



IoT Observability with Grafana

What is Grafana?



Metrics and Logs

- Metrics show the **status** of something **over time**
 - Soil humidity of your plants `soil_humidity 0.33`
 - Amount of electricity you're using `power_usage 23`
- Logs show that **something happened** at some **point in time**
 - Today it rained
 - Power went out
- Line is sometimes blurry
 - Precipitation amount (mm) per hour
 - State (0, 1) of the power grid



Labels

- We measure the same thing for different things
 - `soil_humidity{plant=rose location=balcony} 0.88`
 - `soil_humidity{plant=tulip location=balcony} 0.82`
 - `soil_humidity{plant=rose location=bedroom} 0.70`
 - `soil_humidity{plant=monstera location=bedroom} 0.72`
- Makes easy to match patterns and trends
 - How often do I need to water each plant type? And location?
- Timeseries: Each unique combination of metric name and label values



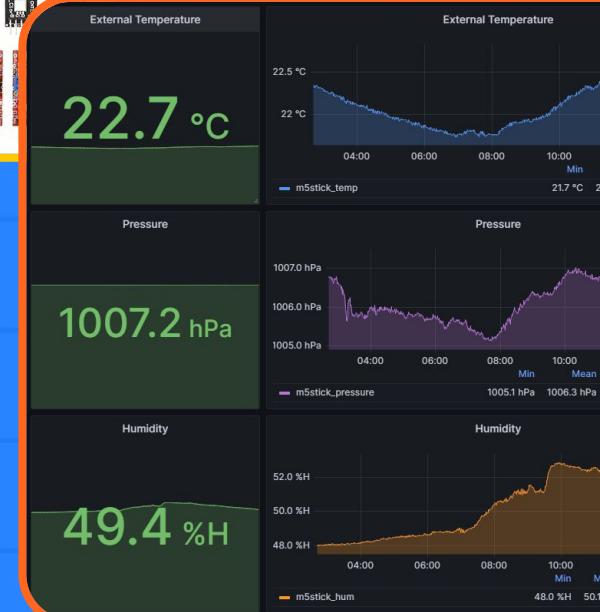
IoT and sensors

- What is "an IoT"?
 - Small, portable CPU with some sensors attached
 - Maybe some actuators too!
- CPU reads sensors and does something
- Info from one (1) system is often not enough to make decisions
- We send that data elsewhere
 - Like Grafana!

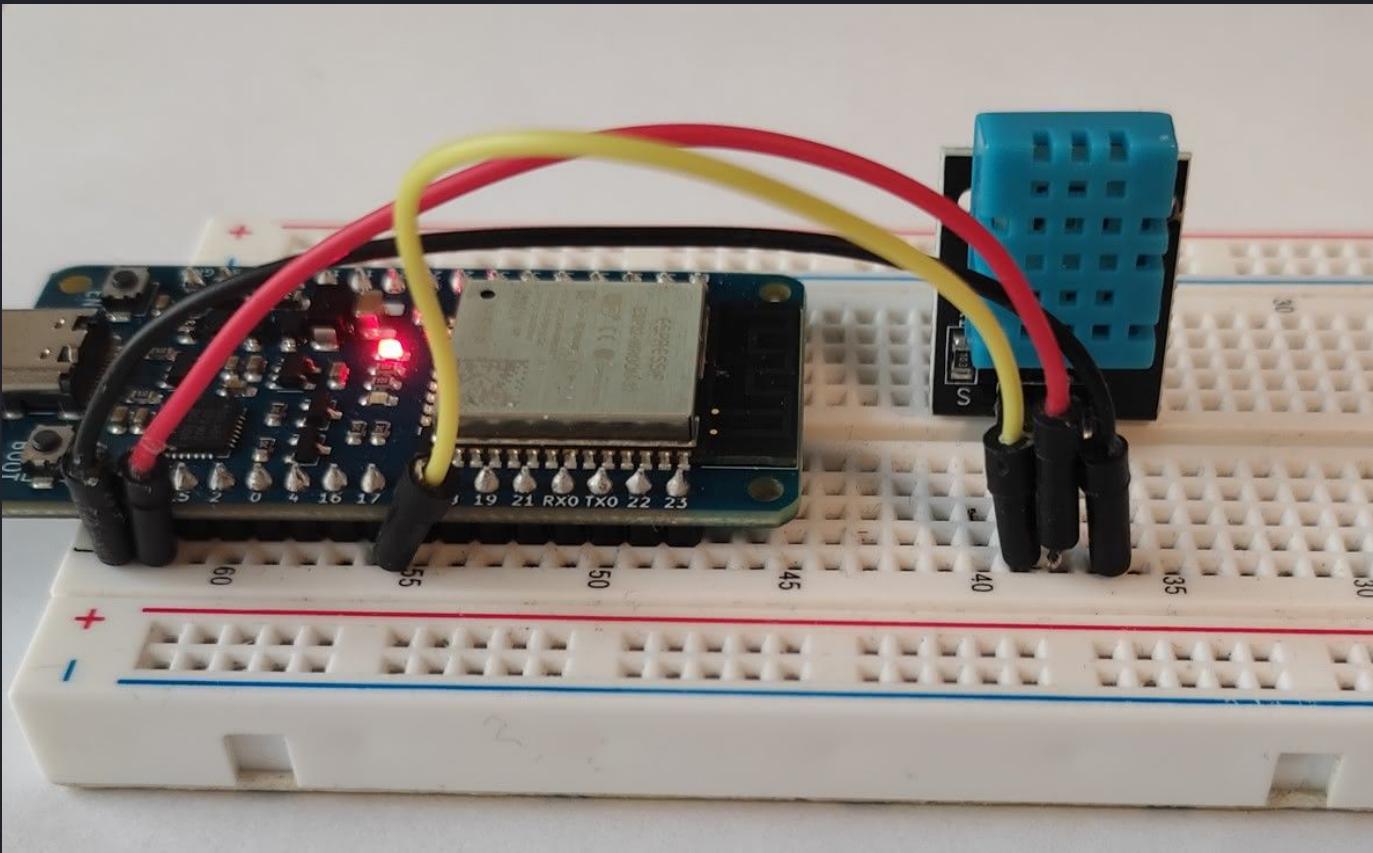


What are you building ?

- Assemble the ESP32 board and sensors
- Flash your code
- Read sensor data
- Send the data every 5 seconds to Grafana Cloud
- Graph it with Grafana!



Assemble the ESP32



Flash your code

- Arduino IDE



The screenshot shows the Arduino IDE interface with the following details:

- Title Bar:** FactoryTest | Arduino IDE 2.1.1
- File Menu:** File Edit Sketch Tools Help
- Board Manager:** Boards Manager - ESP32
- Project Structure:** FactoryTest.ino, bsp_map.c, debug_custom.json, startup_music.c
- Code Editor Content:**

```
1 #include <Arduino.h>
2 #include <MSStack.h>
3 #include <stdlib.h>
4 // #include <esp32.h>
5
6 #include "WiFi.h"
7 #include "utility/MPU9250.h"
8
9 extern const unsigned char gImage_logoM5[];
10 extern const unsigned char msstack_startupMusic[];
11
12 #ifndef min
13 #define min(a, b) (((a) < (b)) ? (a) : (b))
14 #endif
15
16 MPU9250 IMU;
17
18 // #define LEDS_NUM 15
19 // #define LEDS_NUM 10
20 // CRGB ledBuff[LEDS_NUM];
21
22 void startupLogo() {
23     static uint16_t brightness, pre_brightness;
24     uint32_t length = strlen((char *)msstack_startupMusic);
25     MS_Lcd.setBrightness(0);
26     MS_Lcd.fillRect(0, 0, 320, 240, (uint16_t *)gImage_logoM5);
27     for (int i = 0; i < length; i++) {
28         dacWrite(SPEAKER_PIN, msstack_startupMusic[i] >> 2);
29         delayMicroseconds(40);
30         brightness = (i / 157);
```
- Left Sidebar:**
 - Arduino Boards Manager:** Arduino ESP32 Boards, By Arduino, Boards included in this package: Arduino Nano ESP32, More info, Version 2.0.11, INSTALL button.
 - esp32 by Espressif Systems:** 2.0.9 installed, Boards included in this package: Heltec Wireless Stick Lite, ESP32 Wrover Kit (all versions), L0U..., More info, Version 2.0.11, UPDATE button.
 - MSStack by MSStack official:** 2.0.7 installed, Boards included in this package: MSStack-Tough, MSStack-Peri-
- Bottom Status Bar:** In 1, Col 1 ESP32S2 Dev Module [not connected]

- PlatformIO (VSCode)



Read sensor data

- ESP32 is a very popular arduino-compatible microcontroller
- Research information about your sensor
- Search for some libraries and wiring examples
- Check some resources on
 - `#grafana` on the HackUPC slack
 - <https://github.com/grafana/hackupc>



Create a Grafana Cloud account

Go to <https://grafana.com> and sign up for a free account (if you do not have one already)



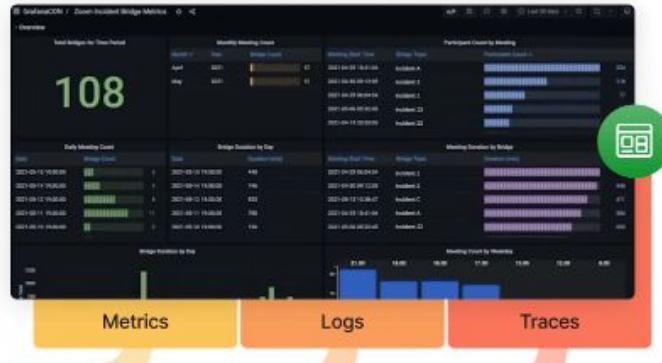
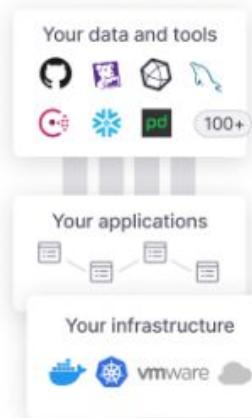
The (actually useful) free forever plan

Grafana, of course + 10K series

Prometheus metrics + 50GB logs +
50GB traces + 500VUh k6 testing

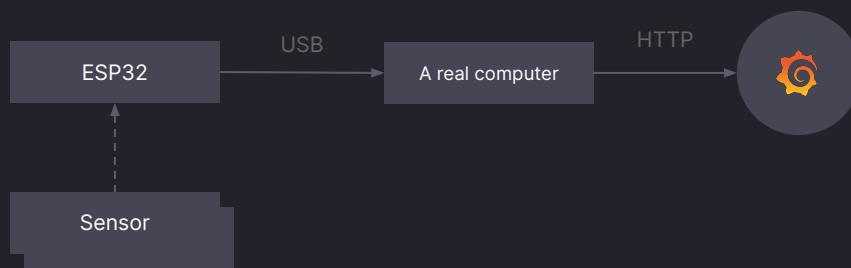
[Create free account](#)

(No credit card required)

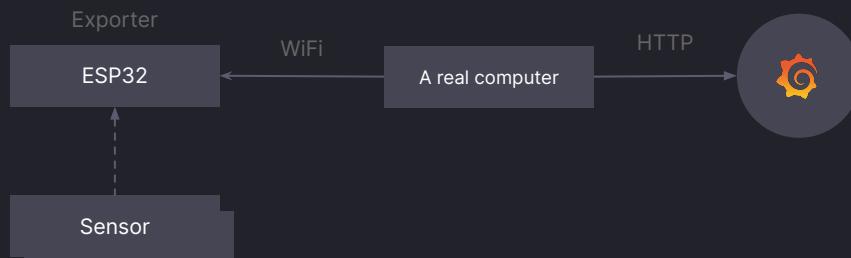
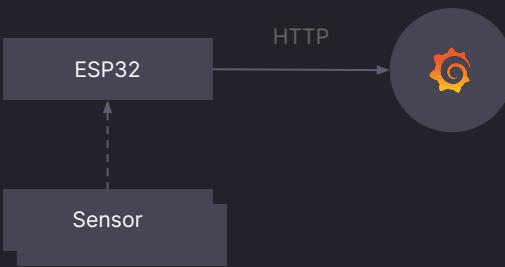


Send data to Grafana

With a computer



Without a computer



With a computer

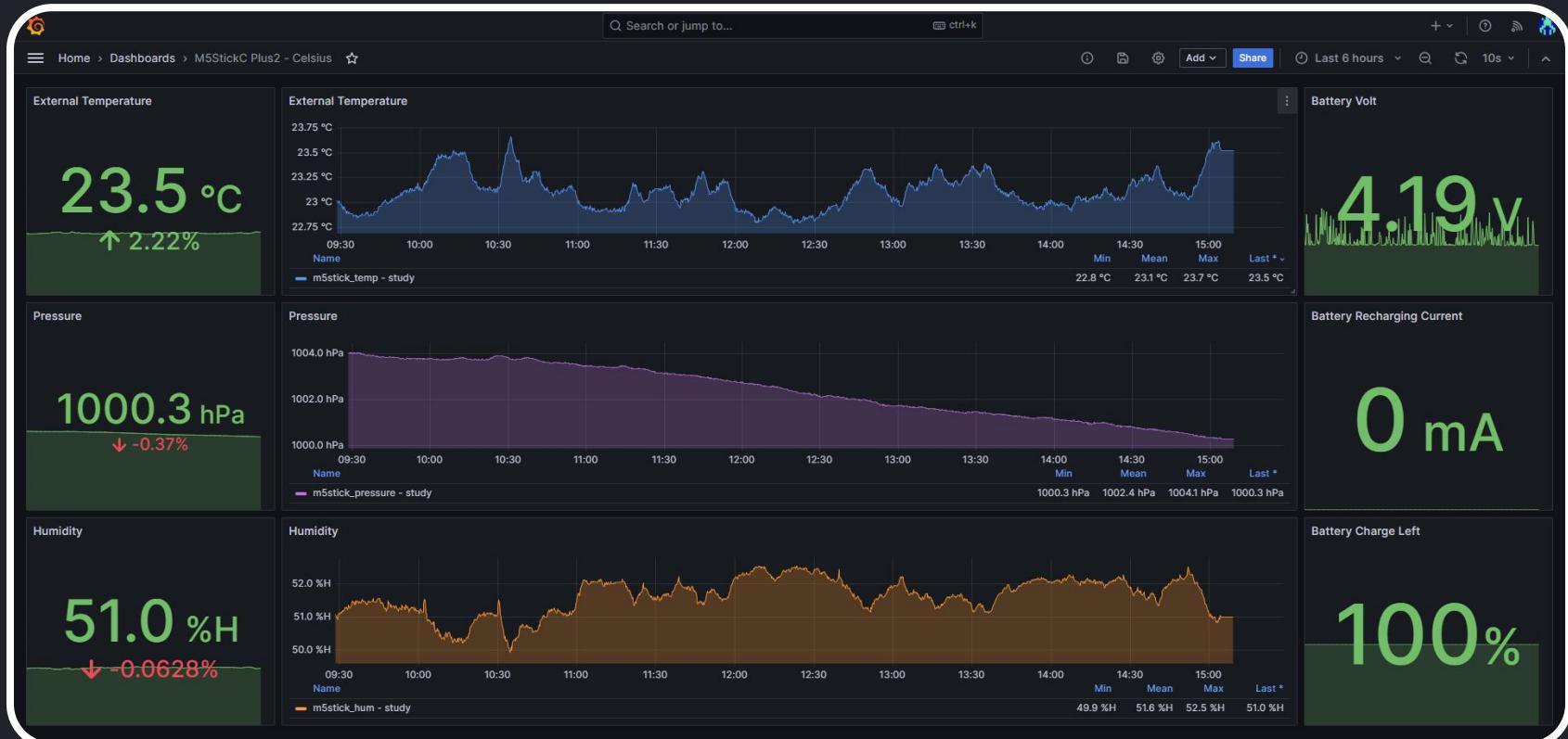
- Expected challenges
 - Data format
 - CSV? JSON?
 - USB communication
 - Read from serial port
 - WiFi communication
 - Extra code to send data to Grafana

Without a computer

- Expected challenges
 - Data format
 - Dealing with TLS certificates
 - Connecting ESP32 to the internet
 - Libraries will help!



Build some cool dashboards!



For some extra fun

- Data processing
 - E.g., calculate thermal comfort, humidex
- What else could you do with the data?
 - E.g., alerts
- What other data can you send?
 - E.g., produce logs for certain sensor events
- What would you do to scale?
 - What if you wanted to add 2 more devices? And 20?





