

CEB supports digital services with modern microservices and integration approach



Software and services

Red Hat® OpenShift®
 Red Hat Integration
 Red Hat Fuse
 Red Hat AMQ
 Red Hat Support

Credit Europe Bank NV (CEB), with an international clientele, serves more than 900,000 corporate and retail customers in six countries. To build and deliver digital services to customers faster, CEB sought to shift from its Java-based legacy approach to microservices and cloud technology. Using a container environment based on Red Hat OpenShift, the bank can deliver new services to customers at the pace of market demand. Additionally, improved messaging and integration between the bank's systems, as well as third-party partners, helps new CEB customers open accounts faster—without requiring in-person visits to a branch. The bank now has a foundation for continuous improvement, with greater choice of cloud providers and improved reliability at scale.



Financial services

1,100 employees

Benefits

- ▶ Reduced time to market for innovative digital services
- ▶ Reduced customer onboarding time from two weeks to 15 minutes
- ▶ Improved portability and flexibility across cloud and geographic environments
- ▶ Eliminated infrastructure downtime with expert support

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Head of Digital Banking and Software Infrastructure, Credit Europe Bank NV

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Modernizing core systems to launch digital banking services

Established in 1994, Credit Europe Bank NV (CEB) provides financial services to more than 900,000 corporate and retail customers through branch locations, ATMs, and point-of-sale terminals around the world. CEB and its subsidiaries focus on trade finance and corporate banking in six countries, including Germany, Switzerland, Romania, Dubai, and Turkey.

CEB sought to become the preferred bank in its core markets, but its monolithic core banking system prevented it from integrating new, innovative technology that would support the delivery of digital products and services. The bank’s existing approach used custom, Java™ Enterprise Edition (Java EE)-based systems deployed in a bare-metal environment.

“Integrations took a lot of time and effort. We wanted to move to a cloud- and microservices-based approach that would give us the speed and flexibility to be more responsive to the market,” said Ulas Ergin, Head of Digital Banking and Software Infrastructure, CEB.

With no previous experience using cloud-native technologies and under strict European industry regulations, CEB sought a solution that would provide not only the required technology capabilities, but also comprehensive security, reliability, and support.

Adopting a cloud-native, microservices-based service foundation from Red Hat

To support its digital transformation efforts, including its shift from datacenter to hybrid cloud infrastructure, CEB decided to adopt Red Hat OpenShift and Red Hat Integration.

“We chose Red Hat OpenShift because it’s based on the Kubernetes container standard and provides key capabilities we need for success with our transformation efforts, such as enterprise support,” said Ergin. “We also found Red Hat’s platform to provide the most flexibility to take advantage of the cloud from within our datacenter with the option to easily move to public cloud anytime we want.”

With assistance from Red Hat Support, CEB initially implemented Red Hat OpenShift 4 in an on-premise virtual environment, including clusters for development, testing, preproduction, and disaster recovery. The company also implemented several Red Hat Integration technologies. Red Hat Fuse supports communication between CEB’s new microservices, legacy Java EE banking system, and third-party partners. Red Hat AMQ supports real-time, event-based communications between these microservices, as well as asynchronous logging.

The bank has gradually begun rebuilding or migrating key applications to its new Red Hat environment, starting with payment services, its Dutch bank data retrieval portal, and an email and SMS customer messaging gateway. After also developing back-end microservices for its online and mobile banking applications, CEB is now focused on gradually transforming its remaining core banking capabilities to microservices on Red Hat OpenShift, including treasury, payment, loans, trade finance, deposits, and accounting.

Innovating at the speed of market demand

Reduced time to market for digital services

With responsive, cloud-based infrastructure, CEB can develop, deliver, and scale the innovative digital services customers want, at the pace of demand. For example, the bank has launched a major new release every two months since the first go-live for its digital banking platform, despite the constraints brought about by the COVID-19 pandemic. These new releases have included, for instance,

video onboarding with live-chat, renewed online banking with new mobile applications and digital onboarding with id scan. In total, CEB completed four projects in 2021—a significant achievement in productivity.

“Development with integrated continuous integration and delivery [CI/CD] pipelines is a far smoother experience than traditional development for monolithic systems,” said Ergin. “And we’re becoming even faster as we gain more experience of this new world.”

Additionally, CEB can quickly integrate new technology and third-party partners to update its services and bring the latest digital banking capabilities to customers. “With the wealth of connector options available in Red Hat Fuse, we can quickly integrate almost any technology to enhance our services, whether directly customer-facing or by improving our back-end capabilities,” said Ergin. “For example, we’ve already adopted a variety of metrics and monitoring tools—including Prometheus, Grafana, and Elastic—to gain extended visibility into the performance and reliability of our microservices and Red Hat OpenShift environment.”

Simplified account opening process for customers

By shifting to digital processes, CEB has also cut onboarding time for new customers in Germany from two weeks to just 15 minutes. Customers can now open an account from any location instead of having to visit a post office to verify their identity and sign paperwork.

Customers can use the mobile application to share identity verification documents and complete a facial recognition scan, approved via video by a live agent. The formerly manual approval process by the bank’s operations team is now completed automatically by a back-end microservice, resulting in approval or flagging for further human inspection.

“Customers are now just one video call away from opening a Credit Europe account,” said Ergin. “They can get started without leaving their home and access their new account the same day.”

Improved portability and flexibility across cloud and geographic environments

By establishing modular, easily scalable cloud infrastructure with Red Hat OpenShift, supported by responsive integration through Red Hat Fuse, CEB can expand innovation to anywhere it does business.

Red Hat AMQ and Red Hat OpenShift Service Mesh, a component of Red Hat OpenShift, provide uniform communications between microservices across CEB’s distributed environment.

Additionally, Red Hat’s technology is vendor agnostic, giving CEB flexibility to adopt technology from their choice of cloud vendors as their needs evolve.

“With Red Hat’s integration and messaging solutions, connecting our digital banking platform to different core banking systems is easy,” said Ergin. “Even though our core banking system in Romania is built on a different platform than our in-house one used in the Netherlands and Germany, we can easily adapt our integration layer with Red Hat Fuse to adapt our digital banking platform to serve Romania as well.”

Eliminated infrastructure downtime with expert support

CEB has worked closely with Red Hat Support during and after implementation of its new technology to optimize performance and troubleshoot any issues before they affect customer-facing services.

“We were one of the first adopters of Red Hat OpenShift 4 in the Netherlands, so Red Hat’s expertise was especially critical during the design phase to help us create the optimal architecture to meet our performance and security goals,” said Ergin. “With their guidance, we haven’t had any infrastructure-related downtime since we adopted Red Hat OpenShift, despite making more frequent, iterative deployments.”

Strengthening market position

After its initial success with microservices-based digital banking services, CEB is now planning to transition its Red Hat architecture to Microsoft Azure Red Hat OpenShift to begin its move to the cloud.

The bank also plans to continue rebuilding its core banking systems and services and migrating them to Azure Red Hat OpenShift, with a current focus on redesigning its credit application system and rolling out its microservices-based approach in Switzerland and Romania.

“Red Hat technologies and services have helped us strengthen our market position,” said Ergin. “We look forward to a successful future where we can take full advantage of new technologies to deliver exciting new digital banking services for our customers.”

About Credit Europe Bank NV

Credit Europe Bank NV is a public limited company established in 1994 in the Netherlands with a full banking license. The bank is headquartered in Amsterdam and has around 1,100 employees in six countries. It operates 27 branches, 59 ATMs, and around 8,200 point of sale terminals. It serves more than 900,000 retail and corporate customers around the world.



About Red Hat Innovators in the Open

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About Red Hat

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