What is Digital Sovereignty and how can OSS help to achieve it?
Digital Sovereignty: Why?

• IT determines our future opportunities
  - Industry
  - Private life
  - Society & Government

• Europe far behind the US (and China)
  - Value creation
  - Dependencies & Control
European values?

- Do we take GDPR seriously?
  - Cloud Act
  - Schrems III?
- Freedom requires data protection rules
- Transparency
- Fair competition
- Digital Markets need rules
A big war in Europe is inconceivable. We don’t need well-working defense.

It’s OK for Europe to strongly depend on natural gas from Russia.

Britain won’t leave the European Union.

The Americans won’t elect an immature bully again.

It’s OK for Europe to strongly depend on US IT platforms.

Safe Harbor sufficiently protects personally-identifiable data transferred to the US.

Privacy Shield 2.0 sufficiently protects personally-identifiable data transferred to the US.

US clouds hosted in European Data Centers are safe to use for personally identifiable data.

Trustee models (EU operated “sovereign” clouds with US tech) fulfill GDPR and sovereignty.

Confidential Computing avoid all these problems with trust and sovereignty requirements.
Regulation to the rescue?

- DSA
- DMA
- GDPR
  - Majority of public cloud usage in EU not GDPR compliant today → ban?
  - Trustee models (US cloud technology operated by EU companies) “sovereign clouds”
Need Alternatives

• European Hyperscaler?
  – Replace dependency on non-EU oligopoly by EU mono/oligopoly?

• Only use European Software?
  – Is it good enough?
  – Do our citizens, companies, administrations like it?
What do we want to achieve?

- **Digital Sovereignty**
  - Sovereignty = Freedom to take decisions (for an individual, for a company, for a society)

- **Practical**
  - Manage risks from dependencies
    - Avoid dependency
    - Ensure influence on supplier (legal, economical)
Legal, Strategic, Economic risks

1) Legal compliance (GDPR)
2) Choice
   Real choice requires low switching cost
   Insourcing option
3) Ability to shape technology
4) Skills and transparency
Open Source Software

• Gives a huge amount of control to the user
• No need to restrict OSS origin to your own country / continent / legal sphere
• Building on top and learning from each other: We truly stand on the shoulders of giants
Open-washing

• „Open“ Marketing abuse
  - Partially open source, Open Core models, strange (non-OSI) „open“ licenses
  - Single-vendor control, no diverse community
  - Closed development process
  - Closed decision making
Four Opens

- Open Source
  - OSI licenses
  NOT: Open Core
- Open Development
- Open Community
- Open Design

https://openinfra.dev/four-opens/
### Taxonomy (1)

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[1] Options like AzureStack improve this  
[2] Depends on providers  
[3] Depends on whether others do the same
SCS mission: Fill the gaps (1)

- Ease of switching requires comprehensive standards
- Interoperability + Federation to create „virtual hyperscaler“
- Joint development creates choices
- Create viable stacks together (Ref. Impl.)

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SCS mission: Fill the gaps (2)

- Good Operations is harder than building platforms
- OSS movements focused on Dev in DevOps
- Open Operations movement focusing on collaboration in Operations:
  - Knowledge
  - Transparency (RCA)
  - Culture
  - Processes
  - Tooling
- https://openoperations.org/

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Open Ops: You’re not alone in Ops

Share knowledge
e.g. monitoring setup and config

Share status
e.g. health & performance monitoring

Share challenges
e.g. fraud detection

Public Root Cause Analysis
e.g. outages

SCS resources:
- Blog
- OperationalDocs
- Operator Lean Coffee
- Tools:
  - e.g. Health-mon dashboard
- Next: RCA templates
- Link collection
Sovereign Cloud Stack vision

**SCS:** One platform - standardized, built and operated by many.

Sovereign Cloud Stack combines the best of Cloud Computing in one unified standard. SCS is built, backed, and operated by an active open-source community worldwide. Together we put users in control of their data by enabling Cloud Operators through a decentralized and federated cloud stack. Leveraging true Digital sovereignty to foster trust in clouds.
Sovereign Cloud Stack Deliverables

1. Certifiable Standards
2. Modular Open Source Reference Implementation
3. Operational Knowledge
### Taxonomy (2)

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[1] Options like AzureStack improve this
[2] Ecosystem ensures local providers can succeed
[3] Depends on whether others do the same
[4] SCS providers share meaningful standards
[5] Implementation & Operations made easier by SCS
Putting **SCS** into reality

- Grant from BMWK (German Ministry for Economic Affairs and Climate Change)
- Project team @ OSB Alliance e.V. (non-profit)
- Paid development (public tenders)
- Community with >30 active members, collaboration with upstream & with Gaia-X
- Lots of publications, event presentations, ...
- 3 public clouds (betacloud, pluscloud open, wavestack), private implementations WIP
- 4 releases of our reference implementation (2/a)
- Certification program in rollout
References

- **Homepage:** https://scs.community/
  **Docs:** https://docs.scs.community/

- **Code:** https://github.com/SovereignCloudStack/

- **OpenOps:** https://openoperations.org

- **OIF talks:** https://www.youtube.com/watch?v=i2hQQFJi3Yo
  https://www.youtube.com/watch?v=oGuUty7ufN8

- **Cloud report article:**
  https://the-report.cloud/why-digital-sovereignty-is-more-than-mere-legal-compliance

- **DuD article (DE)**
Advance Digital Sovereignty!

- Join community [https://scs.community/contribute/](https://scs.community/contribute/)
- Contribute to SCS / upstream (LF, OIF, CNCF, ...)
  - Code, Docs, Issues, Standards, ...
- Apply (we’re hiring!) or offer for our tenders
- Fight for sovereignty beyond legal compliance:
  Real choice, shaping, transparency&skills
- Implement SCS standards in your infra
- Implement SCS ref. impl. (as private or public cloud)
- Offer services

Questions?

OpenInfra meetup:
19:00 CET tonight
@ Rooster’s