

Como criar medidores no Fractal HUB?

help.fractal.com/hc/pt-pt/articles/37555428587917-Como-criar-medidores-no-Fractal-HUB

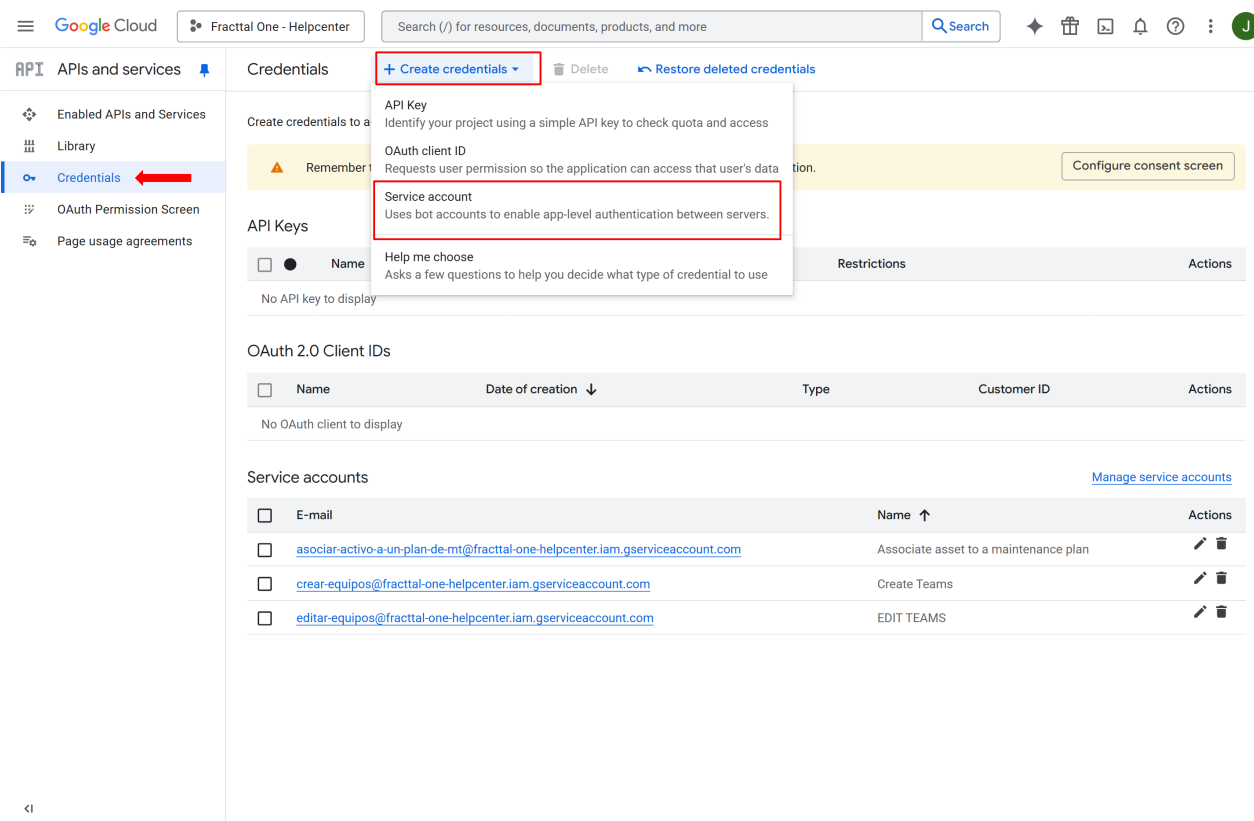
Com a opção de automação no **Fractal Hub**, é possível gerir a criação de medidores de forma eficiente e sem intervenção manual, especialmente em contextos de alto volume de dados. Esta funcionalidade permite aos utilizadores agilizar processos operacionais e minimizar erros humanos no manuseio de leituras de medidores.

A seguir, encontrarás um guia passo a passo sobre como configurar esta funcionalidade dentro da plataforma Fractal Hub.

Passo 1: Acede à Consola do Google Cloud

Acede à Google Cloud Console.

- Dirige-te à seção de **API e serviços > Credenciais**.
- Clica em **Criar credenciais > Conta de serviço**.



- Nomeia a conta de serviço como "criar_medidores" e segue o processo até finalizar.

Google Cloud Fractal One - Helpcenter Search (/) for resources, documents, products, and more Search

