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**Logging TOOLS**

**Graylog**

Graylog is one of the leading names in the industry when it comes to industry-grade logging and visualization capabilities. It's also unique in that it scans your collected logs for signs of security vulnerabilities and notifies you instantly.

Greylog is open-source, but there's an enterprise plan if your needs are complex.With clients like SAP, Cisco, and LinkedIn on its roster, Graylog is a tool you can trust with your eyes closed.

**Logstash**

Like other logging tools on this list, Logstash if fully open-source, allowing you the freedom to deploy and use as you wish.

Logstash is a mothership with capabilities far outweighing any humble logging tool. It's able to collect vast amounts of data from multiple platforms, allows you to define and execute your own data pipelines, make sense of unstructured log dumps, and more.

the only limitation is that it works with the Elastic suite of products only, but if you're starting and looking to scale soon.

# Fluentd

Among centralized logging tools that work as a middle layer for data ingestion, Flutend is a first among equals. With an excellent library of plugins, Fluentd is able to capture data from virtually any production system, knead it into the desired structure, build a custom pipeline, and feed it to your favorite analytics platform, be it MongoDB or Elasticsearch.

Fluentd is built on Ruby, is entirely open source, and is extensively popular because of its flexibility and modularity.

With major companies like Microsoft, Atlassian, and Twilio using the platform, Fluentd has nothing to prove.

## Flume

If really, really large data sets are your challenge, and you eventually want to feed everything into something like Hadoop, Flume is one of the best choices around. It's a "pure" open source project, in the sense that it's maintained by our beloved Apache Foundation, which means there is no enterprise plan.

Written in Java (which continues to astonish me when it comes to groundbreaking tech), Flume's source code is entirely open. Flume is best for you if you're looking for a distributed, fault-tolerant data ingestion platform for heavy-duty stuff.

## Octopussy

Octopussy can be a good choice if your needs are simple, and you're wondering about what all the fuss related to pipelines, ingestion, aggregation, etc., is all about.

In my opinion, Octopussy covers the needs of most of the products out there (estimated stats are useless, but if I had to guess, I'd say it takes care of 80% of use cases in the real world).

Visualization tools

**Kibana**

Kibana is an open-source data visualization software that was built specifically for the Amazon Elasticsearch engine. But it can also run in other environments.

My main reason for including Kibana on this list of the best open-source data visualization tools in the market currently is its ease of use. The interface is quite intuitive and does not require much technical knowledge to master. It is also relatively easy to create, access, and share visualization dashboards using this tool.

My other reasons for recommending the software are:

- It offers very in-depth and interactive reporting tools.
- It is built to be able to handle huge amounts of data.
- You can use it to present continuous layers of information for a comprehensive view of data sets.
- Integrated with Elastic Maps, Kibana is especially suited for viewing and analyzing geolocation data.
- The software lays strong emphasis on machine learning for detecting errors.

## Leaflet

Leaflet is an open-source JavaScript library with great features for data visualization. I recommend it as one of the best in this sector for the following reasons:

- It can be deployed on any device including mobile devices.
- Although it is a downloadable program, Leaflet is extremely lightweight, occupying only 39 KB of your storage.
- Yet, it sports all the essential features needed for charting and mapping.
- Its features can also be extended through the use of plugins.
- The software's ease of use is well above average.
- As a developer, I love Leaflet's well-documented application programming interface and extremely simple source code.

## Grafana Labs

Grafana Labs is an open-source data visualization and analytics tool that is distributed on the AGPL 3.0 license. I consider it not only to be one of the best open-source options but also one of the best in the data analytics sector.

Here are my main reasons for including Grafana on this list:

- You can use the tool to access data almost anywhere.
- Once you have accessed the data, you can easily use Grafana to also visualize and query it with ease.

- The tool is built with robust collaborative features. Thus, you can use it to easily create dynamic and reusable dashboards. Then, you can share the dashboards with your team members.
- Grafana is great for blending pieces of data from various sources. For example, this feature enables you to use the tool for presenting information from different data sources on the same graph.
- You can equally use the tool to get live notifications from data sources. Its alert system also integrates with a wide range of systems such as PagersDuty, Slack, and OpsGenie.
- It ensures efficient management of your logs, with the ability to wiggle between metrics and logs with considerable ease.
- One of the features I like most in Grafana is the ease with which you can use it to compare different results on a single interface. It makes data association almost like a stroll in the park.

## Charted

Charted is an open-source data visualization tool that runs on the MIT license. It was originally developed by the blogging platform Medium.com.

I can say that the mainstay of Charted is the automatic visualization of data. All you need is to provide a link to a data file and the system turns up a comprehensive, well-choreographed, and easily accessible set of data from it.

Here are other reasons why I consider charted as one of the best open-source data visualization solutions in the market:

- The platform is purposely built with ease of use in mind. For example, the interface assembles only essential features. Thus, it is considerably unencumbered. I also think this is because most of the functions are already automated.
- It presents its results equally well on various screen sizes.
- It updates its charts regularly (at 30-minute intervals).
- It is great at sorting data by taking data series and charts apart.
- Using Charted, you can also sort available data by adjusting them according to types, backgrounds, titles or labels, and more.
- Its file support is also fairly comprehensive. It includes such file types as comma-separated values (CSV), tab-separated values (TSV), Dropbox share links, and Google Sheets.