



# UMP SUCCESS STORIES

## Success Stories

---

- Improve your services with a unified approach to customer care **3**
- Get business intelligence with flexible and comprehensive monitoring **4**
- Grow your business at ease with a scalable and centralized solution **5**
- Manage all types of devices with one system **7**
- Decrease the customer churn rate with powerful device grouping capabilities **8**
- Optimize your services with full automation and integration of an ACS and DHCP Server **10**
- Get one device management system to rule them all **11**
- Reduce costs of diagnostics and troubleshooting with all-round device management **13**
- Get control over your devices with remote device management **15**

# Improve your services with a unified approach to customer care

## Overview

---

Philippine's major telco operator had plans to improve their services by adopting a new system for remote device management of broadband network devices. The scope of this undertaking was estimated for a few million devices including ADSL, VDSL, FTTH and LTE equipment. To make it work more smoothly, the system was supposed to be logically divided into system user view and CPE (both Home and Enterprise type) user view. To further enhance the project, the operator decided that a self management solution such as a mobile application for clients would be a great value-add.

## Solution

---

AVSystem started with the integration of ADSL, VDSL and FTTH devices as well as with offering UMP Customer Care with a special customized view. Many of these devices had to be adapted to fully cooperate with UMP Customer Care due to their lack of support for the TR-069 protocol. The full integration included interoperability tests or helping

device vendors in preparing firmware compliant with the operator's requirements. Hundreds of thousands of devices had to be updated for security reasons which entailed creating migrating rules and tasks that would allow mass update actions. The self management application was created for Android and iOS operating systems.

## Results

---

Thanks to AVSystem's solution, the Filipino operator can easily perform mass firmware updates for their devices as well as generate reports for bandwidth speed, number of connected hosts and more which gives them great control over their vast network of devices. Furthermore, the multitenancy mechanism in UMP allowed for comprehensive division of user/admin (and other) views. The UMP Customer Care module proved to be a perfect choice for a demanding call center workload thanks to its unified user interface and comprehensive device diagnosing capabilities.

# Get business intelligence with flexible and comprehensive monitoring

## Overview

---

Swiss Tier 1 operator needed to get control over their CPEs and have more visibility of the network performance and user behaviour. The plan was also to utilize their newly acquired monitoring capabilities in order to get more business intelligence information. One of the main goals was for the system to be flexible in case of further customizations after the implementation. Finally, in this fully customized platform the features of uttermost interest to the operator were: Customer Support Portal, Quality of Experience, Self-support Portal, Reporting and Statistics. On top of that, the system was to be 100% reliable in order to ensure the highest possible SLA.

## Solution

---

AVSystem decided to use UMP with a few adjustments in order to meet the Client's requirements. Firstly, we saw the need for delivering and installing hardware and software (VMware vSphere, Red Hat Enterprise Linux, and others) from scratch. This required from us installing our UMP 3 times in 3 different environments: Production, Testing and

Development. After migration of existing services (as well as a large portion of existing device population) we started a long process of thorough testing to ensure everything works as planned. In order to fix earlier problems with devices, the configuration of UMP was designed to cover 36 methods of provisioning with 13 types of devices needing around 20 different types of firmwares.

## Results

---

Thanks to our solution, the Swiss Tier 1 operator was able to achieve 99.999% availability of the system, which greatly increased their quality of services. Thanks to enhanced business insight, the company is now able to efficiently improve their upselling in order to maximize their profit. The flexibility of the delivered system as well as a multitude of additional features such as Customer Support Portal or Self-Support Portal allow for constant upgrades and ensuring top class quality of experience for the end-users.

