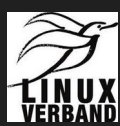
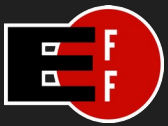
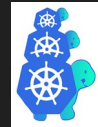
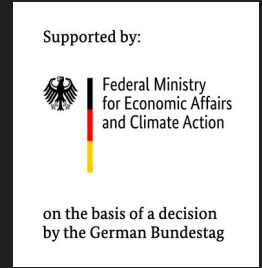
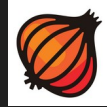
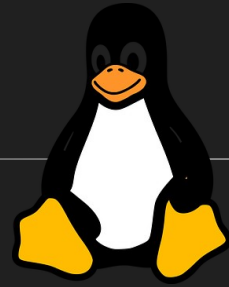


# What is Digital Sovereignty and how can OSS help to achieve it?

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Kurt Garloff

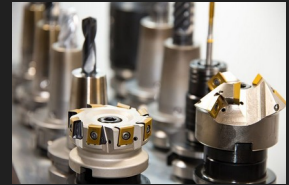
[kurt@garloff.de](mailto:kurt@garloff.de)  
[@garloff:matrix.or](matrix://garloff:matrix.or)



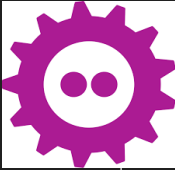


# Digital Sovereignty: Why?

- IT determines our future opportunities
  - Industry
  - Private life
  - Society & Government
- Europe far behind the US (and China)
  - Value creation
  - Dependencies & Control

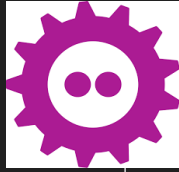


# European values?



- Do we take GDPR seriously?
  - Cloud Act
  - Schrems III?
- Freedom requires data protection rules
- Transparency
- Fair competition
- Digital Markets need rules





# Question Myths 2022/23

~~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.

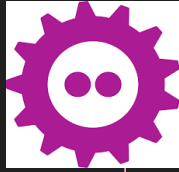
~~Safe Harbor sufficiently protects personally-identifiable data transferred to the US.~~

???. 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

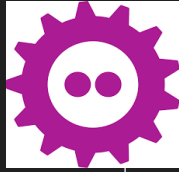
???. Confidential Computing avoid all these problems with trust and sovereignty requirements.



# 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

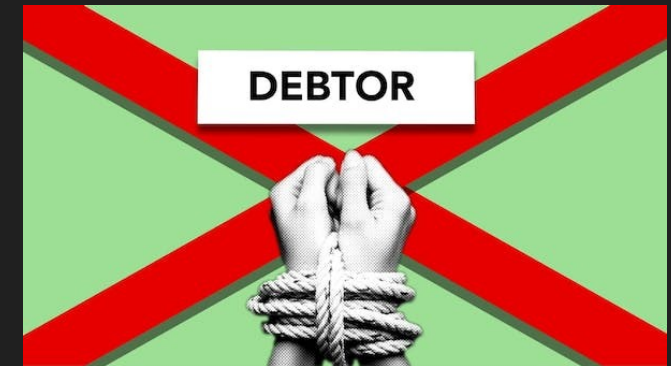
- European Hyperscaler?
  - Replace dependency on non-EU oligopoly by EU mono/oligopoly?
- Only use European Software?
  - Is it good enough?
  - Do our citizens, companies, administrations like it?



# 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

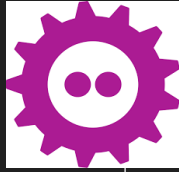
Real choice requires low switching cost

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

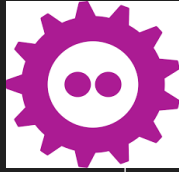


# Open-washing



- „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)

	US Hyper Scaler	Trustee "sov"	EU Hyper Scaler	Proprietary private	OSS public	OSS private
1. GDPR	-	+	++	+	?[2]	++
2. Choice						
- switching	-	-	-	0	?[3]	?[3]
- insourcing	- (o)[1]	-	-	+[3]	+	+
3. Tech shaping	-	-	-	-	+	++
4. Skills & Transp	-	-	-	0	0	+

[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.)



	US Hyp Scaler	Trustee	EU Hyper Scaler	Proprietary private	OSS public	OSS private
GDPR	-	+	++	+	?[2]	++
Choice						
- switching	-	-	-	0	?[3]	?[3]
- insourcing	(o)[1]	-	-	+[3]	+	+
Tech shaping	-	-	-	-	+	++
Skills & Transp	-	-	-	0	0	+



# 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

	US Hyp Scaler	Trustee	EU Hyper Scaler	Proprietary private	OSS public	OSS private
GDPR	-	+	++	+	?[2]	++
Choice						
- switching	-	-	-	0	?[3]	?[3]
- insourcing	-(0)[1]	-	-	+[3]	+	+
Tech shaping	-	-	-	-	+	++
Skills & Transp	-	-	-	0	0	+



- <https://openoperations.org/>



# 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

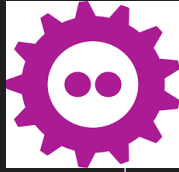
Tools:

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



Certifiable Standards



Modular Open Source Reference Implementation



Operational Knowledge



# Taxonomy (2)

	US Hyper Scaler	Trustee	EU Hyper Scaler	Proprietary private	SCS public	SCS private
GDPR	-	+	++	+	+[2]	++
Choice						
- switching	-	-	-	0	+[4]	+[4]
- insourcing	- (o)[1]	-	-	+[3]	+	+
Tech shaping	-	-	-	-	+	++
Skills & Transp	-	-	-	0	+[5]	++[5]

[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

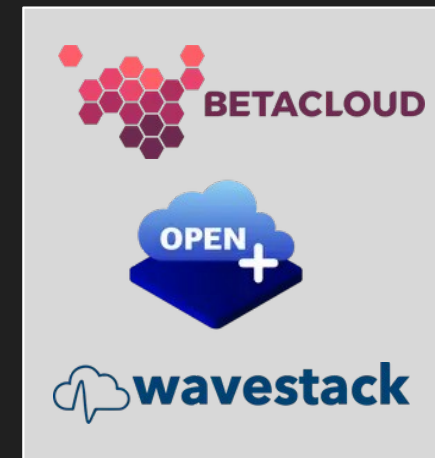
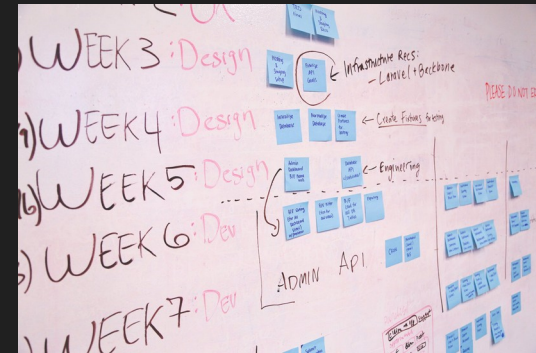
Implementation & Operations made easier by SCS

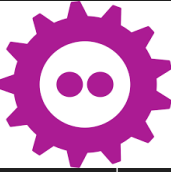
[5] Open Operations



# 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

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- 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/>
- 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