Thank you

Slide Deck Template

Contents

Intro

Title slides

Intro slides (faces and topic titles)

Body slides & layouts (inspiration and blank slides)

Diagrams, charts, & plans (sample diagrams + components)

Logos and icons (logos, icons etc)

Grafana Content (pre-built content to use)

Create your presentation

Copy this deck

Please make a copy of this deck to use for your presentation. Feel free to add, edit, delete any slides so you're comfortable with your presentation.

- Use one of the title slide templates. All the other slide formats are provided for convenience and inspiration, but feel free to do whatever feels right for the content of your presentation
- Wherever possible, use the font 'Inter' for brand consistency

Check out this recent webinar example:

- [Observability with Loki 2.0](#)



If you have questions about the template or slide library, reach out to Carly, Song or Erik H.

If you have a slide you'd like to see added to this library please copy it into our [working deck](#).

Presentation tips



Make sure your intent is clear

What do you want your audience to take away? What specific action do they need to do? Make sure to restate this in your presentation and have a clear call to action (e.g., sign-up for a Grafana Cloud account, create a dashboard, etc)



Minimize background noise

Using a headset with a mic reduces background noise compared with a computer's built-in microphone.



Avoid robotic monologue

Make appropriate pauses, speak at a pace that allows listeners to properly process the information they're receiving. If you are saying "um" a lot, slow down.



Connectivity

Hardwire your internet connection to avoid issues. If wireless (like most), try to have a backup network available (through your mobile device).



And... have fun!

Dead serious about this. If you hate doing this, it will come across to the audience. No matter how much you smile or how much awesome information you cover. It's natural to have nerves. Practice will help a lot, but you'll still probably feel some butterflies. The trick is to have fun with it, though. Your audience will appreciate it (they know they'd be nervous too, by the way).

How to replace presenter's headshot:

1. Select the circle image
(not the colored outline)



2. Find and click '**Replace image**' from the top toolbar.



3. Select '**Upload from computer**' and upload your image*.

*Two easy ways to get headshots:

- Go to grafana.com/about/team, find the presenter's name (Ctrl-f / ⌘-f), and click headshot to **Save Image**.
- OR search presenter's Slack account and save image from the profile.

4. Voilà!



Definition of Done

Done means the customer has everything they need to be successful.

Winter 2021

Some prior art

UX Definition of
Done

Engineering
definition of
done

Grafana Division
Offsite Jam on
DoD



From idea to delivery



Proposed Solution



Machine
Learning



Incorporate
dependencies into
shared DoD



Evaluate & evolve



Proposed goals



Each functional area has their own DoD



Incorporate dependencies into shared DoD



Evaluate & evolve



Features: from idea to delivery



Your non-negotiables (what you need to be successful)



Who are the stakeholders?

**Can we define key
stakeholders?**

(why the distinction)

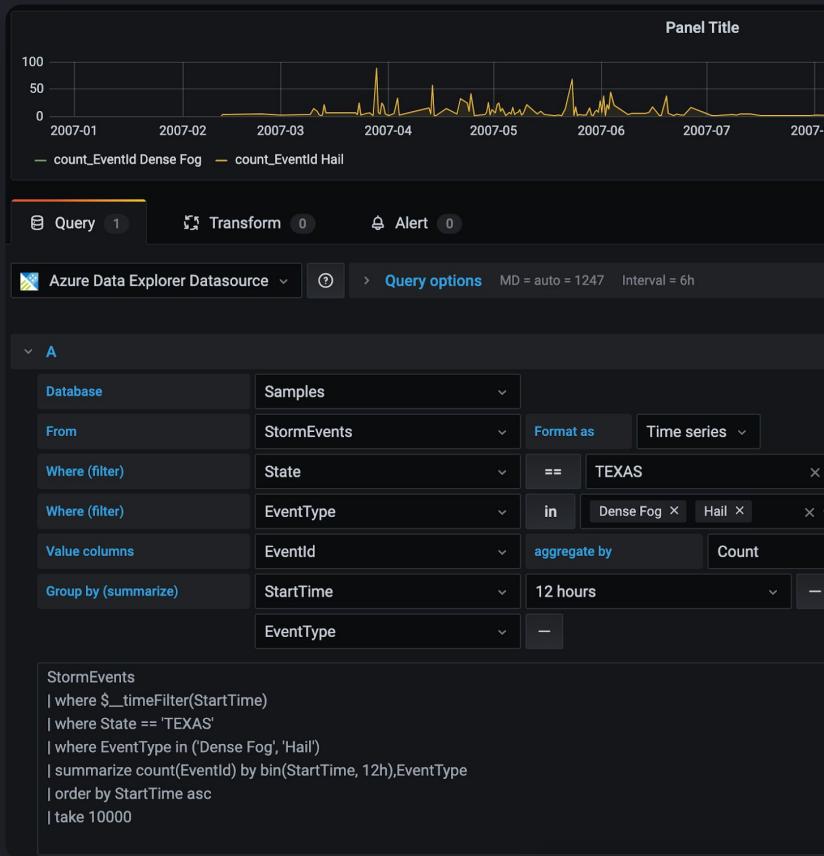


Next steps



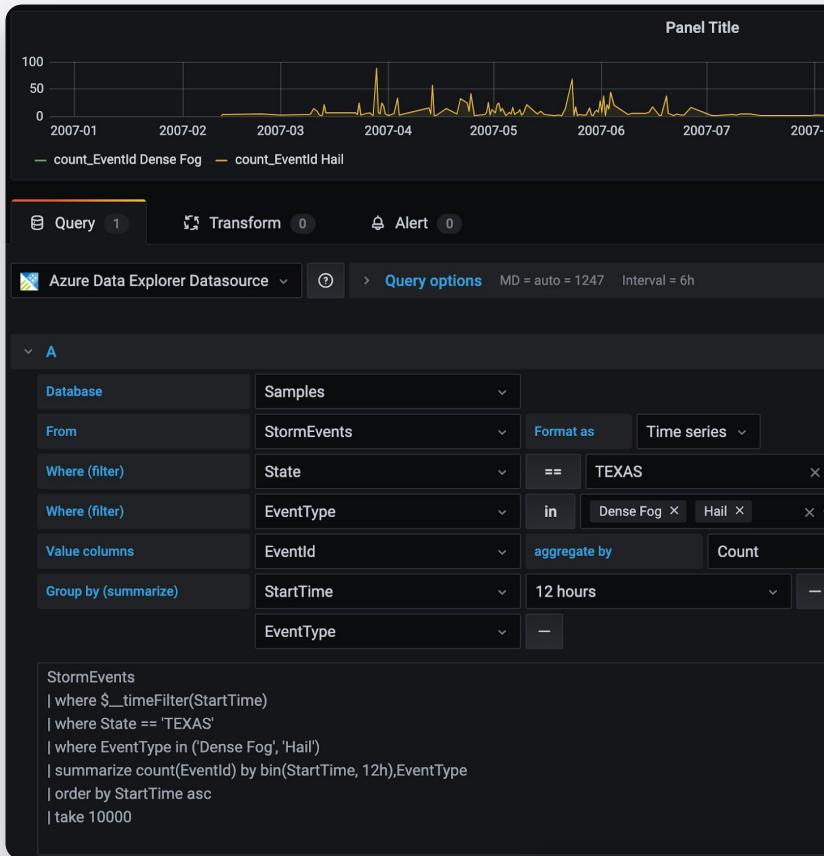


Name of Person
Title of Person



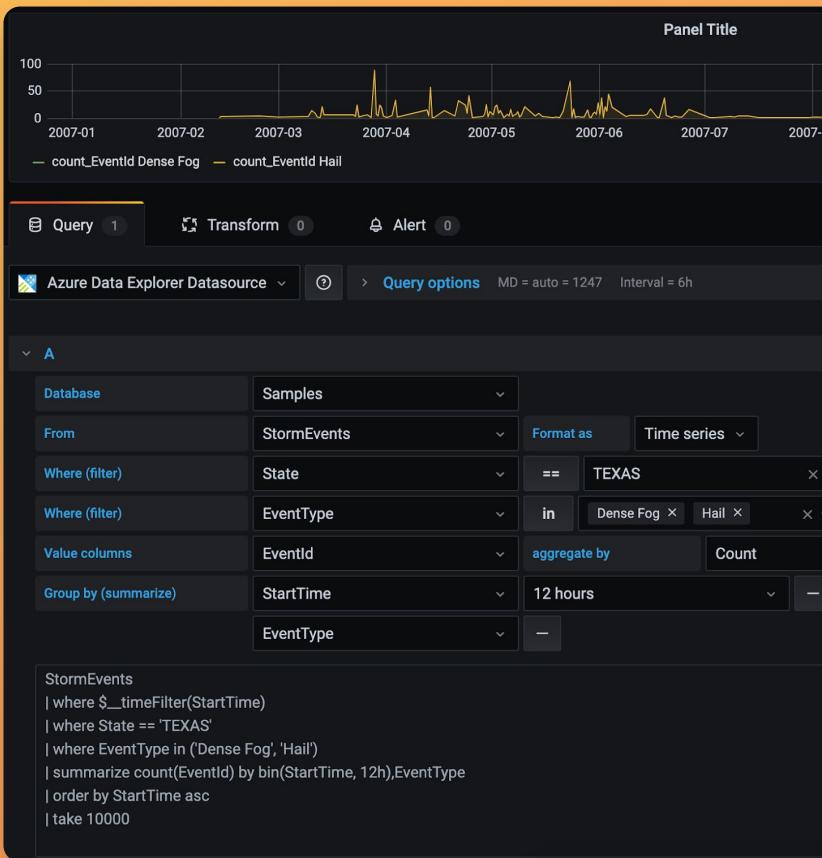


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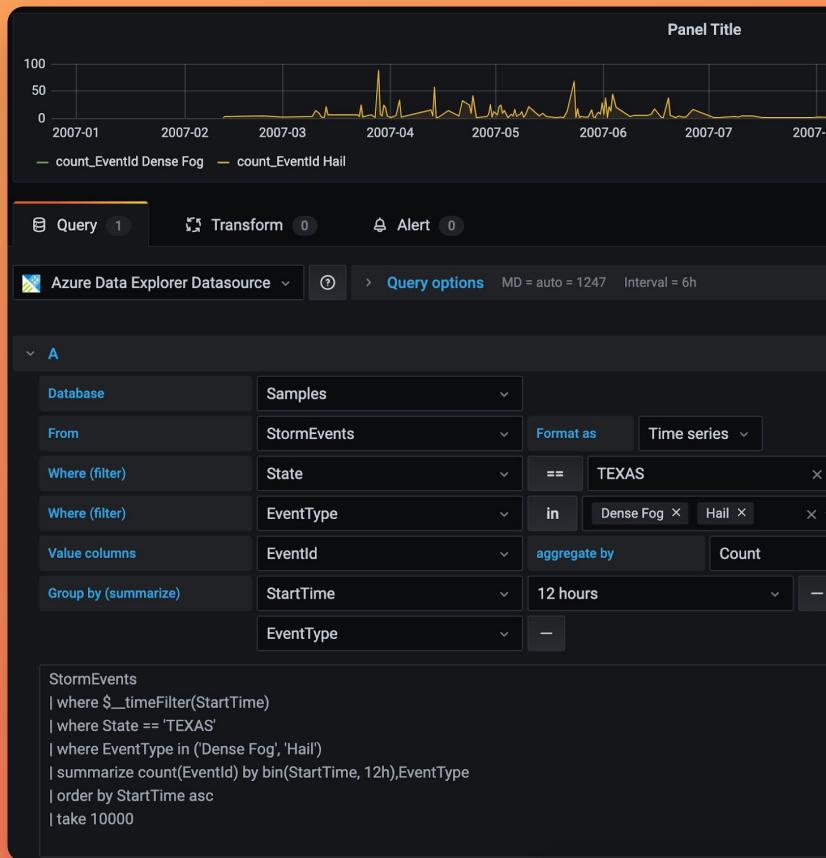


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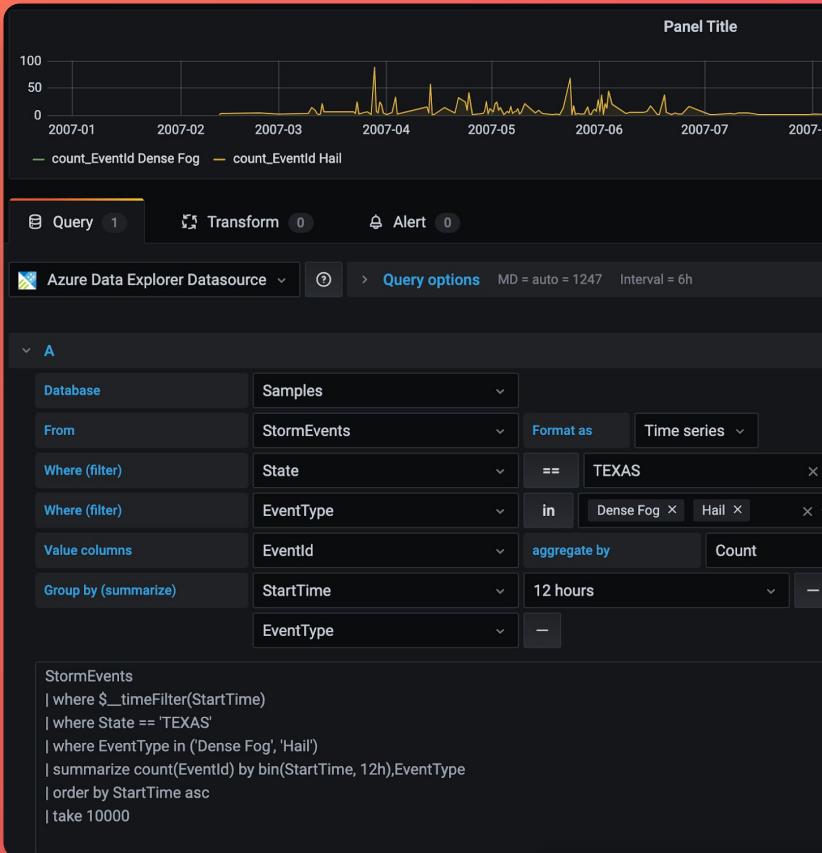


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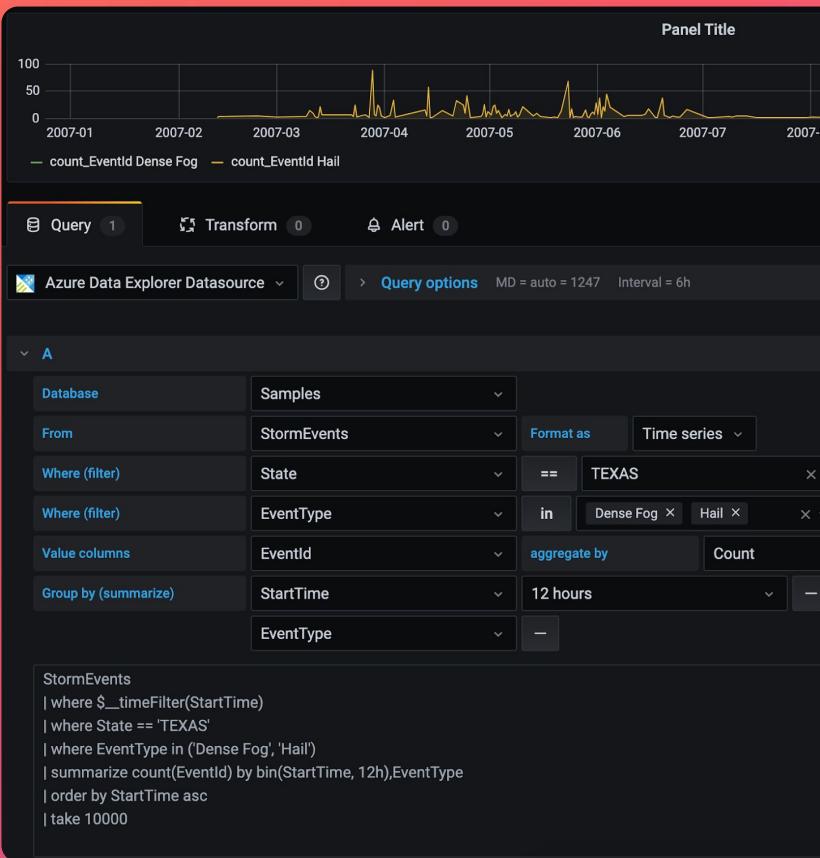


