



# MODERNIZE FINANCIAL SERVICES WITH OPEN SOURCE

BALANCE DIGITAL TRANSFORMATION WITH RELIABILITY,  
SECURITY, AND COMPLIANCE

# TABLE OF CONTENTS

Transforming financial services with technology .....	3
Innovate with trusted software solutions built for financial services .....	4
Customer case studies .....	5
Automate and optimize IT processes .....	6
Simplify process, application, and data integration.....	13
Modernize application development .....	19
Next steps.....	24

## HOW TO NAVIGATE THIS E-BOOK

This e-book is interactive. Move through it by scrolling, using the navigation bar at the bottom of the screen, or by using the forward and back buttons on the left and right sides of each page.



Previous page



Next page

**GO**

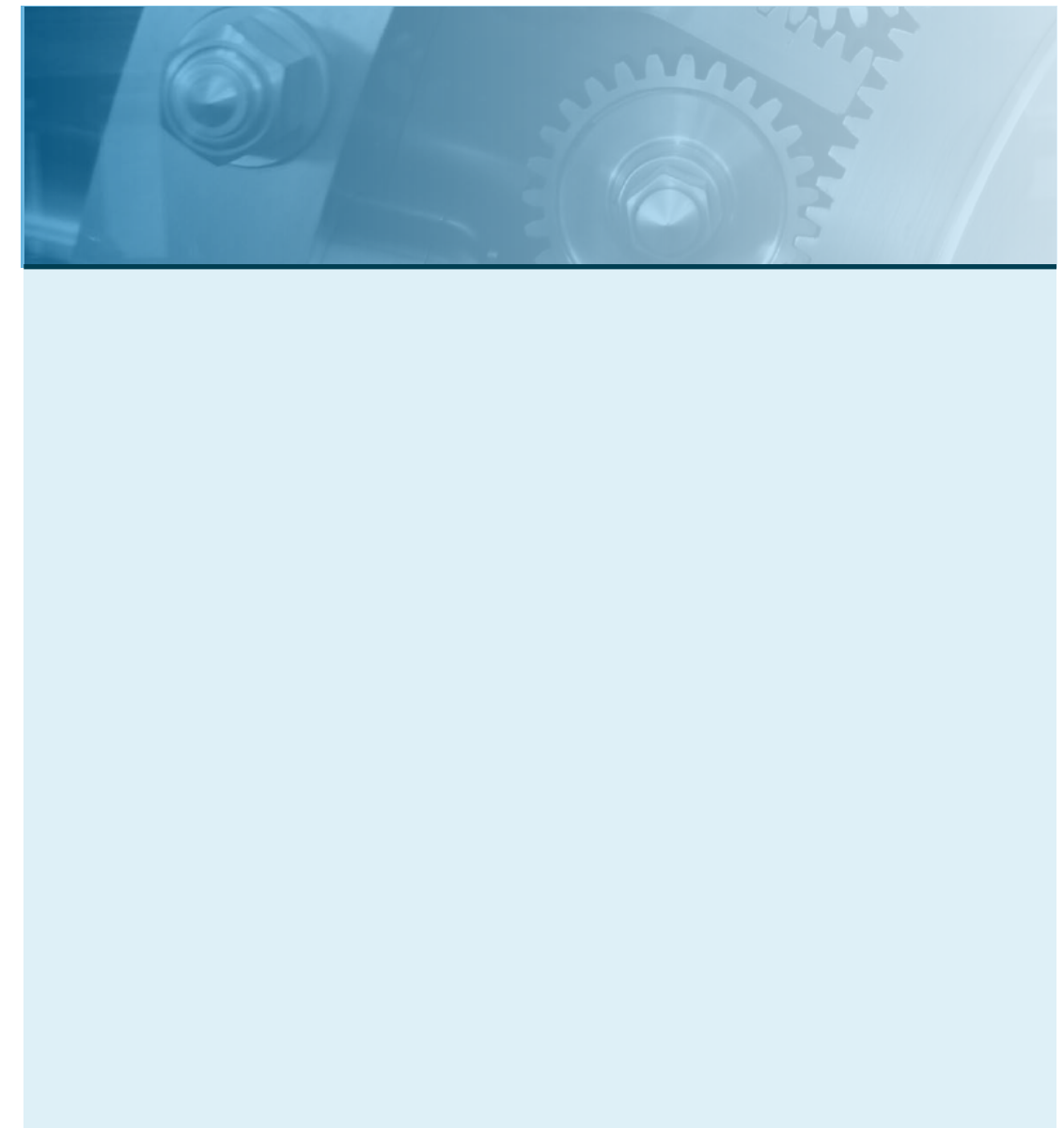
Skip to section

# TRANSFORMING FINANCIAL SERVICES WITH TECHNOLOGY

In the highly competitive financial services industry, speed, security, and agility are critical. Complex transactions, massive amounts of data, and growing demand for fast response to market changes create challenges for even the most skilled IT teams. In addition, fintech companies are causing disruptive change throughout the industry by shifting the competitive landscape.

Digital innovation is key to staying relevant. Your IT architecture must scale dynamically, withstand failures, adapt quickly, and connect to a wide variety of devices, data, and systems any time and in any location. Open source technology can provide a low-latency, high-throughput infrastructure to support digital transformation and online business growth.

