

# Transparency for network security

Verkehrsbetriebe Zürichsee und Oberland AG practice penetration tests

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Reference project:



**“Penetration testing from T-Systems/Deutsche Telekom Security gave us transparency for our network and enabled us to improve our security level.”**

Dominik Trachsel, Head of ICT, Verkehrsbetriebe Zürichsee und Oberland AG

Every day, more than 60,000 passengers trust the transportation services of Verkehrsbetriebe Zürichsee und Oberland AG (VZO), the Zürichsee and Oberland transportation service company. With over 300 employees, the company ensures that commuters, school children, and occasional passengers within 250 km<sup>2</sup> of the Zürcher Oberland and the right bank of Lake Zurich reach their destinations reliably and on time. VZO provides optimized transportation services to the population of the Zurich economic region – while helping to protect the environment. The quality of the services is also verified by the measurements of Zurich’s public transportation network (ZVV), which acts as a client of VZO.

The transportation company operates an ultramodern fleet of more than 100 buses and also invests heavily in its employees. It was recognized with the Swiss Arbeitgeber Award in 2021, Switzerland’s most significant prize for employer attractiveness. Regular training courses for staff, as well as occupational health support, are among the many services that VZO offers its employees.

The Covid-19 pandemic also saw a shift in work environments within VZO – there was a significant reduction in passenger numbers as employees were increasingly working from home.

The managers were aware that the new work situation posed cybersecurity risks. A successful cyberattack could pose massive difficulties to operations. They decided to review their IT security capacity and enlisted the security experts at T-Systems/Deutsche Telekom Security to help them do so.

## At a glance

- Need to increase the security level
- Inventory of the current IT security situation
- Commissioning of Deutsche Telekom Security
- Penetration testing: An external perspective reveals strengths and weaknesses
- Consistent analysis of weak points
- Risk assessment
- Prioritized action recommendations
- Full transparency of vulnerabilities
- Ensuring business operations in the face of a constantly increasing threat level

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# The reference in detail

## The challenge

VZO took the opportunity posed by the changed situation to subject its cybersecurity to a critical review. Its approach involved raising awareness among employees, as well as putting its IT technologies, processes, and methods to the test. Potential vulnerabilities were to be identified, evaluated, and eliminated, to ensure that the company could maintain its business operations reliably despite a constantly increasing threat level. The company commissioned experts from T-Systems/Deutsche Telekom Security to perform a security check and risk assessment.

## The solution

External penetration tests are an efficient, proven method for testing the current security level of (information) systems, technically and objectively. Penetration tests are used to review networks, systems, and/or applications. Before the test, VZO's managers and

Deutsche Telekom Security defined the scope, the targets, and the procedure in a "permission to attack".

Over the course of two months, the security experts scrutinized VZO's network intensively. Initially, public sources of information were perused to identify potential attack vectors. Automated port scans provided information about the services and operating systems.

Based on this information, the security experts assessed the risks posed by the identified vulnerabilities. To minimize the company's risks and mitigate the identified vulnerabilities, the experts presented a prioritized list of suggested solutions. The outcome of the tests was documented in a report containing a summary of the results and a description of the approach used, along with an analysis of each vulnerability. It also contained a risk assessment, a list of the affected systems, a description of each vulnerability and its impact, recommended measures, and documentation of the weak points.

## Customer benefit

Thanks to the analysis by external experts, the managers at VZO gained transparency regarding the strengths and weaknesses of their network. The prioritization and risk assessment enabled them to eliminate weak points efficiently and purposefully, permanently increasing the company's security level. With this step, VZO helped safeguard business operations despite a constantly increasing threat level.

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