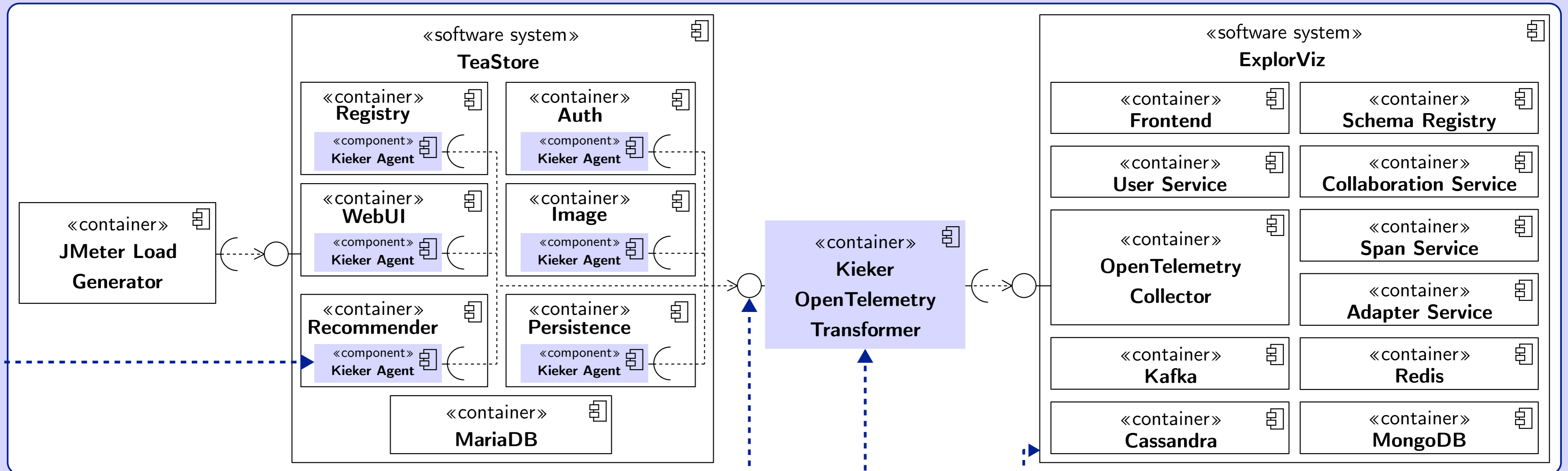
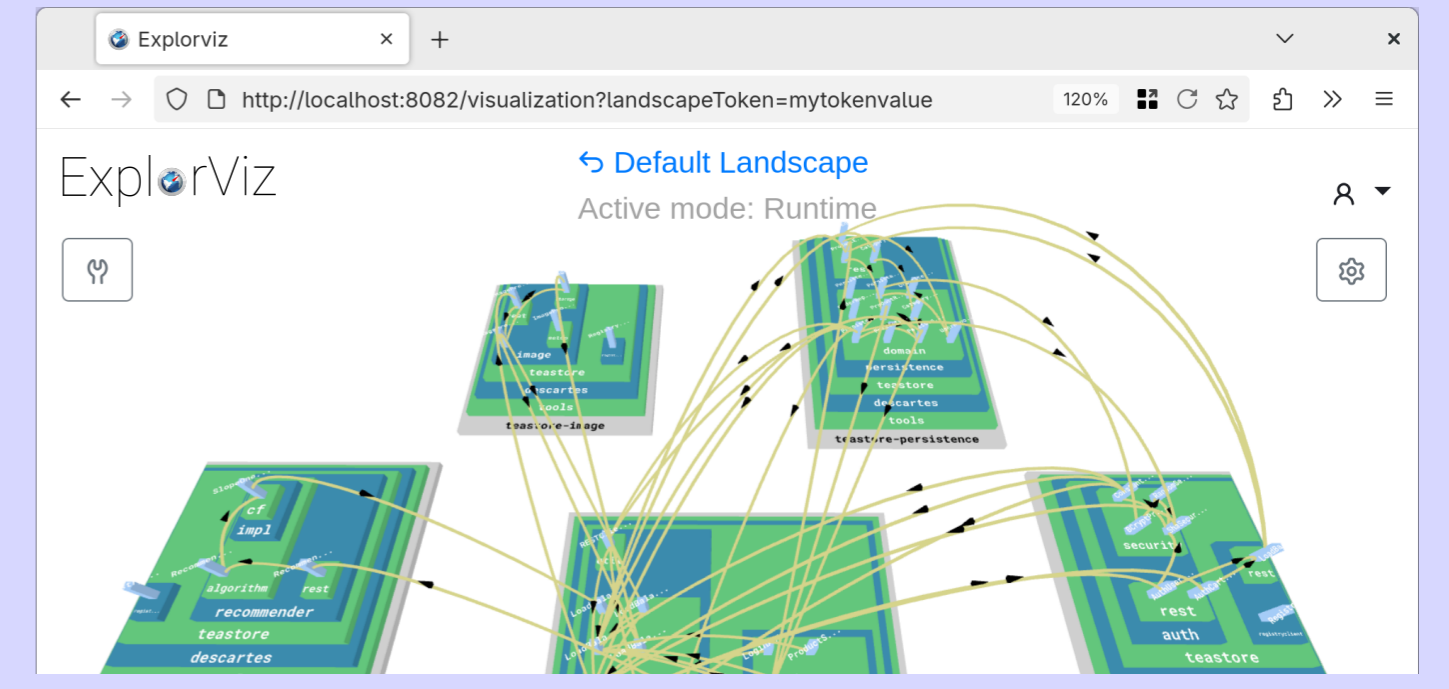
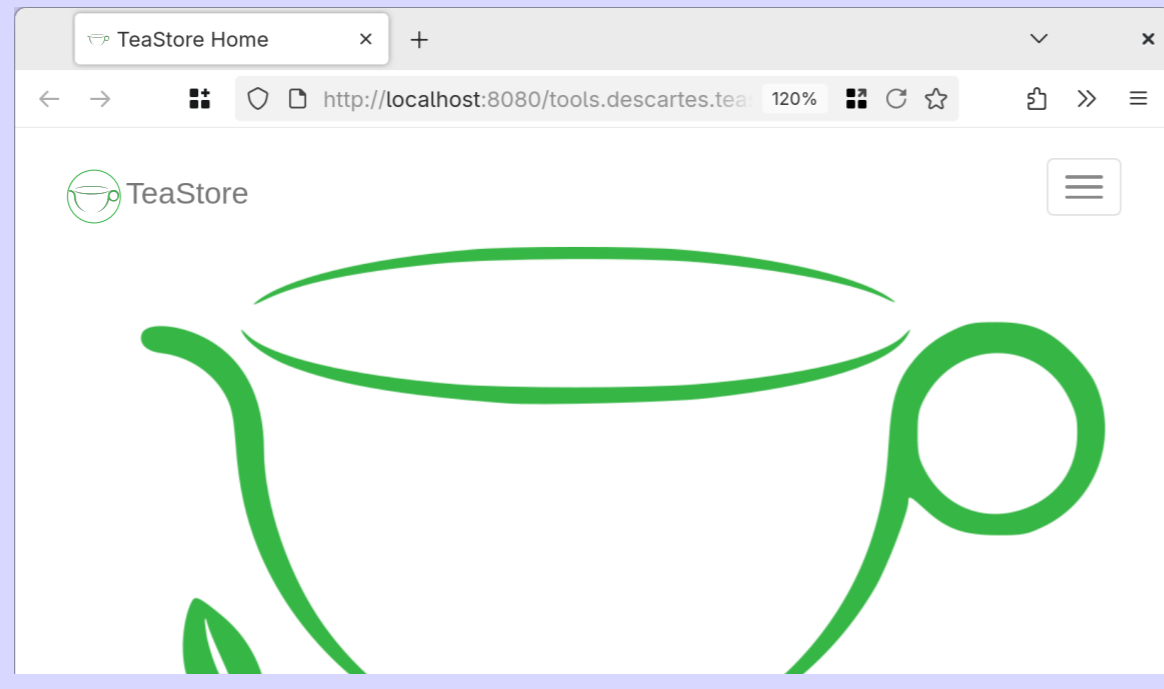


