



NRENs and TRE: Activities at Switch

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Content

- Foundation Switch
- A little bit about “biomedical research” in Switzerland
- Switch Cloud
- Switch’s activities and plans in the area of sensitive data

Foundation

Established in 1987

Founded by the Swiss Confederation and eight university cantons

Governed by the Swiss Higher Education community

No commercial purposes and not for profit

Balancing interests to maximise benefit for all

Governance

Foundation Council

40 members



Customers

	Segments	Subsegments
Beneficiaries of the foundation	Education & Research (Publicly Funded)	Universities
		Research Institutes
Customers (Non-beneficiaries)	Education & Research (Privately Funded)	Universities
		Research Institutes
		University Hospitals
		Libraries
		Other Educational Institutions
	Innovation	
	Organisations of Critical Infrastructures	Health
		Finance
		Energy
		Mobility
		Industry & Logistics
	Authorities & Administration	
	Internet Service Providers	

Activities in the research domain

- Strong focus on IT Services with "traditional NREN services"
- With Switch Cloud direct interactions with researchers
- Focus on research infrastructures – with an emphasis on health
 - Need additional services – not in the "plain vanilla Switch Cloud portfolio"
 - Health is a huge sector – concentrate on University – Hospital research

Challenges for Research Universities - Hospitals

- Universities: IT not suited for sensitive data
- Hospitals: IT not suited for research

- Existing collaborative environments between universities and hospitals often
 - Lack features that the researchers need and/or
 - Do not meet the legal requirements

The cloud for education and research

SWITCH Cloud is an IT service designed to meet the specific needs of **Swiss universities and research institutions**.

SWITCH Cloud meets special requirements in terms of **flexibility, security and performance**, and is under the **full control of SWITCH**. This makes it suitable for critical applications and particularly **sensitive data**.

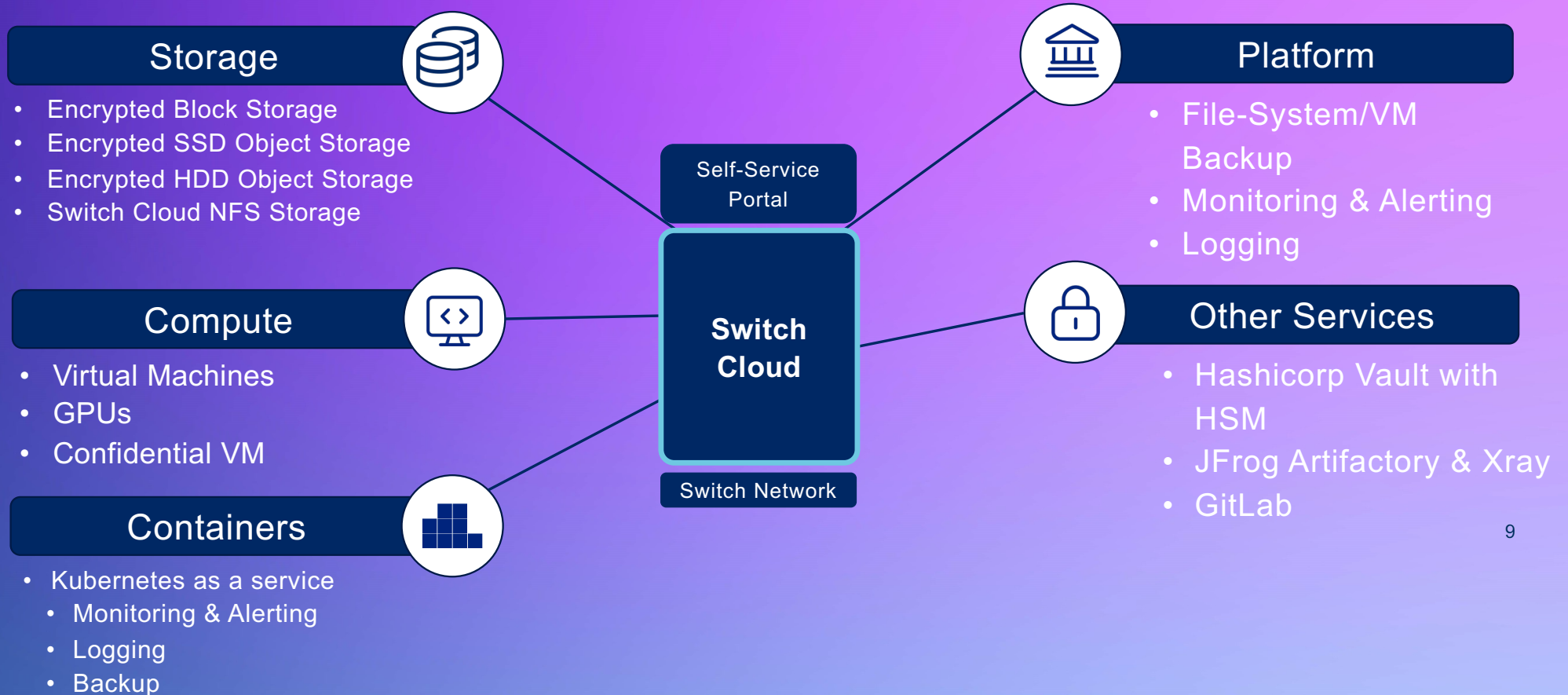
SWITCH Cloud **supports universities and research institutions** in their efforts to consolidate and outsource their IT infrastructure or parts of it. This creates **synergies** in the education and research system and **reduces costs**.

