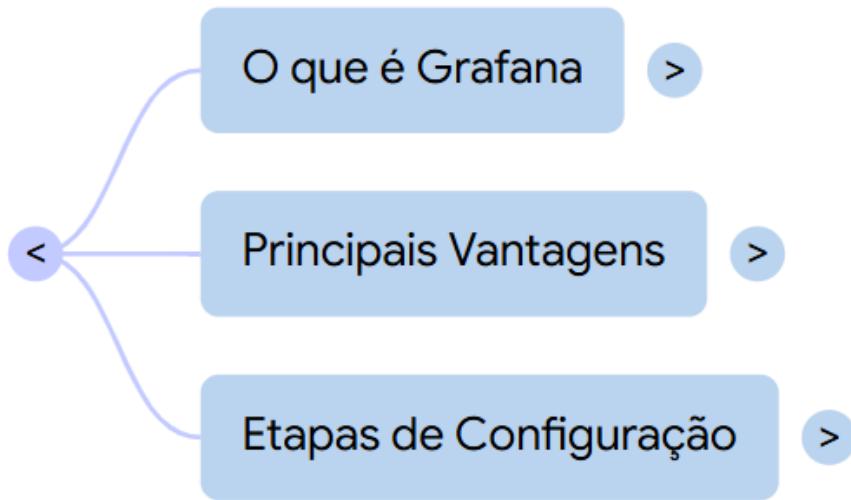
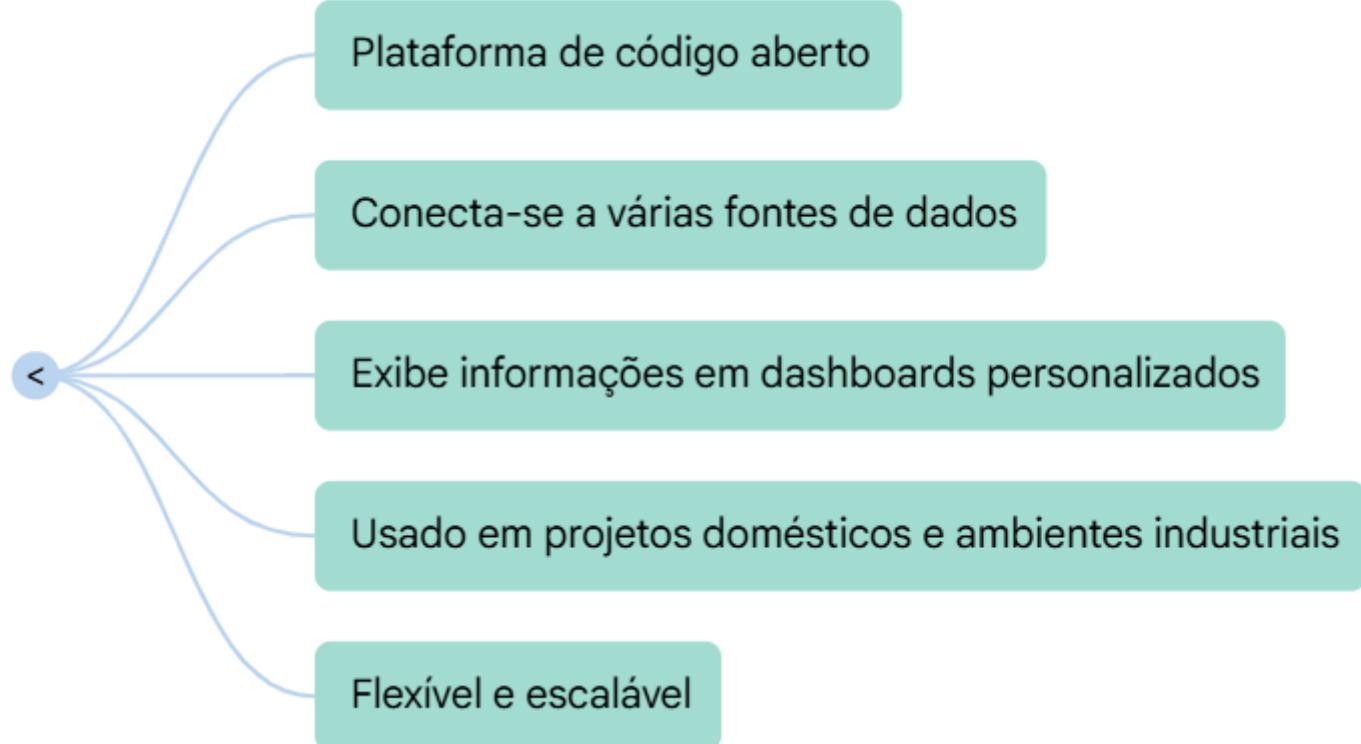