Name of Person
Title of Person





Name of Person
Title of Person



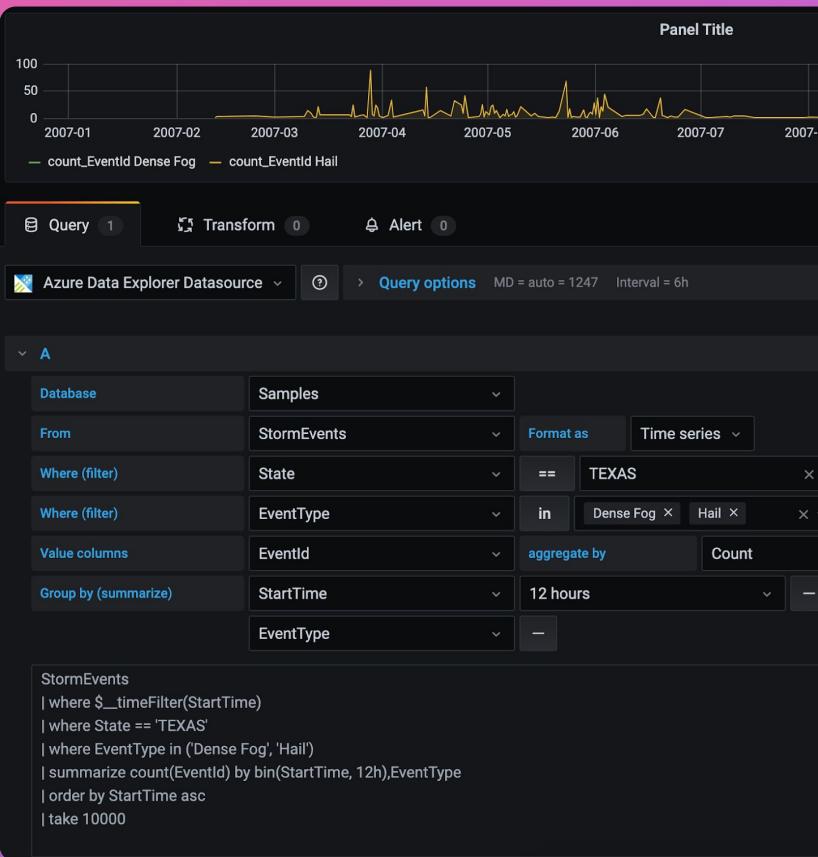


Name of Presenter
Title of Presenter



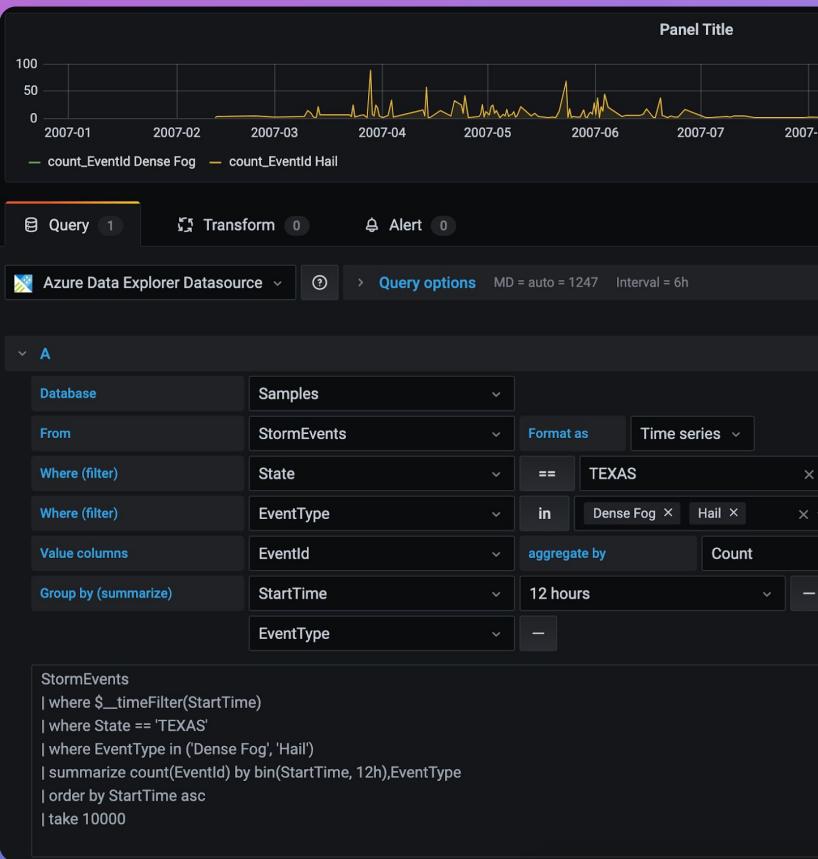


Name of Person
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Name of Person
Title of Person



Intro Slides

A few things to know about this webinar



This webinar is
being recorded

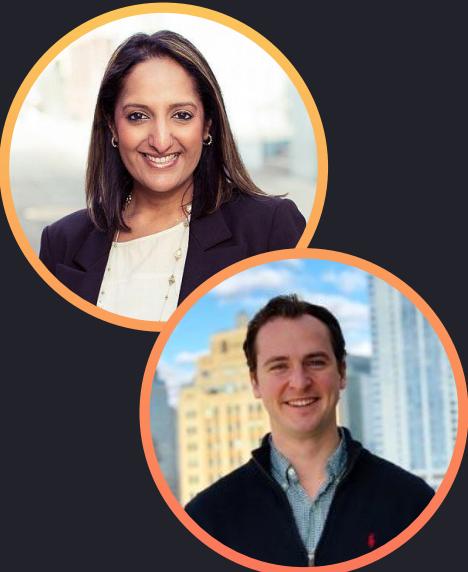


All registrants will receive
access to the recording



Presenters will take
questions at the end





Name of Person One
Title of Person One

Name of Person Two
Title of Person Two



Welcome



Name of Person One
Title of Person One



Name of Person Two
Title of Person Two



Name of Person Three
Title of Person Three



Welcome



Name of Person One
Title of Person One



Name of Person Two
Title of Person Two



Name of Person Three
Title of Person Three



Name of Person Four
Title of Person Four



Welcome



Name of Person One

Title of Person One



Name of Person Two

Title of Person Two



Name of Person Three

Title of Person Three



Name of Person Four

Title of Person Four



Name of Person Five

Title of Person Four



Presenter



Name of Person One

Title of Person One

Overview of your presentation

What does *Incident Response* refer to?

A guide that provides a clear process on escalation to the Engineering teams. It includes communication, defining roles/responsibilities, bringing the right group together, keeping track of what's happening in the incident, and allows to better understand why incidents occur and how to prevent them in the future

What has been updated?

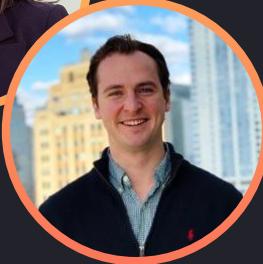
Including Customer Support within the Escalation framework and outlining rules of engagement within the team (severity/priority/SLAs)

Why is this important?

We aim to provide 24x7 support to our customers. Having a guide that outlines the process and expectations between Support and Engineering, associated response times will allow us to operationalize our SLAs and provide a better experience to our end customers.



Presenters



Name of Person One

Title of Person One

Name of Person Two

Title of Person One

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Working team



Name of Person One

Title of Person One



Name of Person Two

Title of Person Two



Name of Person Three

Title of Person Three

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Working team



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Name of Person Two

Title of Person Two



Name of Person Three

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Name of Person Four

Title of Person Four

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Working team



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Title of Person One



Name of Person Two

Title of Person Two



Name of Person Three

Title of Person Three



Name of Person Four

Title of Person Four



Name of Person Five

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Thanks for participating!

Have more questions?

Join us at community.grafana.com

or Grafana public slack #[channel name](#)

Get involved:



#channel



grafana/



community.grafana.com

Comparison

Topic One title

Subtitle or subheader information

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus rutrum magna dolor. Morbi vehicula libero sed sapien accumsan, ac bibendum ipsum cursus.

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Topic Two title

Subtitle or subheader information

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Thank you

Thank you



Placeholder text for the QR code link.
Lorem ipsum dolor sit amet, consectetur
adipiscing elit. Phasellus rutrum magna
dolor.





Thank you!



*Lorem ipsum dolor sit amet, consectetur
adipiscing elit. Phasellus rutrum magna dolor.*



Grafana Labs

Comparison

Topic One

 Lorem ipsum dolor sit amet,
 consectetur adipiscing elit, sed do
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 et dolore magna aliqua.

Topic Two

 Lorem ipsum dolor sit amet,
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Body Slides & Layouts

Slide with basic bullets

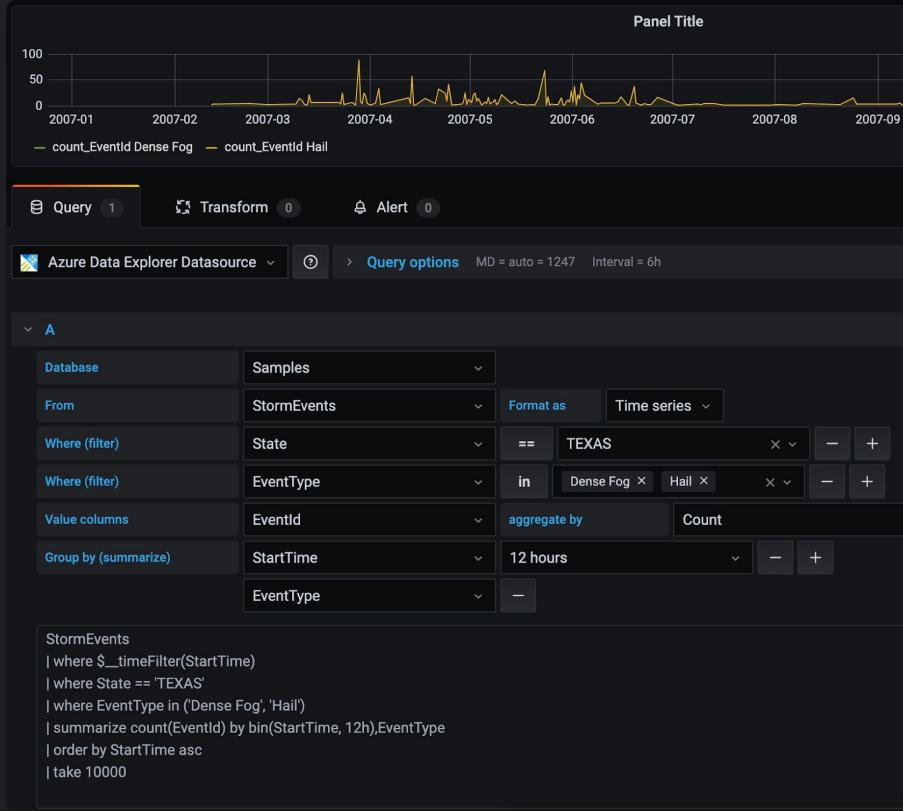
- Focus on what you do best
 - We provision, host, and maintain our servers for customers, so they can focus on what they do best: innovating their products to stay ahead of the competition
- Move faster with Grafana Cloud
 - Move Faster with Grafana Cloud. enables you to build applications faster.
 - Focus on business logic and delivering value rather than managing servers and writing boilerplate code.
- High performance
 - Includes high performance metrics backend compatible with Prometheus & Graphite, as well as hosted logs (Loki)

