

# Grafana

The latest innovation in visualization & monitoring

10

# Agenda

- Grafana top 10
- Grafana 10 highlights
- Purchasing Grafana Cloud through AWS Marketplace
- Local announcements and call for meetup speakers and hosts





## FEATURES

Top 10 Grafana features as told by Grafana engineers\*

\*who are not biased at all

# 1. Grafana Live

**Introduced:** Grafana 8.0

**What it does:** Grafana has built-in support for streaming — no external data source required. Push data to </api/live/push/:streamId> and select that stream using the built-in Grafana data source and visualize it live.



**Torkel Ödegaard**

Chief Grafana Officer & Co-founder



# 2. Query builders

**Introduced:** Grafana 9.0

**What it does:** We built query builders for Grafana Loki and Prometheus to help new users get started in Grafana. You can now query and visualize data even when you're not sure about the querying language.



**Ivana Huckova**  
Senior Software Engineer

The screenshot shows the Grafana interface for building Prometheus queries. At the top, there's a header with the letter 'A' and '(gdev-prometheus)'. Below it are tabs for 'Query patterns' (selected), 'Raw query' (with a toggle switch), and 'Give feedback'. A search bar is also present. The main area contains several query suggestions: 'Rate then sum', 'Rate then sum by(label) then avg', 'Histogram quantile on rate', and 'Histogram quantile on increase'. Below these is a 'Raw query' section containing the Prometheus query: `irate(counters_requests{app="frontend"}[$__interval])`. At the bottom, there are buttons for '+ Add query', 'Query history', and 'Inspector'.

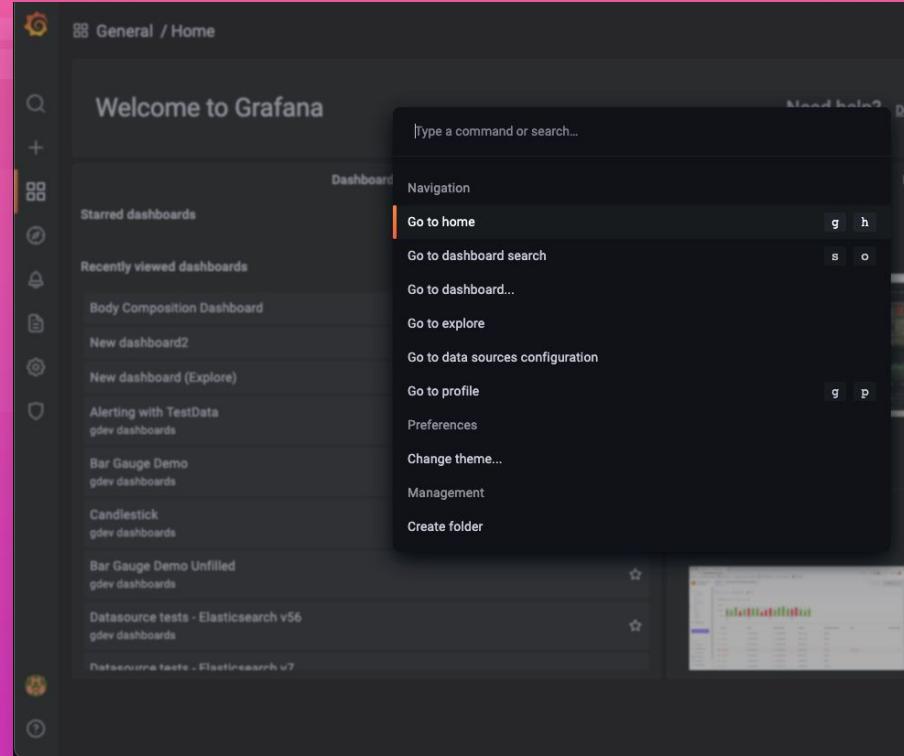
# 3. Command palette

**Introduced:** Grafana 9.0

**What it does:** Navigate your way through the Grafana UI without using your mouse or taking your hands off the keyboard. Hit **cmd + k** and a menu pops up with all the keyboard commands you need at your fingertips.



**David Kaltschmidt**  
Senior Director, Engineering



A screenshot of the Grafana interface showing the command palette. The palette is a floating menu that appears when the 'cmd + k' key combination is pressed. It contains a search bar at the top with the placeholder 'Type a command or search...'. Below the search bar is a list of navigation options: 'Go to home', 'Go to dashboard search', 'Go to dashboard...', 'Go to explore', 'Go to data sources configuration', 'Go to profile', 'Preferences', 'Change theme...', 'Management', and 'Create folder'. To the left of the palette, there is a sidebar with icons for 'Starred dashboards' and 'Recently viewed dashboards', followed by a list of dashboard names: 'Body Composition Dashboard', 'New dashboard2', 'New dashboard (Explore)', 'Alerting with TestData', 'Bar Gauge Demo', 'Candlestick', 'Bar Gauge Demo Unfilled', 'Datasource tests - Elasticsearch v56', and 'Datasource tests - Elasticsearch v7'. The main dashboard area in the background shows several panels with data visualizations.

# 4. RBAC updates\*

**Introduced:** Grafana 8.0

**What it does:** From the beginning, Grafana had a few built-in roles (Viewer, Editor, Admin), each with a predefined set of permissions. With RBAC, you can configure access and change permissions assigned to built-in roles *or* grant specific permissions to users and teams.

| Login  | Email               | Name   | Seen       | Role                               |
|--------|---------------------|--------|------------|------------------------------------|
| Amanda | amanda@some-org.com | Amanda | < 1 minute | Viewer +5 roles                    |
| Ben    | ben@some-org.com    | Ben    | 10 years   | Editor +2 roles                    |
| Cersei | cersei@some-org.com | Cersei | < 1 minute | Admin Licensing writer Select role |

Viewer    Editor

Fixed roles

Alerting

Annotations

API Keys

Dashboards

Data sources

... Click here to see more



**Alexander Zobnin**  
Senior Software Engineer

\* This feature is only available in Grafana Enterprise and Grafana Cloud Advanced.

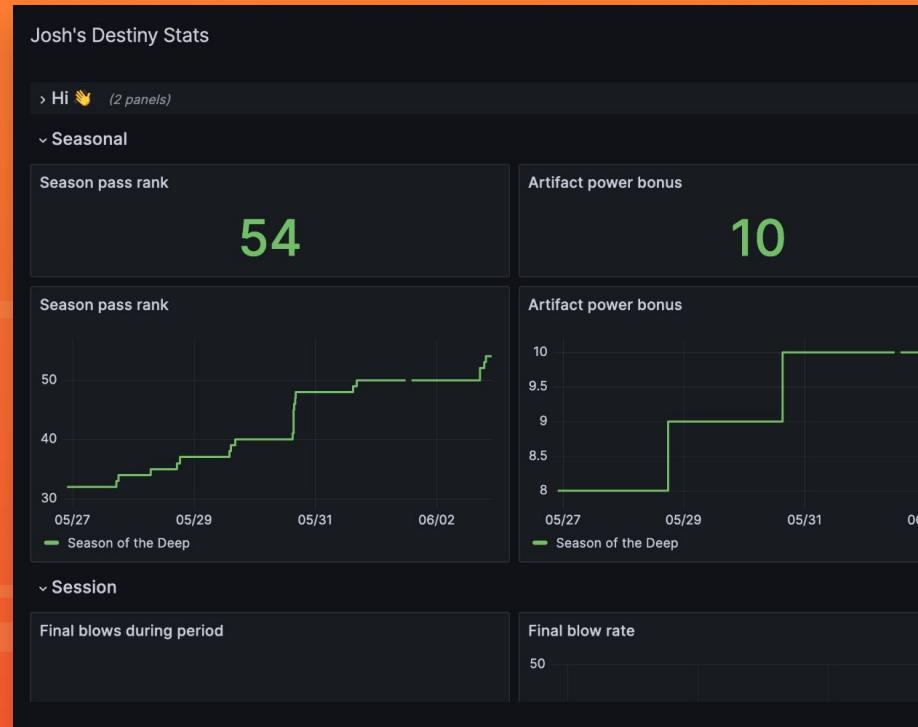
# 5. Public dashboards

**Introduced:** Grafana 9.1

**What it does:** Public dashboards allow you to share your Grafana dashboard with anyone, even if they're not part of your Grafana organization. Users now have the ability to share dashboards with up-to-date data — for work or for play.



