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Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages

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Standardizing an open source cloud computing stack – benefits and drawbacks

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Who are we



Alexander Diab
SCS Ecosystem and
Certification manager



Kurt Garloff
SCS Chief Technology
Officer

Agenda

1. The problem, we solve
2. A digital sovereign cloud computing stack
3. The role of standards
4. How we develop standards and what to consider

Cloud Computing (NIST)

Self Service

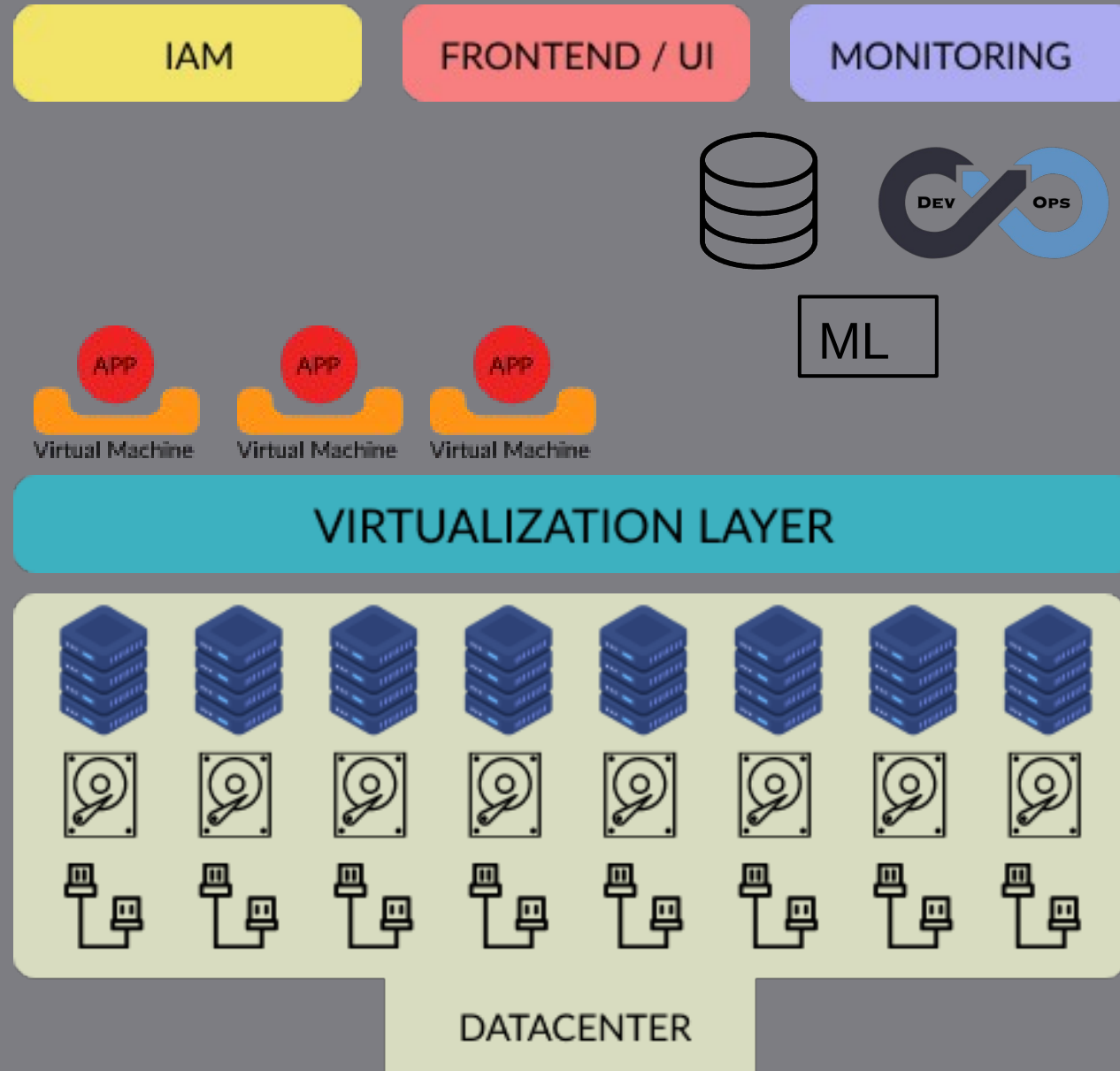
Network Access

Resource Pooling

Elasticity

Measurement Service

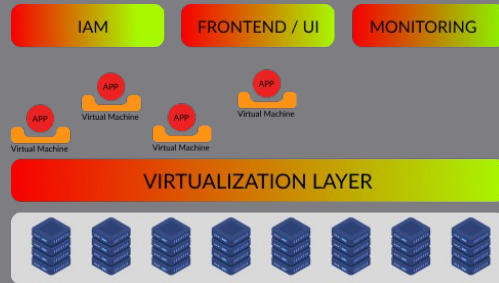
Cloud Computing Stack



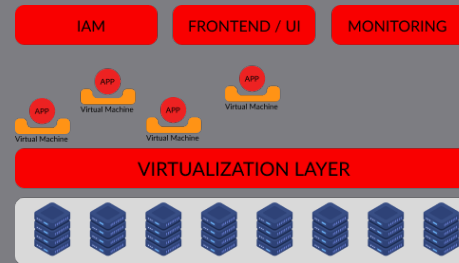
A Digital Sovereign Stack?

?