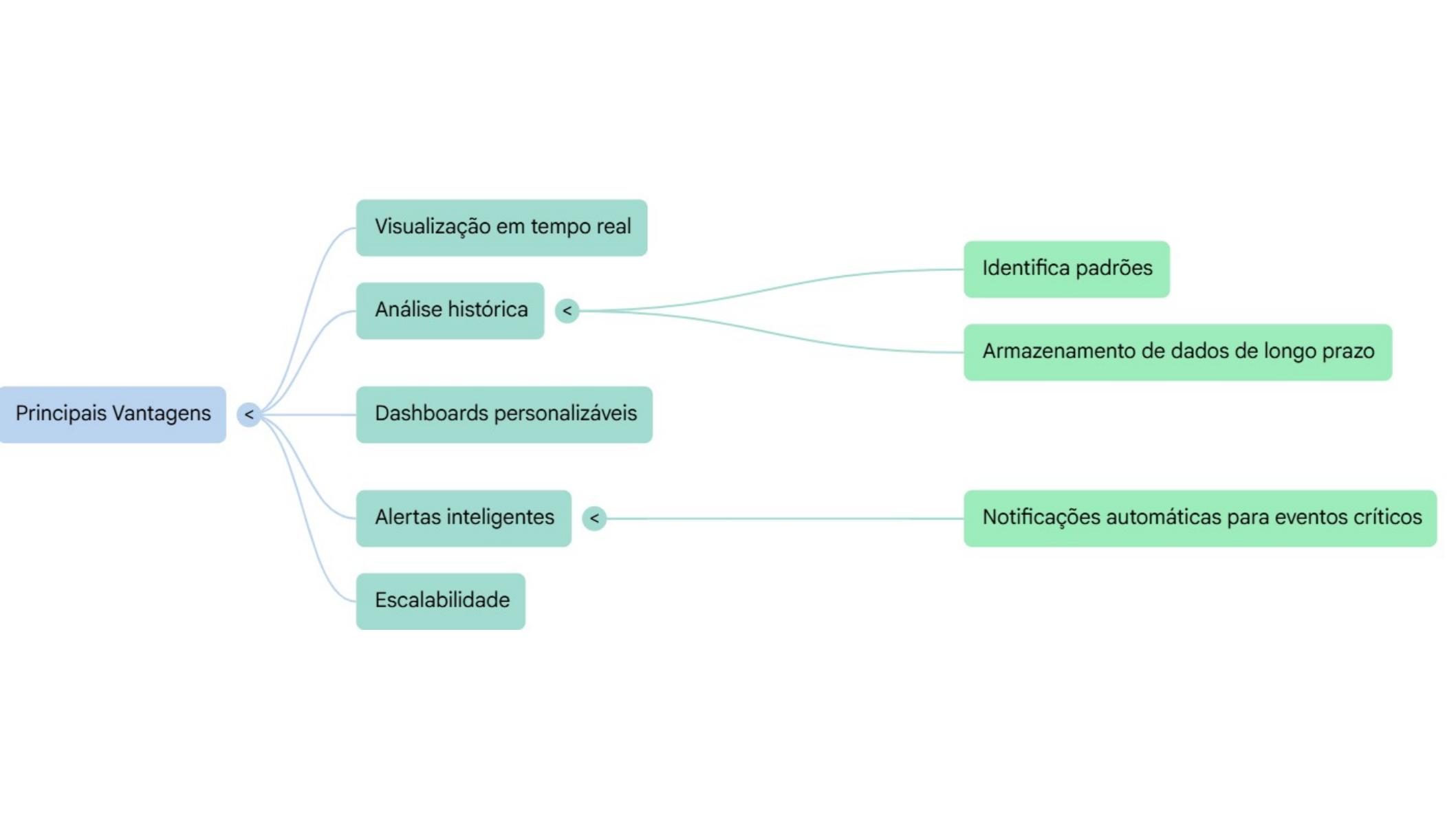
DESENVOLVIMENTO DE UM AMBIENTE
IOT COM GRAFANA

Monitoramento de Estação Meteorológica com Grafana



O que é Grafana







Grafana

Instalar o Grafana no Windows

<https://grafana.com/grafana/download?platform=windows>



grafana.com/grafana/download?platform=windows

Grafana Labs Products Open Source Solutions Learn Docs Pricing Downloads

Grafana

Overview Grafana project Grafana Alerting Download

Baixe o instalador oficial (MSI) de Windows no site da Grafana e execute-o.

Download Grafana



You can use Grafana Cloud to avoid installing, maintaining, and scaling your own instance of Grafana. [Create a free account to get started](#), forever access to 10k series Prometheus metrics, 50GB logs, 50GB traces, & more.

