

Case Study

University IT Infrastructure Monitoring

Industry

IT Infrastructure Management

Companies

Peoples' Friendship University of Russia, www.rudn.ru

Partner

Unicorns LLC, www.unicorns.ru



Partner Profile

Unicorns LLC is a Russian provider of advanced network and IT infrastructure monitoring solutions able to bring quick benefits to customers requiring efficient IT infrastructure operation and development.

This narrow focus allows the Unicorns team to have high expertise in the area, perfectly know the products in their portfolio and get top-grade support from vendors.

The Unicorns professionals offer product demonstrations and pilot projects to help customers ensure acceptability of proposed solutions and evaluate their features. Moreover, the team puts a lot of efforts in implementing the solutions and further technical support.

Customer Profile

During its 55-year history, the Peoples' Friendship University of Russia (PFUR) gained worldwide fame and won a well-deserved reputation as a classical university holding top positions among the best Russian universities for many years and rapidly rising in international rankings.

Every year students and postgraduates from 145-152 countries across the globe come to study and undergo special training programs in the PFUR. Now the university is holding more than 28 000 people representing over 500 nationalities.

Challenges

The university has plenty of units (institutes, faculties, departments) fitted with cutting-edge IT equipment and the local network providing access to shared resources and Internet access to all departments and university hostels on campus. The network operation is maintained by 400 network devices (switches and routers) and over 600 Wi-Fi access points connected to multiple controllers, while the network is steadily expanding and modifying.

The main PFUR network monitoring challenge was developing an efficient network status

and Wi-Fi equipment control system implemented as a single installation. The system was supposed to visualize network status and topology, provide user-friendly tools for identifying equipment failures and their causes, as well as collect required network statistics.

Another challenge was generating custom reports on equipment operation and network traffic. It was also essential to generate regular reports on WiFi access points, get up-to-date information about inaccessible points and their location, as well as analyze failure statistics. By using the solution the customer was going to assist IT staff with completing the tasks promptly and efficiently.

Moreover, due to the existing network topology, incidents with certain devices could lead to a great number of simultaneous messaging about the same incidents from other devices, which made the root cause analysis difficult. Therefore, it was essential to display all device states on a network topology map.

Solution

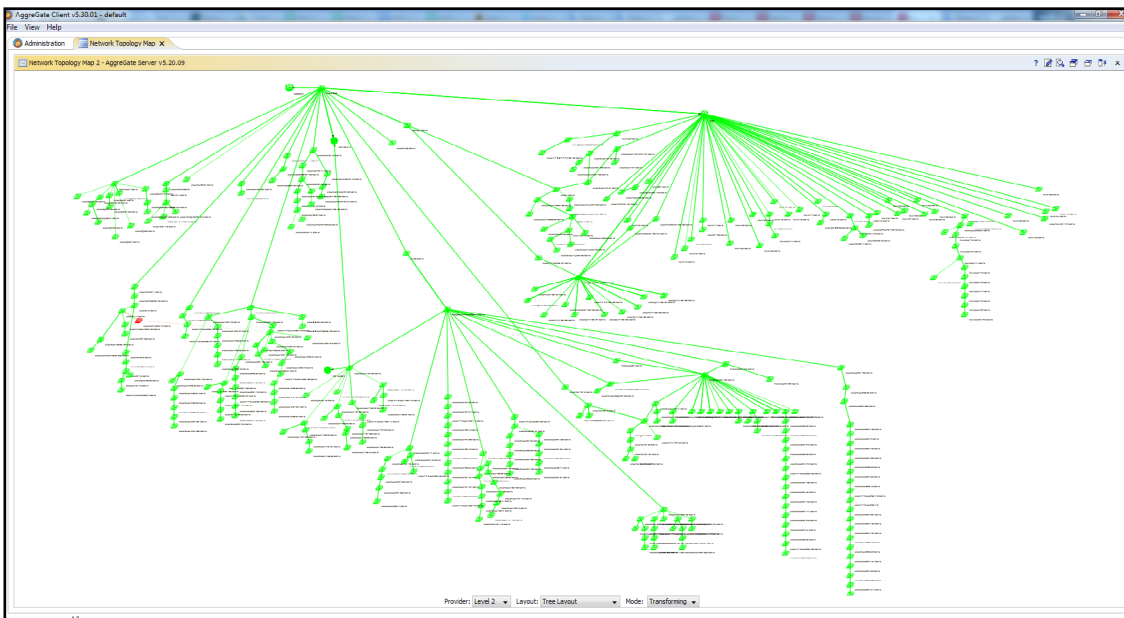
The solution based on Tibbo AggreGate Network Manager system was built by Unicorns LLC, a company having extensive experience in providing corporate network monitoring. Being AggreGate experts, Unicorns NMS engineers have implemented all tasks in the short term. The system was successfully launched for further use by the university staff.

AggreGate Network Manager had all required features available out-of-the-box, was open and easy for implementing custom tasks, had reasonable cost and annual maintenance option, so was in favor among the others.