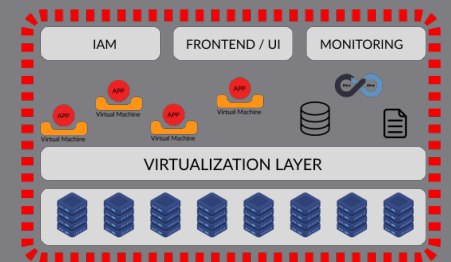
Open source Stack



Proprietary Stack

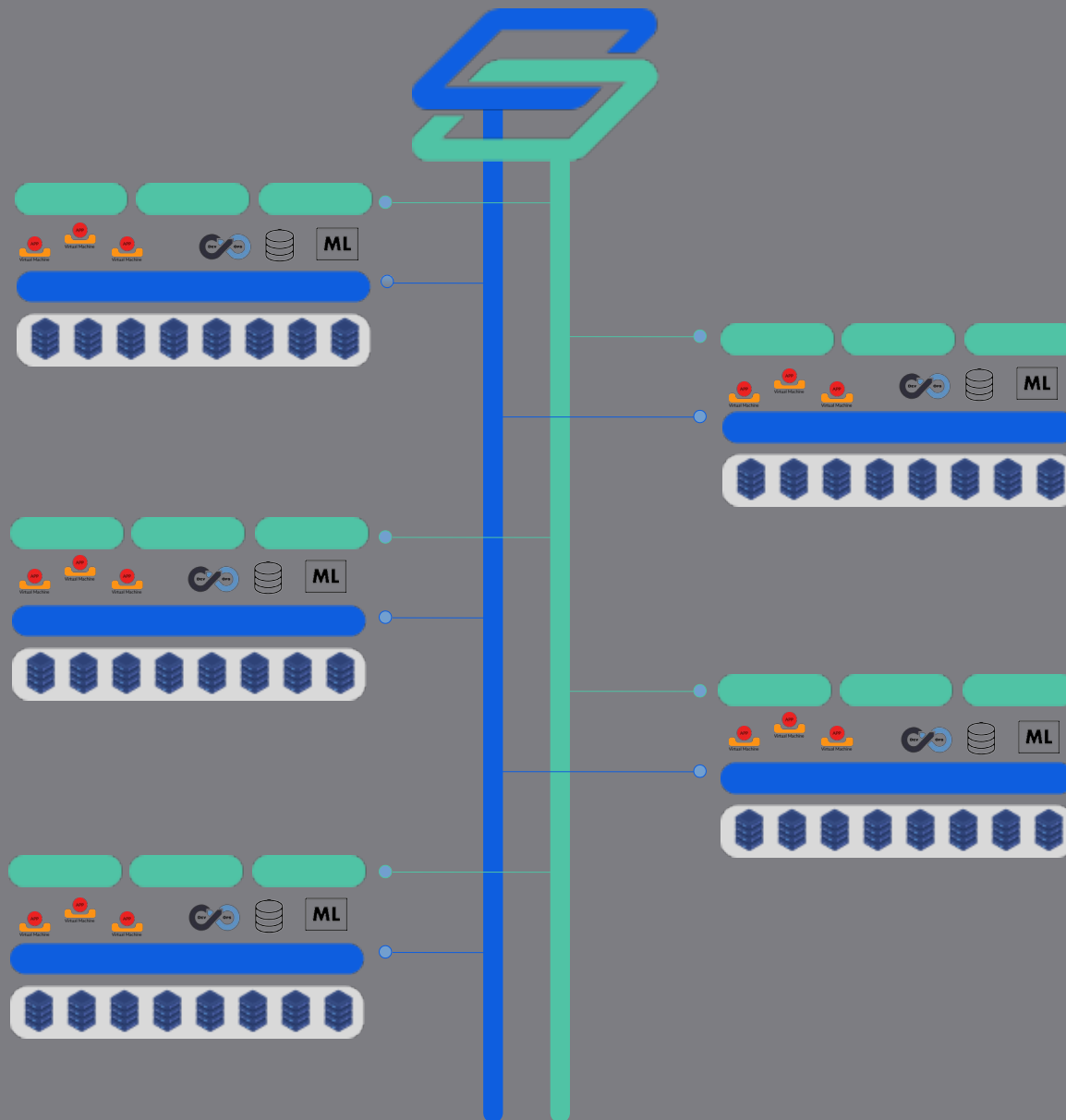


Hyperscaler



Digital Sovereignty

A Federation of Cloud Provider



We define standards
... for users of cloud services to enable mobility of workloads
... for cloud service providers to offer standardized
... for the ecosystem to build knowledge and skills on a common technical and organizational foundation

- ✓ Abschluss eines Studiums der Informatik oder vergleichbare Kenntnisse
- ✓ Gute Kenntnisse im Umgang mit Tools wie Docker, Kubernetes, Gitlab CI, Terraform, Ansible oder Jenkins
- ✓ Wünschenswert sind Erfahrungen mit OpenStack, Sovereign Cloud Stack, OSISM und Ceph
- ✓ Wünschenswert sind Programmierkenntnisse (z.B. PHP, Bash oder Python)

Three Pillars

Certifyable
Standards



Modular Reference
Implementation



Shared Operational
Knowledge



SCS – Certifications



Levels of Digital Sovereignty

SCS Levels of Certifications

4: Operational Transparency and -
knowledge available

4: “SCS-sovereign” – Ops/IAM Module OSS too,
Monitoring and Event Transparency, Contribution to
Open Operations (5 x open)

3: Technological Transparency and ability
to share and influence

3: “SCS-open” – SBOM of functions available and
complete OSS (4 x open)

2: Free provider choice
in-and-out-sourcing (on-prem/public)

2: “SCS-compatible” – Technical compatible
(conformitytest: CNCF, OIF, SCS)

1: Following legal requirements (GDPR)

1: None (rely on ENISA / Gaia-X labels / Law)

0: None

Examples of Standards



Support of S3 protocol for storage

Provision of required volume types and their names

Support of openID Connect protocol for authentication

Provision of certain standardized VM images and their names (flavors)

Required image metadata

Standardized process for provisioning IP addresses

Open Source Standards