**Josh Hunt**  
Senior Software Engineer



# 6. Visualization suggestions

**Introduced:** Grafana 9.1

**What it does:** This is hidden away in the Panel Edit options. It analyzes your data and query context to provide intelligent suggestions for visualizations. Rather than clicking through a lot of visualizations, you get an instant overview of what your data would look like in lots of different panels.



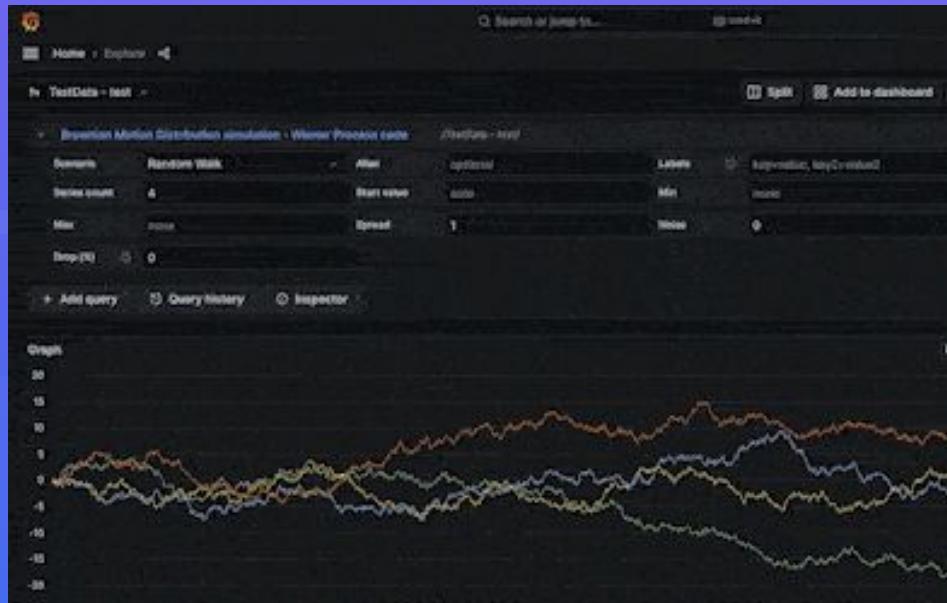
Daniel Lee  
Senior Director, Grafana



# 7. Explore to dashboard

**Introduced:** Grafana 9.0

**What it does:** Easily convert and transfer a data exploration session in the Explore interface into a full-fledged dashboard. The feature provides a seamless transition from exploring data to creating a more permanent and shareable visualization within a dashboard.



**Thanos Karachalios**  
Senior Product Manager

# 8. Chained variables

**Introduced:** Grafana X.X

**What it does:** You can template variables to filter *other template variables*. By doing this, you can create a progressive set of filters that helps you drill down to exactly the data you're looking for, without having to endlessly scroll.



**Mitch Seaman**  
Director of Product

datacenter A server All pod All

Panel Title

Data center = A

server = AA, AB, AC, AD, AE, AF, AG, AH

pod = AAA, AAB, AAC, AAD, AAE, AAF, AAG, AAH, ABC, ABD, ABE, ABF, ABG, ABH, ACA, ACB, ACC, ACF, ACG, ACH, ADA, ADB, ADC, ADD, ADE, ADF, AEA, AEB, AEC, AED, AEE, AEF, AEG, AEH, AFA, AFD, AFE, AFF, AFG, AFH, AGA, AGB, AGC, AGD, AGG, AGH, AHA, AHB, AHC, AHD, AHE, AHF, AHG,

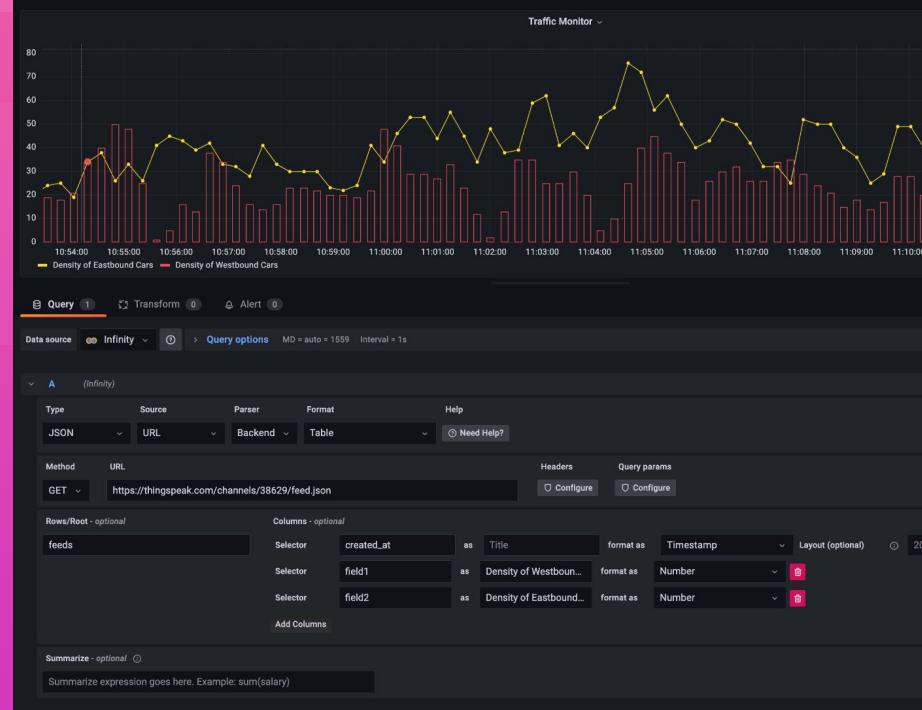
# 9. Infinity panel

**Introduced:** Grafana 9.1

**What it does:** Users can connect Grafana to any third-party API and effortlessly visualize data from diverse sources. The infinity plugin can process different data formats such as JSON, CSV, XML, HTML and GraphQL endpoints easily.



**Sriramajeyam Sugumaran**  
Senior Software Engineer



# 10. Plugin catalog

**Introduced:** Grafana 8.2

**What it does:** Find and install plugins directly within Grafana, all without the interruption of a system restart. The plugin catalog takes the complexity out of building dashboards so you don't need to be a tech whiz to venture into the diverse world of plugins.



Alexa Vargas  
Senior Software Engineer

A screenshot of the Grafana plugin catalog interface. It shows a grid of 12 plugin cards. Each card includes the plugin name, icon, developer, and a "Signed" badge. The cards are arranged in three rows of four. The visible plugins are: Akumuli (Akumuli), Altinity plugin for ClickHouse (Vertamedia), Amazon Athena (Grafana Labs), Amazon Timestream (Grafana Labs), Ambari Metrics (Prajwal Rao), Analytics Panel (macropower), Annotation Panel (novalabs), Announcer (michaeldmoore), Anodot (Anodot), App Center (thalsantana).

# Learn more about Grafana

[Building](#)  
[Grafana](#)  
[dashboards](#)  
[webinar](#)

