

High-performance WLAN on express buses



Reference report on passenger WLAN on the Rhein-Main-Verkehrsverbund

Foto: rms/Alex Habermehl

onway responded to our requirements right from the start and implemented the perfect solution for us. In onway, we have found a partner who has assimilated the demands of any transport association.

Sven Schraven, Head of ITCS and Vehicle IT,
Rhein-Main-Verkehrsverbund Servicegesellschaft (rms)

Initial position

When establishing express buses as a premium product in its network area, the Rhein-Main-Verkehrsverbund (Rhine-Main Transport Network, RMV) was looking for a flexible communication platform that met the following requirements:

- Central data router for a high-performance bus-to-ground connection
- High-performance customer WLAN available free of charge as an internet gateway in all vehicles
- Mobile-phone-based WLAN hotspot function
- Possibility of flexibly implementing further WLAN services in the network area
- Interfaces must be designed in such a way that the system environment can also be integrated
- Provision of a background system for configuring routers and offering Internet Service Provider (ISP) services

Decision

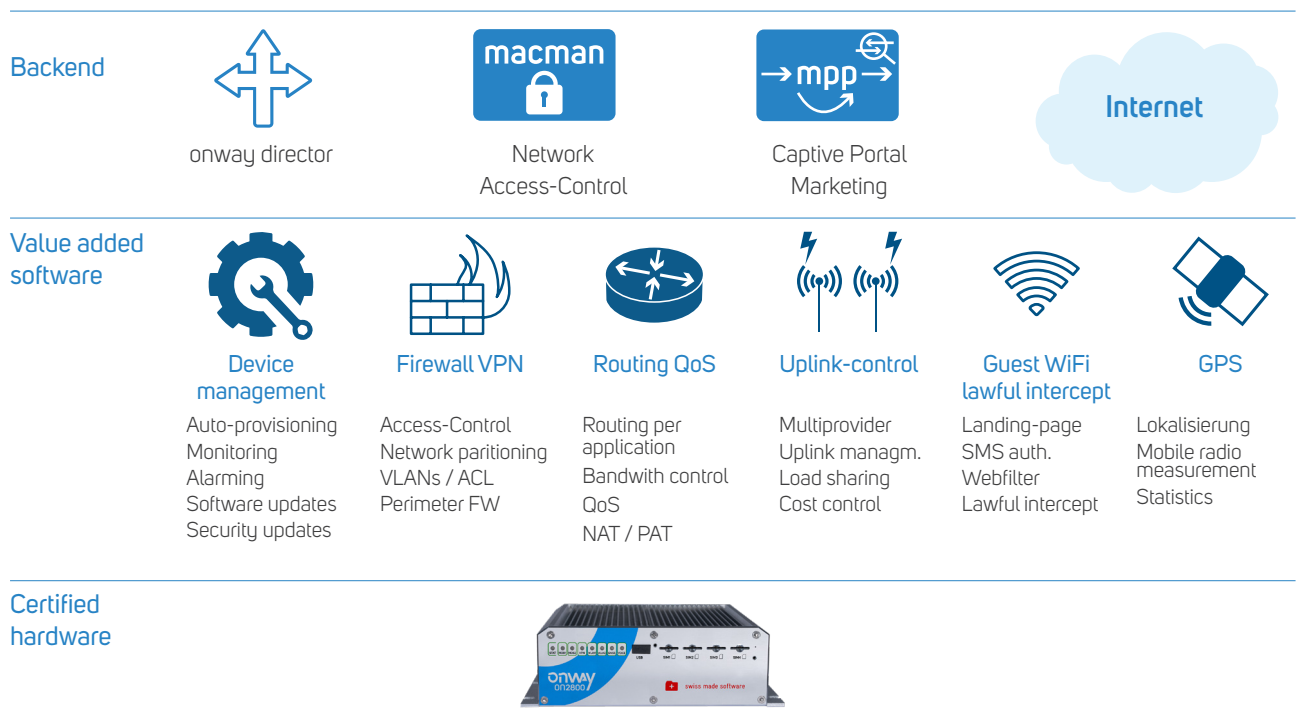
The following points convinced RMV that the onway solution was the most suitable:

- Zero Touch Provisioning
- Simple integration of the pre-programmed, certified routers supplied
- Transparent IP management system
- No need for additional hardware such as routers, antennas or SIM cards for peripheral IT systems in the bus
- Rapid transmission of high data volumes for the infotainment system
- Clear statistics and data evaluations

Solution

The vehicles used on the express bus routes were equipped with a mobile-radio-based WLAN hotspot function. To offer passengers free, legally compliant internet access, various functions are needed both in the vehicle and the back-end. To determine the originator in the event of misuse, GTC registration is required when the connection is first established. To prevent the consumption of inappropriate content, a DNS URL filter is applied.

Using the fleet management onway director, RMV can easily manage all mobile routers and check both the location and the current status at any time. Communication between the mobile router and the redundant central VPN end points is encrypted thanks to IPSec. The mobile environment is taken into account with MobIKE. This guarantees stability and fast connections at all times. The individual needs of RMV vehicles can also be easily and securely integrated in the future.



Rhein-Main-Verkehrsverbund (RMV)

With over 5 million people in the connected area and 809 million passenger movements in 2019, Rhine-Main Transport Network (Rhein-Main-Verkehrsverbund, RMV) is one of the largest transport associations in Germany. What's more, it offers one of the largest public WLAN networks in the country. In recent years, RMV has started to establish a network of express bus routes, partly consisting of new connections and partly developed from existing routes. Introducing WLAN on these express bus routes is part of a comprehensive WLAN strategy.

onway

Since 2004, the team at onway ag has been supporting customers to evaluate, plan, implement and operate their WLAN/Network Access Control solutions, as well as offering ongoing support. To date, the team has successfully completed over 100 projects. We would be delighted to support you with your project.