



Case Study

T-Mobile Poland

About T-Mobile Poland

T-Mobile Polska S.A., wholly owned by the Deutsche Telekom Group at the time of this writing, is one of the largest mobile operators in Poland, serving around 10.3 million contract and prepaid customers. (In this case study, we refer to the company as “T-Mobile.”) Its offerings include consumer and business fixed and mobile telecommunications services, a full information and communications technology (ICT) product package, and financial services through T-Mobile Banking. T-Mobile has been recognized for providing high-quality voice and data transmission services, verified by independent network quality tests carried out in 2014, 2015, 2016 and 2017 by P3 Communications. Each time, T-Mobile’s network received the highest rating. Accedian’s Skylight solution portfolio played a role in T-Mobile achieving these results.

Business challenges

T-Mobile’s backhaul network consisted of eight domains, with cell site aggregation points connected by a combination of IP and Ethernet lines, using high-speed, point-to-point microwave links and direct fiber connections. Routers from three vendors supported this aggregation.

In theory, monitoring the performance of these connections—using Y.1731 Ethernet OAM for Layer 2, and TWAMP RFC-5357 for Layer 3—should have been straightforward, providing seamless core-to-edge, multi-domain coverage.

In practice, though, instrumenting the network proved to be complicated for T-Mobile. Routers in some locations were not fully TWAMP compliant. Furthermore, it was impractical to set up Y.1731 sessions on equipment from one of the vendors because it could not be easily automated using available interfaces.

The Accedian Skylight solution addressed these challenges, along with many others. The solution offers a highly configurable set of continuous monitoring session types, which were able to interwork with the existing network and RAN infrastructure without issue.

Solution benefits

T-Mobile needed a performance monitoring system with consistent support for standard continuous monitoring protocols across multiple vendors’ equipment and with a mix of domain types in the backhaul network. Their ability to stay competitive was compromised by the inability to assure quality of service (QoS) across the entire coverage area, coupled with the lack of nationwide backhaul performance visibility.

They closed those gaps by deploying Accedian’s Skylight solution, covering 14 radio access controller sites in all major Polish cities, and 1,500 fiber links to cell site aggregation points.

T-Mobile uses Skylight to monitor three classes of service to each tower in each of the 14 RAN areas, covering those classes important for the delivery of 3G and 4G LTE services. The initial deployment included 150 SFP compute sensors, which provide enhanced performance monitoring capabilities to existing network and RAN equipment. These sensors have other capabilities as well, which T-Mobile may leverage in future.

The Skylight solution also allowed T-Mobile to leverage existing TWAMP and Y.1731 capabilities in existing devices where they were present.

For T-Mobile the benefits of deploying Skylight extended beyond the obvious advantage of seamless, end-to-end, multi-layer performance visibility. They also gained the ability to optimize network planning, QoS mapping, and performance as new services and protocols are turned up.

Those benefits also include:

- Real-time continuous performance metrics for proactive identification of network and service issues, rapid fault isolation, network segmentation, and per-flow performance visibility
- Programmable statistical thresholding based around percentiles for immediate alarm notification regarding packet loss and latency issues, which often cause call drops and overall poor end user experience
- Detailed service level agreement (SLA) conformance for roaming partners served by the T-Mobile network, along with information and communications technology (ICT) and banking customers paying a premium for their services, with guaranteed SLAs attached.

- SLA reporting also provides T-Mobile with a useful source of data to feed into internal network improvement programs and for contributing to network and service level testing activities, as performed by P3 and others

Business value and outcome

Prior to deploying the Accedian Skylight solution T-Mobile were lacking any kind of end-to-end performance management solution, which resulted in operational inefficiencies and wasted resources.

Skylight not only allowed T-Mobile to make improvements to their operational processes—via enhanced ubiquitous insight into per-service and network performance—but also supported the company's aim of maintaining and furthering their lead in having the highest performing voice and data services in Poland, as validated by independent testing.

T-Mobile is also in the process of launching their 5G network in Poland and was the first operator to announce initial pilot deployments in Warsaw in December 2018. Such a move will be achieved in a far more expedient manner due to the benefits provided by the Accedian Skylight solution.

Not only is this solution proving how existing 3G- and 4G-based services are performing, it also

allows T-Mobile to create baseline performance measurements of each transmission link planned to carry 5G, thus allowing '5G-readiness' to be assured on a link-by-link basis.

This gives T-Mobile a unique advantage in their 5G rollout and will enable any initial issues or problems to be corrected rapidly and for ongoing performance of existing and new services to be assured.

When brand perception and customer retention/acquisition topics are considered, having ongoing continuous insight into network and service performance before, during and after the addition of 5G services will allow T-Mobile to effectively manage the rollout in an efficient, customer-focused manner.

"We are very happy with results from Accedian's Skylight solution. It gives us a complete view of network performance"

Maciej Rozowicz,
Transmission Access and Aggregation
Section Manager, T-Mobile Poland

About Accedian

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