

Virtueller Parldigi Roundtable

Swiss Government Cloud und Sovereign Cloud Stack

11. Dezember 2024

BigBlueButton

Begrüssung und politische Einordnung



Gerhard Andrey

Nationalrat Grüne Kanton Fribourg,
Kernteam Parldigi

Agenda

- 14:00 Uhr **Begrüssung und politische Einordnung der Swiss Government Cloud**
Gerhard Andrey, Nationalrat Grüne Kt. Fribourg & Kernteam Parldigi
- 14:10 Uhr **Vorstellung Sovereign Cloud Stack**
Kurt Garloff und Felix Kronlage-Dammers, Sovereign Cloud Stack
- 14:30 Uhr **Weitere Schritte und Diskussion mit allen Anwesenden**
Moderiert von Prof. Dr. Matthias Stürmer, Parldigi
- 15:00 Uhr Fazit und Abschluss

Parldigi Co-Präsidium und Kernteam



Min Li Marti
Nationalrätin SP, Zürich



Franz Grüter
Nationalrat SVP, Luzern



Gerhard Andrey
Nationalrat Grüne, Fribourg



Corina Gredig
Nationalrätin GLP, Zürich



Matthias Michel
Ständerat FDP, Zug



Nik Gugger
Nationalrat EVP, Zürich



Dominik Blunschy
Nationalrat Mitte, Schwyz



Parldigi

Kernthemen von Parldigi



**Open Source
Software**



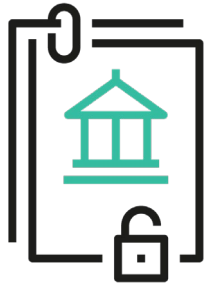
Open Access



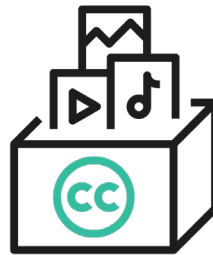
Open Standards



**Open
Government**



Open Data

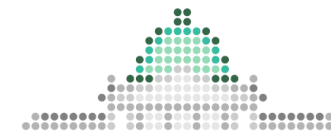


Open Content



Open Internet

Partner und Träger von Parldigi



Parldigi



Adfinis



CH Open

Source | Business | Community



WIKIMEDIA
CH



nts



SUSE



PUZZLE ITC
changing IT for the better



Red Hat



SNOWFLAKE



DIGITAL REALTY

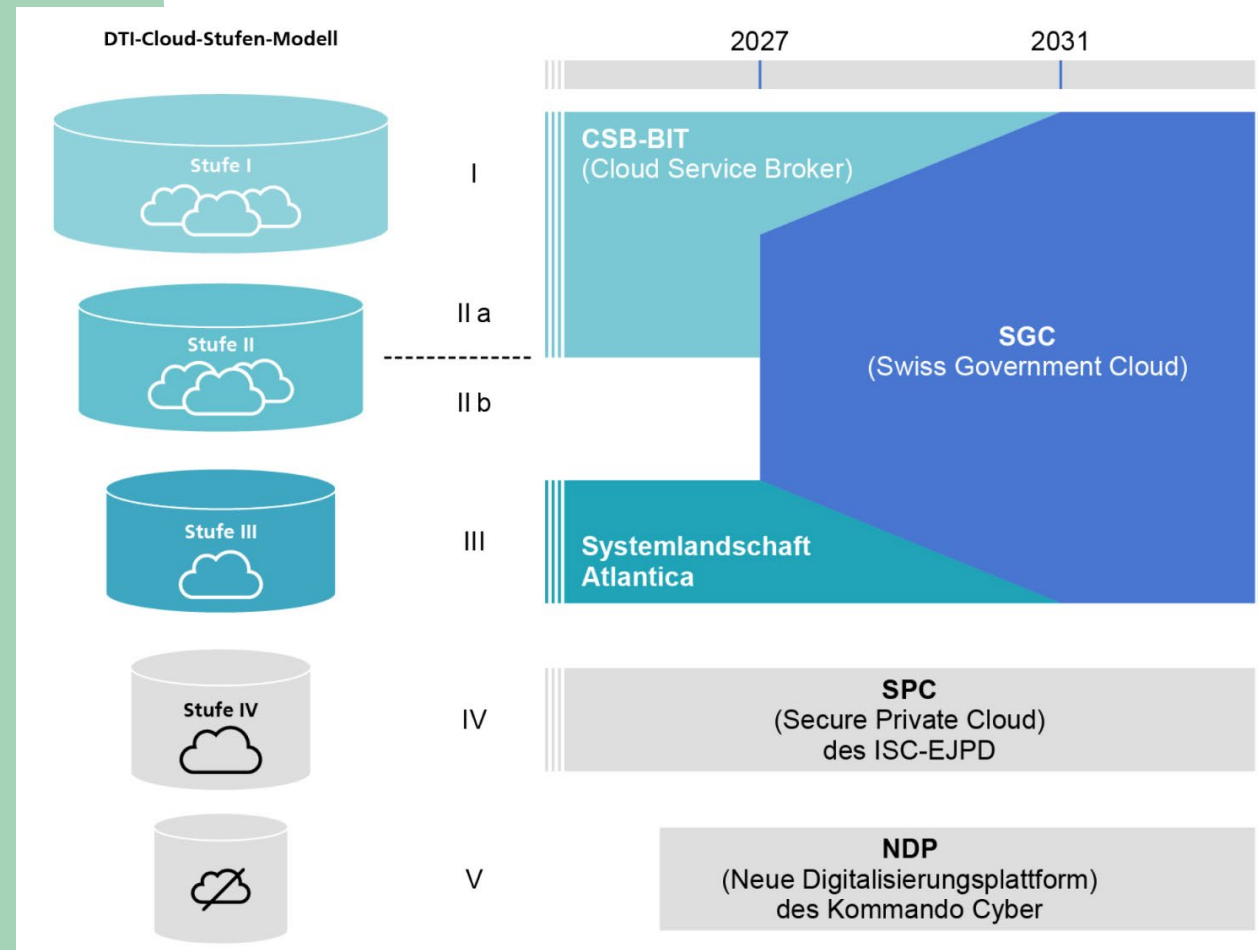



/SSS

information
security society
switzerland



Swiss Government Cloud



 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

«SSe-seal» «SSQrCode»

*Dieser Text ist ein Vorabdruck.
Verbindlich ist die Version, welche
im Bundesblatt veröffentlicht wird.*

24.xxx

**Botschaft
zu einem Verpflichtungskredit zum Aufbau einer Swiss
Government Cloud**

vom ...

