



Pushing Prometheus until it breaks.

The bumpy road to a fully automated benchmarking.

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Krasi Georgiev

no problem if you pronounce it “crazy”



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Climbing and Carrots

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Prometheus maintainer from March



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Prometheus maintainer from March

Part of the  **redhat**. Prometheus team.

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 Prometheus




Climbing and Carrots

Prometheus in Red Hat

- Openshift
- Kiali
- Operations monitoring

Harsh Agarwal

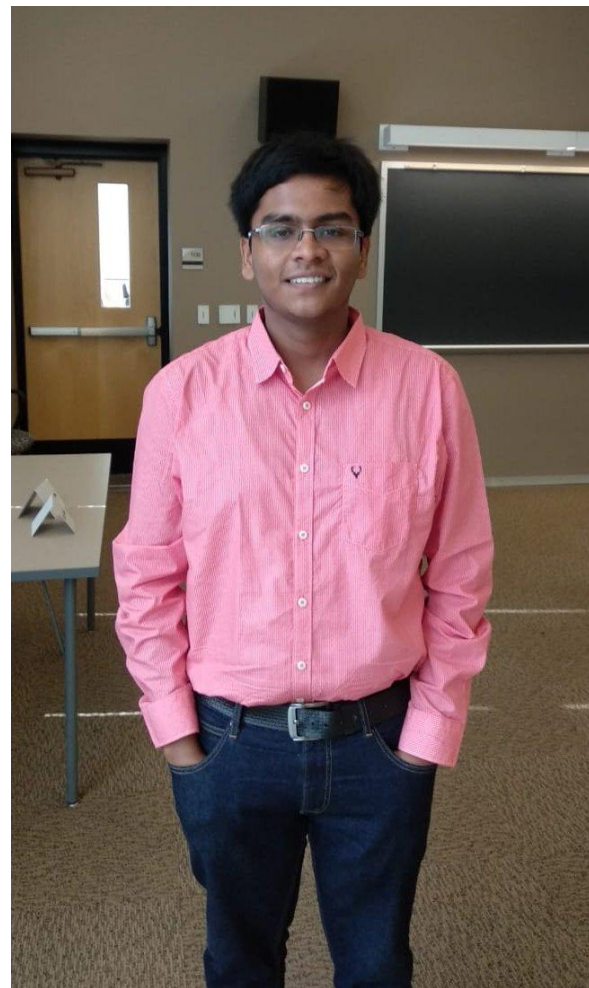
- Undergraduate student from  भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad
- Google Summer of Code 2018 intern for Prometheus
 - Mentors
 - Krasi Georgiev
 - Goutham Veeramachaneni



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Prometheus



Is prometheus ready for a new release?



**I day of a
Prometheus maintainer.**



Wake up and get ready for work.




Sounds Familiar?

User: My Prometheus is broken please help!

Me: Hey man I am not a psychic , give some details.

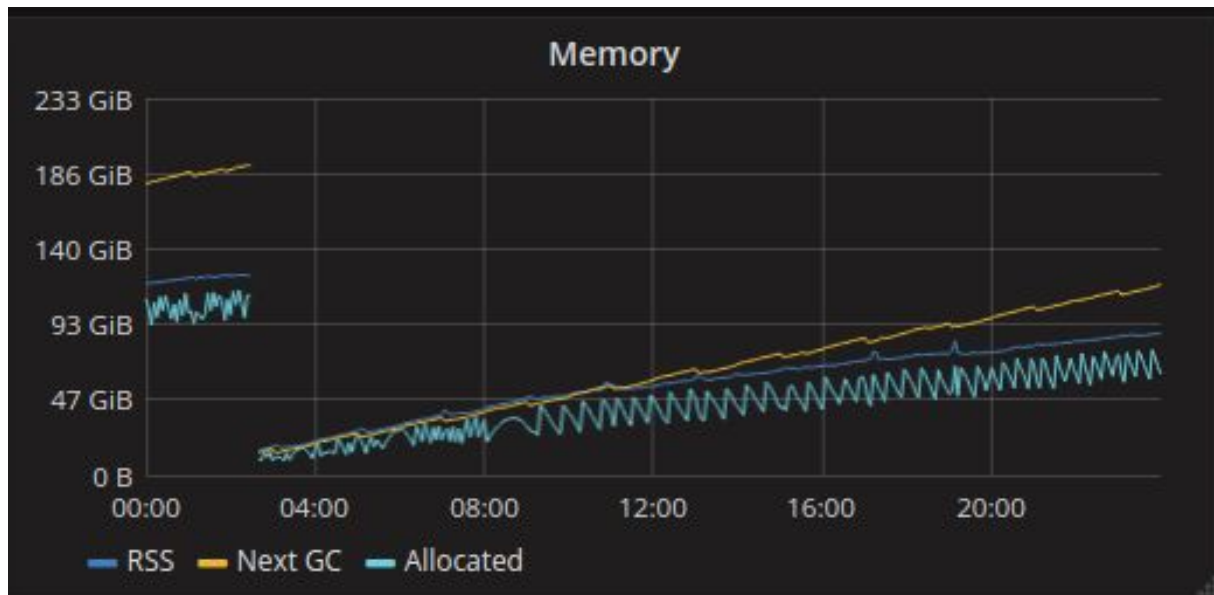
User: 100 lines config scraping 3500 targets.

Me: ooooo sh*t.... replicate this locally.....? 

Why benchmarking?

Why not just unit and e2e tests?

- Memory leaks appear at high load and happen over a long period.
- Compaction can be tested only with long running tests.



Why Prow CI?

- Build by the k8s testing team and runs on k8s
 - each job is a via pod deployments
- Integrates nicely with github
 - triggers via github comments
- Written in golang
- Easy to extend via plugins
- Used by k8s, openshift, istio, jetstack

Extended discussions: <https://goo.gl/CuKsMB>



Didn't make the finals.

- Drone CI
 - No comment triggers (WIP)
 - I bit hacky to make it run jobs on k8s(WIP)
- Packet - Cloud on Bare Metal
 - kudos to their amazing team for helping.
 - decided to use GKE to avoid the k8s bootstrapping
- terraform , kubectl
 - Prefer to troubleshoot few lines of go lang code
 - Life is too short to learn new tools :)
 - The **prombench** tool is easy to use and no dependencies