IAM and administrator / Service accounts / Create service account

← Create service account

1 Create service account

Service account name
Display name for this service account

Service Account ID * X ↺

Email address: <id>@fractal-one-helpcenter.iam.gserviceaccount.com

Service Account Description
Describe how the service account will be used

Create and continue

2 Permissions(optional)

3 Main with access(optional)

Conclude Cancel

Passo 2: Gera a chave JSON

1. Uma vez criada a conta de serviço, seleciona-a a partir da lista.

Google Cloud Fractal One - Helpcenter

API APIs e serviços

Credentials + Create credentials Delete

APIs e serviços ativados

Biblioteca

Credenciais

Tela de permissão OAuth

Contratos de uso de página

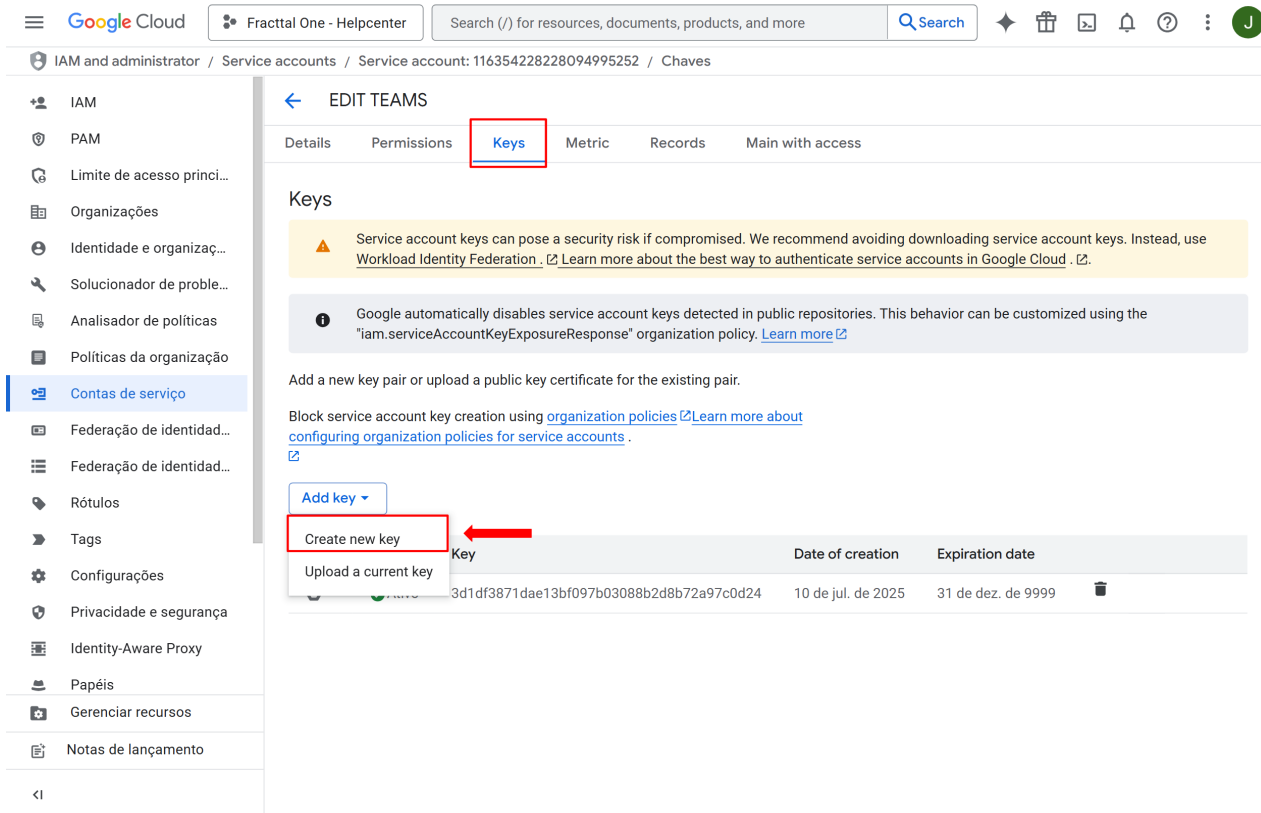
OAuth 2.0 Client IDs

☐	Name	Date of creation ↓	Type	Customer ID	Actions
No OAuth client to display					

Service accounts Manage service accounts

☐	E-mail	Name ↑	Actions
☐	asociar-activo-a-un-plan-de-mt@fractal-one-helpcenter.iam.gserviceaccount.com	Associate asset to a maintenance plan	
☐	crear-equipos@fractal-one-helpcenter.iam.gserviceaccount.com	Create Teams	
☐	crear-medidores@fractal-one-helpcenter.iam.gserviceaccount.com	create meters	
☐	editar-equipos@fractal-one-helpcenter.iam.gserviceaccount.com	EDIT TEAMS	

2. Acede à seção **Chaves**. Clica em **Adicionar chave** > **Criar nova chave**.



The screenshot shows the Google Cloud IAM and administrator console. The left sidebar contains a navigation menu with options like IAM, PAM, and Contas de serviço. The main content area is titled 'EDIT TEAMS' and has tabs for Details, Permissions, Keys, Metric, Records, and Main with access. The 'Keys' tab is active, displaying a warning about service account keys and a table of existing keys. A red box highlights the 'Add key' button, and another red box highlights the 'Create new key' option in the dropdown menu. A red arrow points to the 'Create new key' option.

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IAM and administrator / Service accounts / Service account: 116354228228094995252 / Chaves

← EDIT TEAMS

Details Permissions **Keys** Metric Records Main with access

Keys

Service account keys can pose a security risk if compromised. We recommend avoiding downloading service account keys. Instead, use Workload Identity Federation. [Learn more about the best way to authenticate service accounts in Google Cloud](#).

Google automatically disables service account keys detected in public repositories. This behavior can be customized using the "iam.serviceAccountKeyExposureResponse" organization policy. [Learn more](#)

Add a new key pair or upload a public key certificate for the existing pair.

Block service account key creation using [organization policies](#) [Learn more about configuring organization policies for service accounts](#).

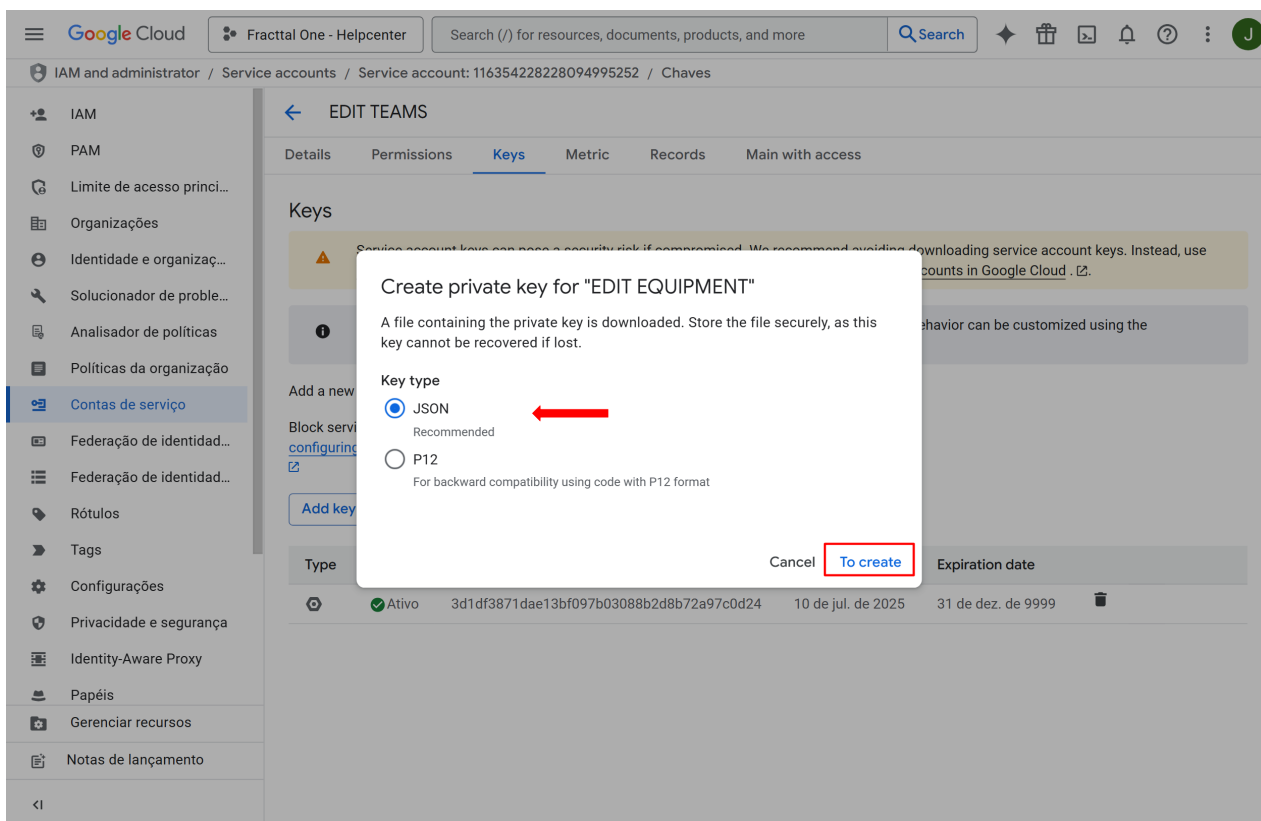
Add key

Create new key

Upload a current key

Key	Date of creation	Expiration date
3d1df3871dae13bf097b03088b2d8b72a97c0d24	10 de jul. de 2025	31 de dez. de 9999

3. Seleciona o formato **JSON**.



The screenshot shows the Google Cloud IAM and administrator console with the 'Keys' tab active. A dialog box is open, titled 'Create private key for "EDIT EQUIPMENT"'. The dialog box contains a warning about the private key and a section for 'Key type' with two options: 'JSON' (Recommended) and 'P12' (For backward compatibility using code with P12 format). The 'JSON' option is selected, and a red arrow points to it. The 'To create' button is highlighted with a red box. The background shows the same console interface as the previous screenshot.

Google Cloud Fractal One - Helpcenter Search (/) for resources, documents, products, and more Search

IAM and administrator / Service accounts / Service account: 116354228228094995252 / Chaves

← EDIT TEAMS

Details Permissions **Keys** Metric Records Main with access

Keys

Service account keys can pose a security risk if compromised. We recommend avoiding downloading service account keys. Instead, use Workload Identity Federation. [Learn more about the best way to authenticate service accounts in Google Cloud](#).