# Grow your business at ease with a scalable and centralized solution

## Overview

---

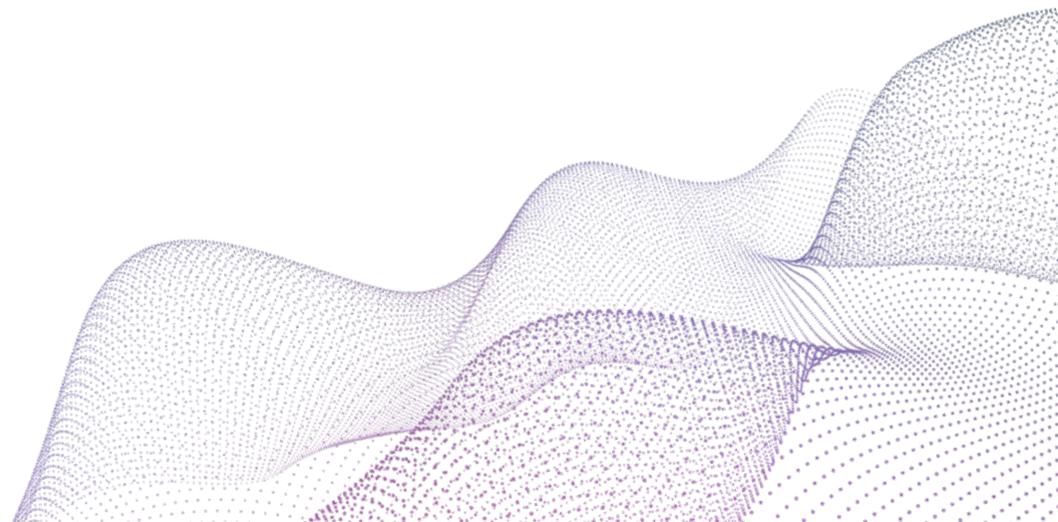
One of Spain's largest service providers was having difficulties in controlling its rapidly growing infrastructure and network. The growing base of the company's customers, caused them to look for a solution for end-to-end management and monitoring of their network.

The variety of access technologies, the need to maintain diverse networks and the rapid growth of the number of users, required an all-in-one, centralized solution to enable management of all of the operator's devices in a seamless and unified way. The operator planned not only to introduce full end-to-end management for CPEs but also to manage the core network.

## Solution

---

To answer the operator's needs, AVSystem delivered a brand new FTTx network activation suite based on Unified Management Platform (UMP). After implementing UMP, AVSystem was able to set up an end-to-end service activation scenario ensuring that the solution will scale up properly and provide the operator with the most comprehensive approach to overall management and monitoring of its heterogeneous network. The Zero Touch scenario included usage of DHCP option 82 managed by AVSystem's robust DHCP to identify OLT ports and assign proper services for FTTH.



## Results

---

Unified Management Platform enabled the operator to run automatic configuration of all services with their OSS/BSS systems. What was also crucial was the management within a single, umbrella system. Thanks to this solution, the operator was able to easily find faulty devices and report this directly to the core network owner. Furthermore, AVSystem's UMP improved the Spanish service provider's Customer Care performance by extending Customer Care console for end customers' assistance. This allowed to decrease the number of customer support phone-call time and reduce the number of calls related to initial installation issues.

The deployment of UMP allowed the operator to fully focus on their core business which included the development of their network, infrastructure and service portfolio.



# Manage all types of devices with one system

## Overview

---

A Tier 1 teleoperator from South America turned to AVSystem in need of deployment of an Auto-Configuration Server for TR-069 devices in the network without any management tool in place thus far. The primary goal was to enable fixing problems remotely with device management and monitoring. The important aspect of this deployment included the requirement of a unified approach to device management regardless of the type of devices used as well as management of business routers with zero-touch configuration capabilities.

The operator also needed to reduce OPEX costs related with Customer Care.