Version: 12.2.0

Edition: Enterprise

The [Enterprise Edition](#) is the default and recommended edition. It includes all the features of the OSS Edition, can be used to the full [Enterprise feature set](#), including support for [Enterprise plugins](#).

License: [Grafana Labs License](#)

Release Date: September 23, 2025

Release Info:



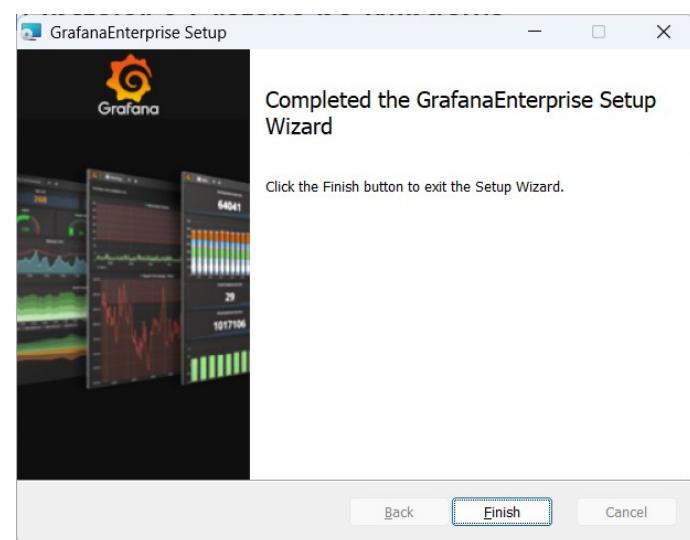
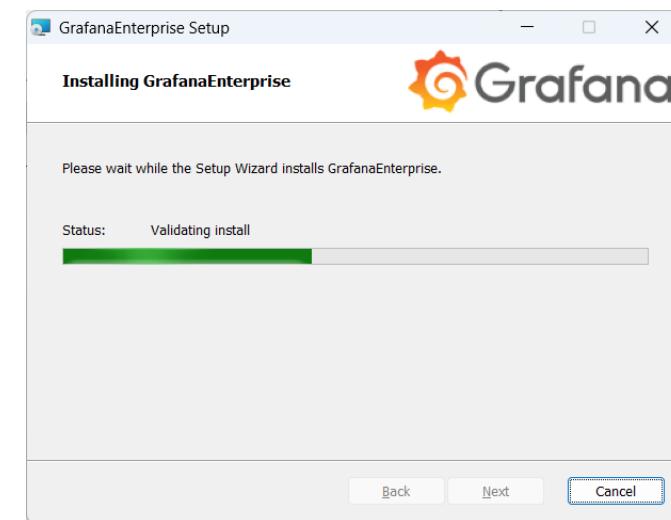
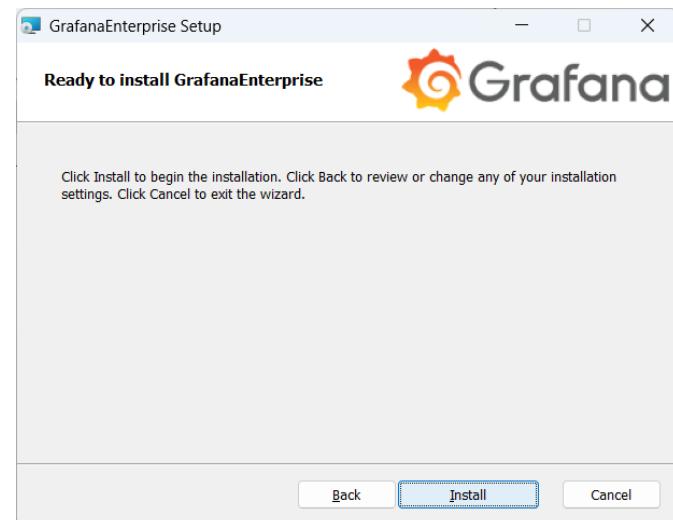
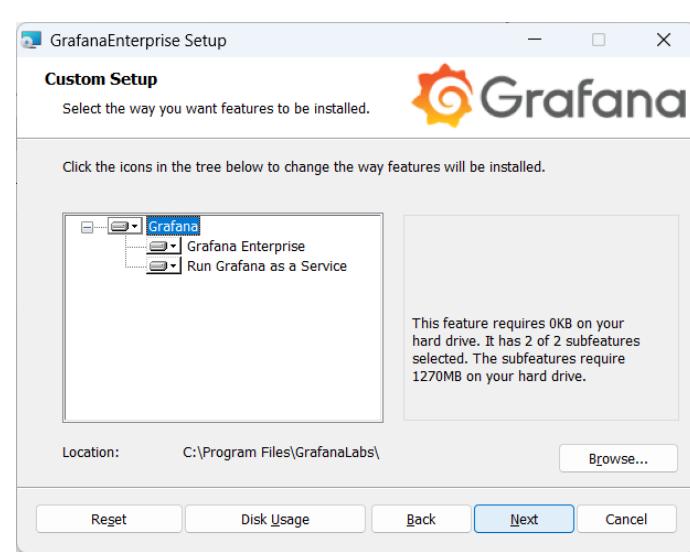
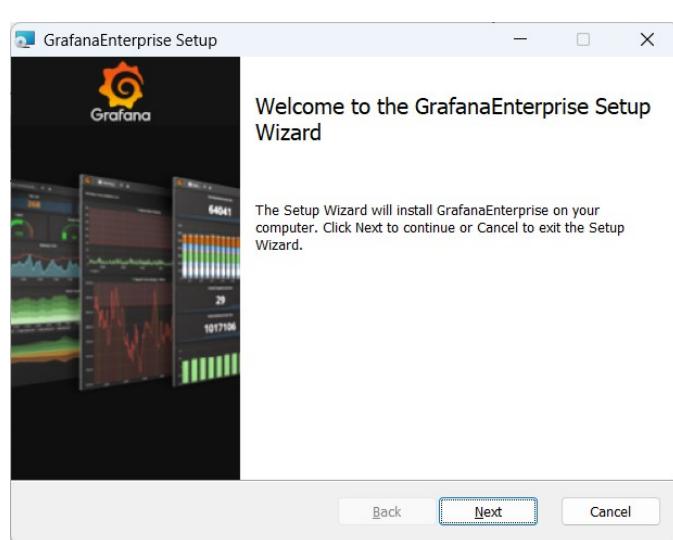
[Windows Installer \(64 Bit\)](#) SHA256: 6c9ef34c7253678bdc5a4779fc6b2492011d3e5f9c75c381a5bab5e3e0acc4