Sehr geehrter Herr Nationalratspräsident
Sehr geehrte Frau Ständeratspräsidentin
Sehr geehrte Damen und Herren

Mit dieser Botschaft unterbreiten wir Ihnen, mit dem Antrag auf Zustimmung, den Entwurf eines Bundesbeschlusses zu einem Verpflichtungskredit zum Aufbau einer Swiss Government Cloud.

Wir versichern Sie, sehr geehrter Herr Nationalratspräsident, sehr geehrte Frau Ständeratspräsidentin, sehr geehrte Damen und Herren, unserer vorzüglichen Hochachtung.

...

Im Namen des Schweizerischen Bundesrates
Die Bundespräsidentin: Viola Amherd
Der Bundeskanzler: Viktor Rossi

2023-... «%ASFF_YYYY_ID»

Swiss Government Cloud

Neuer Zweckartikel:

1. «Der Erlass bezweckt den Aufbau und die Nutzung einer Swiss Government Cloud (SGC). Die SGC soll Public- und Private-Cloud-Dienste kombinieren, um eine flexible, skalierbare, sichere und ressourcenschonende IT-Infrastruktur zu bieten, welche den Behörden die digitale Transformation vereinfacht und die **digitale Souveränität** erhöht.
2. Die SGC soll:
 - a) die Abhängigkeit von einzelnen Anbietern und Jurisdiktionen verringern;
 - b) bei Bedarf die **faktische Betriebsautonomie der Private-Cloud** sicherstellen;
 - c) Datensicherheit und Datenschutz gewährleisten;
 - d) die Netzwerkinfrastruktur und Cybersicherheit stärken;
 - e) die Automatisierung von Betriebs- und kommerziellen Prozessen ermöglichen;
 - f) den ökologischen Fussabdruck der IT-Infrastruktur reduzieren.»

Swiss Government Cloud

Neuer Zweckartikel:

3. «Im Rahmen des Aufbaus der SGC werden ebenfalls:
 - a) gezielte Ausbildungsangebote für Verwaltungsangestellte geschaffen;
 - b) ein Kompetenzzentrum für Beratung und Unterstützung eingerichtet;
 - c) ein Innovationszentrum zur Förderung der Digitalisierung etabliert.
4. Bei Beschaffungen im Zusammenhang mit der SGC werden wenn möglich **offene Standards, Open Source Software und Unternehmen mit Sitz in der Schweiz bevorzugt** behandelt.
5. Die SGC steht Kantonen und Gemeinden zur Verfügung.»

Bisher:

6. «Für den Aufbau der SGC wird ein Verpflichtungskredit von 246,9 Millionen Franken bewilligt.»

Vorstellung Sovereign Cloud Stack

Kurt Garloff

CTO Sovereign Cloud Stack

Felix Kronlage-Dammers

Product Owner IaaS & Operations Sovereign Cloud Stack



Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages



SCS 2024-12-11

Sovereign Cloud Stack: Introduction for Parldigi

Felix Kronlage-Dammers, Kurt Garloff
fkr@osb-alliance.com, scs@garloff.de

<https://scs.community/>
<https://github.com/SovereignCloudStack/>



One platform - standardized, built and operated by many.



Sponsoring for our idea ...



SPRIN-D

Very supportive.

Fast to support project with paid research contract.

Good advice for first supported project.



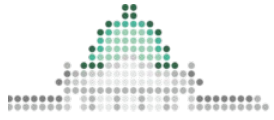
BMWK

Very supportive.

Bound by slow alignment and decision processes.

Lots of projects ...





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Funding proposal (12/2020)

Collaboratively written in .rst and managed with git.

Huge work items master spread sheet, extracted data with python (ODSReader) into doc. Needed several times, e.g. when we discovered that we can not deduce VAT.

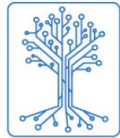
Also handed in offers to substantiate cost calculations and avoid money to be locked. (1st year only, not very successful ...)

6 months till notice of funding
Lost money and people.

Vorhabenbeschreibung

(zur vertraulichen Behandlung)

Zum Projekt GAIA-X



GAIA-X

Vorhaben: Sovereign Cloud Stack

Akronym: SCS



Schlagworte zum Vorhaben:

GAIA-X, SCS, Digitale Souveränität, Infrastruktur, Cloud,
Föderierung, Open Source, Infrastructure as Code, OSB Alliance

Antragsteller:

Open Source Business Alliance – Bundesverband für digitale Souveränität e.V.
Breitscheidstr. 4
70174 Stuttgart

Fon: +49 711 90715-390

Fax: +49 711 90715-350

vertreten durch:

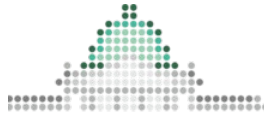
Peter Ganten (Vorstandsvorsitzender)

