

DESARROLLO WEB CON MEAN

```
-rw----- 1 root root 123 Jul 22 2014 ifcfg-lo
-rw-r--r-- 1 root root 254 Jul 22 2014 ifdown -> ../../sbin/ifd...
lrwxrwxrwx 1 root root 20 Jan 29 11:27 ifdown-bnep
-rw xr-xr-x 1 root root 627 Jul 22 2014 ifdown-eth
-rw xr-xr-x 1 root root 511 Jul 22 2014 ifdown-ppp
-rw xr-xr-x 1 root root 781 Jul 22 2014 ifdown-ipv6
-rw xr-xr-x 1 root root 4168 Jul 22 2014 ifdown-isdn -> ifdown-ippp
lrwxrwxrwx 1 root root 11 Jan 29 11:27 ifdown-post
-rw xr-xr-x 1 root root 1481 Jul 22 2014 ifdown-ppp
-rw xr-xr-x 1 root root 1064 Jul 22 2014 ifdown-routes
-rw xr-xr-x 1 root root 835 Jul 22 2014 ifdown-sit
-rw xr-xr-x 1 root root 1465 Jul 22 2014 ifdown-tunnel
-rw xr-xr-x 1 root root 1434 Jul 22 2014 ifup -> ../../sbin/ifup
lrwxrwxrwx 1 root root 18 Jan 29 11:27 ifup-aliases
```

Curso: DESARROLLO CON MEAN PARA WEB Y CLOUD (FULL STACK)

Mongo DB Stitch



MongoDB Stitch es una plataforma sin servidor que permite a los desarrolladores crear aplicaciones rápidamente sin tener que configurar la infraestructura del servidor.

- Construido sobre MongoDB Atlas
- Integra la conexión a la base de datos y la lógica del back end
- Clientes JavaScript, Android, iOS

Mongo DB Stitch

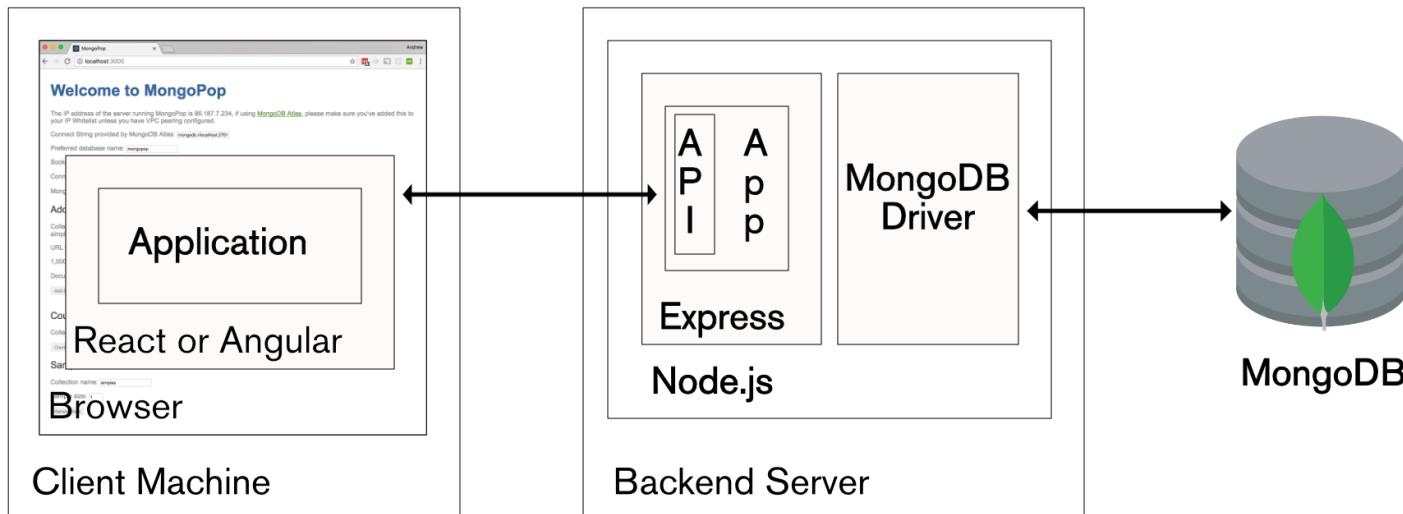


- La base de datos MongoDB como servicio en cloud
- Disponible para AWS, Azure y Google Cloud
- El hardware y el software es delegado en la nube
- Permite desplegar, operar y escalar la base de datos con poco esfuerzo, delegando la mayor parte del trabajo

Mongo DB Stitch

Aplicación Cliente-Servidor clásica

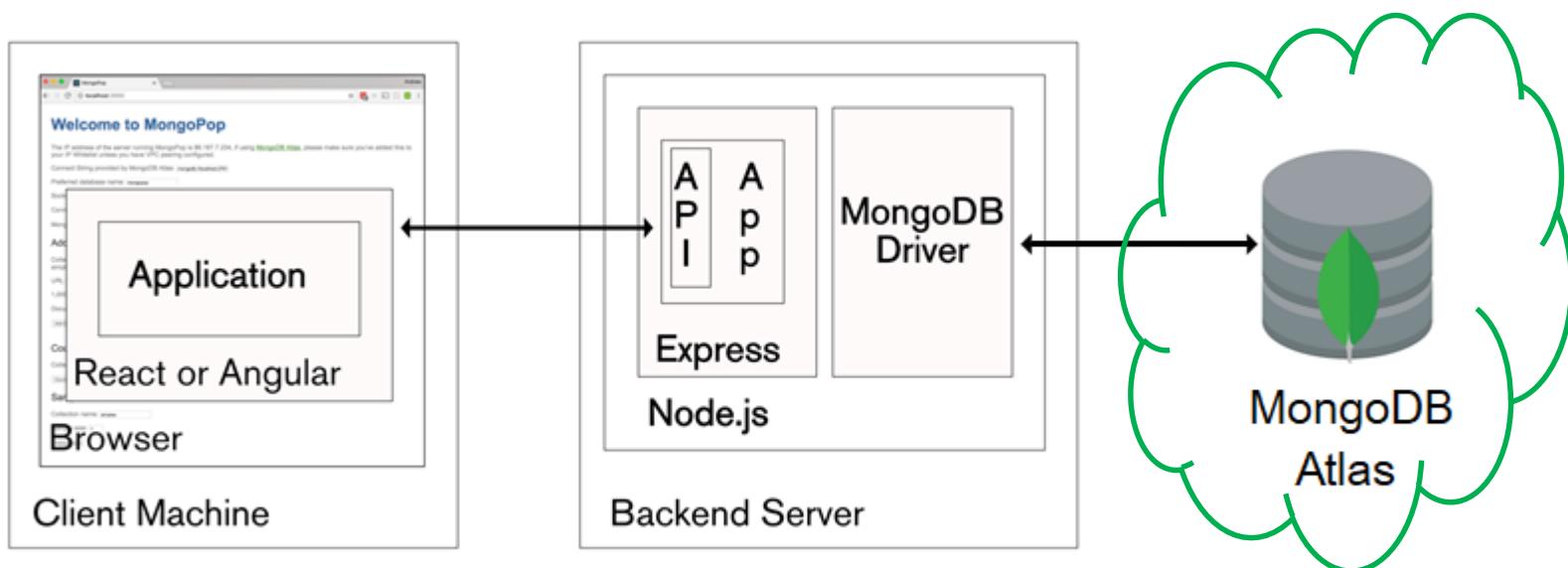
- Una aplicación cliente que envía peticiones al back-end
- Aplicación back-end en un servidor administrado por nosotros
 - Se necesita hardware
 - Se necesita software
- La aplicación back-end conecta con una base de datos, también administrada por nosotros



Mongo DB Stitch

MongoDB Atlas

Seguimos manteniendo la infraestructura para el back-end pero de la base de datos se encarga MongoDB y la contratamos como un servicio



Mongo DB Stitch

Creación de una cuenta en MongoDB Stitch/Atlas

- No implica coste inicial
- El proceso de creación de la cuenta es muy sencillo

Mongo DB Stitch

Accedemos a mongodb.com/cloud/stitch

The screenshot shows the MongoDB Stitch homepage. At the top, there's a banner with a green icon and the text "We're committed to supporting developers in our community through COVID-19. Learn more >". Below the banner, the navigation bar includes links for MongoDB, Cloud, Software, Learn, Solutions, Docs, Contact, Sign In, and a prominent green "Try Free" button. The main title "MongoDB Stitch" is displayed in a large, teal-colored font. Below the title, the subtitle "The serverless platform from MongoDB" is shown. Two buttons are present: a green "Get started" button and a white "Go to docs" button. A yellow rounded rectangle highlights the "Get started" button. At the bottom, a call-to-action reads "Build better apps, faster with MongoDB Stitch services". A green circular icon with a white speech bubble is located in the bottom right corner.

MongoDB Stitch - Serverless plat × +

← → C 🔒 mongodb.com/cloud/stitch

{ } We're committed to supporting developers in our community through COVID-19. Learn more >

