

Kaizen Gaming modernizes service development with microservices on Red Hat OpenShift



Software and services

Red Hat® OpenShift®

Red Hat Consulting

Existing Red Hat technology

Red Hat Enterprise Linux®

Providing sports betting, casino gambling, and other services in 10 countries, Kaizen Gaming is one of the world's fastest growing gametech companies. To continue delivering high-quality customer experiences while expanding to new locations, Kaizen Gaming sought to modernize its monolithic legacy IT applications and virtual machine (VM)-based architecture. Working closely with Red Hat Consulting, Kaizen Gaming transitioned its critical applications to a microservices-based architecture and continuous integration and continuous delivery (CI/CD) approach supported by Red Hat OpenShift. With this enterprise Kubernetes container platform and modern development pipeline, the company has reduced time to market by 50% and gained the scalability to respond to business growth.



Media and entertainment

1,300 employees

Benefits

- ▶ Reduced time to market by 50% with more efficient CI/CD pipeline
- ▶ Improved scalability for existing and new service locations by replacing VM-based approach with containers
- ▶ Optimized new work approach with guidance from Red Hat's expert consultants

"The built-in Red Hat OpenShift Pipelines component gives us a Kubernetes-native framework and continuous integration pipeline that creates a smoother experience for our developers."

Michalis Chrysostomidis

Head of Technology (Platform), Kaizen Gaming

“Red Hat Consulting brought us all their experience with OpenShift design and installation. With their help, we can run our workloads smoothly in our new production environment—and get quick answers to any questions or issues. People and teamwork are the most valuable aspect of working with Red Hat.”

Yiannis Karayiannidis

Head of Site Reliability Engineering,
Kaizen Gaming

Simplifying back-end IT complexity to support engaging gambling experiences

Kaizen Gaming is one of the world’s fastest growing gametech companies. In Greece and Cyprus, Kaizen Gaming provides betting services for a variety of sports, from professional teams to Olympic champions, under the Stoiximan brand. The company also provides sportsbook, live betting, casino, and other gambling services in eight other countries under the Betano brand.

Kaizen Gaming sought to update its gaming platform infrastructure to continue offering a competitive entertainment experience as it expanded to new countries. Its five legacy applications, initially built by a small team of 15 engineers, were monolithic and complex. As the company’s development team grew to around 300 engineers, this complexity made using and managing processes at scale more challenging. For example, Kaizen Gaming’s bonus platform application supported an increasing number of key services, from sports betting and casino flows to customer deposits and more.

To simplify and scale its IT infrastructure and platforms, the company decided to divide its larger legacy applications into microservices and adopt more iterative processes.

“Achieving our goal to deliver new features to users faster meant we needed to make our gaming platform more agile and build a highly scalable foundation,” said Michalis Chrysostomidis, Head of Technology (Platform), Kaizen Gaming. “We decided to divide our larger bonus platform application into several microservices, hosted in Kubernetes containers.”

Transitioning from community to enterprise Kubernetes with Red Hat

Initially, Kaizen Gaming completed a proof of concept (POC) with an in-house platform, running on bare metal and created using the community distribution of Kubernetes. To achieve the full scalability and efficiency benefits with less troubleshooting and management effort, the team replaced this solution with Red Hat OpenShift. This [enterprise Kubernetes](#) container platform provides comprehensive security and automation capabilities to support a modern, iterative development approach.

“While our test proved that we could achieve faster time to market and simplify management running Kubernetes on bare metal, a community-developed solution wasn’t for us,” said Yiannis Karayiannidis, Head of Site Reliability Engineering, Kaizen Gaming. “We had previously worked with Red Hat Consulting to migrate around 300 production VMs [virtual machines] from CentOS to Red Hat Enterprise Linux. That experience gave us confidence that they could provide the enterprise support to adopt Red Hat OpenShift and maintain our Linux servers as we grow.”

With help from Red Hat’s technology experts, Kaizen Gaming deployed Red Hat OpenShift running on bare metal. After a test deployment of five smaller applications, Red Hat consultants redesigned and redeployed Kaizen Gaming’s bonus platform as .NET Core microservices in this new environment.

“We initially used a virtual environment, but the Red Hat team suggested that eliminating the virtualization layer would improve scalability as our platform grew,” said George Laoulakos, Site Reliability Team Lead, Kaizen Gaming. “Their support gave us the confidence to give it a try.”