Red Hat can help you build an IT architecture that delivers the speed, security, and agility you need to stay competitive.



# INNOVATE WITH TRUSTED SOFTWARE SOLUTIONS BUILT FOR FINANCIAL SERVICES

As a leader in open source infrastructure and application development solutions, [Red Hat](#) can help you use technology and innovation to support business objectives. These open, cloud-ready, cost-effective solutions form a security-focused, reliable, high-performance foundation for digital operations. Whether in banking, securities, insurance, or the expanding fintech sector, Red Hat® technology can help you become more agile and respond faster to market changes while reducing costs and managing risk.

Red Hat offers a [complete software foundation](#) for mobile, containers, workload modernization, and application portability. We also deliver business-focused solutions for [risk analytics](#), [anti-money laundering](#), [hybrid cloud computing](#), and [IT automation](#). These products and services help you optimize your customer experience—on any device, on any network, anywhere in the world.

[INFRASTRUCTURE SOFTWARE](#)

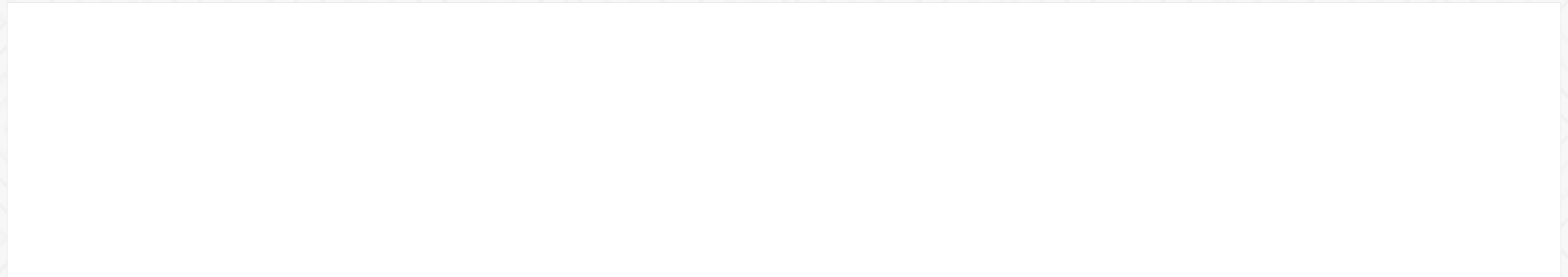
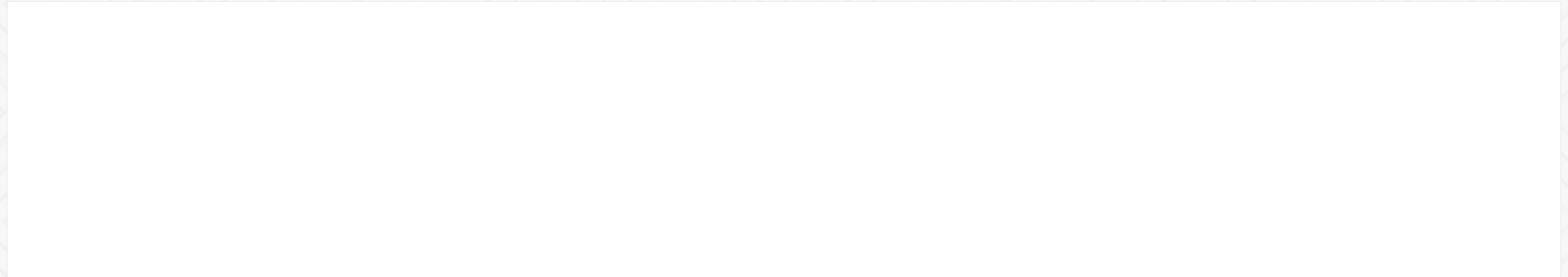
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[APPLICATION SERVICES](#)