Observação: Grafana no Windows

Para rodar o Grafana localmente (self-hosted) no Windows, você não precisa criar conta.

Basta instalar, abrir <http://localhost:3000>, entrar com usuário admin e senha admin e trocar a senha no primeiro acesso.

Você só precisa de conta se optar por usar o Grafana Cloud (versão hospedada pela Grafana).

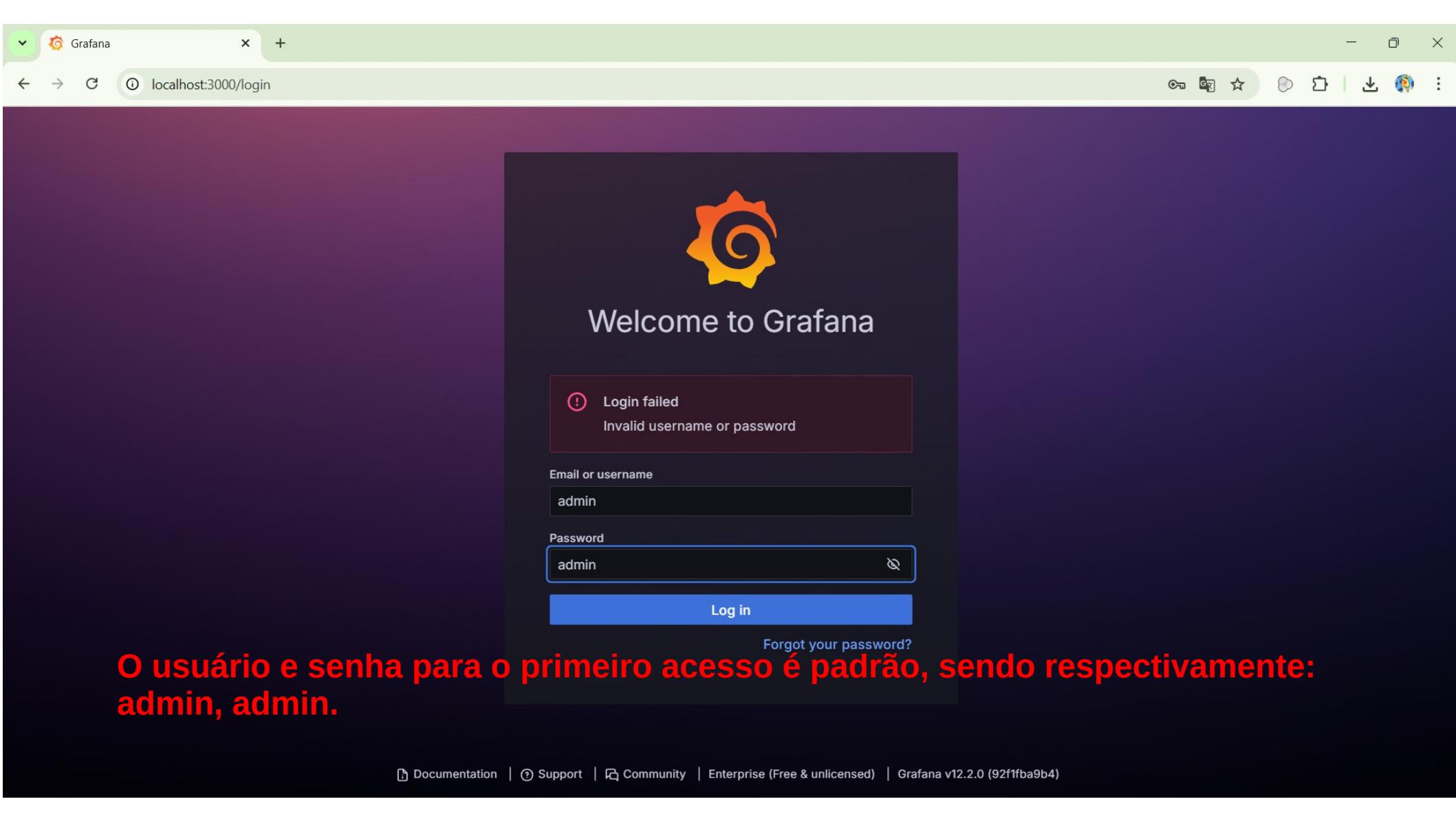


Program Files				
This PC		OS (C:) > Program Files		
		Search Program Files		
+	New	✖	✖	Sort View ...
Videos	Common Files	Date modified	Type	Size
Git	Common Files	10/18/2025 7:28 PM	File folder	
GitHub	CPUID	3/14/2025 6:16 PM	File folder	
Livros	Docker	5/30/2025 4:27 PM	File folder	
Grafana	dotnet	4/6/2025 3:32 AM	File folder	
	DownloadHelper CoApp	5/24/2024 5:43 PM	File folder	
	edb	7/22/2024 10:56 AM	File folder	
	Git	4/1/2025 5:22 PM	File folder	
	Google	10/31/2023 1:31 AM	File folder	
	GrafanaLabs	10/20/2025 5:32 PM	File folder	
	IBM	7/22/2024 4:19 PM	File folder	
	IIS	12/23/2024 8:33 PM	File folder	
	Internet Explorer	8/14/2025 6:03 PM	File folder	
	Java	8/27/2025 5:28 PM	File folder	
	Jenkins	8/27/2025 5:53 PM	File folder	

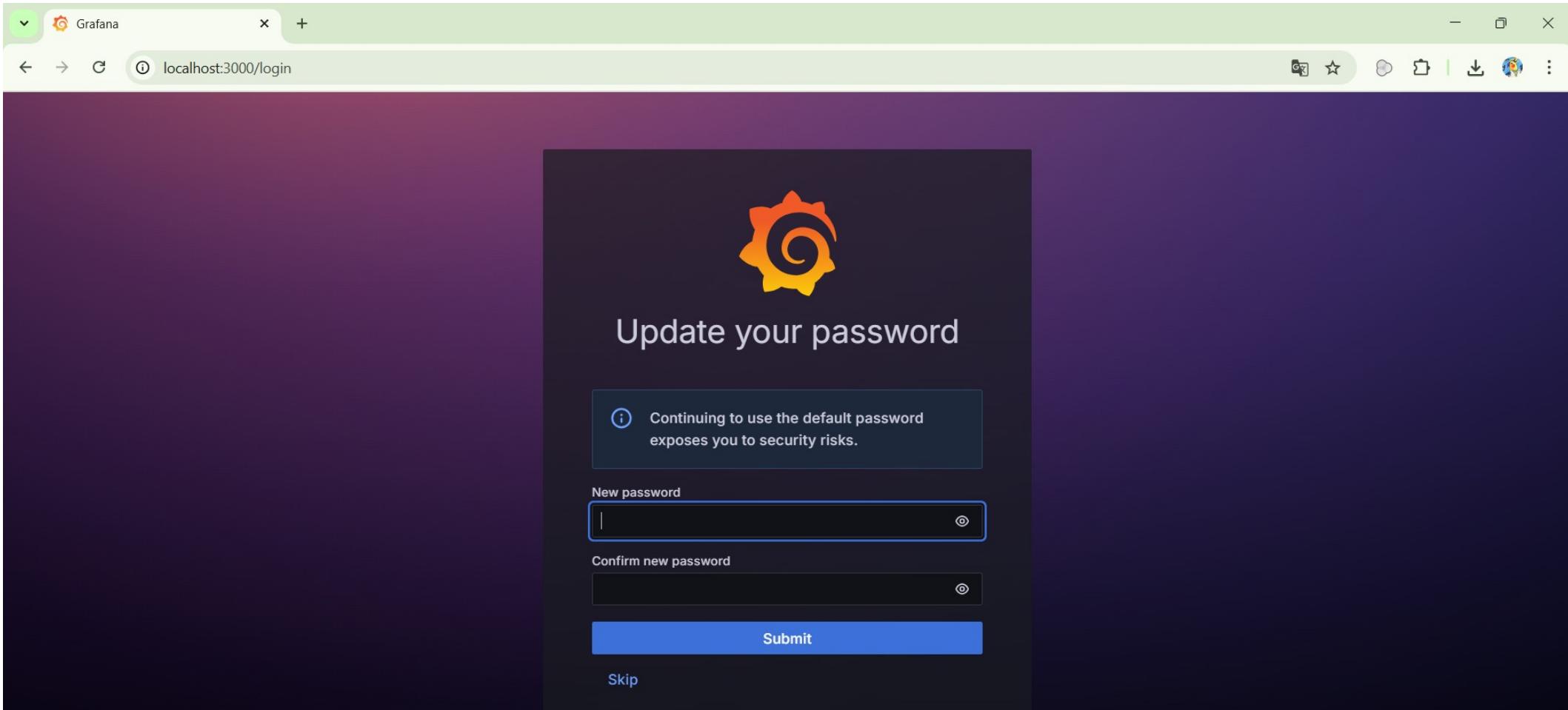
C:\Program Files\GrafanaLabs\grafana\bin

