

Observe your GitHub repos Efficiently

24 Apr. 2024



Presenter



Syed Usman Ahmad
Sr. Developer Advocate

About me

What I do?

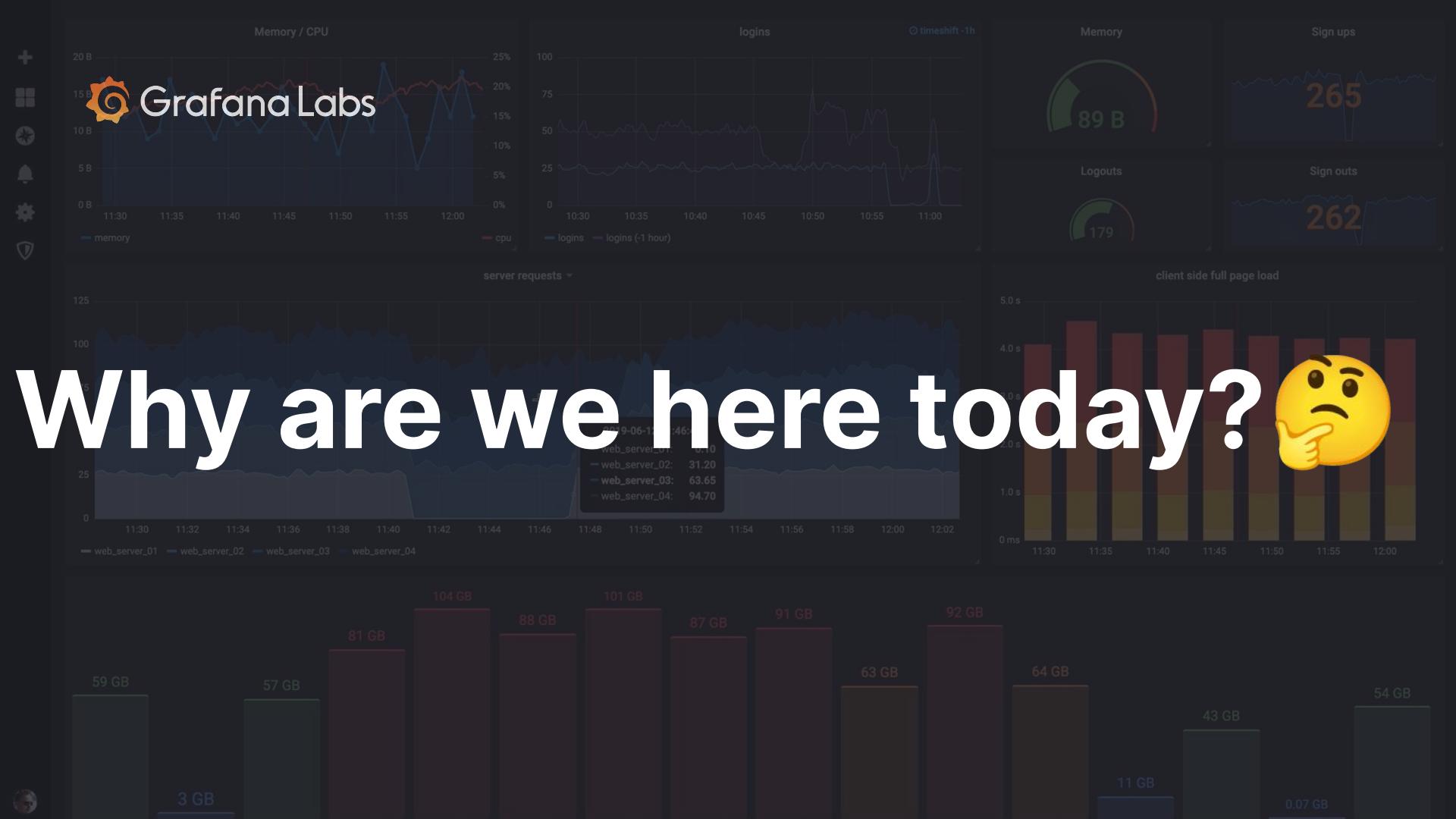
My previous roles?

**What I do beside
work?**



github.com/usmangt





Why are we here today?



Memory / CPU



logins



Memory



Logouts



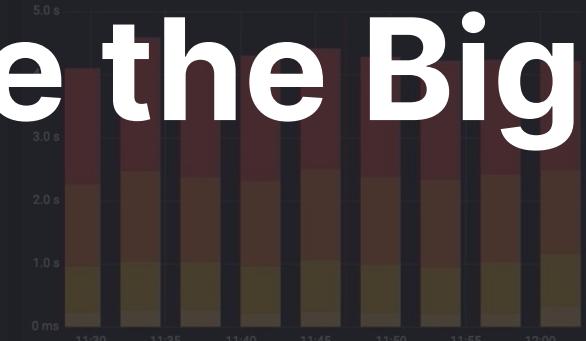
Sign ups



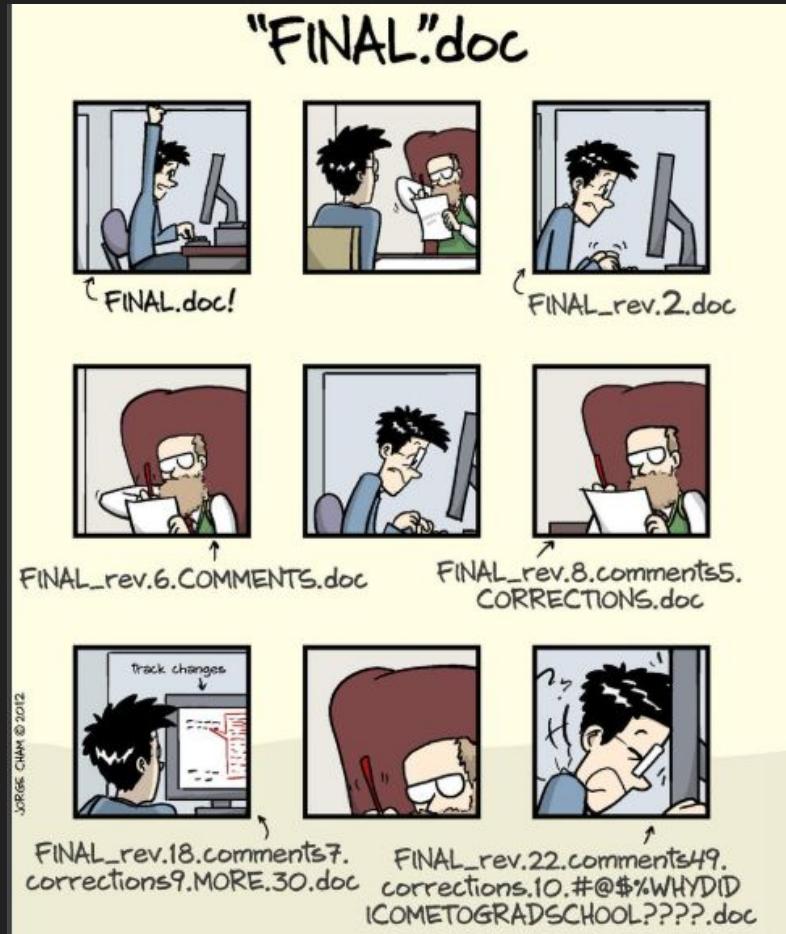
server requests ▾

What exists before the Big Bang

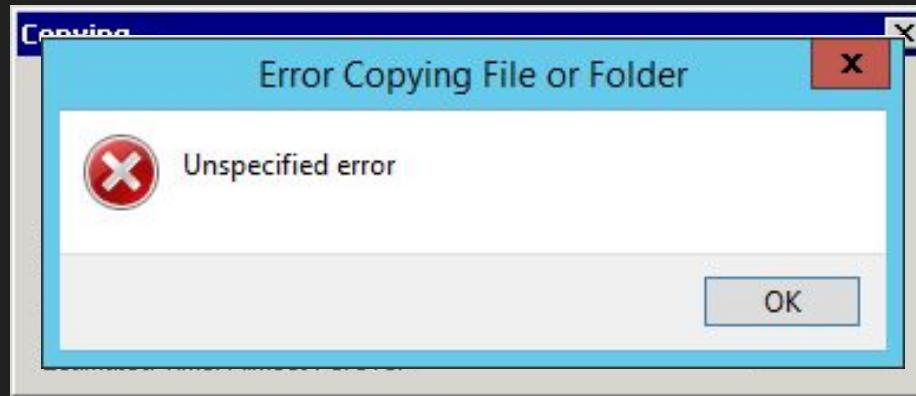
web_server_01 web_server_02 web_server_03 web_server_04



Before Git



Before Git



Then Came Git

- 1 Used almost by everyone
- 2 Easy yet powerful CMD tool
- 3 Becomes a must have skill



Then comes GitHub



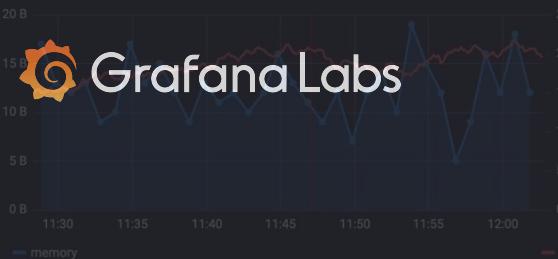
GitHub

- 1 An online service for hosting Git repos and provides GUI interface for using it.
- 2 Just like DropBox or Google Drive, but more structured, powerful, programmatic.
- 3 GitHub is for **EVERYONE!!**