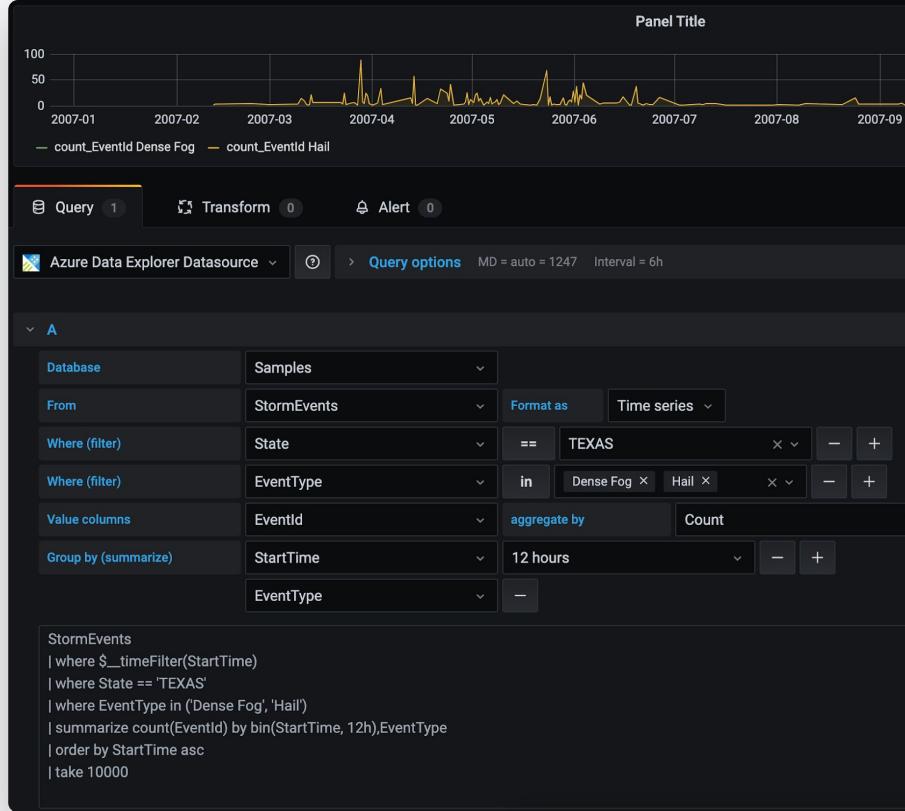


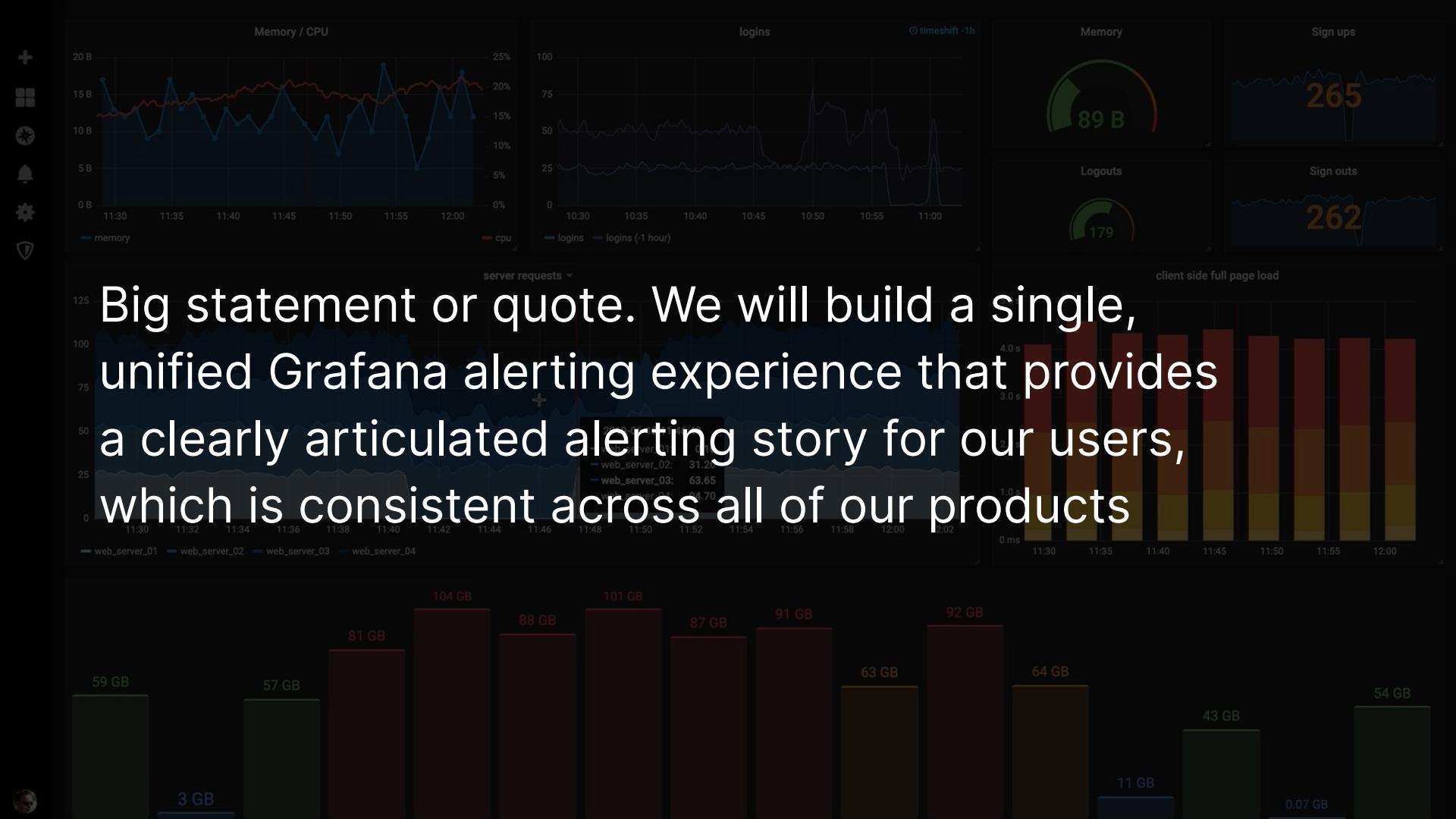
Slide with basic bullets

- Focus on what you do best
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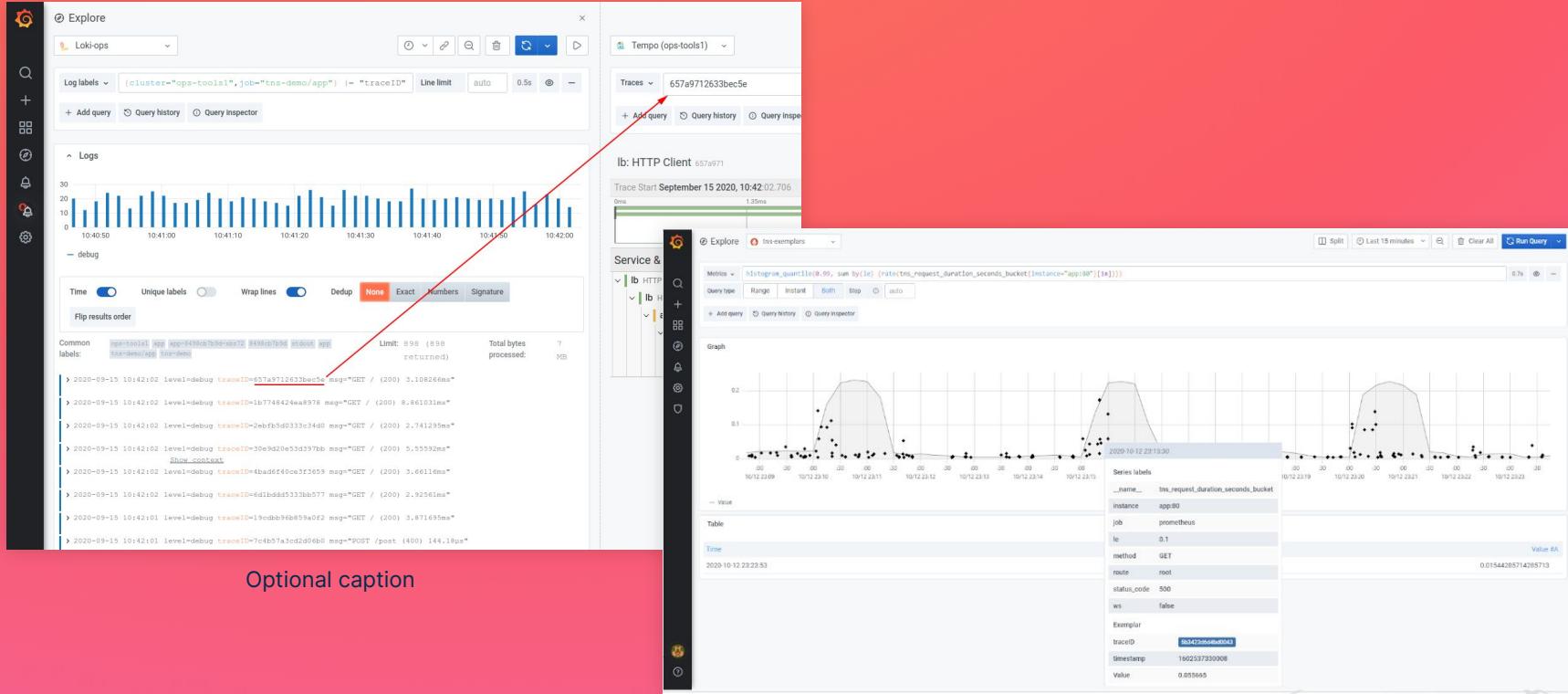






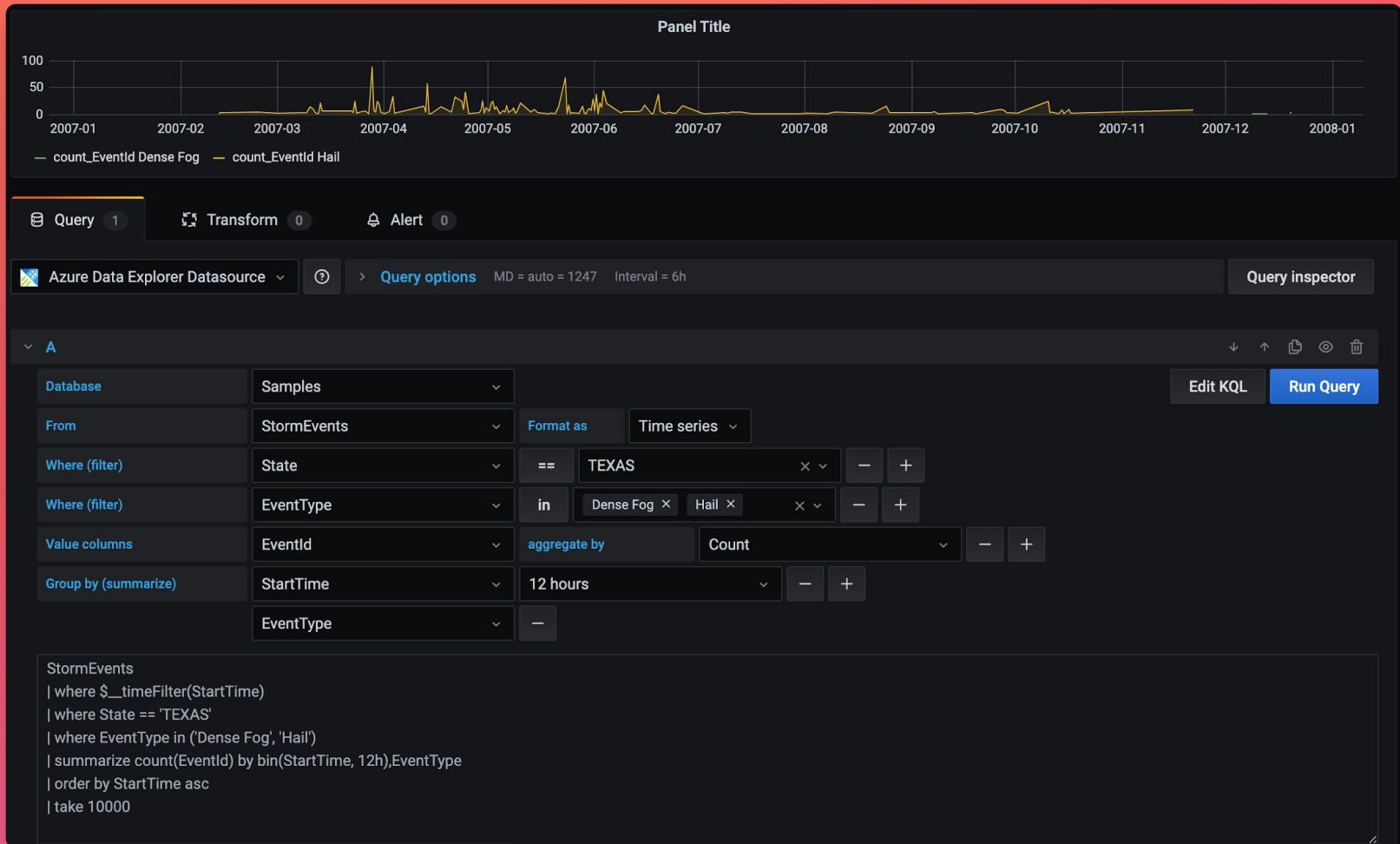


Present your beautiful dashboards



Optional caption

Optional caption



Example slide dark

Scalability Guaranteed

Scalability Guaranteed

Get the help you need to run Loki at scale in your environment from the team that built it.

Secure-by-default

Scalability Guaranteed

Get the help you need to run Loki at scale in your environment from the team that built it.

Grafana Labs has your back

Scalability Guaranteed

Get the help you need to run Loki at scale in your environment from the team that built it.

-
- ✓ 10,000 series for Prometheus or Graphite metrics
 - ✓ 50 GB of logs
 - ✓ 14-day retention for metrics and logs
 - ✓ Access for up to 3 team members



Example slide light

Scalability Guaranteed

Scalability Guaranteed

Get the help you need to run Loki at scale in your environment from the team that built it.

Secure-by-default

Scalability Guaranteed

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Title of your presentation

Subtitle

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A few things to know about a topic



Here is some sample text to go under this icon



Here is some sample text to go under this icon



Here is some sample text to go under this icon



2X

Doubled our headcount
314 employees by the end of this month

30k

GTM team expansion to APAC

R&D

R&D hiring continues: At 2x the headcount vs 2020

CX

Investing in key roles within Customer Experience



Number one
Big statement
or quote

Number two
Big statement
or quote

Number three
Big statement
or quote



Number one
Big statement
or quote

Number two
Big statement
or quote

Number three
Big statement
or quote



Circles with bullets

Customer

- ✓ Customer running Grafana Enterprise or Grafana Cloud

Customer Support

- ✓ Entry point for all escalations
- ✓ Initial triage of the escalation

Engineering Team

- ✓ OnCall Engineers ready to tackle customer escalations



Circles with bullets

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vs

Topic Two title

Subtitle or subheader information

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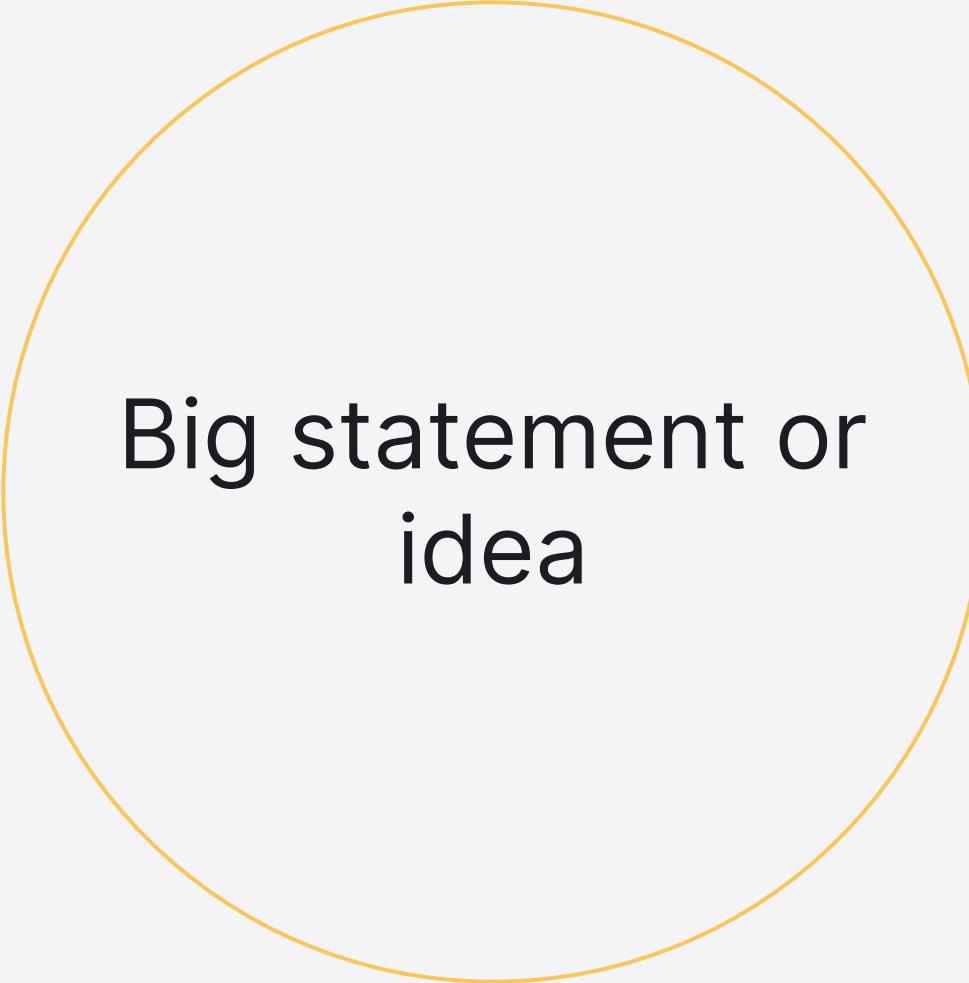
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Big statement or
idea





Big statement or
idea



Big statement or
idea





Big statement or
idea



Big statement or
idea



Big statement or
idea



Big statement or
idea



Big statement or
idea





Call attention
with one of these
circles

Scale
them up
or down



“ ”

Grafana has helped us to develop the web view of our measurement platform in a low-code, scalable, and future-proof way with limited effort.



Name of Person

Title of Person



“ ”

Grafana has helped us to develop the web view of our measurement platform in a low-code, scalable, and future-proof way with limited effort.



Name of Person

Title of Person



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Grafana has helped us to develop the web view of our measurement platform in a low-code, scalable, and future-proof way with limited effort.