bin				
This PC		OS (C:) > Program Files > GrafanaLabs > grafana > bin		
+	New	✖	✖	Sort View ...
Videos	Name	Date modified	Type	Size
Git	grafana	9/23/2025 2:59 PM	Application	833,629 KB
GitHub	grafana-cli	9/23/2025 2:59 PM	Application	3,603 KB
Livros	grafana-server	9/23/2025 2:59 PM	Application	3,603 KB
Grafana				

```
etwork address/port) is normally permitted." duration=14.088ms
INFO [10-20|17:38:57] Starting MultiOrg Alertmanager
ERROR[10-20|17:38:57] Creating shutdown snapshot failed
database"
INFO [10-20|17:38:57] Closing tracing
INFO [10-20|17:38:57] Starting scheduler
INFO [10-20|17:38:57] starting
-10-20T17:39:00-03:00
INFO [10-20|17:38:57] Adding GroupVersion notifications.alerting.grafana.app v0alpha1 to ResourceManager logger=grafana-
apiserver
INFO [10-20|17:38:57] Adding GroupVersion folder.grafana.app v1beta1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Adding GroupVersion dashboard.grafana.app v1beta1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Adding GroupVersion dashboard.grafana.app v0alpha1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Adding GroupVersion dashboard.grafana.app v2beta1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Adding GroupVersion dashboard.grafana.app v2alpha1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Adding GroupVersion iam.grafana.app v0alpha1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Adding GroupVersion userstorage.grafana.app v0alpha1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Adding GroupVersion features.grafana.app v0alpha1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Adding GroupVersion playlist.grafana.app v0alpha1 to ResourceManager logger=grafana-apiserver
INFO [10-20|17:38:57] Installed APIs for app
caller=logger.go:214 time=2025-10-20T17:38:57.9024258-03:
00 app=playlist
INFO [10-20|17:38:57] Skipping API plugins.grafana.app/v0alpha1 because it has no resources. logger=grafana-apiserver
INFO [10-20|17:38:57] Installed APIs for app
caller=logger.go:214 time=2025-10-20T17:38:57.9033807-03:
00 app=plugins
INFO [10-20|17:38:58] StorageObjectCountTracker pruner is exiting logger=grafana-apiserver
INFO [10-20|17:38:58] App initialized
00 app=playlist
INFO [10-20|17:38:58] App initialized
00 app=plugins
caller=logger.go:214 time=2025-10-20T17:38:58.0081318-03:
caller=logger.go:214 time=2025-10-20T17:38:58.0081318-03:
```



O usuário e senha para o primeiro acesso é padrão, sendo respectivamente: admin, admin.



Após o primeiro acesso, fica a seu critério trocar a senha do usuário admin, ou como iremos ver logo em seguida, criar um outro usuário para acesso.

Home - Dashboards - Grafana

localhost:3000/?orgId=1&from=now-6h&to=now&timezone=browser

Grafana

Home Bookmarks Starred Dashboards Explore Drilldown Alerting Connections Administration

Welcome to Grafana

Need help? [Documentation](#) [Tutorials](#) [Community](#) [Public Slack](#)

Basic

The steps below will guide you to quickly finish setting up your Grafana installation.

TUTORIAL
DATA SOURCE AND DASHBOARDS
Grafana fundamentals

Set up and understand Grafana if you have no prior experience. This tutorial guides you through the entire process and covers the "Data source" and "Dashboards" steps to the right.

[Learn how in the docs](#)

DATA SOURCES
Add your first data source

[Learn how in the docs](#)

DASHBOARDS
Create your first dashboard

[Learn how in the docs](#)

Remove this panel

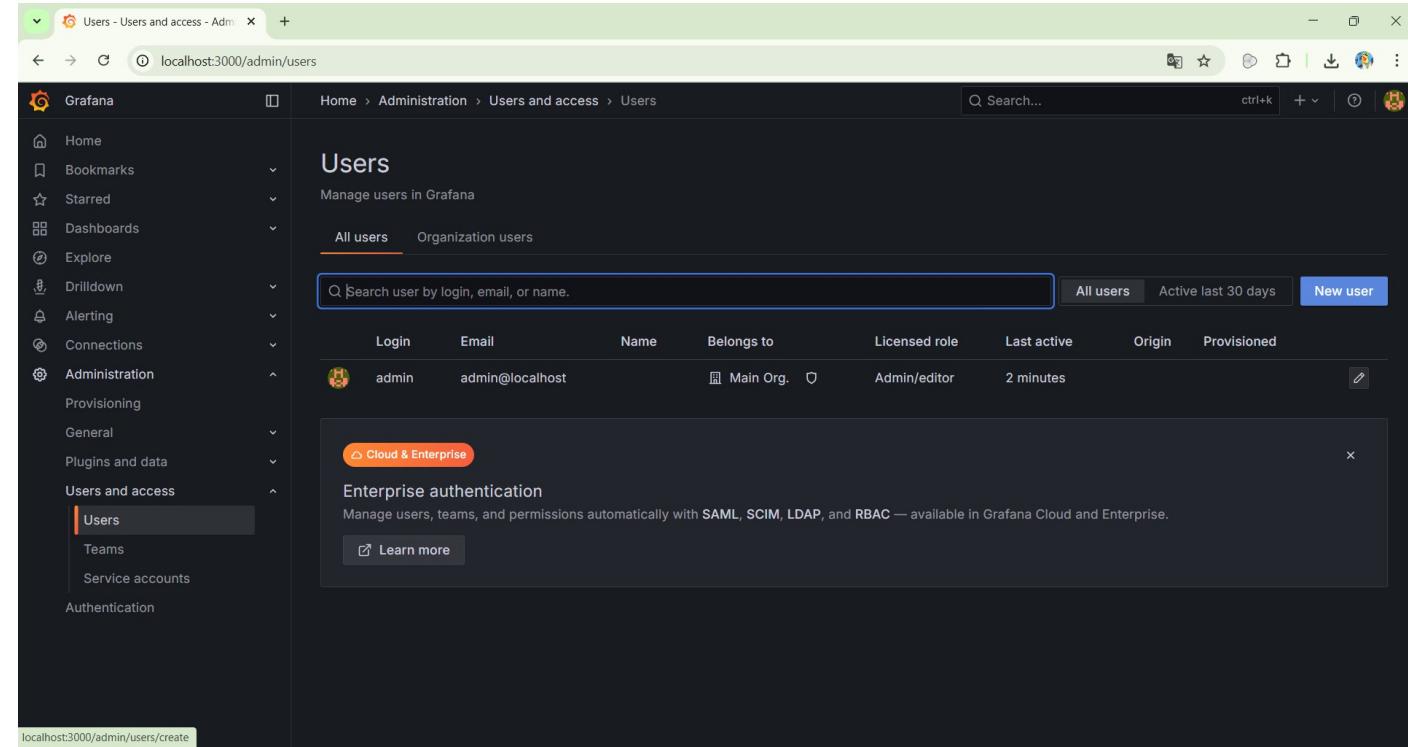
Dashboards

Starred dashboards

Recently viewed dashboards

Latest from the blog

 Tips for optimizing logs in Grafana Cloud



Users - Users and access - Admin

localhost:3000/admin/users

Grafana

Home > Administration > Users and access > Users

Search...

All users Organization users

Search user by login, email, or name.

Login	Email	Name	Belongs to	Licensed role	Last active	Origin	Provisioned
admin	admin@localhost	Main Org.	Admin/editor	2 minutes			

Cloud & Enterprise

Enterprise authentication

Manage users, teams, and permissions automatically with SAML, SCIM, LDAP, and RBAC — available in Grafana Cloud and Enterprise.