## Solution

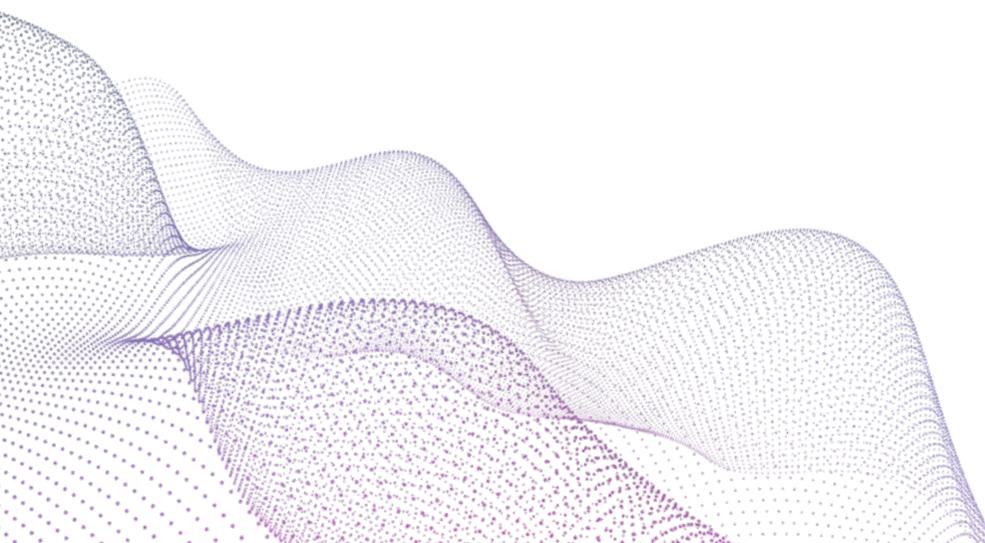
---

AVSystem tackled the problem of deploying an ACS for TR-069 devices by offering UMP with the TR-069 Module. Apart from that, UMP Monitoring Module took care of monitoring the whole network including DSL and Fiber devices. Control of business routers has been solved through integration of UMP via CLI and SNMP delivering not only monitoring but also zero-touch provisioning capabilities. To reduce OPEX costs for Customer Care, AVSystem introduced the UMP Customer Care Portal useful in diagnosing and configuring a variety of device types.

## Results

---

Thanks to the introduction of the UMP Customer Care Portal the operator experienced a 24% drop in Call Center calls. The system also proved to be a great solution to block the Mirai virus from spreading thanks to its ability to very quickly take security measures. UMP also automatically resolved the issue of a big outage in the operator's network which would require on-site technician visits if the platform weren't in place. On top of that, full zero-touch activation resulted in much less manual labor needed for deploying new devices.



# Decrease the customer churn rate with powerful device grouping capabilities

## Overview

---

A multinational communication service provider reached out to AVSystem to implement a few big enhancements to improve their operations and reduce costs. The most important changes included:

- Deployment of a new remote management system
- Replacement of old DSLAM/CMTS system for core access network devices
- Implementation of SmartWiFi module for optimization of WiFi performance
- Quality of Experience for regulatory entity in one of the countries they provide services in
- Massive firmware upgrades possibility and easy integration of new device types
- Integration with OSS/BSS systems to present customer data within the system
- A powerful tool for customer care staff

## Solution

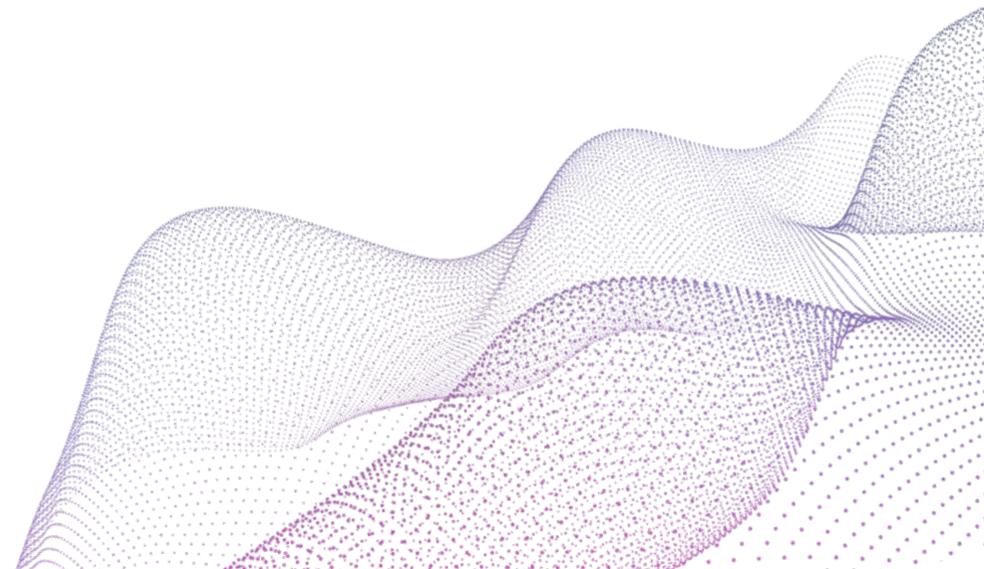
---

AVSystem approached this complicated operation by offering Unified Management Platform equipped with a few modules, including: UMP TR-069 Module, UMP Monitoring Module, UMP DSLAM/CMTS Management Module and UMP Customer Care Portal. The QoE Module was further reinforced with hardware probes that were required due to the fact that the operator's devices did not support speedtest speeds higher than 60Mbps, while services were offering >500Mbps on the Fiber network. The sophisticated Customer Portal was able to provide access to all devices in the network of the entire group of countries. The major improvement was UMP self-management integration for the operator's end-customer portal. Thanks to that, end users were able to change their CPE configuration themselves. The telecom group operates in many countries, thus the multitenancy functionality in UMP granting independent domains for each country to control and monitor only devices in the specific country was a game-changer in this solution.