Memory / CPU



logins



Memory



Logouts



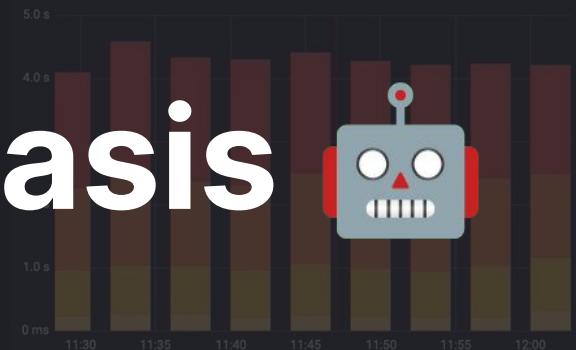
Sign ups



server requests ▾



client side full page load

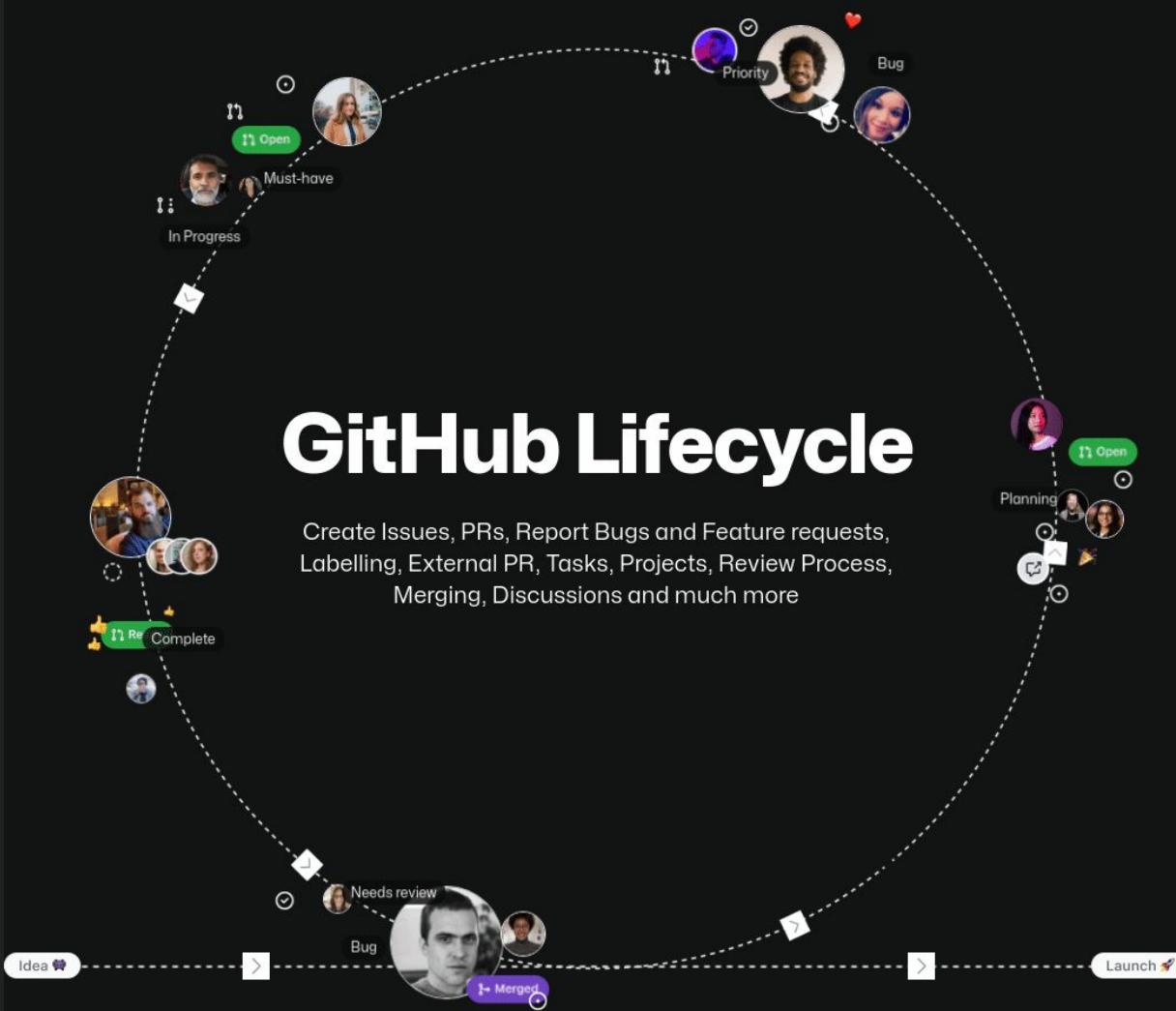


GitHub on Daily Basis

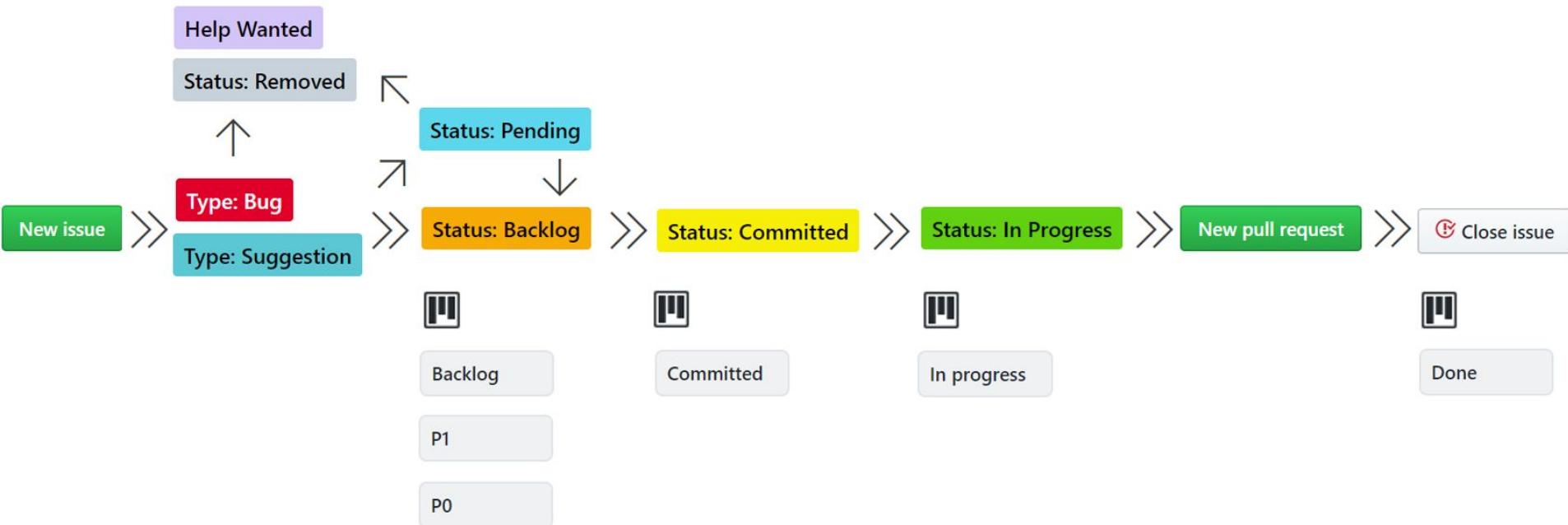


GitHub Lifecycle

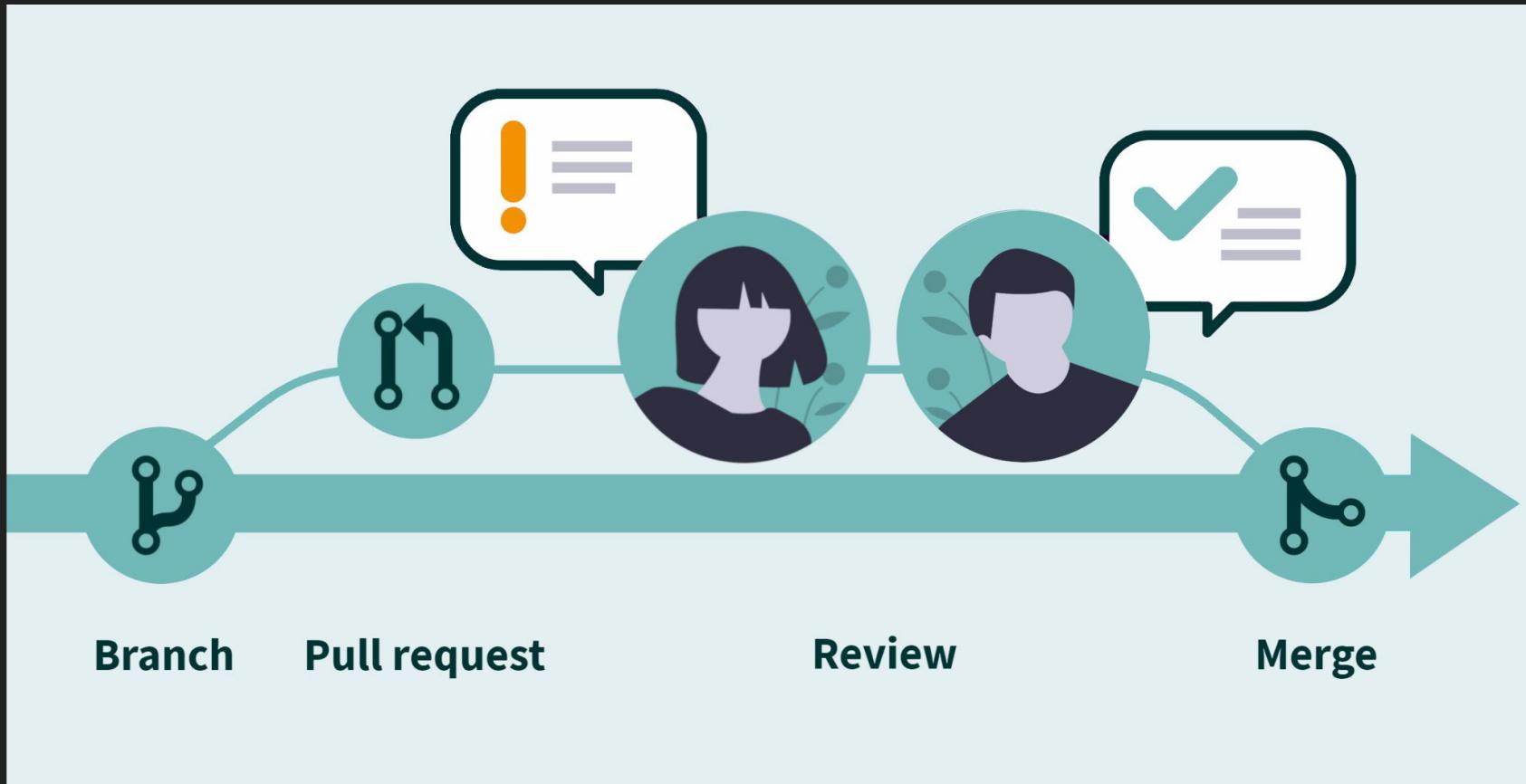
Create Issues, PRs, Report Bugs and Feature requests,
Labelling, External PR, Tasks, Projects, Review Process,
Merging, Discussions and much more



GitHub Issues (Lifecycle)



GitHub PR (Lifecycle)