We develop standard like software features

They must serve the user story - no more, no less

They must be verifiable

They are developed collaboratively, shared and versioned in a git repository

Standards must be created by those, who are using them

Commit Hash	Message	Time Ago
scs-0001-v1-sovereign-cloud-standards.md	Extend scs-0003: more context and process (resolves issues/#...	2 months ago
scs-0002-v1-standards-docs-org.md	Add markdown linter and link validator (#254)	8 months ago
scs-0002-v2-standards-docs-org.md	Fix/move scs 0002 to standards (#333)	3 months ago
scs-0003-v1-sovereign-cloud-standards-yaml...	Added classification field to the check tool descriptor (#365)	3 hours ago
scs-0100-v1-flavor-naming.md	Relocated flavor-naming.md to the proper position (#315)	5 months ago
scs-0100-v2-flavor-naming.md	Relocated flavor-naming.md to the proper position (#315)	5 months ago
scs-0100-v3-flavor-naming.md	Decouple standard flavors from flavor naming (#319)	2 months ago
scs-0101-v1-entropy.md	Revision of scs-0101-v1-entropy (#297)	5 months ago
scs-0102-v1-image-metadata.md	Update scs-0102-v1-image-metadata.md (#368)	last week
scs-0103-v1-standard-flavors.md	Decouple standard flavors from flavor naming (#319)	2 months ago
scs-0104-v1-standard-images.md	Standardize image names and source URLs (resolves #326) (#3...	2 months ago
scs-0110-v1-ssd-flavors.md	Stabilize the SSD flavor decision (#304)	5 months ago
scs-0111-v1-volume-type-decisions.md	Add document for the volume type decisions (#323)	2 months ago
scs-0210-v1-k8s-new-version-policy.md	Add test for k8s version recency (#288) (#318)	3 months ago
scs-0211-v1-kaas-default-storage-class.md	Add markdown linter and link validator (#254)	8 months ago
scs-0212-v1-requirements-for-container-registr...	Add markdown linter and link validator (#254)	8 months ago