Google automatically disables service account keys detected in public repositories. This behavior can be customized using the "iam.serviceAccountKeyExposureResponse" organization policy. [Learn more](#)

Add a new key pair or upload a public key certificate for the existing pair.

Block service account key creation using [organization policies](#) [Learn more about configuring organization policies for service accounts](#).

Add key

Create private key for "EDIT EQUIPMENT"

A file containing the private key is downloaded. Store the file securely, as this key cannot be recovered if lost.

Key type

☒ JSON Recommended

☐ P12 For backward compatibility using code with P12 format

Cancel **To create**

Type	Key	Date of creation	Expiration date
Ativo	3d1df3871dae13bf097b03088b2d8b72a97c0d24	10 de jul. de 2025	31 de dez. de 9999

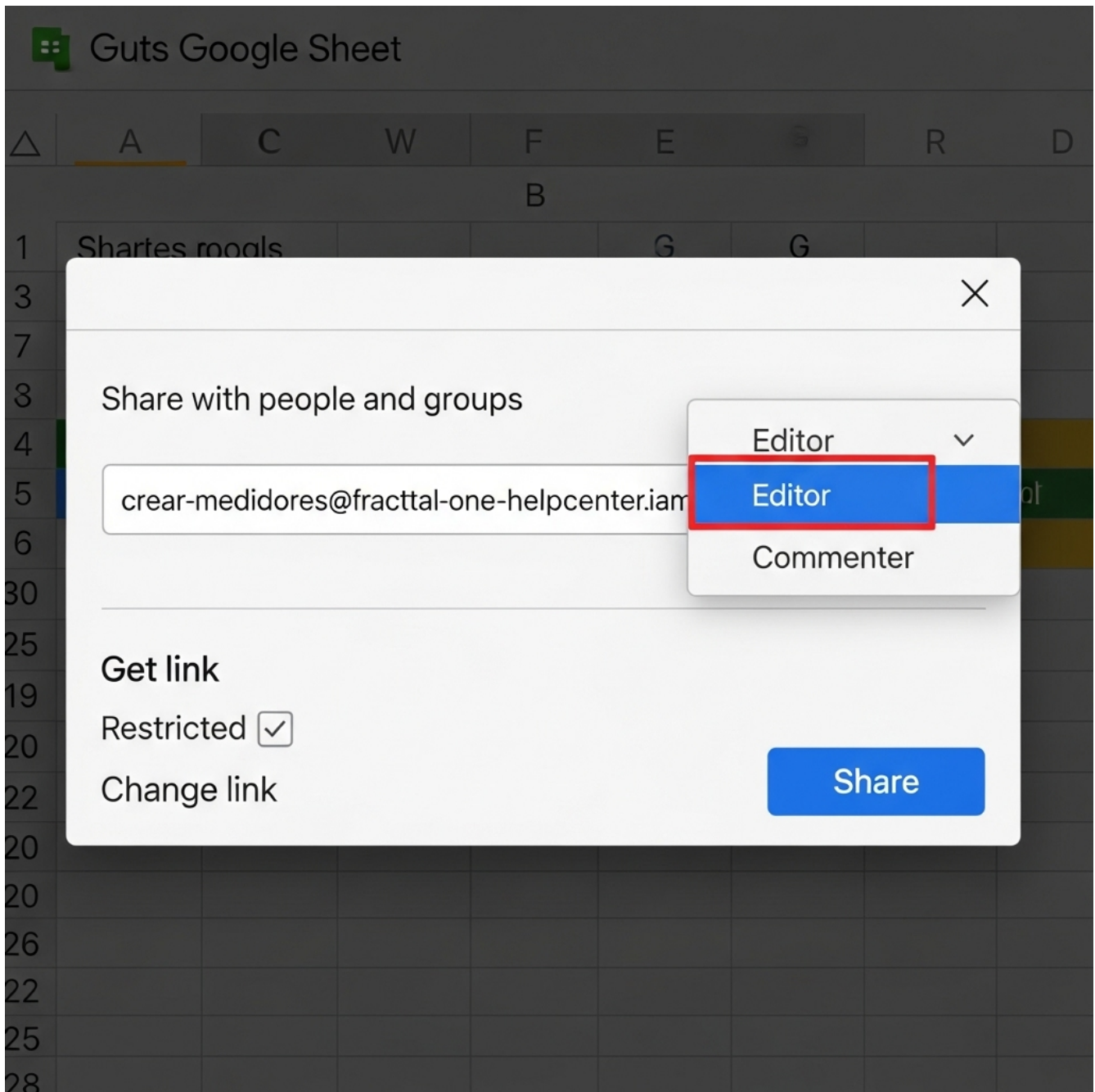
4. Guarda o arquivo gerado numa localização segura; este arquivo será necessário para configurar a integração no Fractal Hub.

Passo 3: Preparar a folha de cálculo (Google Sheets)

Agora, prepararemos a folha de cálculo que servirá como fonte de dados para a criação dos medidores.

description	item_code	unit_code	is_counter
Transformador Elétrico	ABC123-HC-FC	KM	TRUE

1. Crie uma nova folha de cálculo no Google Sheets.
2. Atribua-lhe um nome descritivo, como CRIAR MEDIDOR.
3. Na primeira linha, defina os cabeçalhos das colunas. Estes devem coincidir com os parâmetros que a API do Fractal requer. Para este exemplo, utilizaremos os seguintes campos obrigatórios e um opcional:
 - **Coluna A:** description (Descrição do medidor, ex: "Medidor de KM").
 - **Coluna B:** item_code (Código do ativo ao qual se associará o medidor, ex: "HUB-004").
 - **Coluna C:** unit_code (Código da unidade do medidor, ex: "KM". Este código deve existir previamente em Configuração > Catálogos Auxiliares > Unidade).
 - **Coluna D:** is_counter (Opcional, mas recomendado. Indica se o medidor é um acumulador. Escreva TRUE se o for, ou FALSE se não).
4. Preencha as linhas com a informação dos medidores que deseja criar.
5. **Partilhar a folha de cálculo:** Este é um passo crucial.
 - Copie o e-mail da conta de serviço que criou no Passo 1 (encontrará dentro do arquivo .json no campo client_email).
 - Clique no botão **Partilhar** na sua folha de cálculo.
 - Cole o e-mail da conta de serviço e atribua-lhe permissões de **Editor**.

