

# Telekom Slovenije modernizes service development with containers



As a national operator and the leading Slovenian provider of information and communications technology (ICT) services and solutions, Telekom Slovenije must remain technologically advanced and forward-thinking. As the company grew and faced new digital challenges, Telekom Slovenije decided to containerize many of its applications and systems with a reliable, easy-to-manage platform: Red Hat® OpenShift® Platform Plus. With built-in security, management, and deployment capabilities—including pipeline, container storage, image registry, and other tools—Telekom Slovenije can ensure customer satisfaction as its business grows.

**Question:** What are the main challenges facing your business today?

**Question:** What made you decide to adopt Red Hat OpenShift Platform Plus?

**Tomaž Lokar, IT DevOps Manager:** Simply put, to provide the best services to our customers. We are trying to find new ways to grow as a business by defining additional services that we can offer to our customers—new IT services, for example. This would expand our offering and continue to provide better value.

**Davorin Kocbek, Lead of DevOps Engineering:** Everything is heading toward containers, so we wanted to be prepared. We chose Red Hat OpenShift Platform Plus because, unlike other products, it offers more things out of the box, like a built-in image registry and monitoring and logging components. But the most important aspect is the security, which is taken care of by default. The applications use restricted security context, constraints, and so on. If we hadn't gone with Red Hat, we'd have to do all those security tasks manually. And, of course, we needed a reliable product with good support.

**Lokar:** We chose Red Hat OpenShift because it's the de facto standard enterprise container platform. And the framework is mature enough to use in a serious production environment like ours. In the beginning, we had two OpenShift clusters on VMware, which proved that we were on the right path, so we decided to expand our environment with additional bare-metal clusters. We had little to no experience with the competitive products and they were also not mature enough for serious production work, so the logical choice for us in IT was Red Hat OpenShift.

**Question:** Why was it so important to have the right support and education from your chosen vendor?

**Kocbek:** When we started our container journey, we had no DevOps department. Our pilot project was the setup of the Red Hat OpenShift platform and migration of some internal applications to Red Hat OpenShift. We attended the administration course for Red Hat OpenShift (RH DO280), and Red Hat support played a significant role, where we always received answers and guidance. The team is now in a place where we can continue on our own, but it is great to know that there is someone who can help us if there is any need for that. Red Hat Learning Subscription also played a significant role. For example, courses like DO288, DO378, AD482, which were more development-oriented, were helpful in application modernization to microservices. Additionally, the DO280 course was valuable for Red Hat OpenShift administration. With the help of Red Hat Learning Subscription, I managed to complete the certification program and achieve the title of Red Hat Certified Architect.

**Question:** What are your larger plans for the platform?

**Kocbek:** We are currently renovating our main B2B and wholesale system, which will run entirely on Red Hat OpenShift. Here, I'm not only talking about Red Hat OpenShift but also about other components of the Red Hat OpenShift Plus package, such as Red Hat OpenShift Data Foundation storage, Red Hat's single sign-on technology (SSO), etc. We are also developing some big Internet of Things (IoT) projects for smart cities in Slovenia, and they will run completely on Red Hat OpenShift.

**Lokar:** During this time, we have also managed to establish a successful DevOps department, which is expanding. We also plan to certify more team members. We want them to at least learn how to administer Red Hat OpenShift, because we want to integrate it into our customer-facing services, not just for internal use. Our first thought was to have a private cloud for our partners or the development companies that work for us, but now we are thinking about how to implement it in the services that we will be offering to the market in Slovenia.

**Question:** What features of Red Hat OpenShift Platform Plus did you use initially, and what new ones are you using now?

**Kocbek:** Beyond Red Hat OpenShift, we've used Red Hat Advanced Cluster Management for Kubernetes, Red Hat Advanced Cluster Security for Kubernetes, Red Hat Quay, and Red Hat's SSO technology. We've had a great experience with it, especially Red Hat Advanced Cluster Management, because we can manage all 5 of our clusters from 1 point. It also manages a policy that makes our cluster applications more secure.

We use the registry in Red Hat Quay as our internal registry, along with the built-in registries included in every Red Hat OpenShift cluster. The OpenShift API for Data Protection operator helps us back up our applications, which makes the clusters more reliable. We tested it when we had to delete our cluster while moving it from VMware to bare metal. We had to install it from scratch, and we easily restored the application from the backup, including the data itself.

All our application programming interfaces (APIs) also rest on the platform, and we use autoscaling a lot. We want to make the most of what the Red Hat OpenShift Platform Plus package offers us.

