

O2 Slovakia builds mobile network cloud on Red Hat OpenStack Platform



Software and services

Red Hat®
OpenStack® Platform
Red Hat Enterprise Linux®
Red Hat Ceph® Storage
Red Hat Satellite
Red Hat Consulting

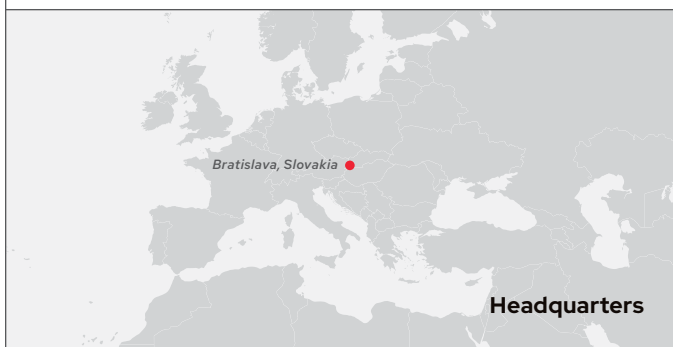
Hardware

Dell PowerEdge R740
rack servers
Intel Xeon processors

Partner

Veracomp

Mobile telecommunications service provider O2 Slovakia (formerly Telefónica O2 Slovakia) is a challenger in a competitive market. After a decade of rapid growth, the service provider is now looking for opportunities beyond traditional voice and messaging services. By building a scalable, supported cloud computing environment based on Red Hat OpenStack Platform and Red Hat Ceph Storage, O2 Slovakia can now bring innovation to market faster and at scale.



Telecommunications

700 employees

Benefits

- Reduced time to create virtualized environments from weeks to hours
- Established scalability to accommodate future network and service growth
- Built in-house expertise across strategic technologies

"We can test new ideas more easily and take successful concepts to production faster, using fewer resources. Red Hat OpenStack Platform makes us more flexible as a business. We can adjust to the market and customer demands much more quickly."

ŠTEFAN KOLLÁR,
Senior Network Architect,
O2 Slovakia



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Senior Network Architect,
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Pursuing growth as a challenger telecommunications brand

Since its founding, O2 Slovakia (formerly Telefónica O2 Slovakia) has rapidly grown to support 2 million SIM (subscriber identification module) cards and become the country’s largest mobile telecommunications operator.

To continue growth beyond traditional voice and messaging services—and compete with new market entrants—O2 Slovakia sought to transform its business with a new technology approach.

“Our advantage as a market challenger is that we don’t have to maintain legacy, physical-equipment connections,” said Štefan Kollár, Senior Network Architect at O2 Slovakia. “We can take more easily adopt new technology, like fixed-mobile for seamless service and the 5G cellular network standard, as exciting growth opportunities.”

However, to take advantage of emerging telecommunications technology, the service provider needed to virtualize its network infrastructure. O2 Slovakia sought a vendor that could not only help create a telecommunications cloud environment to accomplish this change but also help build its in-house expertise to effectively operate and manage the new cloud.

Creating a scalable, supported cloud computing platform

As a long-time user of Red Hat Enterprise Linux, O2 Slovakia quickly decided to build its new private cloud computing environment using Red Hat OpenStack Platform, running on Dell PowerEdge R740 rack servers and Intel Xeon processors and supported by Red Hat Ceph Storage. Red Hat Satellite provides security patches and other updates to the service provider’s Red Hat software.

“We’re fans of open source solutions,” said Kollár. “We looked at different distributors, but Red Hat was always the favorite option. Red Hat has the in-country support, the certifications, and the best references from the telco market.”

Working with Veracomp, a local Red Hat partner, the service provider completed a proof of concept. O2 Slovakia also worked with Red Hat Consulting for design and implementation assistance, with plans for future training opportunities.

“We want to understand the technology and improve our expertise, but we always knew we’d need support,” said Kollár. “Open source alone was never an option. Red Hat’s input was invaluable in making sure everything worked as expected and our teams understand how to build and deploy to an OpenStack environment.”

