Unlocking Key Metrics and Patterns using Grafana

23 May. 2024

Grafana Labs

DEVOPS PRO EUROPE

Presenter

Syed Usman Ahmad

Sr. Developer Advocate

About me

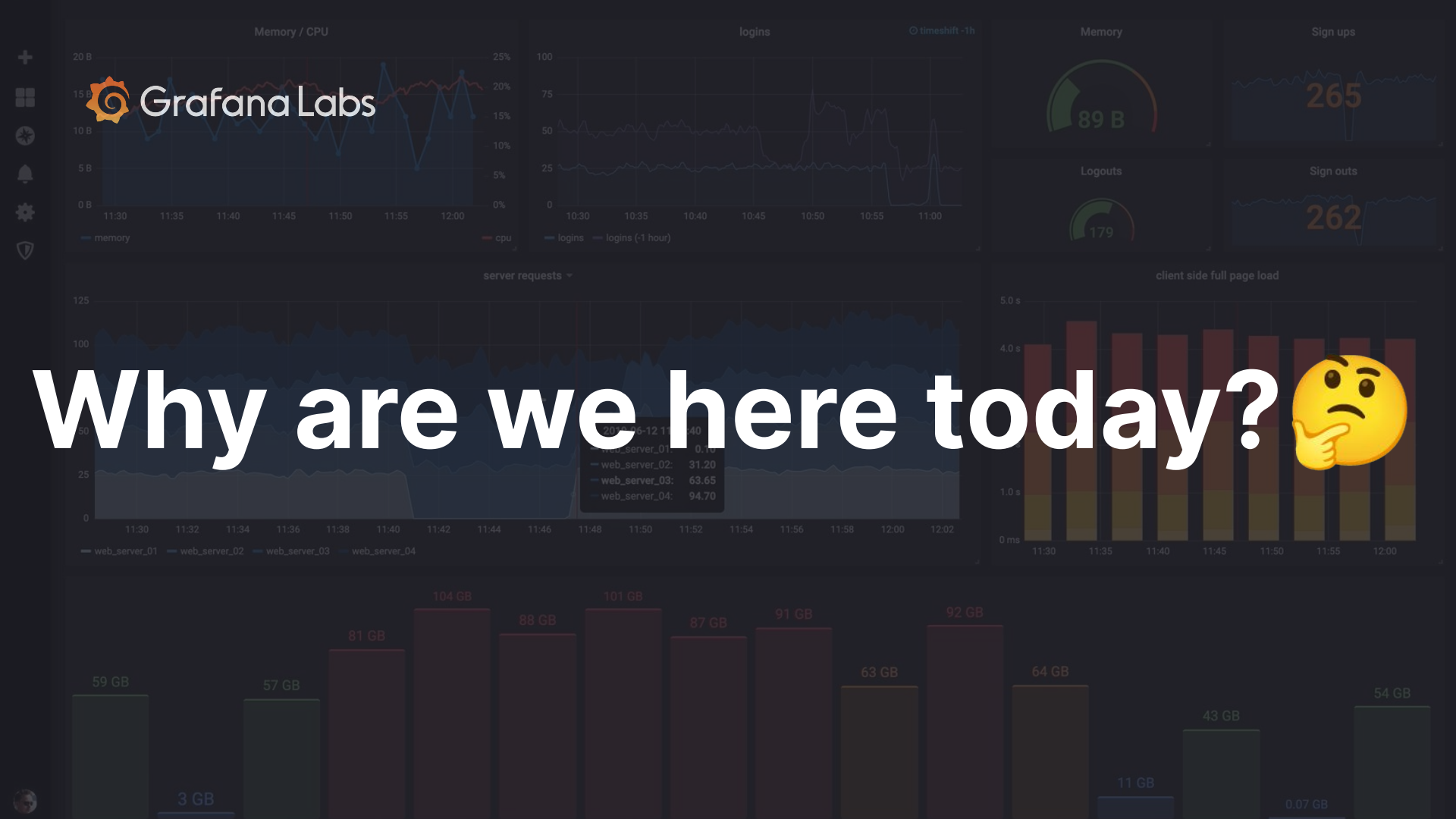
What I do?

My previous roles?

What I do beside work?

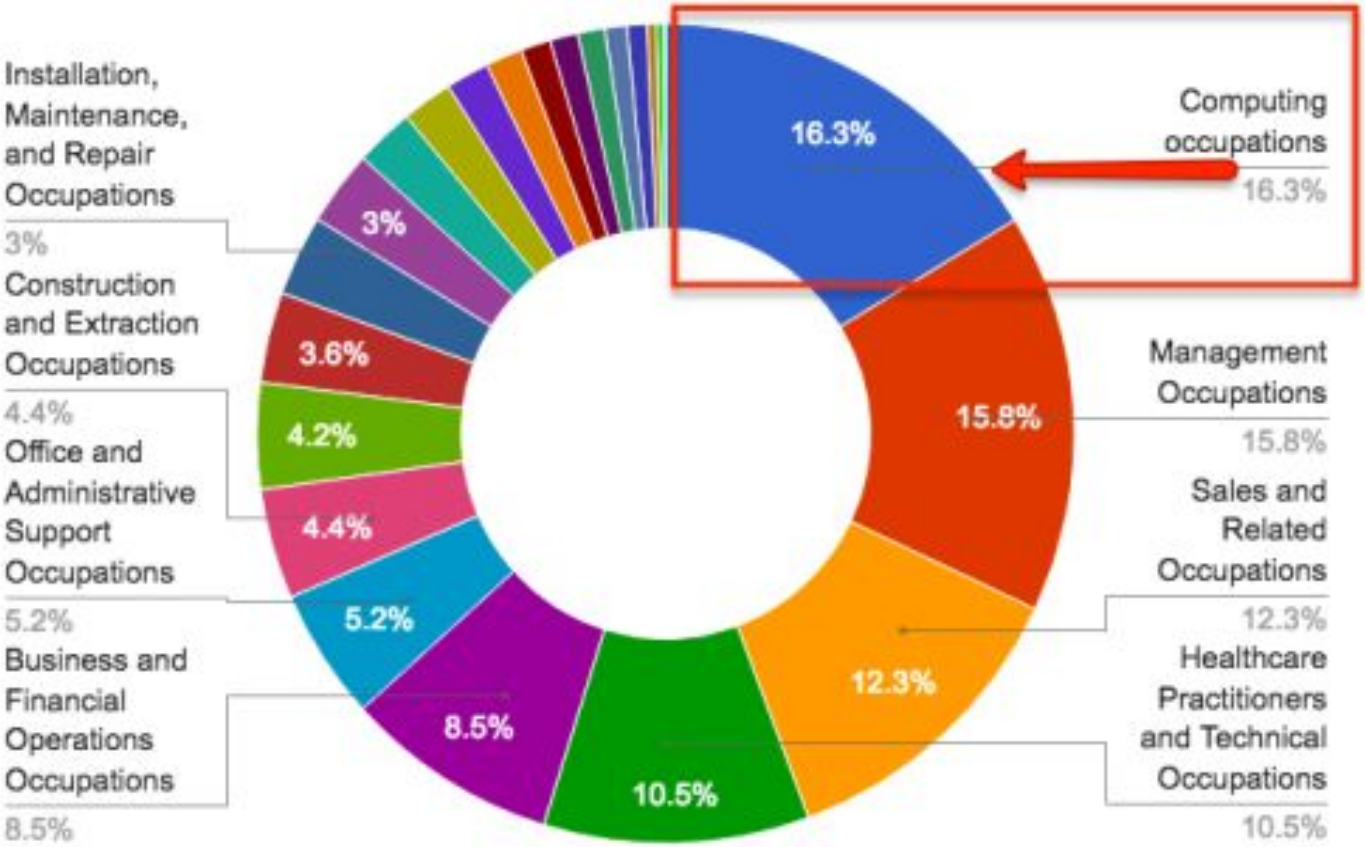
↘

github.com/usmangt



Why are we here today? 🤔

Market Reference



User
Project
Human
Experience
Analyst
UX
Information
Usability
Factors
Head
Engineer
Manager
developer
stuff
Search
Lecturer
Higher
Recruiter
Design
Technology
manager
director
consultant
Planner
Producer
Architect
design
user
drifter
Marketing
PhD
Editor
Interaction
Digital
Consultant
designer
experience
UI
Managing
Business
Feckless
student
Website
Senior
Accessibility
Development
Freelance
Specialist
Principal
Web
Developer
Director
Designer

Grafana Labs
Memory / CPU
memory
cpu
logins
timeshift -1h
logins
logins (-1 hour)
Memory
89 B
Sign ups
265
Logouts
179
Sign outs
262
server requests
web_server_01
web_server_02
web_server_03
web_server_04
client side full page load
One thing in common?

