Continuous Monitoring – Part 2

This lesson provides insight into continuous monitoring tools.

We'll cover the following

- Introduction
- The flow

Introduction

After *cAdvisor* comes to *Prometheus*, it's an open-source data monitoring tool that is largely used with *cAdvisor* and *Grafana* to set up a data analytics and monitoring system. This is kind of a de facto combination is used in the industry.

Grafana is an open-source monitoring dashboard tool that enables us to study monitoring data fetched from a certain data source. In our use case, the data source is *Prometheus*. *Prometheus*, besides being a monitoring system, is also a *time series database*.

Grafana dashboards help us track user behavior, application behavior, error frequency in production or other environments, types of errors popping up, and so on.

StackOverflow uses *Grafana* to enable their developers and site reliability teams to create tailored dashboards for visualizing data and optimizing their server's performance.

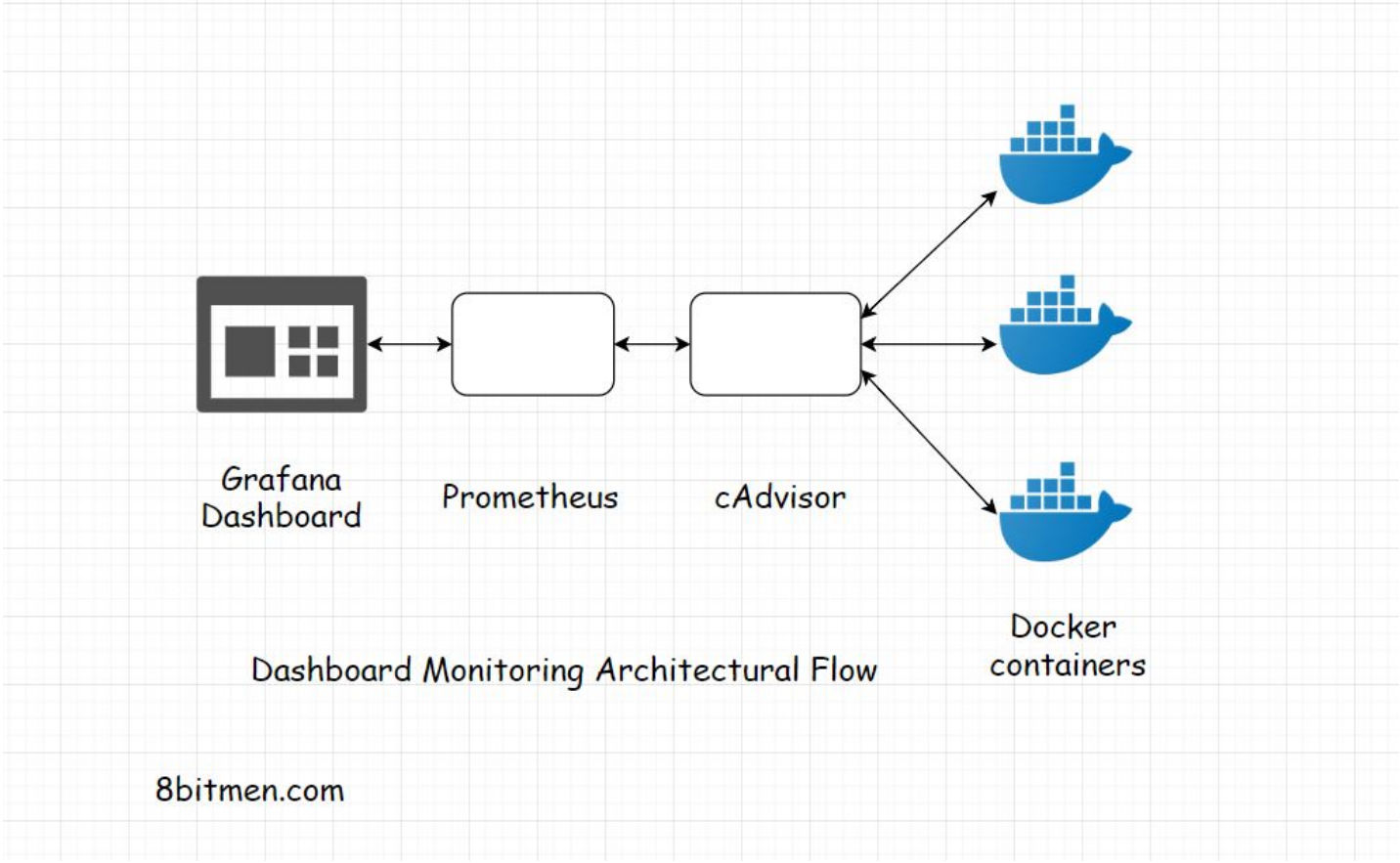
Digital Ocean uses *Grafana* to build a common visual data-sharing platform that enables developers to share visualization data between their teams.

Here is a demo of a Grafana dashboard that you can check out to gain insight into how it tracks different metrics of the system.

The flow

Our services run in containers and the container information is streamed into

Prometheus from *cAdvisor*. *cAdvisor* exposes container statistics as *Prometheus* metrics intrinsically. Jobs are configured in *Prometheus* to connect with *cAdvisor*.



All the container data is displayed on custom *Grafana* dashboards. Queries fired from the dashboard hit *Prometheus*, which is plugged-in to *Grafana* as a data source.

Grafana dashboards contain a gamut of visualization options such as geo maps, heat maps, histograms, and all the varieties of charts and graphs that a business typically requires to study data.

This is a high-level insight into how container monitoring is set up using open source tools. In the next lesson, let's have a look at another popular stack known as the *ELK Elastic Logstash Kibana* stack, which is primarily used to monitor the logs in a distributed system.