Gaia-Xcelerate SUMMIT 2023

Alicante, Spain

9 & 10 November

In partnership with gaia-x Hub Spain

gaia-x

#GaiaXSummit23

Structura-X

gaia-x

POC opiquad
federated multi-region cloud roaming

POC TNO
federated resource expansion

gaia-x GXDCH

CISPE CATALOGUE

Business Case Application

Sibilus APP APP APP

Kubernetes Cluster Orchestrator/Federator

RANCHER

LIQO

CSP Federation

aruba.it opiquad
arsys
intermax

aruba.it opiquad
arsys
bit intermax
SURF

IXP Federation

DE-CIX Madrid Frankfurt
top-ix ICX Turin Milan Merate
amsix Amsterdam

Structura-X

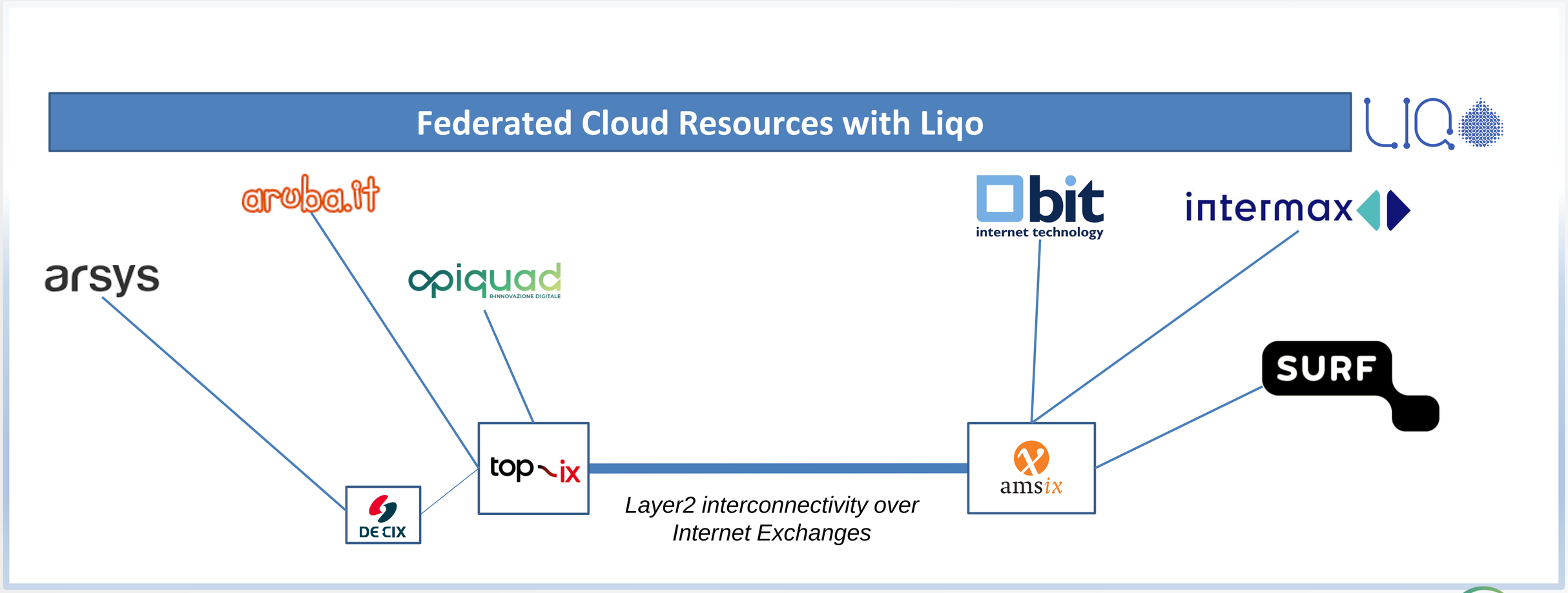
powered by Gaia-X

The demo in short

*We demonstrate the ability to **expand cloud compute resources by using third-party resources** in a trusted and transparent way by applying the Gaia-X Framework. This targets to eliminate **mitigates vendor lock-ins** for businesses acquiring cloud services and infrastructure resources*

Structura-X

Cross-border cloud federation with Liqo



Expanding cloud resources based on advertised characteristics in catalogue

Different types of criteria can affect **federation choices** and **deployment strategies**

We distinguish three types of criteria:

1) *Locality criteria* (e.g. geo-location, on-prem, edge, cloud etc)
2) *Technical criteria* (e.g. resource types, CPUs, GPUs, etc).
3) *Compliance criteria* (e.g. Gaia-X -, GDPR , NIS2 Compliance, etc)