mongoDB Cloud Software Learn Solutions Docs

Try Free

MongoDB Stitch

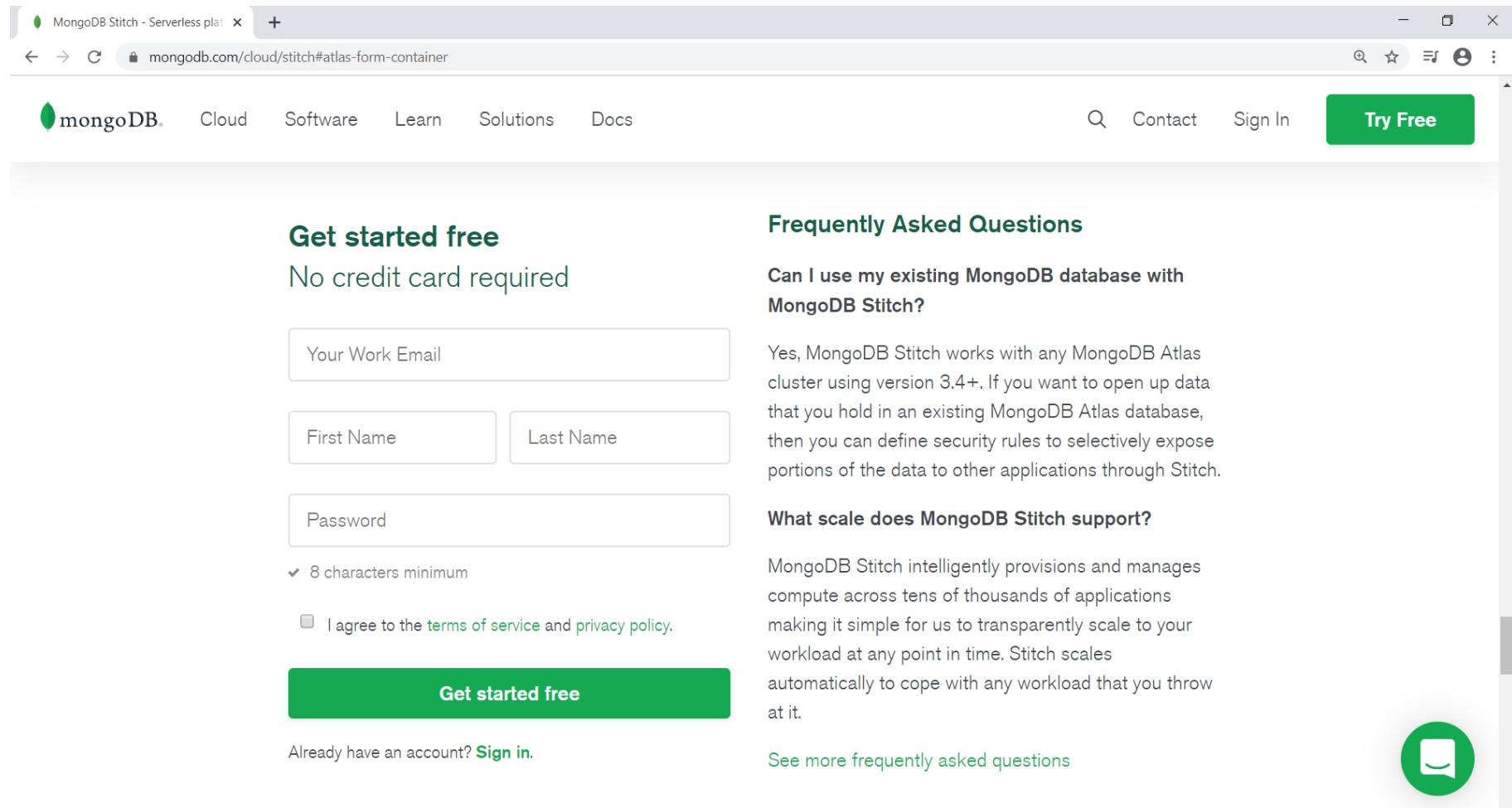
The serverless platform from MongoDB

Get started Go to docs

Build better apps, faster with MongoDB Stitch services

Mongo DB Stitch

Rellenamos los datos para el registro



The screenshot shows a web browser window for MongoDB Stitch. The title bar reads "MongoDB Stitch - Serverless plat". The address bar shows the URL "mongodb.com/cloud/stitch#atlas-form-container". The page header includes the MongoDB logo, navigation links for Cloud, Software, Learn, Solutions, Docs, a search icon, Contact, Sign In, and a prominent green "Try Free" button.

Get started free
No credit card required

Your Work Email

First Name Last Name

Password

✓ 8 characters minimum
 I agree to the [terms of service](#) and [privacy policy](#).

Get started free

Already have an account? [Sign in](#).

Frequently Asked Questions

Can I use my existing MongoDB database with MongoDB Stitch?

Yes, MongoDB Stitch works with any MongoDB Atlas cluster using version 3.4+. If you want to open up data that you hold in an existing MongoDB Atlas database, then you can define security rules to selectively expose portions of the data to other applications through Stitch.

What scale does MongoDB Stitch support?

MongoDB Stitch intelligently provisions and manages compute across tens of thousands of applications making it simple for us to transparently scale to your workload at any point in time. Stitch scales automatically to cope with any workload that you throw at it.

[See more frequently asked questions](#)

Mongo DB Stitch

Creando un Cluster en MongoDB Atlas

- Existe una modalidad gratuita, con limitaciones, que permite el desarrollo de aplicaciones y la prueba de las mismas en un entorno real
- En cualquier momento puede ampliarse para disponer de más funcionalidades, herramientas, ancho de banda y número de peticiones

Mongo DB Stitch

Con la cuenta ya creada, el siguiente paso es crear un cluster de MongoDB

The screenshot shows the MongoDB Atlas Clusters page. On the left, there's a sidebar with sections like ATLAS (Clusters selected), SECURITY, PROJECT, and SETTINGS (Get Started). The main area has a search bar and a large green button labeled 'Build a Cluster'. A yellow box highlights this button. Below it, text says 'Once your cluster is up and running, live migrate an existing MongoDB database into Atlas with our [Live Migration Service](#)'. At the bottom, there's footer information about system status and copyright.

MongoDB Stitch - Serverless plat Clusters | Atlas: MongoDB Atlas +

cloud.mongodb.com/v2/5e7c744a2fcf0085c5f04ac#clusters

mongoDB, Atlas All Clusters

Please set your time zone Usage This Month:\$0.00 details Preferences Luis Ramón Álvarez González

CONTEXT Project 0 > PROJECT 0

ATLAS Clusters Find a cluster...

Data Lake BETA

SECURITY Database Access

Network Access

Advanced

PROJECT Access Management

Activity Feed

Alerts 0

Integrations

Settings

Get Started 5

System Status: All Good Last Login: 89.129.120.35
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Create a cluster

Choose your cloud provider, region, and specs.

Build a Cluster

Once your cluster is up and running, live migrate an existing MongoDB database into Atlas with our [Live Migration Service](#).

Mongo DB Stitch

Escogemos el cluster gratuito

Choose a Path | Atlas: MongoDB

cloud.mongodb.com/v2/5e7c744a2fcf0085c5f04ac#clusters/pathSelector

MONGODB ATLAS

Choose a path. Adjust anytime.

Available as a fully managed service across 60+ regions on AWS, Azure, and Google Cloud

Shared Clusters

For teams learning MongoDB or developing small applications.

- ✓ Highly available auto-healing cluster
- ✓ End-to-end encryption
- ✓ Role-based access control

Create a cluster
Starting at **FREE**

Dedicated Clusters

For teams building applications that need advanced development and production-ready environments.

- ✓ Includes all features from Shared Clusters
- ✓ Auto-scaling
- ✓ Network isolation
- ✓ Realtime performance metrics

Create a cluster
Starting at **\$0.08/hr***
*estimated cost \$56.94/month

Dedicated Multi-Region Clusters

For teams developing world-class applications that require multi-region resiliency or ultra-low latency.

- ✓ Includes all features from Shared and Dedicated Clusters
- ✓ Replicate data across multiple regions
- ✓ Globally distributed read and write operations
- ✓ Control data residency at the document level

Create a cluster
Starting at **\$0.13/hr***
*estimated cost \$98.55/month

Back

Advanced Configuration Options

Mongo DB Stitch

Escogemos las opciones por defecto

Create Cluster | Atlas: MongoDB / +

cloud.mongodb.com/v2/5e7c744a2cf0085c5f04ac#clusters/edit?filter=starter

CLUSTERS > CREATE A STARTER CLUSTER

Create a Starter Cluster

Welcome to MongoDB Atlas! We've recommended some of our most popular options, but feel free to customize your cluster to your needs. For more information, check our [documentation](#).

Cloud Provider & Region

AWS, N. Virginia (us-east-1) ▾

aws

Google Cloud Platform

Azure

★ Recommended region ⓘ

NORTH AMERICA

N. Virginia (us-east-1) ★

Oregon (us-west-2) ★

EUROPE

Ireland (eu-west-1) ★

Frankfurt (eu-central-1) ★

ASIA

Singapore (ap-southeast-1) ★

Mumbai (ap-south-1)

AUSTRALIA

Sydney (ap-southeast-2) ★

Cluster Tier

MO Sandbox (Shared RAM, 512 MB Storage) >

Encrypted

Additional Settings

MongoDB 4.2, No Backup >

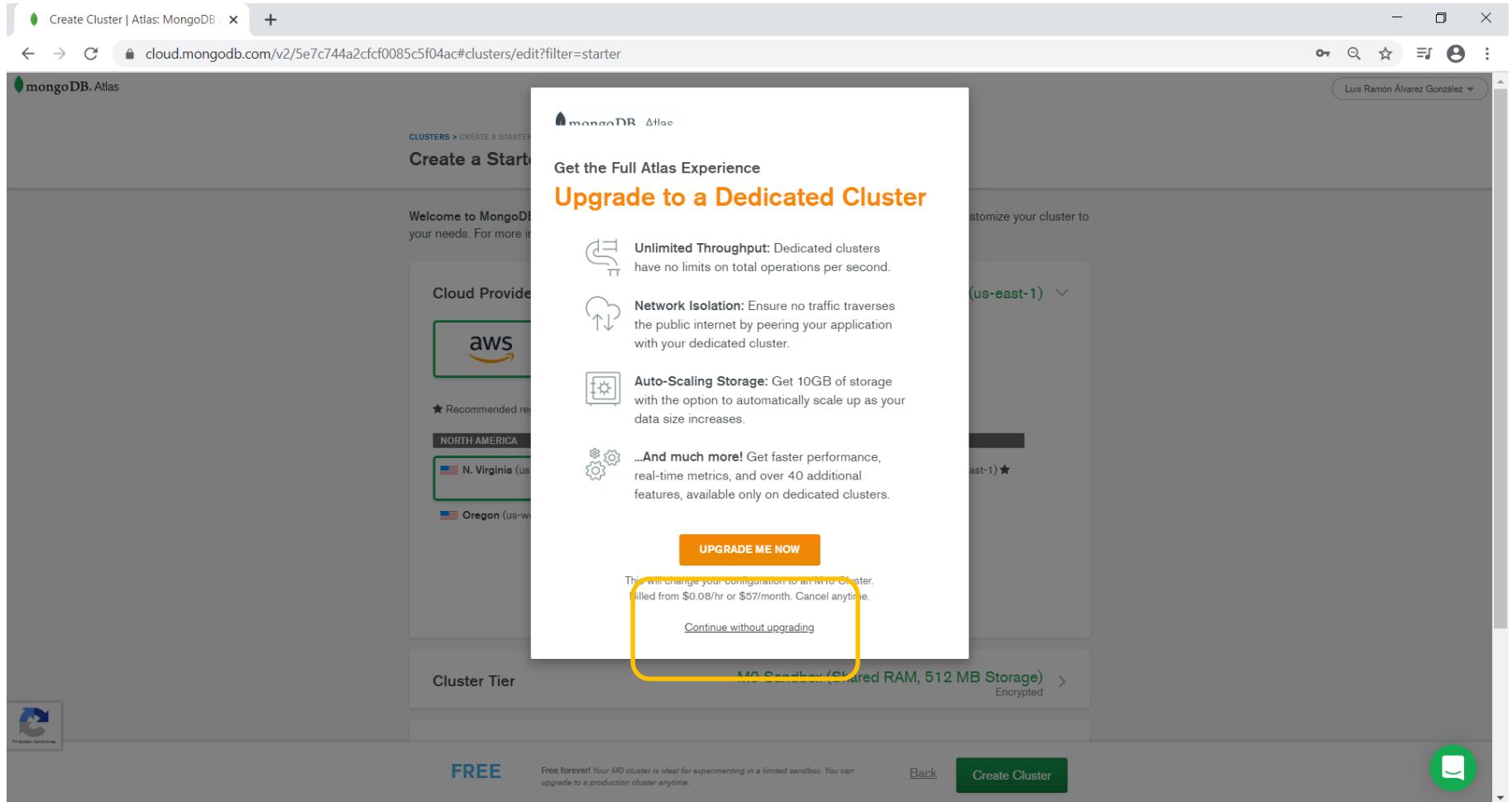
FREE

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

Back Create Cluster

Mongo DB Stitch

Pulsamos 'Create without upgrading'. Luego puede hacerse en cualquier momento



Mongo DB Stitch

Con el cluster creado el siguiente paso será añadir nuestra primera aplicación

The screenshot shows the MongoDB Atlas Clusters interface. On the left, a sidebar menu includes sections for CONTEXT (Project 0), ATLAS (Clusters, selected), SECURITY, PROJECT, SERVICES, and HELP. The main content area displays a single cluster named "Cluster0" in a "SANDBOX" tier. Key details shown include:

- Cluster0** (Version 4.2.5)
- CONNECT**, **METRICS**, **COLLECTIONS**, and a more options button (**...**)
- CLUSTER TIER**: M0 Sandbox (General)
- REGION**: AWS / N. Virginia (us-east-1)
- TYPE**: Replica Set - 3 nodes
- LINKED STITCH APP**: None Linked

Metrics displayed in the "METRICS" section:

- Operations R: 0 W: 0** (Last 6 Hours)
- Logical Size 36.4 KB** (Last 30 Days)
- Connections 10** (Last 6 Hours)

A callout box highlights "MongoDB Atlas Search makes it easy to build simple, integrated search capabilities on top of your data in the cloud." with a "Try the Beta Now" button.

At the bottom, system status is shown as "All Good" and the last login was at 89.129.120.35 on May 20, 2020. A "Upgrade" button is available for the cluster.

Mongo DB Stitch

Creando una aplicación Stitch

- Se crean en la aplicación web de MongoDB Stitch
- En un mismo lugar gestionaremos todas nuestras aplicaciones
- La web permite realizar todas la tareas relacionadas con la creación y gestión de la aplicación de forma online
- También es posible tener una copia de la aplicación en local utilizando STITCH-CLI, pero siempre será necesario desplegarla en la web

Mongo DB Stitch

Seleccionamos Stitch del menú y después ‘Create New Application’

The screenshot shows the MongoDB Atlas interface. The left sidebar has a 'Stitch' section highlighted. The main content area is titled 'Stitch Applications' and features a central icon with a database, mobile phone, lock, lightning bolt, and plug. Below the icon, the text reads: 'Build your application with Stitch, our backend as a service. Stitch manages data manipulation, integrations, and infrastructure so you can focus on building your app.' A green button labeled 'Create New Application' is visible. At the bottom, there is a note about needing an active cluster running MongoDB 3.4 or greater, and a link to 'Learn more about Stitch'. The top navigation bar shows the URL 'cloud.mongodb.com/v2/5e7c744a2cf0085c5f04ac#applications'.

Applications | Atlas: MongoDB At + - X

cloud.mongodb.com/v2/5e7c744a2cf0085c5f04ac#applications

mongoDB. Atlas All Clusters

Please set your time zone Usage This Month:\$0.00 details Preferences Luis Ramón Álvarez González

CONTEXT

Project 0 > PROJECT 0

ATLAS

- Clusters
- Data Lake BETA

SECURITY

- Database Access
- Network Access
- Advanced

PROJECT

- Access Management
- Activity Feed
- Alerts 0
- Integrations
- Settings

SERVICES

- Charts
- Stitch

Help Docs Support

System Status: All Good Last Login: 89.129.120.35
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Stitch Applications

Build your application with Stitch, our backend as a service.

Stitch manages data manipulation, integrations, and infrastructure so you can focus on building your app.

Create New Application

You will need an active cluster running MongoDB 3.4 or greater.
[Learn more about Stitch](#)

Mongo DB Stitch

Indicamos un nombre para la aplicación y pulsamos 'Create'

The screenshot shows a web browser window for MongoDB Atlas. The URL is cloud.mongodb.com/v2/5e7c744a2cf0085c5f04ac#applications/createApp. The main interface is titled "Stitch Applications" under "PROJECT 0". A modal dialog box is open, titled "Create a new application". The "Application Name" field contains "BlogTutorial". The "Link to Cluster" section shows a dropdown menu set to "Cluster0". A note states: "Note: Stitch is currently only located in select AWS regions. Linking it to Atlas clusters in other regions may result in lower performance." The "Stitch Service Name" field contains "mongodb-atlas". Under "Select a Deployment Model", the "Global" option is selected. In the "Select a Primary Region" section, "Virginia (us-east-1)" is chosen. At the bottom right of the modal are "Cancel" and "Create" buttons.

Mongo DB Stitch

Vista inicial de la aplicacion Stitch

The screenshot shows the MongoDB Stitch application dashboard. At the top, there's a navigation bar with tabs for "Getting Started" (selected), "Clusters", "Rules", "GraphQL BETA", "SDKs", "Users", "Functions", "Triggers", "3rd Party Services", "Values & Secrets", "Deploy", "Hosting", "Logs", "Settings", "Push Notifications", and "Documentation". Below the navigation, the main content area has a title "Welcome to Stitch!" and a section titled "Introducing GraphQL" which says "Stitch can now automatically create a full GraphQL API for your MongoDB data, and makes it simple to integrate authentication and data access rules. To get started, generate a schema for your data or check out our documentation." It includes "Learn More" and "Get Started" buttons. The next section, "Usage Metrics", shows usage from 4/1/20 - 5/1/20. It includes three cards: "Data Transfer (GBs)" (25.0GB FREE TIER REMAINING, 0.0GB TRANSFER), "Compute (GB·s)" (100.0K FREE TIER REMAINING, 0.0K GB·S USED), and "Total Requests" (1.00M FREE TIER REMAINING, 0.00M REQUESTS USED). The final section, "Getting Started", has a step "1 Turn on Authentication" with the sub-instruction "Let's turn on an authentication method for your app, so that users have a way to log in." A green circular icon with a white speech bubble is in the bottom right corner.

Mongo DB Stitch

Aplicaciones MongoDB Stitch

- Gestión de usuarios
- Stitch QueryAnywhere
- Clientes de una aplicación Stitch
- Stitch collection rules
- Stitch Functions
- Stitch Triggers

Mongo DB Stitch

Gestión de usuarios

- El acceso a los datos en una aplicación MongoDB Stitch se basa en reglas que dan permisos a los usuarios
- Esas reglas otorgan los permisos con un grano muy fino
 - A nivel global
 - A nivel de colección
 - A nivel de documento
 - A nivel de propiedad de un documento
- La gestión de los usuarios y la autenticación es delegada en la aplicación Stitch

Mongo DB Stitch

Gestión de usuarios, proveedores de autenticación

- Son servicios que guardan información sobre los usuarios y permiten verificar su identidad.
- Pueden proporcionar información adicional de cada usuario. Por ejemplo: correo electrónico, fecha de nacimiento, idioma preferido, etc
- Una aplicación MongoDB Stitch debe disponer de al menos un proveedor de autenticación.
- Varios proveedores de autenticación permiten flexibilizar los modos de autenticarse. Por ejemplo: un usuario podría autenticarse con un usuario y contraseña o con su cuenta de Google

Mongo DB Stitch

Gestión de usuarios, proveedores de autenticación

- Anonymous: Autenticación sin credenciales
 - Para cuando no necesitamos usuarios
- Email/password
 - Guarda los usuarios en una colección de nuestra base de datos
 - Gestiona la creación de los usuarios y la autenticación de los mismos
 - Implementa los procedimientos para el cambio de password
- API key

Mongo DB Stitch

Gestión de usuarios, proveedores de autenticación

- Custom JWT: La autenticación se realiza a través de un token generado fuera de MongoDB Stitch
- Custom function: Permite definir cualquier tipo de autenticación, proporcionando nosotros la lógica y ejecutándola Stitch
- Apple ID oauth-2
 - Delega la autenticación en Apple
- Google oauth-2
 - Delega la autenticación en Google
- Facebook oauth-2
 - Delega la autenticación en Facebook

Mongo DB Stitch

Gestión de usuarios, cuentas de usuario

- Representan a un usuario de nuestra aplicación Stitch
- Tiene un id único
- Pueden tener asociada información extra dependiendo de nuestras necesidades
- Están asociadas mínimo a proveedor de autenticación
- El usuario es un documento en una colección
- Cuando se procesa una petición disponemos de un objeto user que lo representa

Mongo DB Stitch

Gestión de usuarios, objeto usuario

```
{  
    "id": "<Unique User ID>",  
    "type": "<User Type>",  
    "data": {  
        "<Metdata Field>": <Value>,  
        ...  
    },  
    "custom_data": {  
        "<Custom Data Field>": <Value>,  
        ...  
    },  
    "identities": [  
        {  
            "id": <Unique Identity ID>,  
            "provider_type": "<Authentication Provider>",  
            "data": {  
                "<Metdata Field>": <Value>,  
                ...  
            }  
        }  
    ]  
}
```

Mongo DB Stitch

Gestión de usuarios, cuentas de usuario

- Id: cadena de texto con el ObjectId del documento
- Type: tipo de usuario
 - normal: un usuario de la aplicación
 - Server: un proceso del servidor
 - System: Un usuario sin restricciones
- Data: Un document que recopila la información del usuario aportada por los proveedores de autenticación
- Custom-data: Un documento extraído de nuestra colección de usuarios con información relativa a la aplicación
- Identities: Lista de proveedores de autenticación asociados al usuario

Mongo DB Stitch

Gestión de usuarios, sesión de usuario

- Cuando un usuario se autentica Stitch crea un token de autenticación que es enviado de vuelta al cliente
- El SDK se encarga automáticamente de guardarla y reenviarlo en las peticiones posteriores
 - En JS se guarda en el Local Storage
 - En Android en Shared Preferences
 - En iOS en el KeyChain
- El token tiene una validez de 30 minutos y se refresca
- Puede invalidarse en cualquier momento invocando la función 'logout'

Mongo DB Stitch

Gestión de usuarios, Anonymous Auth. Provider

- Hay un unico usuario
- Las aplicaciones cliente deben seguir autenticándose, pero sin credenciales

Mongo DB Stitch

Activamos el proveedor de autenticación para usuarios anónimos

The screenshot shows the MongoDB Stitch Authentication interface. On the left, there's a sidebar with various project management and security options like Clusters, Rules, and SDKs. The 'Users' option is highlighted with a yellow box. The main area is titled 'Users' and has tabs for 'Users', 'Custom User Data', and 'Providers'. The 'Providers' tab is also highlighted with a yellow box. Below it, there's a table with columns for 'Provider', 'Enabled', and 'Edit'. The first row, 'Allow users to log in anonymously', is selected and highlighted with a yellow box. It shows 'Off' under 'Enabled' and an 'EDIT' button. Other providers listed include Email/Password, Facebook, Google, Apple, API Keys, Custom JWT Authentication, and Custom Function Authentication, all currently set to Off.