Memory / CPU



logins



timeshift -1h

Memory



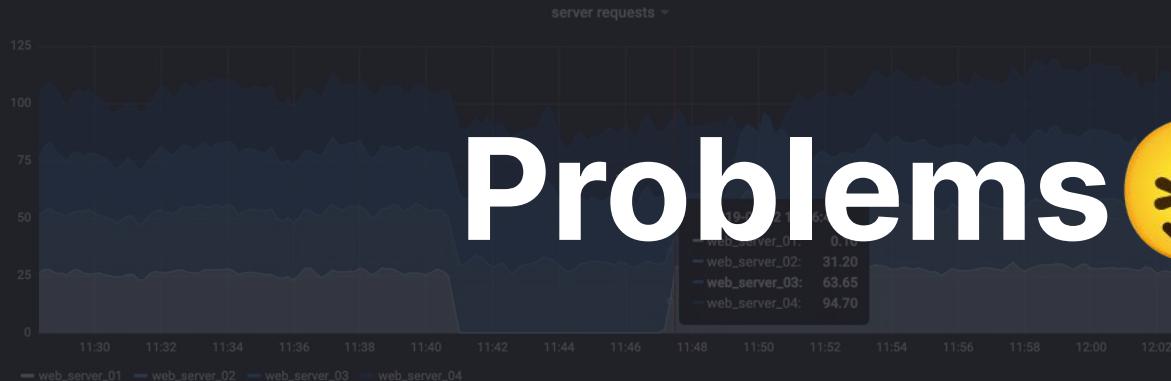
Logouts



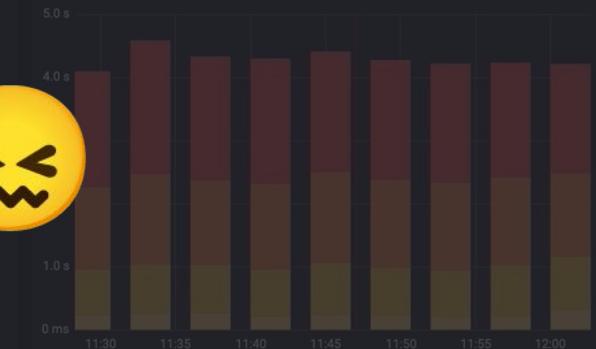
Sign ups



server requests ▾



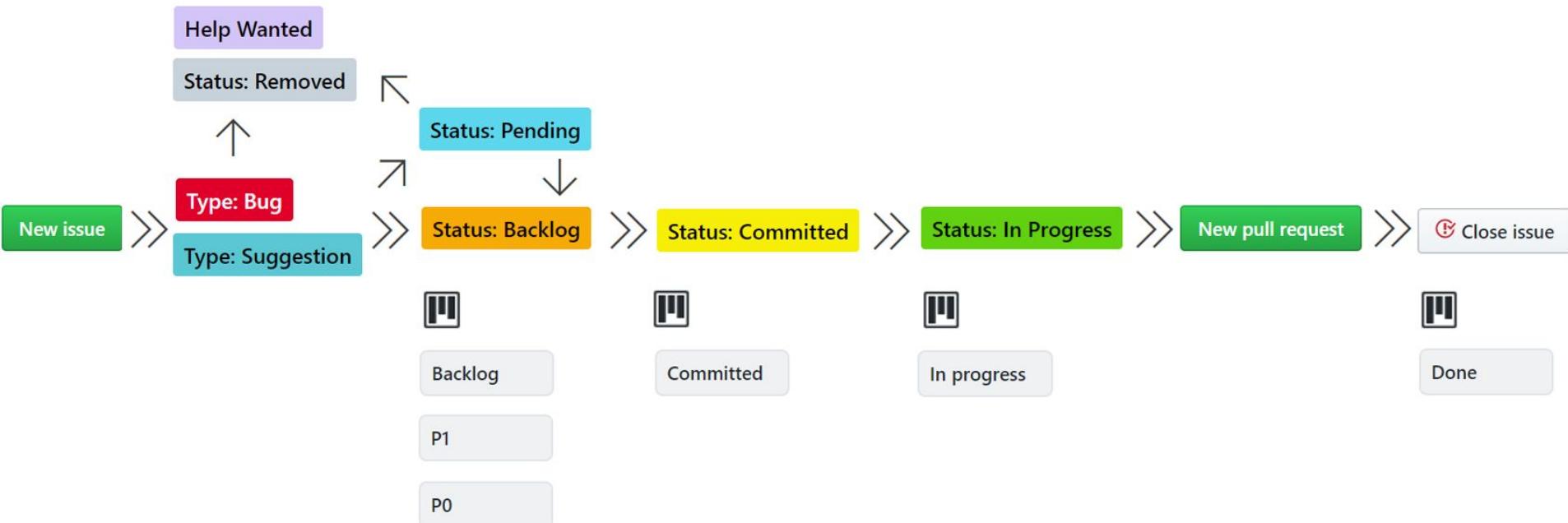
client side full page load



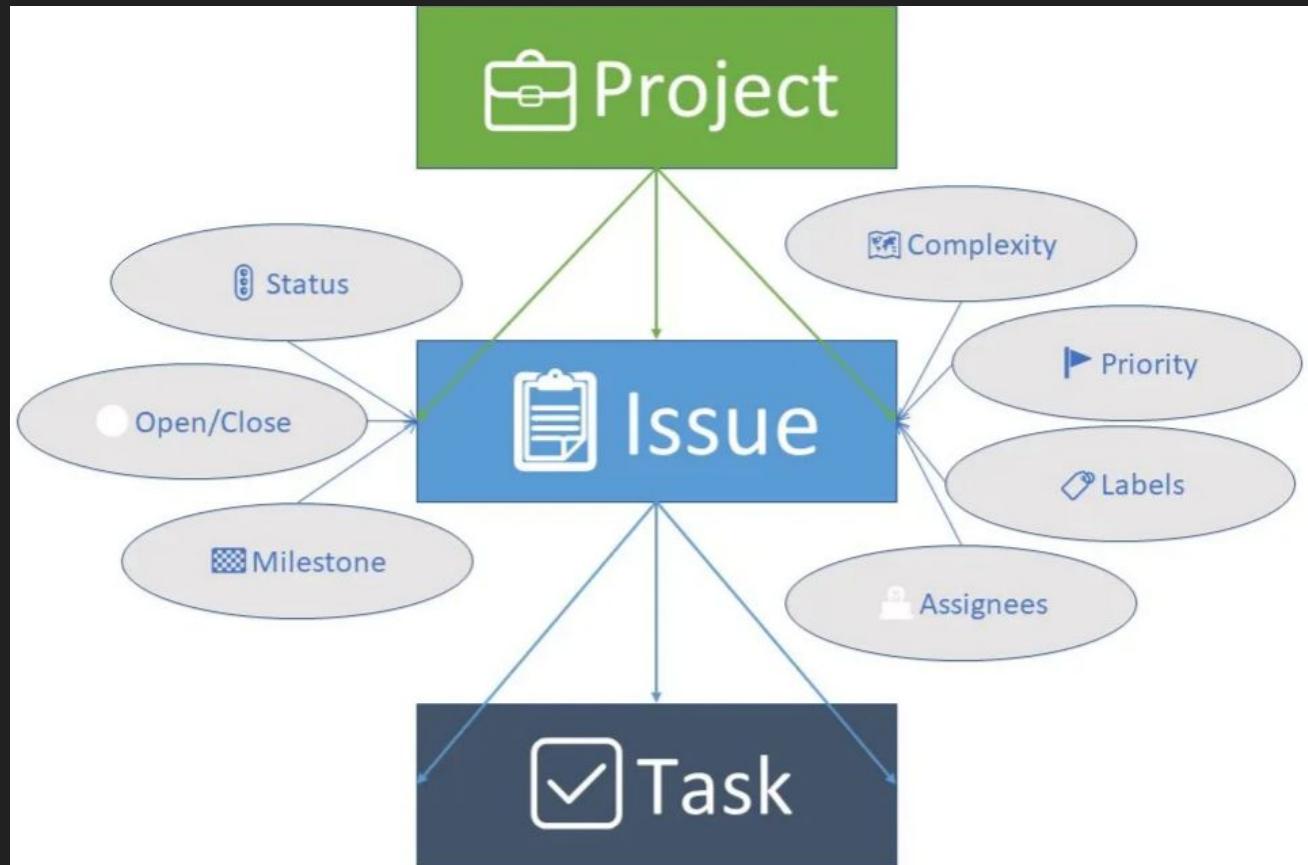
Problems 😡



Working on Issues (Single repo.)



Working on Issues (Single repo.)



Working on Issues (Multi repo.)

Issues Pull requests Labels Milestones Filters is:open is:issue New Issue

① 104 Open ✓ 9,660 Closed Author Labels Milestones Assignee Sort

① .form-group-sm .form-group-lg shrink textarea confirmed css
#13989 opened 11 hours ago by limitstudios v3.2.1

① Tooltip unnecessarily breaks into multiple lines when positioned to the right confirmed js
#13987 opened 15 hours ago by hrnch02 v3.2.1

① Tooltip Arrows in Modal example facing wrong way css
#13981 opened a day ago by SDCore

① Table improvement css
#13978 opened a day ago by Tjoosten

① docs/dist files docs
#13977 opened 2 days ago by XhmikosR v3.2.1

① Potential solution to #4647 js
#13976 opened 2 days ago by julioarmando

① Bootstrap site: right-hand navigation text becomes rasterized after scrolling css docs
#13974 opened 2 days ago by mg1075 v3.2.1

① Dropdown toggle requires two clicks js
#13972 opened 2 days ago by Kizmar

Author Label Projects Milestones Assignee Sort

① Create a "Directives Overview" or similar topic P3 comp: docs feature
#40755 opened 2 hours ago by alkidave Backlog

① Make FormArray's inability to be treated as a regular Array more prominent in the docs comp: docs comp: docs/api comp: forms
#40753 opened 6 hours ago by ychaitkin needsTriage

① bug(cdk-drag-drop): :enter / :leave animations are triggered incorrectly comp: animations
#40752 opened 9 hours ago by udos86 needsTriage

① The structural directive type check docs section is incomplete comp: docs
#40739 opened 2 days ago by ArielGueta needsTriage

① Provide usage examples for APP_INITIALIZER token comp: docs hostlist: community-help
#40730 opened 3 days ago by AndrewKushnir needsTriage

① More precise type for APP_INITIALIZER token comp: core cross-cutting: types feature
flag: breaking change hostlist: community-help
#40729 opened 3 days ago by AndrewKushnir Backlog

Filters is:issue is:open Labels 19 Milestones 1 New issue

① 133 Open ✓ 2,328 Closed Author Labels Projects Milestones Assignee Sort

① Jitter doesn't match for geom_point() and geom_line() unless data sorted
#3535 opened yesterday by wfulpf

