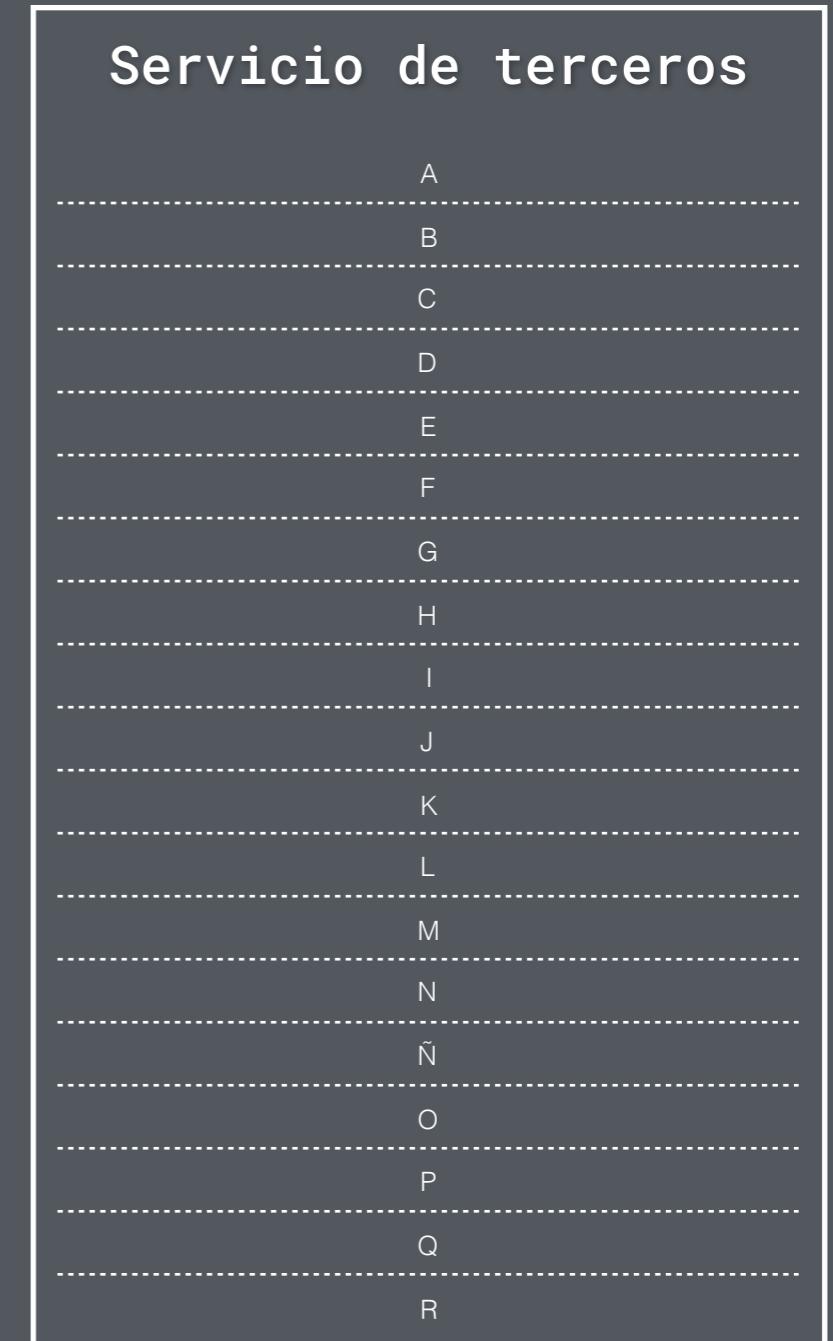