E-Mail: ganten@osb-alliance.com

Version: 2020-12-21

i

Sovereign Cloud Stack Deliverables



Paridigi



Certifiable Standards



Modular Open Source
Reference Implementation



Operational Knowledge

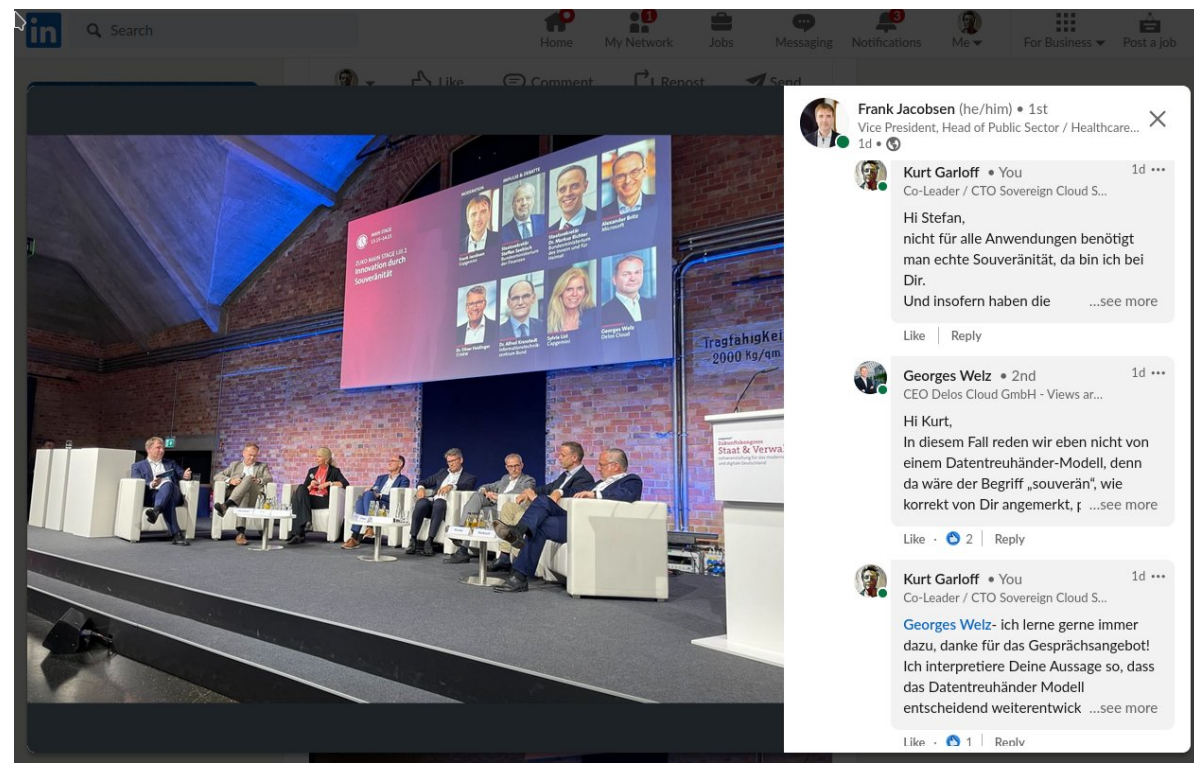


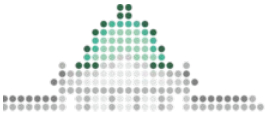
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Sovereignty debate

Sovereignty has become a marketing term :-)

- Providing data protection (GDPR compliance) is a good start ... “data sovereignty”.
- Ability to chose (without redoing automation/integration)
 - Ability to use many providers and federate
 - Requires technical standards/compatibility **SCS**-compatible
- Ability to shape technology and innovate “technological sovereignty”
 - Requires 4 Opens **SCS**-open
- Skills to understand and operate infrastructure
 - Open Operations **SCS**-sovereign





Digital Sovereignty & SCS Certification

Levels of digital sovereignty

4: Operational Transparency and accessible Knowledge (Skill building)

3: Technological Transparency and ability to contribute and shape

2: Choice between many operators, insourcing option (on-premise)

1: Compliance with regulation (GDPR)

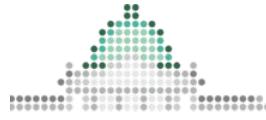
SCS Certification Level

4: “SCS-sovereign” – Ops/IAM stacks are OSS; transparency on monitoring and incidents, contribution to Open Operations (5 Opens)

3: “SCS-open” – SBOM for functional stack available and fully OSS (4 Opens)

2: “SCS-compatible” – technical compatibility (conformity tests from CNCF, OIF, SCS)

1: (Not SCS-specific): ENISA/Gaia-X labels & legal rules



SCS Standards



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- Introduction
- Certification ▼
 - Scopes and Versions ▼
 - SCS Compatible IaaS
 - SCS Compatible KaaS
 - Standards ▼
 - Global ▼
 - scs-0001 >
 - scs-0002 >
 - scs-0003 >
 - scs-0004 >
 - scs-0112 >
 - IaaS ▼
 - scs-0100 >
 - scs-0101 >
 - scs-0102 >
 - scs-0103 >
 - scs-0104 >
 - scs-0110 >
 - scs-0111 >
 - KaaS ▼
 - scs-0200 >
 - scs-0210 >
 - scs-0211 >
 - scs-0212 >
 - scs-0213 >

Overview

Standards are the core deliverable of SCS. By standardizing the open source software components of a cloud computing stack, their versions, how they are to be configured, deployed and utilized, SCS guarantees the reproducibility of a certain behavior of this technology.

