

# ROCHE BENEFITS FROM INNOVATIVE USE OF RED HAT TECHNOLOGY



Healthcare pharma and diagnostics company Roche deployed enterprise-ready Red Hat solutions engineered at the Pharma Informatics Madrid Site. This IT Centre of Excellence located in Madrid provides IT services to the group worldwide. With these solutions, Pharma Informatics has increased flexibility, optimised system management and automation, and reduced time-to-market of applications.

## RED HAT SOLUTIONS:

- Red Hat® Solutions:
- Red Hat JBoss® Middleware
- Red Hat JBoss Enterprise Application Platform
- Red Hat JBoss Operations Network
- Red Hat JBoss Data Services
- Red Hat Satellite
- Red Hat Enterprise Linux®
- OpenShift by Red Hat (proof of concept)



**PHARMACEUTICAL INDUSTRY**

**CUSTOMER SINCE 2007**

*“We particularly value the ability of the Red Hat solutions to adapt to our needs and to our global infrastructure. Red Hat’s enterprise-ready solutions work well with our previous solutions as well as technology from other vendors, which we use in our infrastructure. This has given us greater flexibility and capacity for innovation.*”

JUSTO STOLL  
INTEGRATION, MIDDLEWARE, AND  
APPLICATION SERVICES DOMAIN HEAD ROCHE

**2013 INNOVATION AWARD WINNER**



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The company's commitment to research and development allows Roche to discover, develop, and supply therapy products and services and innovative diagnostics. These products and services provide everything from prevention and early detection of illnesses to diagnostics, treatment, and monitoring.

Roche has an IT Centre of Excellence in its Pharma Informatics Madrid site that houses most of the group's global IT infrastructure services. Since its creation, the IT Centre of Excellence has not only supported six global data centres, but also supplied strategic solutions for key business processes in:

- Marketing
- Distribution
- Finance
- Human resources

The Madrid site also supports the company's global research and development departments. It is working on more than 100 critical international projects for Roche, and provides computer services and support to more than 115,000 users in 150 countries. It also supports the company's infrastructure, including more than 8,000 servers and 200,000 computers, with a storage capacity of greater than 2,800 terabytes.

Roche has deployed approximately 600 Java applications on its platform, including 200 applications from Genentech, its leading biotechnology subsidiary. The application servers that host these applications are a critical part of its IT infrastructure, and it was important that the upgrade of this platform was carried out carefully.

### **REDUCE TIME-TO-MARKET AND AVOID VENDOR DEPENDENCY**

When considering the renovation of its middleware platform, Roche had two main objectives. The first goal of the company was to improve the efficiency of their infrastructure by:

- Reducing developer workloads and time-to-market.
- Improving supply of infrastructures.
- Optimizing operations.
- Accelerating the development of Java applications.

Secondly, the pharmaceutical company wanted to help its IT managers by avoiding vendor dependency and improving the flexibility of its platform. Finally, the company's finance and purchasing managers wanted to reduce license expenses and the cost of the platform.

For these reasons, Roche's IT managers were interested in an open source alternative. In 2007, the company evaluated 10 application server solutions and chose Red Hat® JBoss® Enterprise Application Platform. The solution has proven to be reliable and scalable, has powerful functionality, and represented a reduction in total cost of ownership.

“In 2007, many market analysts predicted Red Hat JBoss Middleware to be the market leader in middleware. Today, we consider Red Hat JBoss Middleware to be the most relevant Java application server on the market. This means that there are more companies using the solution every day, contributing to and developing its innovation exponentially,” said César Infantes, middleware senior engineer at Roche.

### **AVOID VENDOR DEPENDENCY TO INCREASE FLEXIBILITY AND INNOVATION**

With its other Java application server solution, Roche had to use the manufacturer’s complete stack. This vendor dependency not only represented a significant rise in costs, but limited flexibility and innovation as well. One of the benefits of the new platform is the combination of different technologies from Red Hat and other manufacturers. Together, they allow the infrastructure to grow and respond to business needs.