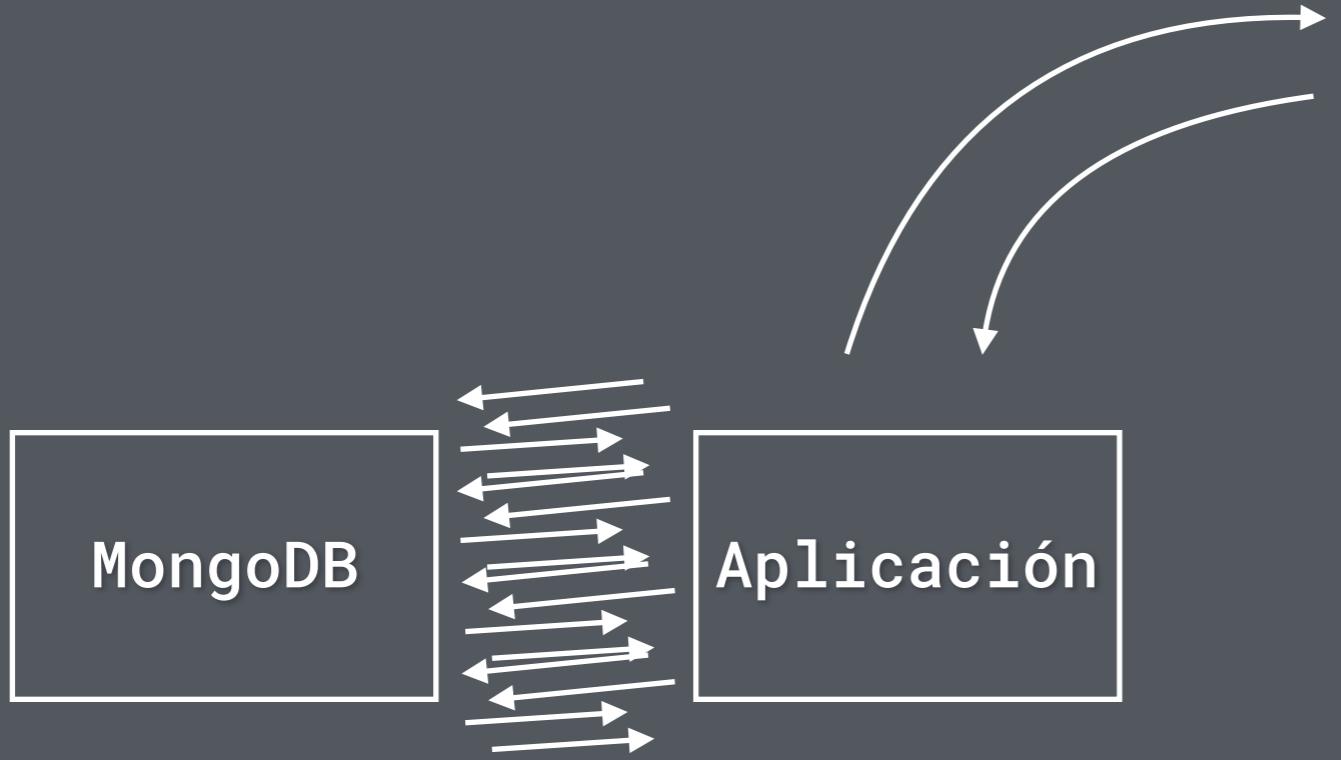
P