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[AUTOMATION](#)

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CUSTOMER CASE STUDIES:

# **AUTOMATE AND OPTIMIZE I.T. PROCESSES**

# BALOISE BANK SoBa

## INSURANCE



### » CHALLENGE

Baloise Bank SoBa needed to modernize its IT and reduce operating costs to adapt to industry changes and challenges.

### » SOLUTION

The company migrated its Avaloq core banking application from proprietary UNIX to Red Hat Enterprise Linux®.



Completed batch processes up to **four times faster**



Reduced total cost of core banking app by **CHF 240,000** annually



Expect to achieve full return on investment within **18 months**

“

“Baloise Bank SoBa can react to new requirements **more quickly, more flexibly, and more cost-effectively** today by running the Avaloq core banking application on Red Hat Enterprise Linux.”

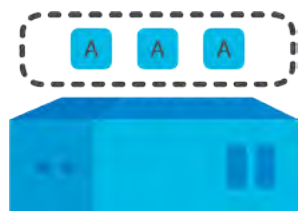
ROLF VOGT  
I.T. PROJECT MANAGER,  
BALOISE BANK SoBa AG

### » CHALLENGE

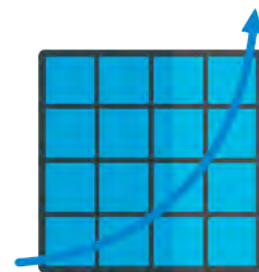
Bank Audi needed to modernize its IT architecture to support regional expansion and introduce new banking services.

### » SOLUTION

The bank migrated critical services to Red Hat Enterprise Linux and uses Red Hat Satellite to improve management efficiency.



Reduced server provisioning time from more than a week to **less than seven minutes**



Increased IT team productivity by **more than 100%**



Improved innovation and **time to market** for new services

““

“Red Hat offers so much **more than just an operating system**. Their enterprise-class technology is backed by an incredibly professional team that sees itself as an extension of our in-house team.”

GEORGES ABOU-ZEIDAN  
TECHNOLOGY ARCHITECT,  
BANK AUDI



## » CHALLENGE

With 100% growth expected over three years, Caja de Valores needed to improve and speed disaster recovery for their business.

## » SOLUTION

The company moved to Red Hat Virtualization and engaged Red Hat Consulting to plan a highly available disaster recovery platform.



Added **50% more** virtual machines in a six-month period



**Streamlined** virtualized infrastructure management



Achieved **50% faster** recovery time

““

“We chose Red Hat because of our **long-standing, trust-based relationship** and the satisfactory results we’ve achieved.”