Name of Person

Title of Person



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Name of Person

Title of Person



Diagrams, Charts, & Plans

Small
icon/logo



Medium
icon/logo



Large
icon/logo



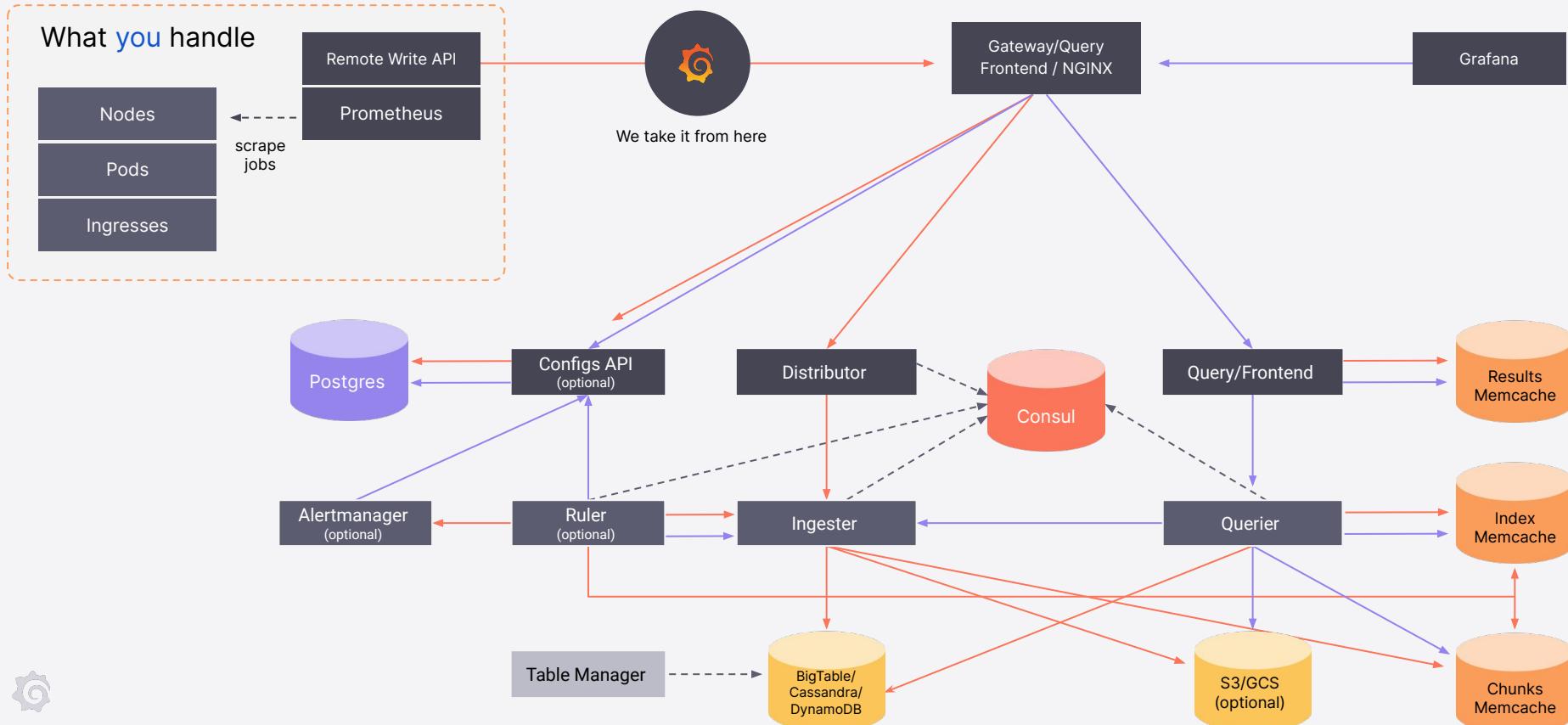


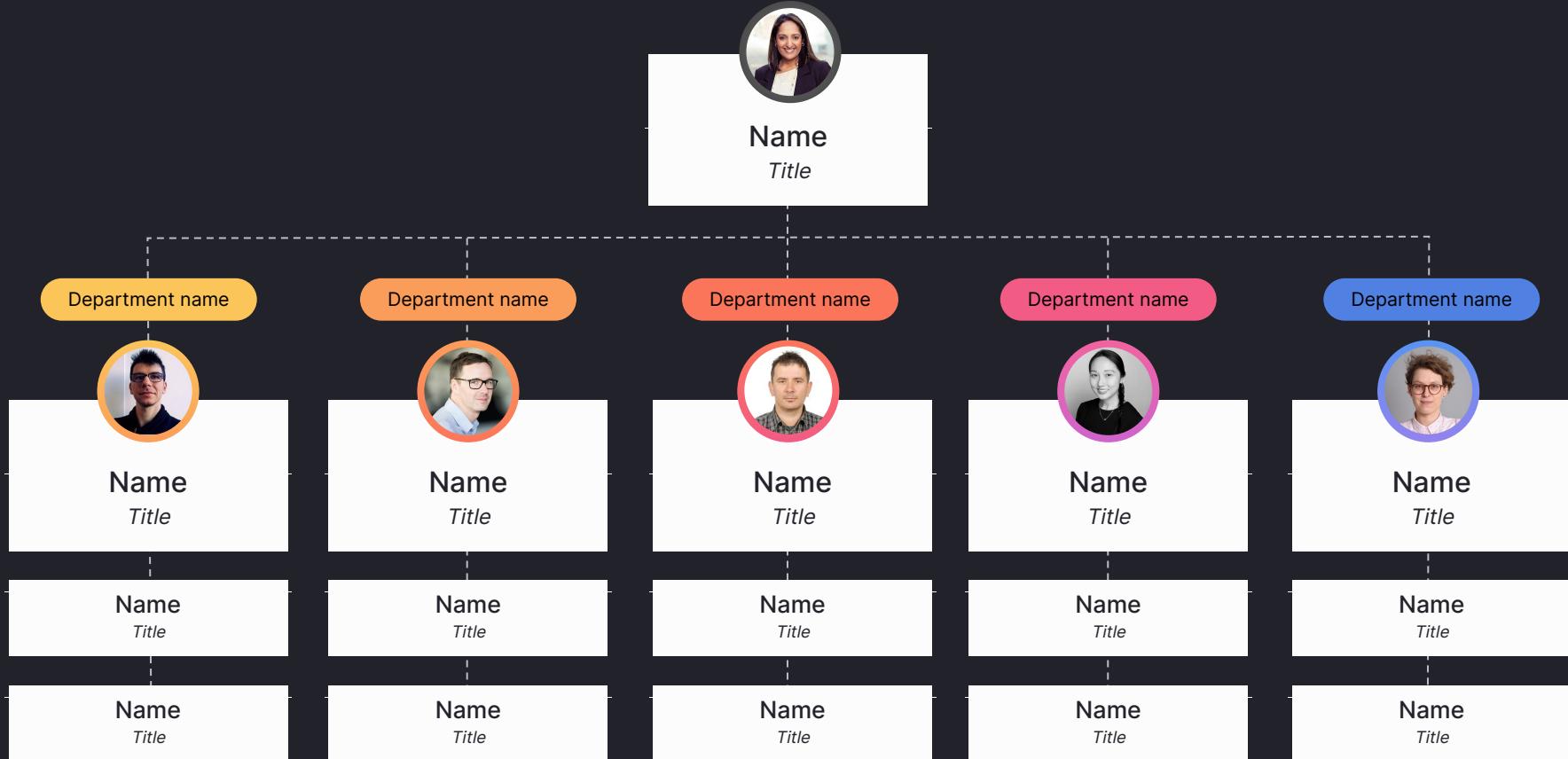
component



Example Diagram: Hosted Cortex

→ Write Path
→ Query Path
↔ Control Requests







Name

Title

Department name



Name

Title

Department name



Name

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Department name



Name

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Department name



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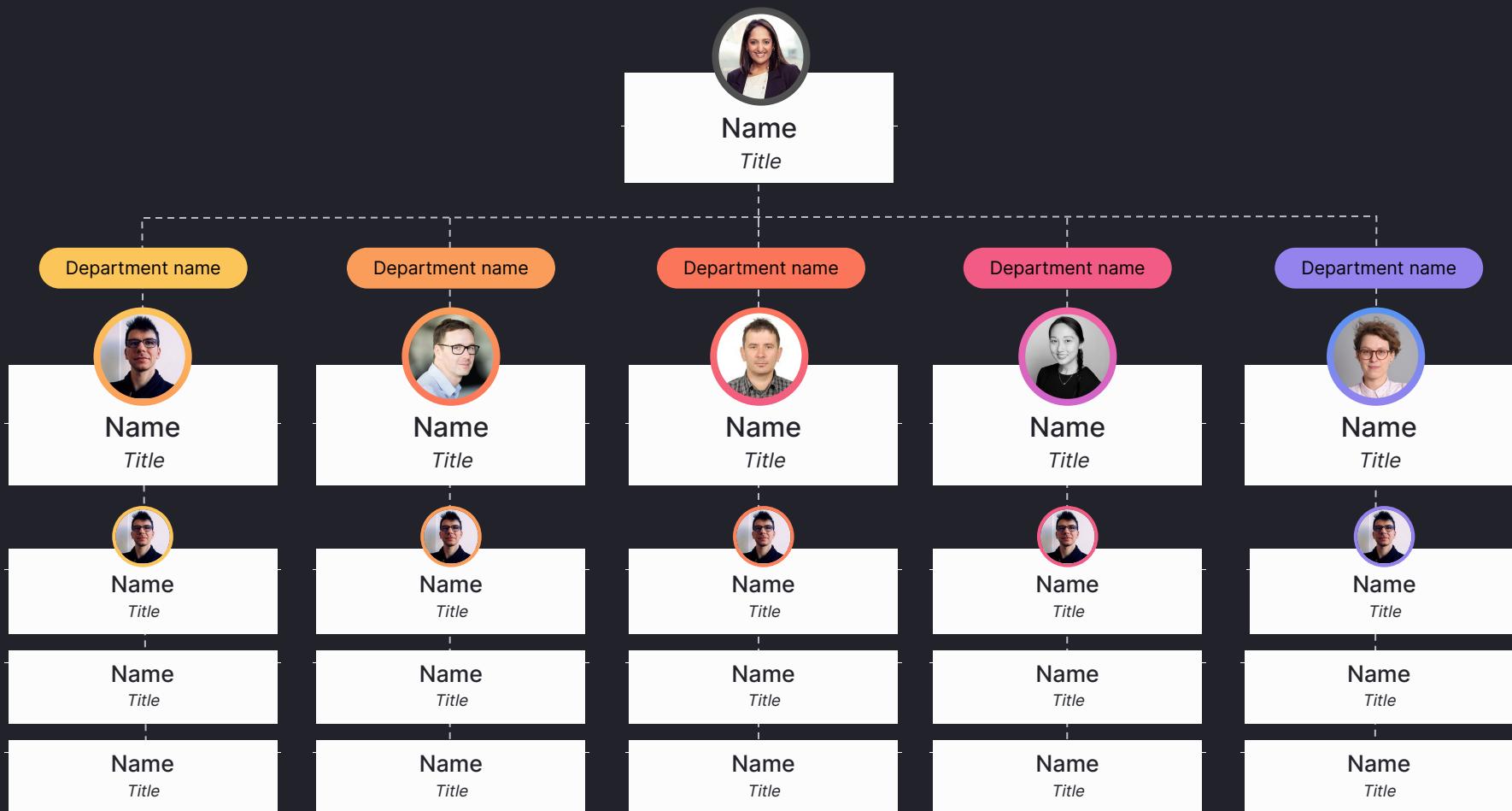
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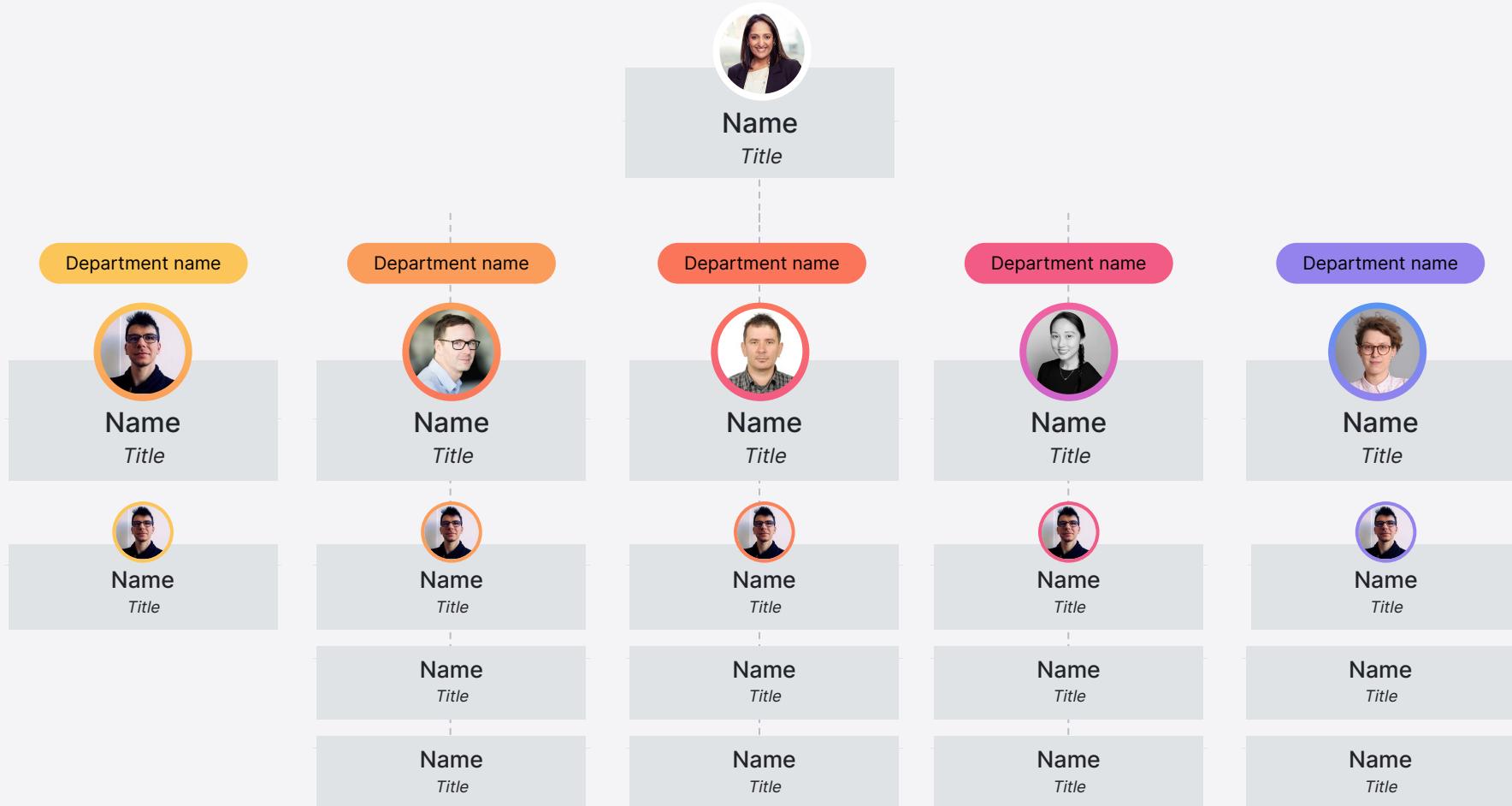
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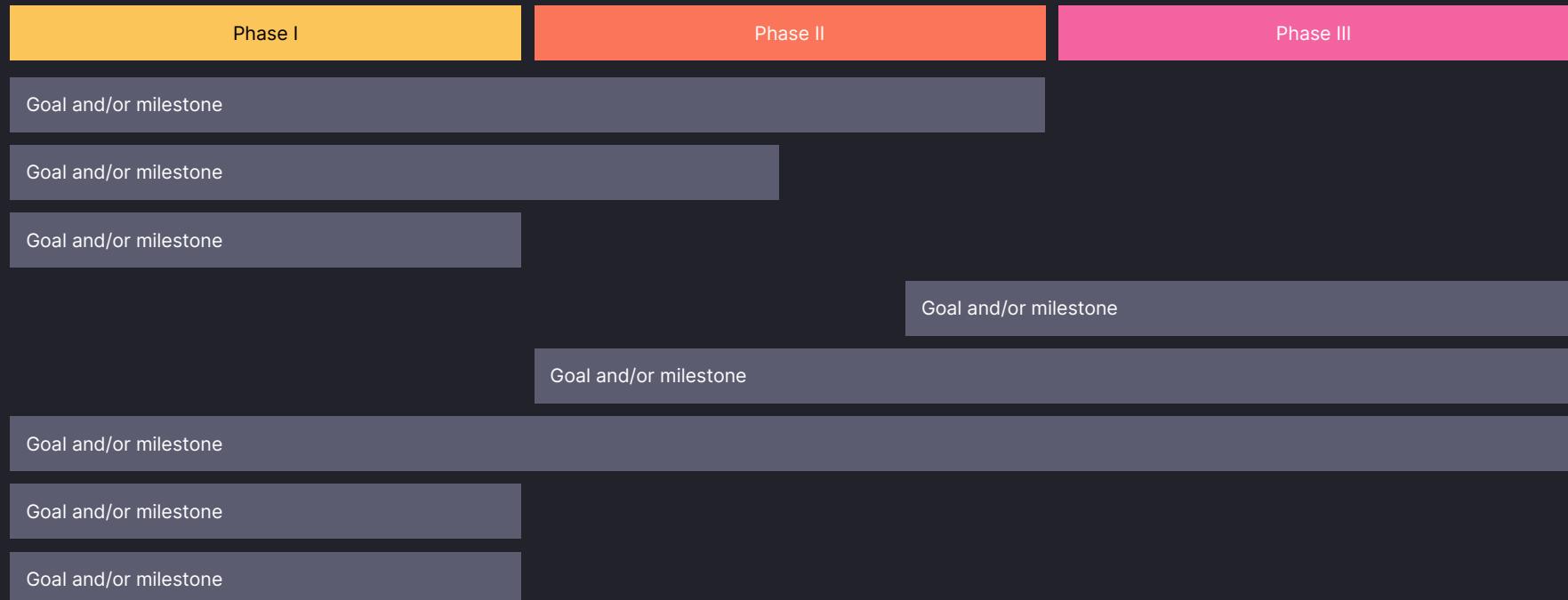
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Title