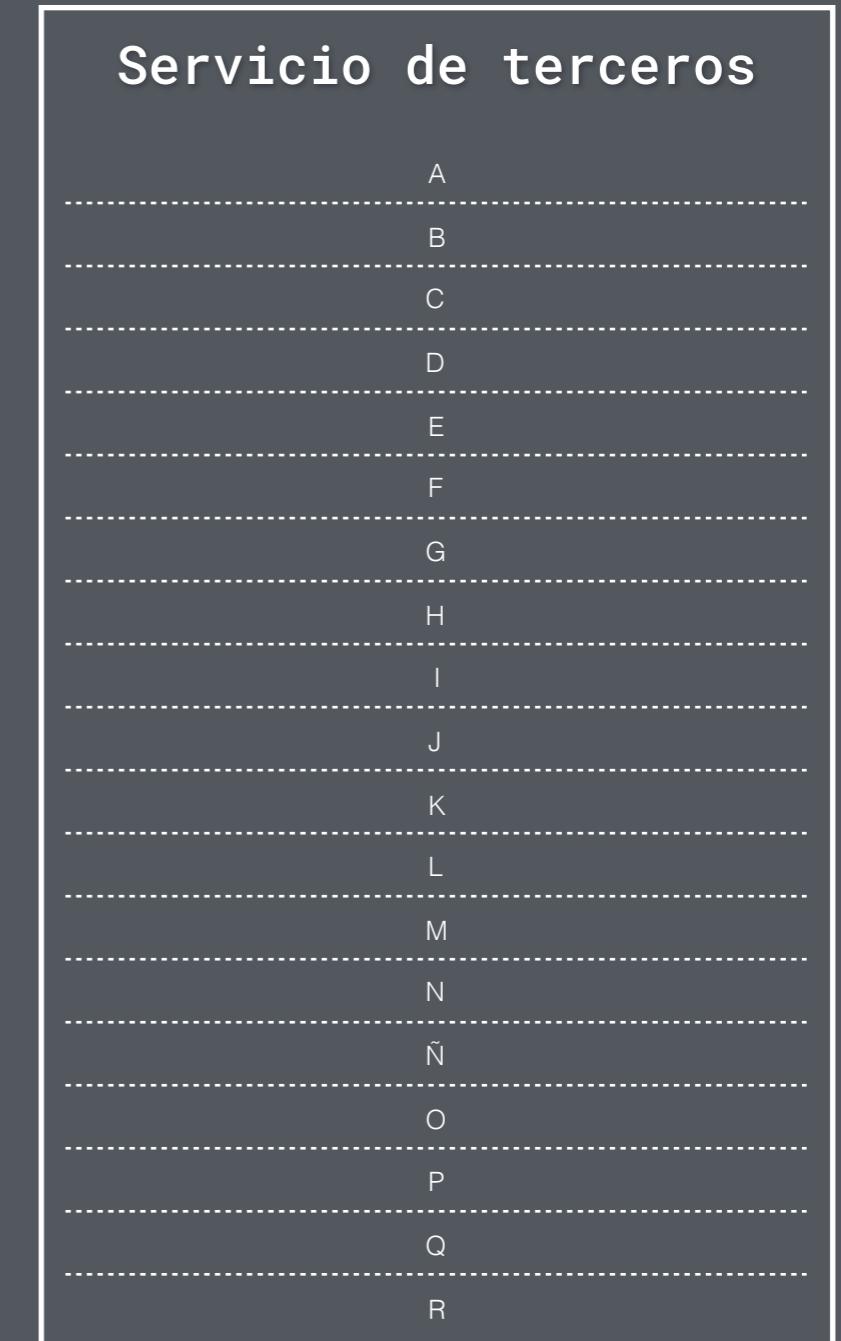