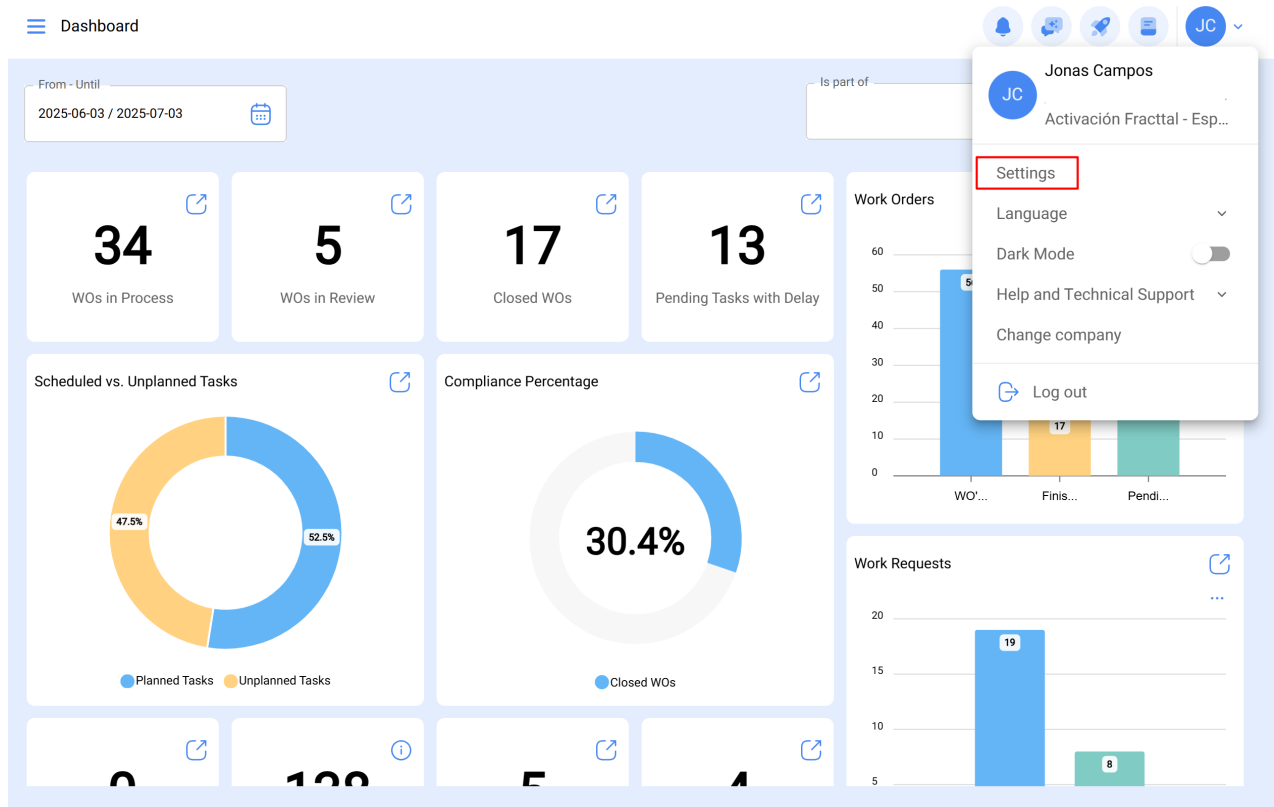


Clique em **Enviar**.

Passo 4: Criar a conexão no Fractal One

Agora vamos configurar a conexão dentro do Fractal para que possa usar as credenciais da conta de serviço.

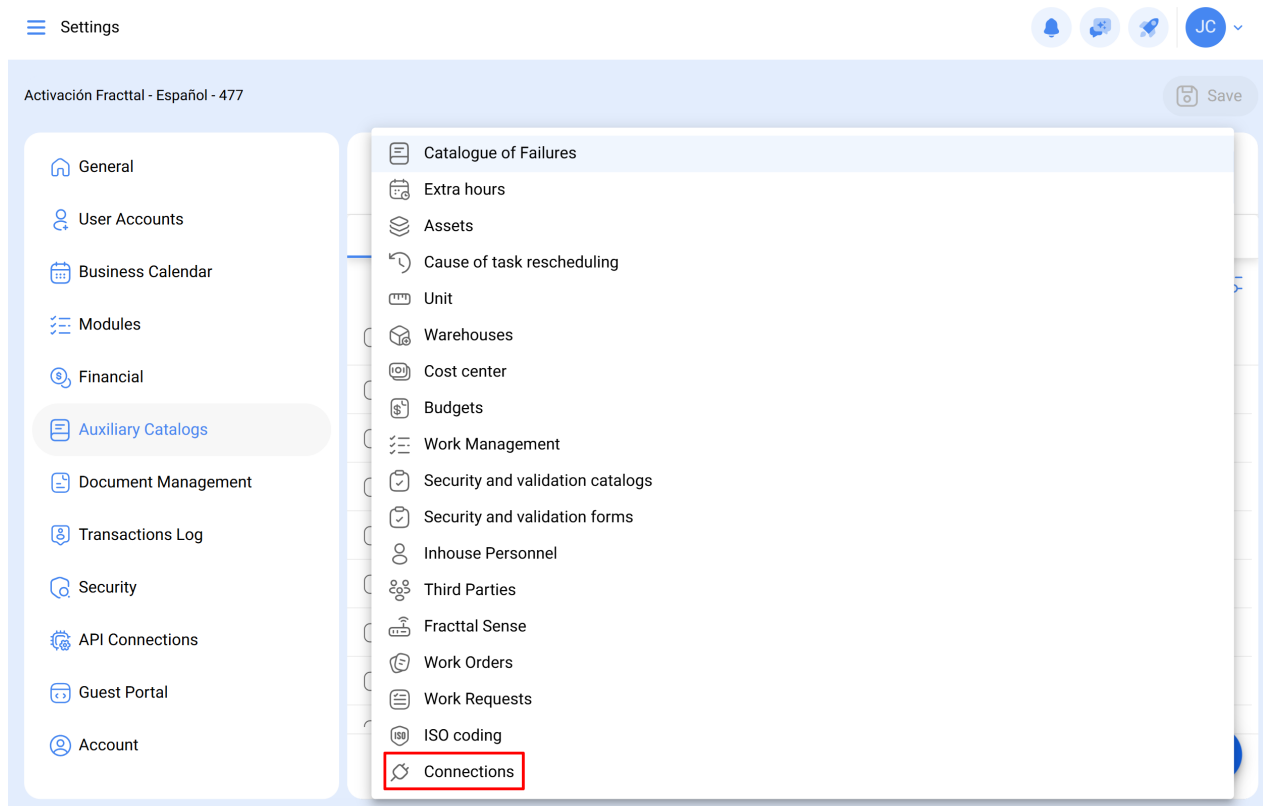
1. No Fractal, navega até **Configuração > Catálogos Auxiliares > Conexões**.



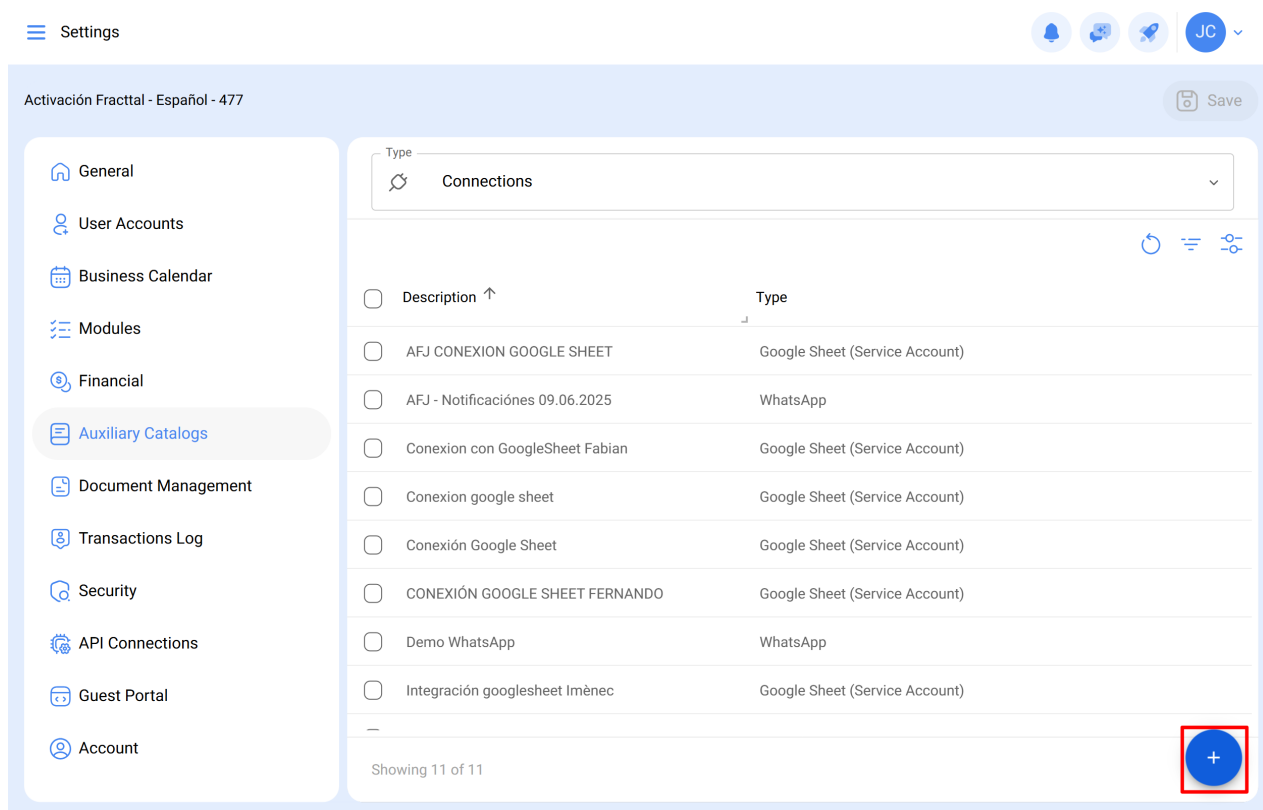
The settings page is titled "Activación Fractal - Español - 477". The left sidebar lists various settings categories, with "Auxiliary Catalogs" highlighted. The main form contains the following fields:

