

Private cloud solution for Swiss Federal Railways (SBB)

Reference project:

↔ SBB CFF FFS

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Igor Masen, Lead Architect at SBB

Swiss Federal Railways (Schweizerische Bundesbahnen, SBB) is a joint-stock company under special legislation with its headquarters in Berne. Its public services include passenger transport and the railroad infrastructure. It gets more than 880 thousand people and 185,000 tons of freight to their destination every day. 33,500 employees are passionately committed to ensuring that their customers arrive safely, on time, and climate-friendly.

Getting travelers from A to B and ensuring that freight cars reach their correct destination is the business mission of Swiss Federal Railways. Above and beyond this, the company continually strives to increase its own efficiency and effectiveness. Developing the “mobility of the future” requires dynamic, cloud-native infrastructures that can react quickly to the volatile demands of the customer environment. In turn, this requires a flexible ecosystem, based on digital IT, that makes it possible to add more trains to the schedule as needed in addition to the established interval timetable. The keys to this are continuous integration and continuous deployment (CI/CD) for the digitalization of all customer needs. They make it possible to capture optimization potential – for instance, to improve employee safety or increase the company’s own network capacity.

At a glance

- **The challenge:** To expand to a hybrid cloud infrastructure, Swiss Federal Railways needed dedicated resources from the private cloud that were secure, flexibly scalable, and seamlessly compatible with other cloud resources. Other requirements included hosting on Swiss soil and low latency.
- **The solution:** T-Systems provides private cloud resources to SBB as managed services. These cloud instances are hosted and managed by digitalization specialists in the Swiss data centers.
- **Customer benefits:** SBB benefits from secure cloud instances provided specifically for SBB, with high flexibility and high availability. T-Systems ensures the smooth operation and continuous further development of the service portfolio within the cloud-native platform. The underlying cloud technology standard “OpenStack” forms the foundation for sovereignty, while API-driven guarantees seamless compatibility with standard public cloud instances.

Reference in detail

The challenge

Real-time services for travelers, efficient resource management, smart mobility services – to meet new demands and develop new applications, SBB requires increasingly extensive IT resources that can be provided as flexibly and scalably as possible. The company's public cloud strategy has already involved a number of different hyperscalers. In addition, SBB also relies on the community cloud from T-Systems, which makes it possible to use established public cloud processes in a similar manner and present the provided service in a more protected context.

The Swiss Open Telekom Cloud is hosted in Switzerland. Low latency times to SBB's existing classic stack and intercommunication with the public stack are guaranteed. The customer's demands for data protection and data conformity are also met.

The solution

Cloud-native operation with hyperscaler integration as the operating model for digitalization at SBB: With the Swiss Open Telekom Cloud, T-Systems provides SBB with the requested on-premise infrastructure. T-Systems also provides managed services for the operation and further development of the underlying technology platform. In the intensive dialog, the partners are developing features like vulnerability management and a zero-trust concept, including credential management, and establishing extensive enterprise service agreements. "Thanks to the close collaboration, we were able to improve our internal service level, making for much more satisfied users," says Igor Masen, the Lead Architect at SBB.

Customer benefits

Secure, flexible, and seamlessly compatible: "With the Swiss Open Telekom Cloud, our employees have the readily scalable computing and storage services that they know from the public cloud available as services in the community cloud," says Igor Masen. What's more, thanks to the OpenStack cloud standard, community cloud resources can easily be combined with instances from the public cloud on demand. SBB has already migrated around 800 development and production systems to the Swiss Open Telekom Cloud and is working on replacing its classic stack. The railroad operator already uses open-source technology for new applications, built on the infrastructure best suited to their intended use. "In the Swiss Open Telekom Cloud, SBB now has additional cloud technology to provide solutions to the company," says Steven Henzen, Tribe Lead Lean Product House & CTO at T-Systems Switzerland.

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