Various services centrally connected and managed

Reference report on the SBB's comprehensive SD-WAN solution

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Initial situation

In 2022, SBB (Swiss Federal Railways) launched a GATT/WTO tender to find a solution for connecting a wide range of devices and services within its increasingly digitalised infrastructure. Flexible deployment options, strict adherence to top-tier security standards, zero-touch provisioning, and centralised management were key criteria in selecting a suitable provider.

Decision

SBB selected onway's comprehensive SD-WAN solution as the most advantageous offer. Our ON1700 and ON1810 routers serve as secure network access points for the increasingly digital SBB infrastructure, using various technologies such as mobile networks, WLAN, and wired WAN connections. With our solution, SBB's different departments and networks are connected to the central network via the same VPN gateways while remaining securely separated from one another.

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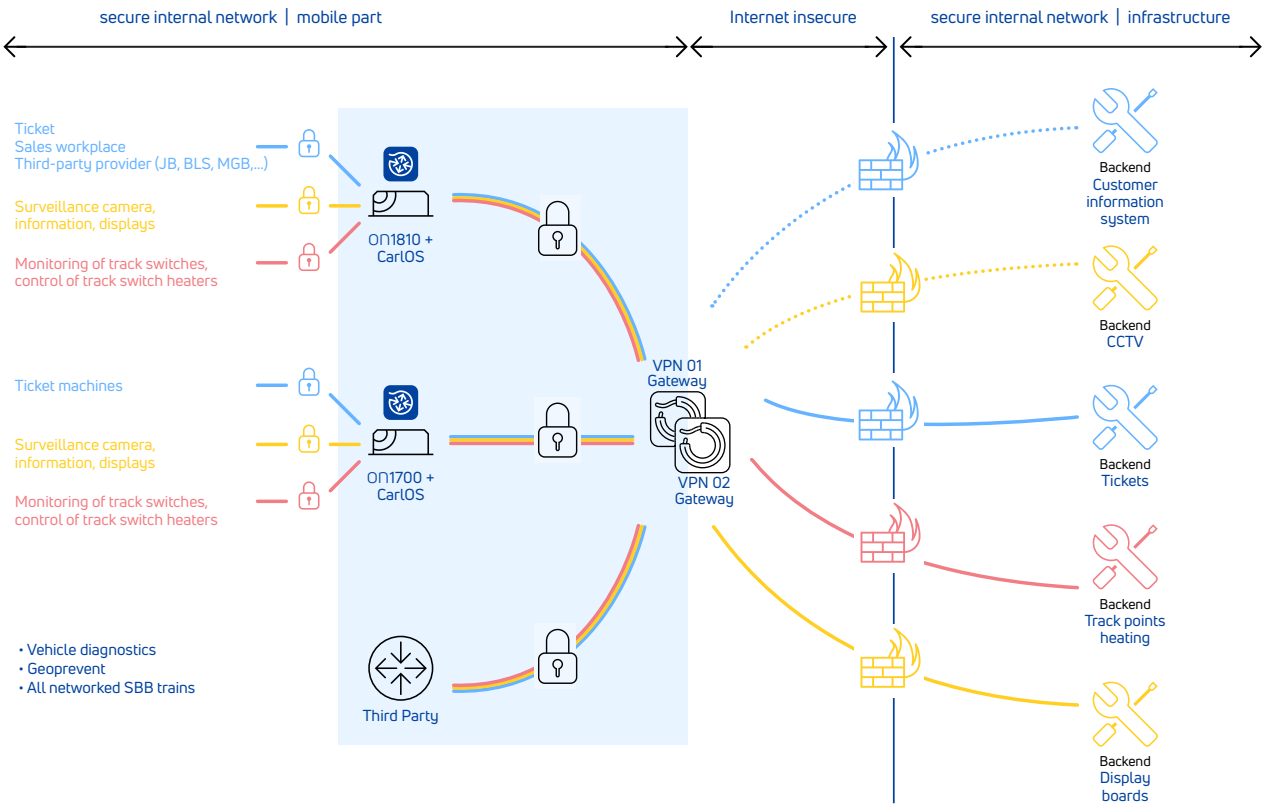
Solution

The infrastructure equipped with onway routers covers all required areas of the tender:

- For video surveillance, the mobile onway routers provide both connectivity and power supply.
- They handle data communication for the ticket vending machines, where passengers can purchase tickets by credit card, redeem gift vouchers, or recharge prepaid mobile phones.
- The routers also control the switch heaters operating in demanding trackside environments.
- At small stations, travellers receive real-time rail information on digital overhead displays, enabled by the routers.
- Notifications about potential maintenance work, automatically detected by diagnostic vehicles, are transmitted via the onway routers.
- They also provide authorised third-party points of sale with access to SBB's ticketing system.

Finally, the seamless train-to-ground connectivity of approximately one thousand trains operates through onway's VPN gateways.



Why onway?

The solution developed by onway offers several distinctive advantages. It can be deployed in any operational area and integrated independently of individual requirements. Everything can be controlled, monitored, and updated through a single management system. Whether connecting switch heaters or operating video surveillance, all data transfers are securely isolated. This allows large device fleets to be managed in an automated, low-effort manner without manual intervention.

In challenging and remote environments, onway routers perform exceptionally well. The security-by-design approach ensures that both security and usability are embedded from the outset in the system's architecture. The routers automatically configure themselves according to the specific needs as soon as a device connects. The cost-efficient system is highly reliable and stable. Thanks to Power over Ethernet (PoE), no additional power supply is required for devices such as cameras, providing significant flexibility during deployment.

onway is responsible for maintenance, operation, and support of the entire infrastructure for an initial period of nine years, with an option to extend.

SBB CFF FFS

In Switzerland, SBB is not only the largest travel and transport company but also one of the country's major employers. In numbers, this means 1.39 million passengers per day, a rail network of 3,266 kilometres, and 801 stations and stops. With more than 35,000 employees, SBB forms the backbone of public transport and ensures that its customers reach their destinations safely, punctually and reliably. Today and in the future.

onway

onway is the leading provider of customized communication solutions for all areas of modern network infrastructures. We support more than 150 customers across various industries with the design, implementation, operation, and support of secure ICT infrastructures. Our own products include a multi-tenant smart access solution, public hotspots, and mobile solutions for public transport vehicles. In addition, we integrate communication solutions from established manufacturers, creating seamless, future-proof networks. The onway Group is fully certified according to ISO 9001:2015, ISO 14001:2015, and ISO/IEC 27001:2022.

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