PAULO DUTRA  
DATA PROCESSING CENTER MANAGER,  
CAJA DE VALORES

### » CHALLENGE

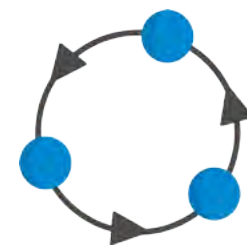
Capital One needed to optimize development and deployment of its mobile applications.

### » SOLUTION

The company used Red Hat Ansible Automation to create an automated services stack, including infrastructure and code deployment.



**Simplified code changes** without disrupting stable components



**Optimized code reuse** across applications



Accelerated build time for entire service stacks to **just minutes**

““”

“With Ansible, we’ve developed the ability to create the entire stack at once, so now we can **create an entire stack** in a few minutes.”

CHRIS WEAVER  
MASTER SOFTWARE ENGINEER,  
CAPITAL ONE

# MUFG UNION BANK, N.A.

## BANKING

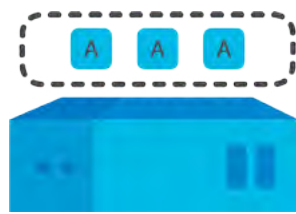


### » CHALLENGE

MUFG Union Bank's IT teams had 45 days to develop a solution that would speed delivery of new application environments from weeks to hours.

### » SOLUTION

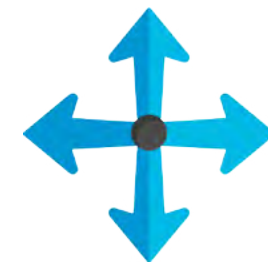
Using Red Hat CloudForms, the company built a private cloud to support Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS) offerings.



Reduced application deployment time **from weeks to hours**



Deployed 700 virtual machines **in less than two months**



Gained the ability to scale IT environment in line with **business demand**

“

“The openness of the Red Hat solutions provides a platform for our future. [...] we consider Red Hat not just a vendor, but **a trusted partner** to our company.”

**DON O'CONNOR**  
MANAGING DIRECTOR,  
TECHNOLOGY OPERATIONS,  
MUFG UNION BANK, N.A.

## » CHALLENGE

Raiffeisenbank needed to replace its aging hardware and proprietary operating system to keep up with business demand.

## » SOLUTION

The bank migrated its 20TB database to modern, industry-standard x86 systems running Red Hat Enterprise Linux.



Improved system performance **by 3x** while maintaining stability



Anticipates reducing total cost of ownership **by 50%** over five years



Gained **greater flexibility** by eliminating vendor lock-in

““”

“A key benefit of switching to Red Hat is that, because Red Hat Enterprise Linux is the **leading enterprise Linux operating system**, bugs and errors are patched very quickly.”

JIŘÍ KOUTNÍK  
HEAD OF SYSTEM ADMINISTRATION,  
RAIFFEISENBANK

CUSTOMER CASE STUDIES:

# **SIMPLIFY PROCESS, APPLICATION, AND DATA INTEGRATION**

## » CHALLENGE

A.IX Capital sought a reliable, scalable, and affordable cloud platform that could be operated by a small company with no IT specialists.

## » SOLUTION

The company participated in the Red Hat OpenShift Startup Program to cost-effectively deploy Red Hat OpenShift Online.



Reduced IT management time to **just minutes each week**



Scaled IT environment to support **innovative app development**



**Cut deployment costs** through the Red Hat OpenShift Startup Program

“

“Now we spend little time managing or maintaining IT operations, usually just minutes a week. OpenShift is very simple to use. **It just works.**”

DR. FABIAN BRAUN  
FOUNDER AND CEO,  
A .IX CAPITAL

### » CHALLENGE

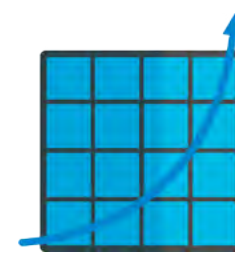
BSE struggled to meet business needs with proprietary technologies that limited innovation and required high-cost upgrades.

