

# PostFinance picks Isovalent Cilium Enterprise for Cloud Native Networking

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PostFinance is a diversified, innovation-driven financial services provider. We provide our customers with first-class solutions and smart innovations for the management of their finances. We rely on future-oriented tools and technologies that we've specially developed or adapted for the Swiss market.



**Thomas Gosteli**

Linux Systems Specialist

*"Cilium and Isovalent helped our team to build a scalable Kubernetes platform which meets our demanding requirements to run mission-critical banking software in production!"*

### KEY FIGURES

17

Clusters

7-75

Nodes

74

Applications

x12k

Faster Pod Startup

2.6M

Users

1000s

Of Containers

## Situation & Challenge

Electronic payments are becoming increasingly popular, and thus availability and scalability requirements for systems processing those payments are more important than ever.

By changing the applications to run in containers and using Kubernetes to orchestrate them, we were able to solve many of our problems. By the time of writing there are already around 70 different applications, each with one or many microservice(s), running in one of our 19 on-premises Kubernetes clusters varying in size between 7 - 75 nodes.

But in the real world, such changes always have some drawbacks. For example, gaining networking insights with traditional, iptables-based CNI plugins was quite hard. The growing infrastructure also led to some latency issues and problems for the CNI plugin in maintaining a consistent state of iptables rules across all cluster nodes.

## Solution

By replacing our previously used CNI with Cilium (including the kube-proxy replacement) we were able to solve our challenges regarding scale, observability and latency.

We measured and compared pod startup latencies - how long does it take for a pod after startup to reach certain endpoints on the network? - and quickly saw that Cilium was outperforming the iptables based CNI:

TYPE	IPTABLES BASED CNI (MAX)	CILIUM (MAX)
Outgoing connection	75ms	48ms
Connection to k8s service	12s	12ms
Connection to pod IP	60s	5ms

\*Measurements include the backend response duration.

## Value

By using Cilium, networking was made visible to us.

- The powers of the gained observability help us to quickly identify and fix problems - which is crucial for our customers wanting to pay for their lunch (or anything else).
- But observability is not limited to (troubleshooting) operations, we're now also able to use network events to generate security alerts, perform forensic analysis and transparently encrypt network traffic "in-flight".
- Additionally, we were able to solve the scale issues of our previous CNI plugin and to simplify our Kubernetes setup by eliminating the need for kube-proxy.



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