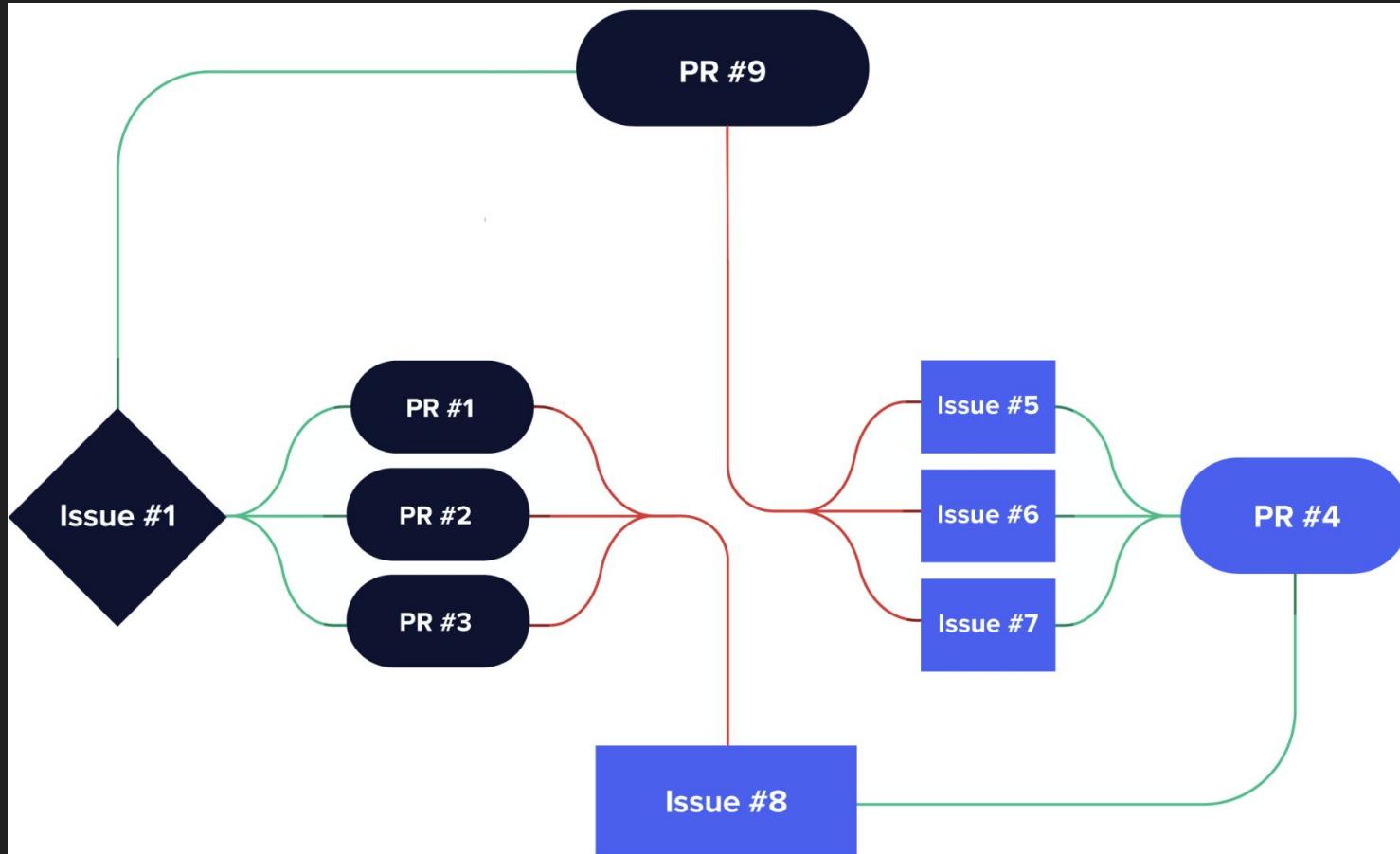
① Suggestion: improve error message on wrong use of scale_x_datetime
#3533 opened 2 days ago by adisarid

① na.rm have no effect in geom_col with position_stack
#3532 opened 3 days ago by dracodoc

① Wrong x range when using coord_cartesian() with zero range xlim and expand=FALSE
#3531 opened 4 days ago by wch

① Don't catch errors in Stat computations
#3528 opened 10 days ago by thomas86

Working on Multiple PRs



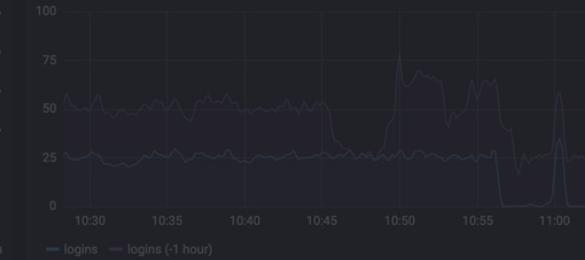


Memory / CPU



logins

⌚ timeshift -1h



Memory



Logouts



Sign ups



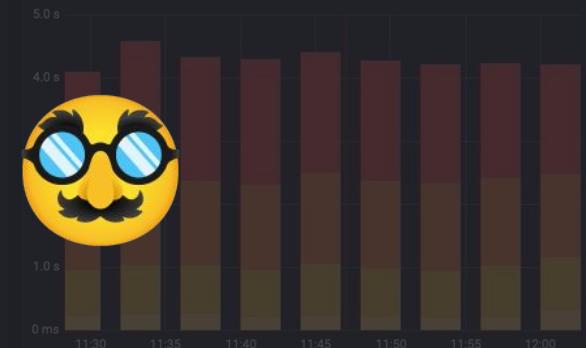
Sign outs



server requests ▾



client side full page load



Short Demo





Memory / CPU

logins

timeshift -1h

Memory

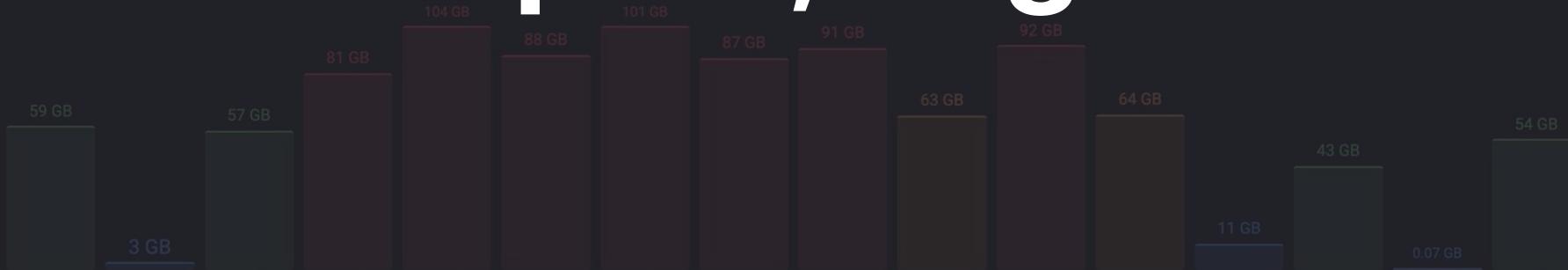
Sign ups



Logouts



Challenges for Developers, Engineers



**Tracking
Progress**

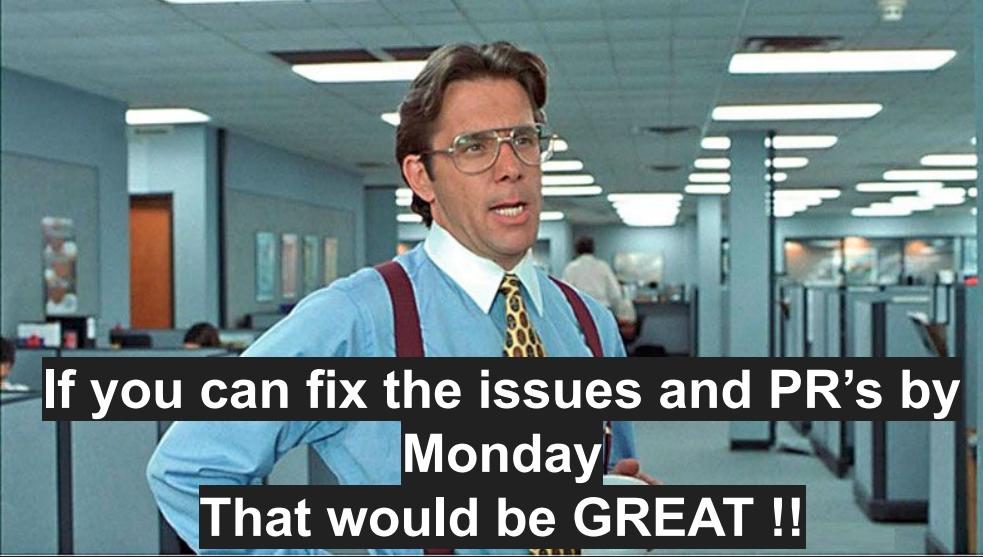
Time-Consuming

**Managing
PRs and
Issues**

**Decision
Making**

Stress





If you can fix the issues and PR's by
Monday
That would be GREAT !!





Challenges for Managers, Team Leads

```
graph TD; C((Lack of Visibility  
+  
No  
Centralized View)) --- O((Ownership)); C --- DM((Decision Making)); C --- D((Deadlines)); C --- CGE((Complexity  
grows  
exponentially))
```

Ownership

Lack of Visibility
+
**No
Centralized View**

**Decision
Making**

Deadlines

**Complexity
grows
exponentially**





Its Performance Review Time !!





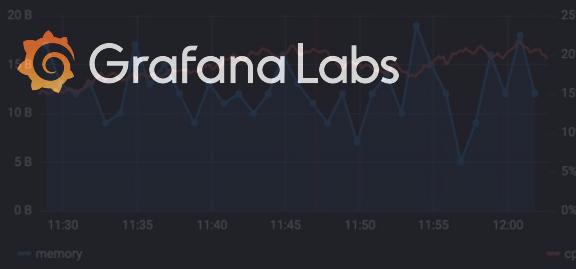
Memory / CPU

logins

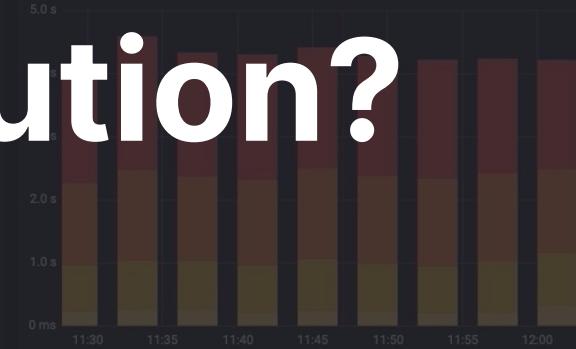
○ timeshift -1h

Memory

Sign ups



server requests ▾



What is the Solution?