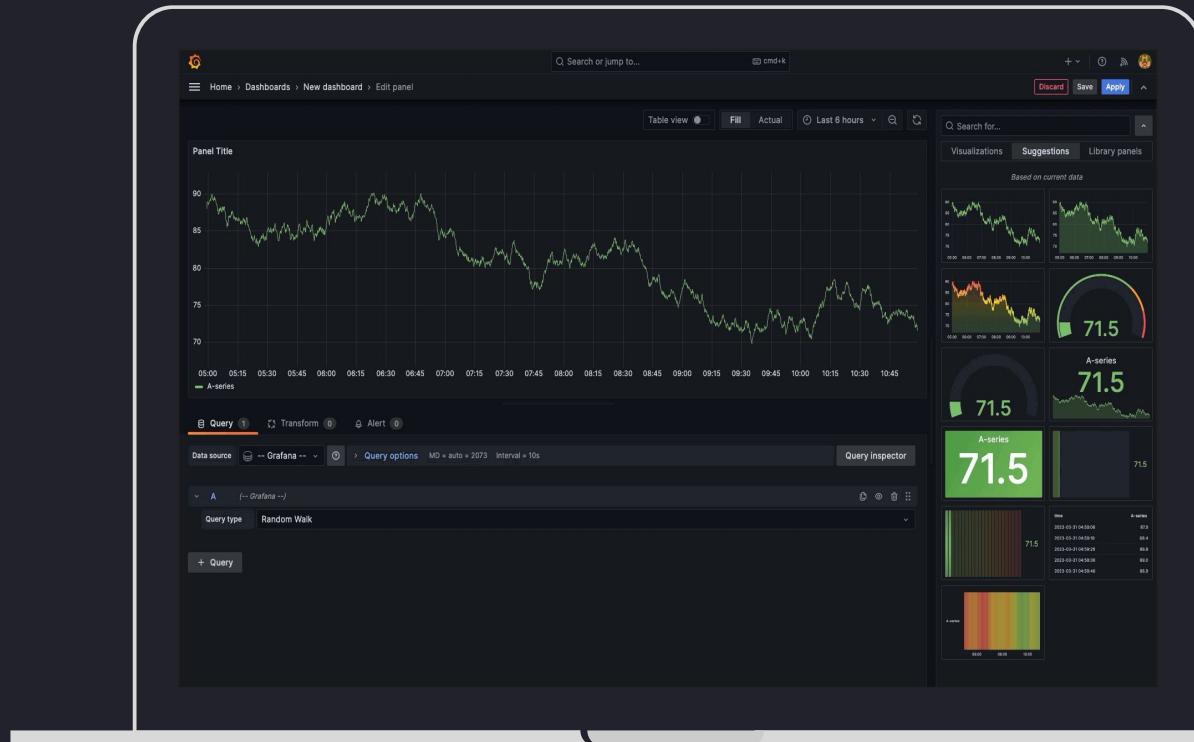
[Grafana](#)  
[documentation](#)

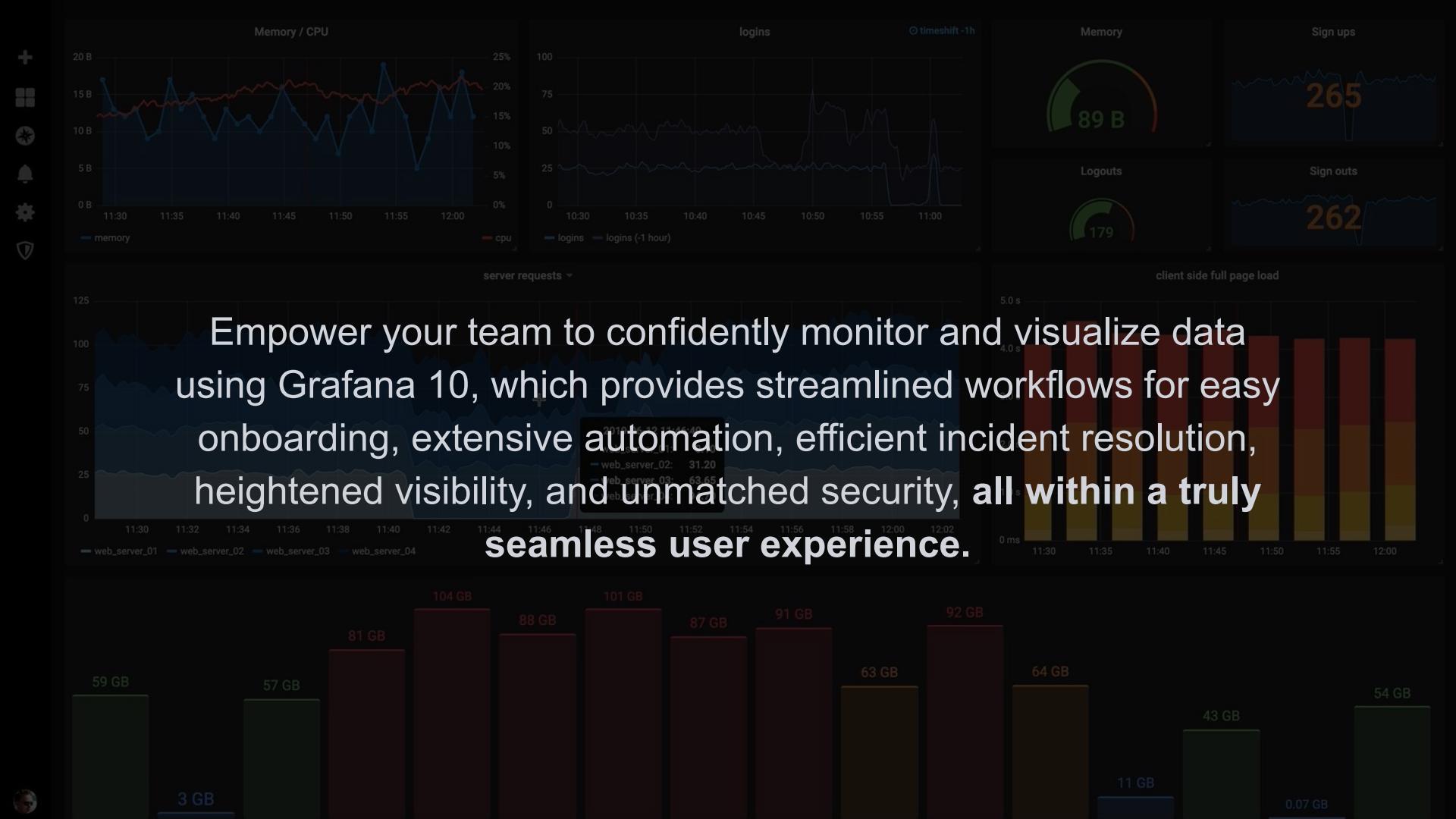
[Deep dive into](#)  
[Grafana 10](#)  
[session](#)



## Access a better visualization & monitoring experience with Grafana 10

- ✓ Better workflow
- ✓ Superior data safeguarding
- ✓ Unprecedented dashboard sharing
- ✓ Advanced, streamlined app creation
- ✓ Unify and analyze your diverse data





# Uncover insights and optimize your monitoring

Discover correlations, transform data into insights, access data securely, share insights, and manage dashboards with ease – **Only available in Grafana 10**



## Uncover data relationships & hidden insights

Quickly uncover correlations and root causes in your data with a flexible and user-friendly interface.



## Access network-secured data sources securely and privately

Connect to your network-secured data sources with confidence. With end-to-end encryption and the ability to route multiple data sources through a single encrypted SSH tunnel



## Share dashboards with stakeholders outside your organization

Choose which dashboards are open to public users and set customizable restrictions on data access to ensure security



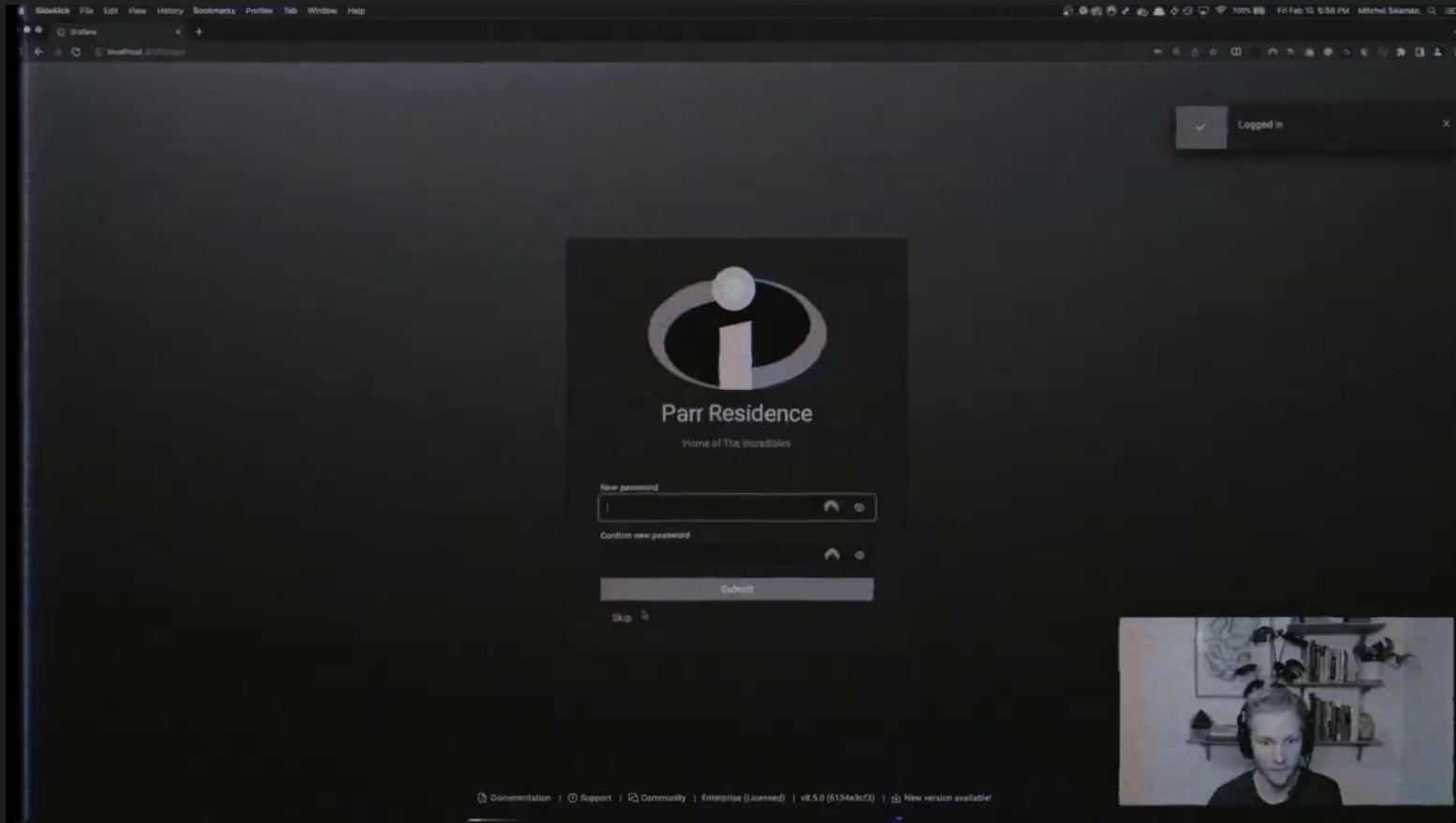
## Create, and manage dashboards more efficiently

