AMADEUS INNOVATES CUSTOMER SERVICE WITH RED HAT OPENSHIFT CONTAINER PLATFORM

AMADEUS

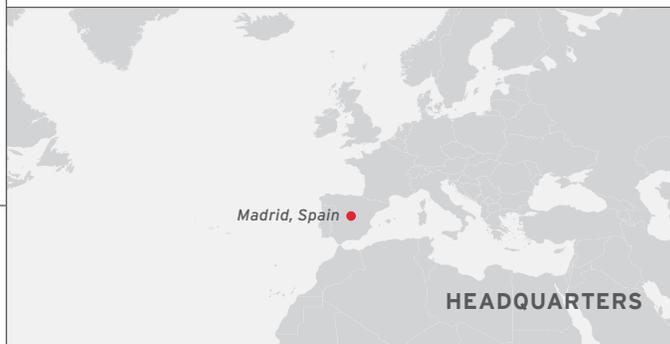Amadeus is a leading provider of innovative technology solutions for the global travel industry. To meet changing customer demand, the €4 billion company needed a new computing platform that was highly available, flexible, and tolerant to infrastructure fluctuations. Amadeus chose Red Hat® OpenShift Container Platform, formerly known as OpenShift Enterprise by Red Hat as the foundation for its new application infrastructure. When the project is complete, Amadeus expects the cloud solution to decrease system latency for better customer service, increase platform availability, streamline operations through automation, and reduce time to market for new services.

SOFTWARE AND SERVICES

Red Hat ® OpenShift Container Platform

Red Hat JBoss® Middleware

Red Hat OpenStack® Platform

Red Hat Consulting

Madrid, Spain ●

HEADQUARTERS

IT CONSULTING & SERVICES

13,000+ EMPLOYEES

BENEFITS

- Reduced system latency

- Improved platform availability

- Increased operational efficiency

- Accelerated time to market

- Relied on Red Hat expertise on emerging technologies

"*Red Hat's commitment to us, from the top executives to the engineers and developers, has been a key contributor to our success.*"

CHRISTOPHE DEFAYET
DIRECTOR OF SOFTWARE DEVELOPMENT,
SECURITY, AND COMMUNICATION SYSTEMS, AMADEUS

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CHALLENGE: THE FUTURE OF TRAVEL

From initial search to booking a flight, from pricing and ticketing to managing reservations, and from check-in to departure, Amadeus technology keeps the travel industry moving forward. With its mission of facilitating the entire travel journey from door to door, the company needed a technology solution that would let its customers, travel agencies, corporations, airlines, airports, hotels, and railways respond quickly and reliably to consumer demand.

"We needed a state-of-the-art computing platform that would help improve the business performance of our customers," said Christophe Defayet, director of software development, security, and communication systems at Amadeus. "As a trusted partner to the travel industry, our technology must help customers meet the increasingly complex demands of travelers around the world."

Amadeus owns and operates one of the largest datacenters in the world. The datacenter includes more than 30 petabytes of storage and more than 12,000 infrastructure devices. During peak operations, it processes more than 30,000 end-user transactions per second and executes more than 31 billion SQL instructions each day.

Yet Amadeus' customers were increasingly focusing on their need to mitigate risk and meet diverse regulatory requirements. As a result, many customers expressed an interest in applications that could run on-site, be distributed over multiple datacenters, or be accessed through public, private, or hybrid cloud platforms.

As the business needs of the travel sector change, IT providers must adapt their technology to meet customer demand. "We need an application platform that can tolerate infrastructure fluctuations, is resilient to failure, and recovers automatically when problems occur," said Defayet. "We also wanted a solution that uses automation to reduce the need for micromanagement of datacenter resources and helps us reduce time to market for our new solutions. Finally, our solution must provide standard methods to deploy and operate applications and provision capacity, so we can accelerate our time to market."

SOLUTION: FLEXIBLE APPLICATION INFRASTRUCTURE

With a long list of solution requirements in hand, Amadeus reviewed different methods of delivering applications to customers. An internal team of IT professionals researched how various open source communities address infrastructure architecture and design. To maximize reuse of existing IT assets, the company considered using container technologies such as Docker and Kubernetes.

