AIRLOCK®
SECURE ACCESS HUB

Zero Trust and Airlock IAM

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How Swiss Federal Railways (SBB) managed to integrate over 260 service providers into one platform.

*« With Airlock, I work with real specialists who wow me with their service every single time. »*

Michael Gerber, Senior Systems Architect at SBB

Establishing secure connections is something that Swiss Federal Railways has been doing for over 200 years. First with rail traffic. And now with data traffic. When customers are purchasing train tickets, booking spa and thermal bath passes or using sharing offers via a central platform, you need IT technology that guarantees one thing above all else – secure connections.

Public transport in Switzerland is a tremendous asset, and the country's system is counted among the best in the world in terms of quality. One of the main reasons for its success is its customer-centric approach and range of innovative services that win over users time and time again. So it comes as no surprise that SBB is a digital pioneer that not only transports 420 million people between towns and cities, but that also exchanges millions and millions of pieces of data with other providers, including public transport service providers, tourism organizations and sharing platforms for renting cars and bicycles.

A cleverly designed digital ecosystem and a one-stop shop

What even is the aim of such data exchange? To create an integrated mobility solution that provides customers with "one ticket for absolutely everything". The advantage for passengers is that they can bene-fit from a one-stop shop and a cleverly designed digital ecosystem – whether they are just catching the local bus or heading out to enjoy a day on the slopes.
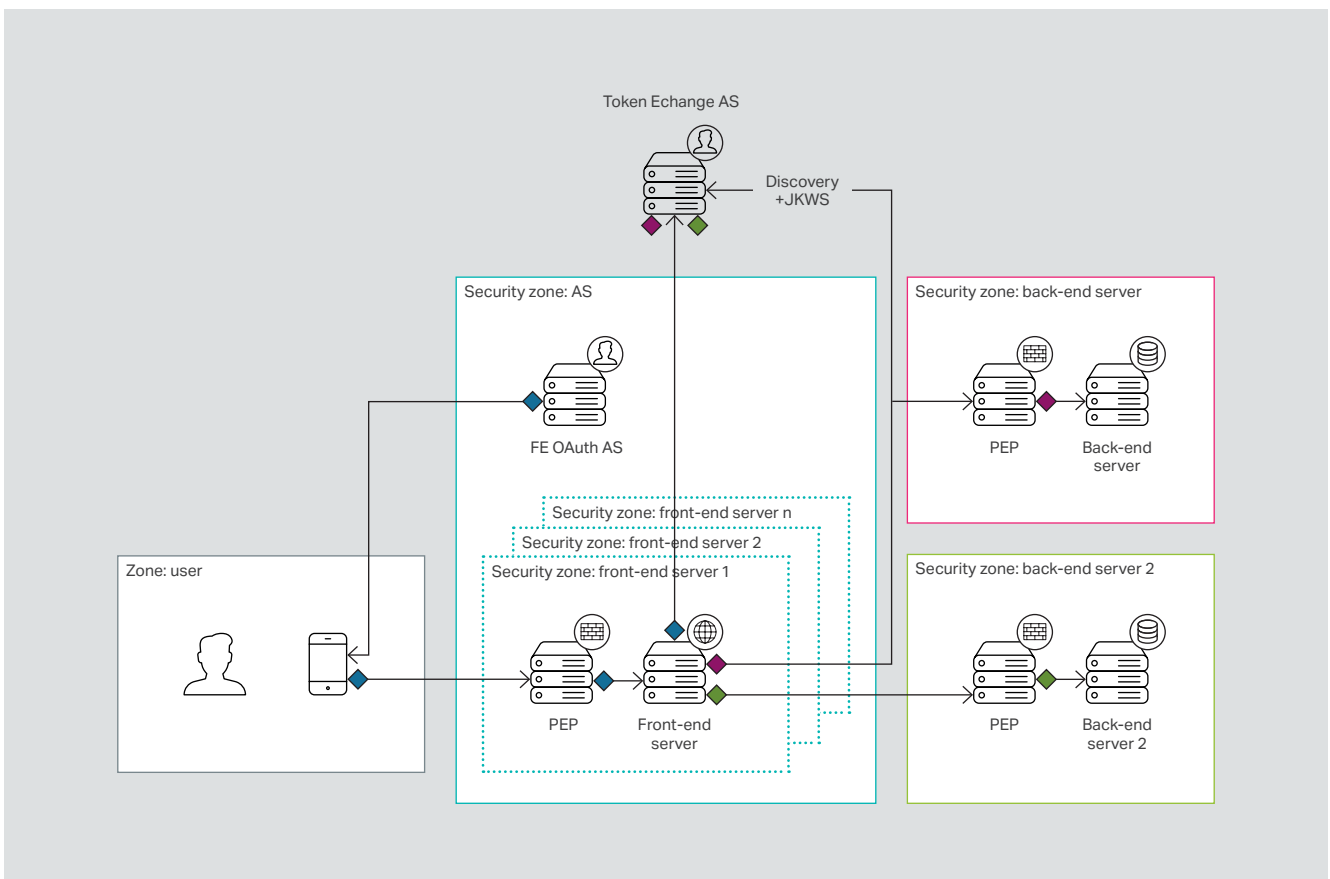
OAuth 2.0 uses access tokens that are issued depending on the context and roles, and has prevailed as the definitive standard for online authorizations.