Learn more

localhost:3000/admin/users/create

Criando um novo usuário

Acesse a barra lateral e vá em Administração

Acesse a aba de usuários e acessos

Vá em usuários

Clique em novo usuário

Preencha as informações, sendo estas:

Nome: nome da pessoa que será o novo usuário.

Email: email que deseja atrelar a esse novo usuário (não obrigatório).

Username: nome do usuário.

Password: senha de acesso ao novo usuário.

Observação

Porta padrão: 3000.

Se precisar mudar (ex.: para 8080), edite conf\custom.ini e ajuste http_port = 8080, depois reinicie o Grafana.

**Exemplo prático (sem precisar
instalar banco externo)**

A screenshot of the Grafana web interface showing the 'Dashboards' page. The URL in the browser bar is `localhost:3000/dashboards`. The left sidebar is open, showing navigation options like Home, Bookmarks, Starred, and Dashboards (which is selected and highlighted with a blue arrow). The main content area is titled 'Dashboards' and contains a sub-instruction: 'Create and manage dashboards to visualize your data'. It features a search bar, a 'Filter by tag' dropdown, and a 'Starred' checkbox. On the right, there are buttons for 'New dashboard' (highlighted with a blue arrow) and 'New folder' (highlighted with a blue arrow). A central illustration of a yellow cartoon character with a headband and a cactus is displayed. Below the character, the text 'You haven't created any dashboards yet' is shown, along with a prominent blue 'Create dashboard' button.

New dashboard - Dashboards - +

localhost:3000/dashboard/new?orgId=1&from=now-6h&to=now&timezone=browser

Grafana

Home Bookmarks Starred Dashboards Explore Drilldown Alerting Connections Administration Provisioning General Plugins and data Users and access Users Teams Service accounts Authentication

Home > Dashboards > New dashboard

Search... ctrl+k Add Settings Save dashboard

Last 6 hours Refresh

Start your new dashboard by adding a visualization

Select a data source and then query and visualize your data with charts, stats and tables or create lists, markdowns and other widgets.

+ Add visualization

Import panel

Add visualizations that are shared with other dashboards.

+ Add library panel

Import a dashboard

Import dashboards from files or grafana.com.

Import dashboard



Edit panel - New dashboard - X Add data source - Data sources X +

localhost:3000/dashboard/new?orgId=1&from=now-6h&to=now&timezone=browser&editPanel=1

Grafana Home Dashboards New dashboard Edit panel Search... ctrl+k + ? Save dashboard Back to dashboard Discard panel

Select data source

Q Select data source

No data sources found

Configure a new data source

Use multiple data sources

-- Mixed --

Reuse query results from other visualizations

-- Dashboard --

Discover visualizations using mock data

-- Grafana --

Open a new tab and configure a data source

Configure a new data source

+ Add query + Expression

be a point to trigger the tooltip, in pixels

Home Bookmarks Starred Dashboards Explore Drilldown Alerting Connections Administration Provisioning General Plugins and data Users and access: Users Teams Service accounts Authentication



SumoLogic

Symbolic integration and datasource



Wavefront

Wavefront integration and data source

Zendesk

Zendesk datasource

Others



Alertmanager

Add external Alertmanagers (supports Prometheus and Mimir implementations) so you can use the Grafana Alerting UI to manage silences, contact points, and notification policies.

Core



TestData

Generates test data in different forms

[Learn more](#)

Find more data source plugins

localhost:3000/dashboard/new?orgId=1&from=now-6h&to=now&timezone=browser&editPanel=1