Memory / CPU



logins



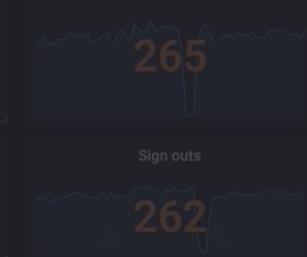
Memory



Logouts



Sign ups



265

Sign outs

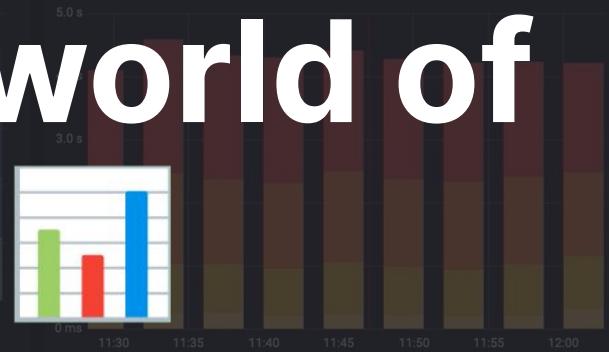
262

Welcome to the world of Monitoring

server requests ▾



client side full page load





Using Grafana

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

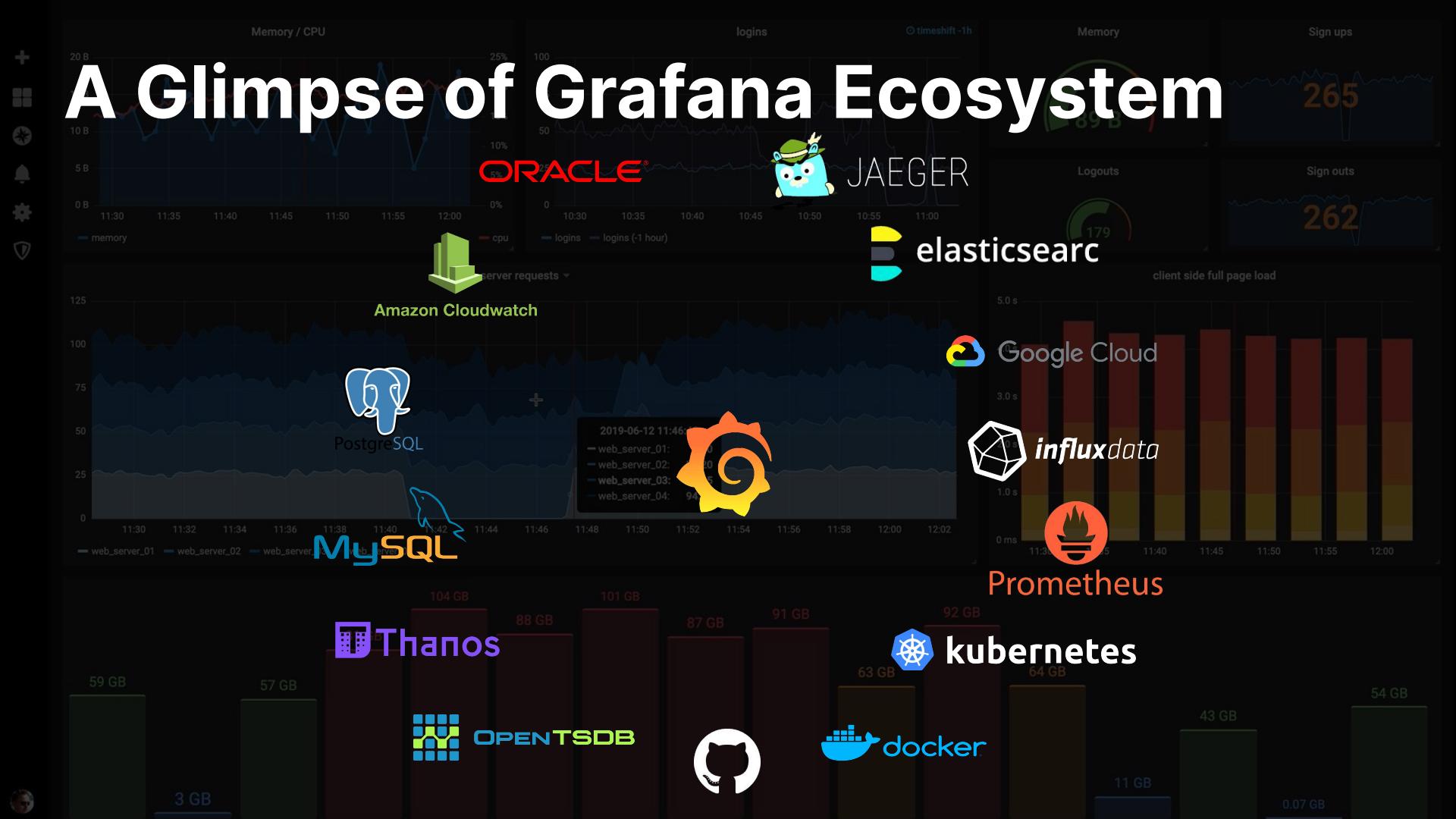




Does Grafana means Prometheus?



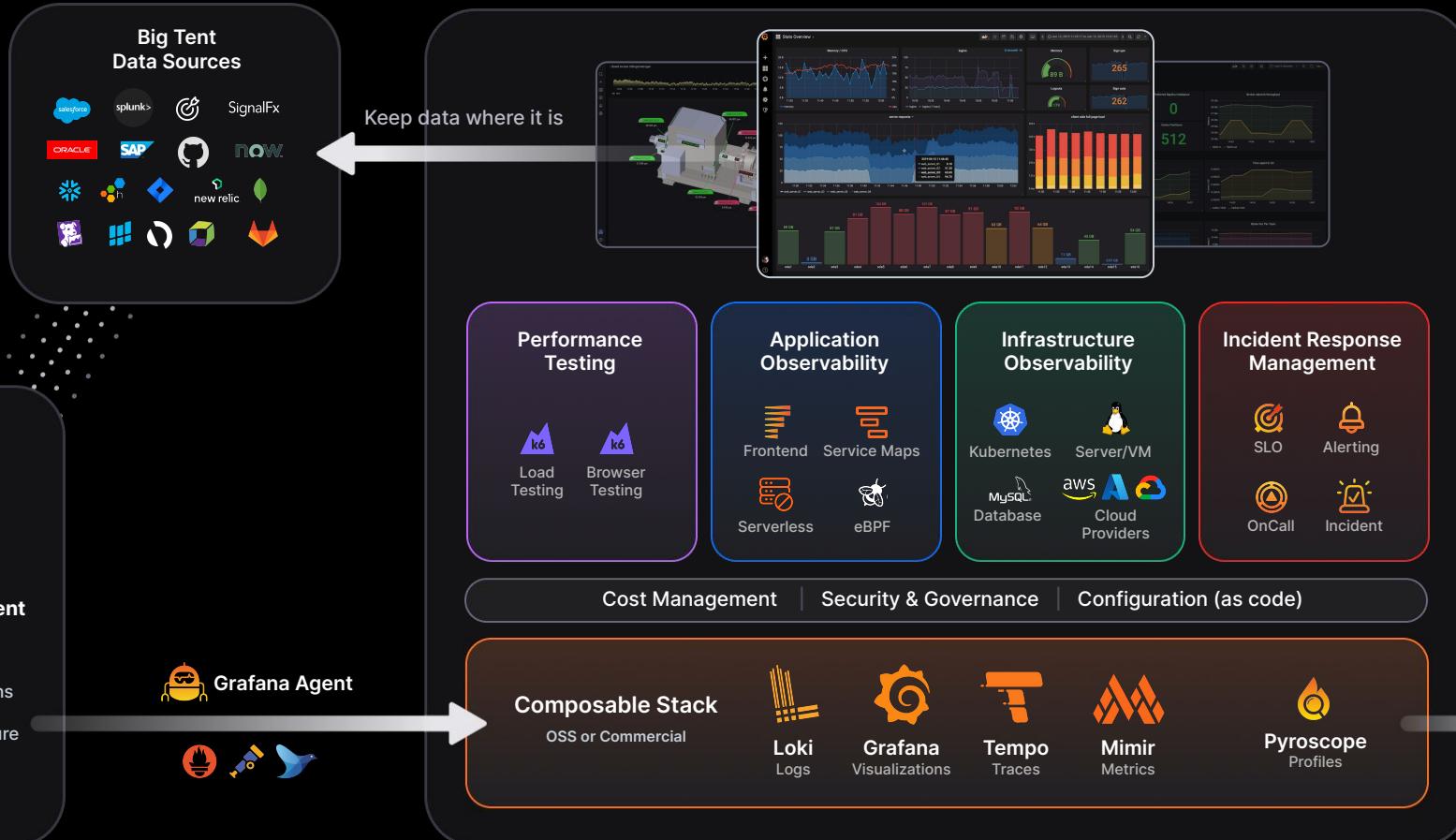
A Glimpse of Grafana Ecosystem

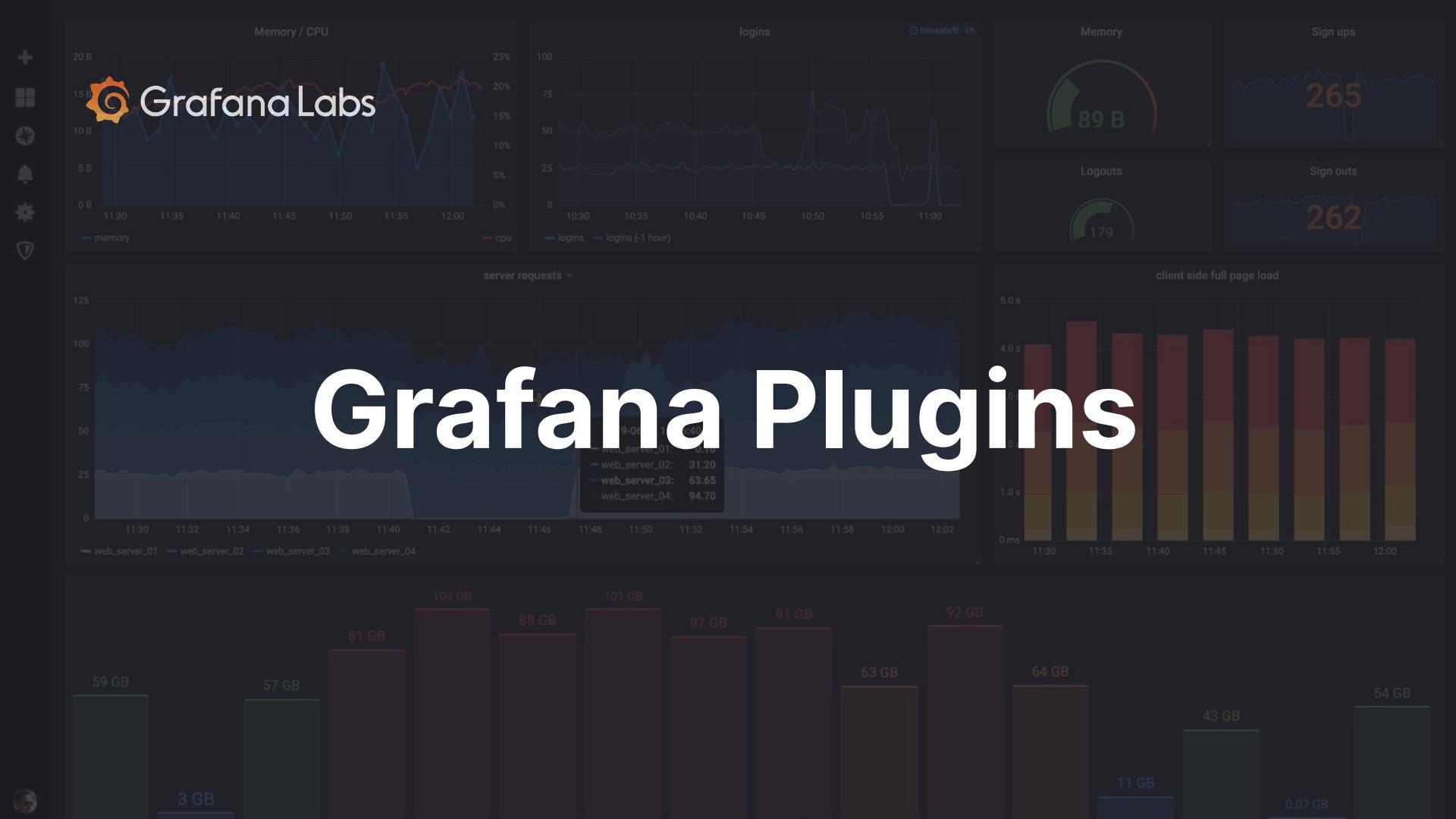




Product stack diagram

Your open and composable observability stack





Grafana Plugins

- 1 **Connect & view the data**
- 2 **Built-in inside the core**
- 3 **Community & Enterprise plugins**

