BPG-IT adopts DevOps and cloud-native to accelerate innovation

Bertelsmann Printing Group

Bertelsmann Printing Group unites Bertelsmann's print and marketing services businesses. More than 20 individual companies within Bertelsmann rely on BPG-IT to provide the IT services they need to serve their customers. With customer expectations for innovations gathering pace, the group's companies needed BPG-IT to deliver new features and services faster. Recognizing the importance of bridging the divide between ops and development for accelerating delivery, BPG-IT began its journey toward DevOps by fostering cross-functional ways of working, where developers and ops to have a deeper understanding of each other. Red Hat® OpenShift® allows ops to provide developers with a framework to build robust solutions while simplifying deployment. Companies can showcase innovations to their customers in days rather than weeks or months. And with some companies keen to move to the cloud and others needing to remain on-premise, developers on all projects can share their experience and know-how, whichever environment they are working in.

Question: How are expectations changing for BPG-IT?

Dennis Wilmsmann, Software Developer at BPG-IT: Our customers are very different and have very different needs; data privacy compliance requirements they must meet, for example. When they ask for new features or services, we like to present a first approach by the end of the week—not after a few weeks or even months—so the customer is sure we understand their requirements.

Florian Höhner, DevOps Infrastructure Engineer at BPG-IT: Due to the rapid pace of progress, everything is happening much more quickly, leading to a shift in the expectations of our customers and ourselves. We are striving to deliver the new features that our customers are asking for at a faster rate.

Dennis Wilmsmann: Our infrastructure needed to be more agile, and we needed to be more agile as well. But we had a disconnect between dev and ops. It could take a few days, weeks, or even months for ops to provide a new VM for dev. Dev then had to explain how it needed to be configured and then drop the application onto the VM when it was ready. If there was ever an issue, dev and ops would play ping pong about who was responsible; resolving it could take a long time.

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

Simon Hensler, Team Lead Cloud Platforms at BPG-IT: Our IT department has understood that increasing agility requires not only introducing a modern technical platform but also changing how we work. The separation between dev and ops is more outdated than ever; you need a cross-functional approach.

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About Red Hat Innovators in the Open

Innovation is the core of open source. Red Hat customers use open source technologies to change not only their own organizations, but also entire industries and markets. Red Hat Innovators in the Open proudly showcases how our customers use enterprise open source solutions to solve their toughest business challenges. Want to share your story? Learn more.

Dennis Wilmsmann: DevOps is a cultural change—a journey we are on. With DevOps, the developer has more knowledge about the platform they are using. And their ops colleagues understand what kind of services will be needed on the cluster to provide a sufficient platform: GPU requirements, CPU requirements, storage requirements, etc. The teams are more connected, working more closely together.

Question: How else has migrating from Red Hat OpenShift 3 to Red Hat OpenShift 4 helped?

Florian Höhner: Red Hat OpenShift 4 gives ops more control over how we deliver namespaces and what the developers are allowed to do.

Dennis Wilmsmann: The 'Wild West' approach we had a few years ago allowed developers to do whatever they wanted without asking. Red Hat OpenShift 4 gives us the best of both worlds, where developers can have as much freedom as possible without the risk of crashing the platform and the ops guys having to fix it.

Simon Hensler: It is a bit like a picture. We [ops] are building the frame for the developers to draw their pictures. Red Hat OpenShift helps us to make the borders clearer for the developers—and that is a big advantage.

Question: What impact have those changes had?

Dennis Wilmsmann: Since migrating to Red Hat OpenShift 4 and embarking on our DevOps journey, we are now able to provide a simple web service to an external customer within a day. Before, the fastest we could provide that would be a few days, and only if reusing existing systems. It could take weeks or even months if we needed a new environment.

One particular example is our machine learning projects. While we mainly develop Java-based applications, these machine-learning applications are written in Python. Without Red Hat OpenShift, we would not be able to provide innovative Python-based systems as fast as our customers need them.

Albert Blazek, Software Engineer at BPG-IT: Red Hat OpenShift 4 makes everything very easy for developers; the orchestration ensures it works like a charm. I am now able to deploy to production several times a day.

Question: How is Red Hat OpenShift helping you on your journey to the cloud?

Dennis Wilmsmann: Going to the public cloud whenever possible is a priority for BPG. But some of our customers—insurance companies, for instance—process personal data. Some of those customers—in Germany especially—are not allowed to use public cloud for compliance reasons. Red Hat OpenShift allows us to move to the public cloud while providing the private cloud these customers need.

Simon Hensler: Two or three years ago, most developers had no understanding of cloud native—and had no reason to. Today, more and more developers are now seeing its advantages. Red Hat OpenShift is helping us to think more cloud natively.

Question: What is next for BPG-IT?

Florian Höhner: We are currently implementing Advanced Cluster Security (ACS) to give us a better overview of our current security situation. ACS will scan our builds—containers in our image registry—not just once but frequently. Previously, our images were only ever scanned once, when we put them in the registry. Identifying the source security issues was difficult.

Simon Hensler: We are also looking at implementing secret management; it is a remarkable solution that eliminates the need for passwords and secrets within source code. And we also want to test the use of a Ceph cluster to provide s3 storage.

From a cultural perspective, we want to continue to build on our cultural changes. After all, we want to bring all our developers—and even our customers' developers—on our journey with us. We currently have an open call every Friday, where people can come and ask for advice on how to implement things, how things work, and to solve problems together.

Florian Höhner: We see ourselves as a nucleus of knowledge and best practices for developing modern applications on Red Hat OpenShift and operating the platform efficiently. So, we spread knowledge from the nucleus to the whole company. The exchange between teams is important because while they are developing different things for different customers, everybody is using the same platform in a similar way.

About BPG-IT

Based in Germany, Bertelsmann is based in one of the world's largest media conglomerates. The Bertelsmann Printing Group (BPG) unites Bertelsmann's print and marketing services businesses. The group comprises more than 20 individual companies in Germany, Austria, Switzerland, Britain, and the U.S. that offer a broad spectrum of services: everything from the full range of print services to data-driven multichannel marketing to comprehensive campaign management services. BPG founded BPG-IT in 2016 to centralize IT for the division.

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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