- Code:** RFC10829120
- Name:** Activación Fractal - Español - 477
- Email:** contacto@fractal.com
- Currency:** Chilean Peso
- Thousands separator:** (.) The character used is a p
- Address:** Calle de San José Artesano, 12
- City:** Bogota
- State:** Cundinamarca
- Country:** Colombia
- Zip code:** 28108

A map of Bogotá is displayed on the right, with a location pin at Inacap Apoquindo. The map includes a search bar and a scale bar.



2. Clica no ícone + para adicionar uma nova conexão.



3. Preenche os seguintes campos:

The screenshot shows the 'Settings' page for 'Activación Fracttal - Español - 477'. The left sidebar lists various settings categories: General, User Accounts, Business Calendar, Modules, Financial, Auxiliary Catalogs, Document Management, Transactions Log, Security, API Connections, Guest Portal, and Account. The 'API Connections' category is selected, showing a list of 11 connections. The right side of the image shows a form for adding a new connection. The form has two fields: 'Type' and 'Description'. Both fields have red error messages below them: 'Type can't be blank' and 'Description can't be blank'.

- **Tipo:** Selecciona **Google Sheet (Conta de Serviço)**.
- **Descrição:** Atribui um nome à conexão:

4. Abre o arquivo .json descarregado e copia/cola o conteúdo dos seguintes campos nos respetivos lugares do formulário do Fracttal:

- private_key
- client_email
- client_id
- client_x509_cert_url

5. Clica no ícone ✓ para guardar e depois em **Guardar**.

Settings

Activación Fracttal - Español - 477

General

User Accounts

Business Calendar

Modules

Financial

Auxiliary Catalogs

Document Management

Transactions Log

Security

API Connections

Guest Portal

Account

Type

Connections

Description ↑	Type
Conexión Google Sheet	Google Sheet (Service Account)
CONEXIÓN GOOGLE SHEET FERNANDO	Google Sheet (Service Account)
Crear medidor	Google Sheet (Service Account)
CREAR MEDIDOR - 0725	Google Sheet (Service Account)
Demo WhatsApp	WhatsApp
EDITAR EQUIPO	Google Sheet (Service Account)
Integración googlesheet Imè nec	Google Sheet (Service Account)
Projeto LCS	Google Sheet (Service Account)
proyectorx	Google Sheet (Service Account)
webnar 2024 v.1	Google Sheet (Service Account)
whatsapp jonas	WhatsApp

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←

↗

✓

Type
Google Sheet (Service Account) ▾

Description
CREAR MEDIDOR - 0725

Type
service_account

project_id *
@fracttal.com

private_key_id *

private_key *

client_email *
crear-medidores@fracttal-one-helpcenter.iam.gserviceaccour

client_id *
10948539799581941586

client_x509_cert_url *
https://www.googleapis.com/robot/v1/metadata/x509/crear

auth_uri
https://accounts.google.com/o/oauth2/auth

token_uri

Passo 5: Configurar o fluxo no Fracttal Hub

Com a conexão pronta, o último passo é criar o fluxo de automação.

1. Navega até o módulo **Fracttal Hub**.

FRACTTAL ONE

Version: 5.8.09

Start

Fracttal AI

Catalogs

Warehouses

Work Management

Monitoring

Dispatcher

Events

Fracttal Hub

Business Intelligence

Cloud Disk

Requests

73

Closed WOs

24

Pending Tasks with Delay

Compliance Percentage

57.0%

Closed WOs

Work Orders

128

73

55

Work Requests

39

2. Clica no ícone + para criar um novo fluxo.

Fracttal Hub

Search...

