

Centralized log collection on Kubernetes

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Centralized log collection on Kubernetes

Agenda

- Logging the Kubernetes Way
- Fluentd & Fluent Bit
- Securing logs
- Elasticsearch & Kibana

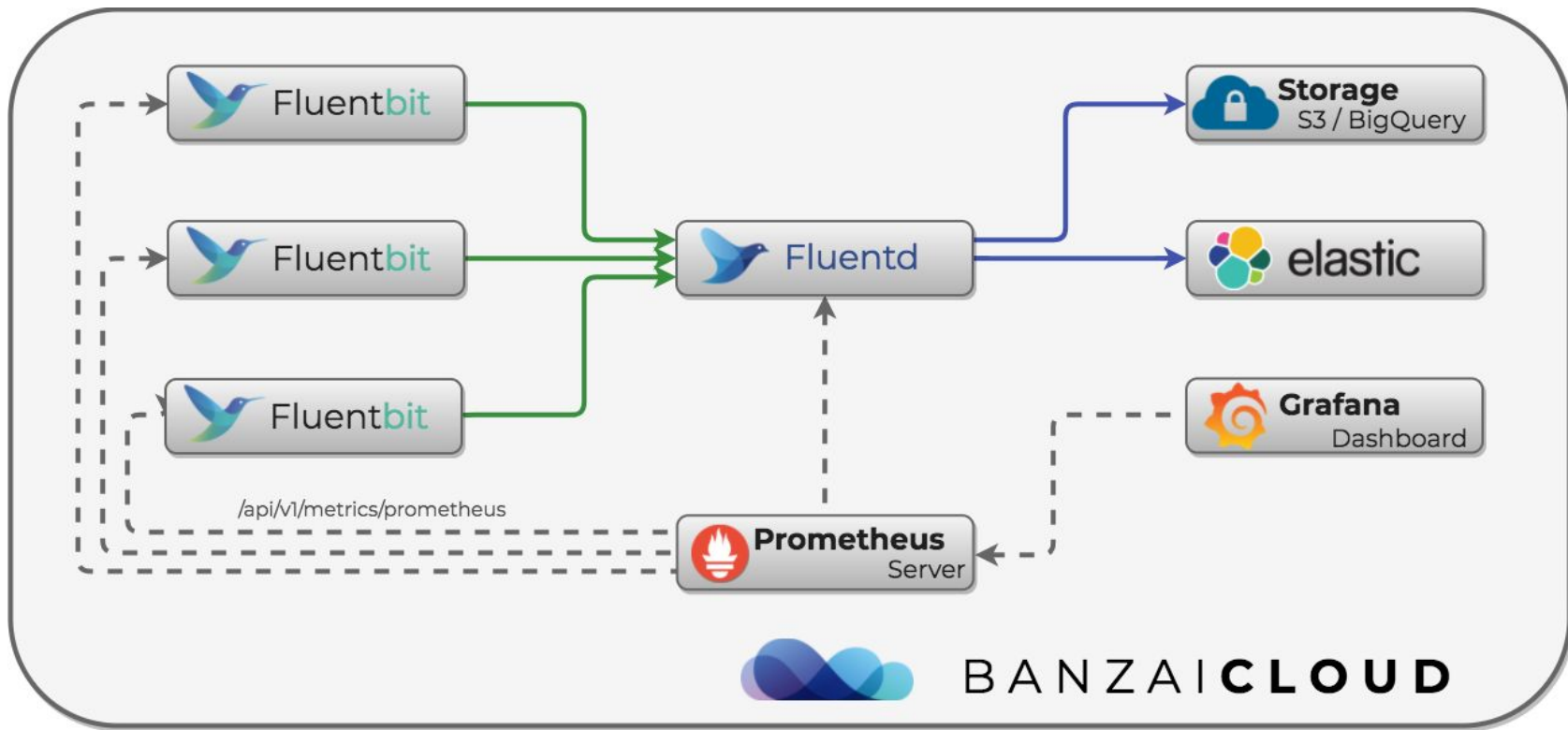


Logging the Kubernetes Way

- Kubernetes doesn't have too much notion of logging
 - Logs are ephemeral
 - Logs can't be configured
 - Needs 3rd party guidance



Logging the Kubernetes Way



Fluentd & Fluent Bit

- Fluentd is an open source data collector for a unified logging layer.
- It's written in Ruby with a plug-in oriented architecture.
- It helps to collect, route and store different logs from different sources.
- There are three main type of plugins: **Source, Filter and Output.**

