

CASE STUDY

MediaMarktSaturn Technology

🔧 **INDUSTRY:** Retail

📍 **LOCATION:** Germany

📌 HIGHLIGHTS

- Ability to scale within minutes
- Deployment frequency 70% faster
- Platform-as-a-service eases demands
- Increased reliability of deployments

📌 KEY BENEFITS

- Cloud first approach implementation
- GitOps provides reliable, automated workflows to ease team friction
- Increased team confidence, autonomy and innovation
- Easy onboarding for new engineers

The customer

MediaMarktSaturn Retail group, based out of Germany, is Europe's leading commerce company for Consumer Electronics with total sales of over €20 billion. The organization runs around 1,000 stores in 13 countries with about 53,000 employees and their integrated online and store offerings reach millions of customers every day.

MediaMarktSaturn has been on a digital transformation journey over the past couple of years. The primary goal was simplifying operations and streamlining infrastructure to support growing business demands in order to stay competitive in the ecommerce space.

Moving from a heavily decentralized hardware and network infrastructure that ran primarily on-premise and private clouds

to a more centralized hybrid and multi-cloud approach set the tone for a more agile software development lifecycle. The company further transitioned to a microservices architecture and GitOps driven Kubernetes platform that not only saves time and costs but also exceeds business expectations and cultivates innovation. but also achieve more efficient and effective software delivery cycles.

“ I wish GitOps practices were available a decade ago. GitOps increases the quality of everything we do. Right now, I can't imagine working differently anytime in the future.”

— Florian Heubeck, Principal Engineer

Challenges

Unable to scale quickly

Being in the retail space, MediaMarktSaturn has many days of unusually high traffic spikes. For example, to prepare for a Black Friday sale, the platform team had to start ordering additional servers two to three months in advance, and always overprovision. Very short internal deadlines for big product launches, sometimes 30 minutes or less, had the teams struggling to scale up to support a 10 fold increase in web traffic. This led not only to difficulties maximizing sales opportunities but also in providing the best online shopping experience for consumers.

Decrease operational overhead and internal friction

MediaMarktSaturn is a product-centric organization with more than 90 different teams developing software. A single platform team provided very manual support for each individual product team across the entire organization to build and deploy their applications. A one size fits all build and deploy pipeline with streamlined tooling was met with frustration throughout the product teams as it did not support unique preferences and requirements. The product teams demanded more freedom and control over the entire process, which the platform was unable to support.



Poor legacy stack licensing

MediaMarktSaturn ran primarily on monolithic systems for their frontend and database solutions. The platform team ran into licensing and scalability issues which forced them to rethink and rework their core systems. These constraints made it increasingly difficult to meet the often tight deadline demands of the more than 90 product teams the platform team supports.

“ We had a platform approach where a single team provides a cloud, all-in-one deployment, build operation solution for every product, software and team within the organization. And we quickly realized that this one size fits all approach simply does not work.” — **Florian Heubeck, Principal Engineer**

Solution

Cloud first approach

To reap the benefits of a cloud first approach, MediaMarktSaturn started their digital transformation journey. Moving from a heavily decentralized hardware and network infrastructure that ran primarily on-premise and private clouds to a more centrally managed hybrid and currently single cloud approach with Google Cloud. As they also started to re-architect many of their monolithic applications into a microservices architecture, the team evaluated cloud native technologies such as Kubernetes to not only scale effectively but also achieve more efficient and effective software delivery cycles.

Platform-as-a-service for maximum freedom

The MediaMarktSaturn central platform team built their own internal platform that enables every team to provision their own resources with small configuration changes. Product teams can now view and operate their own Kubernetes clusters without requiring help from the Platform team. At the same time, there is also a managed solution that can be utilized by smaller teams that are lacking additional manpower.

Standardization with GitOps

With a declarative system like Kubernetes in place, the team was now able to pilot automation solutions that increase productivity through frequent deployments and reduced deployment complexity. During piloting GitOps, the evaluating product team discovered that they were able to operate their entire stack with only 3 developers beside the regular development tasks. This instilled the confidence in the team to move away from a fully managed platform approach and rather build consistent end to end workflows that simultaneously increase consistency and introduce standardization. Due to MediaMarktSaturn's highly decentralized organizational approach, the idea of enhancing the developer experience and having teams choose their own tools fits well into the culture.

“ GitOps? Easy - it just works.” — **Richard Steinbrück, Experienced Software Engineer**

Results

After adopting GitOps, the MediaMarktSaturn product teams see not only the immediate benefits that GitOps brings for application deployment but also experiences an overall increase in quality of their development and operations.

Increased collaboration between ops and dev

When it comes to supporting different product teams, it is far easier for the engineering community to only look at a Git repo to know what kind of infrastructure the Product team is running. Troubleshooting can start right away instead of previously where one had to check multiple resources of potential failure first. This results in a more collaborative working relationship and decreases mean time to resolution significantly.

Higher confidence and autonomy for product teams

Though not all Product teams have made the transition, many are planning to move away from the fully-managed platform approach and instead opt for the self-service model where each Product team manages their own infrastructure. Thanks to GitOps, cloud and Kubernetes have become accessible even for teams with no prior cloud experience. New teams with limited Kubernetes experience are now able to ramp up in less than a week using manifests and Helm charts. This brings great confidence to the Product teams, and they enjoy the increased autonomy.

GitOps has been adopted by 25 teams throughout the organization. The target of the centrally managed pipeline is to migrate more and more teams to GitOps. At the moment manual deployment manifests have to be created on the build, and ideally it should be managed through git commits. Migration efforts are ongoing, and the goal is to start new teams on GitOps right away.



Time-savings and high reliability of deployments

One of the biggest benefits of GitOps that MediaMarktSaturn has enjoyed is the reduction of all manual jobs, tasks, and processes. With GitOps, everything must be declarative, which means deployments are reliable and that any action can be replayed or rolled back at any time. This is reflected in a faster pace of operations. MediaMarktSaturn has noticed a time-saving of at least 60 to 70% for deployments at times as well as a massive increase in reliability due to simplification and automation. In addition, disaster recovery as in recreating a Kubernetes cluster is fully enabled through GitOps.



[The] GitOps approach was the enabler so that even small teams can operate in the cloud on their own. Most of our teams operate their software and systems and are managing their infrastructure including Kubernetes clusters on their own.” – **Florian Heubeck, Principal Engineer**

GitOps instills confidence to experiment and innovate

The teams at MediaMarktSaturn no longer fear to commit a huge change on a Friday evening. They completely rely on their GitOps controllers and operators to ensure that no defects slip through to production. Familiar tooling, reliable deployments, rollbacks and built in disaster recovery are all part of the toolset and accessible for every team.

Product teams are now more prepared to experiment on new concepts. For example, they were able to perform an Istio upgrade by simply rebuilding their clusters using GitOps, and the update was done in minutes without downtime. This openness to experimentation enables them to iterate quickly and encourage innovation, resulting in a faster, more nimble organization. highly decentralized organizational approach, the idea of enhancing the developer experience and having teams choose their own tools fits well into the culture.