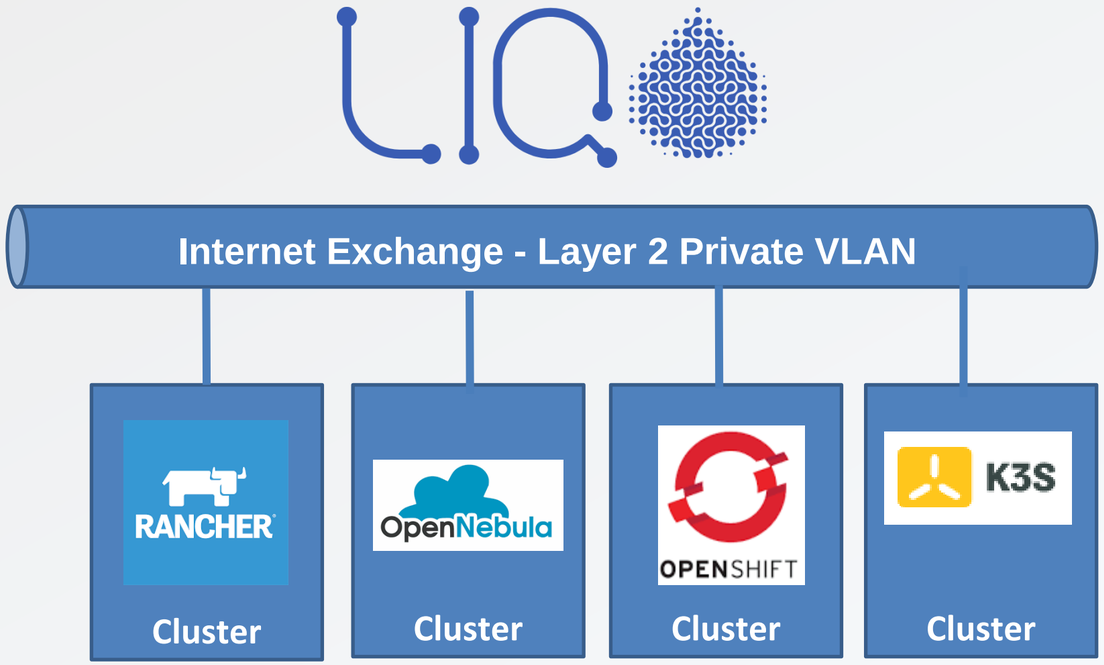
The technical setup

The federation is based on independently managed K8S-clusters

- Kubernetes based on OpenShift
- Kubernetes based on Rancher
- Kubernetes based on K3S
- Kubernetes based on OpenNebula (ONE)

- Layer 2 network connectivity over AMS-IX, TOP-IX and DE-CIX

- Liqo to federate the Kubernetes clusters



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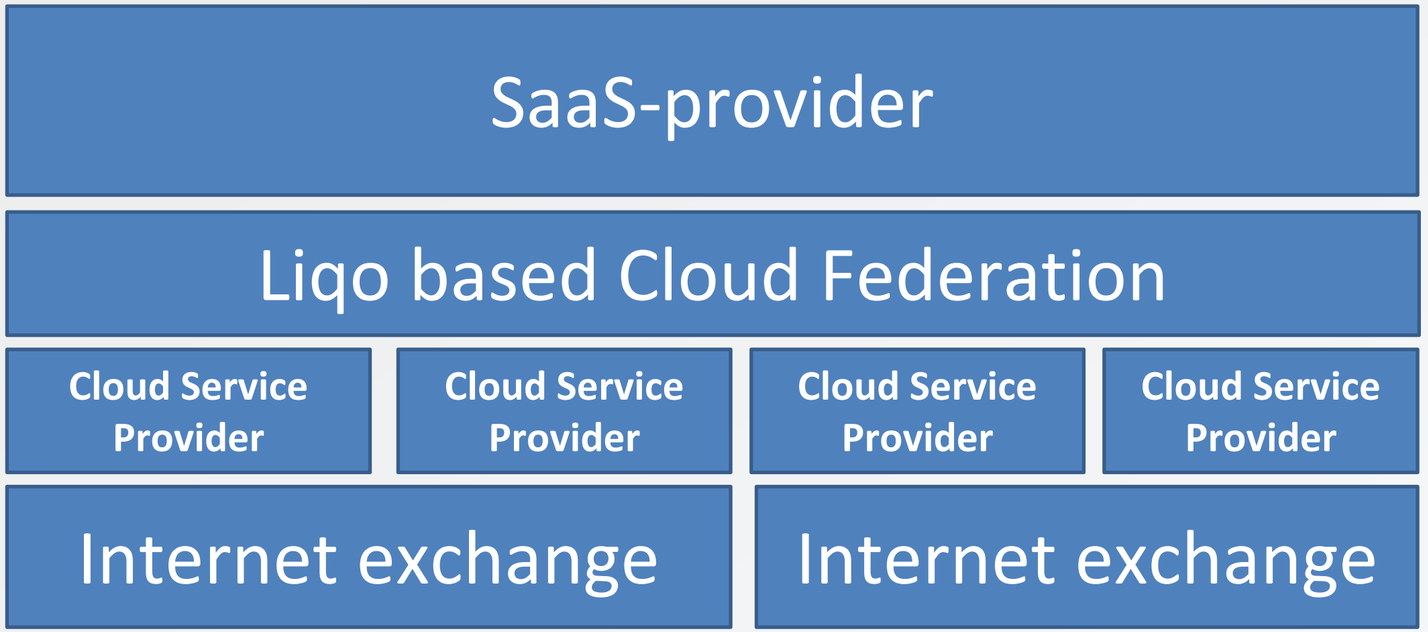
Demo perspectieve: SaaS-provider