### » SOLUTION

The company built a new trading system using open source technology with help from Red Hat Consulting.



Reduced trade transaction time from 10 milliseconds to **6 microseconds**



Increased trading volume from 10 million to **400 million orders per day**



Reduced total cost of ownership by **90%**

““

“We have found the support from Red Hat to be exemplary. Whenever we need anything from them, they have given it. [...] **Red Hat is now our backbone.** Our business cannot run if Red Hat is not there.”

ASHISHKUMAR CHAUHAN  
CEO, BSE

# MLP

## FINANCIAL PLANNING



### » CHALLENGE

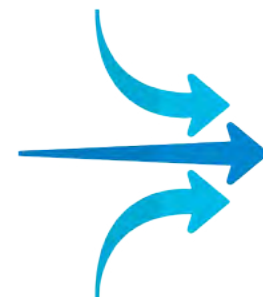
MLP's proprietary application server license expired, forcing them to update or find a solution that provided a cost-effective, certified Java™ EE platform.

### » SOLUTION

The company migrated critical applications from IBM WebSphere 6 to Red Hat JBoss® Enterprise Application Platform.



**Eliminated**  
software licensing  
fees



**Simplified**  
application  
build process



**Improved flexibility**  
and added more  
functionality

““

“Business-critical applications such as MLP's Brokerpilot can be run using Red Hat JBoss Enterprise Application Platform with **great reliability** and with even more flexible functions.”

KLAUS STRUMBERGER  
CIO, MLP



## » CHALLENGE

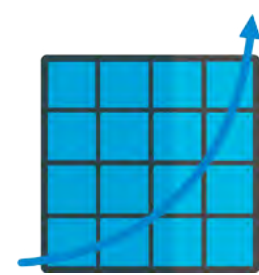
TimesofMoney was growing rapidly but was held back by a legacy platform that restricted scalability, efficiency, and reliability.

## » SOLUTION

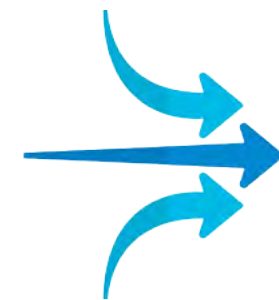
The company migrated to a scalable, cost-effective environment based on Red Hat JBoss Enterprise Application Platform.



Optimized business processes and **reduced service downtime**



Improved performance from 20 to **500 transactions processed per second**



**Simplified** app server management and integration for external users

““

“The support provided by Red Hat and the migration team has been excellent, and the implementation is **robust and reliable.**”

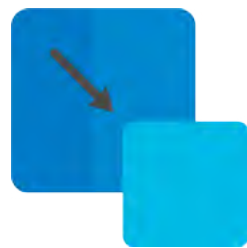
RANA SINHA RAY  
SENIOR VICE PRESIDENT  
AND HEAD OF TECHNOLOGY,  
TIMESOFMONEY

## » CHALLENGE

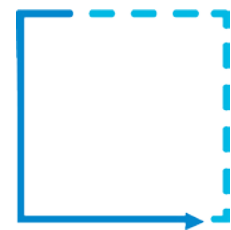
Legacy technology prevented TransUnion from using big data to create products that help its customers make informed decisions.

## » SOLUTION

The company moved to an open operating environment based on Red Hat Enterprise Linux, Red Hat JBoss Middleware, and other Red Hat products.



Consolidated  
**16 datacenters**  
into 7



Decreased recovery time  
of core applications  
to just minutes



Improved app availability  
to **outperform**  
**service-level agreements**

““”

“Our Red Hat operating environment frees us to focus far less on our infrastructure and **spend more time innovating** and delivering new products that improve our customer experience.”