Build dashboards that fit your specific needs and preferences with the ability to support different layouts and variables.



Unlock your data's  
potential from day  
one with Grafana 10

# Once a challenge: Setting up your first dashboard



Accelerate onboarding and enjoy enhanced usability for a better monitoring experience

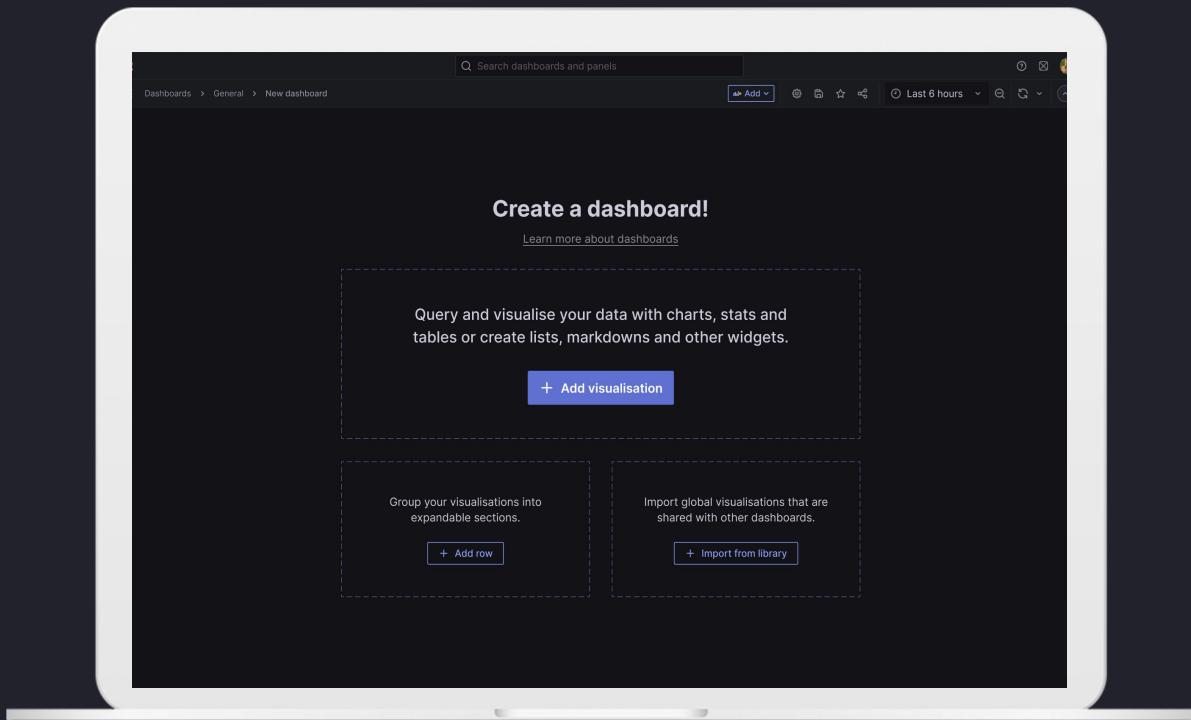
# Jumpstart your Grafana journey

## Get started on Grafana faster

The improved onboarding flow saves time and gets up and running with Grafana even faster.

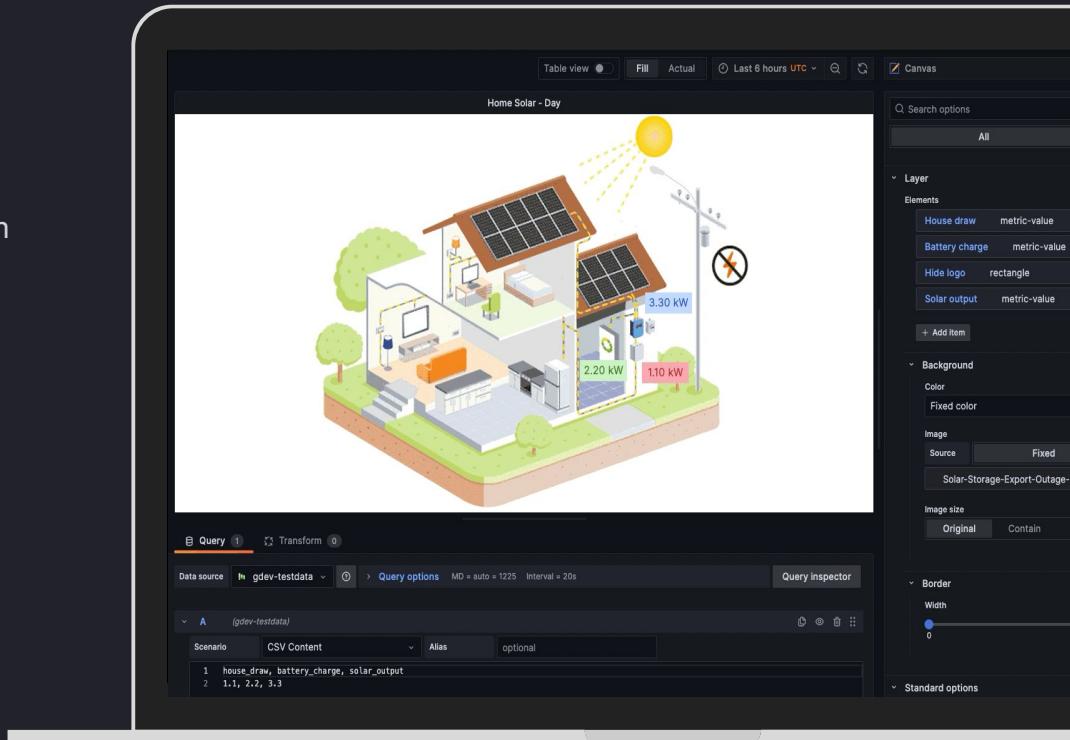
## Effortlessly Discover and Navigate to Your Data

Get to your data sources quickly and easily with the improved data source picker.



