

What is Grafana?

**Grafana** is open-source visualization and analytics software. It allows you to *query, visualize, alert on, and explore your metrics* no matter where they are stored. In plain English, it provides you with tools to turn your time-series database (TSDB) data into beautiful graphs and visualizations.

Grafana helps us track the user behavior, application behavior, frequency of errors popping up in production or a pre-prod environment, type of errors popping up & the contextual scenarios by providing relative data.

After creating a dashboard, there are many possible things you might do next. It all depends on your needs and your use case.



For example, if you want to view weather data and statistics about your smart home, then you might create a playlist. If you are the administrator for a corporation and are managing Grafana for multiple teams, then you might need to set up provisioning and authentication.

It is expandable through a plug-in system. End users can create complex monitoring dashboards using interactive query builders.

Besides the core open-source solution, there are other two services offered by the Grafana team for businesses known as the **Grafana Cloud** & the **Enterprise**.

**Grafana Cloud** is a highly available, fast, fully managed OpenSaaS metrics platform operated by Grafana Labs.

**Grafana Enterprise** is a commercial edition of Grafana that includes additional features not found in the open-source version. Building on everything you already know and love about Grafana, Grafana Enterprise includes exclusive data source **plugins** and additional features like Authentication & Security. On top of that, you get 24x7x365 support and training from the core Grafana team.

Why Grafana?

While there are many solutions in the data visualization space, Grafana is proving to be one of the most exciting, exhibiting rapid growth in scope and features, broad options for deployment and support, and an enthusiastic community contributing to its future growth.



While there are a number of powerful data analytics tools on the market that fulfill these functions, Grafana has a number of features that make it an attractive choice:

**Fast:** The Grafana backend is written in Google's exciting new Go language, making it extremely performant when querying data sources or feeding thousands of data points to multiple dashboard panels.

**Open:** Grafana supports a plugin model for its dashboard panels and data sources. The number of **plugins** is constantly growing as the Grafana community enthusiastically contributes to the project.

**Beautiful:** Grafana leverages the attractive and powerful D3 library. Grafana provides fine-grained control over most graph elements including axes, lines, points, fills, annotations, and legends. It even offers the much sought-after dark mode.

**Versatile:** Due to its plugin architecture, Grafana can support a variety of ever-growing databases (at last count, over 30) from traditional RDBMs, such as MySQL and PostgreSQL, to modern TSDBs, such as InfluxDB and Prometheus. Not only can each graph display data from a variety of data sources, but a single graph can also combine data from multiple data sources.

**Free:** If you want to get your feet wet, Grafana is freely available under the Apache open source license, and if you do plan to run it in your enterprise, you can purchase tiered support.

What Are the Features Offered by Grafana?

This open-source framework takes care of all the analytics of our app. We can easily query, visualize, set up alerts, understand the data with the help of metrics.

**The dashboard** is pretty equipped, & continually evolving, to make sense of complex data. From displaying graphs to heatmaps, histograms, Geo maps. The tool has a plethora of visualization options to understand data as per our business requirements.

**Alerts** are set up & triggered like trip wires whenever an anticipated scenario occurs. These happenings can be notified on Slack or whatever communication platform the monitoring team uses.

Grafana has native support for approx. a dozen databases. And with many more, facilitated by respective **plugins**.

Either host it **on-prem** or **any cloud platform** of your choice.

It has built-in support for Graphite & expressions like add, filter, avg, min, max functions etc. to custom fetch data.

It also has a built-in Influx DB, Prometheus, ElasticSearch, CloudWatch support.



Complementary Interactive Lesson about Grafana