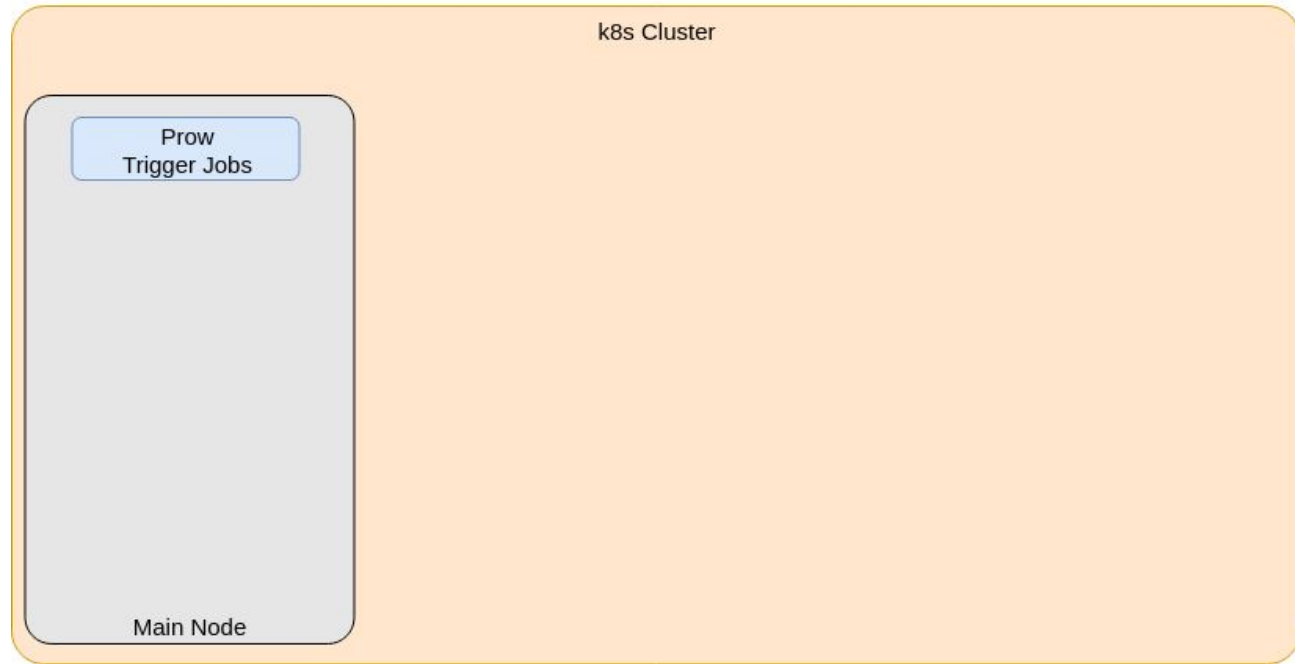


Recorded Demo?

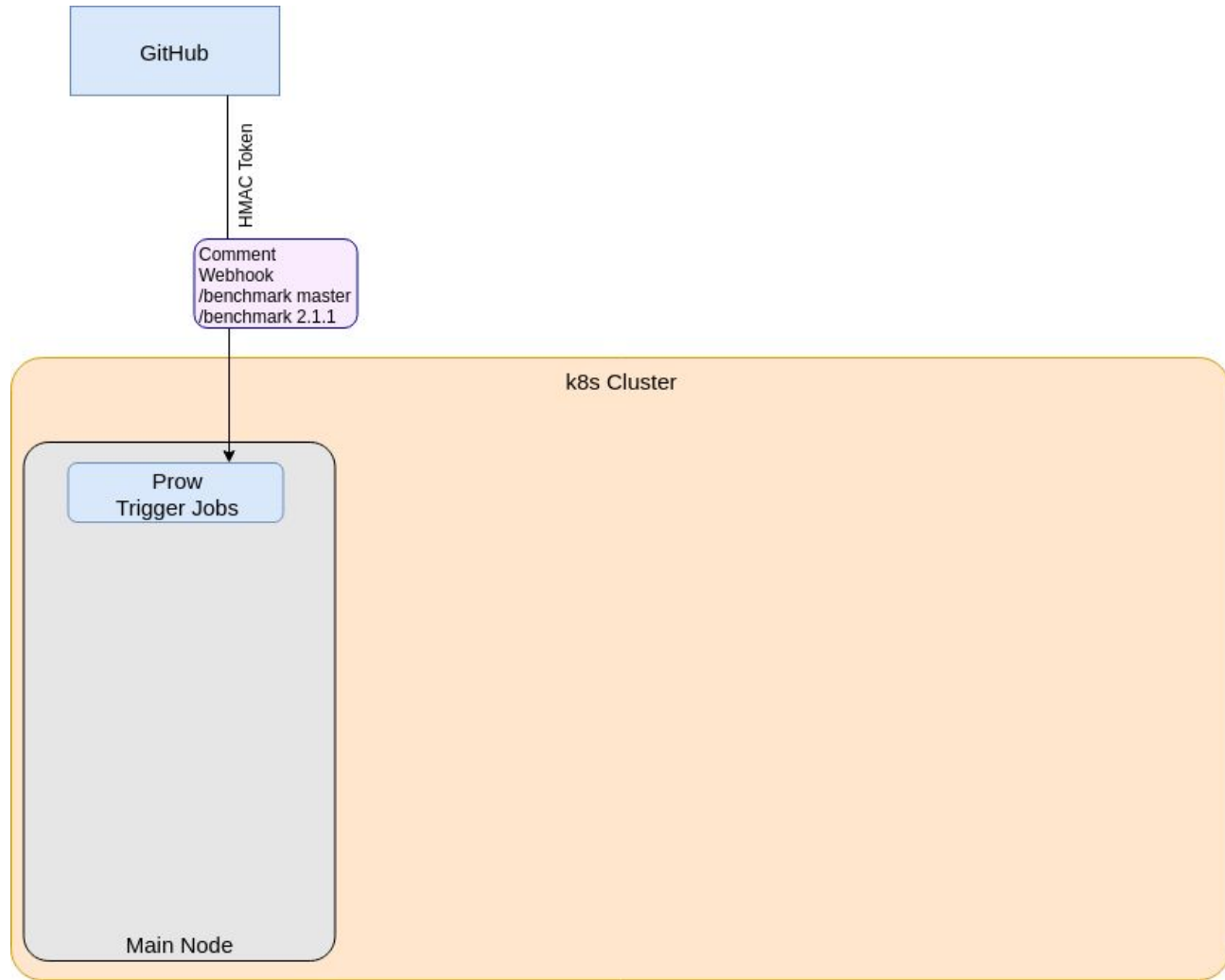
<https://github.com/prometheus/prombench>