O2 Slovakia now runs many of its production services on the platform, including its business-focused broadband remote access server (BRAS) offering using the O2 Mobile LTE network. The service provider also runs several development and lab services on Red Hat OpenStack Platform—including testing for its Virtual CGN (Carrier Grade Network Address Translation) and GiFW (Gateway Internet Firewall) applications and software—as well as separate 5G proof of concept (POC) testing.

Building a path to innovation with improved network performance

Reduced time to market

The primary result of O2 Slovakia’s new cloud platform is faster time to market—which will help the service provider increase revenue by completing sales faster. Previously, ordering, procuring, and implementing a physical server environment could take three months. With Red Hat OpenStack Platform, O2 Slovakia’s teams can provision a virtualized IT environment in minutes.

"We can test new ideas more easily and take successful concepts to production faster, using fewer resources such as staff hours" said Kollár. "Red Hat OpenStack Platform makes us more flexible as a business. We can adjust to the market and customer demands much more quickly."

Anticipate improved scalability

As its business continues to grow, O2 Slovakia can now scale its network, cloud, and storage to keep pace with demand—without affecting back-end or customer-facing service performance. Additionally, the company can scale test projects to explore new innovation separate from production needs.

"The advantage of Red Hat Ceph Storage is that we have reliable scalability as and when we need it to support our open telco cloud," said Kollár. "And as we scale, we can use Red Hat Satellite, Red Hat OpenStack Platform director, and Ansible Playbooks to continue to easily manage our network and storage."

Established in-house expertise on new and emerging technology

O2 Slovakia aims to proactively explore new technologies that could bring potential improvements to its business. For example, the service provider plans to test and validate 5G mobile network technologies, including Mobile Packet Core and Cloud Radio Access Network (C-RAN). Its teams are planning to create a container technology proof of concept to test future cloud-native Mobile Packet Core.

With its cloud environment now in place, the company can now explore these new technologies by taking advantage of its stable, supported Red Hat technology.

"It is important we have the technology in our hands, and that we build our own expertise, so that we can operate more efficiently and use our knowledge of our business to enhance and build compelling products. "With Red Hat, we have the performance and the scalability in place to evaluate how to best discover and adopt new capabilities," said Kollár. "We're active in open source communities for management and network orchestration, for instance."

Accelerating success with automation and orchestration

O2 Slovakia is now looking at ways to take full advantage of its new cloud environment. The service provider is exploring opportunities around the Internet of Things (IoT), virtual and augmented reality, and automotive tracking solutions to expand its customer base and revenue, supported by Red Hat OpenStack Platform. Ultimately, O2 Slovakia also wants to sell services built on Red Hat OpenStack Platform to customers, as well as use OpenStack to create a unified network functions virtualization infrastructure (NFVi).

"We want to be independent from VNF [virtual network function] vendors and build a single platform, rather than having to build a unique NFVi for each vendor," said Kollár.

In the near future, the service provider plans to accommodate growing network activity without additional staff by extending its automation and orchestration capabilities with Red Hat Ansible® Automation Platform.

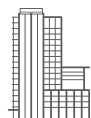
"This is a journey. Network virtualization creates a market advantage for us today, but it's not the final destination," said Kollár. "That's one of the reasons we chose Red Hat: it's one of the most active contributors in the open source community. To stay ahead of the competition we need to be first to market. We have the performance and scalability in place, but Red Hat will help us innovate at the speed of business."

About O2 Slovakia

O2 Slovakia (formerly Telefónica O2 Slovakia) entered the market in February 2007 as the country's third mobile operator. From its beginning, it has offered revolutionary solutions, open communication, and fairness for all customers alike. With its simple product portfolio, it has been systematically trying to change the rules of mobile communication. It promotes the values of fairness, simplicity, and transparency beyond business across the whole society. In 2014, it founded the O2 Fair Foundation to support projects aspiring to make Slovakia more educated, innovative, and open.

About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



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