IT'S ALL ABOUT DATA

DATA

KNOWLEDGE

ACTION

Google Sheets

Google

2024 survey how many users learn to use excel sheets

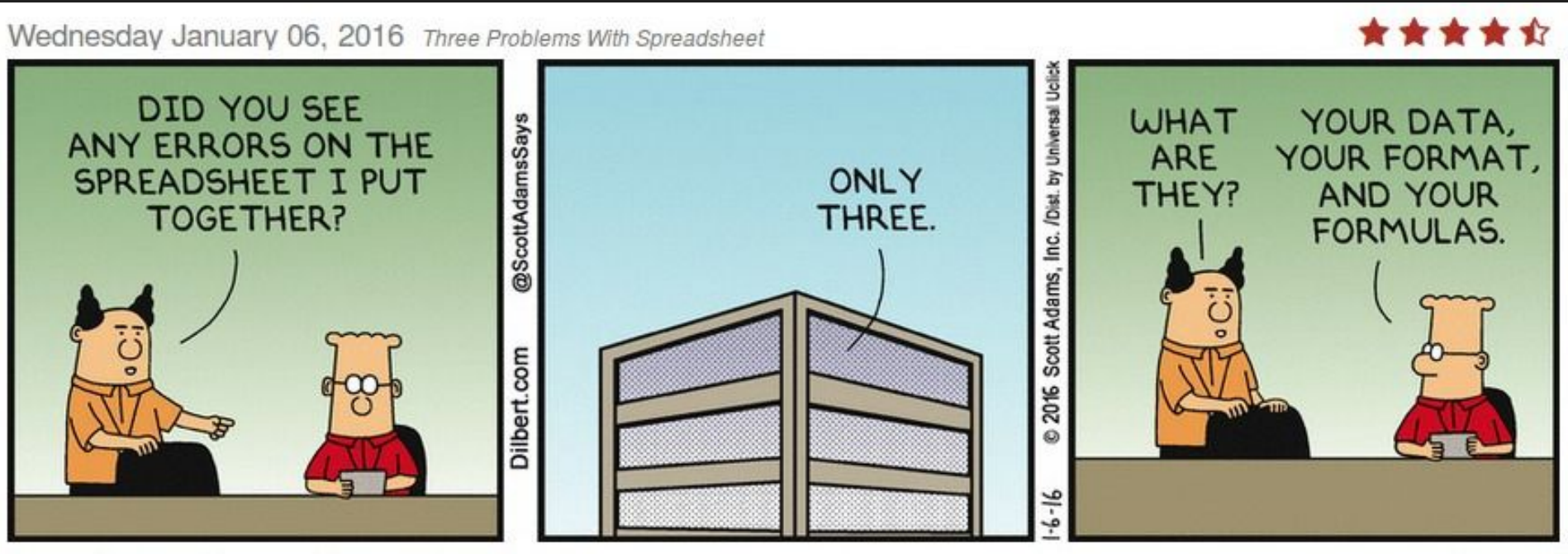
All Videos Images News Books More Tools

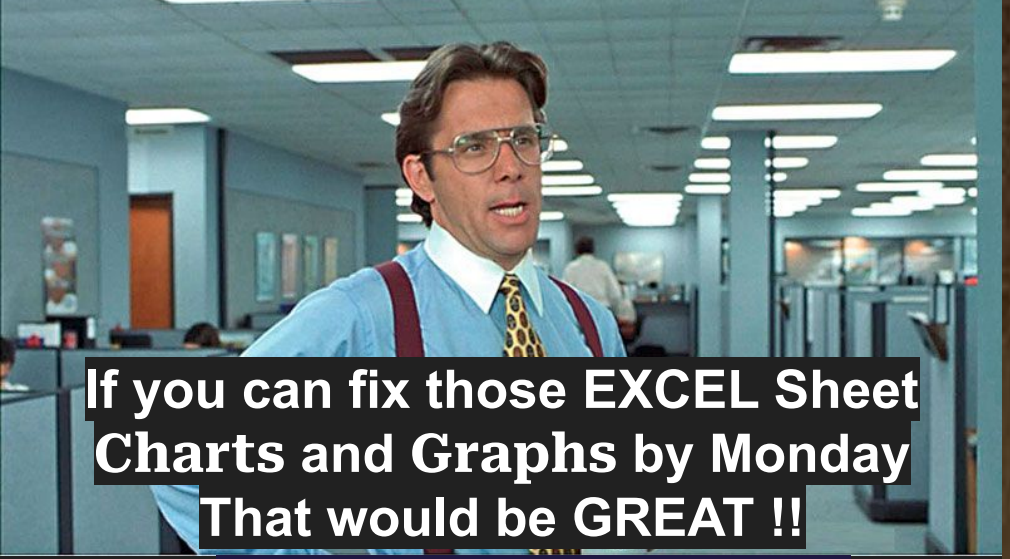
People also ask

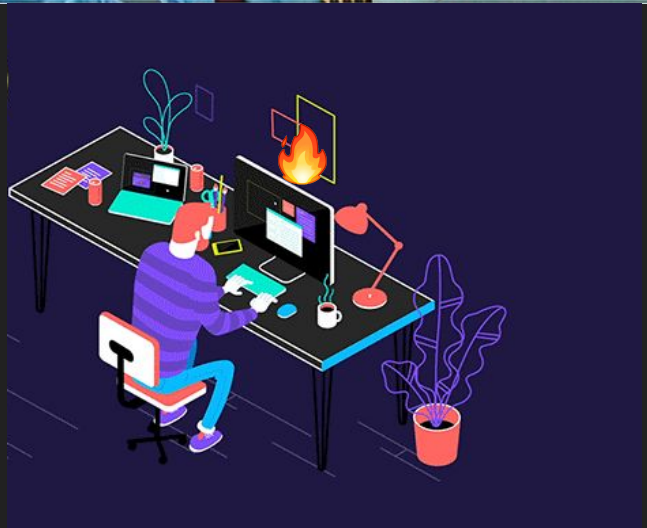
What percentage of people have received training on spreadsheets?

Only **48%** of people have ever received any formal Excel training. People need help from colleagues twice per week with an Excel issue. The average Excel problem takes 8 1/2 minutes to fix on average. 11% of people think they are Excel beginners. 6 Mar 2022

A real example




If you can fix those EXCEL Sheet
Charts and Graphs by Monday
That would be GREAT !!