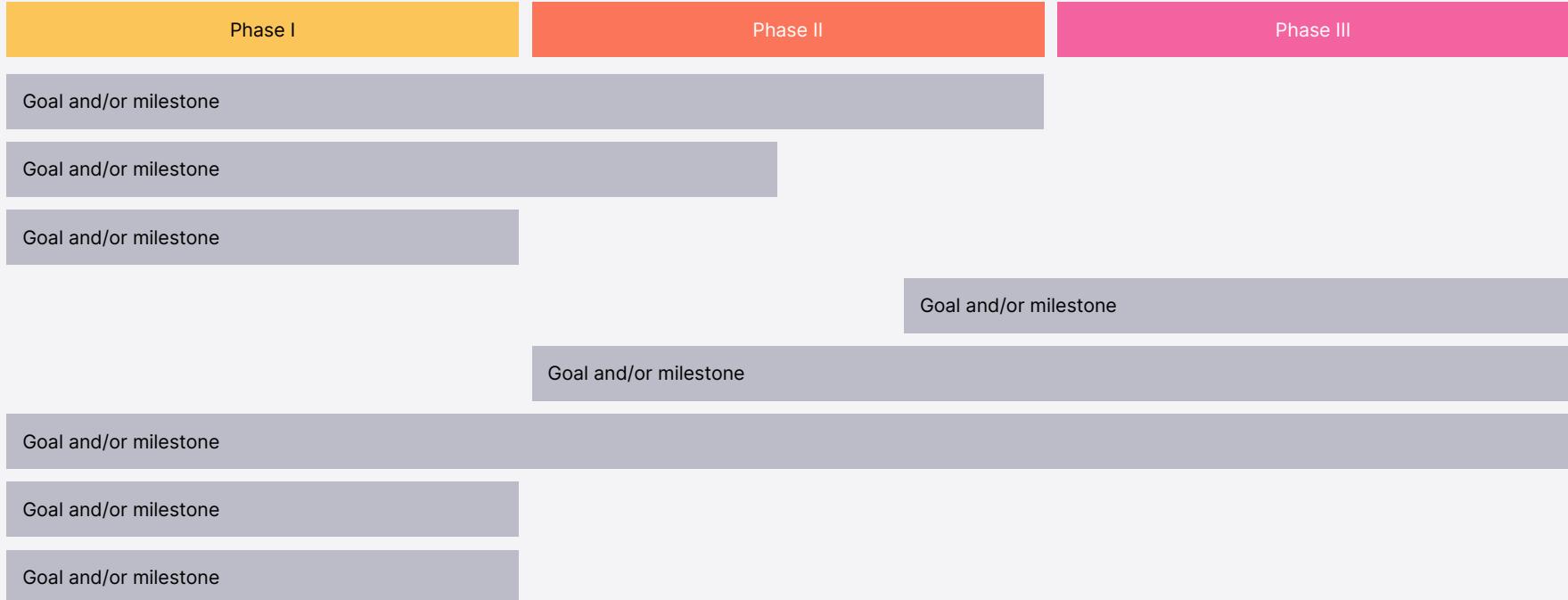




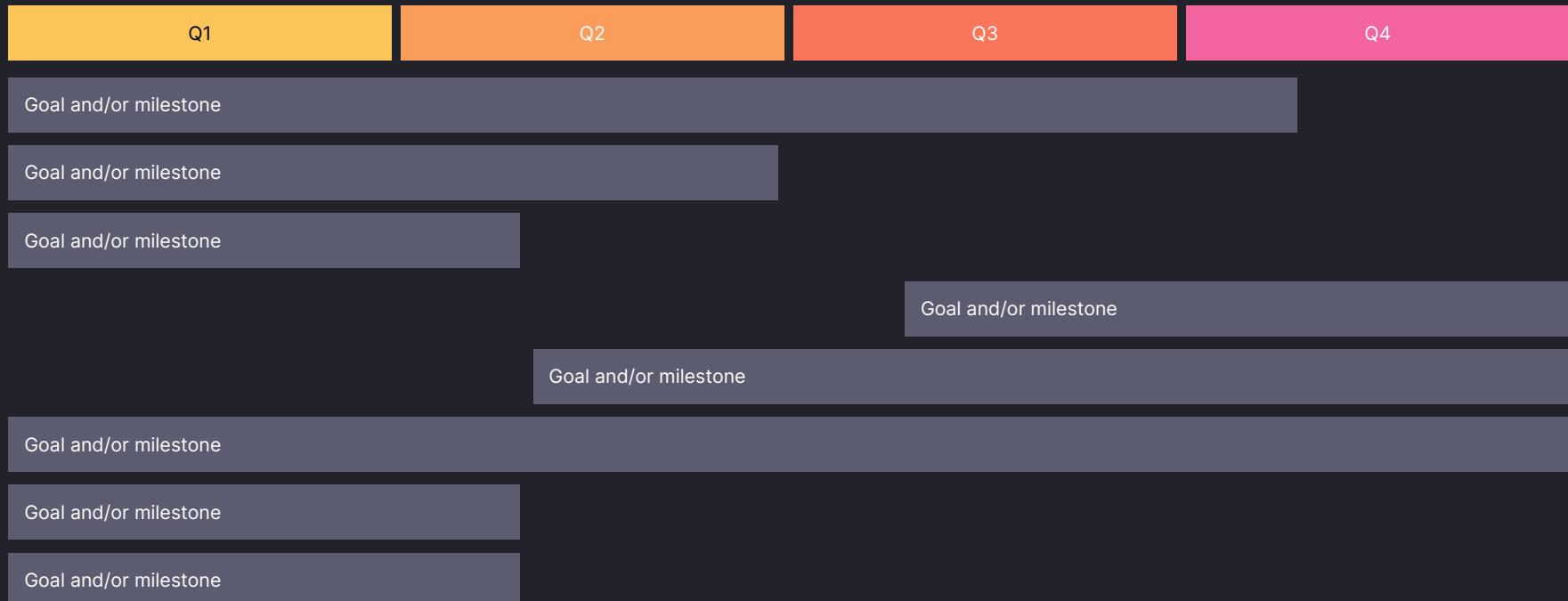
Goals and Milestones Layout



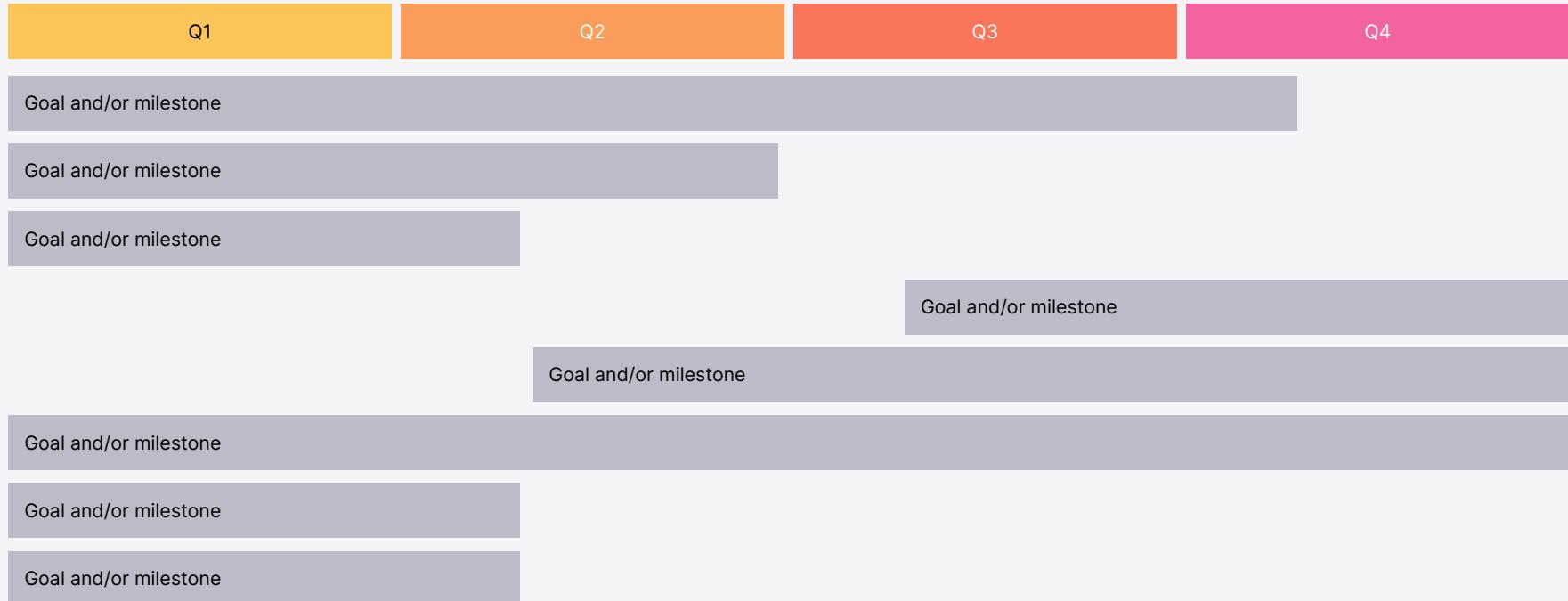
Goals and Milestones Layout



Quarterly Plan



Quarterly Plan



Project Plan

	Overall	Date	Plan	Budget	Scope	Info	Comments
Project 1	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	40	Comment 1
Project 2	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	80	Comment 2
Project 3	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	127	Comment 3
Project 4	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	93	Comment 4
Project 5	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	150	Comment 5
Project 6	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	20	Comment 6
						XX	



Project Plan

	Overall	Date	Plan	Budget	Scope	Info	Comments
Project 1	XX	XX/XX/XX	XX	XX	XX	40	Comment 1
Project 2	XX	XX/XX/XX	XX	XX	XX	80	Comment 2
Project 3	XX	XX/XX/XX	XX	XX	XX	127	Comment 3
Project 4	XX	XX/XX/XX	XX	XX	XX	93	Comment 4
Project 5	XX	XX/XX/XX	XX	XX	XX	150	Comment 5
Project 6	XX	XX/XX/XX	XX	XX	XX	20	Comment 6
						XX	



Project Plan

Nov 2021	Dec 2020	Jan 2021	Q1 2021	Q2 2021 +
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Launch Catalyst <input checked="" type="checkbox"/> Launch AH <input checked="" type="checkbox"/> TAM Book of Business reviews <input checked="" type="checkbox"/> Define Strategic Customer Success program Review Support experience <input checked="" type="checkbox"/> Revise TAM hiring profile 	<p>Develop Enterprise maturity model & definitions</p> <p>Draft and publish Success Methodology to support maturity model</p> <p>Define renewals process, roles, and responsibilities</p> <p>Define CX targets</p> <p>Launch Strategic Customer Success program</p>	<p>Launch Customer Maturity Model</p> <p>Publish CX Scorecard</p> <p>Launch Success methodology</p> <p>Draft CX bootcamp objectives and outline</p> <p>Draft Services Methodology</p> <p>Audit data and tools to articulate needs and areas for consolidation</p> <p>Offer accept for Dir of Support, EMEA TAM, 2 AMER TAMs</p> <p>Weekend coverage for Support</p>	<p>Offer accept for Dir of Success, CX Ops, CX Enablement</p> <p>Launch Renewals Process</p> <p>Draft Support Strategy</p> <p>Develop and deploy CX Pitch Deck (internal/external)</p> <p>Develop and deploy CX Plays to support Sales Plays</p> <p>TAM redundancy in regions</p>	<p>Begin implementation of data needs and tool set consolidation</p> <p>Launch first skills refresher course</p> <p>Develop and launch CX Career Architecture & Pathways</p> <p>Build Segmentation Strategy</p> <p>Identify four areas for Continuous improvement in CX</p>



Project Plan

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The Open Composable observability stack

 **Grafana Enterprise** /  **Grafana Cloud**

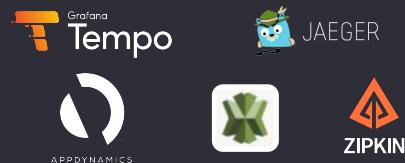
Metrics



Logs



Traces



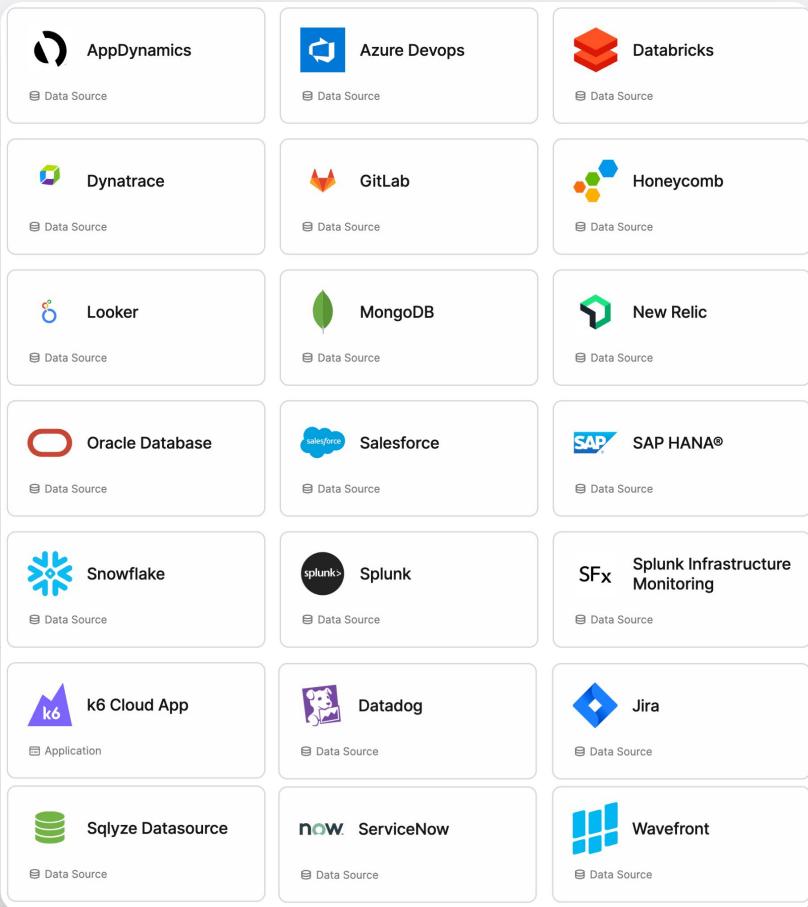


Enterprise Plugins

Build a single pane of glass view of your observability

- ✓ Secure access to data without moving or duplicating it
- ✓ Delightful panels and flexible dashboards with multiple data
- ✓ Powerful data transformations
- ✓ Correlation and annotations
- ✓ Template variables and Adhoc filters
- ✓ Alerting and reporting

Grafana Enterprise provides access to several data sources with Enterprise plugins to build a **centralized observability** platform. This enables our customers to **reduce MTTR** and implement **governance and best practices**



Logos & Icons

Product Logos (.png)



[Grafana logo files](#)



[Loki logo files](#)



[OnCall logo files](#)



[Tempo logo files](#)



[K6 logo files](#)



[Mimir logo files](#)



[Incident logo files](#)



All other logos here: <https://drive.google.com/drive/folders/1gqJ1RBAyQOlya-FaYCwSiFYhb0SIEVw>

Product Logos (.png)



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Open source community (.png)



Amazon Cloudwatch



cortex



DATADOG



influxdata



JAEGER



kubernetes



ORACLE®



PostgreSQL



Prometheus

servicenow

splunk>



Thanos



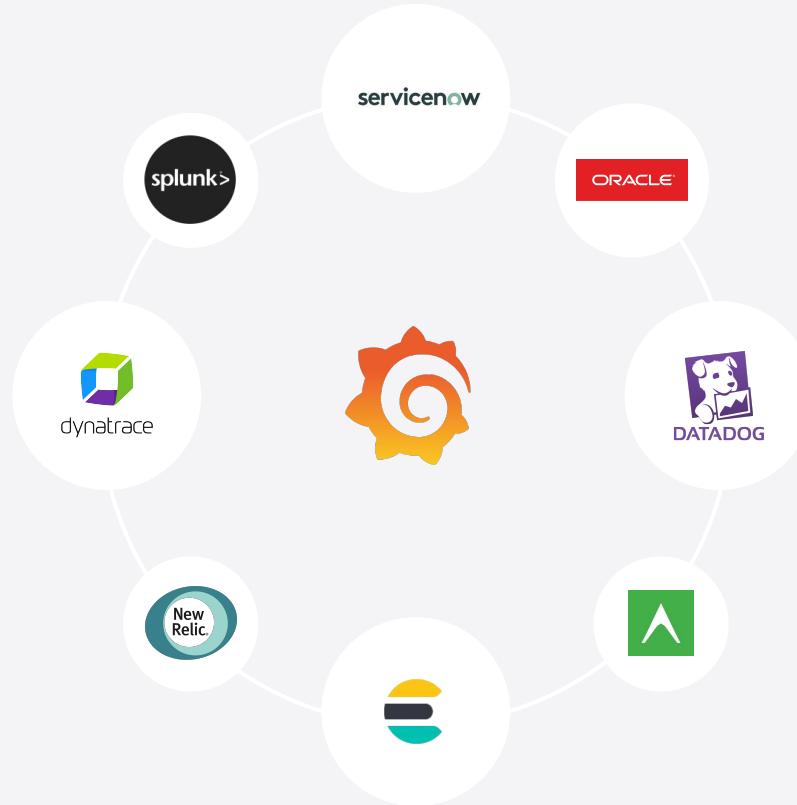
OPENTSDB



Open source community (.png)



Open source ecosystem



Other useful assets

Key points:



Highlighted
bullets:



Side note:



Unlimited 24x7x365 Support
email and telephone

Dedicated Account Manager



Do you want to be in the
business of managing
infrastructure, or would you
rather focus on delivering value
to your customers?