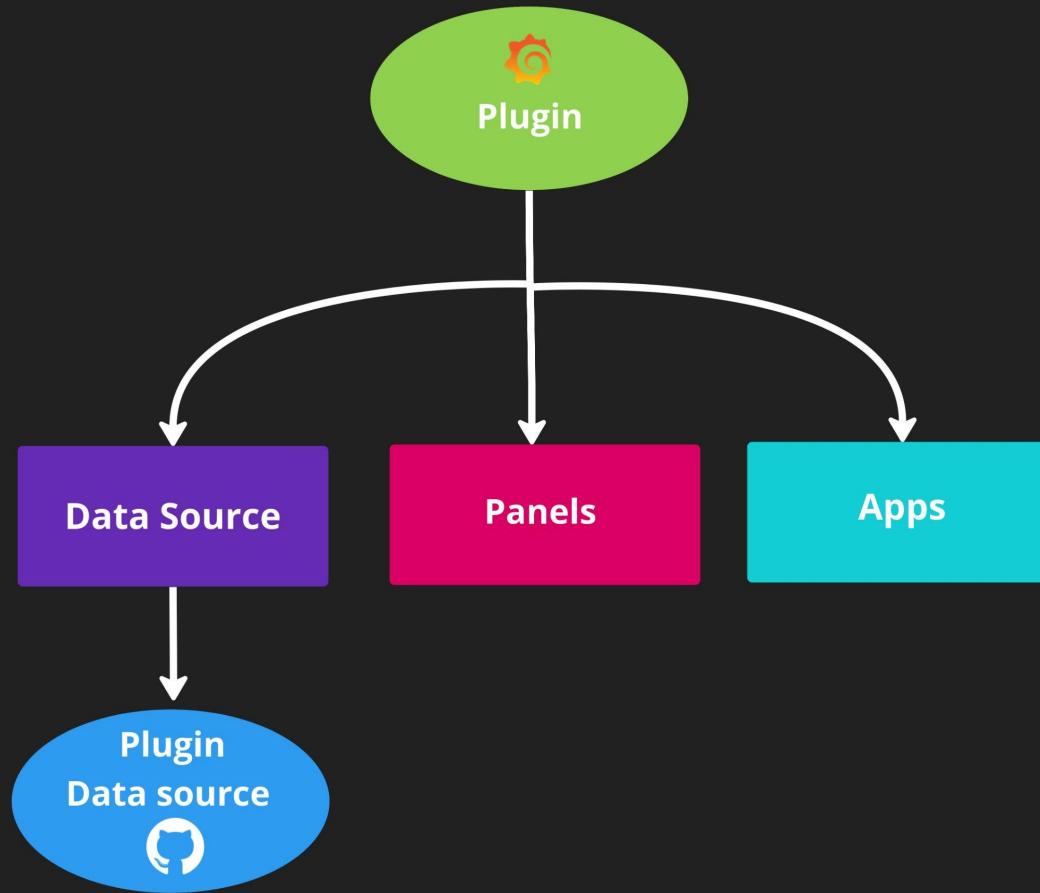


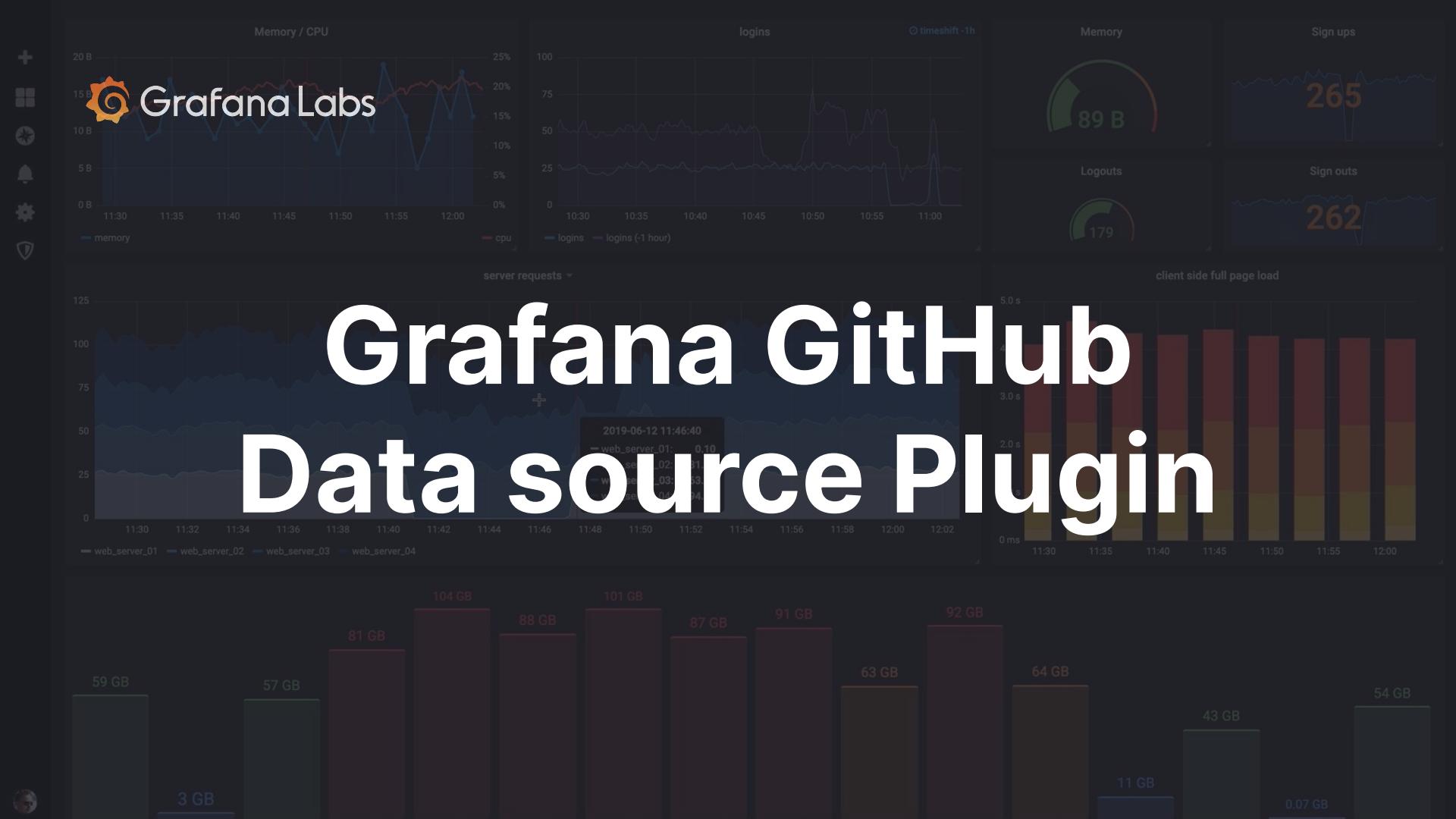


Plugins = Data Sources, Panels or Apps (which one)?



Grafana Plugin Breakdown





Grafana GitHub Data source Plugin

GitHub Data source Plugin

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





Memory / CPU



logins

timeshift -1h



Memory



Logouts



Sign ups



server requests ▾



client side full page load



GitHub Plugin Features

1

Backend

- Releases, Commits
- Repositories, Organizations
- Stargazers, Milestones
- Issues, Labels
- Projects, Workflows, Deploys