## Results

---

Overall, UMP provided the telecom group with full control over devices in their network. Easy and comprehensive device management with UMP enabled rapid firmware upgrade possibilities as well as massive operations performed in bulk. Powerful grouping capabilities in the platform translated into decreasing the customer churn rate while the top-class customer care portal in decreasing the number of WiFi-related calls and overall time spent on diagnostics and troubleshooting.



# Optimize your services with full automation and integration of an ACS and DHCP Server

## Overview

---

A major provider of telecommunication and cable television services in the Philippines decided to make their services fully automated. The company needed to change their existing Network Management System in order to be able to remotely and automatically activate services for their ONT devices. They also wanted to change their subscriber management system to decrease the workload related to network segmentation and manual IP address assignment.

## Solution

---

AVSystem responded to these needs by providing integration of OLT devices from different vendors via the Secure Shell interface. The operator was also provided with new scripts allowing for easy activation and deactivation of ONTs as well as changing the type of service and even changing the customer's entire ONT. Temporary suspension of access to the ONT's internet (in case of lack of payment etc.) was also made possible.

All these operations were enabled through tasks performed in AVSystem's Unified Management Platform. Furthermore, AVSystem prepared various methods to set these tasks from OSS/BSS level in the NBI. Adding AVSystem's DHCP server to improve IP addresses assignment resulted in an easy and comprehensive way of managing hundreds of thousands of devices connected to the operator's network.

## Results

---

Thanks to AVSystem's solution the Filipino telecommunications operator is able to remotely manage all the services available for their customers. Equipped with OLT devices integration as well as new scripts for activation and deactivation largely contributed to service automation. Manual IP address assignment is a thing of the past thanks to adding AVSystem's DHCP server solution and integration with UMP. In case of ZTE and FTTH the provided zero-touch activation allows for seamless interaction with other systems with no need of manual configuration of the ONT.