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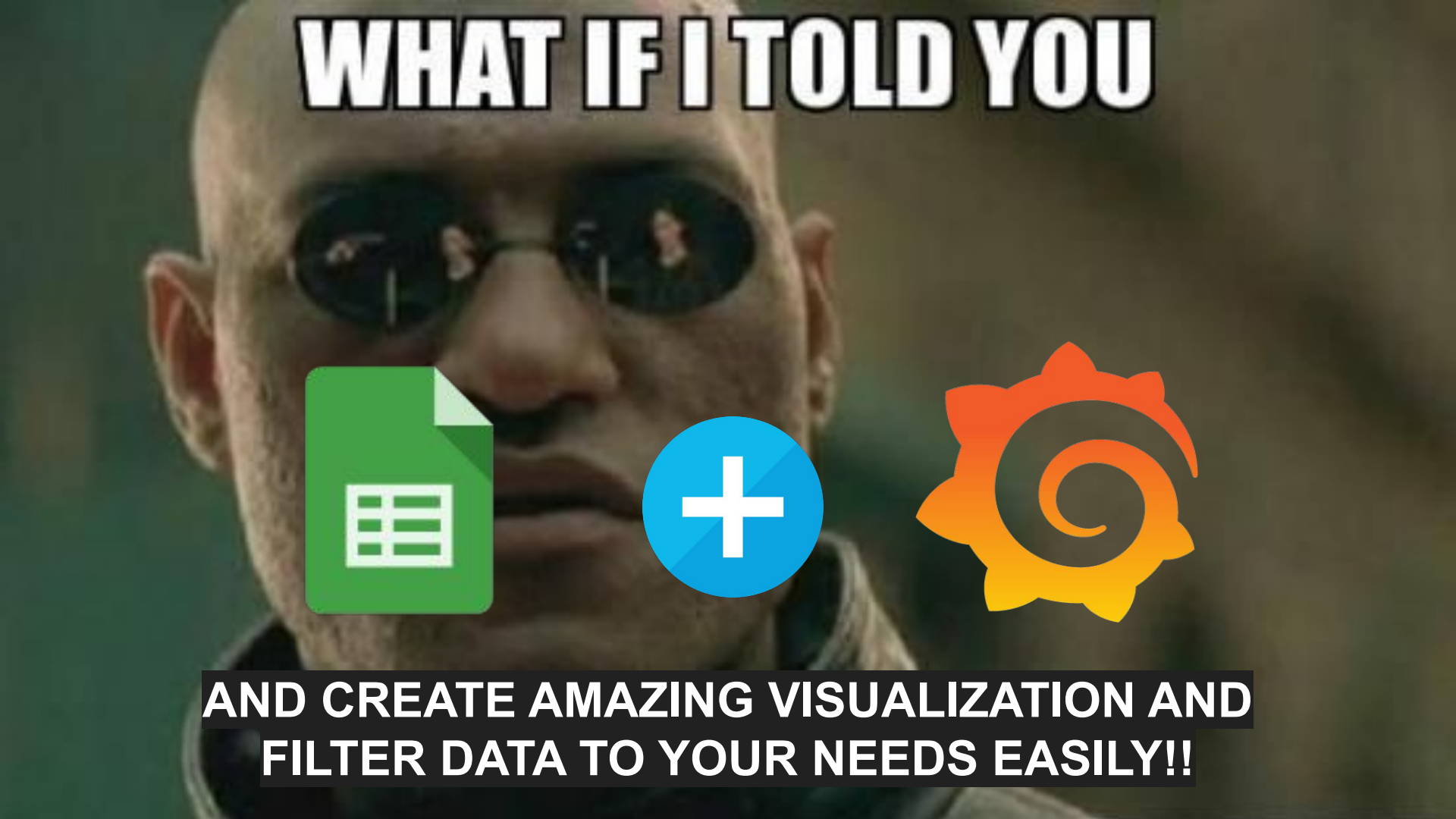
What is the Solution?


WHAT IF I TOLD YOU
AND CREATE AMAZING VISUALIZATION AND
FILTER DATA TO YOUR NEEDS EASILY!!

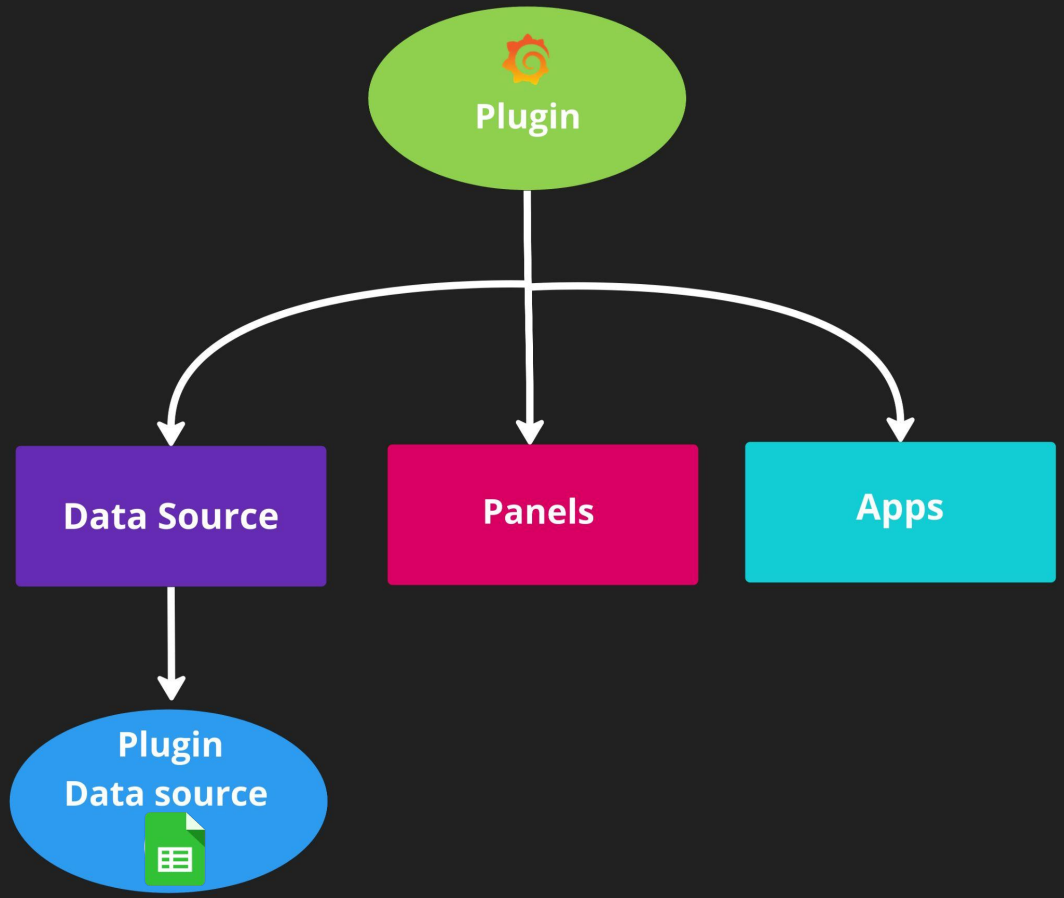
Using Grafana

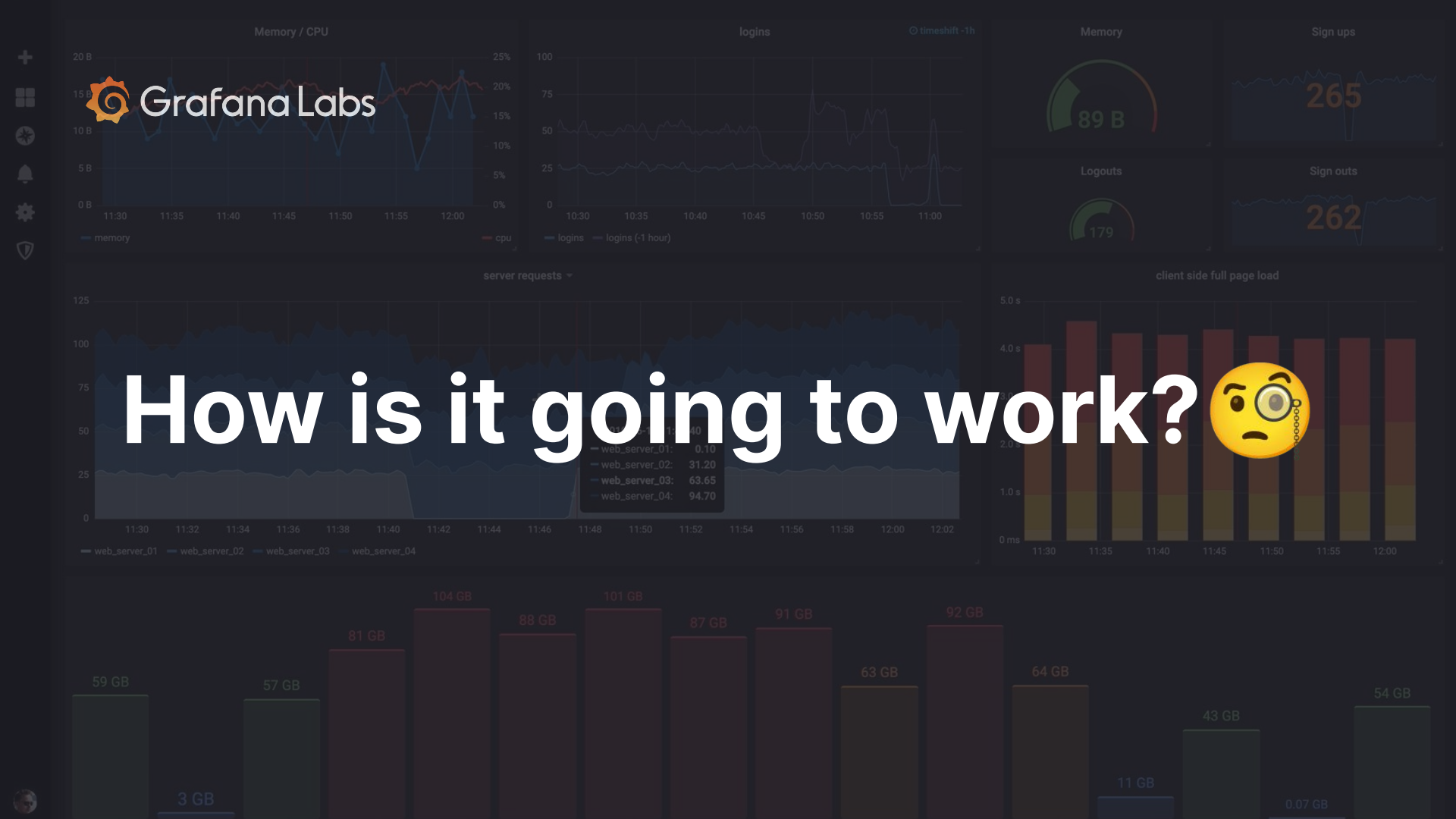
1. Available in many flavour
2. Various Visualisation formats
3. Connect to a Data source