Provider	Enabled	Edit
Allow users to log in anonymously	Off	EDIT
Email/Password	Off	EDIT
Facebook	Off	EDIT
Google	Off	EDIT
Apple	Off	EDIT
API Keys	Off	EDIT
Custom JWT Authentication	Off	EDIT
Custom Function Authentication	Off	EDIT

Mongo DB Stitch

Habilitamos el proveedor y pulsamos 'Save'

The screenshot shows the MongoDB Stitch web interface. At the top, there's a navigation bar with tabs for 'Access Manager', 'Support', and 'Billing'. Below that, a sub-navigation bar shows 'Project 0' selected, along with links for 'Atlas', 'Stitch', and 'Charts'. On the left, a sidebar lists 'Stitch Apps' (with 'BlogTutorial' selected), 'DATA ACCESS & SECURITY' (with 'Clusters', 'Rules', 'SDKs', and 'Users' selected), 'BUILD' (with 'Functions', 'Triggers', 'GraphQL BETA', '3rd Party Services', and 'Values & Secrets'), and 'MANAGE' (with 'Deploy' and 'Hosting'). The main content area is titled 'Auth Providers > Edit anon-user' under 'Stitch Apps'. It shows three tabs: 'Users', 'Custom User Data', and 'Providers'. The 'Providers' tab is active, displaying a section titled 'Provider Enabled' with the sub-instruction 'Allow your users to sign in with this authentication method.' A blue 'ON' toggle switch is turned on. At the bottom right of this section are 'Discard Changes' and 'Save' buttons. A green circular icon with a white message icon is located in the bottom right corner of the main content area.

Mongo DB Stitch

Gestión de usuarios, Email/Password Auth. Provider

- Múltiples usuarios
- Gestionados por la aplicación Stitch
- Ya tiene implementado el procedimiento para que las aplicaciones cliente añadan usuarios
- Implementa los procesos para el cambio de contraseña y la baja de usuarios
- Tambien pueden administrarse los usuarios desde la aplicación Stitch. Es útil en tiempo de desarrollo o aplicaciones en las que el número de usuarios está muy restringido y controlado

Mongo DB Stitch

Activamos el proveedor de autenticación para usuarios con credenciales

The screenshot shows the MongoDB Stitch Authentication interface. The URL in the browser is `stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/auth/providers`. The main navigation bar includes 'Access Manager', 'Support', 'Billing', and user 'Luis Ramón'. Below it, 'Project 0' is selected, along with 'Atlas' and 'Stitch' tabs. A sidebar on the left lists 'BlogTutorial' under 'DATA ACCESS & SECURITY', and 'Users' under 'BUILD'. The 'Users' section is highlighted with a green background. The main content area is titled 'Users' and shows two tabs: 'Users' and 'Providers'. The 'Providers' tab is selected and highlighted with a yellow box. Under 'Providers', there is a table with columns 'Provider', 'Enabled', and 'Edit'. The table rows include: 'Allow users to log in anonymously' (Enabled: Off, Edit), 'Email/Password' (Enabled: Off, Edit, highlighted with a yellow box), 'Facebook' (Enabled: Off, Edit), 'Google' (Enabled: Off, Edit), 'Apple' (Enabled: Off, Edit), 'API Keys' (Enabled: Off, Edit), 'Custom JWT Authentication' (Enabled: Off, Edit), and 'Custom Function Authentication' (Enabled: Off, Edit). A large green button 'Add New User' is located at the top right of the 'Users' table.

Provider	Enabled	Edit
Allow users to log in anonymously	Off	EDIT
Email/Password	Off	EDIT
Facebook	Off	EDIT
Google	Off	EDIT
Apple	Off	EDIT
API Keys	Off	EDIT
Custom JWT Authentication	Off	EDIT
Custom Function Authentication	Off	EDIT

Mongo DB Stitch

Activamos el proveedor de autenticación para usuarios con credenciales

The screenshot shows the MongoDB Stitch web interface for managing authentication providers. The URL in the browser is `stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/auth/providers/local-userpass`. The main navigation bar includes 'Access Manager', 'Support', 'Billing', 'All Clusters', and a user dropdown for 'Luis Ramón'. Below the navigation is a secondary navigation bar with 'Project 0', 'Atlas', 'Stitch' (which is highlighted in green), and 'Charts'. On the left, a sidebar lists 'Stitch Apps' (with 'BlogTutorial' selected) and various 'DATA ACCESS & SECURITY' options like 'Clusters', 'Rules', 'SDKs', and 'Users' (which is also highlighted in green). The main content area is titled 'Users' and has tabs for 'Users', 'Custom User Data', and 'Providers'. The 'Providers' tab is active, showing a section titled 'Provider Enabled' with a toggle switch set to 'ON'. Below this, under 'USER CONFIRMATION', there's a section for 'User Confirmation Method' with three radio button options: 'Send a confirmation email', 'Run a confirmation function', and 'Automatically confirm users', where the third option is selected. Under 'PASSWORD RESET', there's a section for 'Password Reset Method' with two radio button options: 'Send a password reset email' and 'Run a password reset function', where the second option is selected. A large green 'Add New User' button is located on the right side of the 'Users' section.

Mongo DB Stitch

Activamos el proveedor de autenticación para usuarios con credenciales

The screenshot shows the MongoDB Stitch web interface. At the top, there's a navigation bar with tabs for 'Access Manager', 'Support', and 'Billing'. Below that, a main navigation bar includes 'Project 0', 'Atlas', 'Stitch' (which is highlighted in green), and 'Charts'. On the far right of the main bar are icons for user management, export, and notifications.

In the center, under the 'Stitch' tab, is the 'Users' section. A green button at the top right says 'Add New User'. Above the table, there are filters for 'CONFIRMED' and 'PENDING' status, 'Providers (All)', 'Enabled (Any)', a search bar 'Find a user by ID...', and an 'Apply' button. The table itself has columns for 'Name', 'Id', 'User Type', 'Providers', 'Created Date (UTC)', 'Last Login Date (UTC)', 'User Status', 'Enabled', and 'Actions'. A message at the bottom of the table says 'No users found.'

On the left side, there's a sidebar with sections for 'APP ID' (containing 'blogtutorial-elfuh'), 'DATA ACCESS & SECURITY' (with 'Clusters' and 'Rules' options), and 'BUILD' (with 'Functions', 'Triggers', 'GraphQL BETA', '3rd Party Services', and 'Values & Secrets'). The 'Users' section in the sidebar is currently selected and highlighted in blue.

Mongo DB Stitch

Activamos el proveedor de autenticación para usuarios con credenciales

The screenshot shows the MongoDB Stitch Authentication interface. The URL in the browser is stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/auth/providers/local-userpass. The left sidebar has a tree structure with 'BlogTutorial' selected under 'Stitch Apps'. The main area is titled 'Users' and shows the 'Providers' tab selected. A green 'Provider Enabled' section has an 'ON' toggle switch. Under 'USER CONFIRMATION', there's a 'User Confirmation Method' section with three radio button options: 'Send a confirmation email' (unselected), 'Run a confirmation function' (unselected), and 'Automatically confirm users' (selected). Under 'PASSWORD RESET', there's a 'Password Reset Method' section with two radio button options: 'Send a password reset email' (unselected) and 'Run a password reset function' (selected). At the bottom, there's a 'Function' section with a note about passing parameters and a 'Select a function...' dropdown.

MongoDB Stitch - Authentication

stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/auth/providers/local-userpass

Stitch Apps

Auth Providers > Edit local-userpass

BlogTutorial

APP ID

blogtutorial-e1fuh

DATA ACCESS & SECURITY

Clusters

Rules

SDKs

Users

Custom User Data

Providers

Provider Enabled

Allow your users to sign in with this authentication method.

ON

USER CONFIRMATION

User Confirmation Method

Send a confirmation email

Run a confirmation function

Automatically confirm users

PASSWORD RESET

Password Reset Method

Send a password reset email

Run a password reset function

Function

This function will be passed two parameters: an object containing a tokenId, token, username, and password, and any other arguments that the client SDK reset function is called with.

Selecting a new function will allow you to edit a provided default function. [Learn more about writing a reset password function](#)

Select a function...

Mongo DB Stitch

Activamos el proveedor de autenticación para usuarios con credenciales

The screenshot shows the MongoDB Stitch Authentication interface. On the left, there's a sidebar with navigation links: GraphQL BETA, 3rd Party Services, Values & Secrets, MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), HELP (Documentation, Tutorials, Feature Requests), and a feedback form with a green 'Send' button.

The main content area is titled "PASSWORD RESET". It has a sub-section "Password Reset Method" with two options: "Send a password reset email" (radio button) and "Run a password reset function" (radio button, which is selected). Below this is a "Function" section. It explains that the function will be passed two parameters: tokenId, token, username, and password. It also notes that selecting a new function allows editing a provided default function, with a link to learn more about writing a reset password function.

A "New Function" button is visible. In the "Function Name" field, the name "resetFunc" is entered. Below this is another "Function" section with a note that the following function will be executed when a user resets their password. It states that the default function has no side effects and can be edited later.

