Extending Grafana to a new time-series analysis platform with Hastic

CORP glory

Alexey Velikiy

About Alexey Velikiy

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I am a software engineer, who

- Makes **libs**, **tools**, **plugins** for **Grafana** and **contributes** into it.
- Founded CorpGlory Inc. which helps companies to **solve complex monitoring** tasks based on **Grafana** (consulting)

Projects for Grafana like:

- Webpack Template for Grafana plugins development
  https://github.com/CorpGlory/grafana-plugin-template-webpack
- Typings for TypeScript for plugins for Grafana
  https://github.com/CorpGlory/types-grafana
- Multibar Graph Panel
  https://github.com/CorpGlory/grafana-multibar-graph-panel
- .... more: https://github.com/CorpGlory/

The story

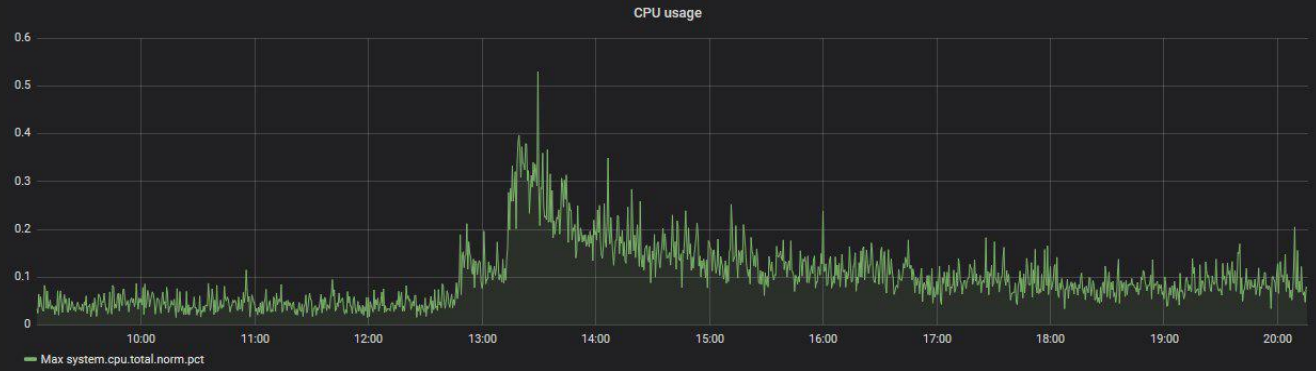
- Started a year ago
- When I called Daniel Lee....

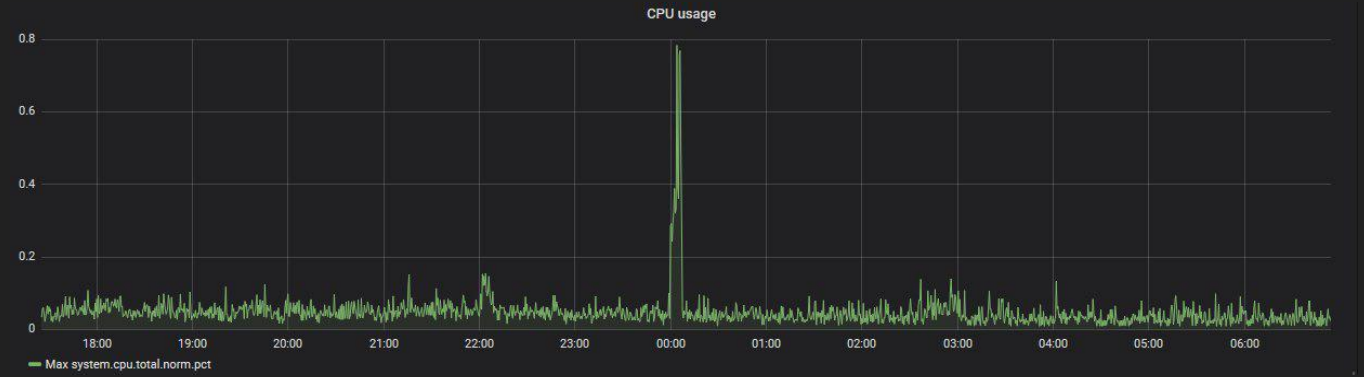
Grafana is **GREAT**

- It’s reliable metrics visualisation platform
- Most of data-sources already there
- … and this is our foundation for Hastic