Grafana Content

 5.0

- Improved **UX** and page design
- New **grid layout** system for flexible dashboard building
- Dashboard **Folders**
- **Teams**
- **Permissions**
- Datasource/dashboards **config from files**

MAR 2018

OCT 2018

DEC 2018

5.4

- Google **Stackdriver** core datasource
- **TV mode** improvements
- **Alerting** w/notification reminders
- New **query builder** for Postgres
- **OAuth support** for Gitlab improved
- **Annotations** w/template variable filtering
- Support for **variables** w/free text

5.3

6.0

- **Explore** for ad-hoc data exploration and troubleshooting
- **Gauge Panel**
- New **Panel Editor** UX improvements
- Google Stackdriver Datasource **released**
- **Azure Monitor** plugin core datasource
- **React** plugin support
- **Named colors** for improved color picking
- Removal of user session storage

FEB 2019

SEP 2019

OCT 2019

NOV 2019

6.6

6.5

- **Improvements** to CloudWatch, Explore, Templating, Azure Monitor, Graphite, Docker, Provisioning, Auth Proxy, OAuth, and more
- **ServiceNow** plugin

- New **Stat panel**
- **News Panel** (RSS feed)
- **Custom Data** units
- **Alerting** enhancements
- **Explore** enhancements
- Enterprise **white labeling** enhancements

JAN 2020

6.3

6.4

- **Plugin** refactoring and improvements
- External **auth** systems
- **Permissions** in Grafana **Enterprise**

- Explore **live tailing** improvements
- New **logs panel**, Data links improvements
- **Series override** to turn constant into line
- **Share query results** between panels
- Alpha version of **grafana-toolkit for plugins**
- PhantomJS deprecation
- Alpine based docker image
- LDAP: Debug UI
- Enterprise Reporting
- Enterprise GitLab OAuth Team Sync support





Meta Analytics

Due for release with 7.0



Logs, tracing, alerting newgen

Support for Jaeger Datasource, traceIDs within Loki to reduce mean time to resolution



New table and graph panels

Move to React enables more reusability of components, scaling of multiple stats
New single stat and bar graph already available



Well-typed data mode

Viz can come from data/context, not manual.
Smart viz based on data (min/max/mean graphs, etc).
Basic BI.



New vis and editing

Better UX and viz options.
Better selection of viz with live previews.



Custom time formats and time zone selection

Better UX and viz options. Better selection of viz with live previews.



Grafana Cloud: Decrease time to market



Grafana Cloud ensures operational best practices for your Observability needs. Allowing your team to focus on what they do best. Accelerating development and delivering value to your customers. Rather than managing infrastructure.



Grafana Cloud handles the time-consuming and costly administration tasks. Allowing you to get the Observability resources you need, when you need them, without spending costly development hours.



Grafana Cloud ensures you are up to date. Grafana Cloud handles the Patches and minor version upgrades so you don't have to. Take advantage of the latest updates and features. Without the headache or wasted time managing/tracking the upgrade process yourself.



Remove the complexity. When your requirements change, Grafana Cloud makes it easy to adjust your Observability platform. You can easily add logs, traces, change data sources, or even add instances. Without your team having to manage the underlying infrastructure.

“ ”

Do you want to be in the business of managing infrastructure, or would you rather focus on delivering value to your customers?

Grafana Cloud: Increase speed of innovation



We provision, host, and maintain our servers for customers, so they can focus on what they do best: innovating their products to stay ahead of the competition



Move Faster with Grafana Cloud. enables you to build applications faster. Focus on business logic and delivering value rather than managing servers and writing boilerplate code.



Includes high performance metrics backend compatible with Prometheus & Graphite, as well as hosted logs (Loki)



Grafana Cloud: Reduce TCO



Grafana Cloud is managed by the experts, ensuring the most cost effective and reliable methods are in place.



Grafana Cloud maintains custom integrations, workflows, and tech stacks, thus reducing your spend on Observability.



Grafana Cloud enables you to pick and choose the best technology for the job at hand so you aren't stuck paying outrageous bills to a single vendor.





What you expect

- Enterprise Observability
- Single pane of glass for optimized operational performance

The reality of doing it yourself

Hidden Operational Costs

- Provision servers
- Configure HA
- Configure Security
- Customize plugins/API scripting
- Ongoing Upgrades and Maintenance
- Retaining tribal knowledge
“how did we get here?”

So, instead, what if someone created a platform that
visualized your data **where it lives?**



Teams would become proactive and get ahead of problems as new code is shipped.



Everyone would gain visibility and access to logs, traces and metrics.



You would instantly connect all the silos.



Confidence would rise due to real-time context between apps and the business.





Grafana Enterprise

Everything customers love today about Grafana:

- ✓ Supports custom metrics (anything with an API)
- ✓ Flexible panels & dashboards with multiple data sources
- ✓ Compatible with tools like Splunk, Oracle, New Relic, ServiceNow, Dynatrace, DataDog, AppD, etc.

Grafana Enterprise provides access to advanced functionality for managing deployments at scale
as well as Enterprise plugins (listed below):



Unlimited Expert Support



Enterprise Plugins



Advanced Auth



Datasource Permissions



Meta Analytics



Reporting



Roadmap Assurance



Custom Training & Workshops



White Labelling



Prometheus Support

24/7 access to unparalleled Prometheus expertise and support. Grafana Labs resources can provide close guidance for all Prometheus deployments, as well as prioritized bug fixes and issue resolution.



24/7 expert support available via phone & email, with an option for a dedicated Slack channel



2-hr critical SLA to guarantee the fastest resolution of critical issues



Grafana employs 1/4 of the global Prometheus maintainers on staff, more than any other company in the world



Roadmap assurance to influence the direction of Enterprise Prometheus capabilities





Cortex Support

24/7 access to unparalleled Cortex expertise and support. Grafana Labs resources can provide close guidance for all Cortex deployments, as well as prioritized bug fixes and issue resolution.



24/7 expert support available via phone & email, with an option for a dedicated Slack channel



2-hr critical SLA to guarantee the fastest resolution of critical issues



Grafana employs the original author of Cortex and is the largest single contributor to the project



Roadmap assurance to influence the direction of Enterprise Cortex capabilities





Thanos Support

24/7 access to unparalleled Thanos expertise and support. Grafana Labs resources can provide close guidance for all Thanos deployments, as well as prioritized bug fixes and issue resolution.



24/7 expert support available via phone & email, with an option for a dedicated Slack channel



2-hr critical SLA to guarantee the fastest resolution of critical issues



Grafana maintains a close relationship with the Thanos authors & both teams work closely together to enhance the project



Roadmap assurance to influence the direction of Thanos' capabilities





Prometheus-inspired log aggregation system

Loki's query language is modeled after PromQL, so the same/similar queries are valid across metrics and logs



Native log component of Grafana Cloud



Loki differentiators

Logs are not indexed but rather labels are added so Loki is fast and cheap for you to run

Logs will have the same labels as Prometheus so users can switch seamlessly between metrics and logs





Loki Support

24/7 access to unparalleled Loki expertise and support. Grafana Labs resources can provide close guidance for all Loki deployments, as well as prioritized bug fixes and issue resolution.



Better deal playbook and motion–
multiple contacts, exec engagement,
W email, Business Impact
Presentations (BIPs)



Reps spend 20% of their time doing
outbound pipeline development



Deal desk to ensure consistency in
discounting and approach



Better SFDC housekeeping



Roadmap for Enterprise Prometheus

Integrated Instance Management

Authentication, RBAC etc with a simple UI and API



Meta Analytics

Which tenant is using how much storage? Which series are using which space? Cardinality of labels? This feature may be a complement to the meta analytics in Grafana Enterprise.

Fine Grained Access Control

Control which users can see which individual metrics, logs and traces at the "atomic level"

Self Auditing Platform

Record, store and analyse access and usage logs for the platform, in the platform.

Data Scrubbing

Automatically remove PII (eg. credit card numbers) on query and ingest

Encryption

Encrypt data at rest and in flight





Common Objectives, Different Approaches



Prometheus compatibility



Fast global queries

Long-term historical metrics



High availability



7 key Questions

- 1 What is the right level of sales coverage?
- 2 How do we ensure consistent sales execution?
- 3 What is our ideal team structure?
- 4 What is our plan for international?
- 5 What is our plan with indirect/channels?
- 6 What is the self-serve plan?
- 7 What is the plan for marketing?



Case Study: Top 5 bank

- A Fortune 20 bank had been using Grafana for years but chose to invest in Enterprise when they were mandated to consolidate observability into an “as a service” offering internally at the bank
- 30K users and 5K editors in the bank leverage Grafana Enterprise to **consolidate 100+ systems into team / org specific dashboard**
- Results have been greatly **reduced MTTR, increased engineer efficiency**, and enabled accelerated consolidation of redundant system
- The same bank then invested in an Enterprise Prometheus contract to **provide metrics as a service as they scaled up their Kubernetes environment**
- This has enabled them to **scale faster, achieve better performance, and do it all with fewer engineers than they'd planned to use with 50% the current metric volume**
- Now evaluating Loki to better align logging with their K8s / Prometheus story and to reduce their costs with large incumbent logging vendors



Your business requirements									
Visualize data in real time across disparate data sources	✓	✗	✗	✗	✗	✗	✗	✗	✗
Native ability to query data without any additional agents/overhead	✓	✗	✗	✗	✗	✗	✗	✗	✗
Allow us to visualize custom apps	✓	✗	✗	✗	✗	✗	✗	✗	✗
Ability to overlay data from various systems (Splunk AppD, DT, Custom apps) and put it together in one panel	✓	✗	✗	✗	✗	✗	✗	✗	✗
Ability to put logs and performance metrics in the same place	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ability to trace transactions	✗	✓	✓	✓	✓	✓	✓	✓	✓
On-Prem and Cloud	✓	✓	✓	✓	✓	✓	✓	✓	✓



Your business requirements	Grafana	Datadog
Visualize data in real time across disparate data sources	✓ pulls data from any datasource	✗ Datadog won't share data - siloed
Native ability to query data without any additional agents/overhead	✓	✗ agent-based - will consume resources
Allow us to visualize custom apps	✓ from any app with an API	✗
Ability to overlay data from various systems (Splunk AppD, DT, Custom apps) and put it together in one panel	✓	✗
Ability to put logs and performance metrics in the same place	✓	✓
Ability to trace transactions	✗ not today, but on the roadmap	✓
On-Prem and Cloud	✓	✓ cloud only



Solution Comparison	 Grafana	 Tableau
Real-time capabilities	✓ Real-time data visualization	✗ Not real-time for dev/ops
Data-source flexibility	<p>✓ Data-agnostic <i>Bring in data from multiple sources, including:</i></p> <ul style="list-style-type: none"> ✓ SQL data ✓ Time series data ✓ Logs ✓ Customer data ✓ Any data source with an API, including premium apps like DataDog, Dynatrace, Oracle, NewRelic, Splunk and ServiceNow 	✗ SQL data and SQL data alone
Data hosting	✓ You host your own data - Grafana visualizes it, reducing the cost of scaling across an org/company	✗ Duplicate hosting costs for data that requires visualization
Architecture	<p>✓ Pluggable architecture - enabling new and custom data sources and visualizations by you or the community</p> <p>✓ Open source - allowing you to test the and prove the use case before licensing</p>	✗ Versioned software requiring release of new features and upgrade to take them



Grafana Cloud is the easiest way to test out Tempo Join the public beta!

The screenshot shows the Grafana Cloud Portal interface. At the top, there's a navigation bar with links for Grafana Labs, Grafana, Products, Open Source, Learn, Downloads, My Account, and Contact us. Below that is a search bar labeled "Username" and links for User Settings and Log Out.

The main content area has a sidebar on the left with sections for Overview, GRAFANA CLOUD (+ Add Stack), GRAFANA ENTERPRISE (Licenses 0), SECURITY (API Keys, OAuth Clients), SUPPORT (Open a Ticket, Tickets), and ORG SETTINGS (My Plugins 0, My Dashboards 0, Members, Settings). The "tempobeta" section under GRAFANA CLOUD is highlighted in blue.

The "tempobeta" section contains a heading "Grafana Cloud Portal" and a sub-section "tempobeta" which says "Manage your Grafana Cloud Stack". It features a "Grafana" card with a "Log In" and "Details" button, and a "Tempo" card with a "Register for Beta" button. Other cards shown include "Prometheus" (Send Metrics, Details) and "Loki" (Send Logs, Details).

Grafana Cloud is the easiest way to test out Loki for free, right now!

 **Grafana Cloud**

Get a centralized view into your observability, wherever it lives.

 Logs Tightly integrated log aggregation and storage with Loki	 Grafana Dedicated Grafana instance with unlimited dashboards	 Traces Easy-to-operate, highly scalable, and cost-effective distributed tracing system with Grafana Tempo	 Metrics Super fast Prometheus- and Graphite-compatible backend
--	---	--	---

A free plan that's actually useful

- 10,000 series for Prometheus or Graphite metrics
- 50 GB of logs
- 14-day retention for metrics and logs
- Access for up to 3 team members

Start with a 14-day trial of Grafana Cloud Pro to get unlimited users, metrics, and logs. Then choose from free or transparently priced options.