As appealing as "one ticket for absolutely everything" may sound, providing a one-stop shop like this is a tremendous technical challenge for companies. The main focus in this regard has to be on IT security. The different sales organizations must be reliably managed with their own shop systems and a heterogeneous application landscape to be able to ensure protection against misuse, handle sensitive customer data and deal with financial transactions. That is why SBB relies on two state-of-the-art concepts: Zero Trust and Token Exchange. And, of course, identity and access management (IAM) from Airlock.

Zero Trust and Token Exchange
Zero Trust is an innovative security strategy based on a central principle: users, devices or applications in a network are automatically not trusted. As such, all access instances must be continuously authenticated and authorized to allow access to sensitive resources. The concept ensures that user identities and authorizations are checked constantly to minimize security risks.

Token Exchange is a technical procedure that facilitates the secure exchange of access tokens between different confidential areas. These tokens are used to check the identity and authorizations of a user without requiring them to disclose their actual login credentials. Token Exchange thus facilitates the integration of applications between different organizations without putting their security at risk.

OAuth 2.0 Token Exchange: multi-level security thanks to targeted segmentation
This approach enables a front-end server to contact a back-end server that is in another security zone, for example. If each zone has its own access token, then the front-end server cannot simply pass on the existing token. Instead, it must exchange it for a new token at the authorization server. Thanks to this segmentation and OAuth 2.0 Token Exchange, an attacker can be stopped from accessing further servers from a compromised system.

The first benefit of this solution is that the best possible IT security also meets the latest regulatory requirements. And what about the second benefit? SBB opted for the upstream IAM solution from Airlock with integrated Token Exchange, so what it received was a standardized solution that is perfect for swift scaling and use as a central authentication platform.

Simple security: Airlock IAM
So what makes the Airlock solution a cut above the rest? Its high availability and system security that is also guaranteed even in multi-cloud environments. Michael Gerber, Senior IT Architect at SBB, explains: "As a Swiss provider of high-quality solutions, Airlock is a trusted partner for our company. Airlock IAM fits into our IT landscape perfectly and its simple integration really won us over – both with its application across multiple instances and its rapid deployment." Michael Gerber also highlights another crucial point: "With Airlock, I work with real specialists that wow me with their service every single time." A secure connection is even guaranteed when it comes to support with quick response times, cleverly designed solutions and reliable support for day-to-day operations.

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Michael Gerber,
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About Swiss Federal Railways (SBB)

Swiss Federal Railways (SBB) is a special public limited company headquartered in Bern. Its public services include passenger transport and rail infrastructure. The company transports over 1.16 million passengers and 185,000 metric tons of goods safely to their destination each day.

Over 33,000 employees devote their energies to ensuring that both passengers and cargo arrive at their destinations safely, on time and in an environmentally friendly way.

About Airlock – security innovation by Ergon Informatik AG

The Airlock Secure Access Hub combines the key IT security issues of filtering and authentication into a well-coordinated overall package that sets standards in terms of usability and services. The Secure Access Hub provides all the key functions required for modern IT security in this field – from a web application firewall (WAF) acclaimed by specialist journalists and a customer identity and access management (cIAM) system trusted by Swiss banks, to API security that meets the latest requirements. The Airlock IT security solution protects more than 20 million active digital identities and 30,000 backends from over 550 customers all over the world.

You can find further information at www.airlock.com. Airlock is a security innovation from Swiss software company Ergon Informatik AG.

Ergon Informatik AG was founded in 1984 and is a leader in the production of customised software solutions and software products. 300 highly qualified IT specialists who quickly anticipate new technology trends and ensure key competitive advantages with innovative solutions thanks to their outstanding specialist knowledge form the basis of this success. Ergon Informatik mainly implements large-scale projects in the B2B sector.

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