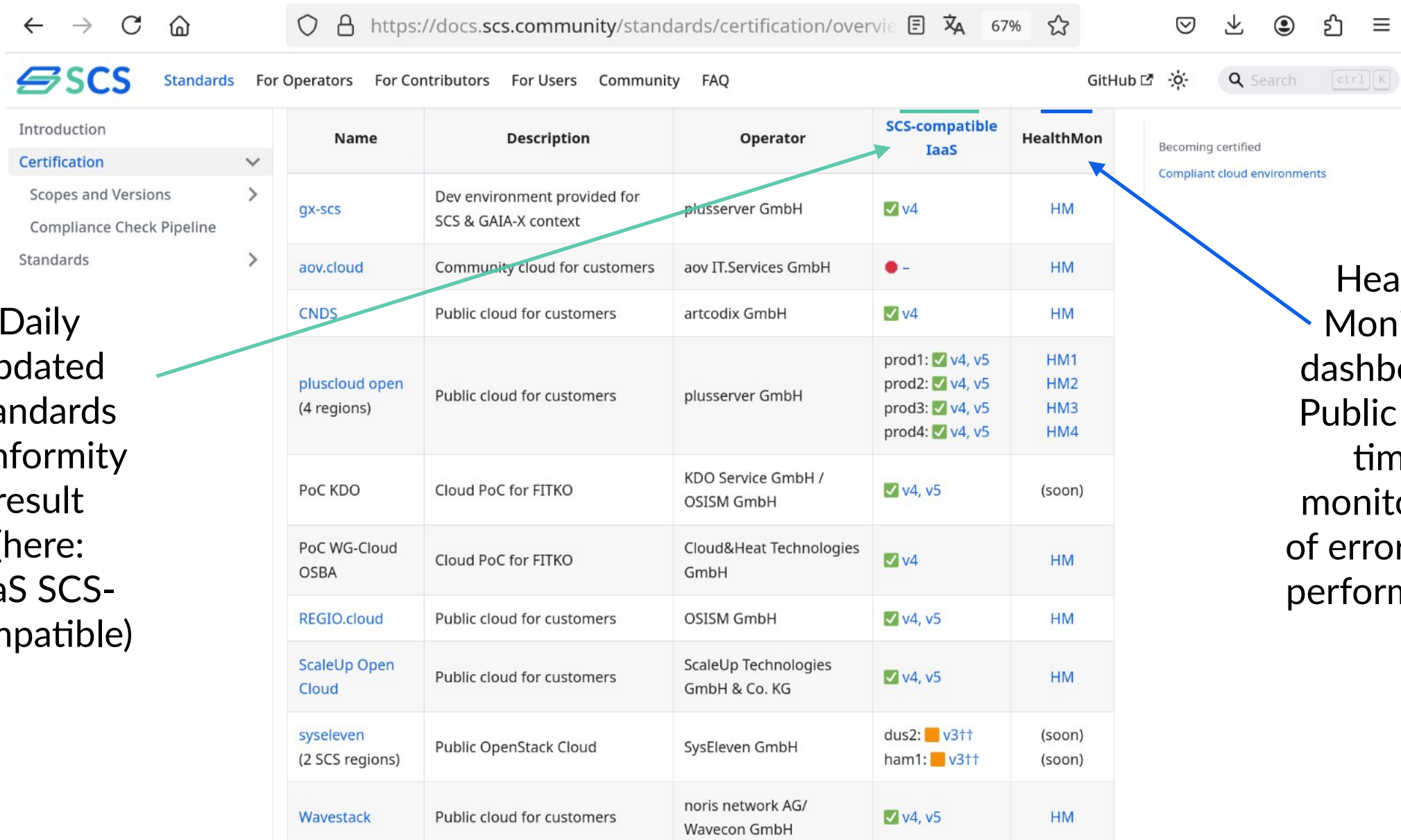
SCS standards are discussed, developed and maintained in the community by the corresponding teams (see Track in the table below), which naturally include existing users of SCS.

*Legend to the column headings: Draft, Stable (but not effective), Effective, Deprecated (and no longer effective).

Standard	Track	Description	Draft	Stable*	Effective	Deprecated*
scs-0001	Global	Sovereign Cloud Standards	-	-	v1	-
scs-0002	Global	Standards, Docs and Organisation	v2	-	v1	-
scs-0003	Global	Sovereign Cloud Standards YAML	v1	-	-	-
scs-0004	Global	Regulations for achieving SCS-compatible certification	v1	-	-	-
scs-0112	Global	SONiC Support in SCS	v1	-	-	-
scs-0100	IaaS	SCS Flavor Naming Standard	-	-	v3	v1, v2
		Supplement: Implementation and Testing Notes	w1	-	-	-
scs-0101	IaaS	SCS Entropy	-	-	v1	-
		Supplement: Implementation and Testing Notes	w1	-	-	-
scs-0102	IaaS	SCS Image Metadata Standard	-	-	v1	-
scs-0103	IaaS	SCS Standard Flavors and Properties	-	-	v1	-



Existing public providers



The screenshot shows the 'Standards' section of the SCS community website, specifically the 'Certification' overview page. A table lists various public providers, their descriptions, operators, SCS-compatibility status, and Health Monitor (HM) status. Annotations include a green arrow pointing to the 'SCS-compatible IaaS' column and a blue arrow pointing to the 'HealthMon' column. A sidebar on the left lists navigation options like 'Introduction', 'Certification', 'Scopes and Versions', 'Compliance Check Pipeline', and 'Standards'. A search bar and navigation icons are visible at the top.