Google Sheets Data source Plugin

1. Available in all Grafana versions
2. Support various Visualisation formats
3. Easy to Setup & Integrate

Grafana Plugin Breakdown




Grafana Labs
Memory / CPU
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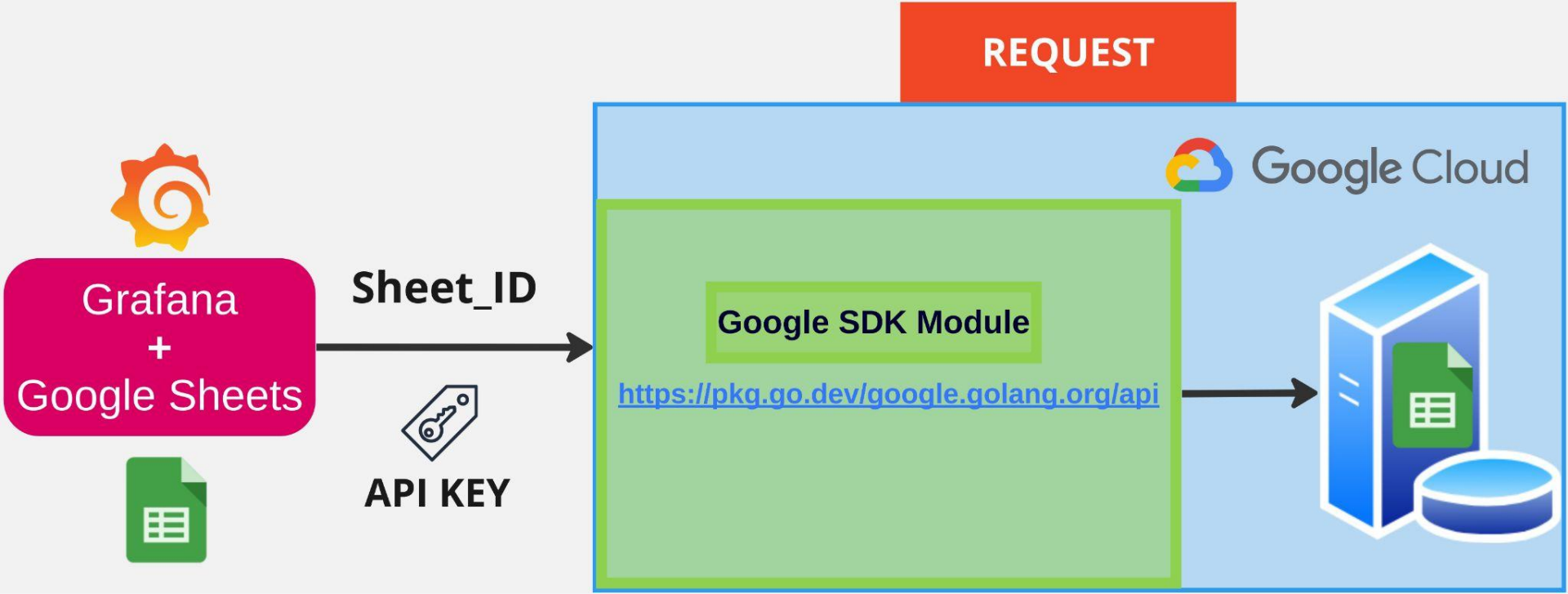
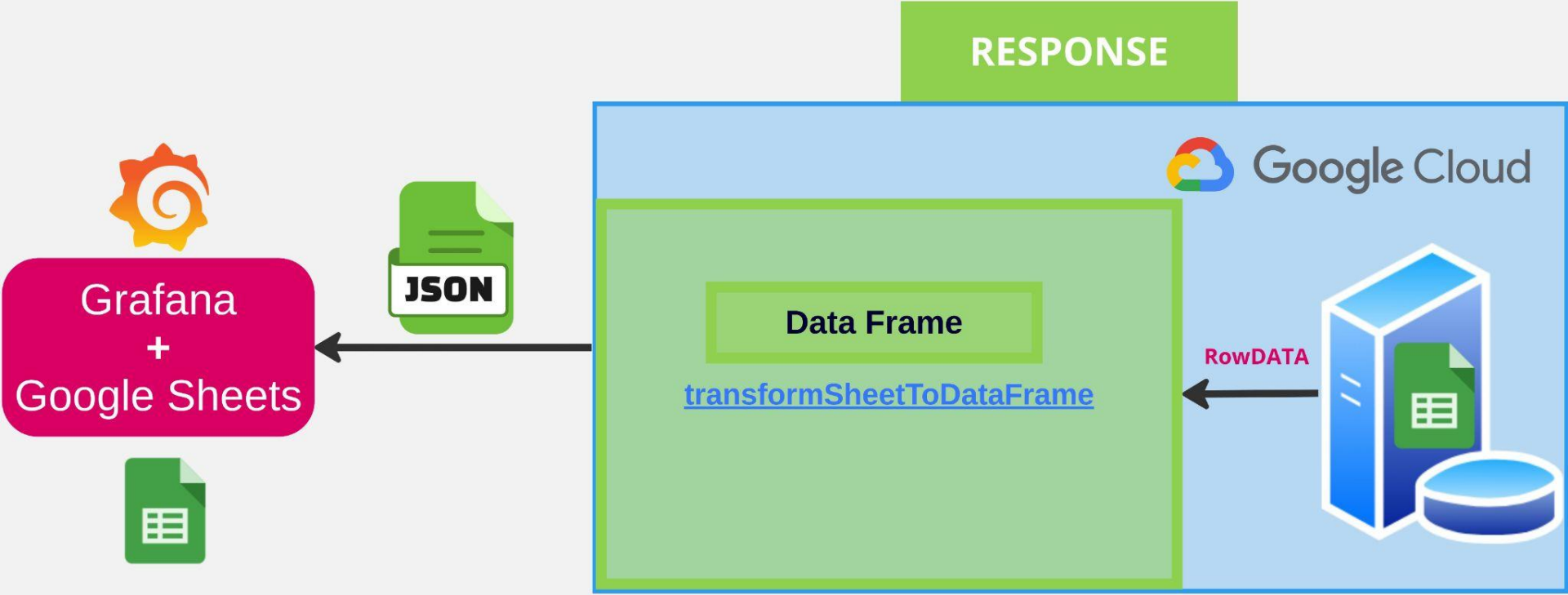
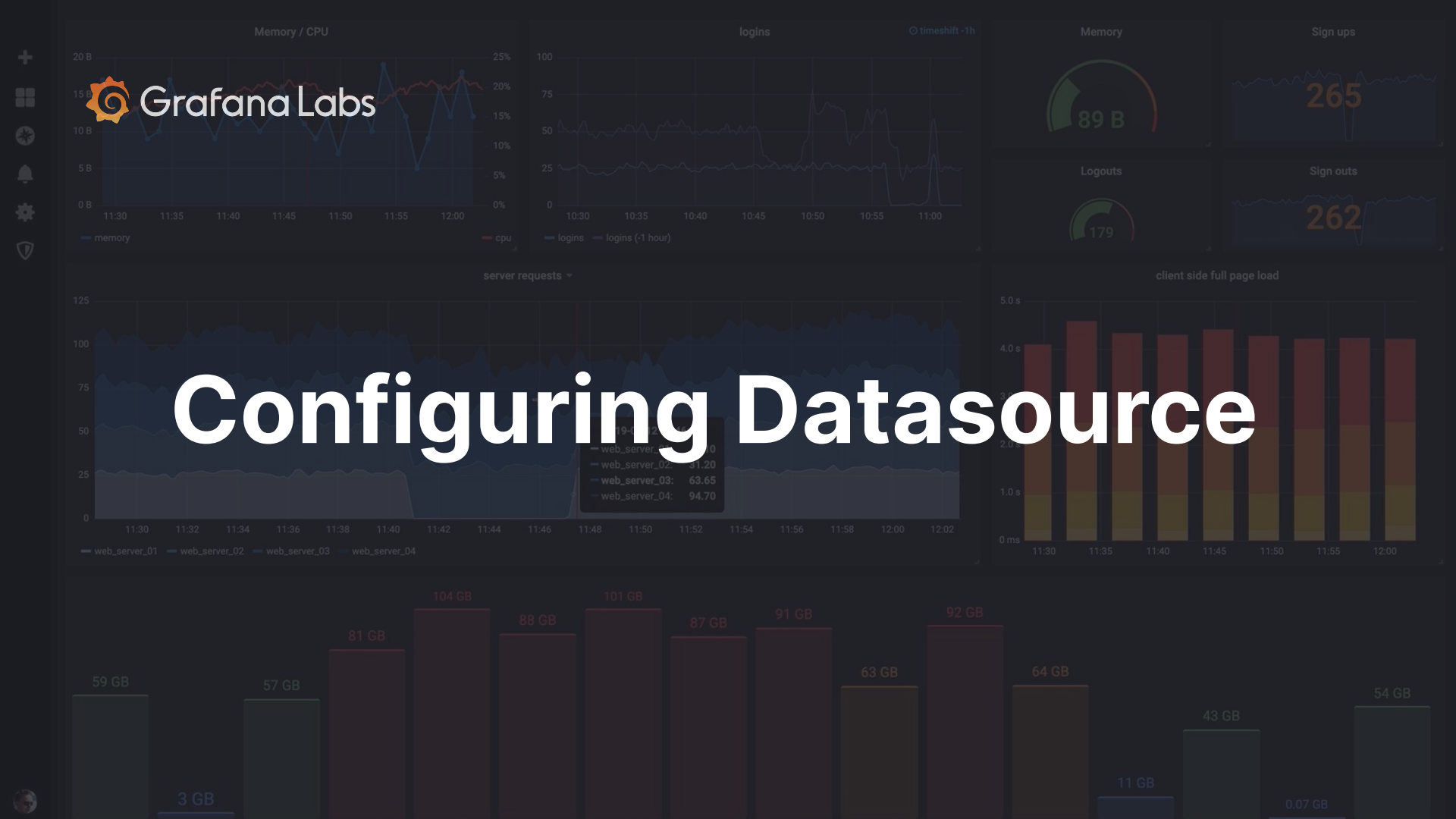
cpu
logins
logins
logins (-1 hour)
Memory
89 B
Sign ups
265
Logouts
179
Sign outs
262
server requests
web_server_01
web_server_02
web_server_03
web_server_04
client side full page load
How is it going to work?
59 GB
3 GB
57 GB
81 GB
104 GB
88 GB
101 GB
87 GB
91 GB
63 GB
92 GB
64 GB
11 GB
43 GB
0.07 GB
54 GB