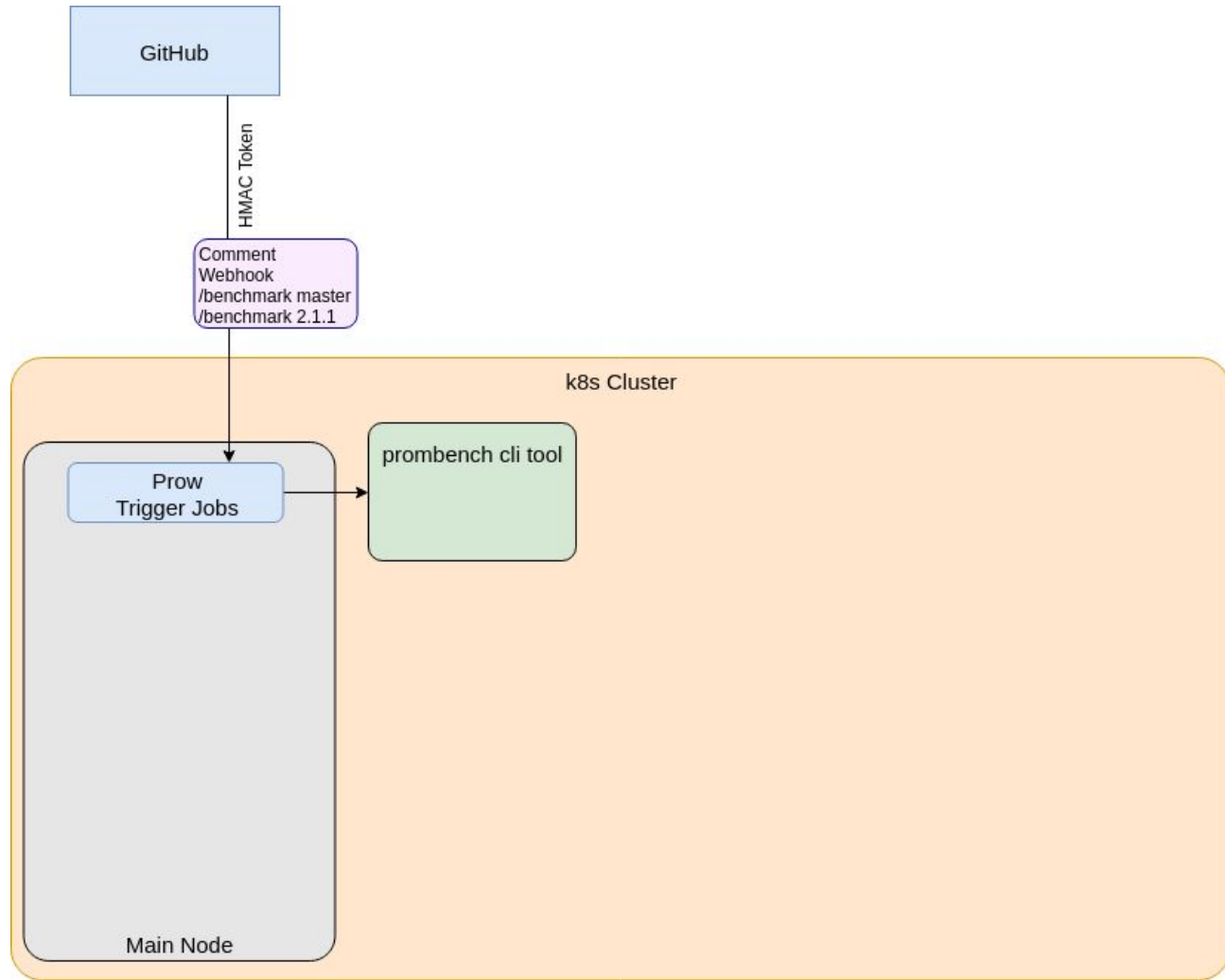
Life of a Bench test



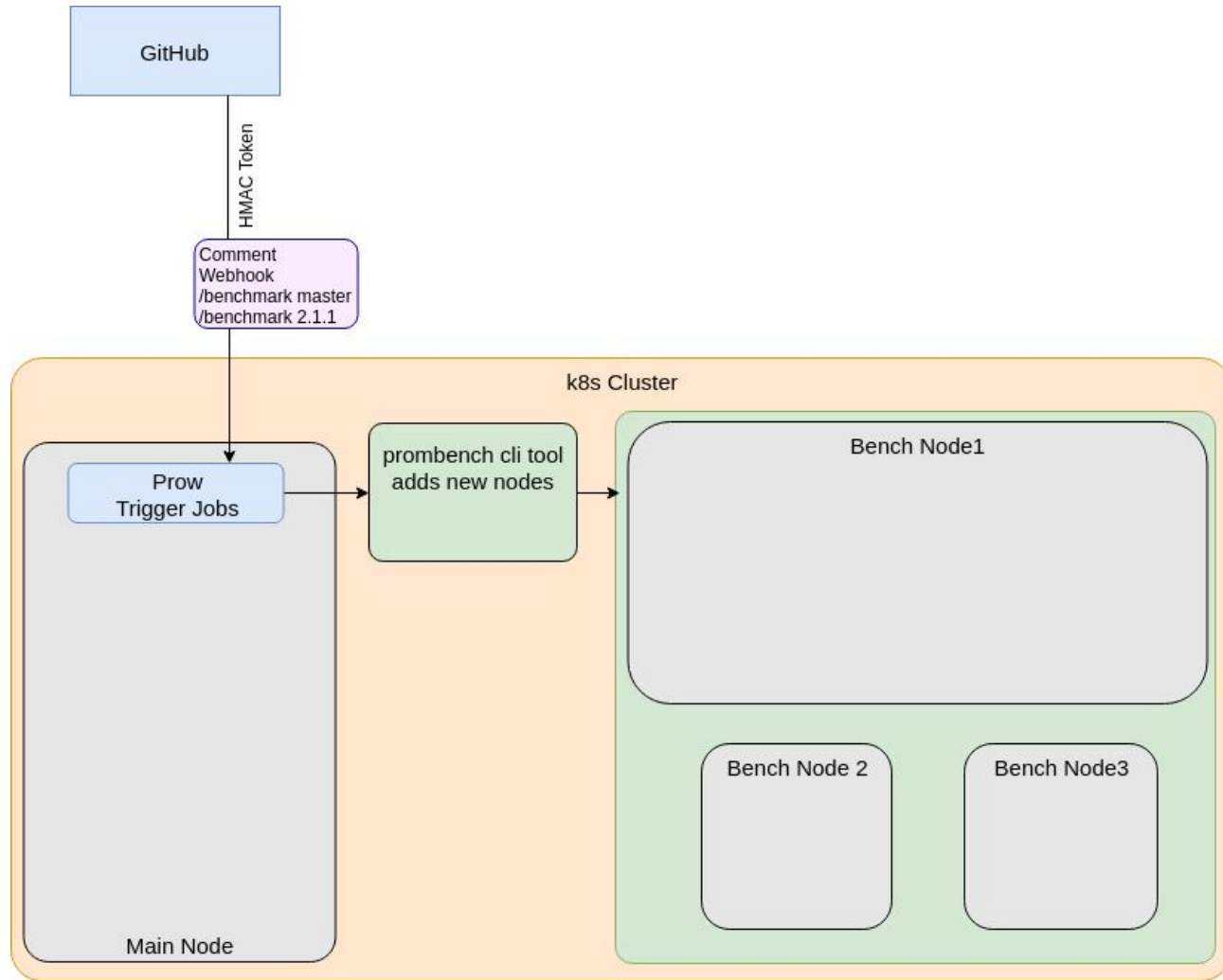
Life of a Bench test



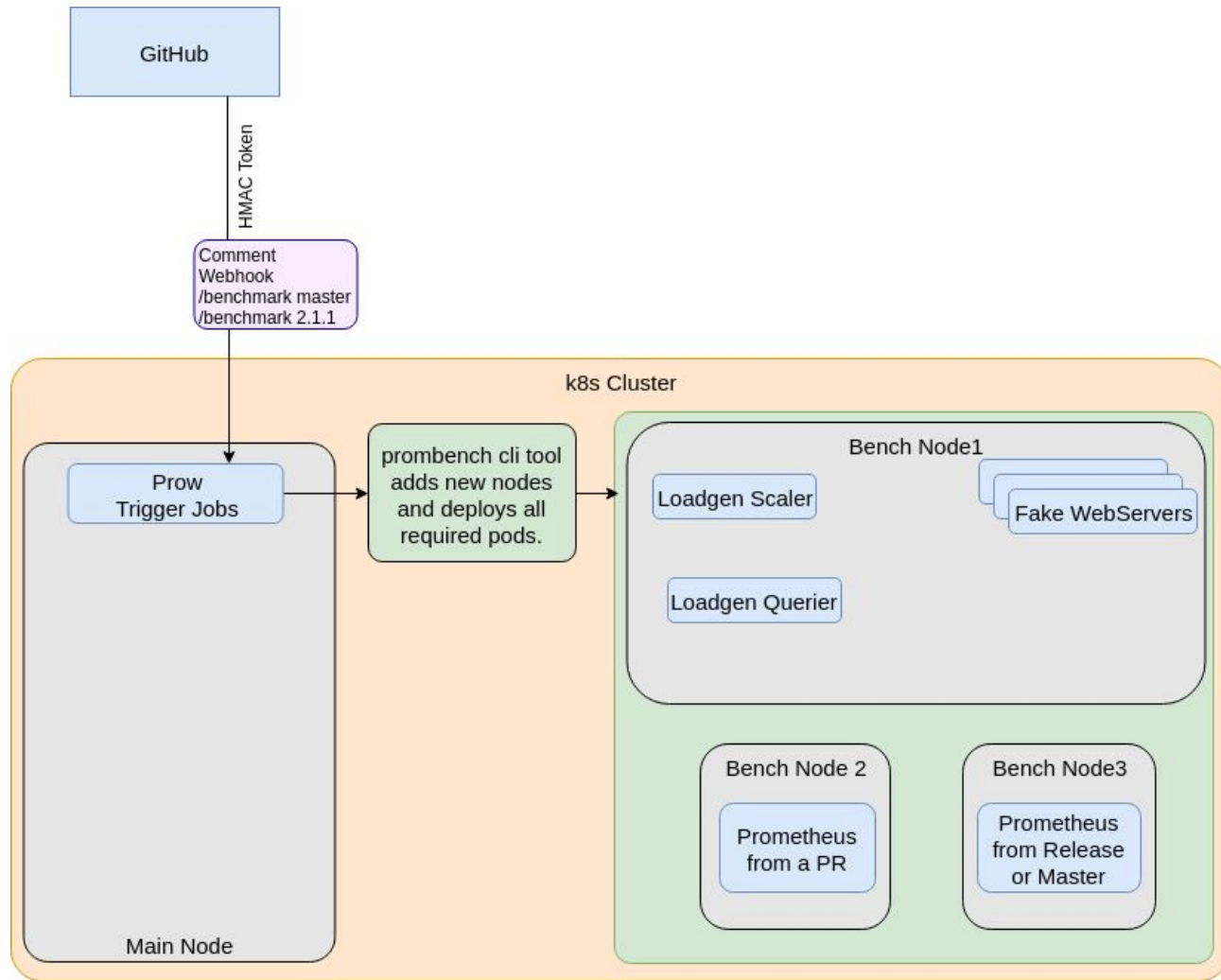
Life of a Bench test



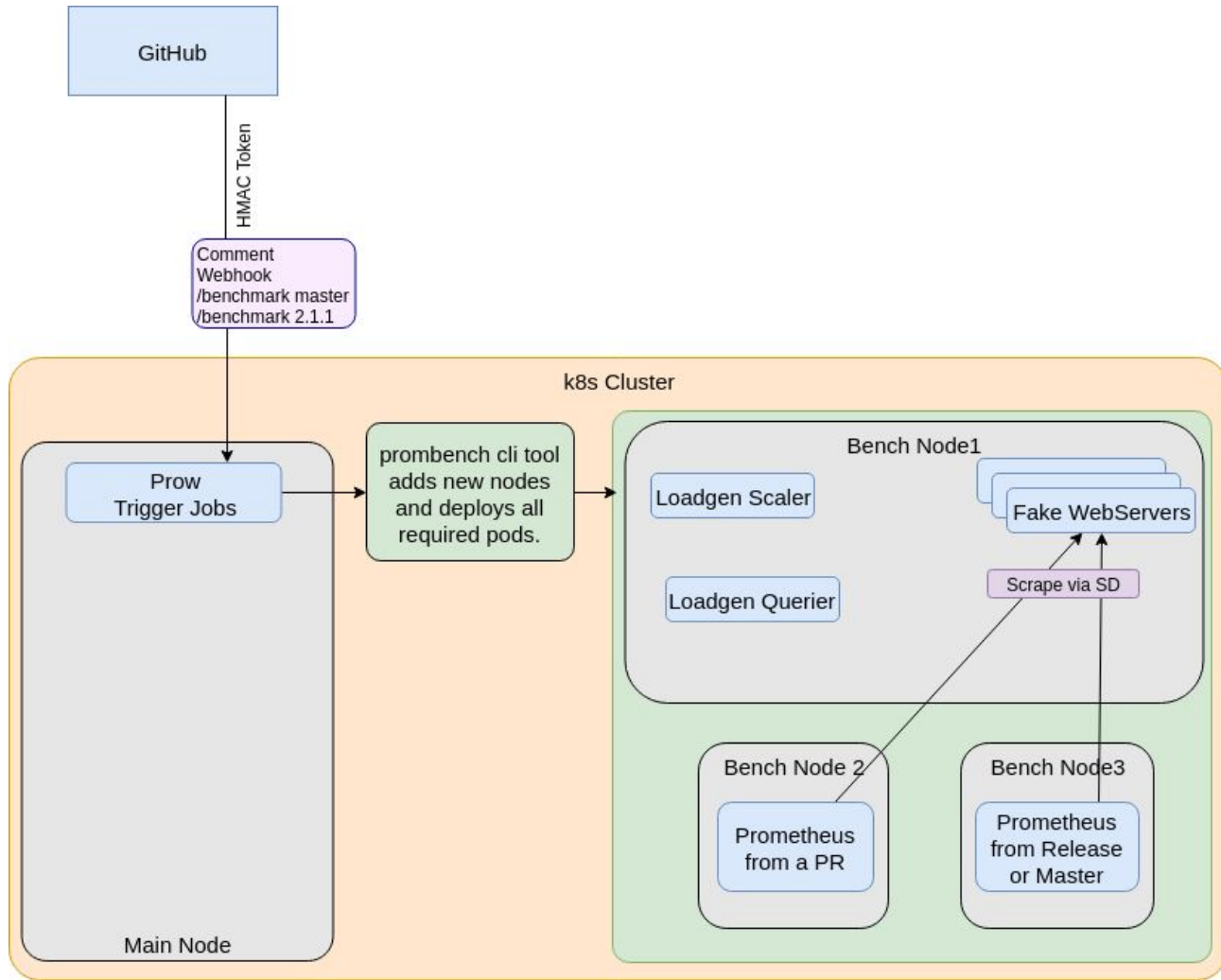
Life of a Bench test



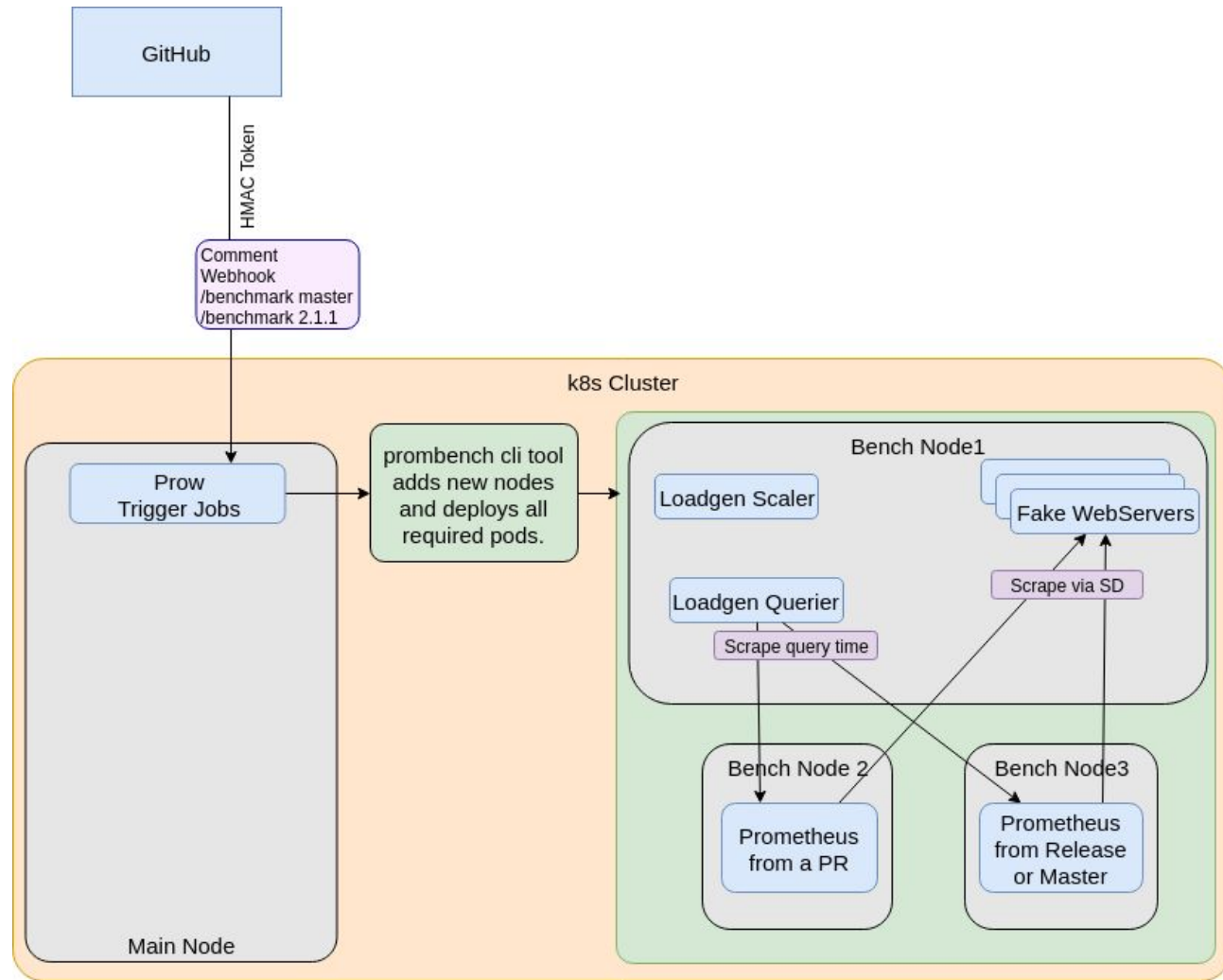
Life of a Bench test