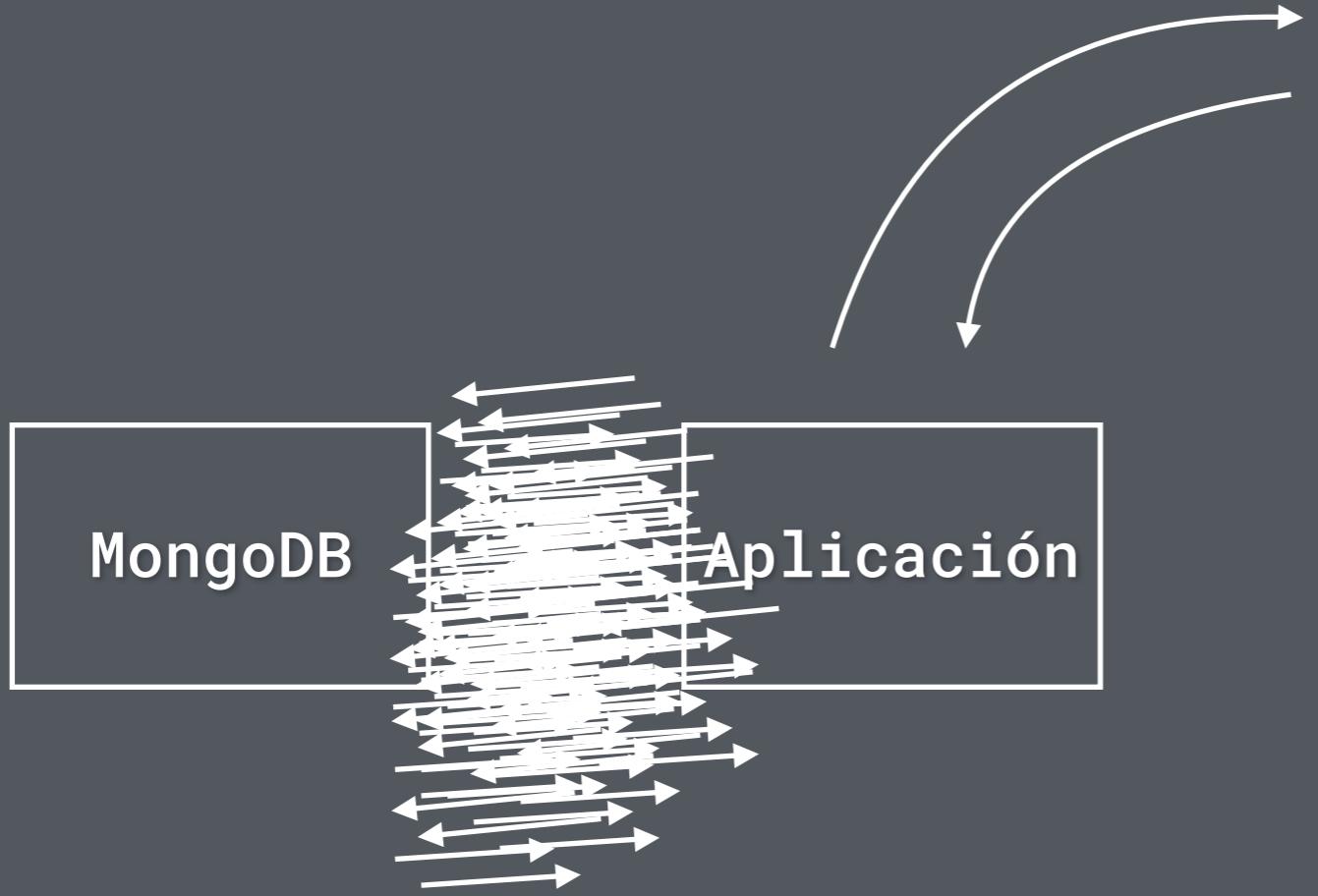
Q