Balancing high-performance gaming services with expansion to new markets

Reduced time to market by 50% with more efficient CI/CD pipeline

Previously, each of Kaizen Gaming's engineers had to manually build environments for code creation and testing. In the pre-production staging environment, a limited number of shared VMs were available, requiring developers to ask others to refrain from overriding the code for several hours while they completed final testing.

Now, with a continuous integration and continuous delivery (CI/CD) development pipeline and ready-to-use task templates provided by [Red Hat OpenShift Pipelines](#), Kaizen Gaming's developers can complete testing in minutes. As a result, Kaizen Gaming has halved its time to market for new applications and features.

"The built-in Red Hat OpenShift Pipelines component gives us a Kubernetes-native framework and continuous integration pipeline that creates a smoother experience for our developers," said Chrysostomidis. "They just tag the new version of their microservice and only need five or ten minutes in the staging environment to complete their testing and move the project forward."

Improved scalability for existing and new service locations

Like many multinational organizations, Kaizen Gaming must balance scaling existing applications to continue delivering reliable experiences with support for business expansion to new locations. The autoscale capabilities built into Red Hat OpenShift let the company spin up a new VM, then create and store an application in seconds—a process that previously took around 20 minutes with its monolithic legacy architecture.

"Rapidly scaling an application in a virtual environment is quite challenging, but we can now scale our bonus platform a hundred times faster—and much easier," said Chrysostomidis. "And for memory-intensive applications, we can simply increase the CPU and memory limits in just a couple of seconds to ensure high performance even when request volumes grow rapidly. For example, we see traffic increases during promotions for specific sporting events."

Kaizen Gaming has also taken advantage of new [multicluster](#) capabilities included in Red Hat OpenShift 4 to bring workloads closer to clients, further optimizing service performance.

"With this version of Red Hat OpenShift, we can deploy a cluster in every country where we operate," said Chrysostomidis. "We can also build smaller segments of code, then isolate them on a country-by-country or brand basis to improve latency or response times. Being able to deliver a consistent gaming experience, no matter where a customer is located, is key to expanding our business."

Optimized new work approach with expert guidance

Ongoing support from experienced technology consultants has helped Kaizen Gaming continue to optimize its microservices architecture and modern development processes.

"Red Hat Consulting brought us all their experience with OpenShift design and installation," said Karayiannidis. "With their help, we can run our workloads smoothly in our new production environment—and get quick answers to any questions or issues. People and teamwork are the most valuable aspect of working with Red Hat."

Building on initial success with a shift to the cloud

After speeding development and improving service scalability for its bonus platform application, Kaizen Gaming now plans to expand its microservices architecture to new, more complex projects. "As we get more experience with Red Hat OpenShift, we will move more of our critical, customer-facing applications to our Windows OpenShift environment," said Karayiannidis.

The company also plans to establish a hybrid cloud environment to support its multicluster approach to international expansion with a combination of on-premise and cloud resources. As part of this new cloud deployment, Kaizen Gaming plans to add new application development and management capabilities and centralize cluster management with Red Hat OpenShift Platform Plus, a set of Kubernetes container technologies that enhances its existing OpenShift solution.

"Adopting a microservices- and container-based approach has changed the way we develop. As part of ongoing modernization efforts across our organization, Red Hat's technology and services will continue to play an important role at Kaizen Gaming," said Chrysostomidis.

About Kaizen Gaming

Kaizen Gaming is one of the fastest-growing GameTech companies in the world. We operate two brands in 10 countries: Betano (Portugal, Romania, Germany, Brazil, Bulgaria, Chile, Peru, Czech Republic) and Stoiximan (Greece, Cyprus), and employ more than 1,200 people across two continents. Obsessed with our customers, we use technology and data to constantly push the boundaries of online gaming entertainment.





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.](#)



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.

 facebook.com/redhatinc
 @RedHat
 linkedin.com/company/red-hat

North America
 1 888 REDHAT1
 www.redhat.com

**Europe, Middle East,
and Africa**
 00800 7334 2835
 europe@redhat.com

Asia Pacific
 +65 6490 4200
 apac@redhat.com

Latin America
 +54 11 4329 7300
 info-latam@redhat.com