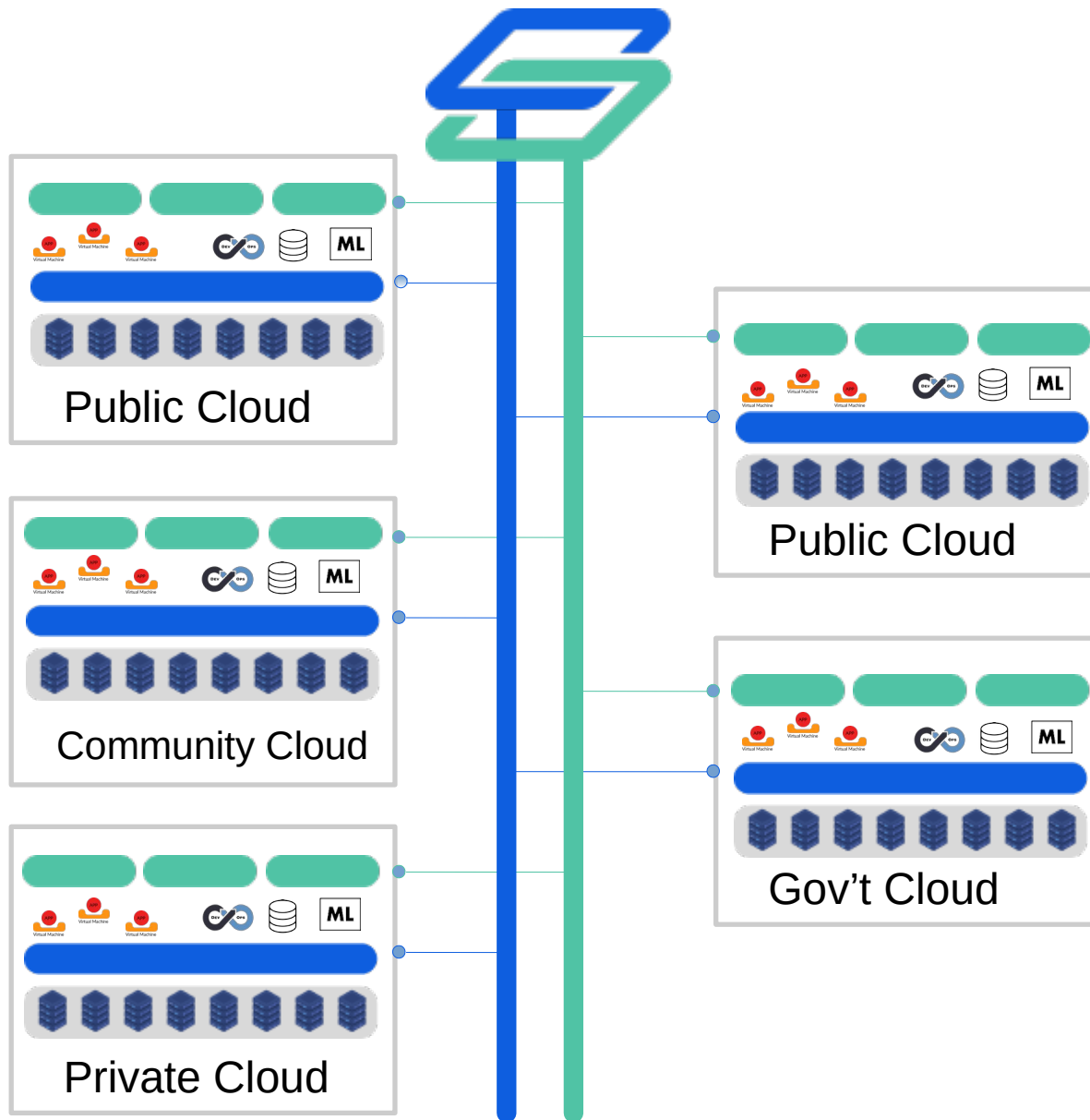
Name	Description	Operator	SCS-compatible IaaS	HealthMon
gx-scs	Dev environment provided for SCS & GAIA-X context	plusserver GmbH	✓ v4	HM
aov.cloud	Community cloud for customers	aov IT.Services GmbH	● -	HM
CNDS	Public cloud for customers	artcodix GmbH	✓ v4	HM
pluscloud open (4 regions)	Public cloud for customers	plusserver GmbH	prod1: ✓ v4, v5 prod2: ✓ v4, v5 prod3: ✓ v4, v5 prod4: ✓ v4, v5	HM1 HM2 HM3 HM4
PoC KDO	Cloud PoC for FITKO	KDO Service GmbH / OSISM GmbH	✓ v4, v5	(soon)
PoC WG-Cloud OSBA	Cloud PoC for FITKO	Cloud&Heat Technologies GmbH	✓ v4	HM
REGIO.cloud	Public cloud for customers	OSISM GmbH	✓ v4, v5	HM
ScaleUp Open Cloud	Public cloud for customers	ScaleUp Technologies GmbH & Co. KG	✓ v4, v5	HM
sysleven (2 SCS regions)	Public OpenStack Cloud	SysEleven GmbH	dus2: v3†† ham1: v3††	(soon) (soon)
Wavestack	Public cloud for customers	noris network AG/ Wavecon GmbH	✓ v4, v5	HM

Daily updated standards conformity result (here: IaaS SCS-compatible)

Health Monitor dashboard: Public real-time monitoring of errors and performance



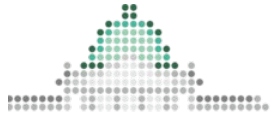
Federated Infrastructure



Built on Common standards
... for users of cloud services to enable mobility of workloads
... for cloud service providers to offer standardized lock-in-less services
... for the ecosystem to build knowledge and skills on a common technical and organizational foundation
... for solution providers that want to build on a common platform