# Get one device management system to rule them all

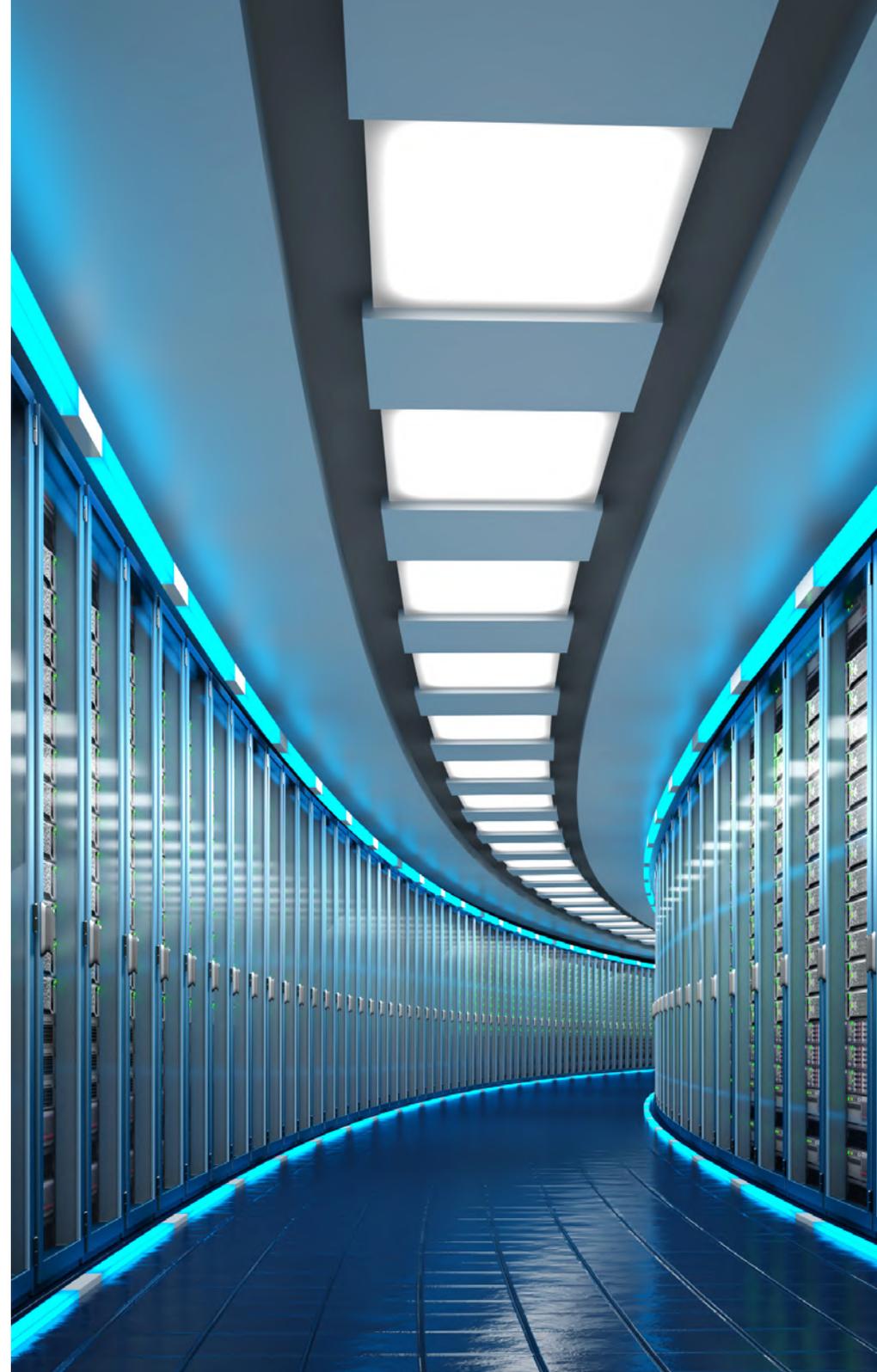
## Overview

---

A Polish operator wanted to replace its in-house ACS used for provisioning different models of devices. The solution had to support various types of provisioning, among others:

- provisioning of xDSL ports utilized by different models of devices,
- provisioning of cable modems and MTA voice gateways in newly created hybrid fibre-coaxial (HFC) network
- provisioning of ONT devices for passive optical network

The plan was to have a proven solution deployed as a centralized system responsible for managing CPEs with complex provisioning services. The end goal was, among other things, offering more reliable help for customers in the operator's customer care center.



## Solution

---

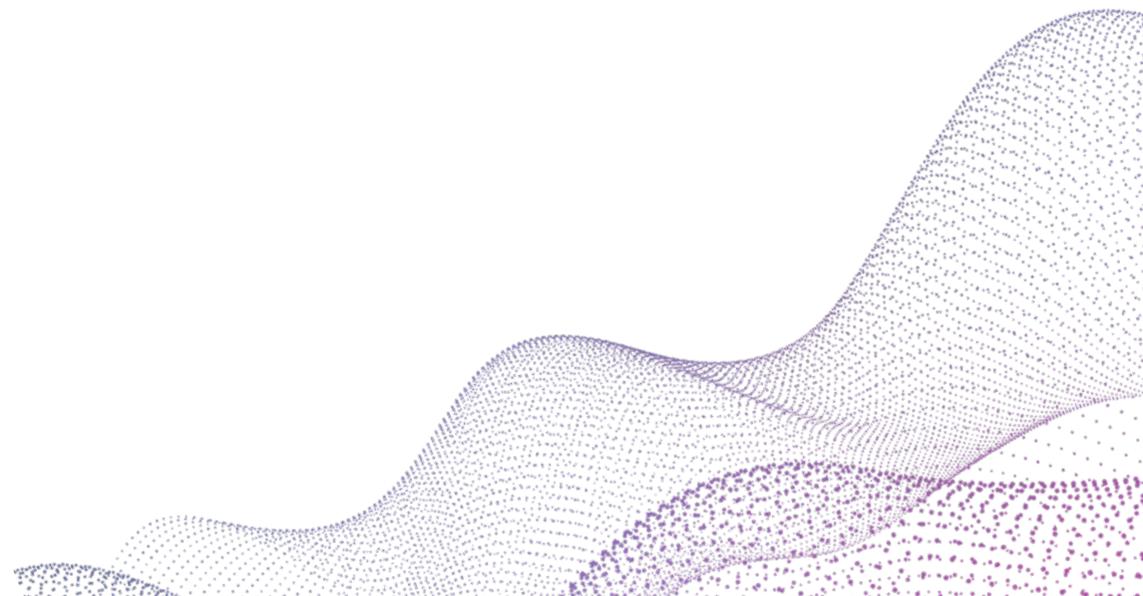
AVSystem helped the operator by offering them UMP in the form of a TR-069 ACS capable of managing various types of devices. TR-098 was implemented to help provision new devices which were constantly added in large amounts. Enhanced management of the devices' lifecycle was achieved thanks to offering a unified UI for different types of devices and tightly tying it up with the operator's OSS and an external AAA framework. The solution also featured:

- customization for the service layer along with initial import of already existing services and parameters on working devices
- customization for OpenRG,
- monitoring module,
- DOCSIS module,
- TELNET module,
- task execution via NBI based on task templates
- customized NBI interface for operator's OSS

## Results

---

AVSystem's solution helped the customer shorten time to market for new services as well as reduce money spent on customer care. Thanks to the implementation of UMP with all the necessary customization and modules the Polish operator can now schedule operations and perform them in bulk which greatly optimizes the efficiency of maintenance tasks. What's more, IVR tied with UMP through NBI allows to perform diagnostics while at the same time presents relevant ads until the end-user connects to the platform. On top of that, UMP as a central system for management of CPEs and operator's access devices comes with efficient 24/7 support to ensure top quality of services.



# Reduce costs of diagnostics and troubleshooting with all-round device management

## Overview

---

Sri Lanka's Tier 1 telecommunications company turned to AVSystem with a few problems that needed attention. The most important things were limiting the costs of handling failure reports from the customer as well as limiting the costs of reconfiguring services for CPEs (both of these cases involved costly on-site visits). The other problems included:

- CPE identification,
- faulty software updating on modems,
- lack of options to provide new services that require CPE configuration,
- no insight about the quality of the services.

A desirable outcome was also to acquire various methods of configuration as well as CPEs diagnostics via Web UI.

## Solution

---

AVSystem offered UMP to take control over a large portion of the device population. Firstly, this allowed the operator to easily get the devices' inventory thanks to UMP's built-in auto-discovery function. With the use of UMP's dialects every type of device has been optimized to be compliant with the particular device management standard it works with. Thanks to AVSystem's solution the Sri Lankan company was able to read the parameters of PPP services, which allowed them to match devices to customers and increase awareness of the quality of services and other useful information in their support systems. To improve software quality and relevance for CPEs, AVSystem also introduced them to CPE tests and requirements for CPE vendors.

## Results

---

Thanks to comprehensive monitoring of parameters for xDSL and LTE (both historic and on-demand) as well as remote diagnostics and reconfiguration of WiFi devices, Sri Lanka's Tier 1 telecommunications company obtained full awareness and control over their devices which greatly decreased the costs related to reconfiguration, troubleshooting or diagnostics of CPEs. The ability to perform mass software updates has also played a key role in decreasing on-site visits to customers. While problems with CPE identification were solved through integration with OSS, in order to bring in new methods of configuration of CPEs AVSystem introduced service management flows such as e.g. FON activation on selected devices or software, as well as UI unification (same UI for customer care and NOC) which greatly enhanced device management capabilities.

# Get control over your devices with remote device management

## Overview

---

One of Bahrain's leading service providers was looking for an ACS system as they needed improvements in their Customer Care to better troubleshoot home network problems. The company realized the value of remote device management via TR-069 and decided to implement it for zero-touch provisioning and monitoring purposes. They were also in need of gaining more control over their devices. The most important thing for them was a map visualisation to show overall health of eNodeBs based on data reported from CPEs and their CellID allocation which would help them quickly react to any problems with eNodeBs.

## Solution

---

Our Unified Management Platform (UMP) with TR-069 Module allowed the service provider to successfully implement a TR-069 ACS along with zero-touch provisioning and monitoring capabilities. With UMP LTE Monitoring and Maps Module showing eNodeBs on the map

with separation of 2G, 3G and 4G network the operator can quickly analyze and diagnose any problems related to eNodeBs. This is further reinforced with UMP SNMP Module for Business Routers monitoring along with detailed reporting about network parameters periodically sent to the technical department and radio planning team.

## Results

---

Our solution helped the provider to reduce the amount of work required on-site from field technicians thanks to automatic provisioning of VoIP accounts in their LTE network. Service troubleshooting was greatly enhanced owing to detailed insights into the customer network. Information about the whole network state grouped by eNodeB association and represented on the map turned out to be a great help to improve control of all the devices in the provider's network. With the new ACS system the operator can now present both the same reports as in the old system and much more complicated ones that were not available before.



[www.avsystem.com](http://www.avsystem.com)

[sales@avsystem.com](mailto:sales@avsystem.com)

+48 12 619 47 00

ul. Radzikowskiego 47d

31-315 Kraków