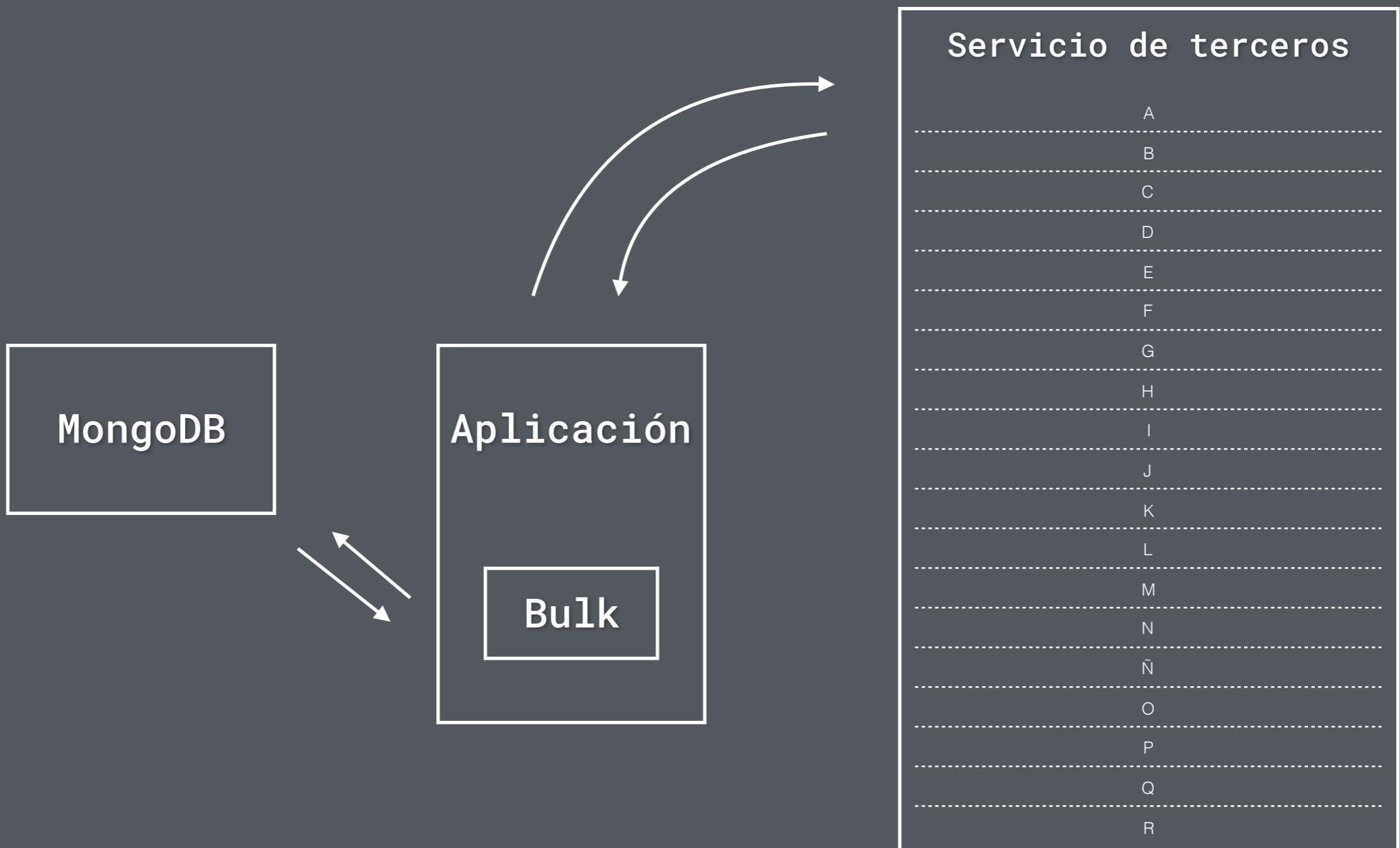
R



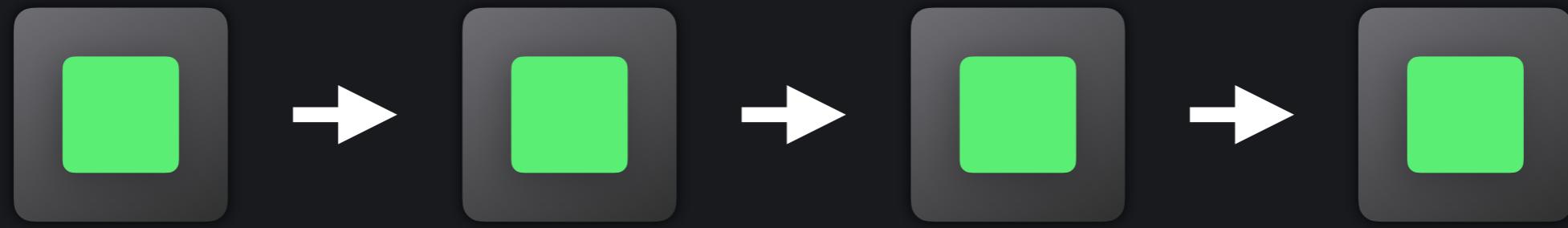








FRAMEWORK DE AGREGACIÓN



\$project

\$match

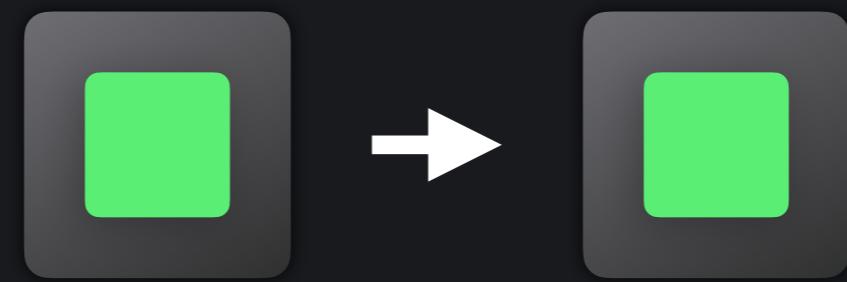
\$group

\$sort

Fases

\$addFields	\$group	\$redact
\$bucket	\$indexStats	\$replaceRoot
\$bucketAuto	\$limit	\$sample
\$collStats	\$listSessions	\$skip
\$count	\$lookup	\$sort
\$facet	\$match	\$sortByCount
\$geoNear	\$out	\$unwind
\$graphLookup	\$project	