Now I want to detect patterns

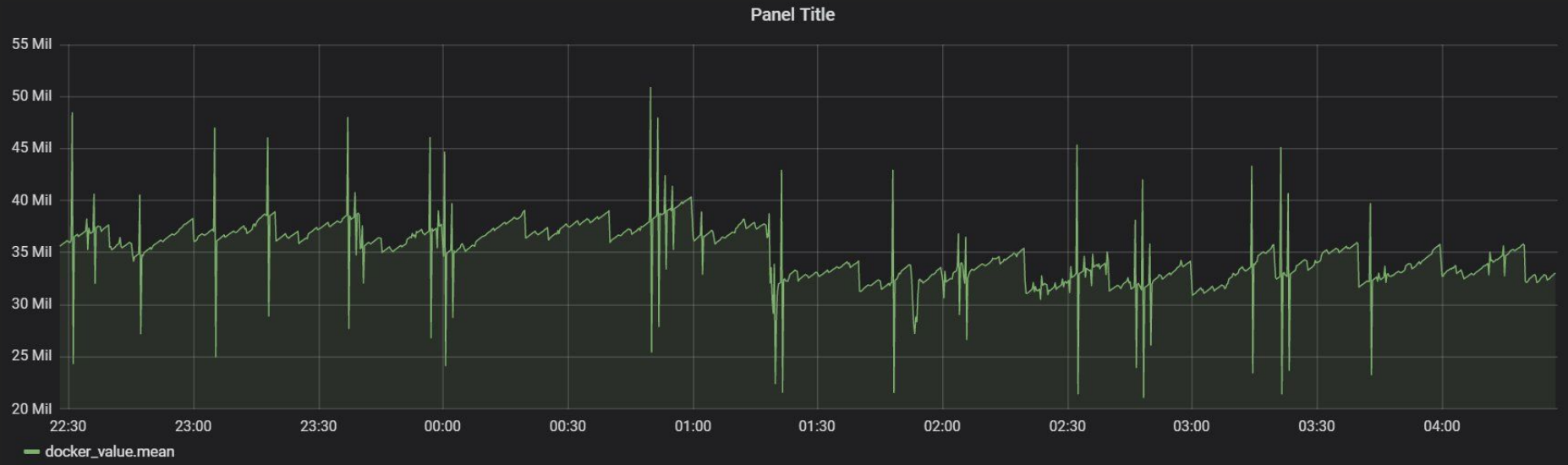
These two peaks are different:





It might be also drops, jumbs, thoughts...

Pattern might be weird:

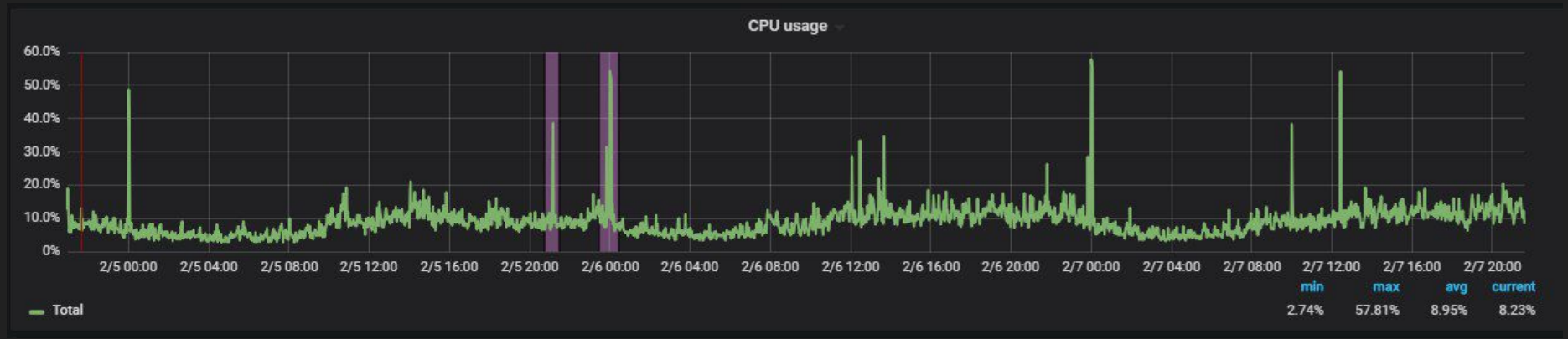


What is Hastic exactly?