MICHAEL CATUARA  
DIRECTOR OF DISTRIBUTED SYSTEMS,  
TRANSUNION

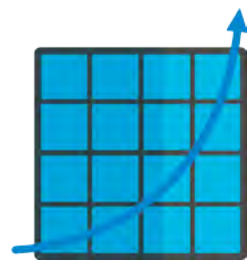
CUSTOMER CASE STUDIES:  
**MODERNIZE APPLICATION  
DEVELOPMENT**

### » CHALLENGE

Barclays needed refresh its IT environment and culture to speed product delivery and be more responsive to market trends.

### » SOLUTION

The bank migrated to an on-premise Application Platform-as-a-Service (aPaaS) with Red Hat OpenShift Container Platform and adopted a DevOps strategy.



Improved developer efficiency for faster updates and feature releases



Cut provisioning times from weeks to hours with self-service capabilities



Freed staff to focus on strategic, valuable projects

““

“Now, with Red Hat OpenShift Container Platform, **we’re more agile**. We can think of an idea, try it, fail, learn, and make adjustments. Culturally, that’s a big change.”

SIMON CASHMORE  
HEAD OF PaaS MIDDLEWARE ENGINEERING,  
BARCLAYS

# ERSTE FINANCIAL SERVICES

## FINANCE SECTOR SERVICES

### » CHALLENGE

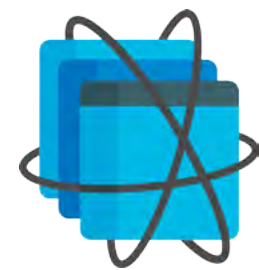
Erste Financial Services wanted to improve IT costs, capabilities, and flexibility for its middleware solutions.

### » SOLUTION

The company migrated from a proprietary integration broker solution to Red Hat JBoss Fuse and Red Hat JBoss AMQ.



Cut overall IT costs  
and reduced proprietary  
licensing expenses



Gained ability to  
create **more**  
**agile services**



Seamlessly migrated to  
Red Hat without  
**interrupting business**

““”

“Red Hat has been great at **transferring knowledge to our developers** ... Red Hat’s consultants have not only solved issues, but also shown us how to better engage with the JBoss community.”

MIGUEL BUESCHER  
BUSINESS SOFTWARE ARCHITECT,  
ERSTE FINANCIAL SERVICES

## » CHALLENGE

KeyBank needed to modernize application infrastructure to comply with regulations and meet demand for digital services.

## » SOLUTION

KeyBank created a DevOps environment and continuous delivery pipeline using Red Hat OpenShift Container Platform.



Improved defect resolution time to within one day for 60% of all defects



Completed 10 production releases in four days with zero defects for acquisition



Achieved nearly 100% application availability

““

“The capabilities of Red Hat OpenShift have allowed us to modernize our applications with container orchestration, helping KeyBank to better enhance our customer experience and increase our delivery velocity.”

JOHN RZESZOTARSKI  
DIRECTOR OF DEVOPS,  
KEYBANK

## » CHALLENGE

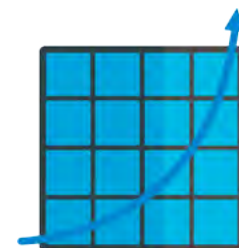
A complex ecosystem prevented Macquarie from meeting customer expectations for mobile and real-time information.

## » SOLUTION

With help from Red Hat Consulting, Macquarie deployed Red Hat OpenShift Container Platform as a public cloud implementation.



**Improved availability**  
and responsiveness  
for customers



Improved developer  
productivity by  
**more than 50%**



Reduced time to market  
for new features  
**from hours to minutes**

““”

“Red Hat technology has helped us to work in a more efficient way, with **speed and agility** as the biggest outcomes. By continually using the platform, we expect huge benefits over the coming months and years.”

**LUIS UGUINA**  
CHIEF DIGITAL OFFICER,  
MACQUARIE BFS

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