MAPREDUCE



Map

Reduce

```
1 db.pedidos.mapReduce(  
2   function() { emit(this.clienteId, this.cantidad) },  
3   function(key, values) { return Array.sum(values) },  
4   {  
5     query: { estado: 'a' },  
6     out: 'total_pedidos'  
7   }  
8 )
```

```
{  
  clientId: 1,  
  cantidad: 2,  
  estado: 'a'  
}  
  
{  
  clientId: 1,  
  cantidad: 84,  
  estado: 'a'  
}  
  
{  
  clientId: 2,  
  cantidad: 56,  
  estado: 'a'  
}  
  
{  
  clientId: 3,  
  cantidad: 21,  
  estado: 'b'  
}
```

query
→

```
{  
  clientId: 1,  
  cantidad: 2,  
  estado: 'a'  
}  
  
{  
  clientId: 1,  
  cantidad: 84,  
  estado: 'a'  
}  
  
{  
  clientId: 2,  
  cantidad: 56,  
  estado: 'a'  
}
```

```
{  
  clientId: 1,  
  cantidad: 2,  
  estado: 'a'  
}  
  
{  
  clientId: 1,  
  cantidad: 84,  
  estado: 'a'  
}  
  
{  
  clientId: 2,  
  cantidad: 56,  
  estado: 'a'  
}
```

map



```
{ "1": [2, 84] }  
  
{ "2": [56] }
```

```
function() { emit( this.clientId, this.cantidad ) }
```

```
{ "1": [2, 84] }
```

```
{ "2": [56] }
```

reduce



```
{  
  _id: 1,  
  value: 86  
}
```

```
{  
  _id: 2,  
  value: 56  
}
```

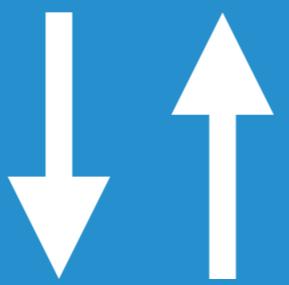
```
function(key, values) { return Array.sum(values) }
```

```
{  
  "_id": 1,  
  "value": 86  
,  
 {  
  "_id": 2,  
  "value": 56  
}
```