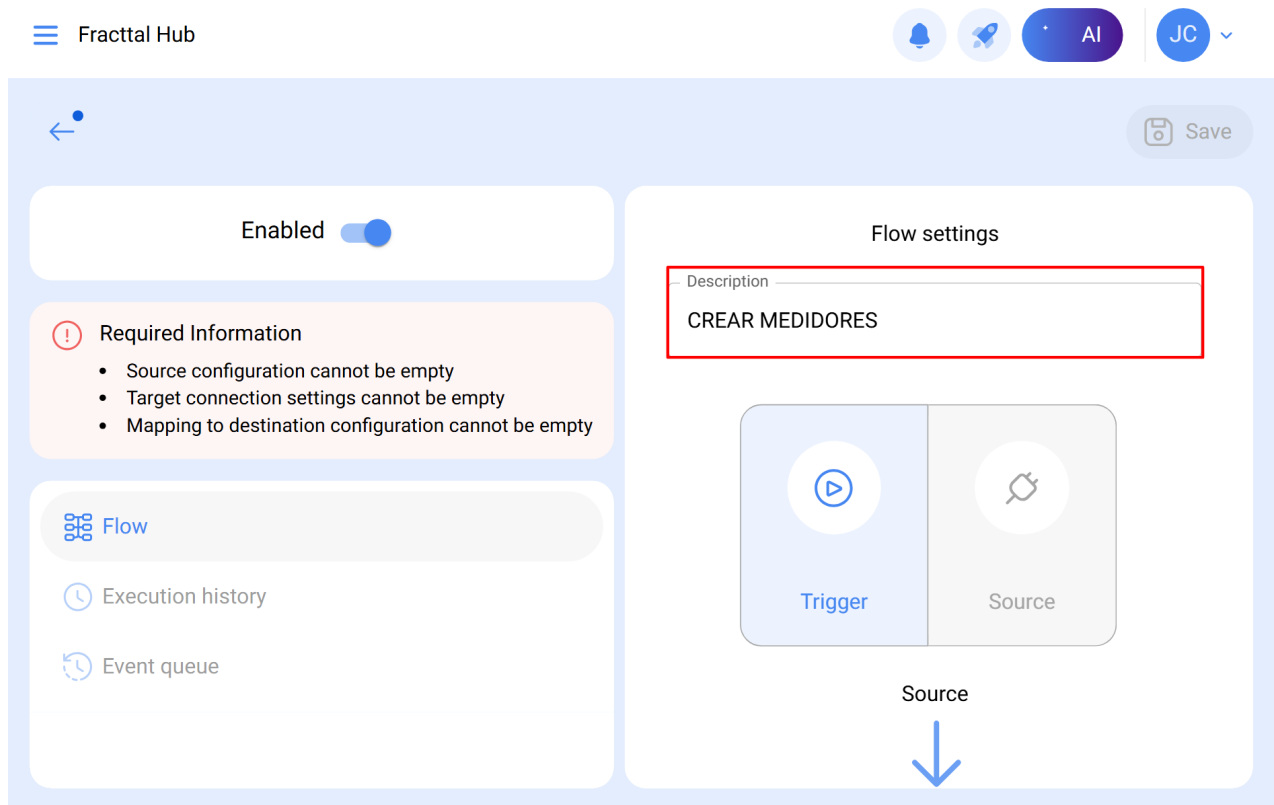
+

☐	Enabled	Description	Last Date	Trigger
☐	Yes	Notificación de nuevas órdenes de servicio de Whatsapp (P...	2025-07-02 12:54	Event
☐	Yes	actualización de horometro	2024-11-22 18:15	Schedule
☐	Yes	AFJ. 09.06.2025. Conex. Wpp	2025-06-09 09:57	Event
☐	Yes	Lecturas fuera de Rango (Rangel)	2023-03-22 17:51	Event
☐	☒ Yes	Consulta subtaeas Fracttal Fabian	2024-12-18 20:26	Manual
☐	☒ Yes	Projeto LCS 1212	2024-12-12 18:12	Manual
☐	Yes	Lecturas fuera de rango	2023-03-22 17:51	Event
☐	☒ Yes	webnar 2024	2024-12-17 23:06	Manual
☐	Yes	Notificación de nuevas órdenes de servicio de Whatsapp (E...	2025-05-23 22:20	Event
☐	No	Comunicación Fracttal One	2024-09-05 21:53	Event
☐	☒ Yes	BODEGAS FAC - MEDIDORES	2025-01-20 16:56	Manual

Showing 14 of 14

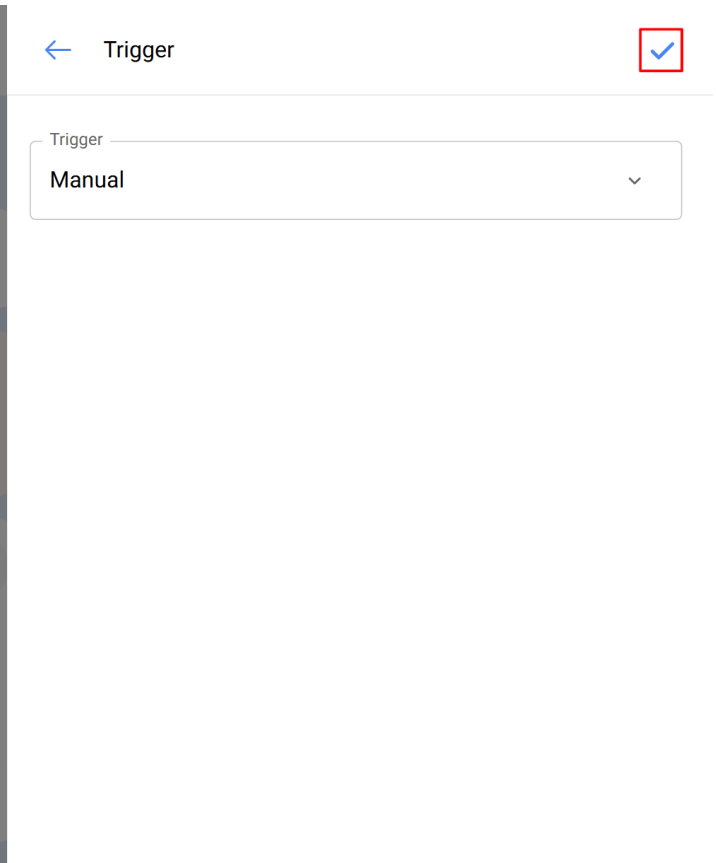
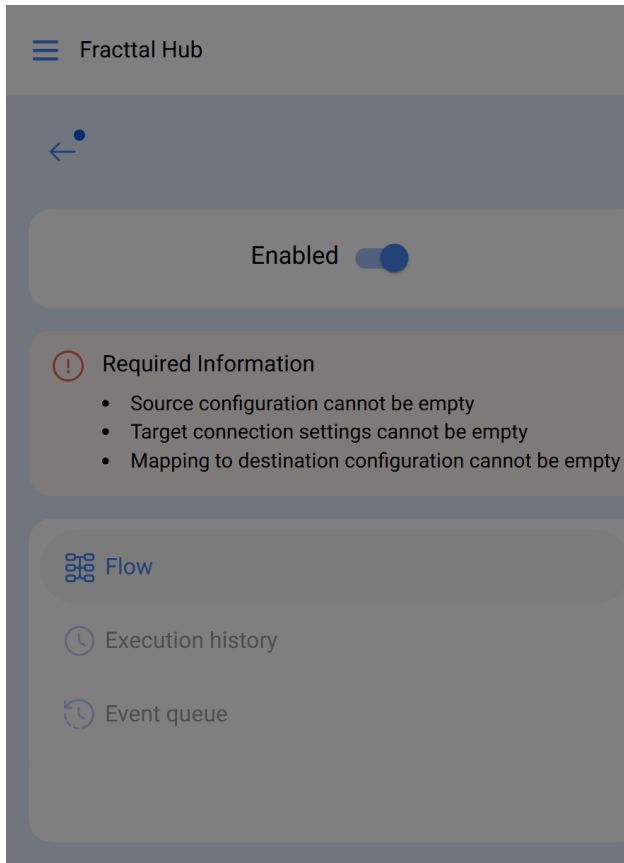
+

