



Gefördert durch:

Bundesministerium für Wirtschaft und Klimaschutz



aufgrund eines Beschlusses des Deutschen Bundestages

EclipseCon, 24. - 27.10.2022

Eduard Itrich

## Digital sovereignty: Why open infrastructure matters

#### \$ curl https://scs.community/itrich



Sovereign Cloud Stack (SCS) is federated cloud technology built entirely with Open Source Software — putting users and providers in control.



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## We need to talk...













#### "

There exists perhaps no conception the meaning of which is more controversial than that of sovereignty. It is an indisputable fact that this conception, from the moment when it was introduced into political science until the present day, has never had a meaning which was universally agreed upon.

- International Law 66, L. F. L. Oppenheim, 1912





# "Supreme authority within a territory

- Philpott, 2020



## "The notion of territory does not need to be restricted to the landmass, "but also [...] to resources lying on the territory such as human infrastructures"

- What does the notion of "sovereignty" mean when referring to the digital?, Couture & Toupin, 2019





Food sovereignty



Energy sovereignty





Digital sovereignty?

## ... more than mere legal compliance



Dimension of competence

Technological dimension

Freedom of choice



Legal dimension





## Even if data is processed and stored solely in a specific jurisdiction, isn't there still a strong dependency on one single software vendor?







## **Okay, let's add alternatives!**







## But even if I can choose between different offerings, how can I influence the future evolution of the software I am using?







## But even if I can inspect, use, modify and share the software, how can I contribute to design decisions or upstream code?











## Are we done yet?



# But even if I can participate in the community developing the software, how the heck am I supposed to operate this stack at scale?

## **Dimension of competence**



Open Source technology has become increasingly mature. However, the greatest software is useless if it cannot be operated confidently. For this to happen, skills and knowledge must be built up, fostered and retained. In an increasingly competitive market for skilled people and increasingly complex IT systems, this is becoming an ever-greater challenge for governments, institutions, and companies. How can we operate digital offerings in a self-determined, secure and qualitatively excellent manner?

The answer to this must be the collectivization of operational knowledge, just as it is being practiced for many years with software code.

#### **Dimension of competence**



## **Curious**?





## WIP: https://openoperations.org

#### **Dimension of competence**



#### The fifth Open Paradigm: Open Operations

Session details ¥	Open Infrastructure technology has become increasingly mature. Nevertheless, high quality management and operations of open platforms					
Status: Accepted Speaker(s): Felix Kronlage-Dammers (Product Owner @ SCS)	continues to require DevOps teams with significant skills. The Sovereign Cloud Stack project has been created with the goal to significantly lower the bar and with the concept of collaboration over competition first results have been achieved on the conceptual as well as technical side of things.					
Experience level: Intermediate Session Track: The Open Source Way Session Type: Standard	While the integration of a standardized operational stack helps the platform operations teams, it is only an important first step. The next step is to create strong communities that share operational practices and make them openly available instead of 'cooking with the secret sauce'. Documenting best practices, fostering an open root cause analysis process just as much as publishing the little tools to do cleanup jobs or the setup of dashboards that can be used for capacity management are important contributions.					
	Being transparent about bugs, incidents, security responses may sound disturbing to traditional operation teams at first yet it is key to build up experience.					
	Only failures make us experts and embedding a healthy culture towards errors has been proven to lead to less outages long term. Furthermore it helps to create trust with users, especially when incidents do occur.					
	With the 'Four Open' the community has been leading the way how open source software is developed. Let's extend this by the adding the 'fifth paradigm': Open Operations.					
	Objective of the presentation: Open Operations is about extending the open source principles to processes, culture and operating mindset.					
	Attendee pre-requisites - If none, enter "N/A": N/A					
Schedule info						
Time: 26 Oct 2022 - 15:15 to 26 Oct 2022 - 15:50						
Room: Silchersaal						

## ... more than mere legal compliance





Dimension of competence

Technological dimension

Freedom of choice

Legal dimension

## Read more...







https://thereport.cloud









## Let's demistify digital sovereignty and embrace open technology hosted by an open community with open operational knowledge!



### **Sovereign Cloud Stack**





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## Three pilars for digital sovereignty



Standards



**Reference Implementation** 



**Open Operations** 







## **Supporting organizations**





**GONICUS** PIONEERS OF OPEN SOURCE

Open Infrastructure FOUNDATION

OSISM

StackHPC

SPRIN-D



plusserver

Univention be open









https://scs.community

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#### SCS: Eine föderierbare, souveräne Cloudplattform









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## Upstream first!













## What has been achieved so far?

- Release 3 published on 2022-09-21
- Thriving community and growing ecosystem
- Three Public Cloud Provider using the reference implementation













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