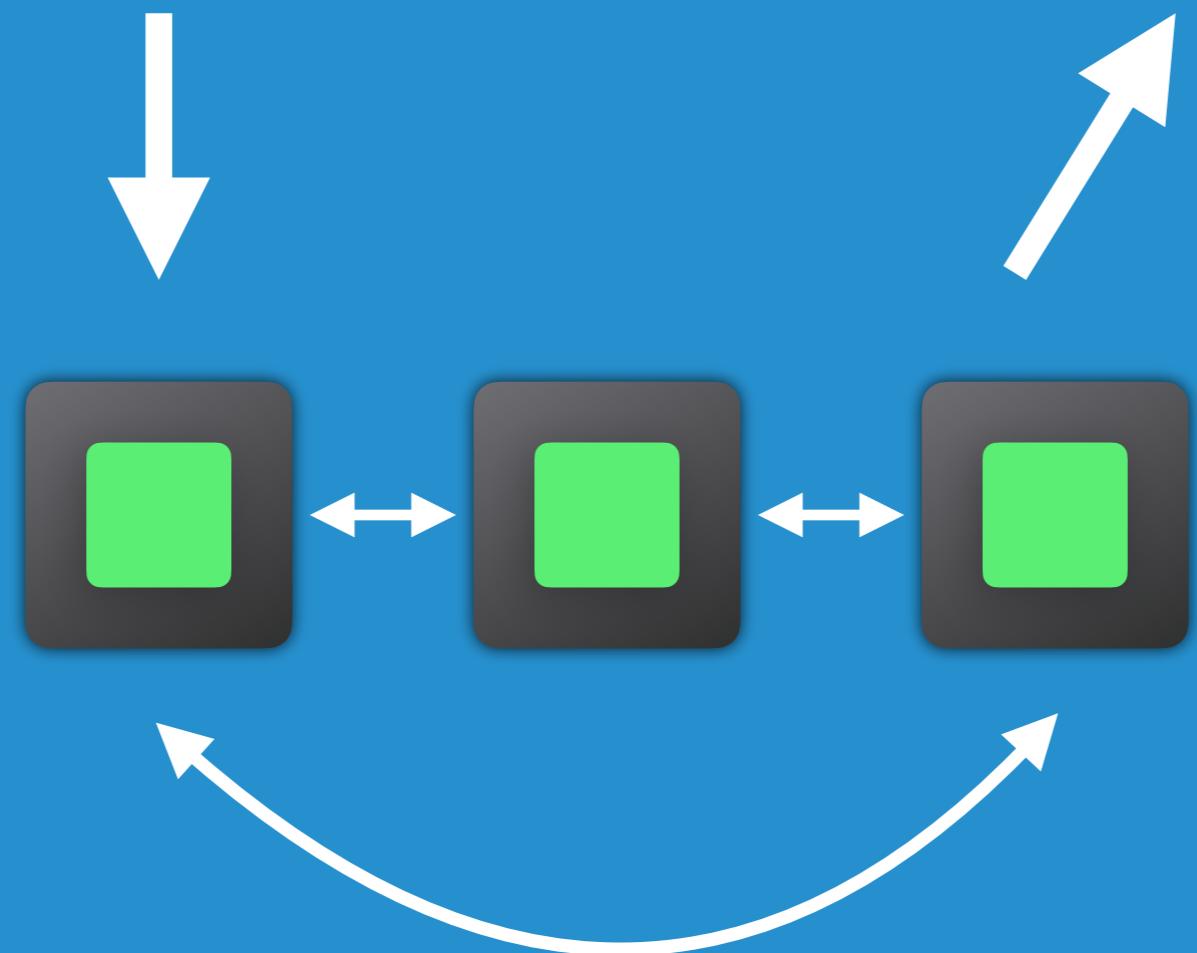
```
out: 'total_pedidos'
```



MongoDB Oplog







Oplog?

Transacciones





```
db.productos.update({ '_id': 'pilas_walkman' }, { '$dec': { stock: 1 } })
db_pedidos.insert({ producto: 'pilas_walkman', cliente: 'María' })
db.ingresos.insert({ fecha: new Date(), cantidad: 300 })
```



```
db.productos.update({ '_id': 'pilas_walkman' }, { '$dec': { stock: 1 } })
```

```
db_pedidos.insert({ producto: 'pilas_walkman', cliente: 'María' })
db_ingenieros.insert({ fecha: new Date(), cantidad: 300 })
```

```
1 session.startTransaction({
2   ··readConcern: { ·level: ·'snapshot' ·},
3   ··writeConcern: { ·w: ·'majority' ·}
4 });
5
6 db.productos.update({ ·_id: ·'pilas_walkman' ·}, ·{ ·$dec: ·{stock: ·1} ·}, ·{ ·session ·})
7 db_pedidos.insert({ ·producto: ·'pilas_walkman', ·cliente: ·'María' ·}, ·{ ·session ·})
8 db.ingresos.insert({ ·fecha: ·new ·Date(), ·cantidad: ·300 ·}, ·{ ·session ·})
9
10 try ·{
11   ··commitWithRetry(session);
12 } ·catch ·(error) ·{
13   ··session.abortTransaction();
14   ··throw ·error;
15 }
```





docs.mongodb.com



mongodb.com/blog

mongoose

elegant **mongodb** object modeling for **node.js**

```
const mongoose = require('mongoose');
mongoose.connect('mongodb://localhost/test');

const Cat = mongoose.model('Cat', { name: String });

const kitty = new Cat({ name: 'Zildjian' });
kitty.save().then(() => console.log('meow'));
```

<https://mongoosejs.com>

[https://github.com/js-ourense/
JSOurense-281220-mongodb](https://github.com/js-ourense/JSOurense-281220-mongodb)



ourense.javascript.gal



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Software Development Consultant

JS
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