# Better dashboard usability

- ✓ New, fresh start dashboard
- ✓ Connections console & automatic plugin installation
- ✓ Enhanced data source configuration
- ✓ Improved Prometheus and Loki query builders
- ✓ New data source picker for quicker selection
- ✓ Introduction of an interactive Canvas panel
- ✓ Revamped navigation & accessibility
- ✓ Inclusion of subfolders for better organization





Automate &  
accelerate your  
dashboard  
management

# Grafana as code now

Complex,  
undocumented

Lack of objects  
consistency

Dashboards are  
a JSON monolith



# Grafana second interface

Growing complexity without growing pain

Dashboards in sync with your applications

Monitoring as code as part of your platform



# How Grafana is approaching as code



Recognize there is  
no one-size-fits-all  
solution



Different tools for  
different use cases



Common foundations  
everything we are  
building



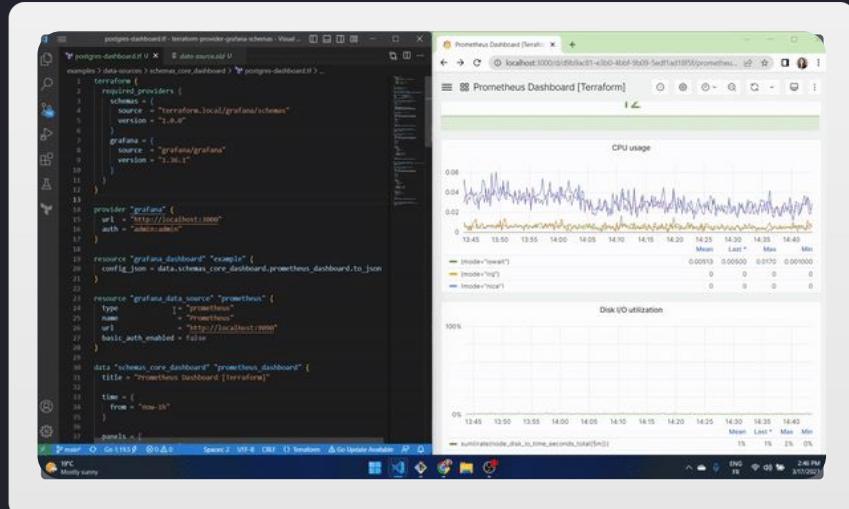
Effortlessly optimize your dashboards

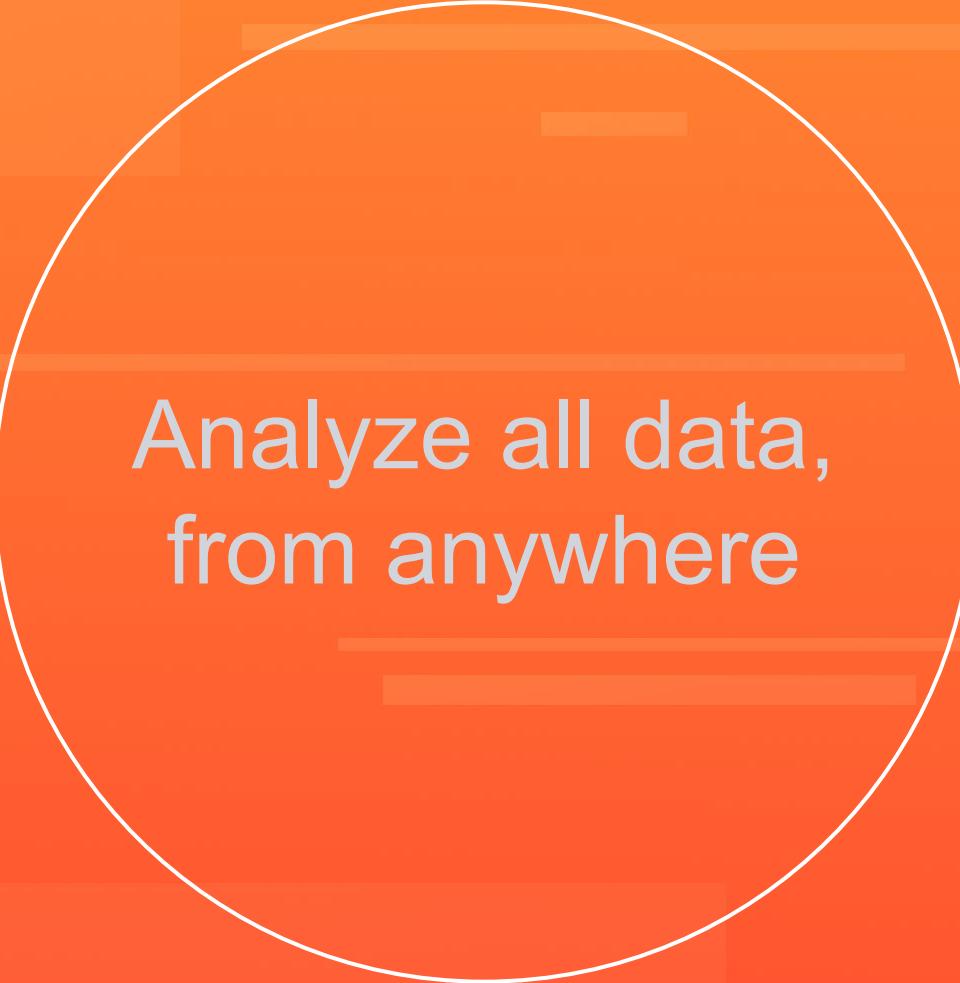
Experimental 

# Compose dashboards as code

## Achieve seamless dashboard creation and management

Build customizable, future-proof dashboards with Grafana's updated Grafonnet and Terraform libraries. Enhance your efficiency and elevate your observability platform.





Analyze all data,  
from anywhere

## Visualize

# Grafana Correlations (Glue)

Correlate your data, no matter where it lives.

## Who?

Users with related data in more than one data source.

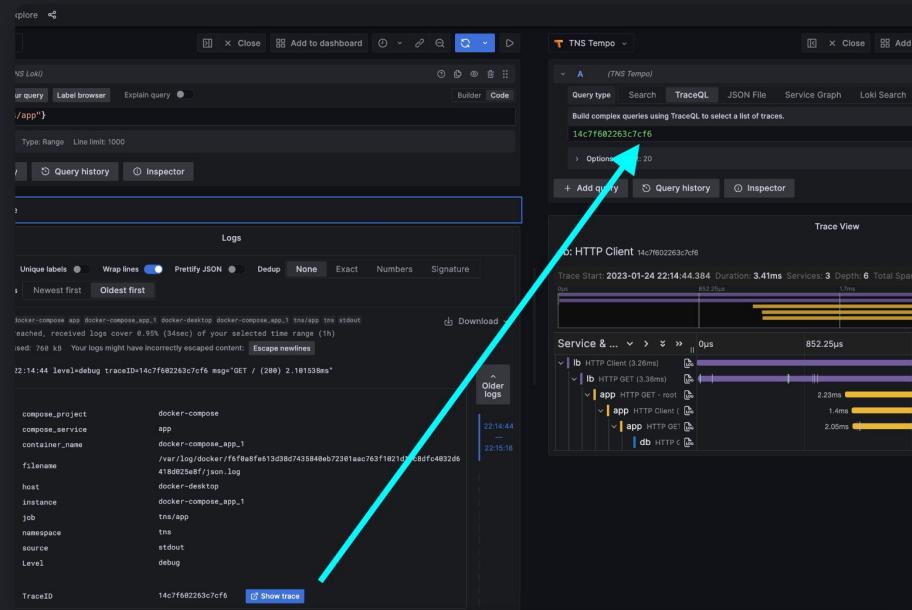
## Why?

Bringing together all the signals and context for the systems you care about enables you to truly observe those systems.

Unfortunately, those signals and context often live in different data sources. Grafana Correlations brings all that data together and enables you to explore correlated and contextualized information.

## What?

- ✓ Define the relationships between your data in Grafana
  
- ✓ Use Grafana to pivot between different data sources using those connections



# Where we are...

|               | Grafana loki | Grafana Tempo | Grafana Mimir | elasticsearch | splunk> | any! |
|---------------|--------------|---------------|---------------|---------------|---------|------|
| Grafana loki  |              | ✓             |               |               |         |      |
| Grafana Tempo | ✓            | ✓             | ✓             | ✓             | ✓       |      |
| Grafana Mimir |              | ✓             |               |               |         |      |
| elasticsearch |              | ✓             |               |               |         |      |
| splunk>       |              | ✓             |               |               |         |      |
| any!          |              |               |               |               |         |      |



[All Editions](#)Public  
Preview

Quick and easy data correlation

The screenshot shows a configuration dialog for a data correlation rule. It has two main sections: 'Source' and 'Target'. The 'Source' section contains a dropdown menu with 'gdev-loki' selected. The 'Target' section also has a dropdown menu with 'gdev-prometheus' selected. Below these are fields for 'Label' ('Logs to Metrics') and 'Description' (empty). Under 'Target field', there is an empty input field. The 'Query' section includes a 'Metrics browser' with the query '{application=\_\_data.fields.app}'; this part is highlighted in blue. Below the browser are buttons for 'Options', 'Legend: Auto', 'Format: Time series', 'Step: auto', 'Type: Range', and 'Exemplars: false'. At the bottom right of the dialog is a blue button labeled '+ Add'.