Sending Request



Receiving Response





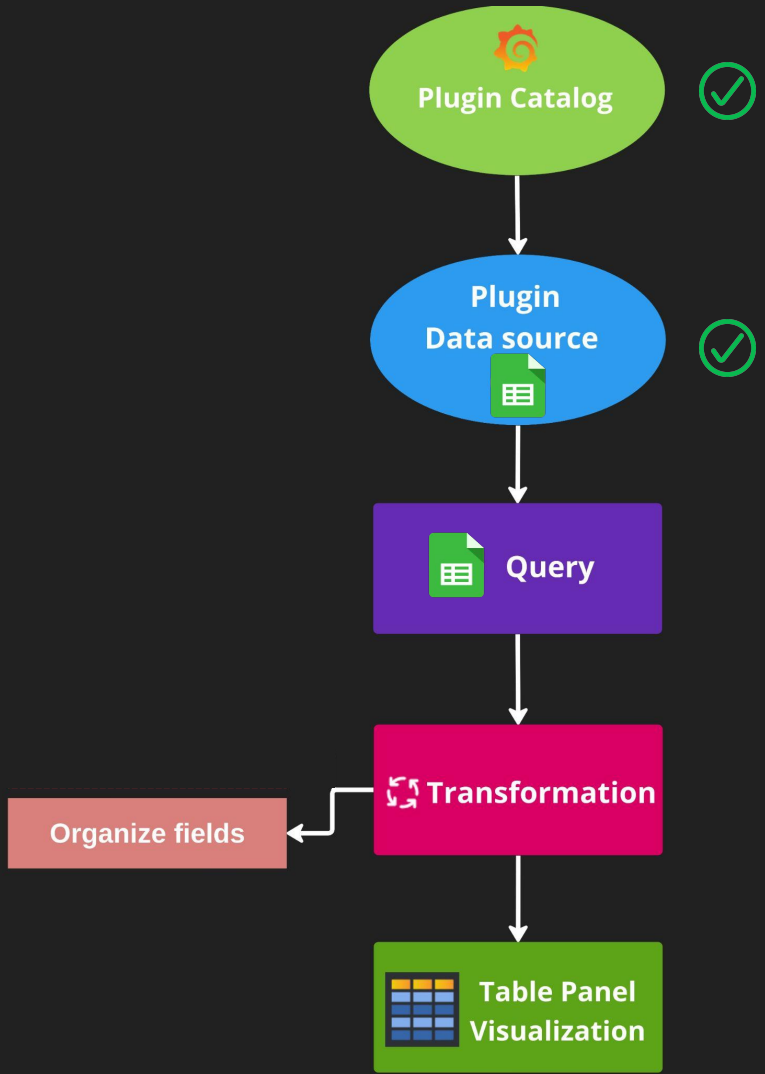
Configuring Datasource

2 Step process

Install using the plugin catalog

Configure API Key

Creating a Dashboard panel


Plugin Catalog
Plugin
Data source
Query
Transformation
Organize fields
Table Panel
Visualization

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92 GB
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54 GB

Demo

Home › Dashboards › Demo: GitHub › 1 - Single Repo Dashboard › Edit panel

1

Table view | Fill | Actual | Last 12 hours

2

Basic Table Panel view

title	author	author_company	repo	number	closed	created_at	clo
Alerting Provisioning: Importing JSON not	PhilippHomann		grafana/grafana	85229	false	2024-03-27 09:56:19	
Missing option in settings file	PhilippDehner		grafana/grafana	85227	false	2024-03-27 08:51:33	
Tooltip: Tooltip isn't hidden when `Series -	baldm0mma		grafana/grafana	85220	false	2024-03-26 23:49:25	

3

Query 1 | Transform data 0

4

Data source: GitHub: Grafana Repo

Query options: MD = auto = 1502 Interval = 30s

Query inspector

A (GitHub: Grafana Repo)

Query Type: Issues

Owner: grafana

Repository: grafana

Query:

Time Field: CreatedAt

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Transformations

Grafana Transformation

1. A powerful way to manipulate data
2. Happens before the visualization

Transformation

Extract fields

Convert field type

Group by

Sort by

Filter data

Organize

Format by

Rename by Regex

Reduce

Grafana Labs
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client side full page load
Example Data

Transformation - Organize fields

Home › Dashboards › Demo: Google Sheets › 3- Advanced Example 1 › Edit panel

Discard | Save | Appl

Table view | Fill | Actual | Last 6 hours

Filtered Data using Transformations

id	title	reply_count	views	last_posted_at	category_id	status
101736	How to reset lost admin passw	5	12940	2023-08-30 11:47:49 UTC	22	SOLVED
101086	Convert epoch metric to dateti	4	9721	2023-08-13 22:50:34 UTC	15	SOLVED
101551	CSP Issue attempting to acces	6	9501	2024-02-17 05:44:04 UTC	79	UNSOLVED

Query 1 | Transform data 1

1 - Organize fields by name

id	Category ID
title	Description
reply_count	Total replies
views	Total views
last_posted_at	Last Post Update
category_id	Rename category_id
status	Current Status

Rename the field

Hide unwanted field

+ Add another transformation | Delete all transformations

1 2 3

Transformation - Organize fields

Home › Dashboards › Demo: Google Sheets › 3- Advanced Example 1 › Edit panel

Table view | Fill | Actual | Last 6 hours

Filtered Data using Transformations

Category ID	Description	Total replies	Total views	Last Post Update	Current Status
101736	How to reset lost admin password in grafana?	5	12940	2023-08-30 11:47:49 UTC	SOLVED
101086	Convert epoch metric to datetime	4	9721	2023-08-13 22:50:34 UTC	SOLVED
101551	CSP Issue attempting to access an iframe from	6	9501	2024-02-17 05:44:04 UTC	UNSOLVED
106291	Failed to upgrade legacy queries Datasource	2	9362	2023-10-25 16:57:32 UTC	UNSOLVED
100264	Make your own custom 'Datepicker' (Use/set y	4	7933	2023-08-15 17:21:41 UTC	SOLVED

Query 1 | Transform data 1

1 - Organize fields by name

id	Category ID
title	Description
reply_count	Total replies
views	Total views
last_posted_at	Last Post Update
category_id	Rename category_id
status	Current Status

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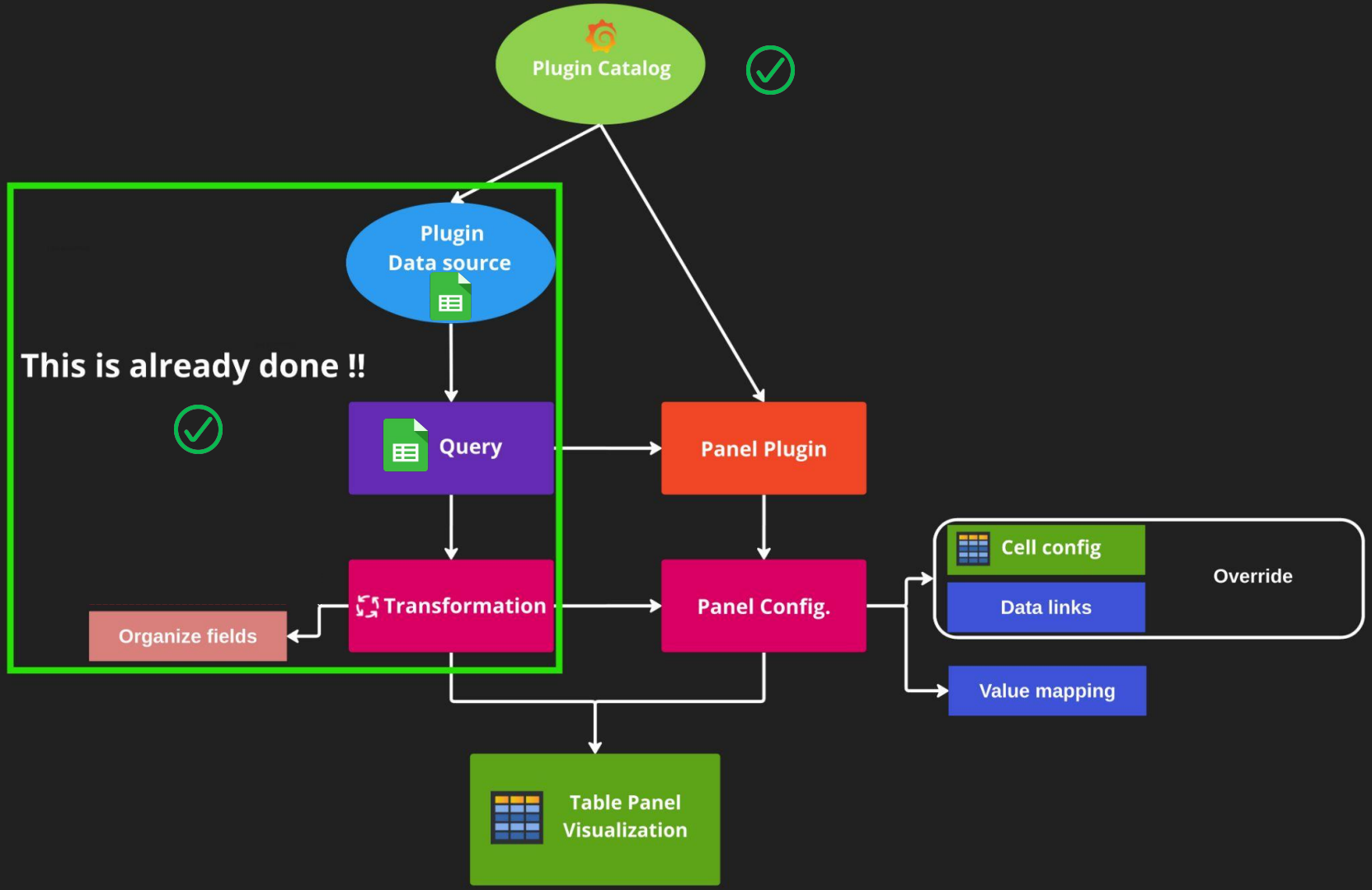
Panel configurations 🧐


Plugin Catalog
Plugin
Data source
This is already done !!
Query
Panel Plugin
Transformation
Panel Config.
Organize fields
Cell config
Data links
Override
Value mapping
Table Panel
Visualization

Grafana Override Function

1. Customize visualization settings
2. For specific fields or series

1 Using Override - Cell type

101736	How to reset lost admin pass	5	12940	2023-08-30 11:47:49 UTC	22	SOLVED
101086	Convert epoch metric to date	4	9721	2023-08-13 22:50:34 UTC	15	SOLVED
101551	CSP Issue attempting to acce	6	9501	2024-02-17 05:44:04 UTC	79	UNSOLVED
106291	Failed to upgrade legacy que	2	9362	2023-10-25 16:57:32 UTC	33	UNSOLVED
100264	Make your own custom 'Date	4	7933	2023-08-15 17:21:41 UTC	61	SOLVED
105976	Change dashboard date form	3	5352	2023-10-19 18:53:19 UTC	20	SOLVED
103216	Public key issue again with a	0	3865	2023-09-11 16:10:47 UTC	18	UNSOLVED

1 Using Override - Cell type

Home › Dashboards › Monitoring Status Dashboard › Edit panel

Discard | Save | Apply

Table view | Fill | Actual | Last 24 hours

Panel Title

Topic-ID	Title	Reply count	Total views	Last viewed	Status
87028	Database is locked	1	1219	2023-05-13T10:37:16.185Z	UNSOLVED
88090	How can I get CPU usage for multiple servers withi...	7	901	2023-06-30T07:46:12.239Z	SOLVED
90396	Failed to evaluate queries and expressions: input d...	2	724	2023-07-28T11:32:30.758Z	UNSOLVED
86940	How do you sum all like-named rows?	2	689	2023-05-03T15:38:15.557Z	SOLVED
89538	Influxdb2: Combining last + sum to get weekly valu...	7	653	2023-06-21T16:33:38.259Z	SOLVED
88901	How to change the labels and color of the gauge p...	19	565	2023-06-07T12:04:06.496Z	UNSOLVED
87835	Found duplicate series for match group	0	560	2023-06-21T10:17:51.155Z	UNSOLVED
86860	Need to set variable in same dashboard when click...	6	543	2023-05-02T20:21:19.966Z	SOLVED