3. Adiciona uma **Descrição** para o fluxo:

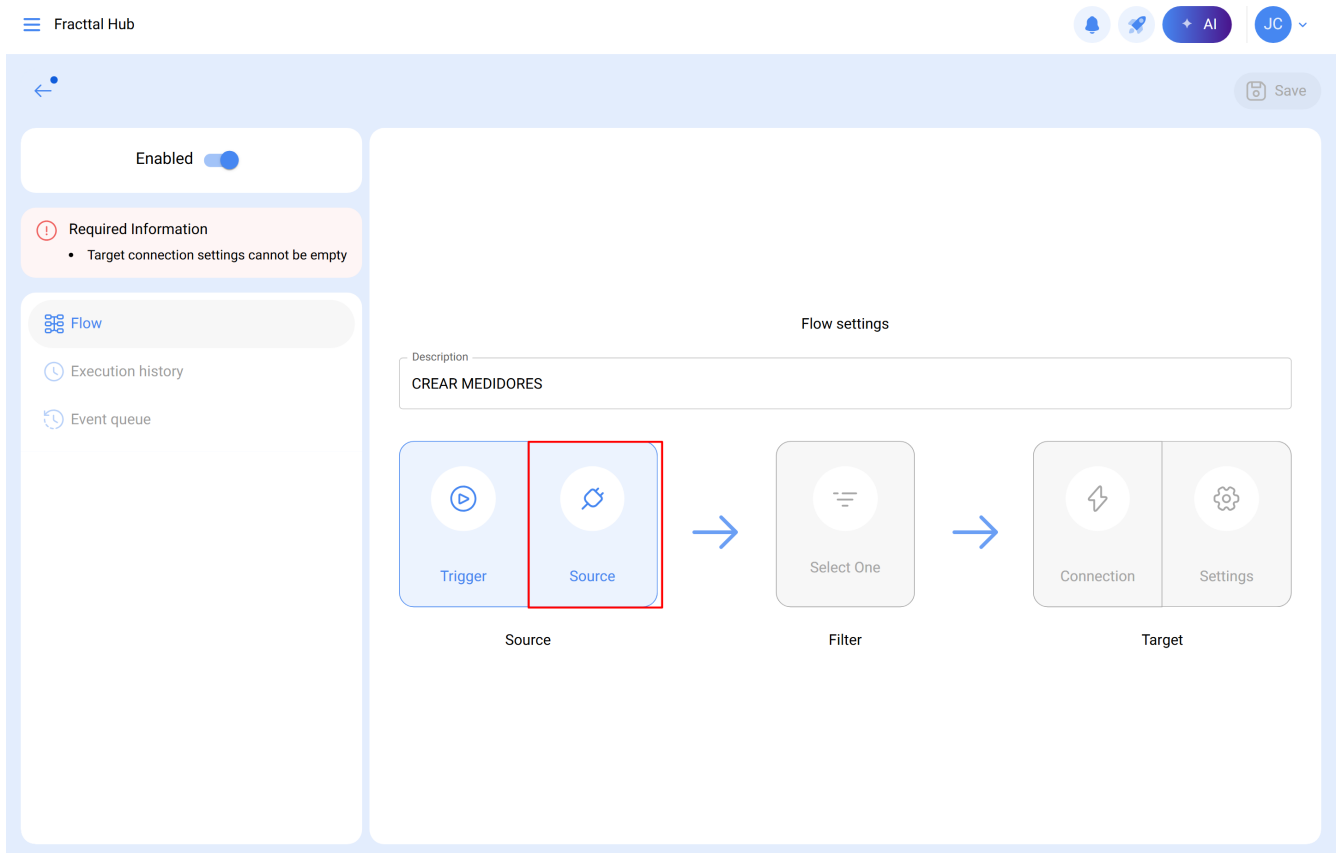


Configuração do ativador:

Clica em **Ativador** e seleciona o tipo **Manual**. Isto permite executar o fluxo quando desejado.



Configuração da Fonte:



- Clica em **Fonte**.
- **Módulo**: Selecciona GoogleSheet.
- **Conexão**: Selecciona a conexão criada no passo anterior.
- **Ação**: Selecciona Ler.
- **spreadsheet_id**: Copia o ID da tua folha de cálculo (encontras na URL, entre /d/ e /edit/).
- **sheet**: Escreve 0 para ler a primeira aba.
- **Campos**: Adiciona os nomes das colunas:

The screenshot displays the 'Source' configuration interface in Fractal Hub. On the left, a sidebar contains a menu icon, the text 'Fractal Hub', and navigation links for 'Flow', 'Execution history', and 'Event queue'. The main area is titled 'Source' and features a toggle switch labeled 'Enabled'. Below this, a 'Required Information' section lists three error messages: 'Source configuration cannot be empty', 'Target connection settings cannot be empty', and 'Mapping to destination configuration cannot be empty'. The configuration fields are as follows:

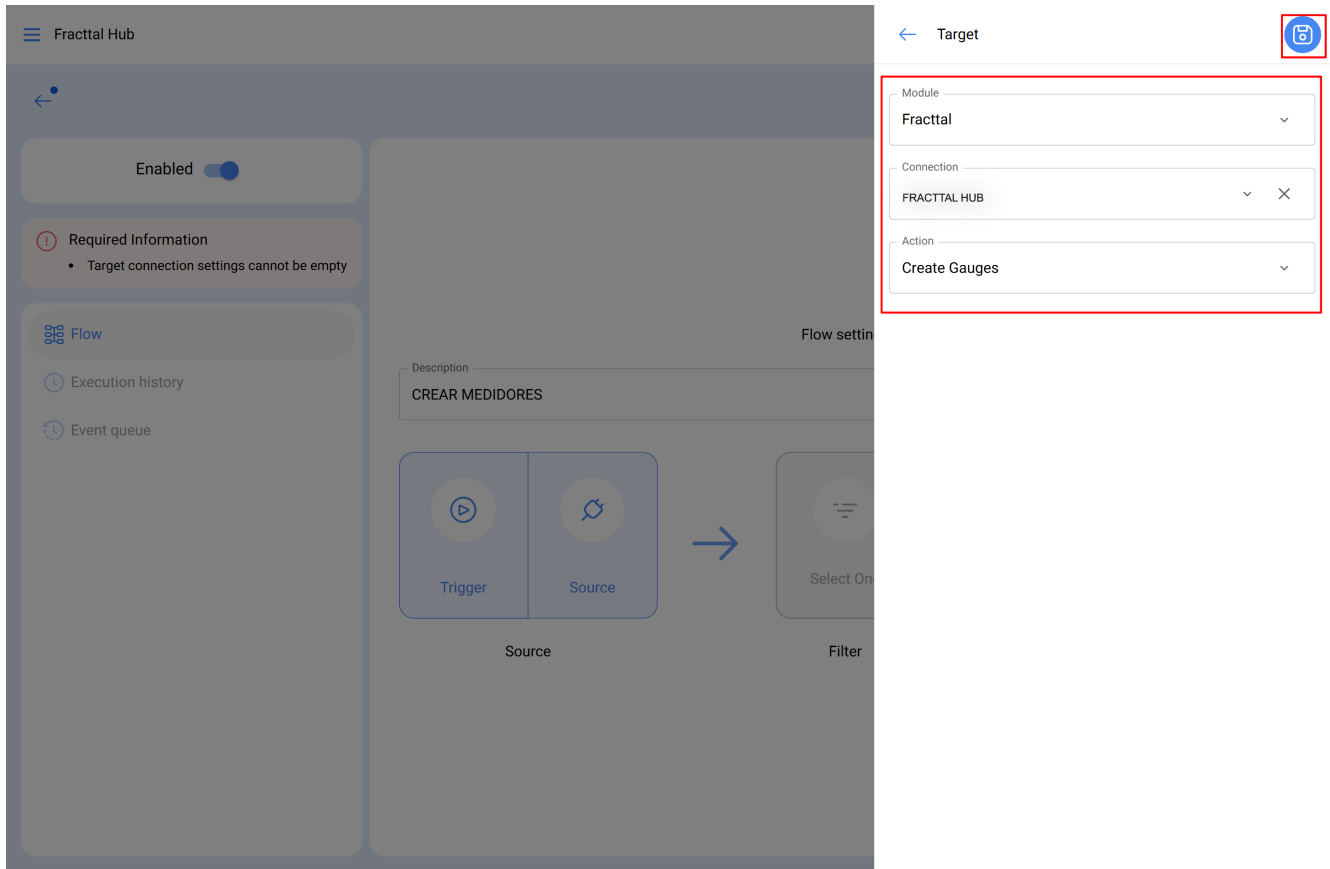
- Module**: GoogleSheet (dropdown menu)
- Connection**: CREAM MEDIDOR - 0725 (dropdown menu with a close icon)
- Action**: Read (dropdown menu)
- spreadsheet_id**: 338689D5-4FC6-4641-9FB3-715768F4DCAC (text input)
- sheet**: 0 (text input)

At the bottom, the 'Fields' section shows a table with one column named 'id' and a data type of 'Text'. A plus icon is visible next to the data type.