Source

Target

Links to gdev-prometheus

Label

Logs to Metrics

Description

Target field

Query

Kick start your query Explain

Metrics browser > {application=\_\_data.fields.app}

+ Add

Universally connect data

# Correlations

Manage and discover the relationships between different data sources. Quickly view related metrics and trace information all in one place, saving you time and headaches during troubleshooting.

## Get a complete picture of your system

No more switching between tools to piece together the necessary information. Easily combine data from various sources and see a unified view in one place.

## View your data sources in context

Stop the guesswork. View data in the context of other related data sources, making it easier to understand what's happening in your system.

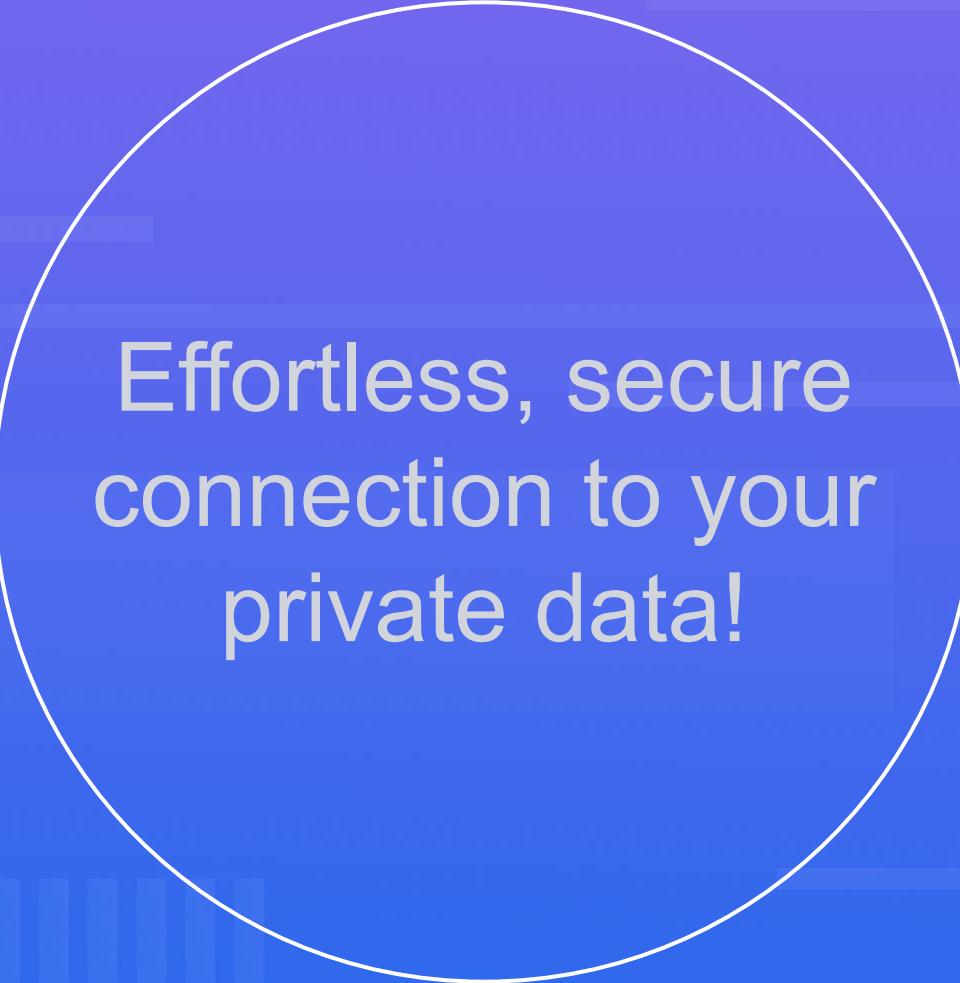
## Scale and adapt with ease

Don't worry about compatibility issues. This scalable and flexible solution allows you to easily add new data sources and adapt as your needs change.

# Where we are heading!

|                  | Grafana<br>loki | Grafana<br>Tempo | Grafana<br>Mimir | elasticsearch | splunk> | any! |
|------------------|-----------------|------------------|------------------|---------------|---------|------|
| Grafana<br>loki  | ✓               | ✓                | ✓                | ✓             | ✓       | ✓    |
| Grafana<br>Tempo | ✓               | ✓                | ✓                | ✓             | ✓       | ✓    |
| Grafana<br>Mimir | ✓               | ✓                | ✓                | ✓             | ✓       | ✓    |
| elasticsearch    | ✓               | ✓                | ✓                | ✓             | ✓       | ✓    |
| splunk>          | ✓               | ✓                | ✓                | ✓             | ✓       | ✓    |
| any!             | ✓               | ✓                | ✓                | ✓             | ✓       | ✓    |





Effortless, secure  
connection to your  
private data!

Connect with confidence

# Private Data Source Connect

Securely and easily connect your network-secured data sources to your Grafana Cloud instance.

With end-to-end encryption and the ability to use a single agent for multiple data sources, you can trust that your data is safe and accessible.

## Seamlessly access on-prem services from Grafana Cloud

Improve observability and save time by eliminating the need for VPN and special setup inside Grafana Cloud.

## Ensure secure, controlled access to on-prem data sources

Protect sensitive data and reduce risk with secure, authenticated access to on-premises services.

## Simplify setup and management of on-prem data sources

Save time and reduce complexity by easily provisioning and managing a reverse proxy plugin for Grafana Cloud customers.

The screenshot shows the 'How to get set up' section of the PDC configuration interface. It includes three steps: 1. A checkmark icon indicating the connection is created by default. 2. A gear icon for connecting the PDC agent to Grafana Cloud. 3. A plug icon for assigning data sources via Secure Socks Proxy. Below these are instructions for using PDC to query data from secured networks. The 'Kubernetes' tab is selected under 'Choose your installation method'. A note says tokens generated elsewhere may lack required scopes. The 'Secure data connections' section shows a token named 'pdc-4372' with an expiration date of 'mm/dd/yyyy'.

How to get set up

Your private data source connection (PDC) is created by default! → Connect your PDC agent to Grafana Cloud using the instructions below. → Assign data sources to your PDC by toggling their Secure Socks Proxy setting.

Use private data source connect (PDC) to query data that lives within a secured network without opening the network to inbound traffic from Grafana Cloud. Queries and data are encrypted from a PDC agent deployed on the network all the way to the user's browser. PDC works with on-premise networks, as well as Virtual Private Clouds (VPCs) hosted by public cloud providers. Learn more in the [PDC docs](#).

1. Choose your installation method

There are three installation options: running on Kubernetes, running the PDC Agent Docker image, or running the PDC Agent binary directly.

Kubernetes  
Running on Kubernetes

Docker  
Running the PDC Agent Docker image

Binary  
Running the PDC Agent binary directly

2. Generate a PDC signing token

Click below to generate a PDC signing token. The token created here allows the private data source connect agent to authenticate with your Grafana Cloud instance.

Tokens generated elsewhere do not have the required scopes to configure the private data source connect agent.

Secure data connections

Token name  
The name will help you view and revoke this token later.

pdc-4372

Expiration date  
(Optional) Leave it empty to never expire.  
mm/dd/yyyy

Manage who can do what in Grafana

## Better Auth & RBAC

### New UI for SAML configuration

Set up and test your SAML integration directly in Grafana

### Flexible role mapping from auth providers

More and consistent options for where roles are synchronized

### API Keys are migrating to Service Accounts

Service accounts work with RBAC and allow you to rotate keys more easily.

The screenshot shows a dark-themed web interface for configuring SAML integration. It consists of three main sections:

- Step 1: Configure IdP using Grafana metadata**

To configure your identity provider (IdP) you will need the Grafana metadata URL. All below endpoints must be reachable by your Identity Provider (IdP).