Back to dashboard Discard panel Save dashboard

Search... ctrl+k

Table view Last 6 hours Refresh

New panel

Time series

Panel options

Title: New panel

Description

Repeat options

Tooltip

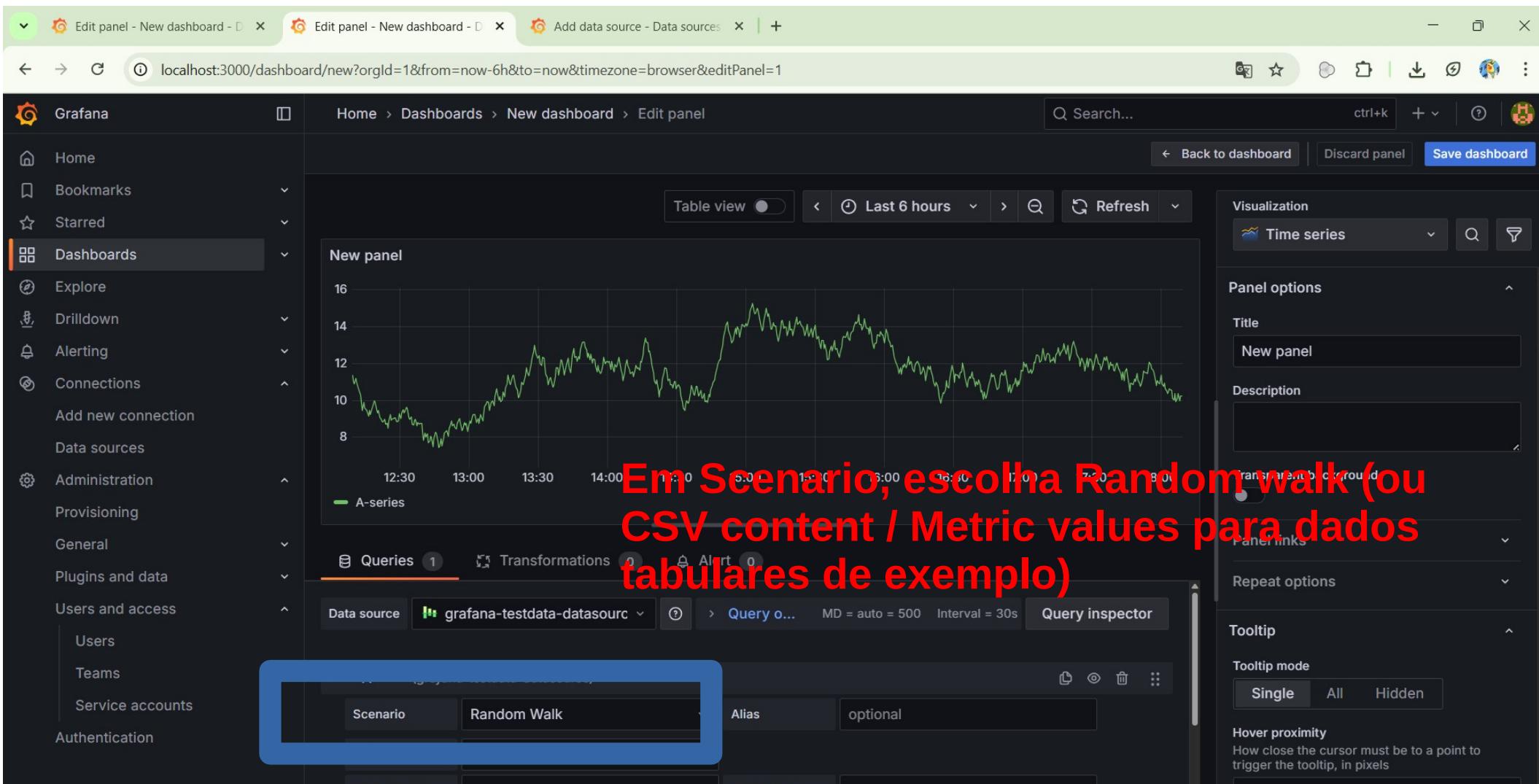
Tooltip mode: Single

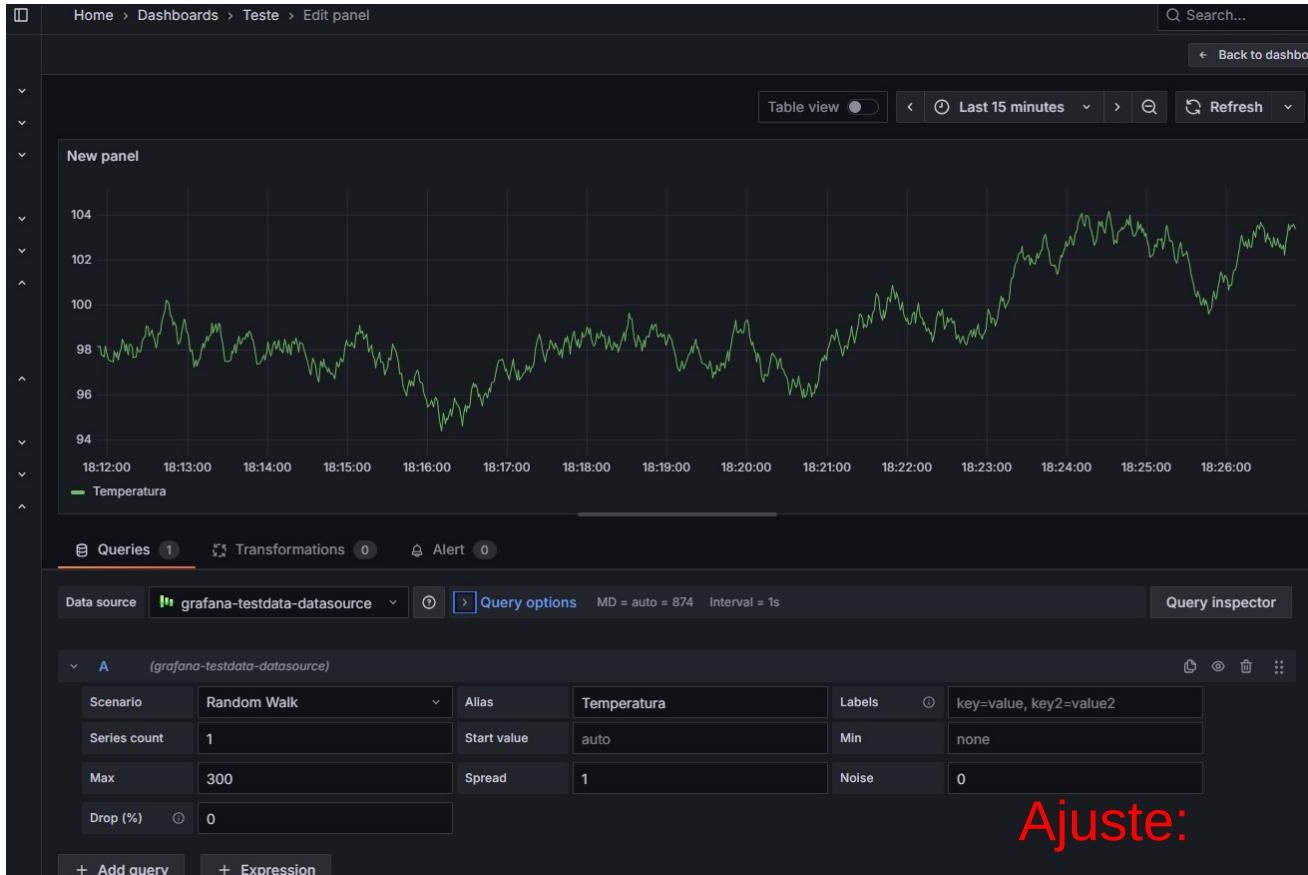
Hover proximity: How close the cursor must be to a point to trigger the tooltip, in pixels

Scenarios: Scenario Random Walk

Alias: optional

Em Scenario, escolha Random walk (ou CSV content / Metric values para dados tabulares de exemplo)