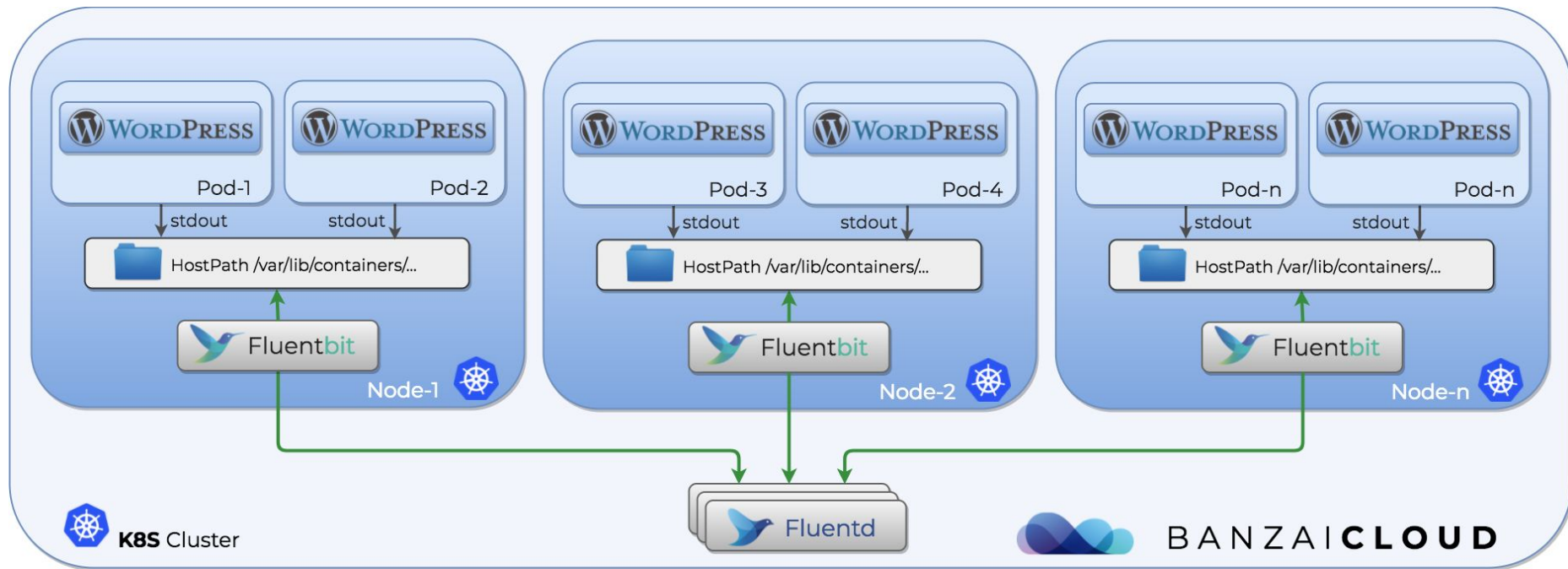


Fluentd & Fluent Bit

- Fluent Bit is also an open source data collector, but...
- It's written in C with performance in mind
- It's feasible even for IoT.
- It has a similar (but reduced) feature set to Fluentd.
- It has built-in Kubernetes support.