“With the current platform, we can choose the Red Hat technologies we need, and combine them with solutions from other providers, giving us even more functionality. Now, we can create our own infrastructure, mixing technology and solutions. This is very valuable to our company,” said Justo Stoll, integration, middleware, and application services domain head at Roche.

“True technology innovation is a result of many different components. In order to achieve this, you need the flexibility and openness offered by a company such as Red Hat,” added Stoll.

### **OPTIMISED MANAGEMENT AND AUTOMATION**

“From Madrid, we can provide services to the global Roche network,” said Infantes. “It is very important for us to distribute our applications very quickly, and with Red Hat we can. With just a few administrators, we in Madrid can manage all the datacenters in both Europe and the United States. With Red Hat solutions’ powerful automation and monitoring capabilities, our entire infrastructure is under control and we have improved time-to-market of our applications.”

Red Hat Network Satellite (the systems management platform) and Red Hat JBoss Operations Network—which provides application management and monitoring capabilities—have helped Roche automate and standardize its infrastructure deployment processes, integrating them with its monitoring and backup systems. Developers can now deploy software more quickly and in a standardized manner, and the time for delivering or modifying any type of application (e.g., web, mobile, hospital, pharmaceutical industry) is much quicker. There are now approximately 100 applications per middleware administrator, and infrastructure deployment times have been reduced from weeks to just days.

“Today, our developers are much happier,” said Infantes. “Not only because most of them prefer to develop with open source solutions, but also because they have a very stable platform and manage to complete their applications much more quickly and economically.”

### **FROM COMMUNITY TO ENTERPRISE**

Roche’s IT team also values the groundbreaking and innovative open source community. Thousands of users invest their time in improving open source software. “The open source community provides constant innovation that, once tested, validated, and standardised, is incorporated into the commercial solutions, with a clear and detailed product roadmap meeting the market’s needs,” said Infantes.



CUSTOMER CASE STUDY Roche Benefits from Innovative Use of Red Hat Technology

“In addition to excellent technical support, Red Hat also supports this active and growing community, which allows us to very easily find the solutions and architectures we need to improve our platform or solve our issues,” continued Infantes. “Fortunately, we have not had to use technical support often, but when we do, we speak directly with someone who is really knowledgeable and can help us. With our previous Java solution, it was necessary to reach the third level of support to find a technician capable of helping us. With Red Hat, from the first line of support, we have been given a very satisfactory service.”

Red Hat Consulting has played a very important role in both defining the platform’s structure, and in its deployment. “We particularly value the ability of Red Hat solutions to adapt to our needs and to our infrastructure. Red Hat’s enterprise-ready solutions work well with our previous solutions as well as new ones from other vendors, which we use in our infrastructure. This has given us greater flexibility and capacity for innovation,” said Stoll.

The pharmaceutical sector is constantly evolving and innovation is a critical factor. It is also a highly regulated sector with vigorous control from the U.S. Food and Drug Agency and the European Medicines Agency. Red Hat’s open source solutions allow Roche to innovate and grow quickly, while maintaining strict safety requirements and obligations and avoiding dependency on one supplier.

“Before deciding, we researched the market, analysed our needs and the different options available. It is our recommendation that companies carefully review their options and choose the solution that best fits their needs. But also, we recommend that they choose a supplier that will be a long-term partner and will not limit them in the future,” said Stoll.

“With Red Hat, we think that the best is yet to come, because, in the future, we will deploy Platform-as-a-Service (PaaS) solutions. We are currently participating in the proof of concept of OpenShift by Red Hat, evaluating how it may offer us even more flexibility and elasticity in growth and adapt our platforms for scale—and how it can be ‘dialed up’ or ‘dialed down’ according to demand. I think this is a very exciting time and we are looking forward to implementing this type of solution,” said Stoll.



ABOUT RED HAT

Red Hat is the world’s leading provider of open source solutions, using a community-powered approach to provide reliable and high-performing cloud, virtualization, storage, Linux, and middleware technologies. Red Hat also offers award-winning support, training, and consulting services. Red Hat is an S&P company with more than 70 offices spanning the globe, empowering its customers’ businesses.



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