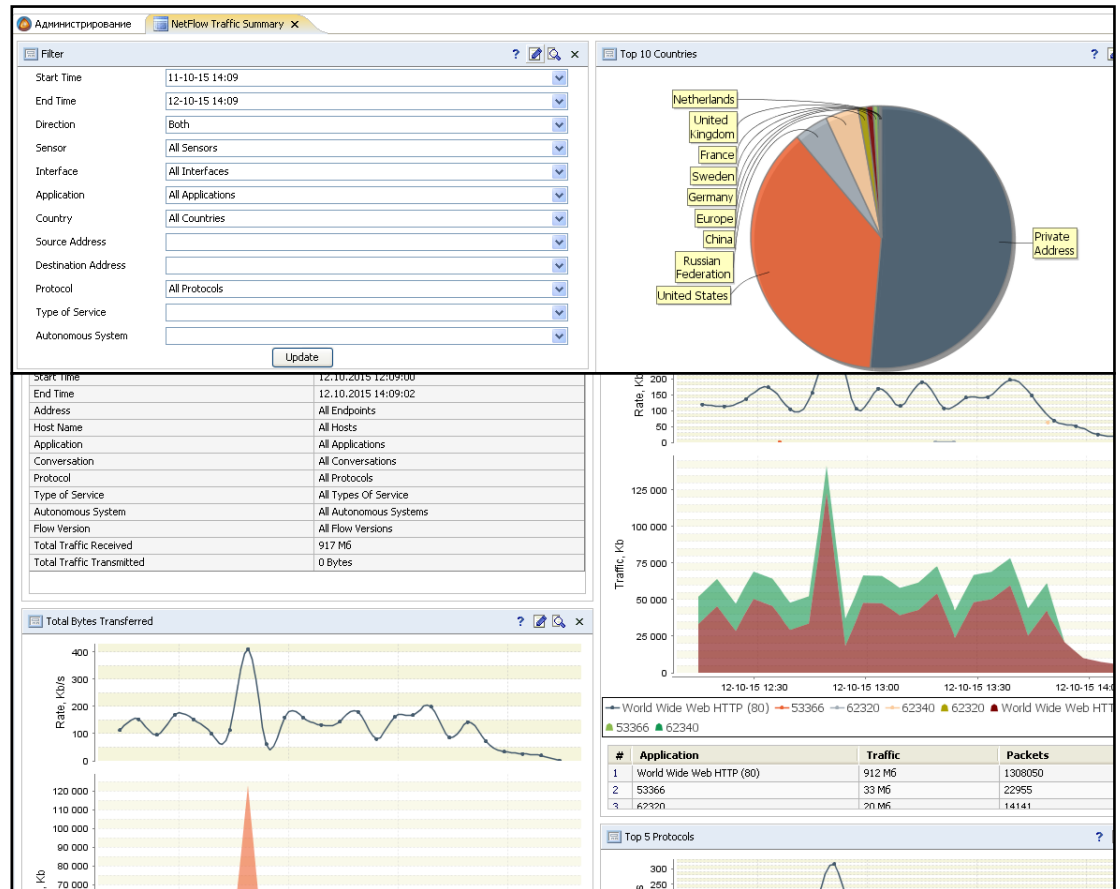
Currently, the system is supervising all PFUR network devices and all Wi-Fi access points placed in different parts of the university campus. PFUR has a plan to extend the network by adding new access points in the coming future.

This single system provides real-time and historical data collection related to device and data channels. Besides, it reveals problems, analyzes diverse metrics and visualizes them on demand or as TOP10 charts. Moreover, AggreGate Network Manager supports NetFlow-based traffic analysis.

The designed map displaying network device statuses and their topology is automatically updated by the system. The map is easily scaled by the PFUR staff when required. It's easy to get the detailed up-to-date information about any network device.



The Network Manager has a variety of out-of-the-box dashboards for viewing collected information. In addition, lots of custom dashboards have been developed for the IT staff to deal with important issues. These dashboards enable them to manage vital problems by analyzing network traffic, device performance data, user activities, and usage history. When designing these dashboards, the Unicorns team used out-of-the-box widget design tools along with specifications for selecting the required data and its displaying on widgets



A custom incident dashboard makes it possible to prioritize processing, divide incidents into groups according to their severity, and manage open problems by analyzing log messages and incident open /close history.