The code editor shows the following JavaScript code:

```
1  /*
2   * This function will be run when the client SDK 'callResetPasswordFunction' and is called with an object parameter
3   * which contains four keys: 'token', 'tokenId', 'username', and 'password', and additional parameters
4   * for each parameter passed in as part of the argument list from the SDK.
5   *
6   * The return object must contain a 'status' key which can be empty or one of three string values:
7   *   'success', 'pending', or 'fail'
8   *
9   * 'success': the user's password is set to the passed in 'password' parameter.
10  *
11  * 'pending': the user's password is not reset and the UserPasswordAuthProviderClient 'resetPassword' function would
12  * need to be called with the token, tokenId, and new password via an SDK. (see below)
13  *
14  */
15  const emailPassClient = Stitch.defaultAppClient.auth
```

Mongo DB Stitch

Activamos el proveedor de autenticación para usuarios con credenciales

The screenshot shows the MongoDB Stitch web interface. The top navigation bar includes 'MongoDB Stitch - Authentication', a '+' button, and a URL 'stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/auth/users'. The main menu on the left has sections for 'Stitch Apps', 'Users', 'APP ID', 'DATA ACCESS & SECURITY', 'BUILD', and 'MANAGE'. The 'Users' section is currently selected. A modal dialog titled 'Add New User' is open in the center. It contains a note: 'Edits to this page will be updated in your application immediately and will not be included as draft changes.' Below this are three input fields: 'Email Address' (containing 'falso@no.es'), 'Password' (containing '*****'), and 'Confirm Password' (containing '*****'). At the bottom right of the modal are 'Cancel' and 'Create' buttons. The background shows a list of users with columns for 'Name', 'Status', 'Enabled', and 'Actions'.

Mongo DB Stitch

Activamos el proveedor de autenticación para usuarios con credenciales

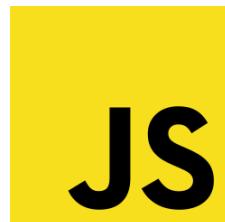
The screenshot shows the MongoDB Stitch Authentication interface. At the top, there's a navigation bar with tabs for 'Access Manager', 'Support', and 'Billing'. Below that is a main header with 'Project 0', 'Atlas', 'Stitch' (which is selected), and 'Charts'. A green banner at the top indicates a successful deployment on 04/24/2020 at 13:19:14. On the left, a sidebar lists 'BlogTutorial' under 'Stitch Apps', and sections for 'DATA ACCESS & SECURITY' (Clusters, Rules, SDKs) and 'BUILD' (Functions, Triggers, GraphQL BETA, 3rd Party Services, Values & Secrets). The main content area is titled 'Users' and shows a table of users. The table has columns for Name, Id, User Type, Providers, Created Date (UTC), Last Login Date (UTC), User Status, Enabled, and Actions. One user is listed: 'falso@no.es' with Id '5ea2ec03a011e8524...', User Type 'normal', Providers 'Username/Pas...', Created Date '04/24/2020 13:39:15', and Status 'Confirmed'. There are buttons for 'Add New User', 'CONFIRMED' (selected), 'PENDING', 'Find a user by ID...', 'Apply', and 'LOAD MORE'.

Name	Id	User Type	Providers	Created Date (UTC)	Last Login Date (UTC)	User Status	Enabled	Actions
falso@no.es	5ea2ec03a011e8524...	normal	Username/Pas...	04/24/2020 13:39:15	--	Confirmed	On	VIEW ACTIVITY ...

Mongo DB Stitch

Stitch QueryAnywhere

- Son las aplicaciones cliente las que ejecutan directamente las consultas
- El servidor es la aplicación Stitch, desplegada en la nube y accedida como un servicio
- Las aplicaciones cliente se ejecutan en el navegador o en un dispositivo móvil



iOS



Mongo DB Stitch

Stitch QueryAnywhere, Collection Rules

- Las aplicaciones tradicionales exponen un api a los clientes
- Esta api está asociado a una lógica que ejecuta las consultas a la base de datos en nombre de los clientes
- No exponen, por lo tanto, directamente la base de datos al exterior
- Con Stitch los clientes ejecutan directamente las consultas
- Se definen unas reglas que indican que datos se pueden ver y cuales no
- Estas reglas también indican que documentos pueden insertarse/modificarse/borrarse
- Esas reglas tienen en cuenta quién es el cliente
- Las reglas se aplican de forma transparente:
 - Los clientes envían consultas sin conocer específicamente las reglas

Mongo DB Stitch

Para añadir una colección, desde la aplicación Stitch entramos en ‘Rules’ y pulsamos ‘Add Collection’

The screenshot shows the MongoDB Stitch Rules interface. On the left, there's a sidebar with navigation links: Back to Atlas, BlogTutorial (selected), APP ID (with a dropdown for 'blogtutorial-woeat'), DATA ACCESS & SECURITY (Clusters, Rules selected), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The main area has a title 'Rules' with a lock icon. It shows a list of collections under 'mongodb-atlas': 'blog'. Below the list, there's a green icon of two stacked cylinders with a lock, followed by the text 'Allow access to your data.' and 'Stitch prevents access to your data by default. Create rules to specify the data that users can access.' A green button at the bottom right says '+ Add Collection'. At the bottom center, there's a link 'Learn more about rules.' with an info icon.

Mongo DB Stitch

Indicamos un nombre para la colección

The screenshot shows the MongoDB Stitch interface with the 'Rules' tab selected. On the left, there's a sidebar with sections for APP ID, DATA ACCESS & SECURITY, BUILD, MANAGE, and HELP. Under APP ID, 'blogtutorial-elfuh' is selected. In the main area, under 'DATA ACCESS & SECURITY', 'Clusters' is expanded, showing 'mongodb-atlas' which contains a 'blog' collection. A modal window titled 'Add New Collection' is open, prompting the user to enter a database name and collection name. The 'Database Name' field is set to 'blog' and the 'Collection Name' field is set to 'comments'. Below these fields, there's a section for selecting a permissions template, currently set to 'No template'. Under 'Role: Default', four checkboxes are checked: 'Read (Field)', 'Write (Field)', 'Insert (Document)', and 'Delete (Document)'. At the bottom right of the modal are 'Cancel' and 'Add Collection' buttons.

Mongo DB Stitch

Cuando creamos una colección podemos seleccionar una plantilla para securizar el acceso a los documentos en ella almacenados

Es un buen punto de partida que más adelante se puede detallar

The screenshot shows the 'Add New Collection' dialog box. On the left, there's a sidebar titled 'Collections' with a 'Show all collections' toggle switch. Below it, under 'mongodb-atlas', there are two collections: 'blog' and 'comments'. The main area has a title 'Add New Collection' with a back arrow. It contains fields for 'Database Name' (a dropdown menu) and 'Collection Name' (another dropdown menu). Below these is a section titled 'Choose a Permissions Template' with a sub-instruction: 'Templates set default values for users roles' read and write permissions to their data and all other data in this collection. You may edit the individual Roles at any time.' A link 'Learn more about these templates.' is provided. A dropdown menu shows five options: 'No template' (selected), 'No template' (disabled), 'Users can only read and write their own data', 'Users can read all data, but only write their own data', and 'Users can only read all data'. At the bottom right are 'Cancel' and 'Add Collection' buttons, and a small circular icon with a speech bubble.

Mongo DB Stitch

Una vez creada podemos indicar los campos que incluirán los documentos

The screenshot shows the MongoDB Stitch Rules configuration interface. The left sidebar navigation includes sections for APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY (Clusters, Rules - selected), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The main content area displays the 'Rules' configuration for the 'blog.comments' collection under the 'MONGODB-ATLAS' section. The 'Permissions' tab is active, showing a single role named 'default'. The 'Fields' section has 'Read' and 'Write' checkboxes for individual fields, both of which are unchecked. The 'All Additional Fields' section also has 'Read' and 'Write' checkboxes, both of which are unchecked. A note at the bottom right of the permissions table says 'Learn how to define roles and permissions for this collection.' There are 'REMOVE CONFIGURATION' and 'SAVE' buttons at the top right of the main panel, along with an 'ADVANCED MODE' link.

Mongo DB Stitch

Por las características de MongoDB incluir los campos es opcional pero permite afinar las reglas de acceso

The screenshot shows the MongoDB Stitch Rules interface. On the left, a sidebar navigation includes sections for APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY (Clusters, Rules selected), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The main area displays a "Rules" configuration for the "MONGDB-ATLAS" project. It shows a tree view of collections: "mongodb-atlas" (selected) > "blog" > "comments". The "Permissions*" tab is active, showing a table for the "blog.comments" collection. The table has columns for "Fields" (comment, user, All Additional Fields), "Read" (checkboxes), and "Write" (checkboxes). A "default" role is listed at the top. Buttons for "REMOVE CONFIGURATION", "DISCARD CHANGES", and "SAVE" are visible. A "NEW ROLE" button is also present. A note at the bottom right says "Learn how to define roles and permissions for this collection."

Mongo DB Stitch

Stitch QueryAnywhere: Clientes JS

- La característica más destacable de MongoDB Stitch
- Desde una aplicación que se ejecuta en el navegador
 - Ejecutamos consultas a la base de datos
 - Invocamos funciones alojadas en el servidor
 - Independiente del framework JS utilizado
 - Nos desentendemos de la administración de la base de datos y el servidor
- También desde una aplicación Node.JS



Mongo DB Stitch

Stitch QueryAnywhere: Clientes JS desde el navegador

- Librerías necesarias:

```
<script src="https://s3.amazonaws.com/stitch-sdks/js/bundles/4/stitch.js"></script>
```

- Creando un cliente:

```
const client = stitch.Stitch.initializeAppClient('<app-id>');
```

- Conectando con una base de datos:

```
const db = client.getServiceClient(stitch.RemoteMongoClient.factory,  
                                  'mongodb-atlas')  
      .db('<DATABASE>');
```

Mongo DB Stitch

Stitch QueryAnywhere: Clientes JS desde el navegador

- Autenticación (Usuario anónimo):

```
client.auth.loginWithCredential(new stitch.AnonymousCredential())
.then(user => {
    console.log("Usuario:"+user)
}).catch(err => {
    console.error(err)
});
```

- Ejecución de una consulta:

```
db.collection('<COLLECTION>').find({}, { limit: 100}).asArray()
.then(docs => {
    console.log("Found docs", docs)
}).catch(err => {
    console.error(err)
});
```

Mongo DB Stitch

Stitch QueryAnywhere: Clientes JS desde Node.js

- NPM

```
npm install mongodb-stitch-server-sdk
```

```
npm install mongodb-stitch-core-services-mongodb-remote
```



- Require

```
const {  
    Stitch,  
    ServerApiKeyCredential,  
    RemoteMongoClient,  
} = require('mongodb-stitch-server-sdk');
```

Mongo DB Stitch

Stitch QueryAnywhere: Clientes JS desde Node.js

- Autenticación (Usuario anónimo), igual que desde el navegador:

```
client.auth.loginWithCredential(new stitch.AnonymousCredential())
.then(user => {
    console.log("Usuario:"+user)
}).catch(err => {
    console.error(err)
});
```

- Ejecución de una consulta, igual que desde el navegador

```
db.collection('<COLLECTION>').find({}, { limit: 100}).asArray()
.then(docs => {
    console.log("Found docs", docs)
}).catch(err => {
    console.error(err)
});
```

