The MGEN Group cuts middleware delivery times by 80% with Red Hat OpenShift

Mutuelle Generale de l'Education Nationale (The MGEN Group) is a key provider of social protection services to more than 4 million people in France. To stay competitive, MGEN's IT department sought to replace its costly, complex Java™ application server platform. With Red Hat JBoss Enterprise Application Platform running on Red Hat OpenShift, MGEN's IT department can take advantage of scalable, stable technology and a collaborative DevOps approach that supports rapid adaptation to the latest technical frameworks. Now, the group can meet customers' demands for new services more efficiently.

Software

Red Hat® OpenShift®

Red Hat JBoss® Enterprise Application Platform

Red Hat Virtualization

Services

Red Hat Consulting

Paris, France ●

Headquarters

Financial services

10,000 employees
4 million customers

Benefits

- Reduced delivery times by 80%

- Improved customer experience with better stability at the scale and pace of demand

- Established support for collaborative DevOps approach with integrated, adaptable technology

"Red Hat technologies help us resolve issues that emerge—from rapidly scaling, for example—and focus our efforts on adapting our ways of working to prioritize agility and collaboration."

Frédéric Roulet
Team Manager, Engineering Development and Middleware Integration,
IT Department, Mutuelle Generale de l'Education Nationale

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@RedHat
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redhat.com

Maintaining leadership in a highly competitive market

The MGEN Group (Mutuelle Generale de l'Education Nationale) is a major market presence in social protection in France. MGEN supports more than 4 million people in the health, safety, welfare, and care sectors by operating social security for the employees of several government ministries and providing healthcare services. It is the first health and welfare insurance company in the civil service.

To respond to increasing competition, MGEN sought to develop innovative digital services. However, its existing Java Enterprise Edition (EE) (now Jakarta EE) application server architecture required extensive effort to digitize existing services or create new digital services.

"Adopting new technical frameworks was costly and could take up to a year, particularly for new versions of Java or middleware, and there were often technical issues," said Frédéric Roulet, Team Manager, Engineering Development and Middleware Integration, IT Department, The MGEN Group. "When launching new services, we had to provision and deploy new servers as quickly as possible to scale up and to support traffic increases but needed 1-2 days to carry out these infrastructure changes."

The MGEN Group's IT department decided to look for a more cost-effective solution and create a container-based architecture. This new architecture would be used to help support high service availability, deployment on virtual or bare-metal servers, and software selection and version management.

Containerizing core business services with Red Hat

MGEN's IT department sought to take advantage of open source community innovation but needed a supported, enterprise container platform to ensure stability and security. The container platform offered by its application server provider would potentially create vendor lock-in. Instead, after a proof of concept (POC), MGEN chose to migrate to Red Hat OpenShift and Red Hat JBoss Enterprise Application Platform (EAP). MGEN's IT department was familiar with Red Hat from using Red Hat Enterprise Linux® for server operations.

"Red Hat OpenShift is a mature and comprehensive enterprise product," said Mr. Roulet. "It offers API [application programming interface]-based integration with our DevOps tools and a wealth of containerized images through Red Hat's container catalog to help us develop our services faster. Our proof of concept confirmed Red Hat would give us the agility and scalability we need—at a price point for return on investment within just a few years."

Red Hat OpenShift is a Kubernetes-based container platform with robust automation capabilities for developer productivity across on-premise, cloud, or hybrid infrastructure. The MGEN Group's IT department runs JBoss EAP as a containerized image on Red Hat OpenShift. JBoss EAP, a Jakarta EE application server optimized for hybrid environments, compliments DevOps approaches with latest components for continuous testing and development.

Additionally, the group's IT department decided to migrate its bare-metal server environment from Red Hat Enterprise Linux to Red Hat Virtualization to scale its critical, resource-intensive virtualized workloads.

MGEN's IT department worked with Red Hat Consulting to design the architecture for implementing Jakarta EE frameworks on JBoss EAP. Red Hat consultants also provided guidance on containerizing applications with JBoss EAP to run on Red Hat OpenShift.

With help from Red Hat Consulting, MGEN's IT department implemented these new technologies in production in just 10 months. Using a phased approach, MGEN's application development teams have now migrated more than 90% of its Jakarta EE assets—a total of 175 applications—to the new production Red Hat environment.

> "We like working with Red Hat because they understand our technical background and share best practices, without demanding that we work in a specific way. In short, Red Hat has helped us move forward and realize our strategic technology vision."