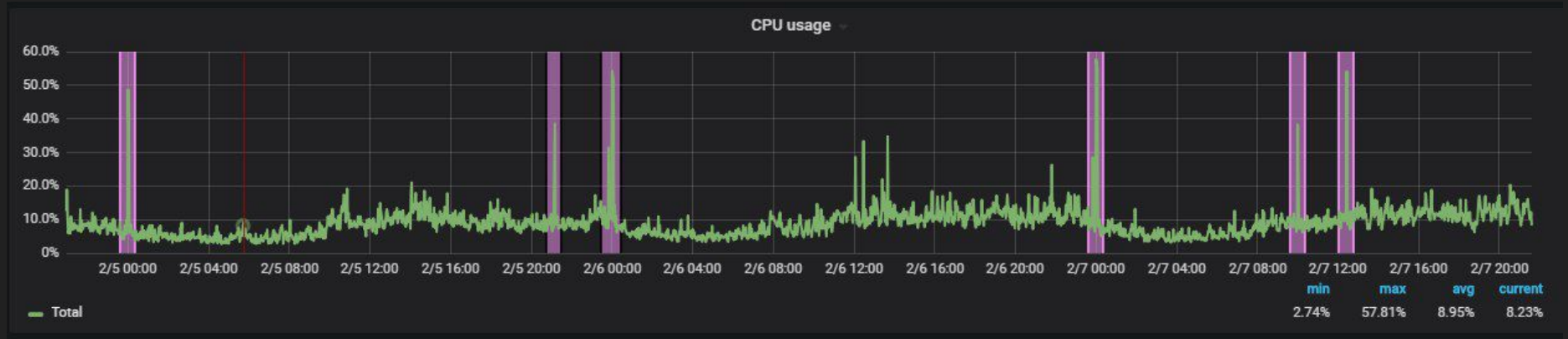
- A node.js \ python app for processing time-series data
- An app for Grafana with UI for labeling and rendering patterns
- You only need a laptop to make it run