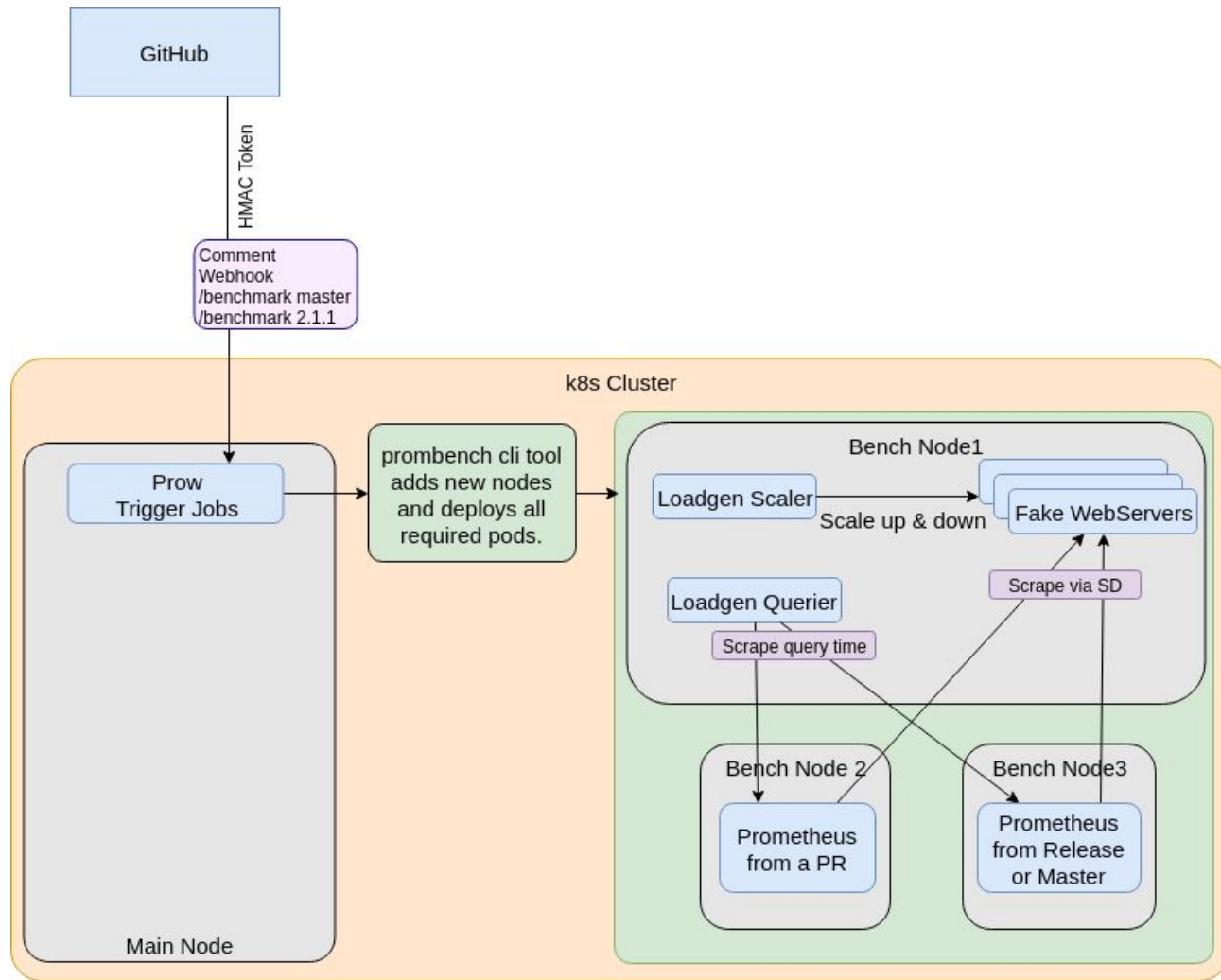
Life of a Bench test



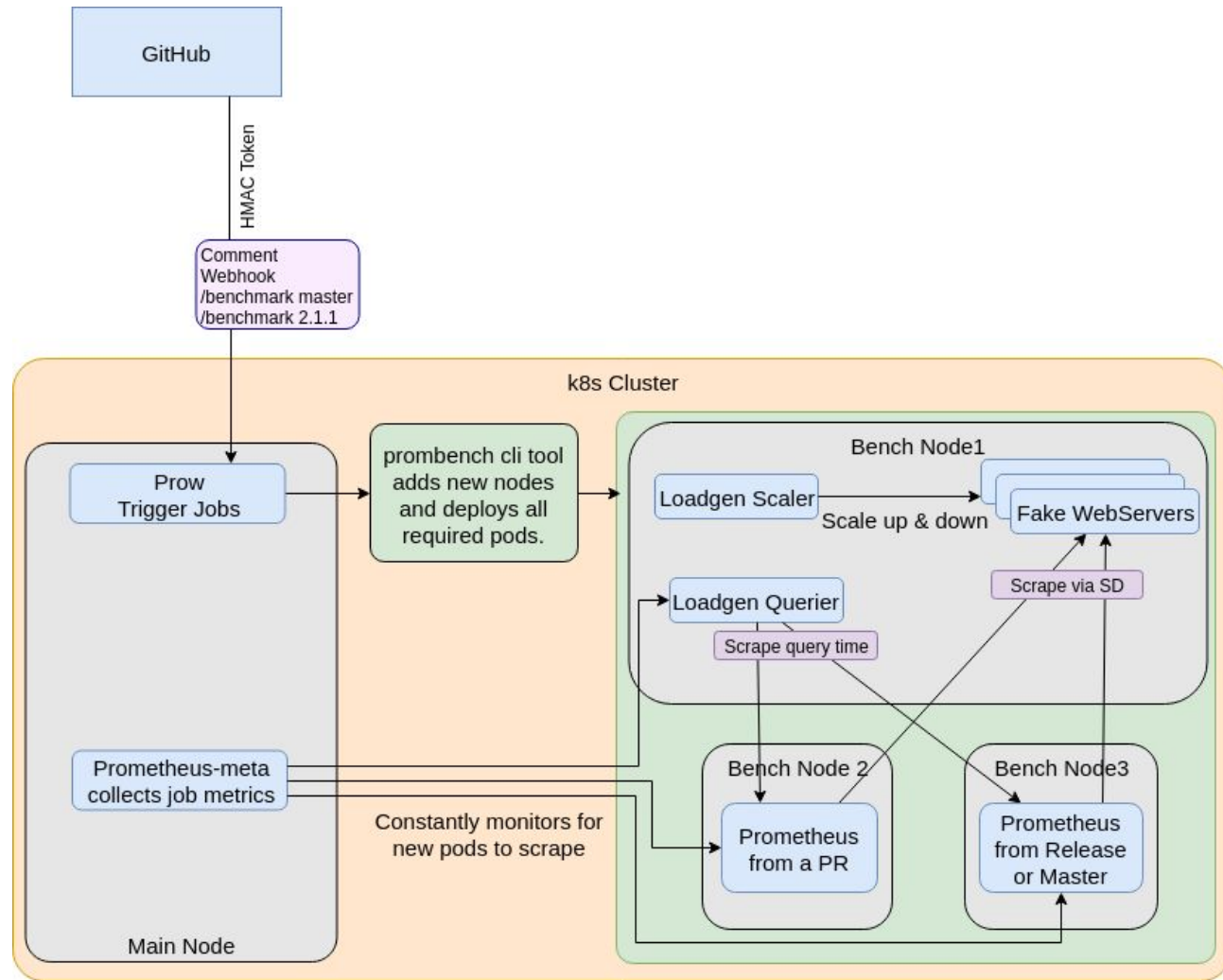
Life of a Bench test



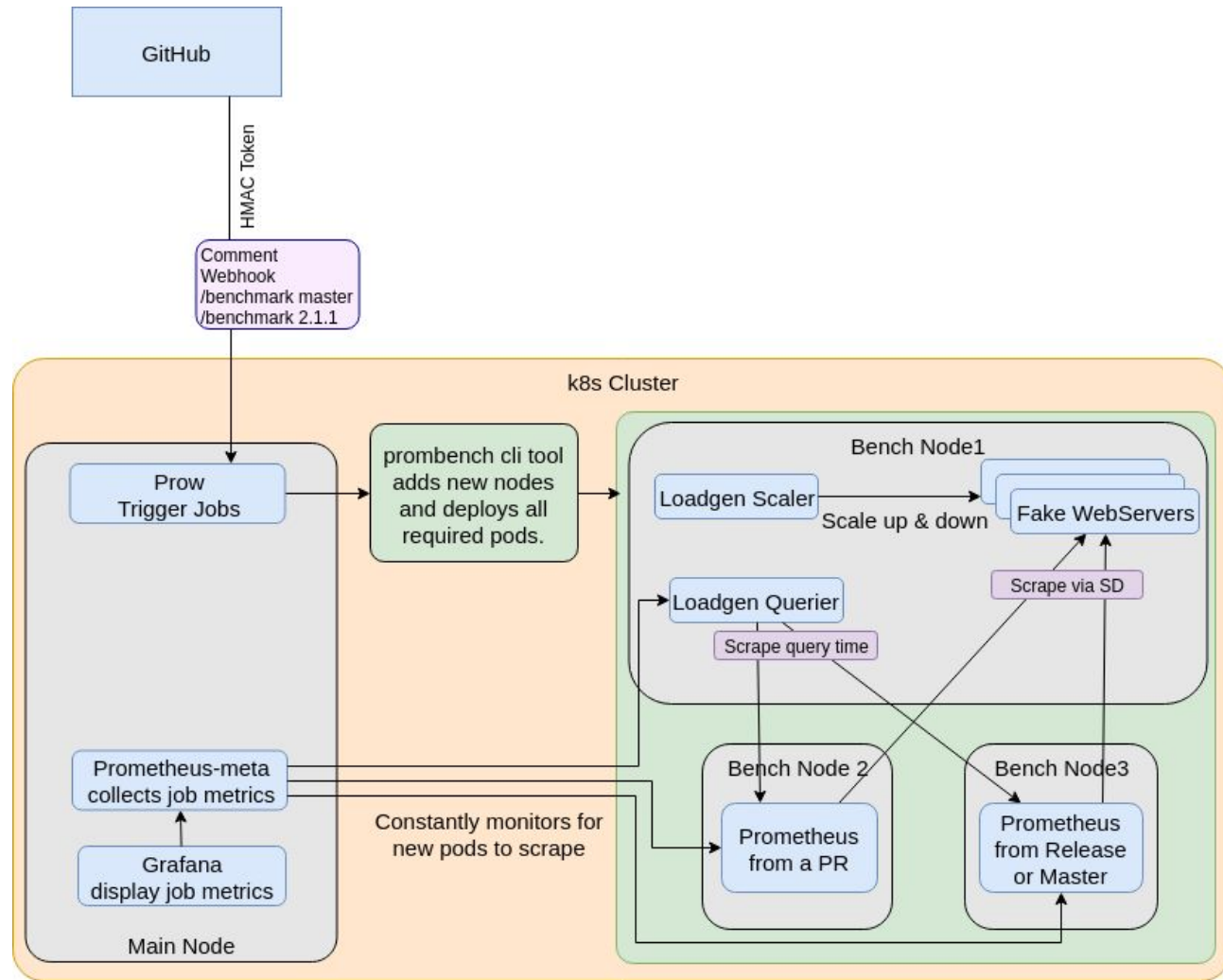
Life of a Bench test



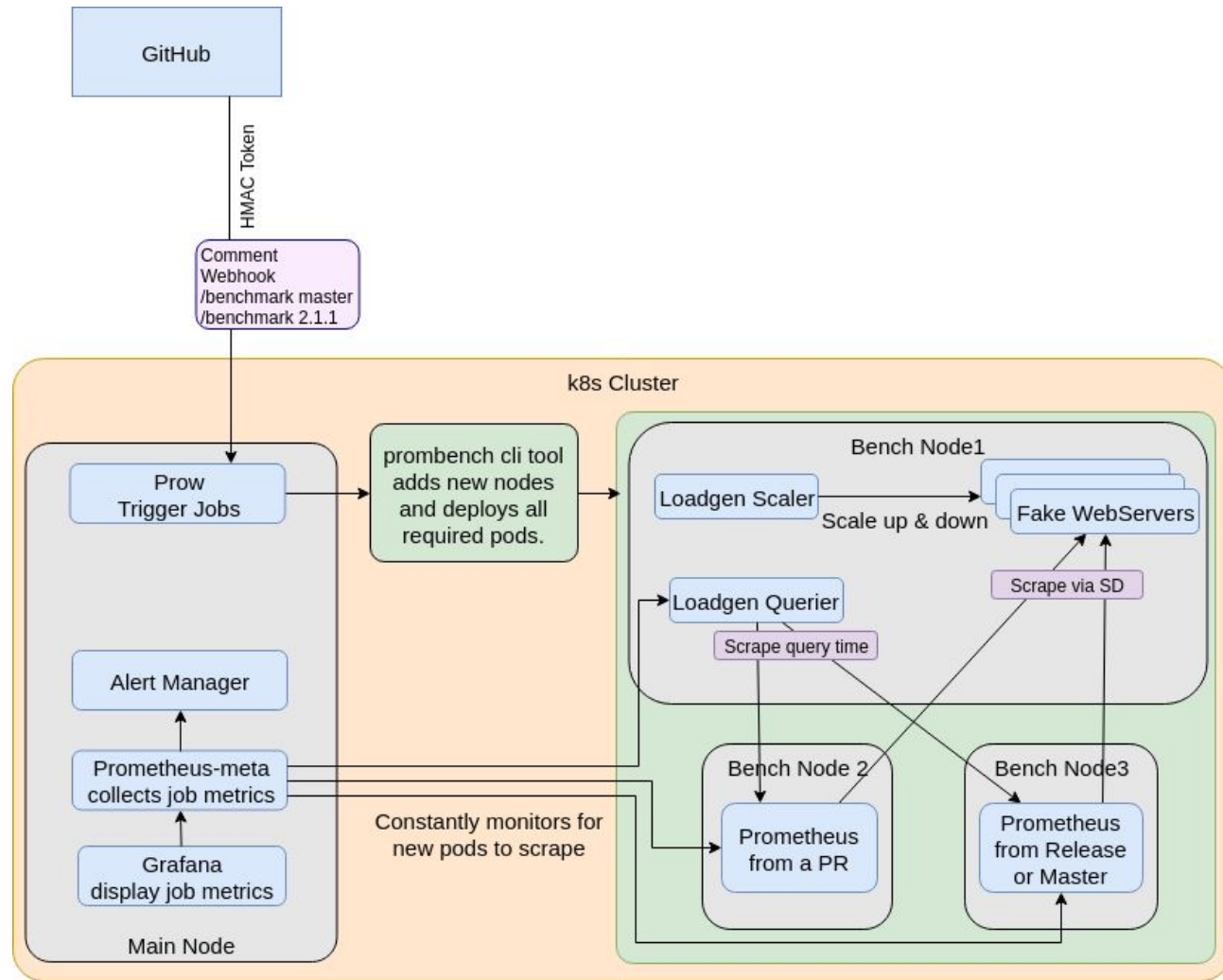
Life of a Bench test



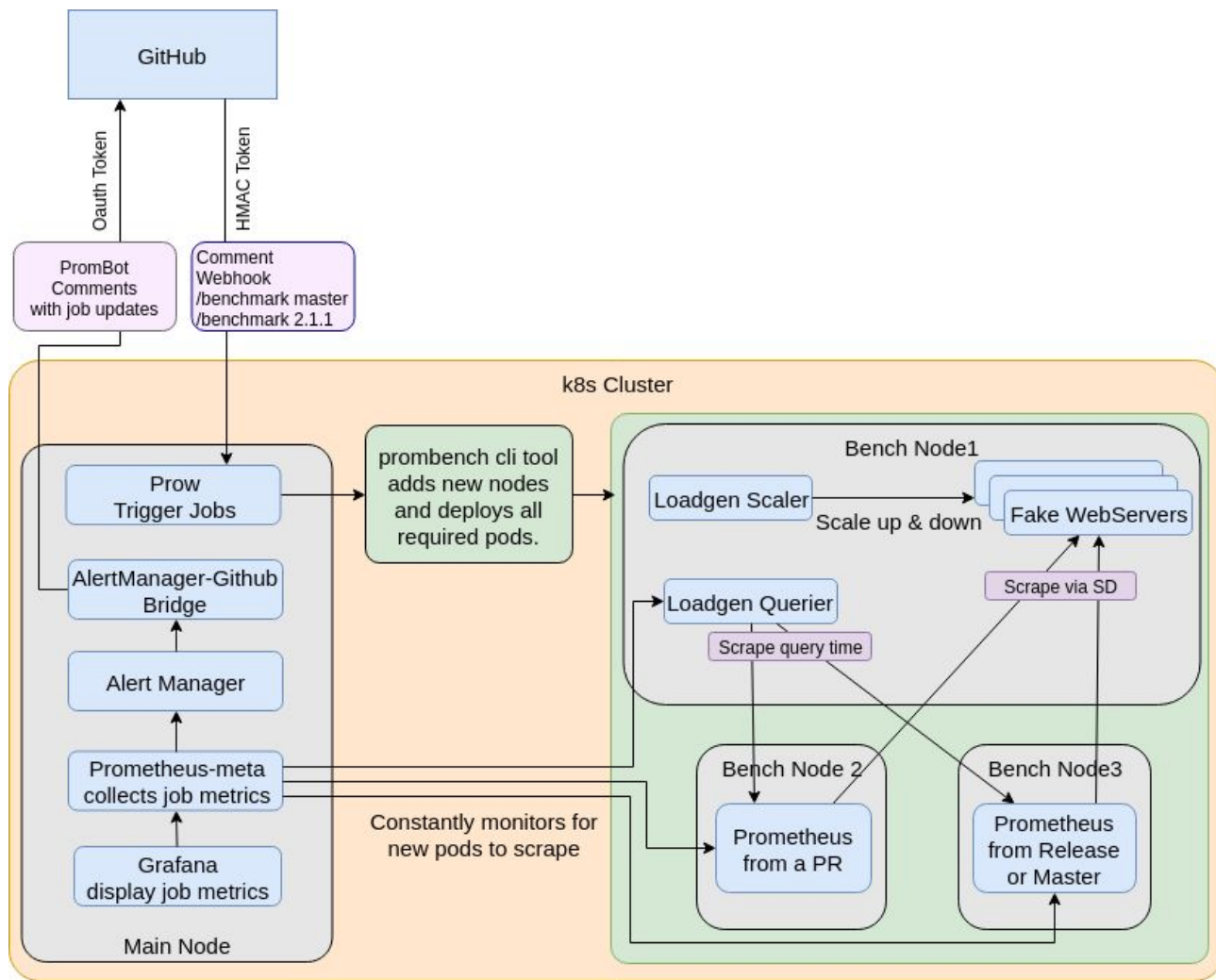
Life of a Bench test



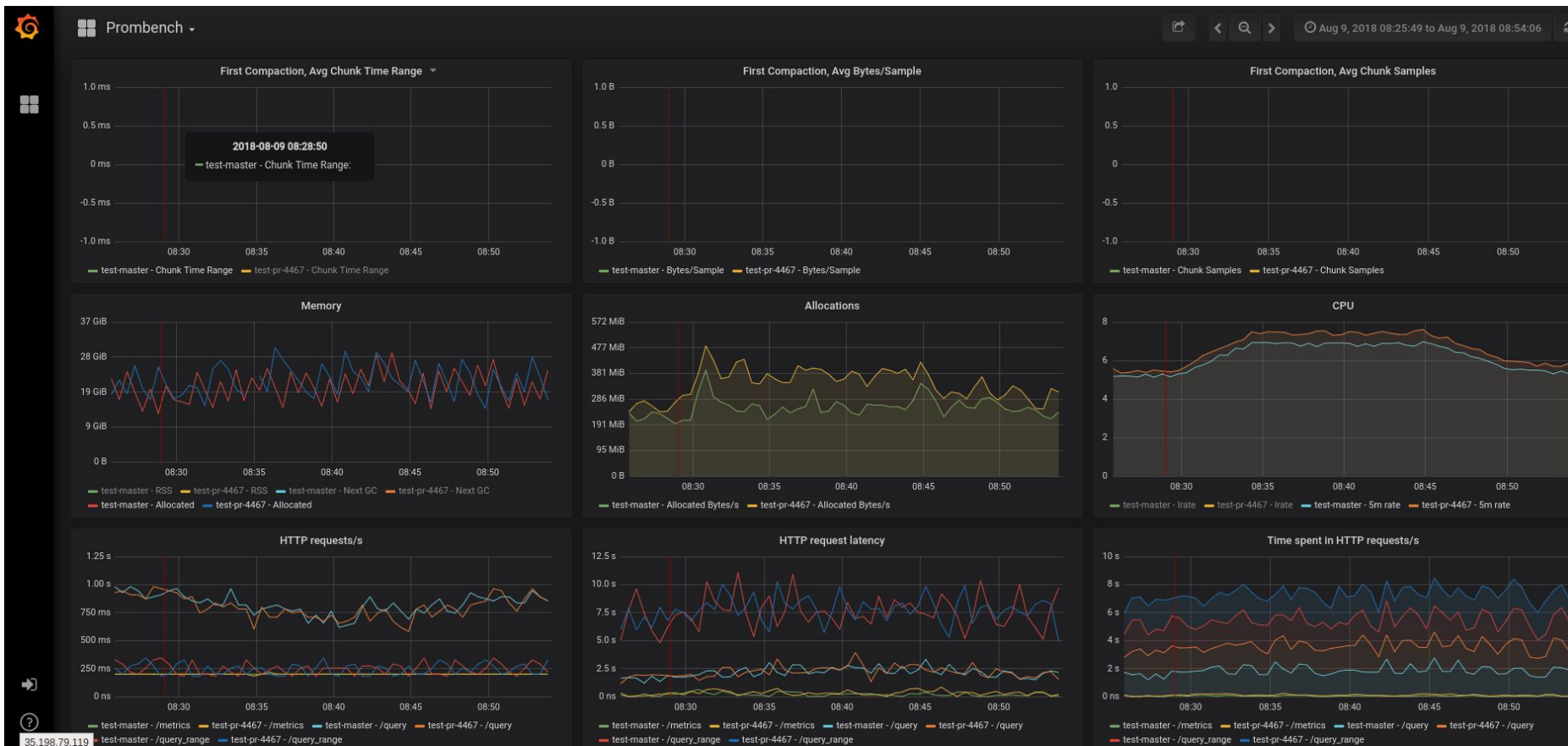