AggreGate Client v5.21.03 - rudn-vn

Администрирование Problems x

Device Offline

Тривога	Время	Устройство
Device Offline	27.10.2015 13:29:49	news147
Device Offline	06.10.2015 21:32:53	perimetr
Device Offline	06.10.2015 21:32:52	cisco-DO
Device Offline	06.10.2015 21:32:51	cisco-blog
Device Offline	06.10.2015 21:32:51	cisco-viva

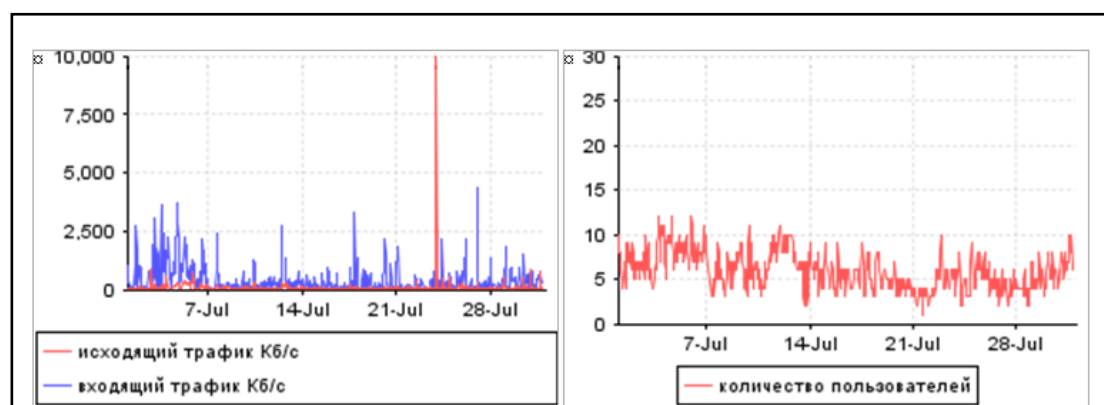
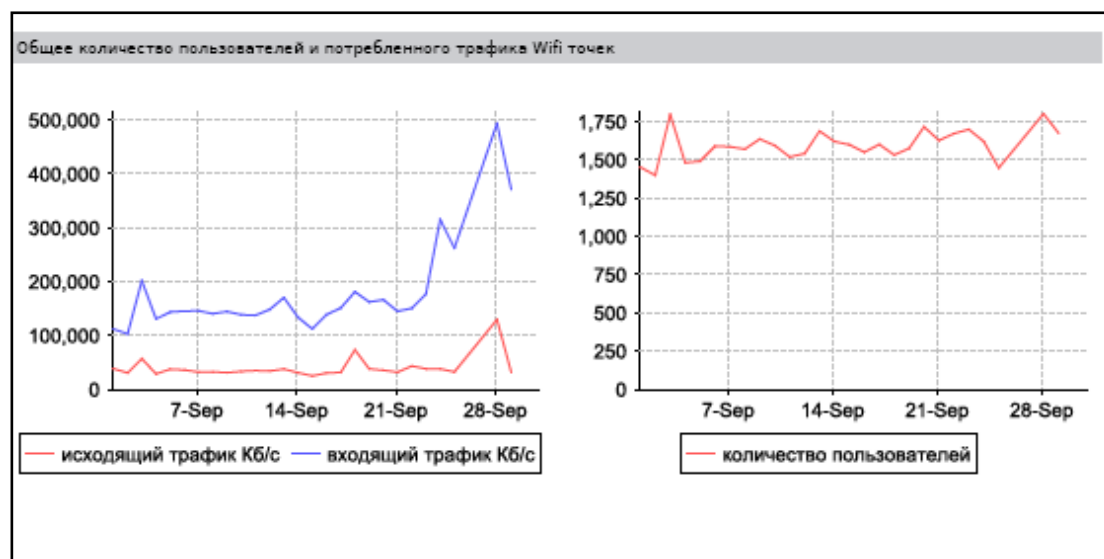
Device Offline x Other problem x

Wifi problem

#	Тривога	Время	Устройство
12	Wifi AP disconnect	26.10.2015 22:28:48	AP-zhk-67.231/6
3	Wifi AP disconnect	23.10.2015 10:53:48	AP-EGF-4level-67.1
15	Wifi AP disconnect	23.10.2015 10:53:48	AP-EGF-1Level-caf

The following reports and dashboards on Wi-Fi access points use data received from Wi-Fi controllers and switches connected to these points. This type of data is unavailable on controllers.

Therefore, the customer benefits from having current statistics on every Wi-Fi access point status, parameters and traffic volume, plus a number of users in different time slots.



Benefits

The single solution of high reliability and availability combines efficient tools for data collection, analysis and visualization, custom report generation, as well as quick root cause analysis and rich functionality.

On top of rich functionality, it's also possible to customize monitoring settings without involving any product modification or coding. Thanks to ongoing product development, the system is regularly enriched with new exciting monitoring features.

Conclusion

The customer was satisfied with inexpensive deployment and the advanced system allowing them to control around 1000 network devices and 1000 Wi-Fi access points. Fortunately, the integrator able to provide fast implementation and professional troubleshooting is always available for them.

About Tibbo

Located in Taipei, Taiwan, Tibbo Technology Inc. brings simplicity to the automation world defined by enormous complexity of operating systems, programming languages, and design tools. Tibbo's programmable hardware and the AggreGate Platform offer a complete solution for delivering robust, distributed automation and monitoring systems.