Hastic-app

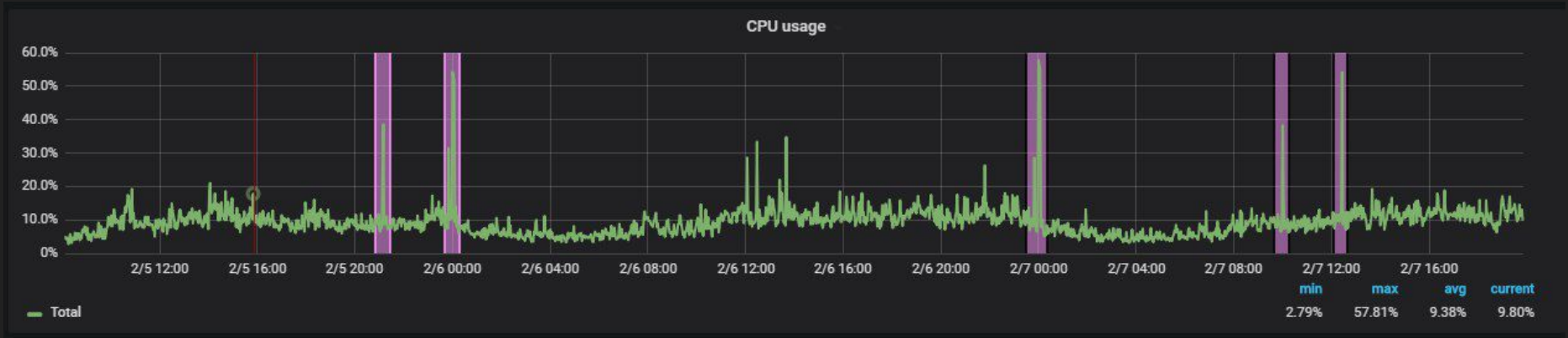
1. Label your pattern occurrence



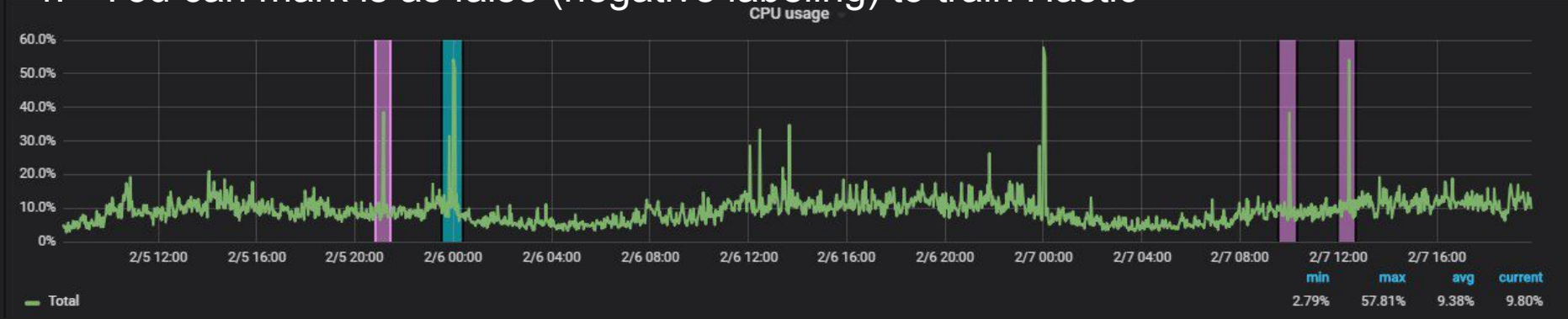
2. Get detections when the pattern appears



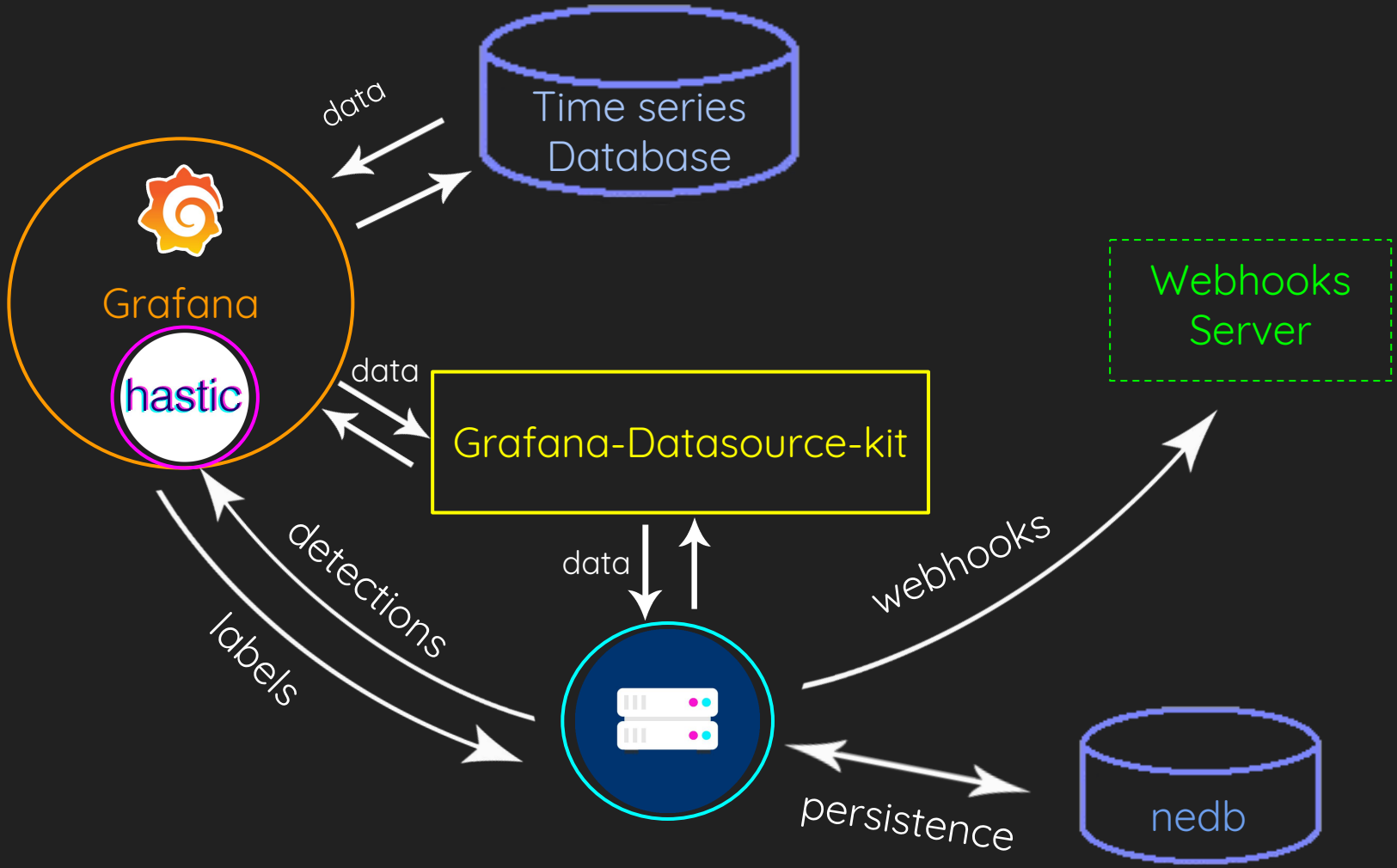
3. If detection is false ...