Fluentd & Fluent Bit



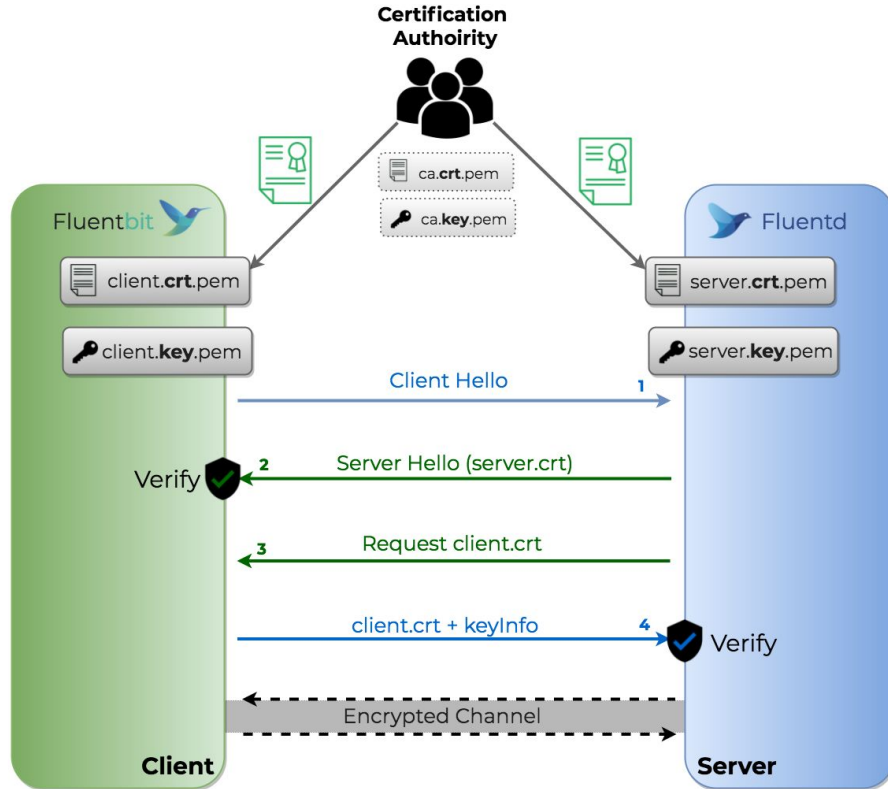
Securing logs

- Log messages can contain sensitive data
- Fluentd and Fluent Bit offers mTLS
- Client and Server can be authenticated as well
- Manual setup is a but tedious but it worth the effort



