

THESIS STATUS REPORT

WEEK 02

DONE

I connected the single steps of the synthetic load testing and deployment. Both processes are now automated.

I decided to use Linkerd ¹ as a service mesh to gather network metrics. It is easier to deploy and more lightweight than other service meshes like *Istio* and *traefik*. Furthermore, it contains its instance of *Prometheus* which makes collecting its metrics more accessible. I accomplished to deploy Linkerd into the Kubernetes cluster and I am now able to collect these metrics.

I started to filter and format all gathered metrics and I am now finding out which metrics are useful in which particular way and combination.

Additionally, I deployed *Grafana* and started to create a dashboard where all relevant metrics can be observed in real-time.

I started to research about how an Autoscaler could be implemented. There is a possibility to use a Prometheus metric based Autoscaler².

UPDATE FROM SYNC MEETING (15.01.2021)

Next meeting is postponed until I am not sick anymore. I should contact the secretary about postponing my submission date.

NEXT STEPS

1. Format the Data for machine learning and extra-p usage
2. Develop and implement the machine learning model
3. Implement extra-p
4. Implement the auto scaler

¹ <https://linkerd.io/>

² <https://github.com/DirectXMan12/k8s-prometheus-adapter>