



Thanos ContribFest

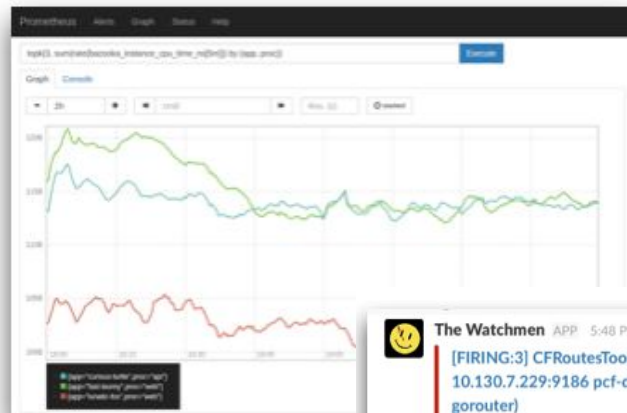
Contribute to Thanos!


Prometheus




Prometheus

- Standalone monitoring server
- Deployed close to applications
- No external dependencies
- Stores data locally
- Flexible query language (PromQL)
- Yells at you when something is wrong

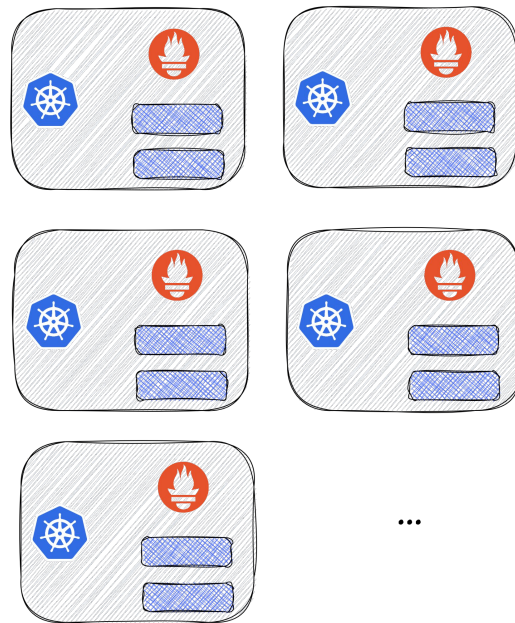
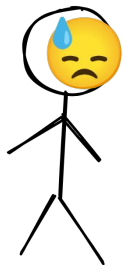


 **The Watchmen** APP 5:48 PM
[FIRING:3] CFRoutesTooLow (cf router pcf-dev 10.130.7.229:9186 pcf-dev-firehose codelab-monitor gorouter)
The number of routes in the router's routing table is dangerously low: 113

 **The Watchmen** APP 5:54 PM
[RESOLVED] CFRoutesTooLow (cf router pcf-dev 10.130.7.229:9186 pcf-dev-firehose codelab-monitor gorouter)
The number of routes in the router's routing table is dangerously low: 113

Limitations

- Lack of global overview of the data
- Hard to retain data for long periods of time
- Inadequate resolution for long range queries
- ...and more



Thanos: “Distributed Prometheus ++”

Thanos: Horizontally Scalable Metric Monitoring System

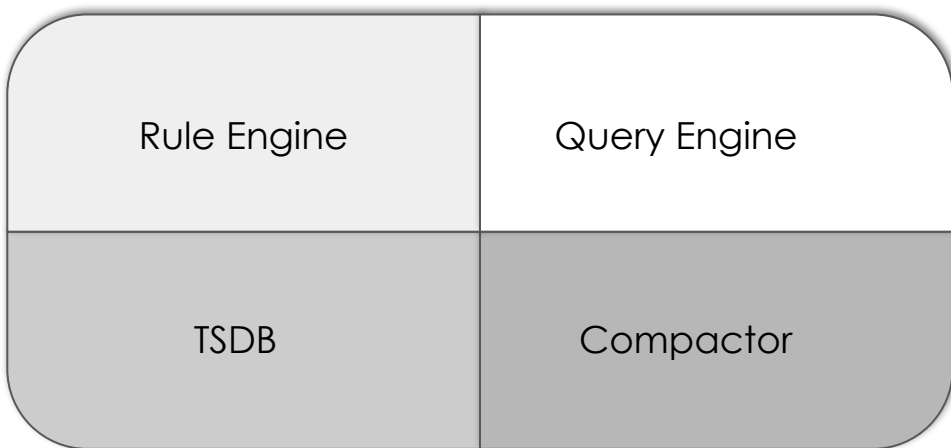
- Highly available and scalable components
- Global view
- Long term retention
- Downsampling
- Multi-Tenancy