GitHub Plugin Features

2

Frontend

- Visualize queries
- Template variables
- Annotations





Memory / CPU



logins

timeshift -1h



Memory



Logouts



Sign ups



Sign outs

265

262

server requests ▾



client side full page load



Configuring Datasource



2 Step process

Install  using the
 plugin catalog



Configure  API Key



Memory / CPU



logins



Memory



Logouts



Sign ups



server requests ▾



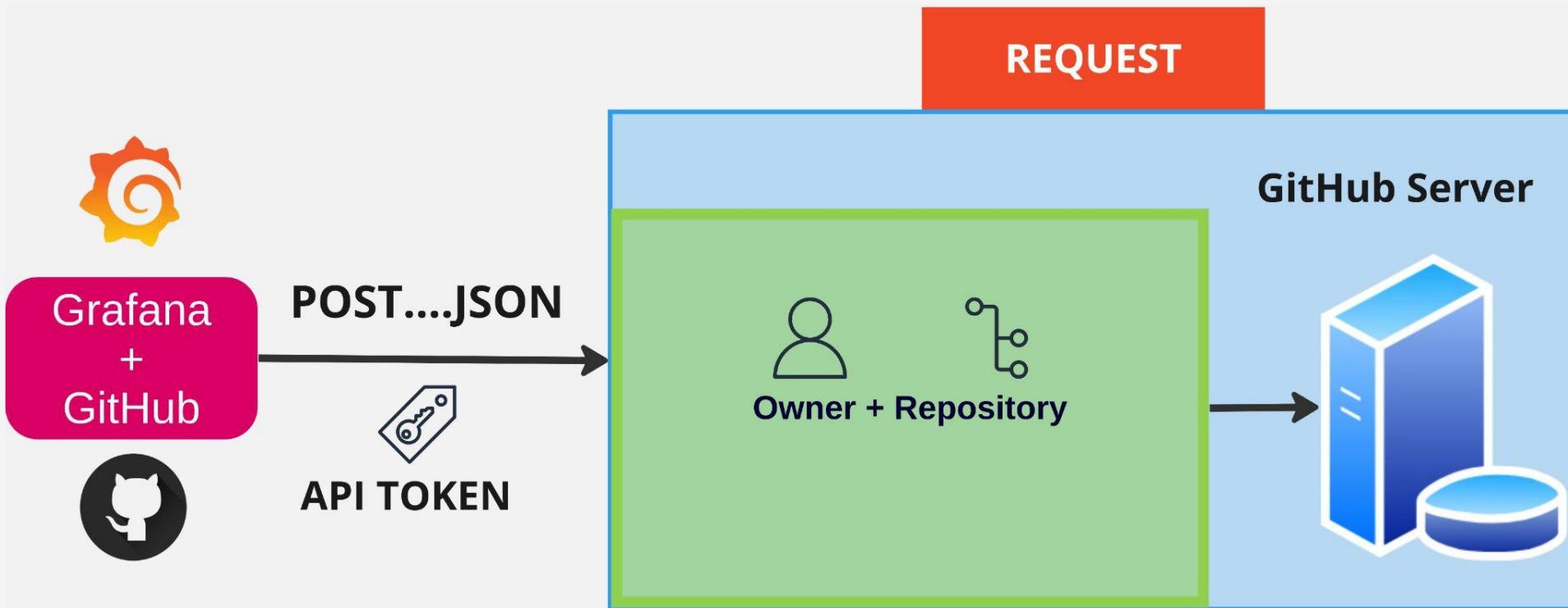
client side full page load



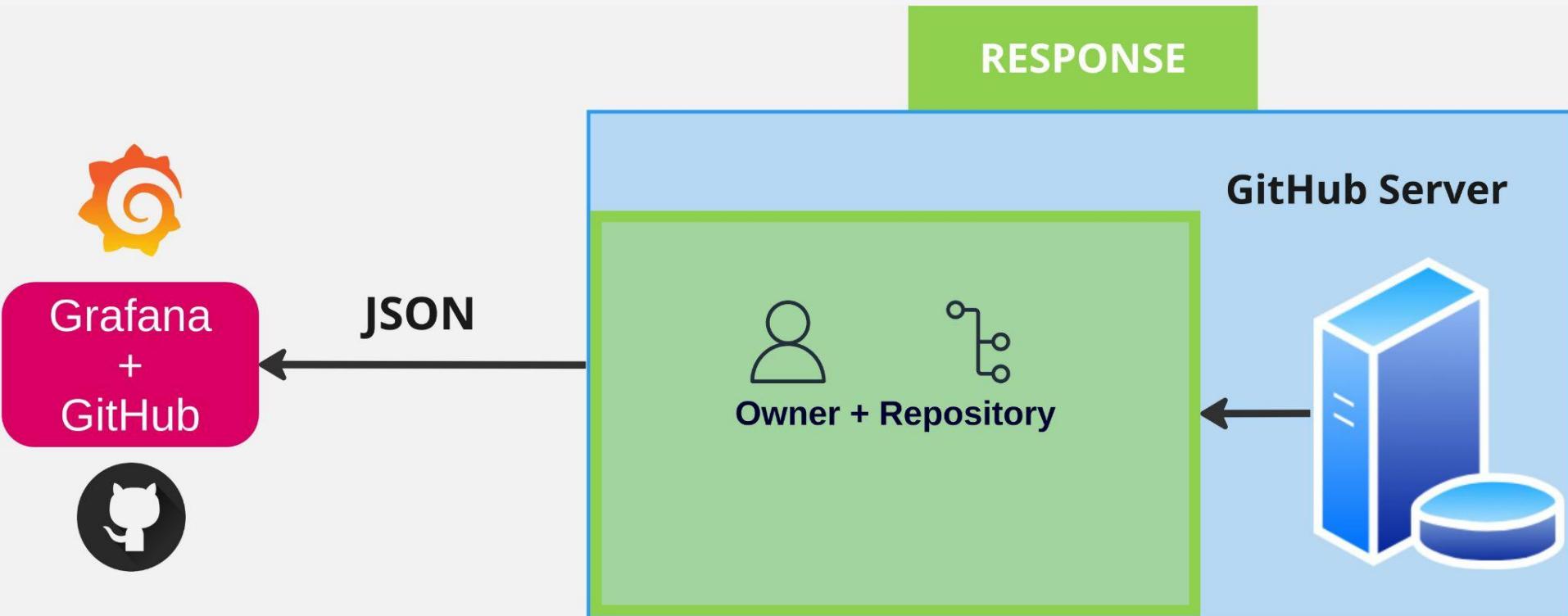
How is it going to work?



Sending Request



Receiving Response

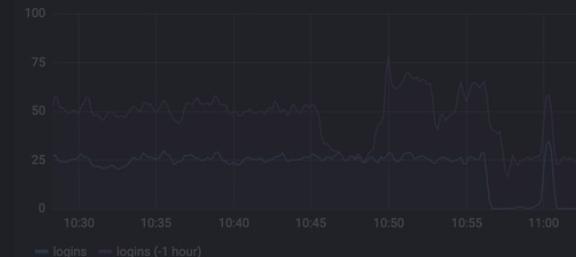




Memory / CPU



logins



Memory



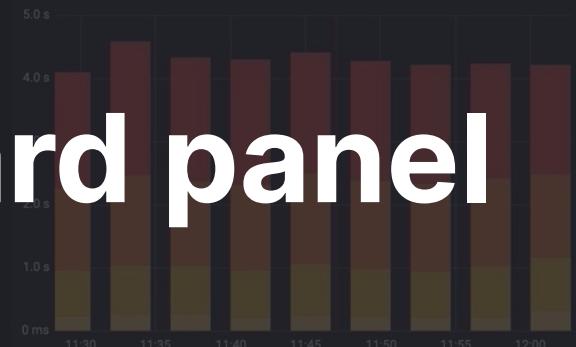
Logouts



Sign ups

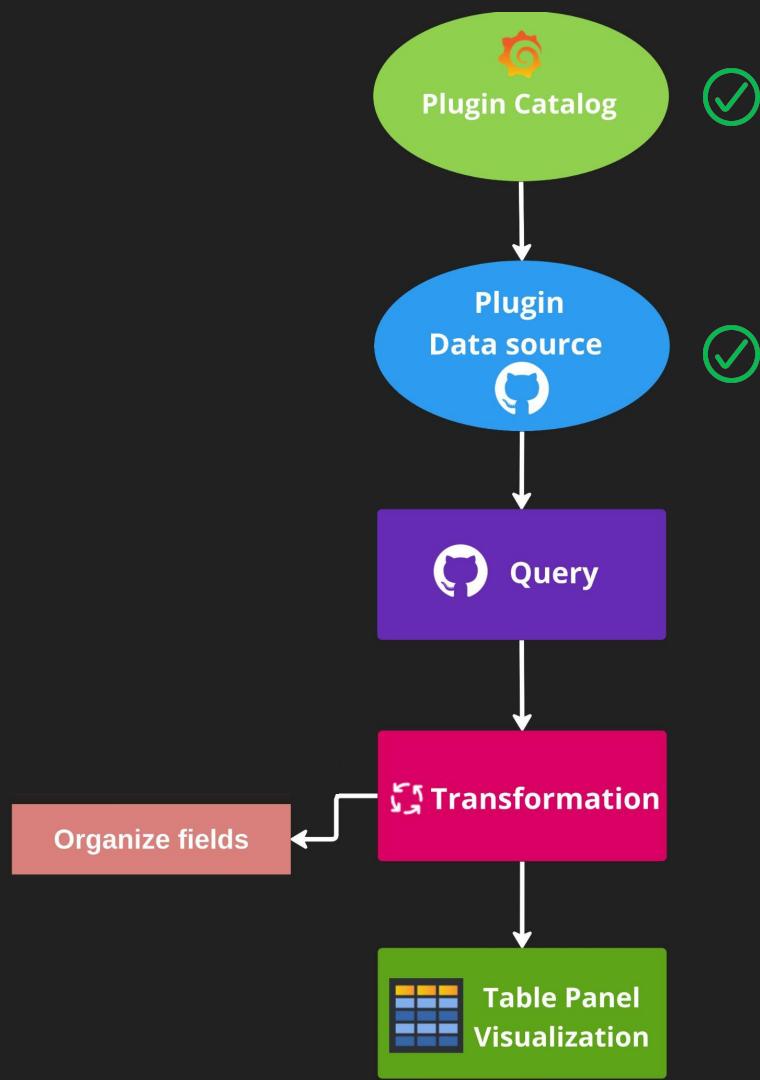


client side full page load



Creating a Dashboard panel





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

Table view Fill Actual Last 12 hours

Basic Table Panel view

title	author	author_company	repo	number	closed	created_at	closed
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 - baldmOmma'			grafana/grafana	85220	false	2024-03-26 23:49:25	

Query 1 Transform data 0

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

1

2

3

4



Memory / CPU



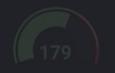
logins



Memory



Logouts



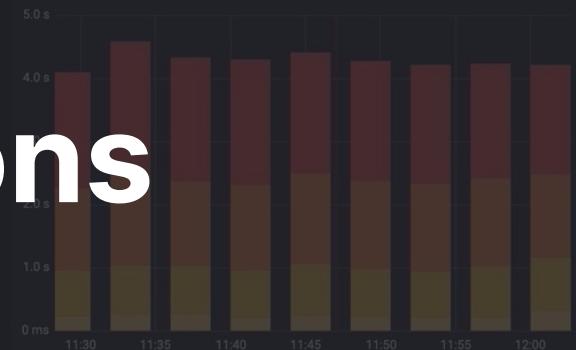
Sign ups



server requests ▾



client side full page load



Grafana Transformation

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



Transformation

Extract fields

Sort by

Format by

Convert field type

Filter data

Rename by Regex

Group by

Organize

Reduce

Transformation - Organize fields

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

Discard Save A

Using Transformations

issue number	title	created_at	repo	closed ↑	author	closed_at
85229	Alerting Provisioning: Importing	2024-03-27 09:56:19	grafana/grafana	false	PhilippHomann	
85227	Missing option in settings file	2024-03-27 08:51:33	grafana/grafana	false	PhilippDehner	
85220	Tooltip: Tooltip isn't hidden wh	2024-03-26 23:49:25	grafana/grafana	false	baldm0mma	

Query 1 Transform data 1

1 - Organize fields by name

1 3

Renaming and hiding fields:

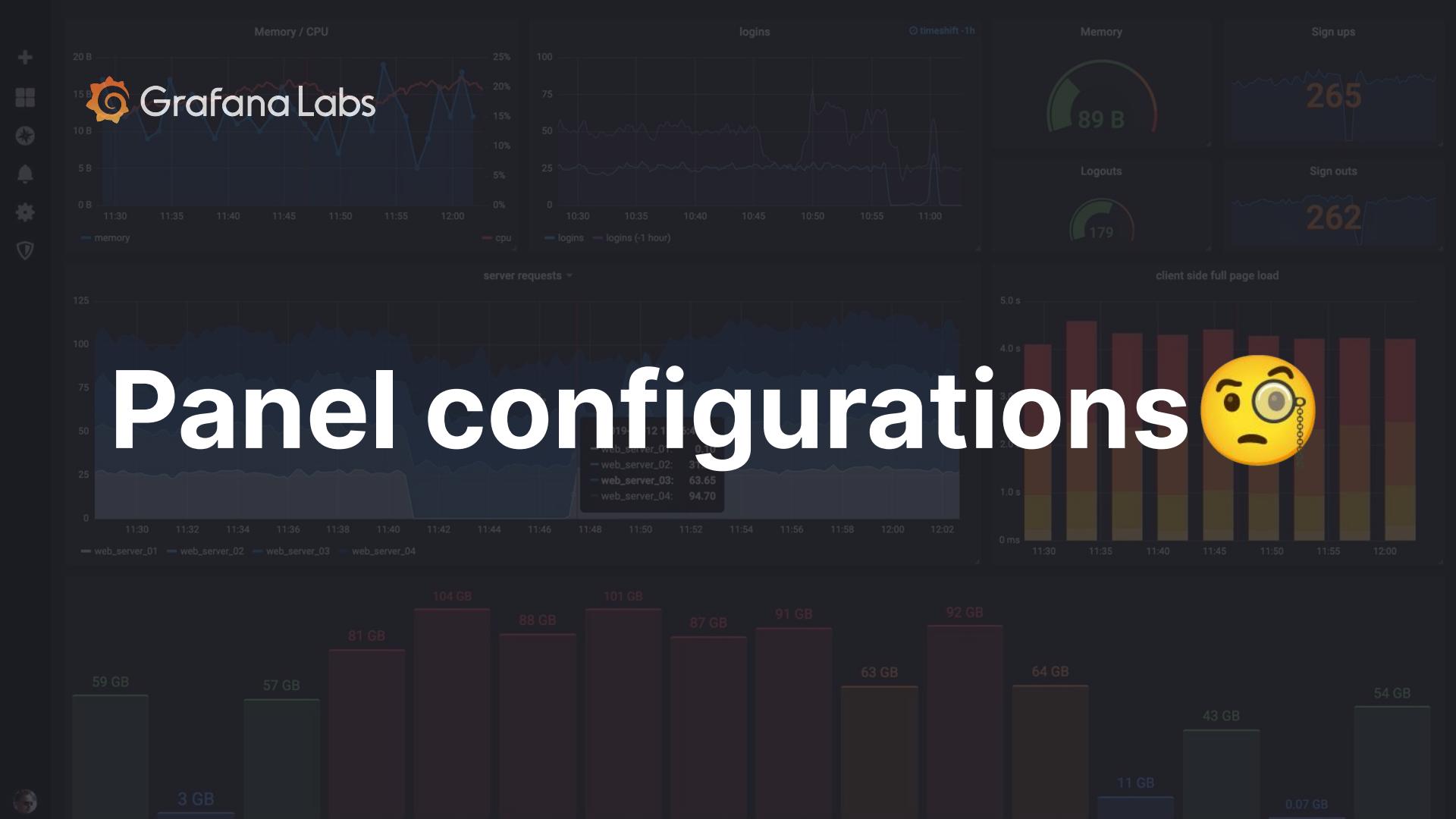
Original Field	Rename
issue number	issue number
title	Rename title
created_at	Rename created_at
repo	Rename repo
closed	Rename closed
author	Rename author
author_company	Rename author_company
closed_at	Rename closed_at