Query 1 | Transform 2

Data source: Infinity | Query options MD = auto = 1326 Interval = 1m | Query inspector

A (infinity)

Type: JSON | Parser: Backend | Source: URL | Format: Table | Help | Github

Method: POST | URL: https://community.grafana.com/admin/plugins/explorer/queries/7/run | Headers, Body, Request params

URL options Method, Body, Additional headers & parameters

Parsing options & Result fields Field types, alias and selectors

Pagination beta

Table

Search options

All | Overrides

Table

Table footer

Cell options

Standard options

Data links

Value mappings

Add value mappings

Thresholds 2

Override 1
5 › Column width

Override 2
4 › Column width

Override 3
3 › Column width

Override 4
2 › Column width

Override 5
0 › Column width

Override 6
Topic-ID › Column width

Override 7
Status › Column width

Override 8
Title › Column width

+ Add field override

2 Using Override - Data links

Override 7

Fields with name

Topic-ID

Data links

Link to topic

https://community.grafana.com/t/${__data.fields.Topic-ID}

+ Add link

Edit link

Title

Link to topic

URL

https://community.grafana.com/t/${__data.fields.Topic-ID}

Open in new tab

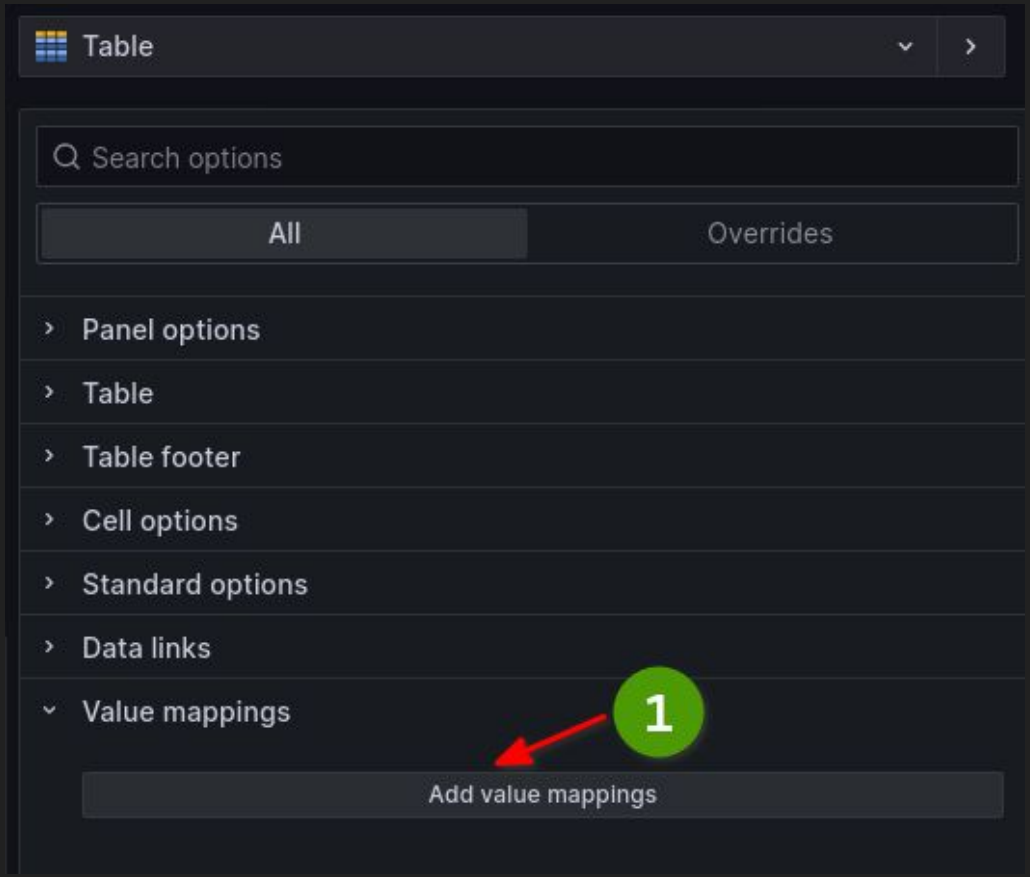
Using Override - Data links

Panel Title

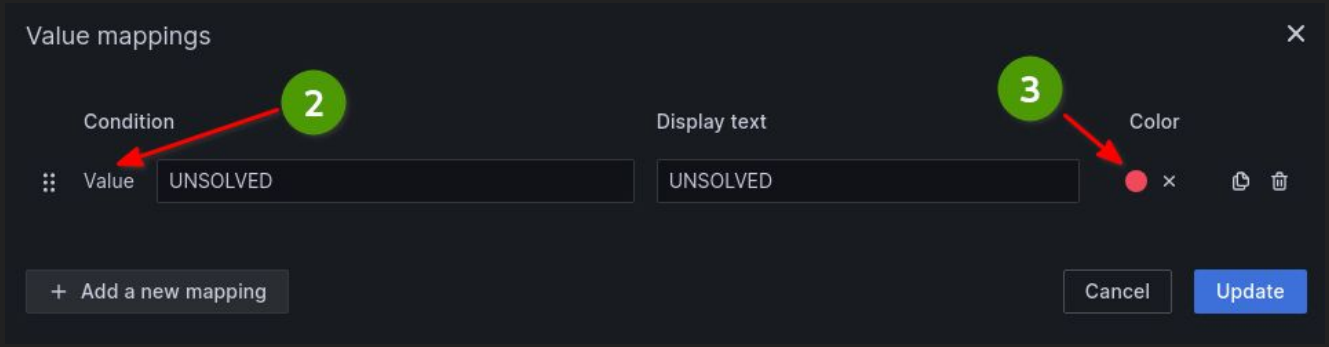
Link to the post

Topic-ID	Title	Reply count	Total views	Last viewed
87028	Database is locked	1	1116	2023-05-13T10:37:16.185Z
88090	How can I get CPU usage ...	7	824	2023-06-30T07:46:12.239Z
86940	How do you sum all like-n...	2	657	2023-05-03T15:38:15.557Z
90396	Failed to evaluate queries ...	2	598	2023-07-28T11:32:30.758Z
89538	Influxdb2: Combining last ...	7	592	2023-06-21T16:33:38.259Z
88901	How to change the labels ...	19	530	2023-06-07T12:04:06.496Z

Using Value mapping



Using Value mapping



Topic-ID	Title	Reply count	Total views	Last viewed	Status
87028	Database is locked	1	1120	2023-05-13T10:37:16.185Z	UNSOLVED
88090	How can I get CPU usage for multiple servers withi...	7	826	2023-06-30T07:46:12.239Z	UNSOLVED
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87835	Found duplicate series for match group	0	519	2023-06-21T10:17:51.155Z	UNSOLVED
86860	Need to set variable in same dashboard when click...	6	509	2023-05-02T20:21:19.966Z	SOLVED

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63 GB
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64 GB
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54 GB

Demo

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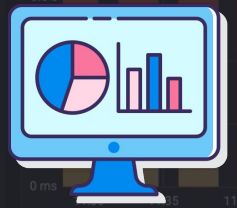
Dynamic Dashboard Variables