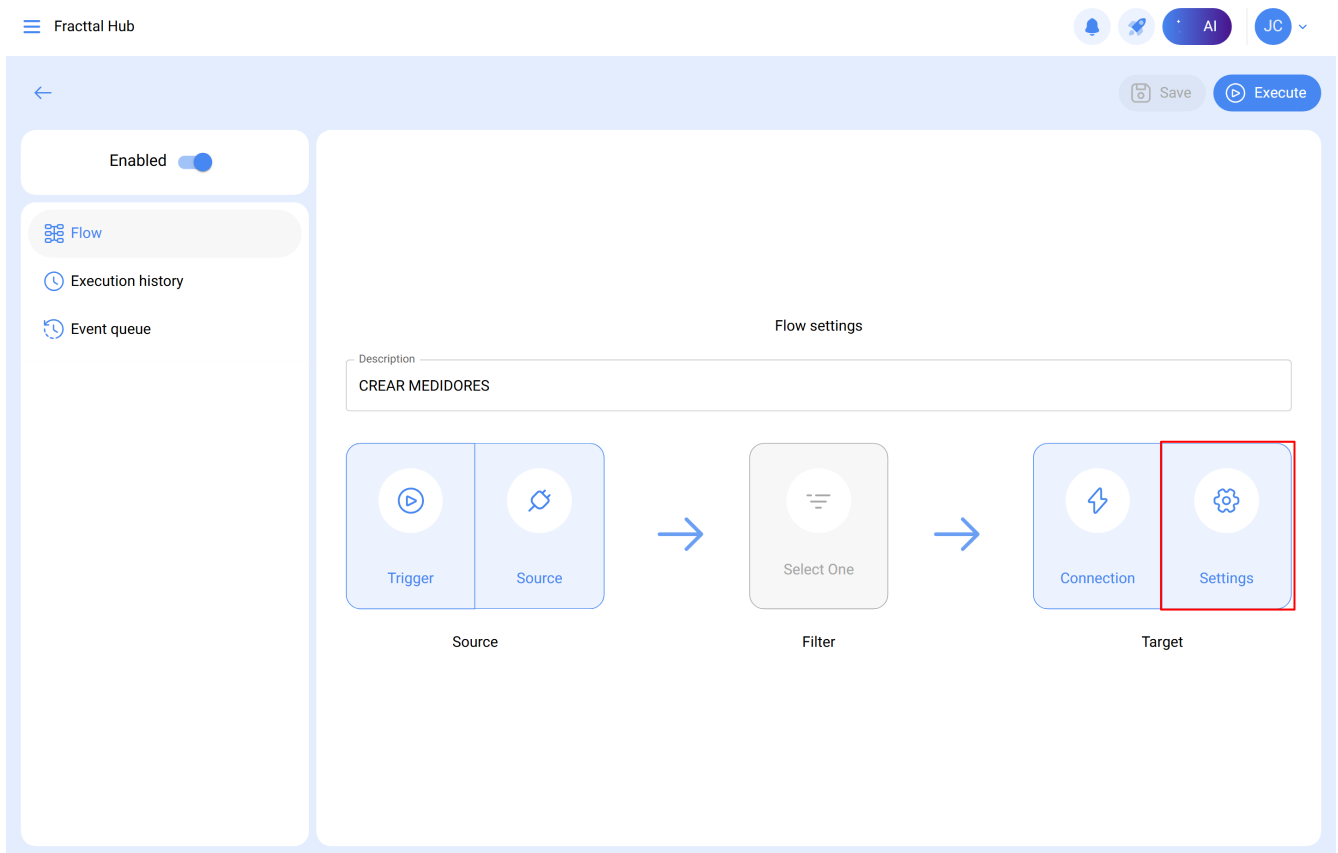
Configuração do Destino:

The screenshot shows the Fractal Hub interface with a flow configuration. On the left, there is a sidebar with a toggle for 'Enabled' and a 'Required Information' section stating 'Target connection settings cannot be empty'. Below this are links for 'Flow', 'Execution history', and 'Event queue'. The main area is titled 'Flow settings' and contains a description box with the text 'CREAR MEDIDORES'. The flow is visualized as a sequence of three steps: 'Source' (containing 'Trigger' and 'Source' modules), 'Filter' (containing 'Select One' module), and 'Target' (containing 'Connection' and 'Settings' modules). The 'Connection' module in the 'Target' step is highlighted with a red box.

- Clica em **Conexão** na seção de destino.
- **Módulo**: Selecciona Fractal.
- **Conexão**: Escolhe FRACTTAL HUB.
- **Ação**: Selecciona Criar Medidores.



Configuração de campos (mapeamento):



- Clica em **Configuração** na seção de destino.
- Mapeia os campos da folha (Origem) com os do sistema (Destino), assegurando-te de que coincidam:

description ← **description**

item_code ← **item_code**

unit code ← **unit_code**

is_counter ← **is_counter**

The screenshot shows the Fractal Hub interface. On the left, there's a sidebar with 'Enabled' toggle, 'Flow', 'Execution history', and 'Event queue'. The main area shows a flow diagram with a 'Trigger' and 'Source' block. On the right, the 'Fields Configuration' panel is open, showing a mapping between 'Source (Fields)' and 'Target (Fields)'. The mapping is as follows:

Source (Fields)	Target (Fields)
description	description
item_code	item_code
unit_code	unit_code
All -> Object	serial
is_counter	is_counter
All -> Object	serial_parent_meter
All -> Object	last_reading

Clica em **Guardar** para guardar a configuração do fluxo.

Passo 7: Executar e verificar o fluxo

1. Ativa o interruptor **Habilitado**.

2. Clica novamente em **Guardar**.

The screenshot shows the Fractal Hub interface. In the top right corner, there is a 'Save' button with a floppy disk icon, which is highlighted with a red box. On the left sidebar, there is a toggle switch labeled 'Enabled' that is currently turned off, also highlighted with a red box. Below the toggle, there is an 'Information' section with the text 'You have pending changes to save!'. The main area displays 'Flow settings' with a description 'Asociar activo a plan de MTTO'. The flow diagram consists of three stages: 'Source' (containing 'Trigger' and 'Source' components), 'Filter' (containing 'Select One' component), and 'Target' (containing 'Connection' and 'Settings' components).

3. Clica no botão **Executar** para iniciar o processo.

The screenshot shows the Fractal Hub interface. In the top right corner, there is an 'Execute' button with a play icon, which is highlighted with a red box. The 'Enabled' toggle switch on the left is now turned on. The main area displays 'Flow settings' with a description 'CREAR MEDIDORES'. The flow diagram is identical to the previous screenshot, showing the 'Source', 'Filter', and 'Target' stages.

Podes monitorizar o progresso nas abas **Fila de eventos** e **Histórico de Execução**. Um processo bem-sucedido mostrará "Processo Realizado" e marcará como completas as etapas de Extração, Transformação e Carga.

The screenshot displays the Fractal Hub interface. At the top left, the text "Fractal Hub" is visible. On the top right, there are user profile icons and a dropdown menu labeled "JC". Below the header, a left sidebar contains a toggle switch labeled "Enabled" and a menu with three items: "Flow", "Execution history", and "Event queue". The "Execution history" and "Event queue" items are highlighted with a red rectangular box. The main area is titled "Flow settings" and contains a description field with the text "Asociar activo a plan de MTTO". Below this, a flow diagram is shown with three stages: "Source", "Filter", and "Target". The "Source" stage includes "Trigger" and "Source" components. The "Filter" stage includes a "Select One" component. The "Target" stage includes "Connection" and "Settings" components. Arrows indicate the flow from Source to Filter to Target.