The demo takes the perspective of a **SaaS (Software as a Service) provider** which is a consumer of cloud resources



Demo infographic

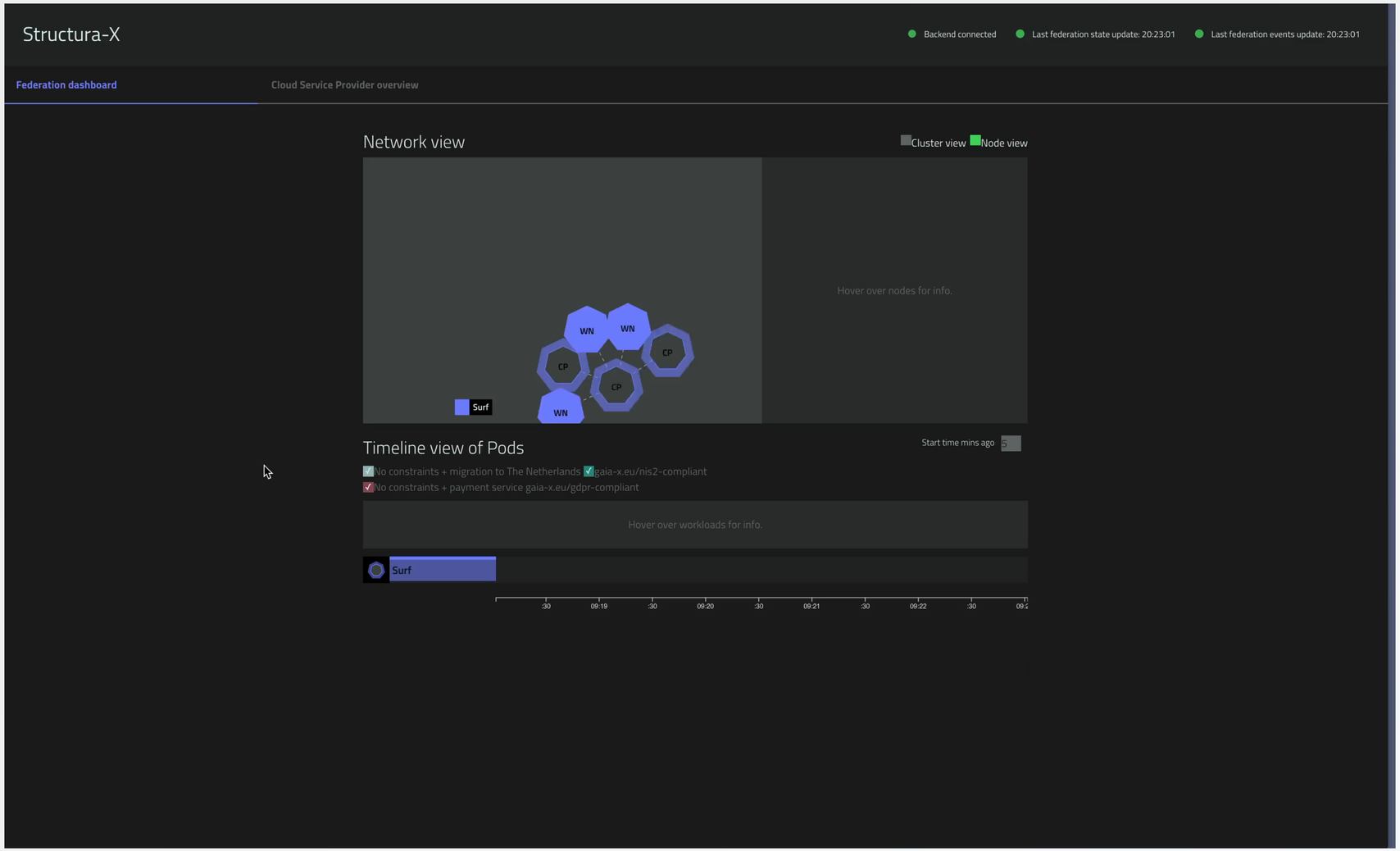
Available CPSs to federate over

CSP Overview

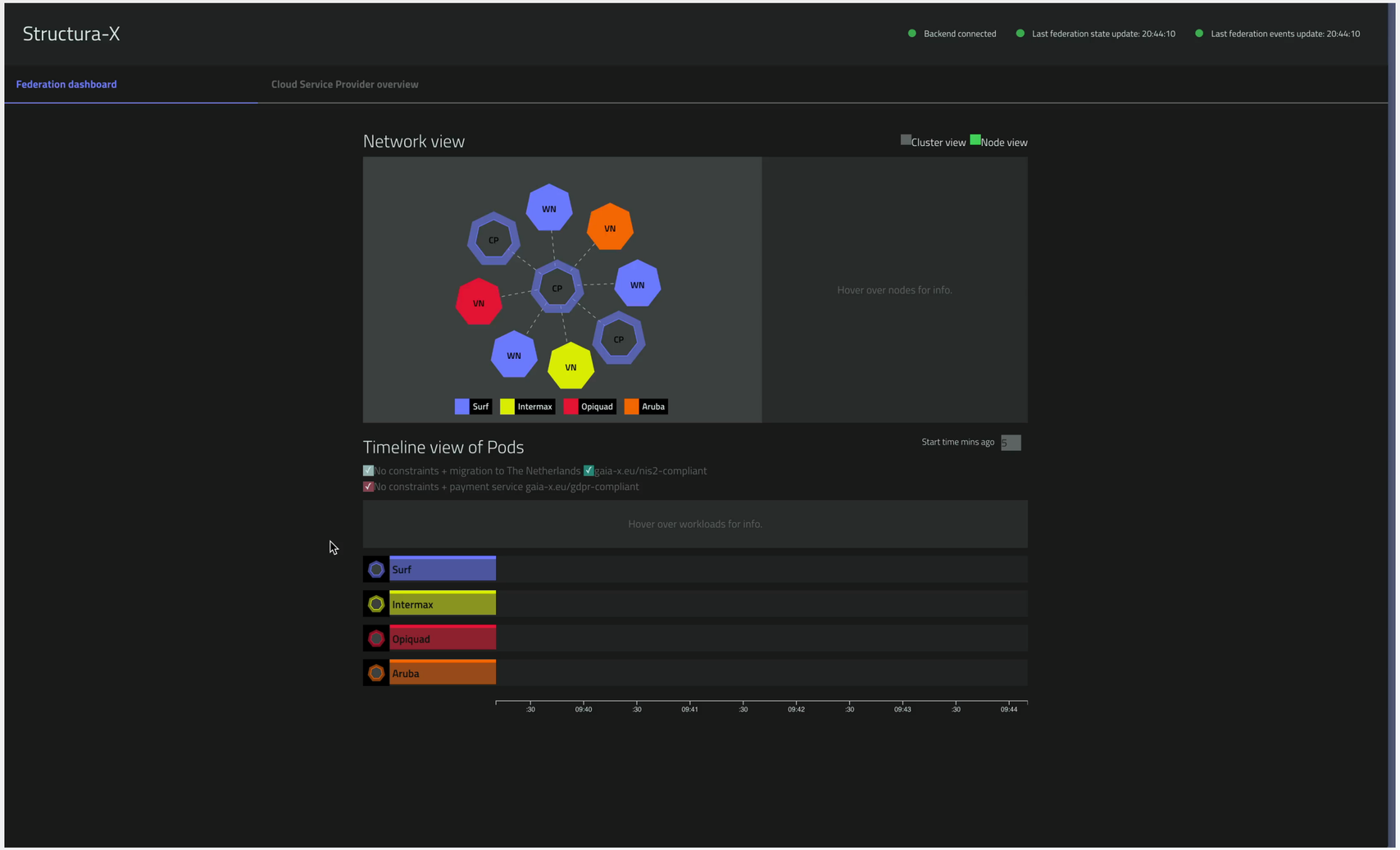
cpu | gaia-x.eu/gdpr-compliant

Name	Locality	Peering 1	cpu	gaia-x.eu/gdpr-compliant
Surf	The Netherlands	Self	24	true
Bit	The Netherlands	Discovered	12	true
Intermax	The Netherlands	Discovered	16	false
Opiquad	Italy	Discovered	8	true
Aruba	Italy	Discovered	8	true
Arsys	Spain	Discovered	12	true

CSPs are chosen to federate over



Multiple deployments on different CSPs



Workload migration from CSP to CSP