4. You can mark is as false (negative labeling) to train Hastic



Hastic-server


Time series Database
data
Grafana
hastic
data
Grafana-Datasource-kit
Webhooks Server
data
detections
labels
webhooks
persistence
nedb

The **Hastic** project...

Design principles

- Originally, is a tool to help you deal with false-positive
- It is a tool, but not an ultimate solution
- We make something stable first and then make a foundation for something bigger (so now only patterns)
- “Server” is stable, but analytic-units are not
- You use our webhooks for alerting, but you can use it with your alert system
- You need to secure your hastic-server instance

- First public announcement on Monitorama September 5, 2018
- ... from that moment ...

Hastic-Server:

* Features: 12
* Bugfixes: 29
* Enhancements: 14

Hastic-App:

* Features: 9
* Bugfixes: 17
* Enhancements: 11

Highlights

Graphite / Prometheus / ElasticSearch / PostgreSQL / TimescaleDB support.

Positive / Negative labels

Threshold detector

RPM

Panel -> Application

Webhooks.

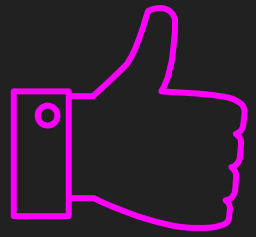
Reduce amount of required labeled segments for learning (>=1)

Parallel learning for analytic units

Decouple "analytics" and "server" processes to different docker containers.

Hastic is **BETA NOW!**

Try in now:
https://hastic.io/downloads/



A new platform?

- You can create your “Detectors” for detecting anomalies and apply custom statistical models
  It is a python class to implement
- You can make Grafana plugins with Hastic’s API for detecting not only single-value metrics, but geospatial, graph, text data

Our business model

We are inspired by Grafana

- Hastic as a service
- Hastic on-premise
- Paid services and consulting

Thanks too...

Grafana Labs

For a great support

American Consulate in Warsaw

For processing my emergency case

CorpGlory Dev team

For hard work

@rozetko, @amper43, @VargBurz, @sanke1

My girlfriend

instagram.com/katetito

Monitorama
For spreading the first word about us
@obfuscurity

Our early adopters

For testing and features requests

You guys

For making this day so awesome

Our contacts:
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https://hastic.io/

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Thank you!