**Question:** Is there a Red Hat OpenShift product that has been particularly useful?

**Lokar:** Red Hat OpenShift Data Foundation was a lifesaver for us. With it, we gained additional features, like object store, Amazon S3 buckets; it is easy to scale and highly available. With OpenShift Data Foundation, we have a lot of influence on storage.

**Kocbek:** The Red Hat OpenShift platform itself plays a key role in the Red Hat OpenShift Plus package. It is the main component and, as such, the most important for our operations. However, the true impact is seen when Red Hat OpenShift is integrated with other components, such as OpenShift Data Foundation storage, Quay image registry, Red Hat Advanced Cluster Security, and so on.

**Question:** Do you use the platform for creating new apps, modernizing old ones, or both?

**Kocbek:** OpenShift Platform Plus supports a lot of new applications and a lot of legacy, monolithic applications that have been transformed into microservices. They are mostly for our internal telecommunication processes—for example, the application for assigning telephone numbers. We use it for internal applications and also applications from our external partners. We are also developing applications that will run on Red Hat OpenShift and will be intended for our company's customers.

**Lokar:** And our policies specify that every new project and any new software has to run on Red Hat OpenShift and be built in a way that will enable us to easily put it there. This is to ensure that there are no monolithic applications and we put everything, new and old, on Red Hat OpenShift. We are expanding every day throughout the company.

**Question:** How has your containerization journey been going?

**Kocbek:** In the beginning, we had 3 bigger applications with around 20-30 microservices and some smaller applications with a few microservices, such as back-end APIs and front-end microservices. These applications were transformed into microservices and deployed into Red Hat OpenShift. We have also developed standardized continuous integration and continuous delivery (CI/CD) pipeline templates that all of our developers use to deploy applications consistently into Red Hat OpenShift.

**Lokar:** The 2nd application we migrated to the Red Hat OpenShift Container Platform was our internal employee portal. This was a good test for us. We're now developing our customer portal, and our website will run in a containerized environment on Red Hat OpenShift.

**Question:** How does this new container environment help you innovate?

**Kocbek:** We have improved the process of delivering software code to production. Before Red Hat OpenShift, we did 3-4 deployments per month after the developers prepared the code locally on their own computers and uploaded builds into FTP servers. The team responsible for the application servers then deployed the application in the evening. At the time of deployment, the application was unavailable. Now, with Red Hat OpenShift, deployments are regular and are released daily—sometimes multiple times a day. Our developers execute code builds through pipelines, and deployments take care of themselves. There is no downtime, and errors are fixed as soon as they're discovered. This approach makes applications more secure and reliable, which improves customer satisfaction.

**Lokar:** We can innovate faster. The way I see it: If you need resources for an application, it can be done in a few minutes. So you have the resources, you implement the pipeline, and you're set. Everything is much faster. And our employees don't need to work at night to deploy the applications. We can do that during the day, so the working hours are a huge win for us. We also don't need as many resources as before. We don't have to worry about a separate operating system or the costs connected to it. In general, I feel very confident that we have the modern platform for our needs and that we are ready for the future.

## About Telekom Slovenije

Telekom Slovenije is the leading provider of comprehensive communication services in Slovenia. It connects users and simplifies their lives, and ensures security through a range of the most advanced ICT services and solutions. Telekom Slovenije has a 35.5% market share in the field of mobile telephony (approx. 950,000 connections at the end of 2022) and 27.3% market share in the field of fixed broadband access (over 196,000 connections at the end of 2022).

The Telekom Slovenije Group operates in southeastern Europe. In addition to being the national communications operator in Slovenia, the Group is present through its subsidiaries in Kosovo, Croatia, Bosnia and Herzegovina, Serbia, Montenegro, and North Macedonia.

### The activities of the Telekom Slovenije Group include:

- Fixed and mobile communications and ICT solutions.
- Digital and multimedia content and services.
- System integration and cloud services.
- The development and implementation of solutions for managing business content and tools for managing and monitoring operations.
- The construction and maintenance of telecommunications networks.
- Cybersecurity and the IoT (Internet of Things).
- Other services, such as financial services, eCare solutions, insurance, smart home, city, community and industry solutions, and e-mobility.
- The production and sale of cardboard sleeves and packaging and the control and upgrading of terminal equipment.
- The preservation of natural and cultural heritage in the Sečovelje Salina Nature Park.



### 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 develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A [trusted adviser to the Fortune 500](#), Red Hat provides [award-winning](#) support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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