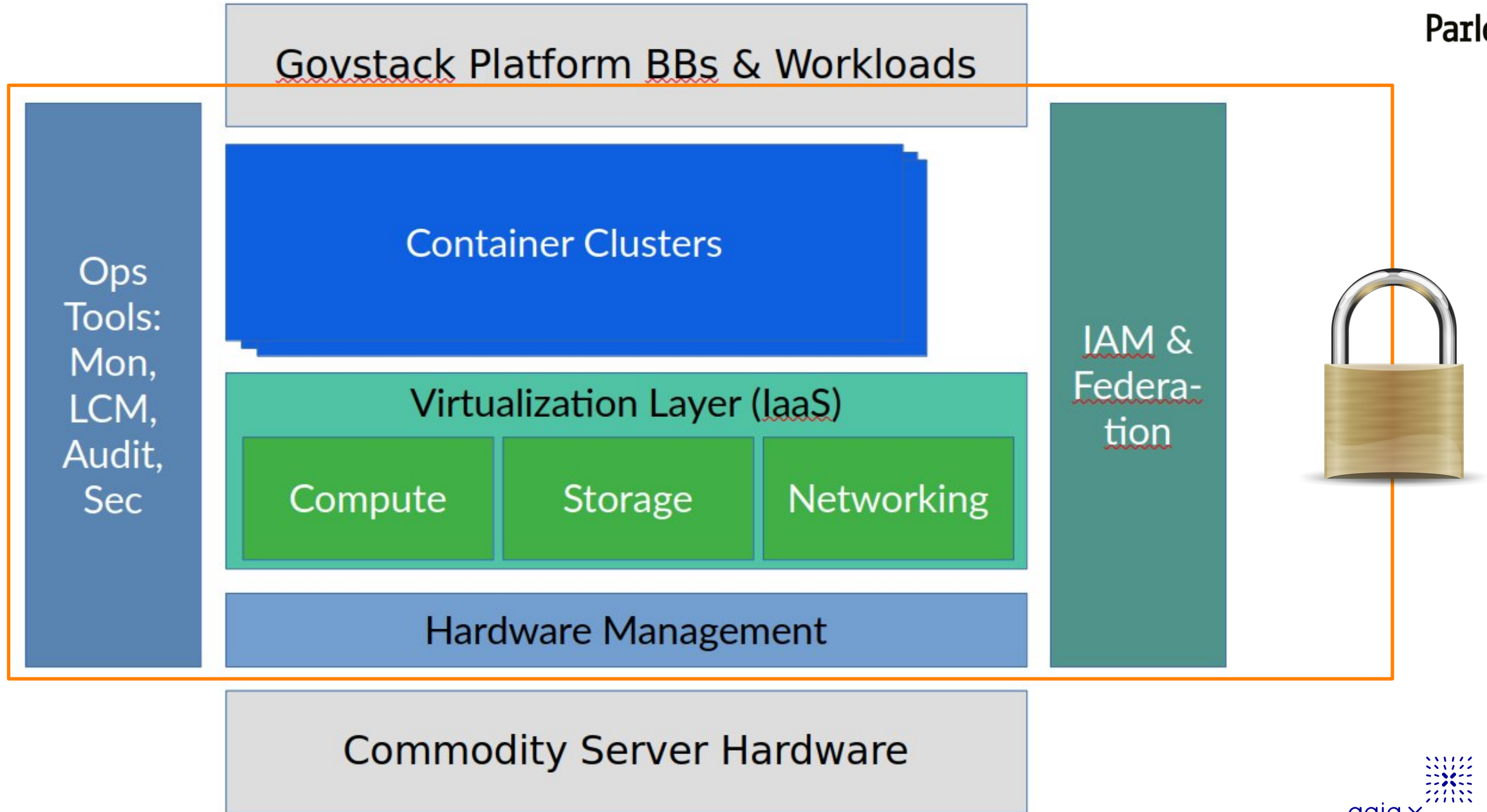
SCS Software (Reference Implementation)



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SCS Architecture (Reference Architecture)

building it up from the ground





Parldigi

Really open

Open has become a marketing term :-)

SCS Open Source Health Check

- Four Opens: Fully Open Source, Open Development, Open diverse Community, Open Design
- Maturity, Security & Maintenance
- Activity & Adoption

Github issues, PRs, project board, minutes, ...
Meets (Jitsi), Matrix, MLs,

Open Operations

Joint knowledge building for excellent operations

Upstream first!

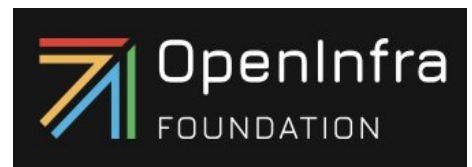
Healthy community with tender contractors, employees, volunteers

Open Source

OpenInfra FOUNDATION

Four Opens

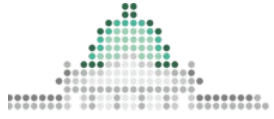
Open Operations





SCS Knowledge

Open Knowledge



← → ↻ 🏠 🔒 https://docs.scs.community 🔍 50% ☆ 📄 📥 🗑️ 📌 ☰

SCS Standards For Operators For Contributors For Users Community FAQ GitHub ⚙️ 🔍 Search

Welcome to the SCS Documentation

Find user guides, code samples, deployment examples, reference, community pages and more.

Introduction to SCS Get to know SCS better and learn about the background. Get Started	Releases SCS is currently in Release 7. Check out the latest Release Notes. Learn More	Frequently Asked Questions You are curious what SCS is all about, what it can do and what it can't? Get Answers	Existing Public Clouds There are SCS compliant public clouds in production. Test Them
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Architectural Layers

Ops Layer Tooling and infrastructure design for easy, efficient and transparent ways to operate an SCS Cloud. Learn More	Container Layer SCS offers a robust solution for managing container workloads on a Kubernetes infrastructure. Learn More	IAM Layer Working on Keycloak federated identity provider within our Team IAM. Learn More
	IaaS Layer SCS offers OpenStack infrastructure solutions based on KVM virtualization to deploy VM workloads and enabling the container layer optionally. Learn More	

Additional Resources

Get in touch Come into our Matrix Chat in the SCS Tech Room. Join Now	Come to our Meet-Ups Our working groups and special interest groups meet weekly or biweekly. When? Find out within our public community calendar.	Standardization in progress Get to know our current Decision Records and Standards. Start Now	Deployment Examples Get to know different ways to deploy SCS with cloud resources or on bare metal. Explore Cases
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<https://openoperations.org/>

We build a community of practice

Open Operations builds a community of practice to keep the barrier to entry low and create a thriving environment for comfortable exchange.