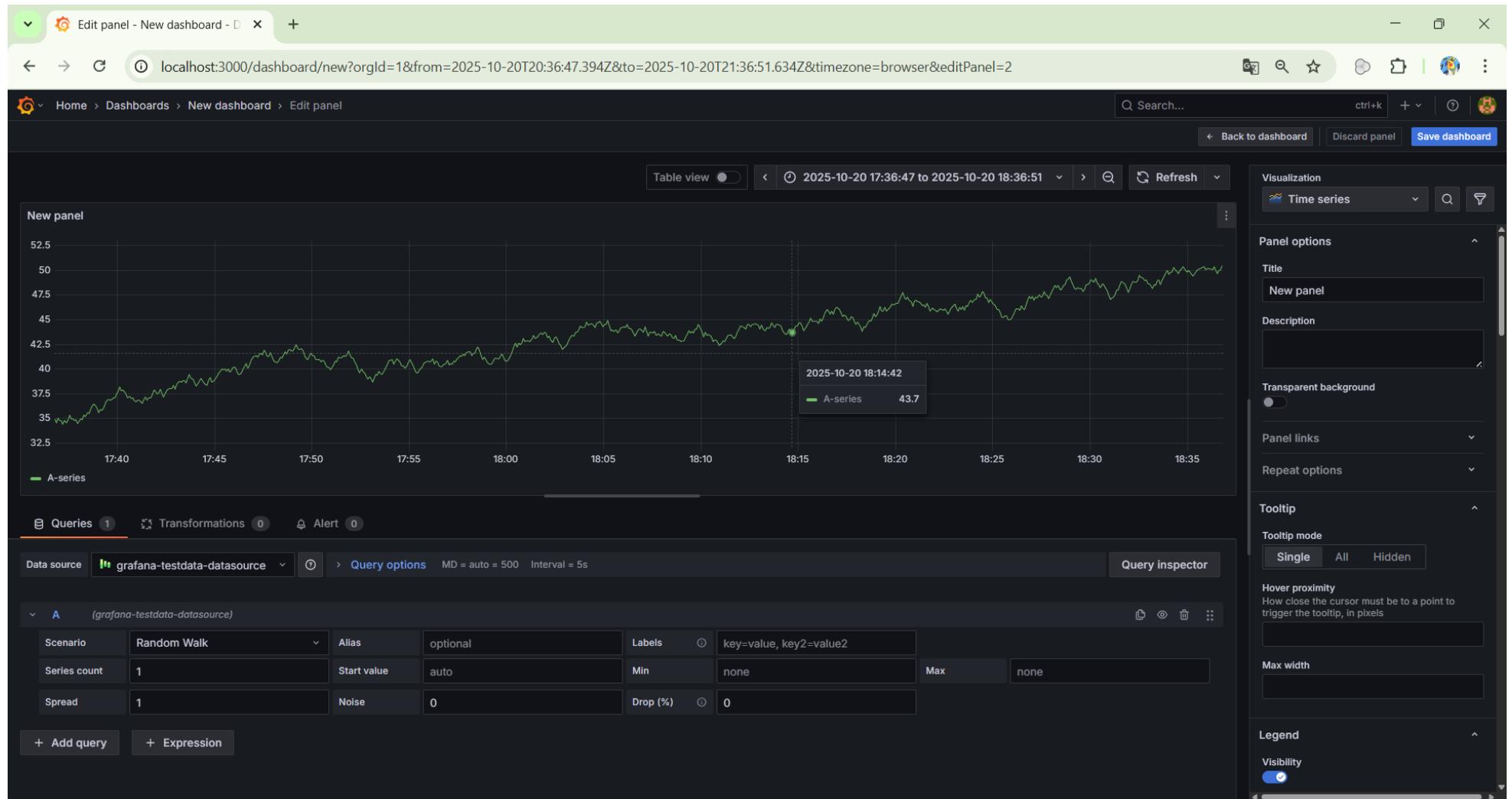


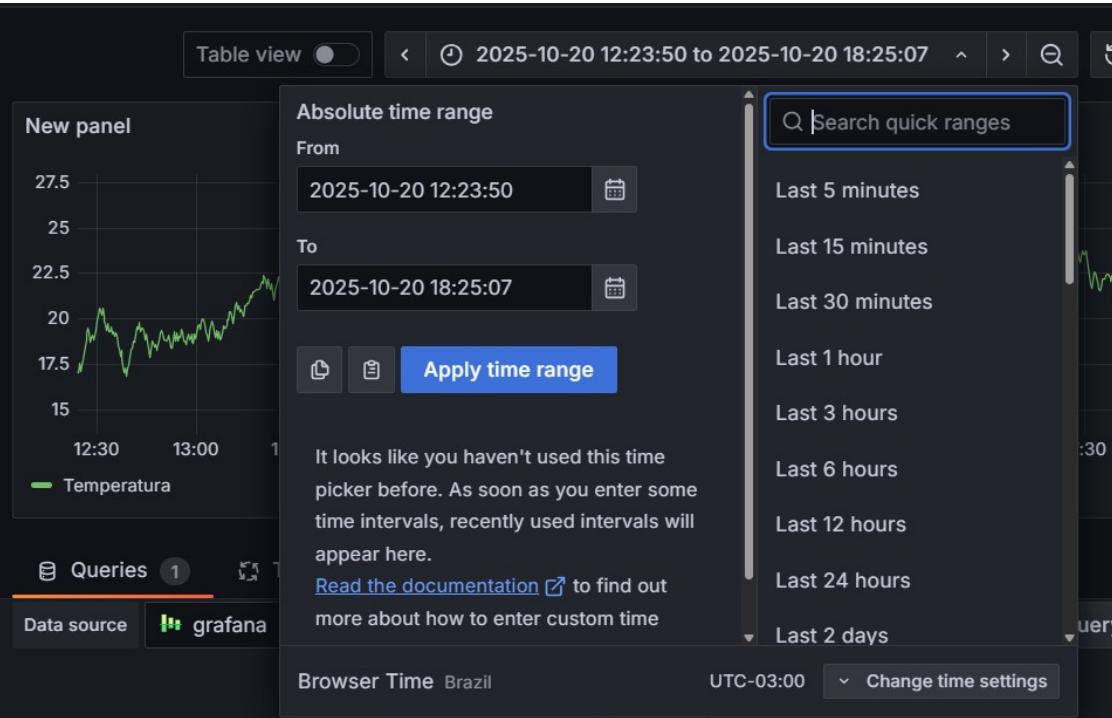


Ajuste:

Alias: Temperatura

Max points: 300 Series count: 1





Intervalo de tempo (canto superior direito): Last 15 minutes



Back to dashboard

Discard panel

Save dashboard

Table view

2025-10-20 17:36:47 to 2025-10-20 18:36:51



Refresh



Visualization

Time series



New panel



Queries 1 Transformations 0 Alert 0

Data source **grafana-testdata-datasource** MD = auto = 500 Interval = 5s

A (grafana-testdata-datasource)						
Scenario	Random Walk	Alias	optional	Labels	key-value, key2=value2	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/> <input type="button" value="More"/>
Series count	1	Start value	auto	Min	none	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/> <input type="button" value="More"/>
Spread	1	Noise	0	Drop (%)	0	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/> <input type="button" value="More"/>

Panel options

Title

New panel

Description

Transparent background

Panel links

Repeat options

Tooltip

Tooltip mode

Single All Hidden

Hover proximity

How close the cursor must be to a point to trigger the tooltip, in pixels

Max width

Legend

Visibility



Table view

2025-10-20 17:36:47 to 2025-10-20 18:36:51



Refresh



Transformations 0

Alert 0

Visualization



Click to change visualization

Panel options

Title

New panel

Description

Transparent background



Panel links

Repeat options

Value options

Show

Calculate a single value per column or series or

- <https://embarcados.com.br/desenvolvimento-de-um-ambiente-iot-completo-do-microcontrolador-ao-grafana/#Funcionamento-basico-e-caracteristicas-do-DHT11>