Mongo DB Stitch

Stitch Functions

- Permiten definir la lógica en el lado del servidor
- Se programan en JavaScript ES6
- Pueden utilizarse módulos de Node.js
- Son invocadas desde las aplicaciones cliente o desde otras funciones
- Los valores devueltos se codifican como Extended JSON

Casos de uso

- Guardar lógica de negocio que no queremos en los clientes
 - Por su importancia para el negocio
 - Para evitar duplicarla en distintos clientes
- Implementar reglas personalizadas de acceso a los datos
- Incluir código para interactuar con otros servicios inaccesibles desde los clientes

Mongo DB Stitch

Stitch Functions

Limitaciones

- El tiempo máximo de ejecución de la función será de 90 segundos
- Podrán utilizar como máximo 256Mb de memoria
- Los módulos de Node.js que se utilicen deberán estar programados con EcmaScript 5
- Solo podrán abrirse hasta cinco sockets durante la ejecución de la función

Mongo DB Stitch

Para crear una función seleccionamos primero la aplicación Sticht
Entramos en ‘Functions’ y pulsamos ‘Create New Function’

The screenshot shows the MongoDB Stitch Functions interface. At the top, there's a navigation bar with a back arrow, a refresh icon, and a URL: `stitch.mongodb.com/groups/5e7c744a2cfcf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/functions`. Below the bar, the title 'MongoDB.Stitch' is displayed. The main area has a header 'Functions' with tabs for 'Functions' (which is active), 'Dependencies' (BETA), and 'Data Access & Security'. On the left, a sidebar under 'BUILD' has 'Functions' selected (highlighted with a yellow box). Other options in the sidebar include 'Triggers', '3rd Party Services', and 'Values & Secrets'. Under 'MANAGE', options like 'Deploy', 'Hosting', 'Logs', 'Settings', and 'Push Notifications' are listed. A 'HELP' section at the bottom contains a link to the same URL as the page. In the center, there's a green cloud icon with curly braces inside it. Below the icon, the text 'This application has no functions' is displayed. A green 'Create New Function' button is located at the bottom right of this central area, also highlighted with a yellow box.

Mongo DB Stitch

Escogemos un nombre para la función

The screenshot shows the MongoDB Stitch Functions creation interface. The URL in the browser is stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/functions/new.

Left Sidebar:

- APP ID: blogtutorial-elfuh
- DATA ACCESS & SECURITY
 - Clusters
 - Rules
 - GraphQL BETA
 - SDKs
 - Users
- BUILD
 - Functions** (selected)
 - Triggers
 - 3rd Party Services
 - Values & Secrets
- MANAGE
 - Deploy
 - Hosting
 - Logs
 - Settings
 - Push Notifications
- HELP
 - Documentation

Page Content:

Function Editor (selected) | **Settings***

Name: funcionEjemplo

Authentication: Application Authentication (radio button selected, others: System, User Id, Script)

Log Function Arguments: ON

AUTHORIZATION: (dropdown menu open, showing '1')

Mongo DB Stitch

Escogiendo la autenticación que se aplicará para el acceso a la función

Function Editor **Settings**

Name

This is the name of your function. You can use this name to call your function from a client.

funcionEjemplo

Authentication

This is where you can choose the authentication method for your function.

Application Authentication ⓘ
 System ⓘ
 User Id ⓘ
 Script ⓘ

- Application: El código de la función se ejecuta con los permisos del usuario que se ha autenticado en la aplicación cliente
- System: La función se ejecuta con un usuario con permisos completos sobre la base de datos, independientemente de quien la invoque
- User Id: La función se ejecuta con un usuario cuyo id se indica (siempre será el mismo y tendrá unos permisos concretos)
- Script: El usuario con el que se ejecuta la función se calcula con la ejecución de un script JavaScript

Mongo DB Stitch

Escogiendo la visibilidad de la función

Private

If private, this function may be called from incoming webhooks, rules, and other functions defined in the Stitch console. Private functions may not be called from Stitch client application.



- Off (por defecto): La función es accesible desde otras funciones de la aplicación, reglas y por las aplicaciones cliente
- On: La función es accesible desde otras funciones de la aplicación, reglas pero NO por las aplicaciones cliente

Mongo DB Stitch

Escribimos el código de la función

The screenshot shows the MongoDB Stitch Functions editor interface. The left sidebar includes sections for APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL BETA, SDKs, Users), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The main area displays a code editor titled "funcionEjemplo". The code is as follows:

```
1 * exports = function(arg){
2 *   /*
3 *     Accessing application's values:
4 *     var x = context.values.get("value_name");
5 *
6 *     Accessing a mongodb service:
7 *     var collection = context.services.get("mongodb-atlas").db("dbname").collection("coll_name");
8 *     var doc = collection.findOne({owner_id: context.user.id});
9 *
10 *     To call other named functions:
11 *     var result = context.functions.execute("function_name", arg1, arg2);
12 *
13 *     Try running in the console below.
14 */
15 * return { eco: arg };
16 };
```

The code editor has tabs for "Function Editor*" and "Settings". Below the code editor are buttons for "Console" and "Result". At the bottom right, there are buttons for "System User" (with a user icon), "Change User" (with a person icon), "Run" (with a play icon), and "Clear Result" (with a trash bin icon). A green circular button with a white envelope icon is also present. The status bar at the bottom right indicates "Ln 15 Col 23".

Mongo DB Stitch

Código de una función

Dentro de una función nos encontramos

- Código JavaScript ESTANDARD
- Lógica de control
- Lógica de negocio
- Llamadas a MongoDB
- Llamadas a otras funciones
- Llamadas a otros servicios

Mongo DB Stitch

Function Context

Cuando estamos desarrollando el código de una función necesitamos una serie de recursos, accesibles a través del objeto implícito ‘context’

- Servicios externos
- Valores globales
- Otras funciones de nuestra aplicación
- Usuario que invoca la función
- Request recibido

Mongo DB Stitch

Function Context: Servicios

Nuestra aplicación Stitch puede necesitar acceder a servicios externos.

- El cluster MongoDB Atlas (el servicio más importante)
- Servicios AWS
- Servicio Twilio (servicio de mensajería telefónica)
- Servicios de mensajería
- Servicios de log

Accedemos a un servicio con:

```
context.services.get(serviceName)
```

Mongo DB Stitch

Function Context: Servicios

Ejemplo de la invocación de un servicio externo desde una función

En este caso el servicio es la base de datos MongoDB. El nombre por defecto de este servicio es ‘mongodb-atlas’

```
exports = function(arg){  
    const mongodb = context.services.get("mongodb-atlas");  
    const collection = mongodb.db("blog").collection("authors");  
    var result = collection.findOne({"author": arg});  
    return result;  
};
```

Mongo DB Stitch

Function Context: Funciones

Permite invocar otras funciones definidas en la aplicación.

Invocamos otra función con:

context.functions.execute(nombreFuncion, params)

Mongo DB Stitch

Function Context: Funciones

Ejemplo de invocación de una función dentro de la aplicación Stitch

```
//funcion sumar
exports = function(a, b) {
    return a+b;
};

//Otra función
exports = function(a, b) {
    return context.functions.execute("sumar", a, b);
};
```

Mongo DB Stitch

Function Context: Values y Secrets

Permite acceder a variables globales de la aplicación.

Es un objeto con la función 'get':

context.values.get(nombreValor/Secret)

Mongo DB Stitch

Function Context: Http

Disponemos en el contexto de la función de un cliente Http

- Lo usaremos para enviar peticiones http desde la función
- Esas peticiones irán dirigidas a otras aplicaciones/servicios

Es un objeto con funciones asíncronas para enviar peticiones GET, POST, PUT, PATCH, DELETE, HEAD, etc.

Se accede a él con

`context.values.http`

Mongo DB Stitch

Ejemplo de una petición get

```
exports = async function() {
  const response =
    await context.http.get({ url: "https://www.example.com/users" })
  return EJSON.parse(response.body.text());
};
```

Ejemplo de una petición post

```
exports = async function() {
  const response = await context.http.post({
    url: "https://www.example.com/messages",
    body: { msg: "This is in the body of a POST request!" },
    encodeBodyAsJSON: true
  })
  return EJSON.parse(response.body.text());
};
```

Mongo DB Stitch

Function Context: Propiedad User

Un objeto que representa al usuario en nombre del cuál se ejecuta la función

Se accede a él con

context.user

```
{  
  "id": <string>,  
  "type": <string>,  
  "data": <document>,  
  "identities": <array>  
}
```

Mongo DB Stitch

Function Context: Propiedad User

Propiedades del usuario

- Id: identificador del usuario en la base de datos
- type: puede tener tres valores
 - normal: el usuario que envía la petición desde la aplicación cliente
 - server: el usuario asociado a un proceso del servidor que se ha autenticado en la aplicación Stitch
 - system: el usuario es un usuario de sistema (no se les aplican las reglas de seguridad)
- data: un JSON con metadatos del usuario extraido de la colección de usuarios
- custom_data: JSON extraido de nuestra propia colección de usuarios, con toda la información que le hayamos querido asociar (opcional)
- identities: un array de proveedores de autenticación

Mongo DB Stitch

Function Context: Propiedad Request

Un objeto que representa la petición recibida en la aplicación Stitch.

Se accede a él con **context.request**

```
{  
  "remoteIPAddress": <string>,  
  "requestHeaders": <object>,  
  "webhookUrl": <string>,  
  "httpMethod": <string>,  
  "rawQueryString": <string>,  
  "httpReferrer": <string>,  
  "httpUserAgent": <string>,  
  "service": <string>,  
  "action": <string>  
}
```

Mongo DB Stitch

Invocando a una función desde el cliente JS

- Obtenemos un objeto cliente

```
const client = stitch.Stitch.initializeAppClient('<app-id>');
```

- Utilizamos 'callFuncion'. Los parámetros son
 - Nombre de la función en la aplicación Stitch
 - Array con los parámetros
- Devuelve una promesa

```
client.callFunction("sumar", [3, 4])
.then(result => {
  console.log(result)
});
```

Mongo DB Stitch

También podemos probar la función con un pequeño script y pulsando 'Run'

The screenshot shows the MongoDB Stitch Functions interface. On the left, there's a sidebar with navigation links: APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY, Clusters, Rules, GraphQL^{BETA}, SDKs, Users, BUILD (Functions selected), Triggers, 3rd Party Services, Values & Secrets, MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation, Tutorials, Feature Requests). The main area has tabs for Function Editor (selected) and Settings. The Function Editor contains the following code:

```
1 * exports = function(arg){
2 *   /*
3 *     Accessing application's values:
4 *     var x = context.values.get("value_name");
5 *
6 *     Accessing a mongodb service:
7 *     var collection = context.services.get("mongodb-atlas").db("dbname").collection("coll_name");
8 *     var doc = collection.findOne({owner_id: context.user.id});
9 *
10 *     To call other named functions:
11 *     var result = context.functions.execute("function_name", arg1, arg2);
12 *
13 *     Try running in the console below.
14 *   */
15 *   return { eco: arg };
16 };
```

Below the code editor, there are two tabs: Console and Result. The Console tab is active. A note says: "To Run the function:
- Select a user
- Type 'exports()' to run the function with no arguments
- Type 'exports(arg1, arg2, args...)' to run the function with arguments
- To run a saved function type 'context.functions.execute(<function-name-string>, args...)'
- Click 'Run function as'". The Result tab is empty. At the bottom right of the interface, there are buttons for System User, Change User, Run (which is highlighted with a yellow box), Clear Result, and a dropdown menu. The status bar at the bottom shows: Server Version: 6942efc5a8 UI Version: 3.43.2 JS SDK Version: 3.10.0.