We share knowledge

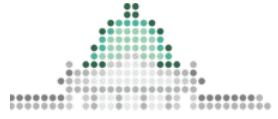
The availability of knowledge and skilled engineers is the limiting factor for many organizations to adopt, leverage, and successfully operate complex technology.

We're transparent about our incidents

We firmly believe that failures make us experts. The way we handle mistakes is how we become better.

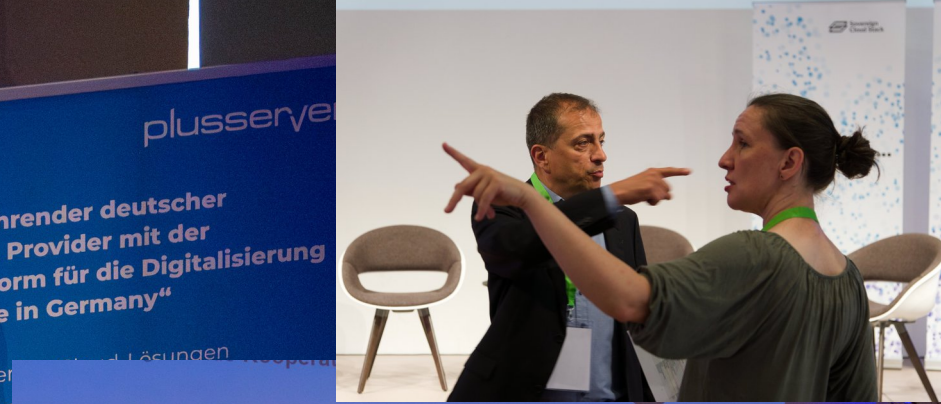
We're transparent about our operational processes

We share our internal processes for the sake of transparency. We firmly believe that transparency leads to better and more reliable processes.



SCS Adoption

SCS Summit 2024



Supporting companies and organizations



Upcoming:

+BASF

+TLRZ

+sys eleven

+LinuxHotel

23 Technologies			
SPRIN-D			

Existing CSP

Future CSP

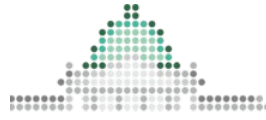
SCS compat

Impl. Partner



Flexible, secure,
digitally sovereign
office collaboration
solution

Standardized, secure,
digitally sovereign
infrastructure

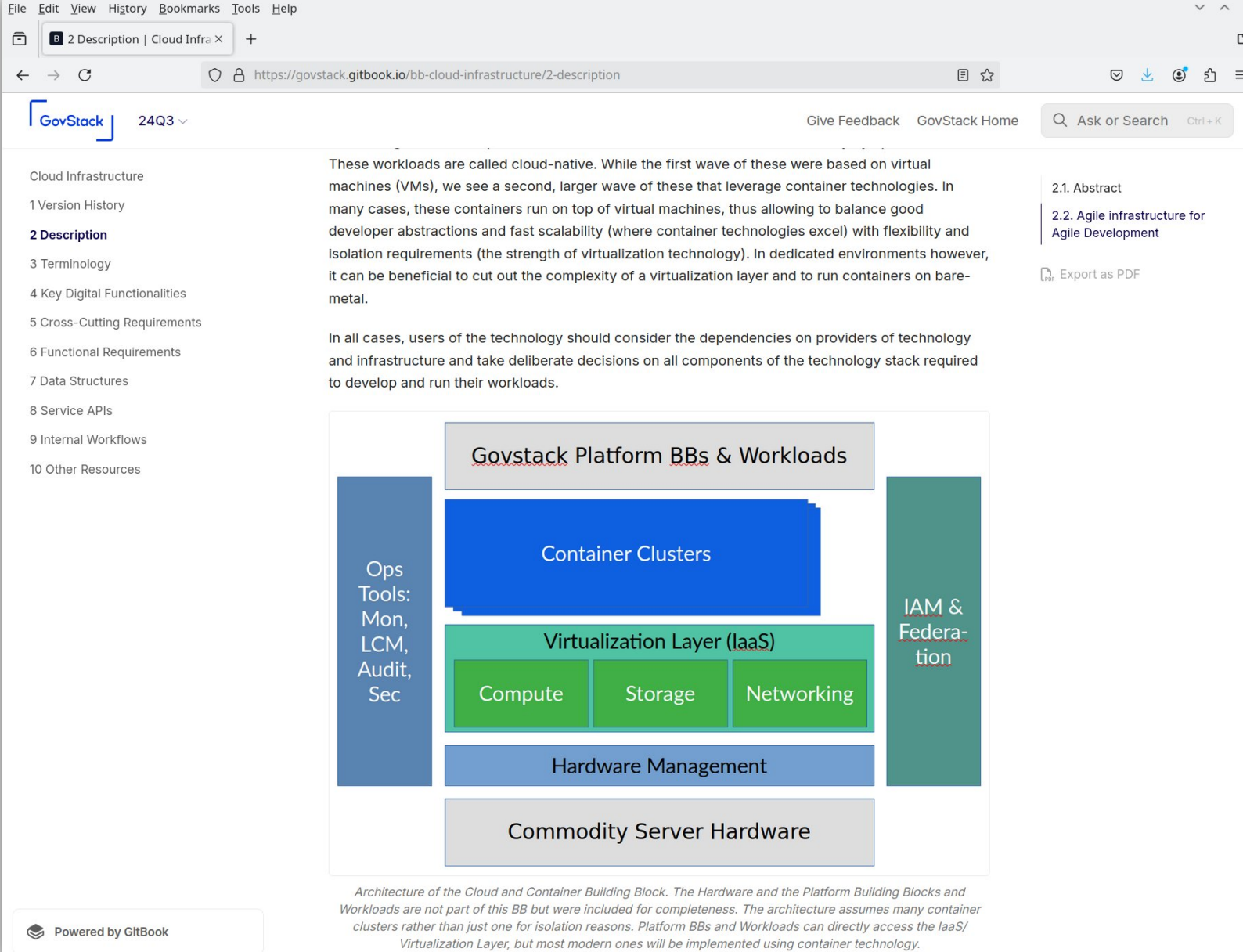


SCS Future

GovStack Specs for Cloud Computing



<https://govstack.gitbook.io/bb-cloud-infrastructure>



The screenshot shows a web browser window with the URL <https://govstack.gitbook.io/bb-cloud-infrastructure/2-description>. The page content includes a table of contents on the left, a main text area with two paragraphs, and a diagram of the cloud architecture. The diagram shows a stack of layers: Commodity Server Hardware at the base, followed by Hardware Management, a Virtualization Layer (IaaS) containing Compute, Storage, and Networking, Container Clusters, and Govstack Platform BBs & Workloads at the top. Sidebars for 'Ops Tools: Mon, LCM, Audit, Sec' and 'IAM & Federation' are also present.

These workloads are called cloud-native. While the first wave of these were based on virtual machines (VMs), we see a second, larger wave of these that leverage container technologies. In many cases, these containers run on top of virtual machines, thus allowing to balance good developer abstractions and fast scalability (where container technologies excel) with flexibility and isolation requirements (the strength of virtualization technology). In dedicated environments however, it can be beneficial to cut out the complexity of a virtualization layer and to run containers on bare-metal.

In all cases, users of the technology should consider the dependencies on providers of technology and infrastructure and take deliberate decisions on all components of the technology stack required to develop and run their workloads.

Govstack Platform BBs & Workloads

Container Clusters

Virtualization Layer (IaaS)

Compute Storage Networking

Hardware Management

Commodity Server Hardware

Ops Tools: Mon, LCM, Audit, Sec

IAM & Federation

Architecture of the Cloud and Container Building Block. The Hardware and the Platform Building Blocks and Workloads are not part of this BB but were included for completeness. The architecture assumes many container clusters rather than just one for isolation reasons. Platform BBs and Workloads can directly access the IaaS/ Virtualization Layer, but most modern ones will be implemented using container technology.



Sovereign Cloud Stack
Sovereign Cloud Stack

Building Block
Cloud Infrastructure (Level 2)

[Full Report](#)

ministerium
schaft
schutz



Protection&Control: Sustainable future of the SCS idea: Two entities, idea & brand are in the non-profit organisation

Forum SCS-Standards @ OSBA e.V.

Holds the IP rights on the **SCS brand** (and is thus unique), sets the rules for the brand usage

Charitable / Non-profit (OSBA)

Cares for and orchestrates a fair and transparent ecosystem as „neutralizer“.

Further development of **Standards** und **Certifications**, employs staff for this

Membership and usage fees from Operators and Partners (prerequisite for brand usage)

Creates visibility and trust in the market and the whole ecosystem

Collaborates with upstream communities

Partner for „certification-only partners“

OSS Technology companies

Partner for users of the SCS Software (**Reference Implementation**)

Brand usage only possible within the limits set by Forum SCS @ OSBA e.V.

Further development, warranty, maintenance and backend support for SCS Software, subscriptions (for maintenance & support, CRA, ...)

Several such commercial entities exist: OSISM, sysself, dNation, Cloud&Heat, ...

Central entity that creates a turnkey product (with coordinated policies, roadmap, maintenance, support) and orchestrates cross-stack common dev needs: S7n Cloud Services GmbH

Implementation partner ecosystem

14 SCS initial partners found the Forum SCS-Standards in the OSB Alliance e.V.

The Forum SCS-Standards ensures that the continuous development of the SCS Standards and the certification rules and measures is guaranteed and takes place in an open, transparent process. The Forum SCS-Standards sees itself as a committee in which the rules of the SCS community are jointly discussed and decided.



Parldigi





SCS Questions?



<https://scs.community/>

<https://docs.scs.community/>

<https://github.com/SovereignCloudStack/>

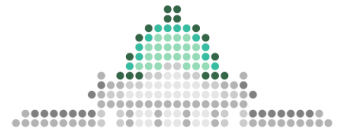
Weitere Schritte und Diskussion

Gerhard Andrey, Nationalrat & Kernteam Parldigi

Kurt Garloff, CTO Sovereign Cloud Stack

Felix Kronlage-Dammers, Product Owner IaaS & Operations Sovereign Cloud Stack

Moderation: **Prof. Dr. Matthias Stürmer**, Parldigi



Parldigi

Fazit und Abschluss

Matthias Stürmer

Geschäftsleiter Parldigi

Ausblick Hauptversammlung Parldigi

- **Mittwoch, 26. Februar 2025**
von 12h bis 15h
- **Schweizerischen Bundesarchiv**
Archivstrasse 24, 3005 Bern
- **Inhalt:** Stehlunch, Digitalisierungsaktivitäten des Bundesarchivs, ordentliche Hauptversammlung
- **Eingeladen:** Alle Mitglieder des Vereins Parldigi
→ <https://www.parldigi.ch/de/ueber-parldigi/verein/>