Life of a Bench test



Life of a Bench test



Results example PR vs Master



This is only the beginning!

- Document how to run manually without prow.
- Catch Races with the -- race detector.
- Add Service Discovery tests.
- Automated Scalability tests.
 - post results with every release
- New cli commands
 - ``promtool debug`` - gather metrics/profile data
 - ``tsdb scan`` - scan and repair/delete corrupted blocks(WIP).



the **Big** thanks

Positively surprised of how much support we received from everyone.

- Packet , Google , RedHat(for letting me work on this).
- Goutham, Frederic , Max for providing feedback along the way
- Julius - for putting us in touch with the CNCF for the GKE credit.
- Chris from the CNCF for setting up the google account.
- Fabian & Max for their first Prombench version.
 - Many pieces were all ready to use.
- The kubernetes-sig-testing team for introducing us to prow.
 - <https://github.com/cjwagner>
 - <https://github.com/krzyzacy>

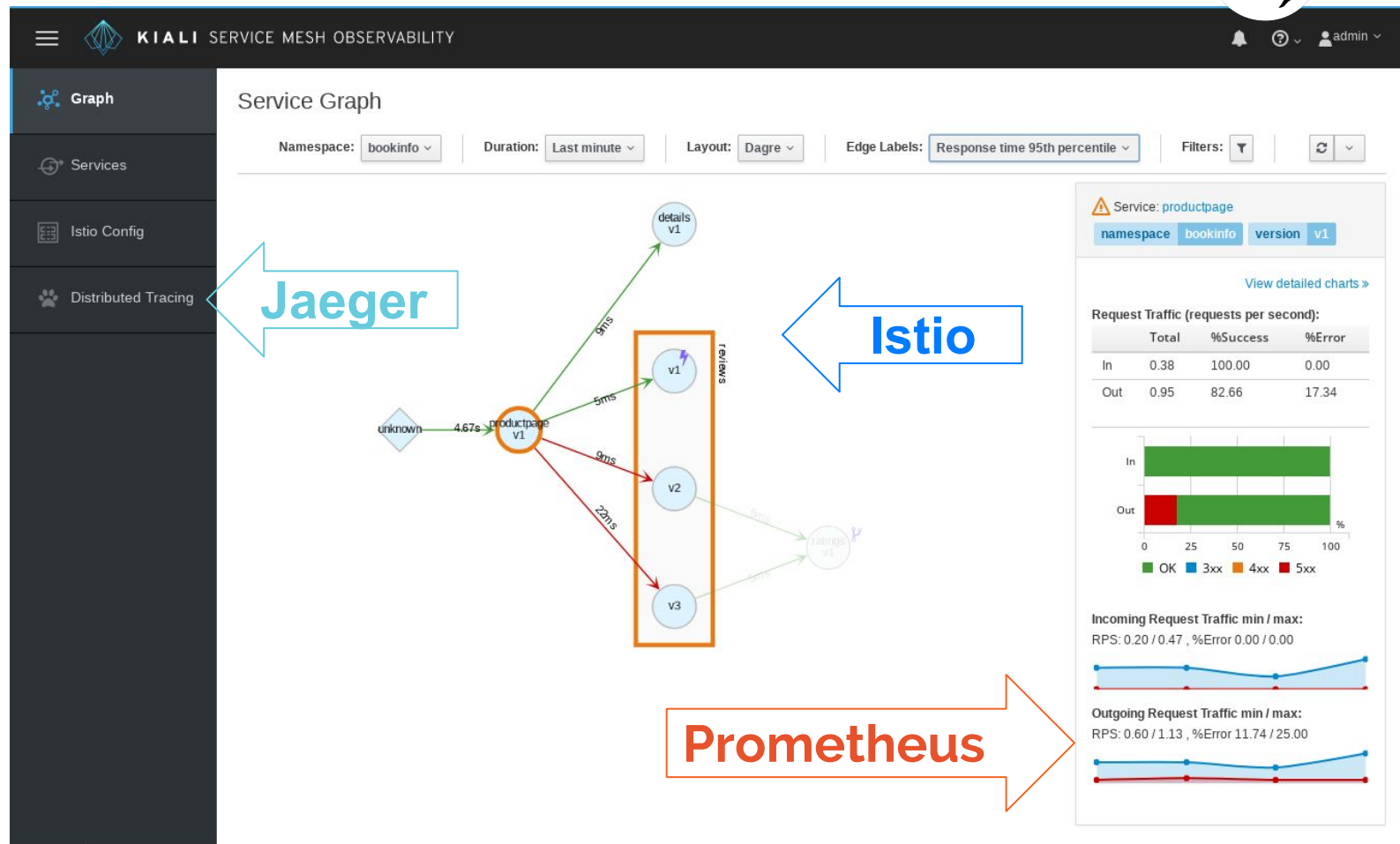


Conclusion!

If you don't break = you don't refactor and optimize.



Open source - Mesh observability



If you DON'T have any questions please ask them now.

Questions for extreme sports are welcome :)

Slides: <https://goo.gl/ky5ZZX>

Code: <https://github.com/prometheus/prombench>

Proposal: <https://goo.gl/CuKsMB>