Mongo DB Stitch

El resultado de la ejecución está en la pestaña ‘Result’

The screenshot shows the MongoDB Stitch Functions interface. The left sidebar has sections for APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL BETA, SDKs, Users), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation, Tutorials). The 'Functions' section is currently selected. In the center, there's a 'funcionEjemplo' function editor with tabs for Function Editor (selected) and Settings. The code editor contains the following JavaScript:

```
1 exports = function(arg){
2   /*
3     Accessing application's values:
4     var x = context.values.get("value_name");
5
6     Accessing a mongodb service:
7     var collection = context.services.get("mongodb-atlas").db("dbname").collection("coll_name");
8     var doc = collection.findOne({owner_id: context.user.id});
9
10    To call other named functions:
11    var result = context.functions.execute("function_name", arg1, arg2);
12
13    Try running in the console below.
14 */
15    return { eco: arg };
16}
```

The 'Result' tab at the bottom shows the execution output:

```
> ran on Sun Apr 12 2020 15:30:58 GMT+0200 (hora de verano de Europa central)
> took 377.258536ms
> result:
{
  "eco": "Hello world!"
}
> result (JavaScript):
EJSON.parse('{"eco":"Hello world!"}')
```

At the top right, there are buttons for No Changes and three dots. Below the result, there are buttons for System User, Change User, Run, Clear Result, and a dropdown.

Mongo DB Stitch

Stitch Values y Secrets

Son valores estáticos globales a la aplicación, accesibles desde cualquier elemento de la misma

- Funciones
- Reglas

Diferencias entre ellos

- Los values se exportan cuando se quiere desarrollar en local
- Los secrets nunca salen del servidor

Mongo DB Stitch

Entramos en la opción ‘Values & Secrets’ de nuestra aplicación

The screenshot shows the MongoDB Stitch application interface. The title bar reads "MongoDB Stitch - Values & Secrets". The URL in the address bar is "stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/values". The left sidebar has a tree view with "BlogTutorial" selected. Under "BlogTutorial", the "Values & Secrets" option is highlighted with a yellow box. Other options like "Clusters", "Rules", "GraphQL BETA", "SDKs", and "Users" are also listed. The main content area is titled "Values & Secrets" and shows a message: "This application has no values". It includes a sub-instruction: "Values are named constants that you can use in rules and functions using the %values expansion." A green "Create New Value" button is centered below this text. A small icon of three overlapping files labeled "STR", "BOOL", and "INT" is positioned above the message. The bottom of the sidebar has sections for "MANAGE" (Deploy, Hosting, Logs, Settings, Push Notifications) and "HELP" (Documentation).

Mongo DB Stitch

Damos un nombre al valor, escogemos entre Plain Text o Secret y pulsamos 'Save'

The screenshot shows the MongoDB Stitch web interface for creating a new value. The URL is stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/values/new. The left sidebar has sections for APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL BETA, SDKs, Users), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets, which is selected and highlighted in green), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The main area is titled 'New Value' under 'Values > Create Value'. It has fields for 'Value Name' (valorGlobal) and 'Value Type' (Plain Text, which is selected with a radio button). Below these, there's a table with a single row labeled 'Value' containing the value '1 12345'. At the bottom right are 'Cancel' and 'Save' buttons, with 'Save' being highlighted by a yellow box.

Mongo DB Stitch

El valor será un documento JSON

The screenshot shows the MongoDB Stitch web interface. The top navigation bar includes a logo, a search bar, and a user icon. Below the header, a green banner displays a success message: "04/16/2020 09:44:56 Deployment was successful!" with a "VIEW DEPLOYMENT HISTORY" button.

The main content area is titled "valorGlobal". On the left, a sidebar lists various app settings: APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL BETA, SDKs, Users), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets - highlighted in green), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP.

The "Values & Secrets" section contains a "Value Name" field set to "valorGlobal" and a "Value Type" section with "Plain Text" selected. The "Value" field contains the following JSON document:

```
1 {  
2   "$numberInt": "12345"  
3 }
```

A yellow box highlights the JSON code in the "Value" field. In the bottom right corner of the page, there is a "No Changes" button and a circular icon with a white envelope.

Mongo DB Stitch

A partir de ahora se podrá acceder al valor/secret desde cualquier regla o función

The screenshot shows the MongoDB Stitch web interface. The URL in the browser is `stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/values`. The main content area is titled "Values & Secrets". A green banner at the top indicates a successful deployment on "04/16/2020 09:44:56". The "Values" tab is selected, showing a table with one row:

Value Name	Last Modified	Actions
valorGlobal	04/16/2020 09:43:54	...

Below the table is a green button labeled "Add a Value". On the left side, there is a sidebar with navigation links grouped under categories: APP ID, DATA ACCESS & SECURITY, BUILD, MANAGE, and HELP.

- APP ID**: blogtutorial-elfuh
- DATA ACCESS & SECURITY**: Clusters, Rules, GraphQL^{BETA}, SDKs, Users
- BUILD**: Functions, Triggers, 3rd Party Services
- MANAGE**: Deploy, Hosting, Logs, Settings, Push Notifications
- HELP**: -

The "Values & Secrets" link in the sidebar is highlighted with a green background.

Mongo DB Stitch

Stitch Triggers

Permiten ejecutar tareas en el lado del servidor de manera automática cuando se produce un evento

Cuando el evento se produce el trigger ejecuta una función

Hay tres tipos de triggers dependiendo del evento al que responden

- De base de datos: responden a inserciones, modificaciones y borrados de documentos en la base de datos
- De autenticación: responden ante la creación, login y logout de un usuario
- Planificados: responden a un evento planificado en el tiempo

Mongo DB Stitch

Stitch Triggers: Database trigger

Se asocian a una colección y se disparan cuando se efectúa algún cambio en ella

- Inserción de un documento
- Modificación de un documento
- Borrado de un documento

Cuando se produzca alguno de los anteriores eventos se ejecutará la función que le haya sido asignada.

Mongo DB Stitch

Entramos en la opción ‘Triggers’ de nuestra aplicación Stitch

The screenshot shows the MongoDB Stitch interface for managing triggers. The left sidebar has sections for APP ID (selected), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL^{BETA}, SDKs, Users), BUILD (Functions, selected), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The main content area is titled 'Triggers' and displays a green lightning bolt icon. It states 'This application has no triggers' and provides a description: 'Triggers allow you to execute functions in real-time based on database, authentication, or scheduled events.' A prominent green button labeled 'Add a Trigger' is centered at the bottom of the page, which is also highlighted with a yellow box.

MongoDB Stitch - Triggers

stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/triggers

mongoDB Stitch

Back to Atlas

BlogTutorial

APP ID

blogtutorial-elfuh

DATA ACCESS & SECURITY

Clusters

Rules

GraphQL^{BETA}

SDKs

Users

BUILD

Functions

Triggers **(highlighted)**

3rd Party Services

Values & Secrets

MANAGE

Deploy

Hosting

Logs

Settings

Push Notifications

HELP

Documentation

Triggers

Add a Trigger

This application has no triggers

Learn more about Triggers

Learn more about Triggers

Mongo DB Stitch

Escogemos 'Database' y le damos un nombre al trigger

The screenshot shows the MongoDB Stitch interface for adding a new trigger. The left sidebar has sections for APP ID (selected), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL BETA, SDKs, Users), BUILD (Functions, Triggers - selected), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The main area is titled 'Add Trigger' under 'Triggers > Add Trigger'. On the left, there's a 'Trigger Type' section with three options: 'Database' (highlighted with a green border), 'Authentication', and 'Scheduled'. Below that is a 'TRIGGER DETAILS' section with a 'Name' field containing 'triggerEjemplo' (highlighted with a yellow border). Under 'Event Ordering', there's a note about sequential processing and a toggle switch set to 'ON'. At the bottom, there's a 'TRIGGER SOURCE DETAILS' section with a 'Cluster Name' field labeled 'Select a cluster...' and a small green circular icon with a white envelope symbol.

Mongo DB Stitch

- Nombre del cluster (por defecto es mongodb-atlas)
- Nombre de la base de datos
- Colección que se monitorizará
- Operaciones que se quieren monitorizar
- Full Document: al ejecutarse la función nos pasarán el documento afectado al completo

▼ TRIGGER SOURCE DETAILS

Cluster Name x | v

Database Name x | v

Collection Name x | v

Operation Type Insert Update Delete Replace

This trigger will only execute on these operations.

Full Document By turning on Full Document, you will receive the document created or modified in your [change event](#). For Delete operations, the full document will not exist. ON

Mongo DB Stitch

Selección de la función asignada al trigger

FUNCTION

Select An Event Type

Learn how to use Amazon EventBridge with Triggers

Function

EventBridge

Function

Select the function to be executed on a [change event](#). Selecting a new function will create a default function you can edit in the future.

Select a function...