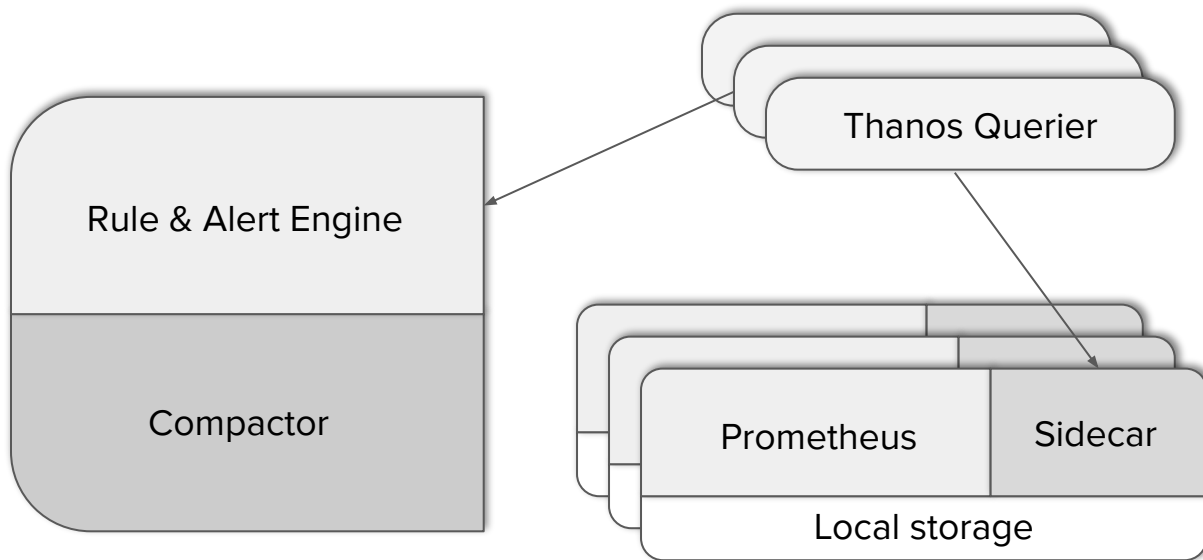
Prometheus



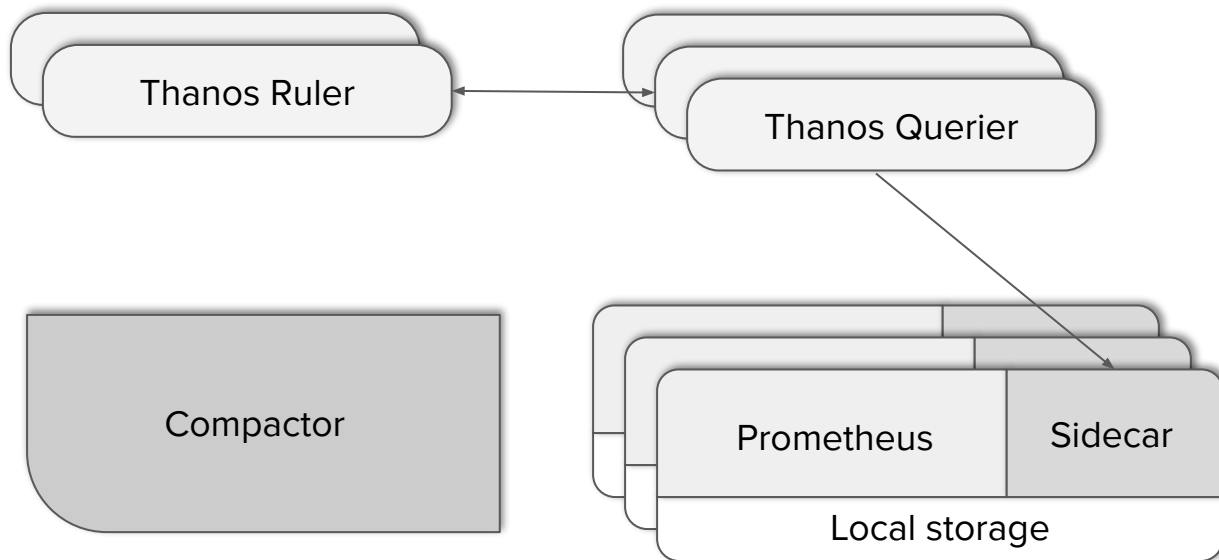
Prometheus decomposed



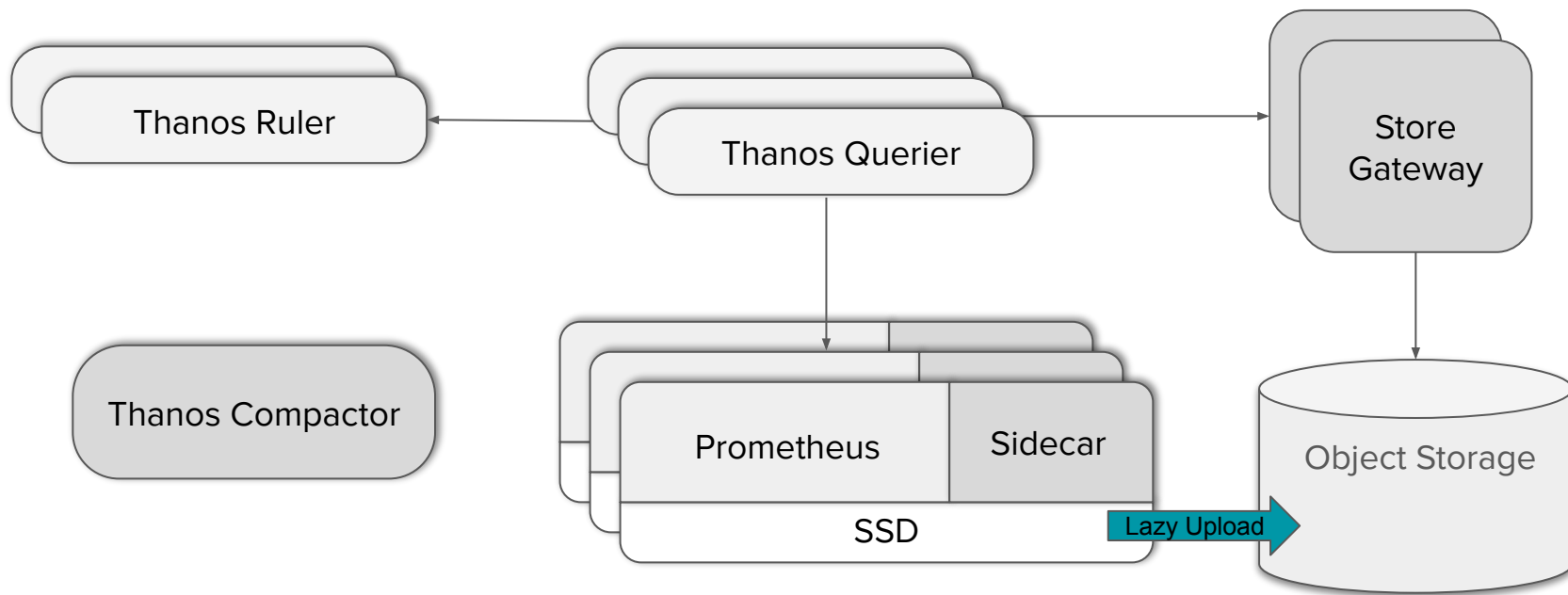
Thanos Sidecar



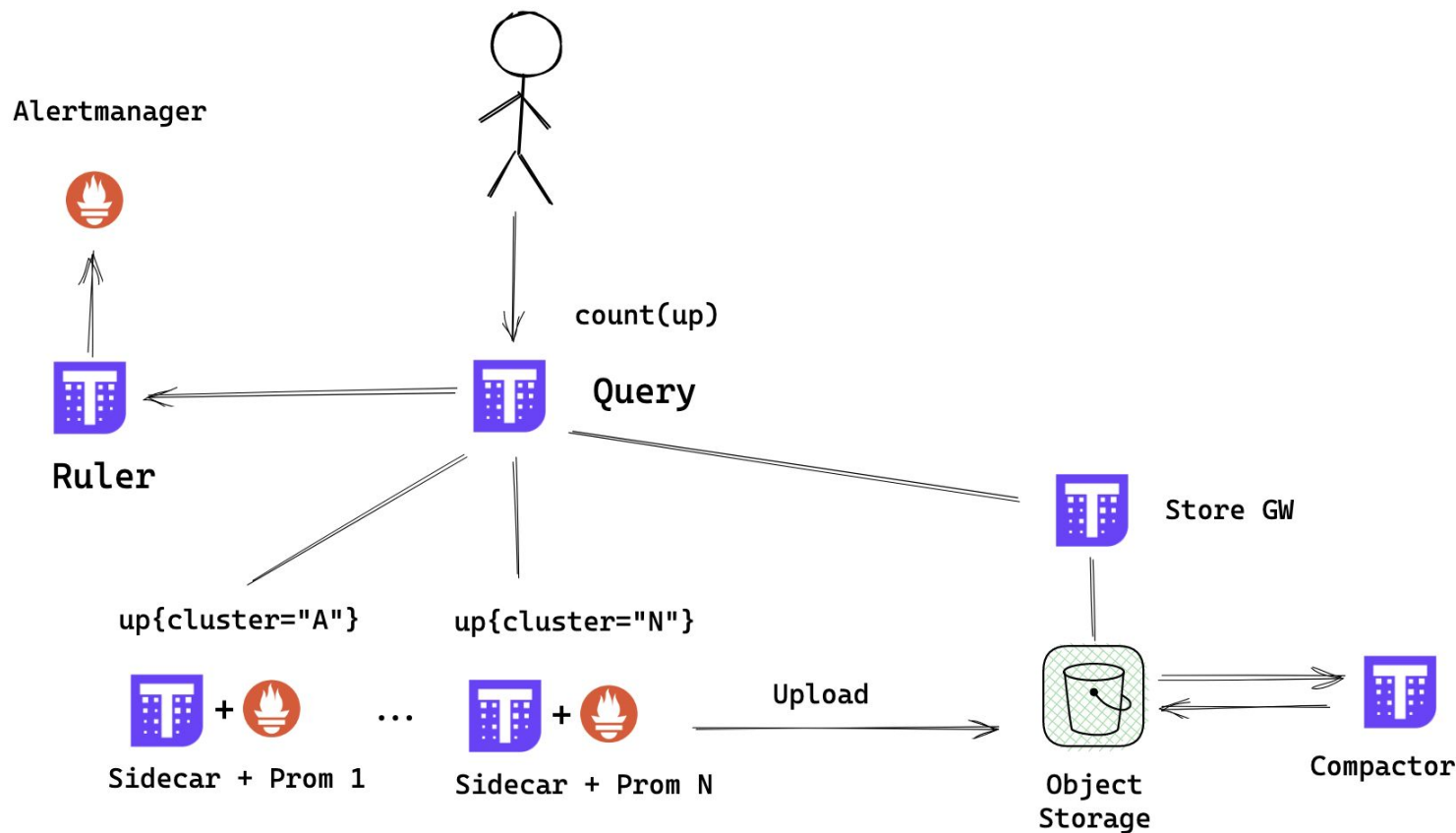
Thanos Ruler



Thanos Store



Query with Unlimited Retention



Prerequisites

- Computer
- git, make
- Go (preferably 1.20.X) => [install](#)
- Docker => [install](#)
- NodeJS + npm (if working on frontend)
- Prometheus => [install](#)

More detailed:

<https://thanos.io/tip/contributing/contributing.md/>

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First steps

- Getting started
 - Clone (and fork) github.com/thanos-io/thanos
- **make** is your friend
 - **make help**
 - **make build**
 - **make test-local**
 - **make test-e2e-local**
 - **make quickstart**
- Spinning up multiple Thanos components
 - **scripts/quickstart.sh** script
 - [GitHub Codespaces / GitPod](#)
- Interactive tutorial
 - <https://killercoda.com/thanos/>

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Opening a PR