**Metadata URL**  
SP metadata URL / SP Entity ID  
`https://ops.grafana-ops.net/saml/metadata` [Copy](#)

**Assertion Consumer Service URL**  
Assertion consumer service POST binding URL  
`https://ops.grafana-ops.net/saml/acs` [Copy](#)
- Step 2: Finish configuring Grafana using IdP data**

Visit your IdP's configuration panel, add new app and use metadata from step one to connect with Grafana. You will need to copy your IdP's metadata and provide it to Grafana.

**IdP's metadata**  
Must be the same as set-up or required by IdP.

|                         |                        |              |
|-------------------------|------------------------|--------------|
| <b>URL for metadata</b> | Base64-encoded content | Path to file |
|-------------------------|------------------------|--------------|
- Step 3: Configure assertions, group, group and org mappings in the next step.**

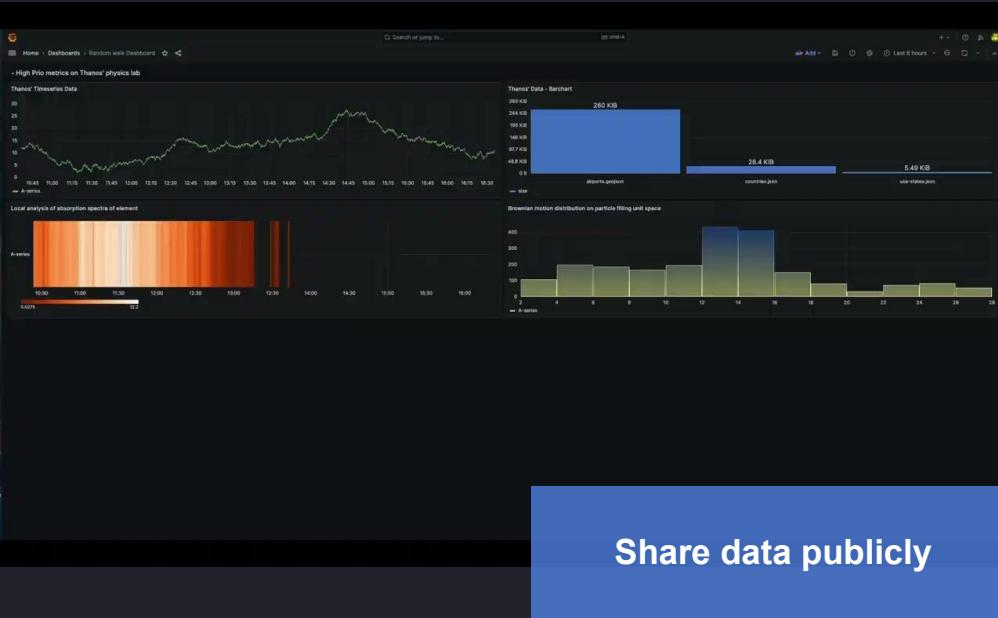
At the bottom, there are navigation buttons: "Previous: Key and certificate" and "Next: User mapping".

Share your insights with the world

## Public Dashboards

Effortlessly share your data visualization with the world.

With easy-to-use controls for granting public access to specific dashboards, you can now make your most impactful visualizations accessible to external users without compromising security.



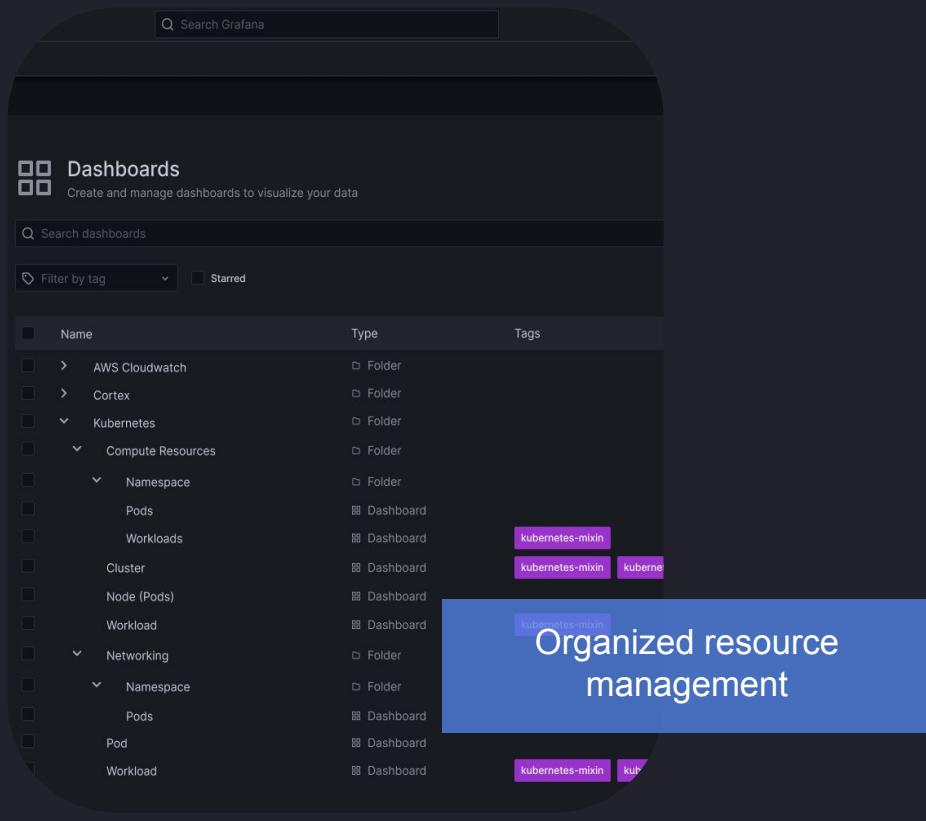
Share data publicly

### Share your visualizations with the world

Showcase your data and insights to a broader audience, including customers and external users, without requiring them to log in.

### Engage and inform your stakeholders

Ensure all stakeholders, including non-technical users, stay informed about the state of your services, building monitoring, climate change forecast, or any other relevant data.

[All Editions](#)[Public Preview](#)

Organize with ease, secure with confidence

## Subfolders

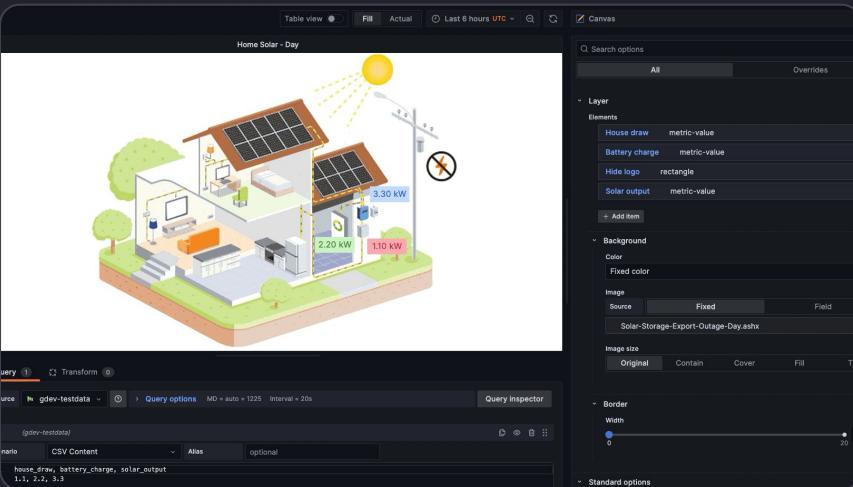
Simplify navigation and protect confidential information with customized user permissions and a user-friendly folder structure

### Streamline dashboard navigation for improved efficiency

Easily find the dashboards you need with intuitive folder structures that allow you to nest and organize them in a way that makes sense for your organization.