+ New Function

funcionEjemplo

Cancel

Save

Mongo DB Stitch

La función asignada al trigger recibirá un objeto por parámetro con la siguiente información:

- Documento completo que se ha insertado/modificado
- Una descripción de lo que ha cambiado exactamente

```
exports = async function (changeEvent) {  
  
    //Extraer los valores de changeEvent  
    fullDoc = changeEvent.fullDocument  
    updateDescription = changeEvent.updateDescription  
    removedFields = updateDescription.removedFields  
    updatedFields = updateDescription.updatedFields  
  
    //Actuar de la manera adecuada dependiendo del cambio detectado  
    //lógica necesaria...  
};
```

Mongo DB Stitch

Stitch Triggers: Authentication trigger

Nos permiten ejecutar lógica de negocio en el servidor cuando se produce un evento relacionado con los usuarios

- Se da de alta un nuevo usuario
 - Por ejemplo para enviarle un correo electrónico de bienvenida
 - Por ejemplo para guardar información adicional en alguna colección distinta a ‘users’
- Un usuario se autentica
 - Por ejemplo para realizar alguna comprobación extra una vez que Stitch ha permitido el acceso
- Un usuario se da de baja
 - Por ejemplo para borrar información en colecciones distintas a ‘users’
 - Por ejemplo para enviarle una encuesta al usuario

Mongo DB Stitch

Entramos en la opción ‘Triggers’ de nuestra aplicación Stitch y pulsamos ‘Add a Trigger’

The screenshot shows the MongoDB Stitch interface for a specific application. The left sidebar has sections for APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL^{BETA}, SDKs, Users), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The 'Triggers' section is highlighted with a yellow box. The main content area is titled 'Triggers' and shows a message: 'This application has no triggers'. It includes a green 'Add a Trigger' button, a 'Learn more about Triggers' link, and a green lightning bolt icon. The browser address bar shows the URL: `stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/triggers`.

Mongo DB Stitch

Seleccionamos 'Authentication' y le damos un nombre

The screenshot shows the MongoDB Stitch interface for adding a new trigger. The left sidebar has sections for APP ID (selected), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL BETA, SDKs, Users), BUILD (Functions, Triggers selected), and MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications). The main area is titled 'Add Trigger' under 'Triggers > Add Trigger'. It has fields for 'Trigger Type' (Database, Authentication, Scheduled, all three are highlighted with yellow boxes), 'Name' (trigger0, highlighted with a green box), 'Enabled' (ON switch), 'Action Type' (Create, Login, Delete), 'Provider(s)' (Select provider(s)... dropdown), and 'Select An Event Type' (Function, EventBridge). A bottom note says 'Learn how to use Amazon EventBridge with Triggers'.

Mongo DB Stitch

- Escogemos el evento asociado al trigger (create/login/delete)
- Seleccionamos los proveedores de autenticación
 - Puede seleccionarse más de uno

Action Type

Create Login Delete

Provider(s)
Select which provider(s) you want this auth trigger to apply to.

Select provider(s)...

Anonymous Login
API Keys
Custom Authentication
Facebook
Google
Email/Password

Select An Event Type
[Learn how to use Amazon EventBridge with Triggers](#)

Function
Select the function to be executed on an auth event. Selecting a new function will create a default function you can edit in the future.

Cancel Save

Save icon

Server Version: ca7b3456fb UI Version: 3.43.2 JS SDK Version: 3.10.0

Mongo DB Stitch

Asociamos una función al trigger y pulsamos ‘Save’. El trigger ya está creado

Select An Event Type

[Learn how to use Amazon EventBridge with Triggers](#)

Function

EventBridge

Function

Select the function to be executed on an auth event. Selecting a new function will create a default function you can edit in the future.

Select a function...

- + New Function
- funcionEjemplo



Mongo DB Stitch

Stitch Triggers: Scheduled trigger

En lugar de esperar a que se dispare un evento los scheduled trigger trabajan según una planificación temporal

- La planificación puede hacerse básica (bastante limitada)
- O por expresiones CRON

Ejemplos de uso

- Eliminar cestas de compra antiguas y no aceptadas
- Enviar un correo electrónico semanal a los usuarios
- Realizar comprobaciones periódicas

Mongo DB Stitch

Entramos en la opción ‘Triggers’ de nuestra aplicación Stitch y pulsamos ‘Add a Trigger’

The screenshot shows the MongoDB Stitch interface for a specific application. The left sidebar has sections for APP ID (blogtutorial-elfuh), DATA ACCESS & SECURITY (Clusters, Rules, GraphQL^{BETA}, SDKs, Users), BUILD (Functions, Triggers, 3rd Party Services, Values & Secrets), MANAGE (Deploy, Hosting, Logs, Settings, Push Notifications), and HELP (Documentation). The 'Triggers' section is highlighted with a yellow box. The main content area is titled 'Triggers' and shows a message: 'This application has no triggers'. It includes a green 'Add a Trigger' button, a 'Learn more about Triggers' link, and a green lightning bolt icon. The browser address bar shows the URL: `stitch.mongodb.com/groups/5e7c744a2cf0085c5f04ac/apps/5e8c4596f7a8e8e75f463d95/triggers`.

Mongo DB Stitch

Escogemos un nombre para el trigger.

Triggers > Add Trigger

Add Trigger

Trigger Type

Database Authentication **Scheduled**

Name

tareaProgramada

Enabled

ON

Mongo DB Stitch

Planificación básica, ejemplos

Cada 12 horas:

Schedule Type
Learn more about Scheduled Triggers.

Basic Advanced

Repeat once by:

Hour every 12 hour(s)

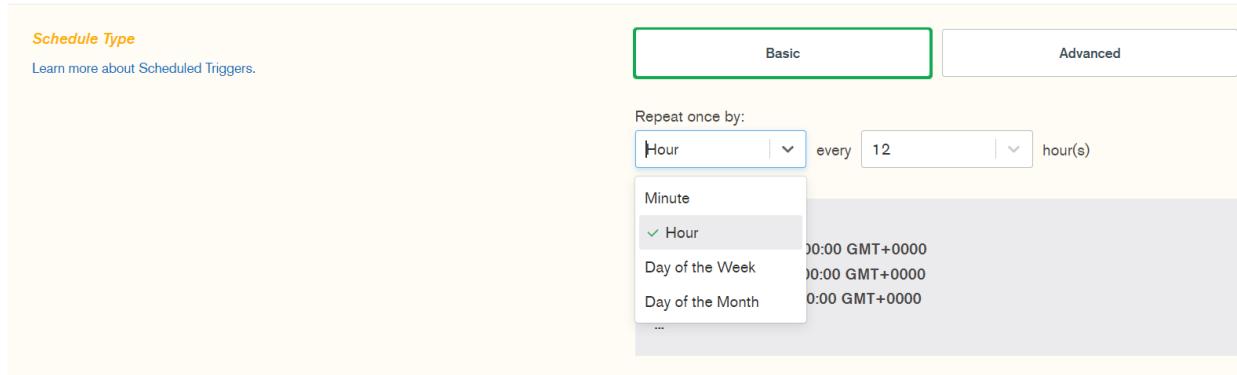
Minute

✓ Hour 00:00 GMT+0000

Day of the Week 00:00 GMT+0000

Day of the Month 0:00 GMT+0000

...



Todos los lunes:

Schedule Type
Learn more about Scheduled Triggers.

Basic Advanced

Repeat once by:

Day of the Week on Monday

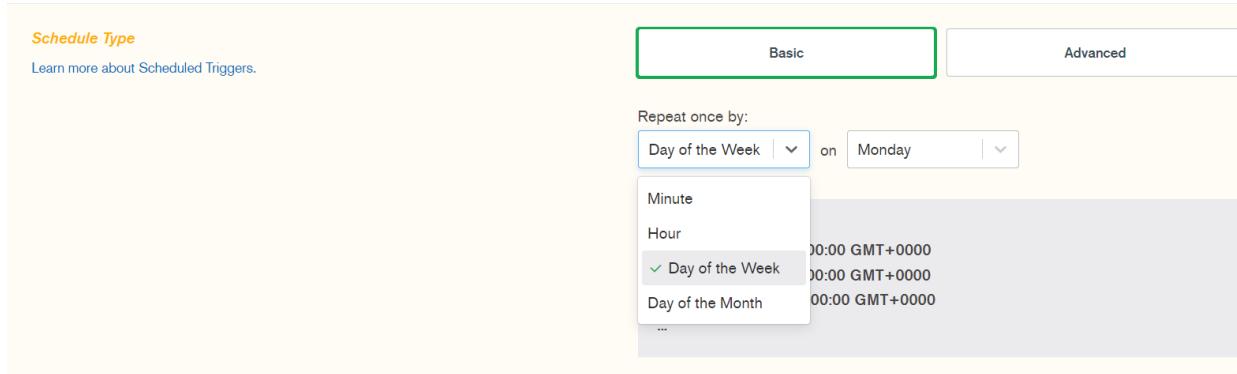
Minute

Hour

✓ Day of the Week 00:00 GMT+0000

Day of the Month 00:00 GMT+0000

...



Mongo DB Stitch

Planificación avanzada: Expresiones CRON

Schedule Type

Learn more about Scheduled Triggers.

Basic

Advanced

Set a CRON schedule. [Learn about CRON expressions](#)

*/1 * * * *

Minutes	Hours	Day of Month	Month	Day of Week
*/1	*	*	*	*

Next Events:

Sun Apr 19 2020 12:44:00 GMT+0000

Sun Apr 19 2020 12:45:00 GMT+0000

Sun Apr 19 2020 12:46:00 GMT+0000

...

Mongo DB Stitch

Asignamos una función al trigger y pulsamos 'Save'

FUNCTION

Select An Event Type

[Learn how to use Amazon EventBridge with Triggers](#)

Function

EventBridge

Function

Select the function to be executed on a scheduled event. Selecting a new function will create a default function you can edit in the future.

Select a function...

+ New Function

funcionEjemplo



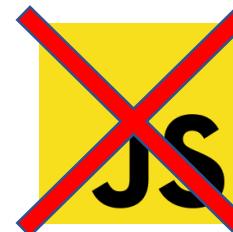
Mongo DB Stitch

MongoDB Mobile

Dos piezas:

- Una versión optimizada para dispositivos móviles de la base de datos MongoDB
- Un SDK para Android e iOS que administra las operaciones con la base de datos y proporcionan métodos para interactuar con la aplicación MongoDB Mobile y el backend Stitch

iOS



Mongo DB Stitch

MongoDB Mobile. Stitch SDK

Dos tipos de clientes:

- Local: Proporciona únicamente acceso a MongoDB Mobile. Recomendado para cuando nuestra aplicación móvil necesita una base de datos pero no queremos que se conecte a atlas
- Remote: Proporciona acceso tanto a la base de datos local (MongoDB Mobile) como a Atlas, permitiendo además la sincronización de ambas.
 - La aplicación puede trabajar sin conexión con la base de datos local
 - Porque se ha perdido cobertura
 - Porque la aplicación así lo decide
 - Puede sincronizar la base de datos en el servidor en cualquier momento
 - Por ejemplo porque se ha reestablecido la conexión

Mongo DB Stitch

MongoDB Mobile. Stitch Mobile Sync

- Para sincronizar la base de datos local (en el dispositivo) y remota (MongoDB Atlas)
- El programador decide qué documentos serán sincronizados
 - Insertando con `sync().insertOne()`
 - Sincronizando documentos existentes con `sync().syncOne()`
- Para que un documento deje de estar sincronizado entre la base de datos local y la remota
 - `sync().desyncOne()`