Switch



Portfolio Vision for Switch Cloud

A portfolio of complementary services is being developed on the Switch cloud infrastructure.



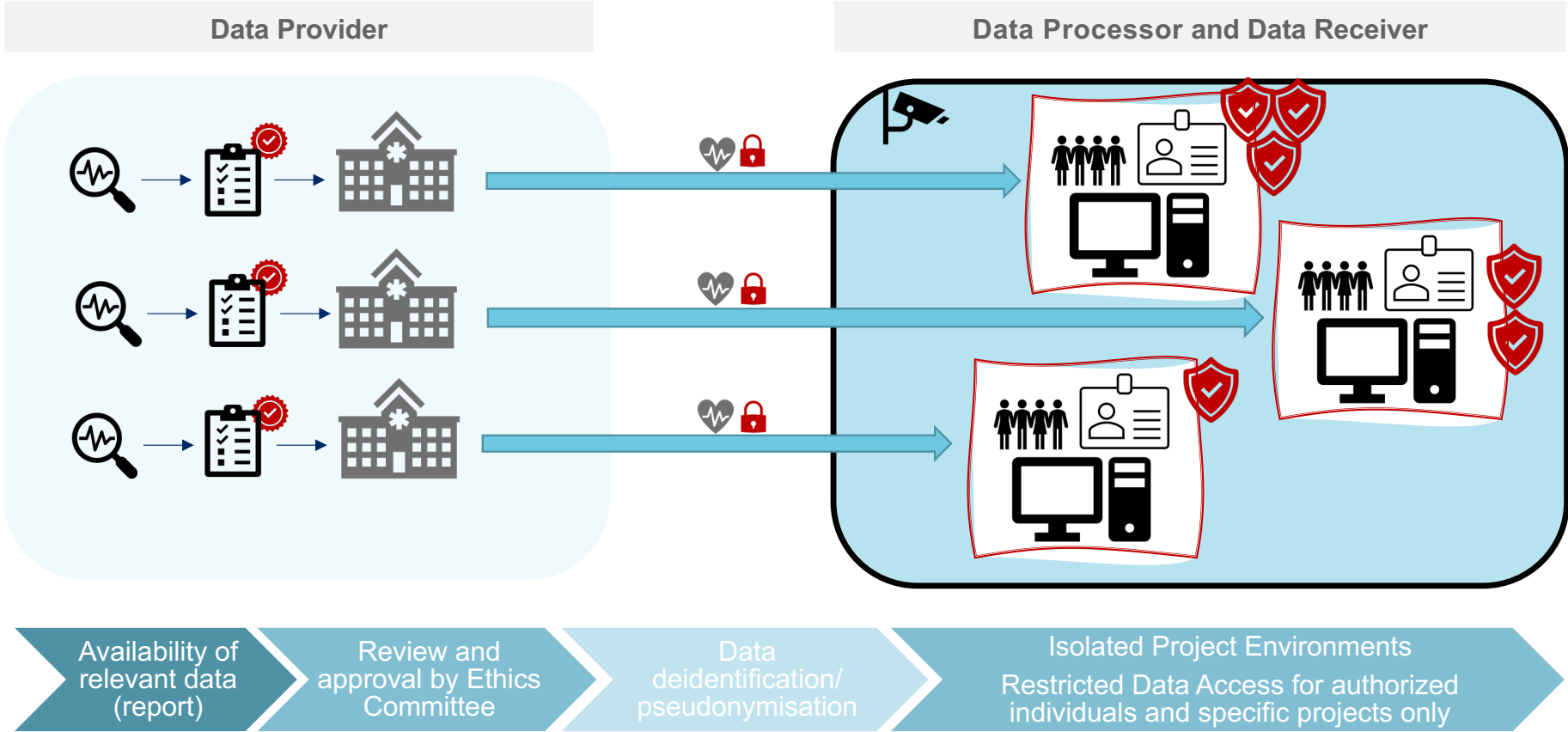
Switch Cloud and TRE

- SPHN initiative built infrastructure for analyzing health data in three nodes
- Focused on large inter-institutional projects with many data sources → strict policies
- Largest medical faculty lacks a suitable research environment
 - Decision to use Switch Cloud and partner with Switch

Switch Cloud and TRE at Switch: Projects and Prospects

- University of Bern decided to build a research platform to support joint projects in health between the university and the university hospital
- TRE for Swiss instance of federated European Genome Archive
- A university explores how it can install its current TRE (currently on dedicated hardware) on the Switch Cloud
- A university hospital designs a setup in which a “set of resources on Switch Cloud” are becoming “part of their local network”
- Substantial interest from various other parties how these activities proceed

Research Platform Berne: Goal



Research Platform Berne

- Must support "simple" projects like master thesis as well as multi-year multi-institutional projects
- Must be approved by the CISOs of university and hospital as well as the data protection officer of the Canton of Berne
- Project: Approved in June 2024
 - MVP (release 1): May 2025
 - Final version: December 2025
- Operation of the platform divided between Switch and University
- Plan to make platform also available to other universities and hospitals

Switch