# The Kieker Observability Framework Version 2

[www.kieker-monitoring.net](http://www.kieker-monitoring.net)



## The Tool Artifact Architecture



## Interoperability between Kieker and OpenTelemetry

- Kieker agents are running inside each TeaStore microservice container
- Kieker agents in each TeaStore microservice generate Kieker records
- Kieker OpenTelemetry Transformer translates Kieker records to spans
- ExplorViz consumes the received spans and visualizes TeaStore

## Current & Future Work

- **Support for Python applications:** using a domain-specific language that maps an OpenTelemetry (OTel) span to a Kieker record.
  - Leverages the OTel instrumentation
  - **OTel → Kieker Translation:** Translation on the client ((de-)serialization overhead vs. instrumentation overhead)

## Try the Tool Artifact Demo

```
git clone https://github.com/kieker-monitoring/tool-artifact
cd tool-artifact
docker compose up -d
```

- Launches all software systems as microservices using Docker Compose
- Tested and runnable on all major platforms with Docker
- TeaStore and ExplorViz are accessible with two web servers:
  - (1) TeaStore: <http://localhost:8080>
  - (2) ExplorViz: <http://localhost:8082>

## The SustainKieker Project

- **DFG-funded project for the reusability and sustainability of Kieker as research software (grant no. 528713834)**  
[sustainkieker.kieker-monitoring.net](https://sustainkieker.kieker-monitoring.net)

## Replicability Repositories

GitHub: Docker compose scripts that download and run Docker images  
<https://github.com/kieker-monitoring/tool-artifact>

Zenodo: OVA appliance image runs the demo after booting on an OVA-supported virtual systems  
<https://doi.org/10.5281/zenodo.14989908>

TeaStore Online Demo from Kiel University Data Center  
<https://teastore.sustainkieker.kieker-monitoring.net>

ExplorViz Online Demo from Kiel University Data Center  
<https://explorviz.sustainkieker.kieker-monitoring.net>

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