### Protect confidential information with customized user permissions

Keep sensitive information secure by defining user permissions at the folder level and restricting edit access to only those with the necessary clearance

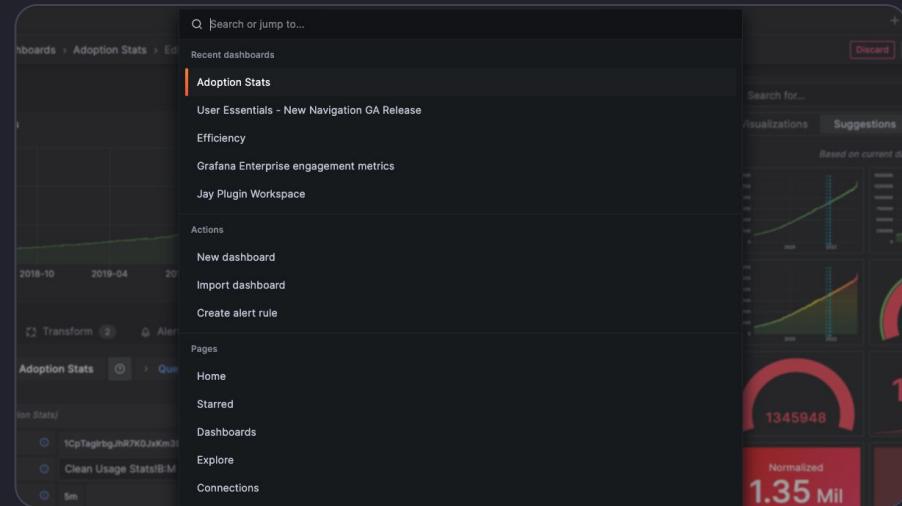


# Master flexible authentication solutions

Harness the full potential of comprehensive authentication and security updates. Secure your organization's data with effortless idP group mapping, advanced token management, and extensive support for various authentication methods

# Elevate your security management

Empower your organization with enhanced authentication and security features. Confidently map idP groups to Grafana attributes, streamline token management, and support external group sync for consistent user permissions and access control.





All Editions

Experimental



Dynamic app creation

## Scenes

Build your own highly interactive, custom experiences within Grafana's app plugins, using the new Scenes library

### Easily manage complex dashboards with deep nesting and composition

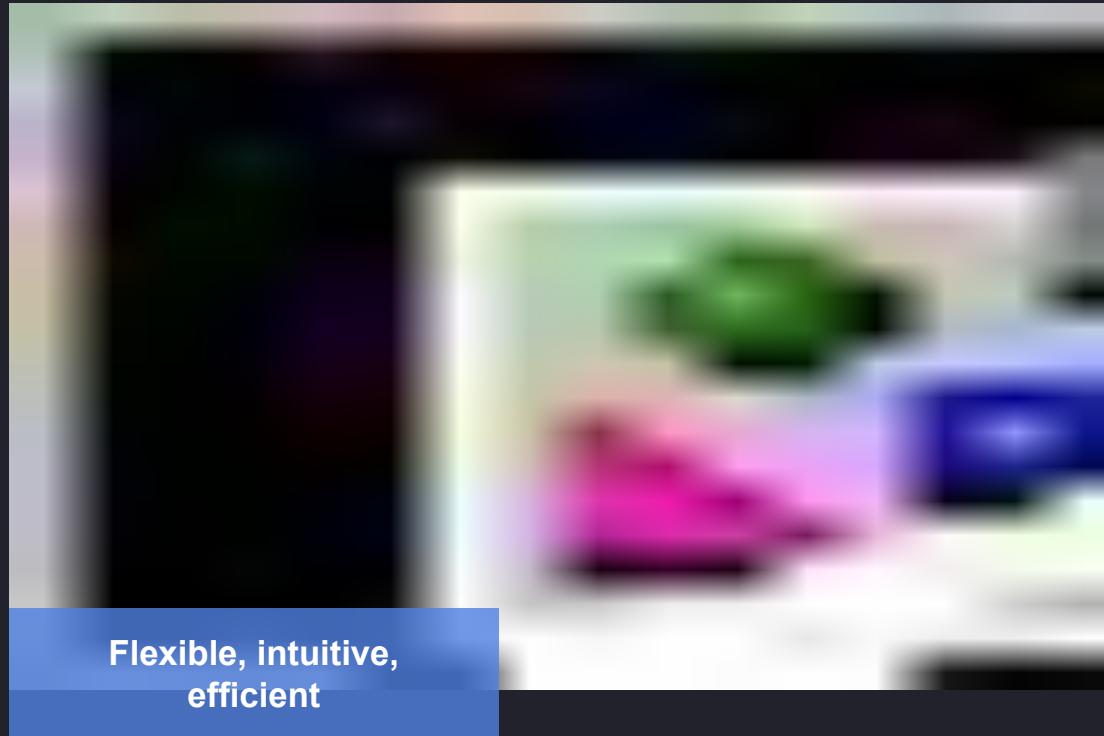
Organize, visualize, and manage large amounts of data intuitively with nested and composed dashboards

### Flexible layouts for dynamic visualization

Adapt to any screen size with layout systems, including a new flex layout that makes visualizing data a breeze

### Efficient performance with serialized and cached state

Experience improved performance and faster re-rendering with runtime state, including query results, that can be serialized and cached in the frontend



Enhance your workflow with improved plug-in features

# Drive efficiency with tailored solutions

## Speedy plugin development

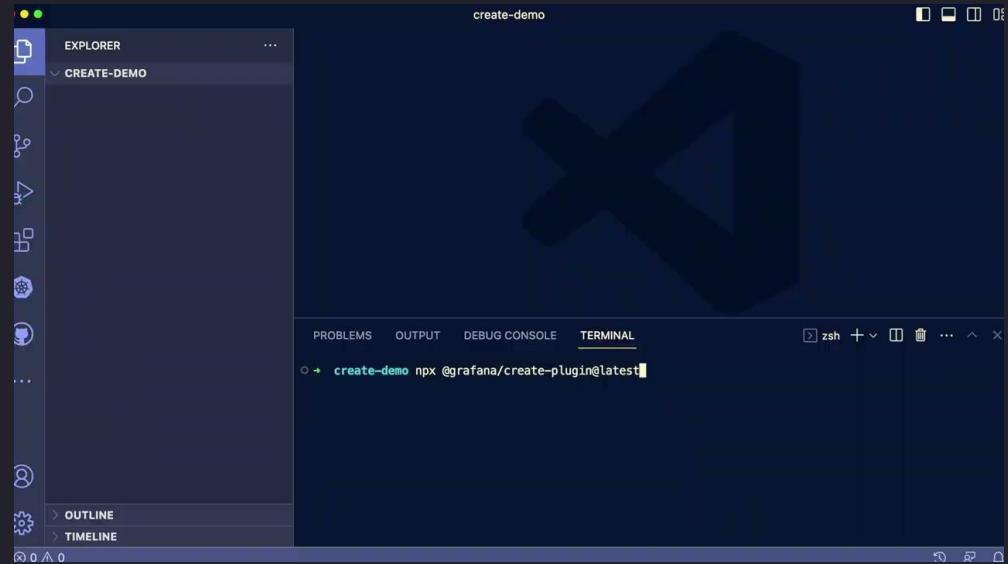
Easily create and update plugins using our improved SDKs and API tooling. You'll save time and enjoy a smoother development process with the `create-plugin` tool and an expanding range of samples.

## Diagnose & resolve plugin issues faster

Experience easier plugin diagnosis and resolution with distributed tracing support in the Grafana Plugin SDK for Go. Debug your plugins in your IDE, making finding and fixing issues simpler.

## Unlock new app plugin possibilities

Build feature-rich apps with cutting-edge plugin features and seamless integration into the Grafana ecosystem. Extend Grafana UI with app plugins to unify and enhance your observability platform experience.



# Purchase Grafana Cloud through AWS Marketplace

## Burndown your AWS commit

Leverage 100% of precommitted AWS dollars to make your Grafana Labs purchase

## Streamlined Procurement

Reduced vendor onboarding time, contract negotiation, and finance approvals

## Simplified & Centralized Billing

Consolidated billing through your AWS invoice leading to improved governance and control

## How to engage?

- ✓ Head to our [Marketplace Listing](#)
- ✓ Try the [Grafana Enterprise Free Trial](#)
- ✓ Self-Serve [Grafana Cloud](#)
- ✓ Private Offer? Reach out to your Grafana AE



*Check us out on Marketplace*



# More meetups in St. Louis? Yes, please!



We're ready to give you the stage! Submit this form and we'll get in touch about your presentation. Have a cool story but would rather skip the public speaking? Write a blog!

<https://grafana-labs.typeform.com/community>



# We want to see you again!



Grafana is hiring! Check out our open roles via the QR code or at <https://grafana.com/about/careers/>

If you took any pictures today, please post them with  
**#grafanacon**- we'll be on the lookout



# Placeholder- local announcements



# Q&A



**In case you have a question we can't answer:**



**Contact Sales**



**Technical Support**