- Formatted? Linted? Tested?
- **Signed your commits?**
 - `git commit -s`
- Update CHANGELOG.md
- Good description, link GitHub issue(s)
- What we look for?
 - Correctness
 - Readability / coding style
 - [Guide](#)
 - Efficiency (benchmarks?)
 - Backwards compatibility

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Opening a PR

- Demonstration

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Issues!

- Frontend
 - <https://github.com/thanos-io/thanos/issues/6270>
- Backend
 - <https://github.com/thanos-io/thanos/issues/6284>
- **Bring your own issue!**

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Outro

- Want to learn more about Thanos and community?
 - **Session tomorrow at 11:00!**
 - <https://sched.co/1HzdL>

[Back to Schedule](#)

Friday, April 21 • 11:00 - 11:35

☐ Metrics at Full Throttle: Intro and Deep Dive Into Thanos - Saswata Mukherjee & Filip Petkovski, Shopify

[Click here to add to My Schedule.](#)

<https://sched.co/1HzdL> [Tweet](#) [Share](#)

Thanos is one of the leading open-source solutions when it comes to scaling Prometheus-based monitoring. It is a single binary, that provides you with various components that allow composing it into a distributed highly-available metric system with long-term retention. Thanos already addresses several unique challenges with scaling functionality like querying metrics across large time ranges via downsampling and ingesting metrics at scale. Over the last few quarters, the Thanos community has been more active than ever. We have been heavily focused on interesting challenges around operational excellence, namely query execution performance, building a brand new query engine and quality of service advancements. In this talk, you will learn about the basics of Thanos and how to leverage its state-of-the-art features. The Thanos maintainers will share their insights by giving you a brief overview, and demonstrating how they are using the latest features in larger engineering contexts.