At the Red Hat Summit event, the Amadeus team explained its goals to a group of Red Hat engineers, and its desire to unify current assets with Red Hat® OpenShift Container Platform the company's Platform-as-a-Service (PaaS) offering. "Containment was important because we have many applications developed in older technologies that we will not change for at least 10 years," said Defayet. "We also wanted to integrate existing middleware into OpenShift Enterprise, so that system administrators retain a uniform view of operations, the platform, and availability."

Amadeus learned that Red Hat is extremely active in the Docker and Kubernetes open source projects. Amadeus wanted to use the Docker container engine without sacrificing direct access and capabilities within the native APIs for Docker. At the same time, the team wanted to capitalize on the web scale of the Kubernetes cluster while partnering in an ecosystem of some of the largest providers in the market today. Red Hat's level of proficiency in these two emerging technologies allowed Amadeus to work together with the OpenShift and Red Hat Enterprise Linux engineering teams.

The partnership meant more efficiency: With Red Hat focusing on the operating system and orchestration, Amadeus could focus on putting its new PaaS to work for the business.

With its previous success using Red Hat JBoss Middleware in its business web services platform and Red Hat OpenStack Platform to run database tiers, Amadeus already had confidence in Red Hat solutions. The Red Hat team described a variety of operational use cases and assured Amadeus that Red Hat® OpenShift Container Platform could meet the company's goals. After considering several other vendors (as well as a homegrown solution), Amadeus selected Red Hat.

"With the relationship we built with Red Hat over several events, we realized we had a common technological vision and goals," said Defayet. "By choosing Red Hat as our provider, we knew we would gain a valuable partner."

Over the next 18 months, Amadeus formed six agile development teams that worked to create a private cloud-based application platform, using Red Hat® OpenShift Container Platform, to the specifications of a unique travel industry customer. With the help of a dedicated Red Hat engineer, the teams worked on projects such as orchestrating middleware, monitoring the platform, and creating an engaging developer experience. Developers are now working on e-commerce applications that support shopping and travel reservations for another key customer. The project, a joint effort of the company's global operations and research and development (R&D) departments, is scheduled for delivery to the customer soon.

"Our mission is to generalize what we've learned on this project for additional enterprise applications over the next five years," said Defayet. "We've already contracted with Red Hat to work with us for the remainder of the project."

BENEFITS: FASTER RESPONSE AND HAPPIER CUSTOMERS

DECREASED SYSTEM LATENCY AND IMPROVED PLATFORM AVAILABILITY

Red Hat® OpenShift Container Platform is expected to increase system performance, reduce latency, and rapidly adapt to peak load increases and new application deployment. In case of system failure or server downtime, applications can now be redeployed on another part of the network. As a result, the new solution enables Amadeus to provide more responsive customer service.

STREAMLINED OPERATIONS THROUGH AUTOMATION

Red Hat® OpenShift Container Platform automates many common system management and administration tasks, allowing Amadeus to eliminate the need for micromanagement of the underlying infrastructure. "By more efficiently and effectively managing our applications, we will be able to streamline operations," said Defayet.

REDUCED TIME TO MARKET FOR NEW APPLICATIONS

With standard methods for deploying applications, provisioning capacity, and operating the solution, Amadeus will be able to focus on meeting customers' business needs. The agile platform solution will help the company deliver new solutions faster, helping Amadeus become an even more valued partner to its travel industry customers.

RESULTS: OPEN SOURCE AND THE GLOBAL FUTURE

The partnership with Red Hat is helping Amadeus deliver significant business value to its customers. "We are extremely happy with Red Hat and their commitment to our success," said Defayet. "This is a big project, and we never feel we're alone in our efforts."

Amadeus also contributes to the open source community on a variety of projects, hoping to give back by sharing technology. "We really enjoy the open source model," said Defayet. "The open source community has always been a great help to Amadeus as we work through these projects."

Over the next year, the company plans to continue working on the new application platform. The cloud-based solution will be hosted from a number of roof datacenters across the world.

"We're a truly global organization, and this project was a success because of the efforts of team members around the world," said Defayet. "It's only fitting that a global Amadeus team created this innovative solution, which will help us continue to shape the future of travel."

ABOUT AMADEUS

Amadeus is a leading provider of technology products and solutions that keep the travel sector moving. Amadeus technology solutions help customers—travel agencies, corporations, airlines, ground handlers, hotels, railways, car rental companies, airports, cruise lines, and ferry operators—improve business performance. By working with customers and partners and maintaining a strong commitment to R&D, Amadeus is shaping the future of travel.
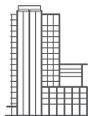
ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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