Frédéric Roulet
Team Manager, Engineering Development and Middleware Integration, IT Department, Mutuelle Generale de l'Education Nationale

"Our Red Hat infrastructure now supports the applications that provide API-based services for our customer web portals and mobile applications, as well as core internal business applications—from products and contracts to health insurance contributions and more," said Mr. Roulet.

Adopting efficient, collaborative development practices and processes

Reduced middleware delivery times by 80%

The group's IT department has accelerated updates to its development environment with Red Hat OpenShift. Previously, moving to a newer framework or runtime version could take up to a year, but MGEN's IT teams can now complete the task in just two months.

"Red Hat OpenShift helps us keep up-to-date with changes to JBoss EAP and Jakarta framework evolutions with containerized workloads," said Mr. Roulet.

Additionally, MGEN's IT engineering teams can now focus on creating and delivering innovative work faster, rather routine provisioning or technical administration tasks. Instead of a massive server environment that had to be adapted to a variety of framework versions and components, the new environment based on Red Hat OpenShift gives teams the capacity to run different Jakarta frameworks and version and collaborate without worrying about integration.

"We built a small website for an internal team in two days, thanks to Red Hat OpenShift," said Mr. Roulet." In our legacy environment, the same project would have taken ten days."

Improved customer experience with better reliability at scale

Better stability and scalability help the MGEN Group enhance its customer experience while adapting rapidly to change. The health insurance provider can continue to offer its digital services without interruption during production migrations.

For example, during the COVID-19 pandemic, the MGEN Group was able to respond to massive increases in requests for processing healthcare reimbursements following lockdown.

"The absence of any major issues during this final phase of the pandemic lockdown gives us confidence that our Red Hat environment can adapt well to fast-changing situations," said Mr. Roulet. "It responds rapidly as demand rises by adjusting the services and compute behind our applications, something that wasn't easy in our previous environment. For instance, Red Hat Virtualization helps us add high-capacity clusters."

Removed barriers to innovation with DevOps

Beyond the technical benefits, adopting Red Hat software to create a container-based platform has also helped the teams within the MGEN Group's IT department—middleware, framework, application, and others—unite to collaborate on new, innovative projects with a DevOps approach.

"If, for instance, we plan to move to a new version of Red Hat JBoss EAP, our teams now gather to discuss the change. That shift is really important to our continued success," said Mr. Roulet. "Red Hat technologies help us resolve issues that emerge—from rapidly scaling, for example—and focus our efforts on adapting our ways of working to prioritize agility and collaboration."

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

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

redhat.com
#F24644_0121

Planning additional ambitious changes to support strategic business goals

After successfully migrating more than 90% of its Jakarta EE assets to its new environment, MGEN's IT department is now focusing on migrating its primary website, mgen.fr, and adopting other container runtimes on Red Hat OpenShift. "This crucial project is very demanding, and our website must remain fully available throughout the work," said Mr. Roulet. "Red Hat technologies can help that happen."

MGEN's IT department is also working on several new projects using Red Hat software, including launching a new OpenShift-based microservices platform. This project uses Red Hat Runtimes to create an application development platform, as well as Red Hat Decision Manager to incorporate decision logic. "Our CIO is driving a major initiative to develop an API approach using microservices. We'll build internal APIs and then APIs for partners," said Mr. Roulet.

Additional changes being evaluated by MGEN's IT department include:

- Standardizing on the service mesh approach provided by Red Hat OpenShift 4 to support the internal service mesh for its IT system.

- Migrating from Red Hat Virtualization to Red Hat OpenStack® Platform to provide a flexible private cloud environment to better support containers and automate provisioning of bare-metal servers

- Migrating from Red Hat CodeReady Studio (formerly Red Hat Developer Studio) to Red Hat CodeReady Workspaces to take advantage of a consistent, preconfigured integrated development environment (IDE) for containerized, OpenShift-based applications.

"The technologies and services Red Hat provides are really constructive,"said Mr. Roulet. "We like working with Red Hat because they understand our technical background and share best practices, without demanding that we work in a specific way. In short, Red Hat has helped us move forward and realize our strategic technology vision."

About Mutuelle Generale de l'Education Nationale (MGEN)

The MGEN Group is a key player in social protection in France. Social security operator for the employees of several government ministries, the first health and welfare insurance company in the civil service, and a healthcare provider. MGEN supports more than 4 million people in the health, safety, welfare, and care sectors. Founded in 1946, the MGEN Group has around 10,000 employees, and its head office is situated in Paris.

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