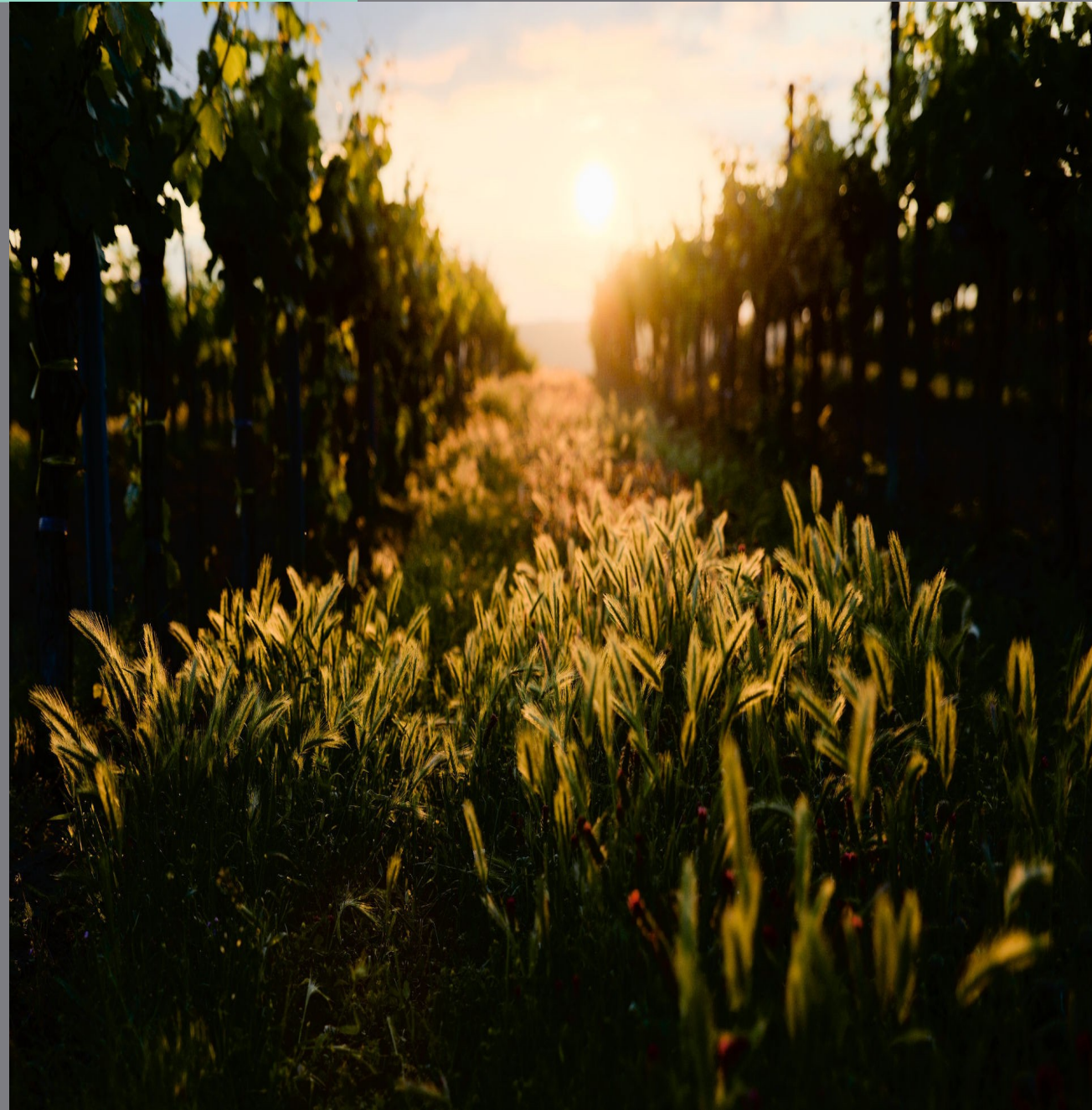
Our tasks

Coordinating the process and providing the framework

Building the community

Providing a certification system

→ Without organizing and managing these tasks any open source standardization system is meaningless





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Thank you!

Questions?