[Create free account →](#)



Planning workshop output

Confirm/adjust
integration
OKRs

Aligned
initiatives

Roadmap

Governance
structure

Minimum
viable
integration



The prompt

Part 1

Describe what you think an ideal v1 of an **established project/program management process** should look like at Grafana Labs

Consider some of the following, but feel free to expand beyond this illustrative list:

- Engagement model
- Prioritization process
- Roles and responsibilities
- Mechanism to convey progress to stakeholders and track and report on programs and projects

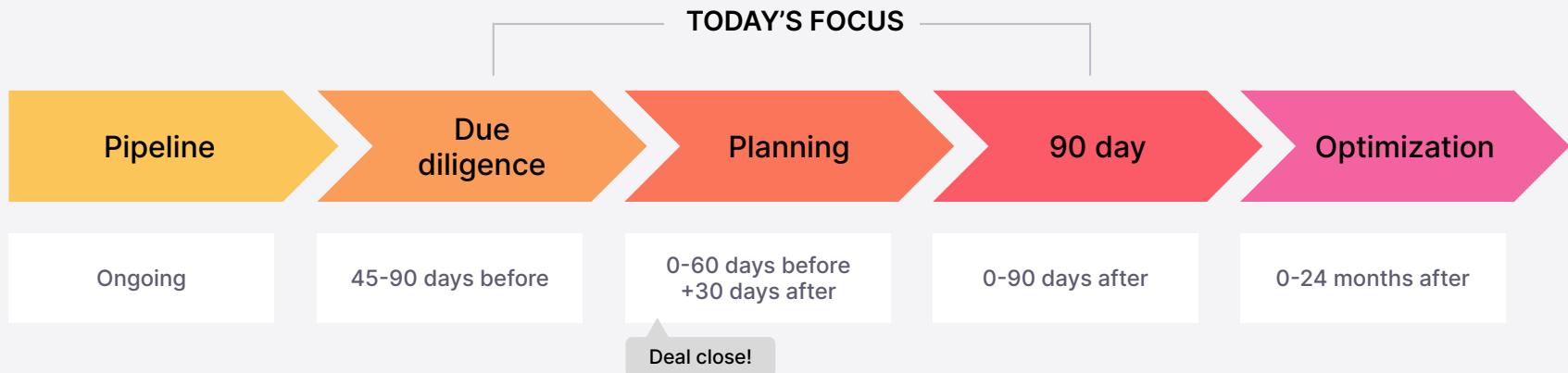
Part 2

Highlight some of the **major consideration of an M&A integration** for a target with the following profile and come up with a **timeline for the first 90 days** post-acquisition

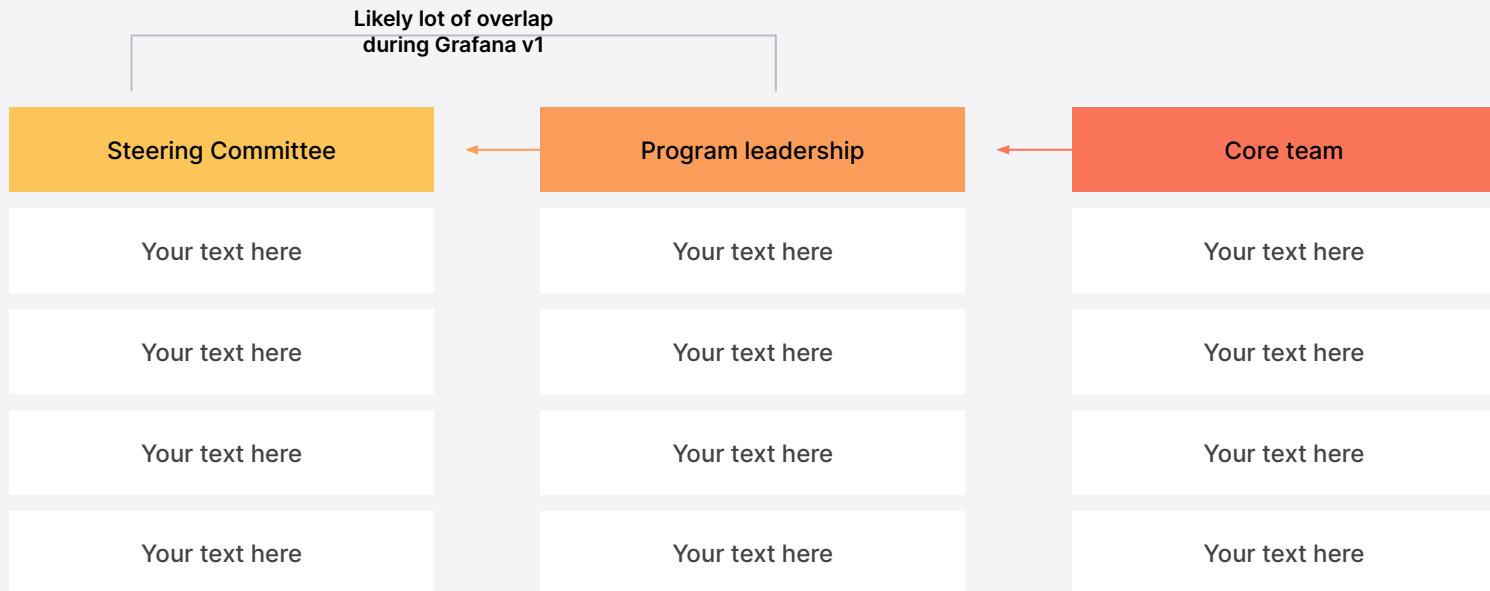
- Adjacent product area to Grafana; could integrate over time with our cloud offering
- 30 employees, based largely in the UK
- Mostly engineers, but a few GTM folks
- Will remain "a Grafana Labs company" for 12 months, but then be integrated



High-level integration timeline



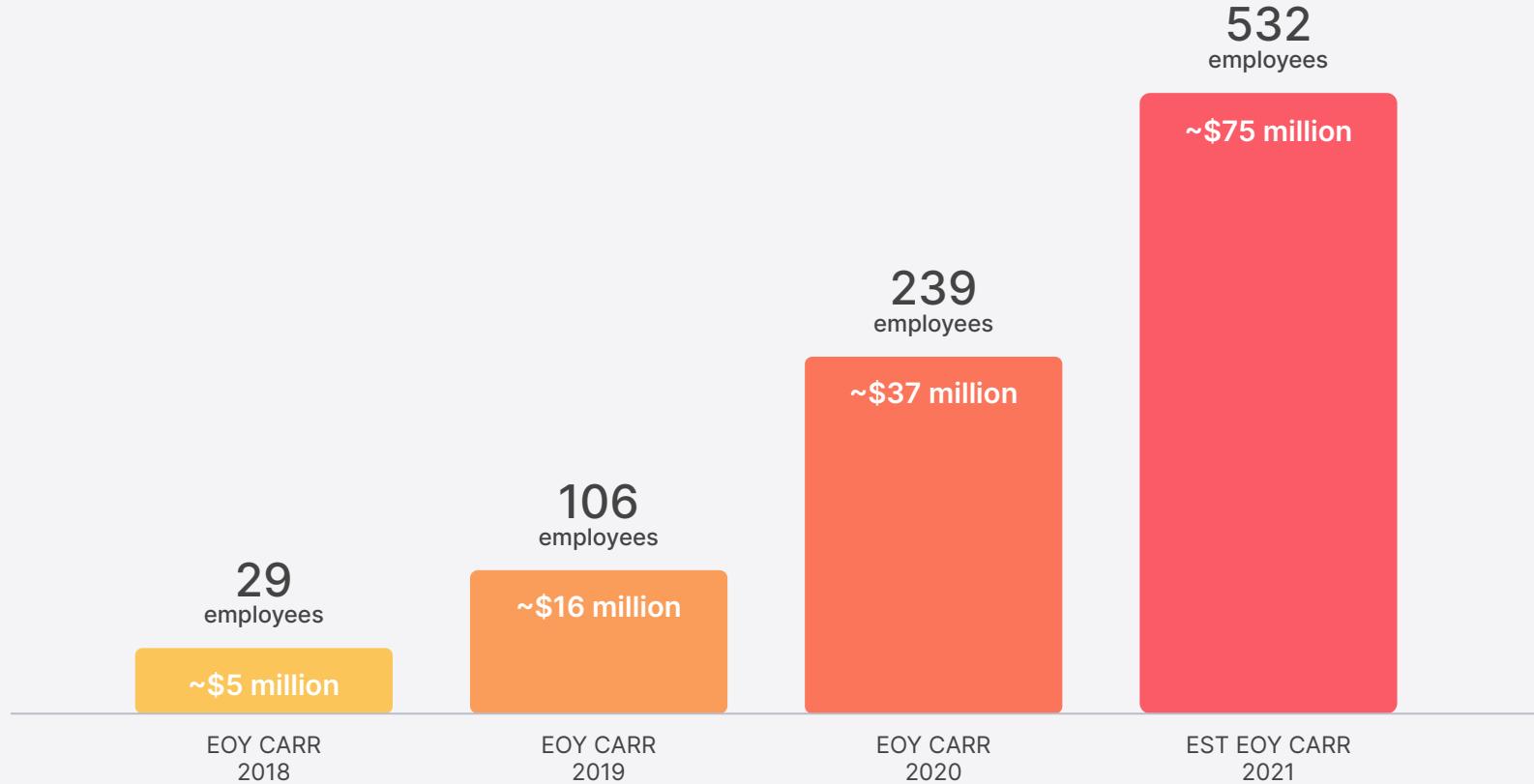
Governance structure



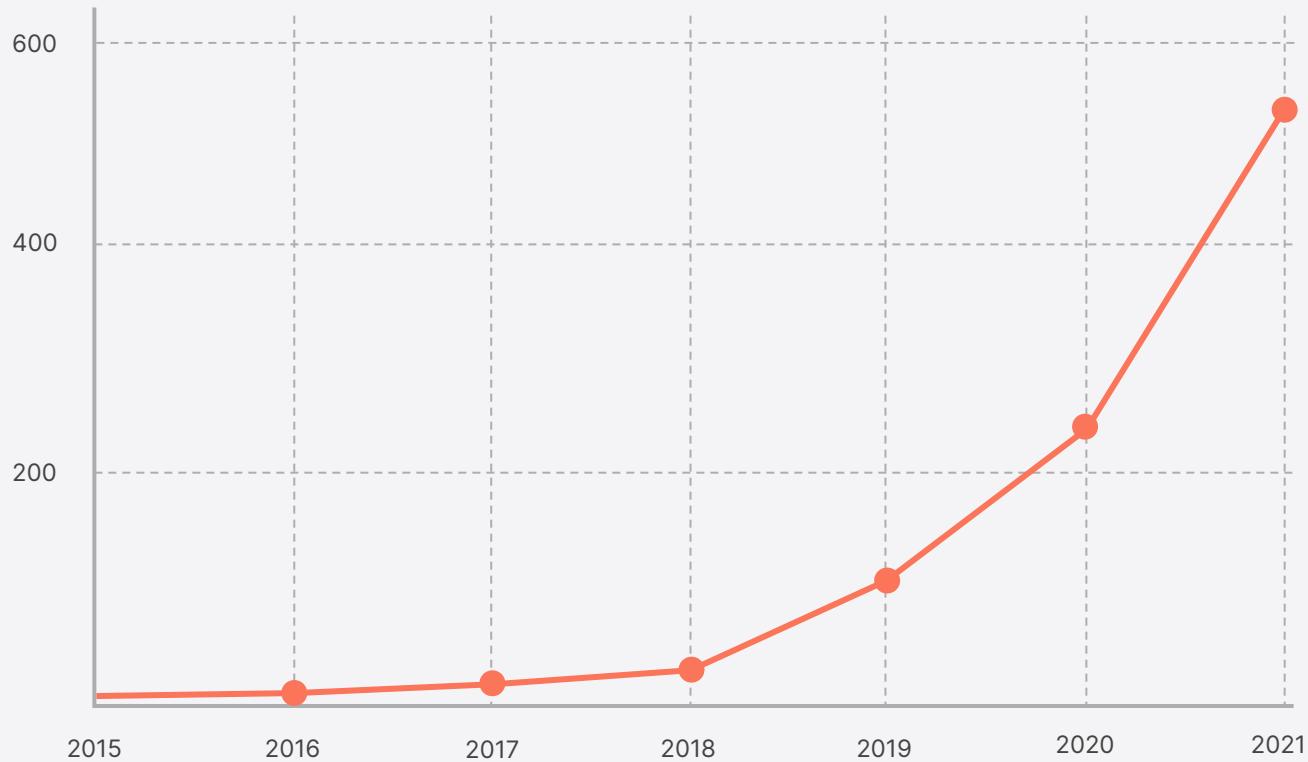
1000s: Grafana Cloud & Enterprise Customers



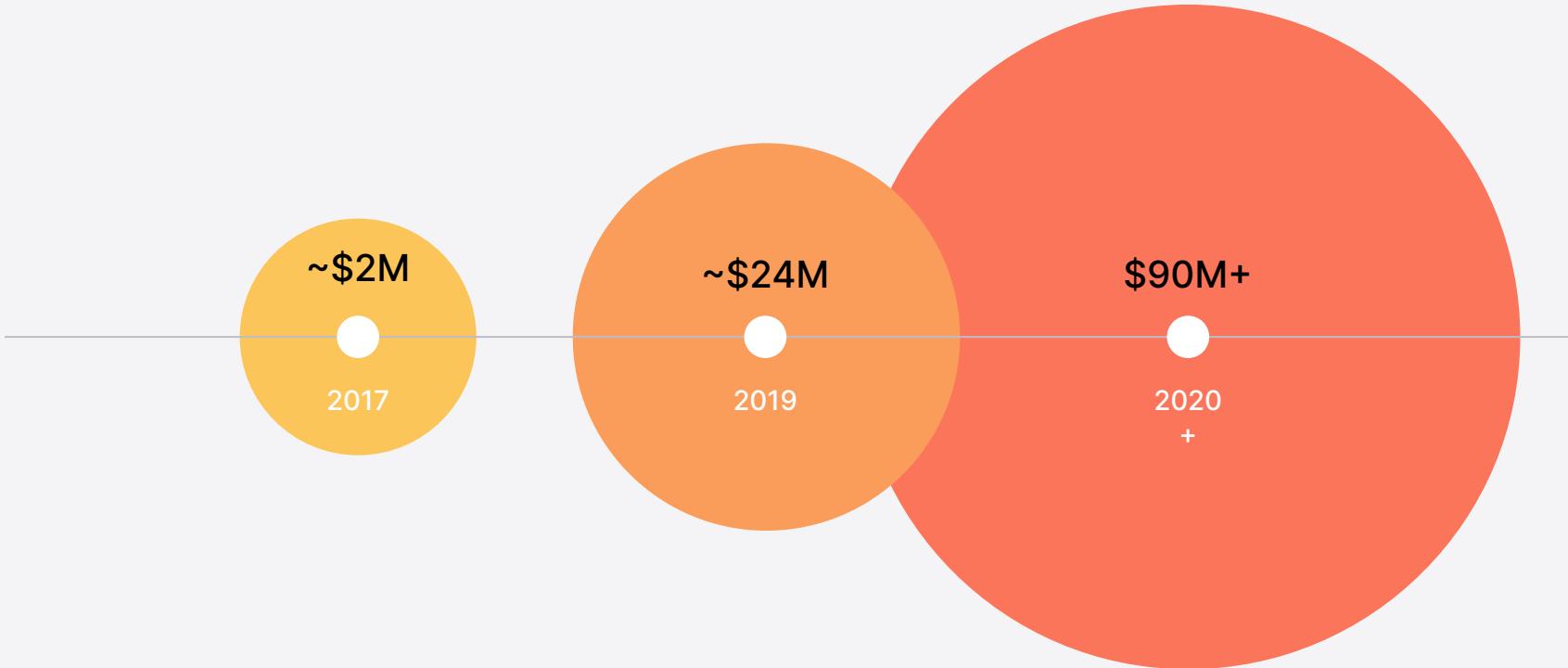
Revenue and employee growth year over year



Our headcount growth



Funding year over year



Grafana Enterprise

Access Control

Decide who can do what, to grant users freedom to explore without exposing sensitive information.

Performance

Store and query data more efficiently, for lower cost and snappier dashboards.

Visibility

Who observes the observability stack? Gain insight into the health and usage of Grafana Enterprise and Grafana Enterprise Metrics.

Monitoring the SDLC

Monitor and draw connections across the entire software development lifecycle.

Reporting

Choose template variables for reports, export tables in.csv, save reports to disk, and select from a wider range of scheduling options.

Splunk Infrastructure Monitoring

Directly query and visualize metrics from SignalFx/Splunk Infrastructure Monitoring side-by-side with your other data sources.

Grafana Cloud

User Onboarding

Improve the sign-up experience

Alerts, Integrations, and Migration Tools

Reduce the time it takes to get the first working dashboard. The agent and integrations provide prepackaged dashboards, while migration tools allow users to easily move their existing data from other platforms onto ours.

Unified Alerting

A single, unified Grafana alerting experience that provides a clearly articulated alerting story for our users, which is consistent across all of our products: Grafana core, Grafana Cloud, and Grafana Enterprise Metrics.

Synthetic Monitoring

Iterate on our blackbox monitoring solution that's exclusive to Grafana Cloud and provide migrated users with new differentiators not previously available in worldPing.

Cloud Administration

Intuitive interface and abilities to manage your cloud account without additional help. We want Grafana Cloud to behave like a proper SaaS product that's fully self-service with little external intervention required.



Grafana Enterprise

Access Control

Decide who can do what, to grant users freedom to explore without exposing sensitive information.

Performance

Store and query data more efficiently, for lower cost and snappier dashboards.

Visibility

Who observes the observability stack? Gain insight into the health and usage of Grafana Enterprise and Grafana Enterprise Metrics.

Monitoring the SDLC

Monitor and draw connections across the entire software development lifecycle.

Reporting

Choose template variables for reports, export tables in.csv, save reports to disk, and select from a wider range of scheduling options.

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Success Plan Progress Against Goals

Goals (What are their strategic goals?)	Initiative (What initiatives will help meet their goals?)	Metrics (How will the measure success of the initiative?)	Next Steps / Progress
Lower Reddit's overall telemetry costs by leveraging a highly performant, unified, on-prem TSDB			
Standardized, automated A&A to free up human capital and allow all employees & executives to access critical information			
Optimize Engineering productivity by tracking usage of the telemetry platform - understand which views provide high value, and identify telemetry latency issues & errors.			