Grafana Dashboard Variables

1. Also known as templating
2. Create interactive and dynamic dashboards
3. **AVOIDS Duplication!!**

Dynamic dashboard variables

Data source

Ad-hoc filters

Global variables

Interval

Custom

Constant

Chained variables

Query

Text Box

Dashboard variables - Custom type

Grafana Labs
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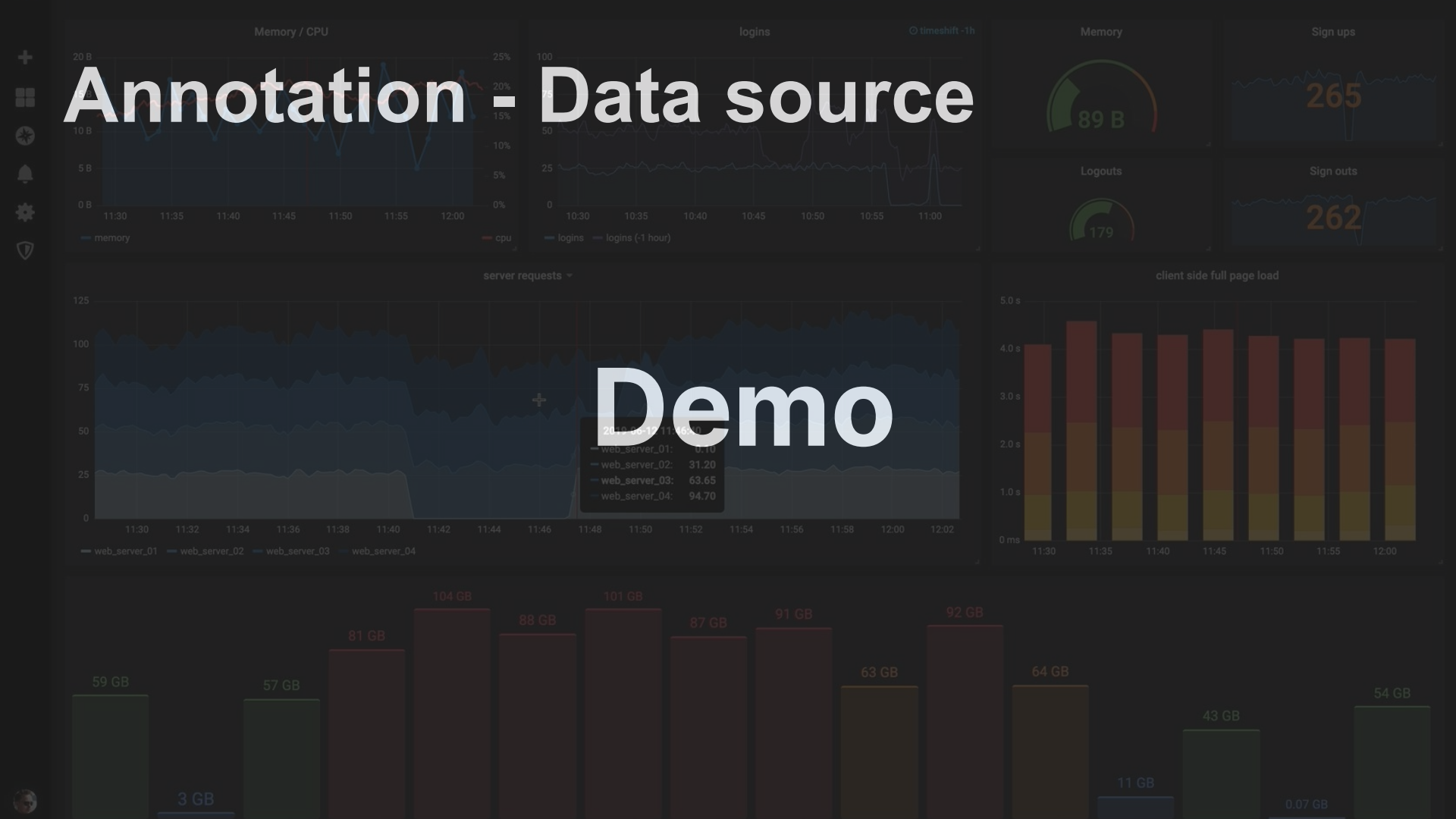
client side full page load
Annotations

Grafana Annotations

1. Mark points on a visualization with events
2. Visualized as vertical lines and icons

Annotation - Data source



Demo

Troubleshooting ❓🙄

Takeaways

1. Centralized Visibility
2. Collaboration & Transparency
3. Cross-Platform support

Future Improvements

1. Support Alerting
2. Support for Drive

Want to get involved?

1. **To report bugs, feature-request:**
   - GitHub repo

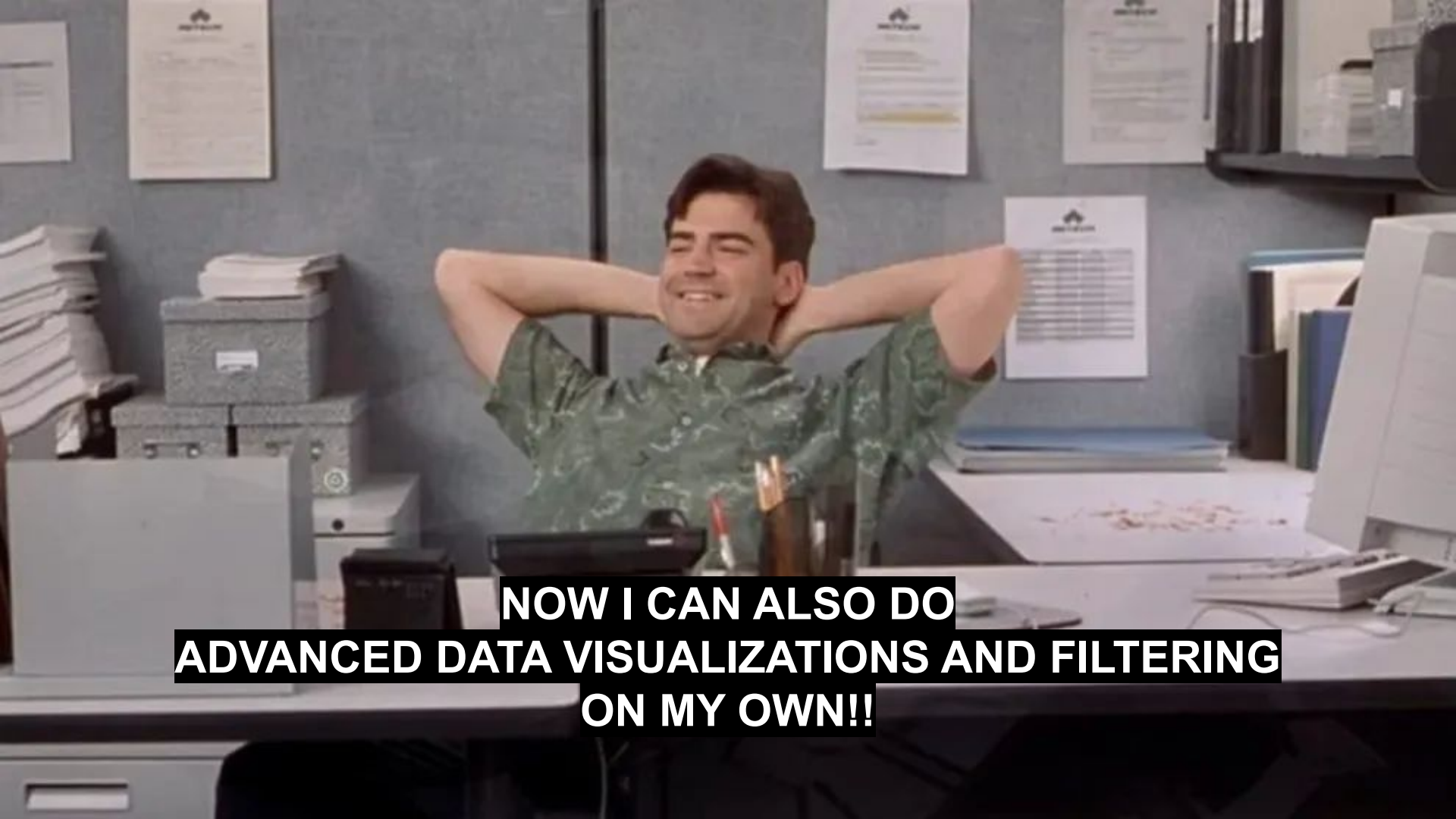
grafana/google-sheets-datasource

2. **Other useful resources:**
   - Slack channel #grafana
   - Community forum

#grafana

community.grafana.com

SUCCESS
SOLUTION
PROBLEM


NOW I CAN ALSO DO
ADVANCED DATA VISUALIZATIONS AND FILTERING
ON MY OWN!!

Grafana Labs

Thanks for participating!

Contact me:

usman.ahmad@grafana.com

Syed Usman Ahmad

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