Securing logs

TLS Handshake

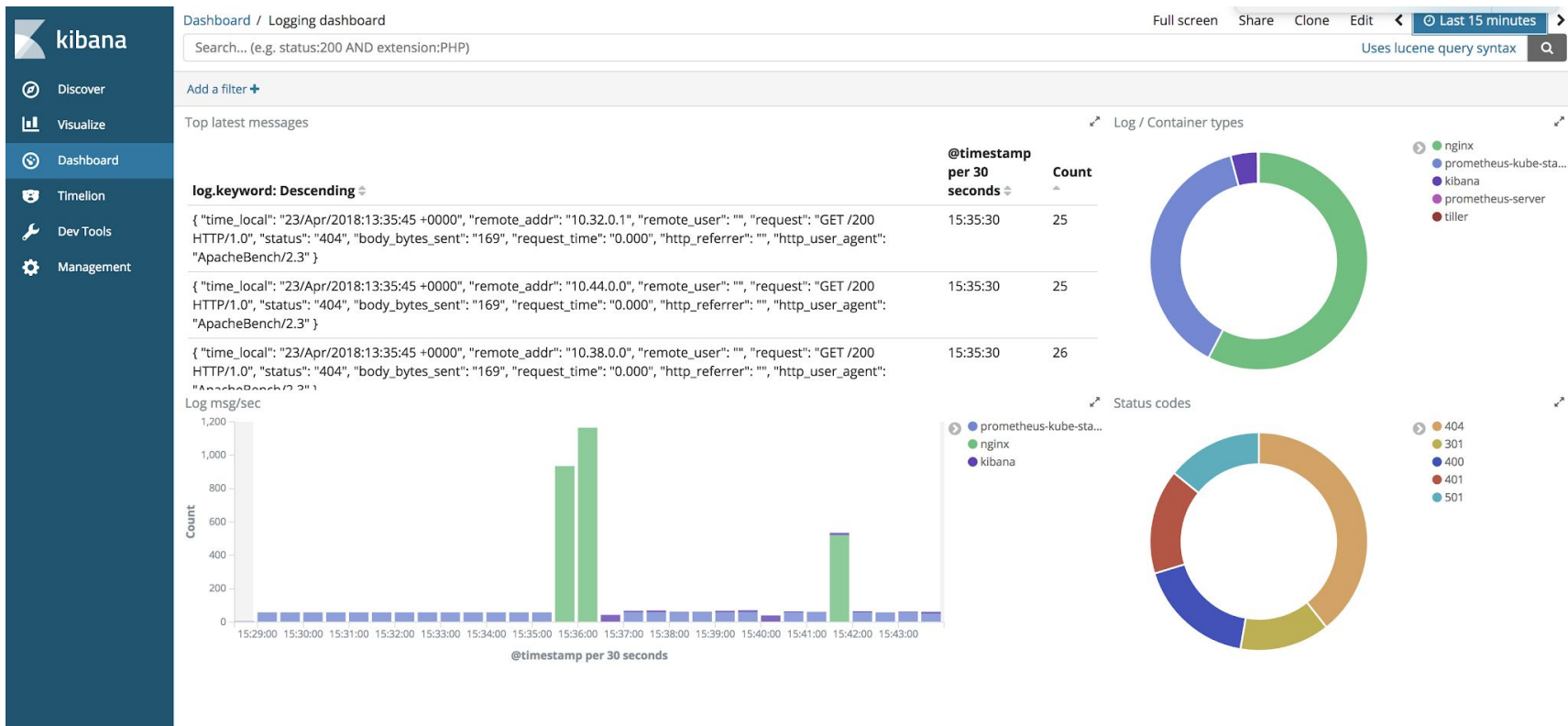


Elasticsearch + Kibana

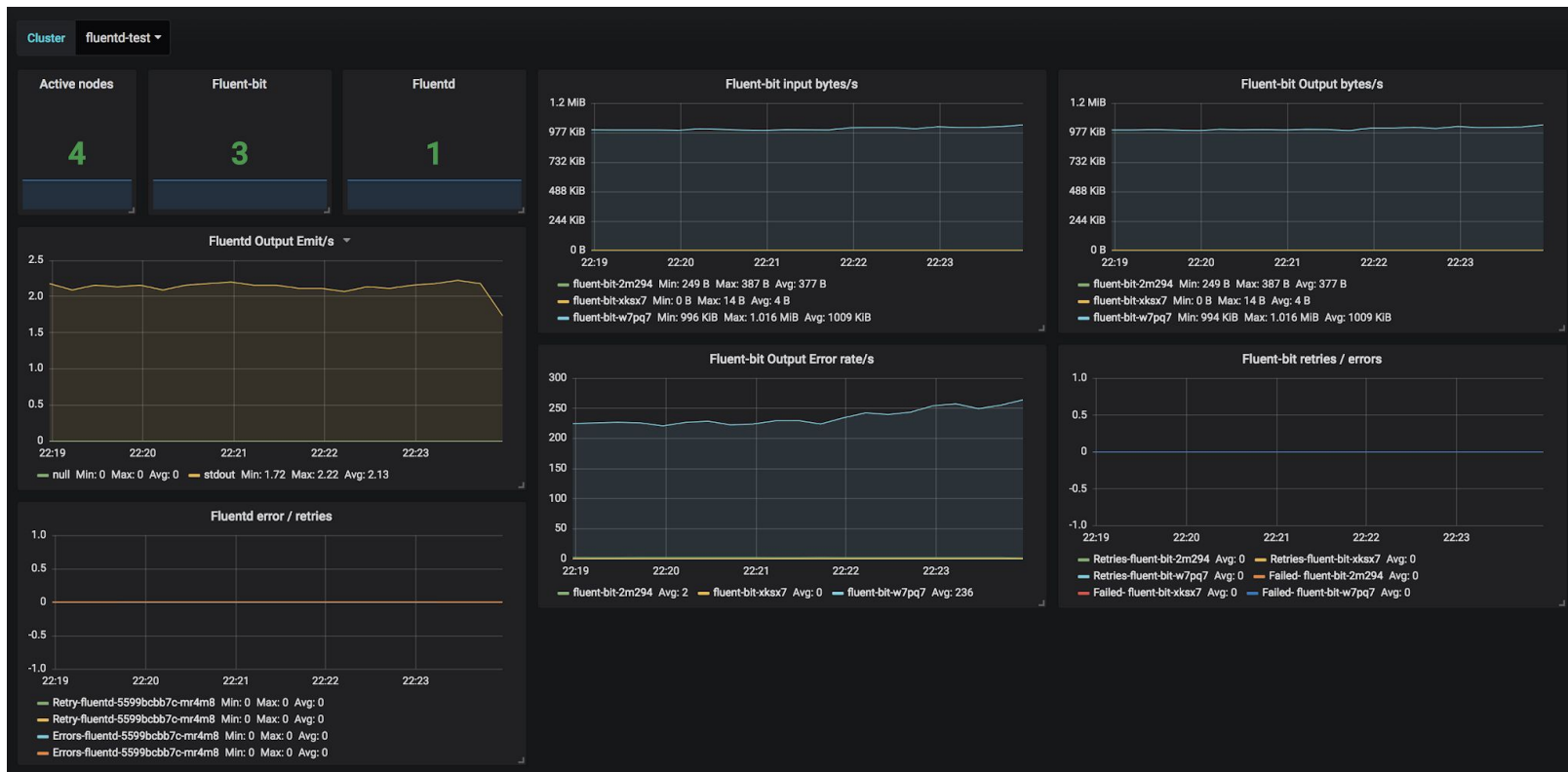
- All your logs are parsed and aggregated now
- You need an analyzer to store and search them easily
- Elasticsearch is a great tool for that
 - distributed, RESTful search and analytics engine
- If you want to visualize log entries Kibana has support for Elasticsearch



Elasticsearch & Kibana



Monitoring the log deployment



Pipeline support

- Of course the whole logging stack can be automated with Banzai Cloud's Spotguides and Pipeline



Pipeline

A Next Generation **OpenShift** / **Heroku** / **Cloud Foundry** like PaaS.

A full managed runtime for enterprise software.



Pipeline



GitHub

<https://github.com/banzaicloud/pipeline>



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**Do you have any
questions?**



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