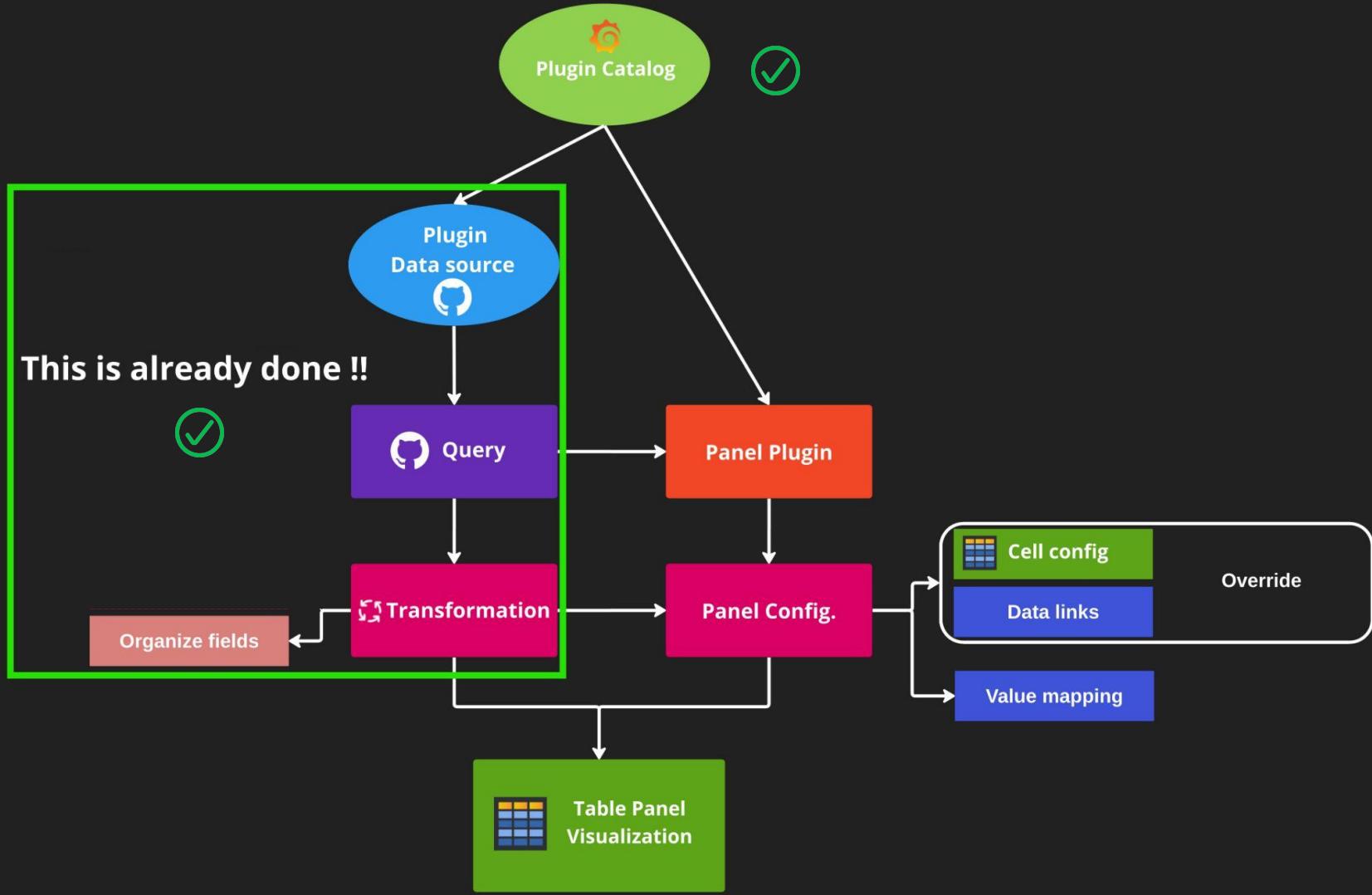
Rename the field

Hide unwanted field

+ Add another transformation × Delete all transformations

2





Grafana Override Function

- 1 Allow you to customize visualization settings for specific fields or series
- 2 Lets you define multiple options for how that field is displayed



Using Override - Cell type

Using Overrides

issue number	title	created_at	repo	closed ↓	author	closed_at
85081	Add Reporting tab in scenes ShareModal	2024-03-25 15:38:39	grafana/grafana	true	juanicabananas	2024-03-25 20:36:57.000
85202	Explore/logsInfiniteScrolling: UI slowdown	2024-03-26 18:51:44	grafana/grafana	true	ddelemeny	2024-03-26 20:52:00.000
85066	Grafana: folder admin can not edit alert e	2024-03-25 12:19:35	grafana/grafana	false	mhulscher	
85067	Auth: allowed_groups not working for Go	2024-03-25 12:24:36	grafana/grafana	false	PioneerD	
85069	DataSourceAPI: Add optional `queries` pa	2024-03-25 12:36:16	grafana/grafana	false	dprokop	
85070	AdHocFilters: Allow providing a free text \	2024-03-25 12:43:58	grafana/grafana	false	dprokop	
85074	AdHocFilters: Allow picking multiple value	2024-03-25 13:31:18	grafana/grafana	false	dprokop	

Using Override - Data links

Override 7

Fields with type

Number (1)

▼ Data links

Link to the issue

`https://github.com/grafana/grafana/issues/${__data.fields["issue number"]}`

+ Add link

Edit link

Title

Link to the issue

URL

`https://github.com/grafana/grafana/issues/${__data.fields["issue number"]}`

Open in new tab



Cancel

Save

Using Override - Data links

Using Overrides + Data Links

URL Link to the issue

issue number	title	created_at	repo	closed ↓	author
85081	Add Reporting tab in scenes ShareModal	2024-03-25 15:38:39	grafana/grafana	true	juanicabanas
85202	Explore/logsInfiniteScrolling: UI slowdownr	2024-03-26 18:51:44	grafana/grafana	true	ddelemeny
85066	Grafana: folder admin can not edit alert e	2024-03-25 12:19:35	grafana/grafana	false	mhulscher
85067	Auth: allowed_groups not working for Go	2024-03-25 12:24:36	grafana/grafana	false	Pioneerd
85069	DataSourceAPI: Add optional 'queries' pa	2024-03-25 12:36:16	grafana/grafana	false	dprokop
85070	AdHocFilters: Allow providing a free text \	2024-03-25 12:43:58	grafana/grafana	false	dprokop

Using Value mapping

Value mappings X

Condition	Display text	Color	Actions
Value false	in progress	●	✖ ↳ trash
Value grafana/grafana	grafana-core	●	✖ ↳ trash

+ Add a new mapping Cancel Update

Using Value mapping

Using Overrides + Data Links + Value Mapping

issue number	title	created_at	repo	closed	author
84807	Dashboard - extensions menu split into separate sections	2024-03-20 12:49:59	grafana-core	in progress	sympatheticmoose
84808	Azure Monitor: Metric query for multiple metrics	2024-03-20 12:55:14	grafana-core	in progress	goorallab
84818	Annotations are not shown in the panel editor	2024-03-20 14:39:16	grafana-core	true	dprokop
84821	Dashboards: TB/TiB, GB/GiB Unit Conversion	2024-03-20 14:56:54	grafana-core	true	reiverjohn
84824	VizTooltips: Switch data links display from icon to text	2024-03-20 15:33:11	grafana-core	true	lukasztyrala
84829	Menu hiding when panel has no title	2024-03-20 16:18:07	grafana-core	in progress	natellium
84830	Panel menu not visible when panel has no title	2024-03-20 16:18:11	grafana-core	in progress	natellium
84834	Scenes powered dashboards enhancement	2024-03-20 16:23:18	grafana-core	in progress	natellium



Dynamic Dashboard Variables



Grafana Dashboard Variables

- 1 Also known as templating
- 2 Create interactive and dynamic dashboards
- 3 **NO** hard-coding !!



Dynamic dashboard variables

Data source

Interval

*Chained
variables*

Ad-hoc filters

Custom

Query

Global
variables

Constant

Text Box

Dashboard variables - Custom type

Demo

Dashboard variables - Query type

Demo



Memory / CPU



logins



Memory



Sign ups



Logouts



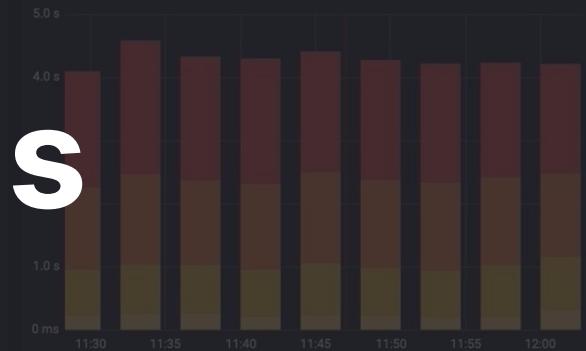
Sign outs



server requests ▾



client side full page load



Annotations



Grafana Annotations

- 1 Mark points on a visualization with events
- 2 Visualized as vertical lines and icons
- 3 **NO hard-coding !!**



Annotation - Data source

Demo

Takeaways

- 1 Centralized Visibility
- 2 Monitoring the Productivity
- 3 Collaboration & Transparency



Future Improvements

- 1 Support Alerting
- 2 Access Token Limit
- 3 Time Series Data

Want to get involved?

1

To report bugs, feature-request:

- Grafana GitHub [repo](#)



[grafana/github-datasource](#)

2

Other useful resources:

- Slack channel [#grafana](#)
- Community [forum](#)



[#grafana](#)



[community.grafana.com](#)



SUCCESS

SOLUTION

PROBLEM





Thanks for participating!

Contact me:



usman.ahmad@grafana.com



Syed Usman Ahmad



