

Discount Bank innovates faster to compete with start-ups



Software and services

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With many young startups entering Israel's financial market, Discount Bank needed to reduce time-to-market for new products and services. The bank had to adopt a modern architecture to remain a leader and stay competitive. Having realized that an approach based on microservices and containers was the best approach, the bank adopted Red Hat OpenShift to ensure security and scalability. Red Hat Consulting provided a bespoke training program for all stakeholders. The new infrastructure built on Red Hat technology has reduced time-to-market, ensured security, and allowed the bank to adopt FinOps innovation.



Financial services

200 branches

Benefits

- ▶ Reduced time-to-market to just days from one month
- ▶ Ensured security across clusters with standardization
- ▶ Allowed the bank to adopt FinOps innovations

"Red Hat OpenShift would allow us to create a security environment to meet our permission and authentication needs."

Guy Avrahami

Head of Infrastructure, Discount Bank

"From my experience designing and implementing a multitude of projects, this stands out as a flagship endeavor, representing a technological leap forward. It's the reason Asaf, Tom, and I chose to present it at our last OpenShift Commons conference."

Almog Elfassy
Cloud Architect, Red Hat

Competing with innovative young financial companies in parallel to the traditional banks

The Discount Group is a global financial organization providing comprehensive corporate, commercial, retail, and private banking services. It comprises banking, capital market and investment, finance, and trust companies in and beyond Israel. In Israel, Discount Bank provides banking services to more than one million private and corporate customers through a network of more than 200 branches, business and investment centers, and direct, online, and mobile channels.

Israel is a country renowned for its innovation. As one of Israel's leading financial institutions, the bank needed to compete with the innovative young companies entering the market. "Israel is a very competitive location," said Asaf Goldfeld, Head of OpenShift and Linux at Discount Bank. "The game for all the banks is to bring the best products to market in the shortest time."

Discount Bank needed to move away from its legacy environment built on virtual machines to do that. "There are a lot of start-ups in Israel," said Guy Avrahami, Head of Infrastructure at Discount Bank. "It's very easy for them to innovate fast because they don't have the legacy core applications or environments we need to consider."

To remain competitive, the bank needed to adapt its IT strategy. It began building a modern infrastructure using an API (application programming interface) approach. But acquiring one start-up opened its eyes to a whole new approach. "Pay Box, a digital wallet, was using an approach based on containers and microservices," said Avrahami. "We could see this approach was the future and so decided to include it in our IT strategy."

With its IT strategy now based on microservices and containers, the bank began its modernization journey by designing and building pipelines to support a CI/CD (continuous integration and continuous delivery) approach. As for the infrastructure, market research revealed Kubernetes as the way forward. "We learned that Kubernetes is the next generation of platforms for running containers," said Avrahami. "But we found a lot of gaps between our governance and security requirements and what the community version of Kubernetes could deliver. We needed a product."

Adopting a modern architecture based on trusted technology

It was early days for Kubernetes in the financial market. "It was difficult to know what product to select as we would be the first bank to adopt containers and microservices," said Avrahami. "We needed to close the gap around governance and security. We had previous experience with Red Hat products and saw that Red Hat OpenShift would allow us to create a security environment to meet our permission and authentication needs."

Red Hat OpenShift Service Mesh provides a uniform way to connect, manage, and observe microservices-based applications and allows institutions to customize microservices security to meet the complex security requirements with which all financial institutions must comply.

Red Hat Consulting built Discount Bank a tailor-made training program that included bespoke workshops and access to self-paced training courses through Red Hat Learning Subscription. These helped the bank prepare for working in its new architecture. "Containers, microservices, and Red Hat OpenShift were all new to us," said Avrahami. "Red Hat tailored our training to educate all our teams so they would all understand, and all speak the same language."

The program reached all departments—DevOps, development, design, application architecture, and infrastructure—and helped them learn about the platform. An introduction day for C-level executives helped them align their terminology with the technical teams.

With extensive training, the Discount Bank team built their new infrastructure-as-code environment with help from a team of experts from Red Hat Consulting. “From the beginning, the bank was open-minded, and the innovative architecture we built was challenging,” said Batel Assaf Volchek, SA for the FSI Sector, Red Hat. “The bank invested a lot to build a flexible architecture secured and scalable for future needs. Looking back, the first brick and the effort we invested together was one of our keys for successful deployment.”

Having crafted the new IT strategy and brought it to life by adopting DevOps, building pipelines, and implementing Red Hat OpenShift, the bank next needed to focus on adapting its organizational culture to the new world.

Innovating faster with more efficient development, infrastructure, and security

Reduced time-to-market to just days from one month

Discount Bank has met its goal with the new architecture based on microservices and containers running on Red Hat OpenShift, significantly reducing time-to-market. “We can give our customers the best solutions in the shortest time, and this is the big plus of our Red Hat OpenShift solution,” said Avrahami. “Something that would have taken a month to deploy in our previous environments, we can now deploy in a few days—or even a few hours.”

Moreover, developers no longer rely on the infrastructure team to create the environments they need, allowing them to be much more efficient and launch new functionality much faster. “We have projects launching hundreds of new services,” said Tom Porat, Full Stack Developer at Discount Bank. “Most of that happens without any involvement from the infrastructure team.”

The bank can now deploy small developments and small changes to an application very quickly. The development team is working on more projects than it would have previously. “Our developers are providing more solutions for our customers—taking our service to the next level—with the same number of people, or even fewer in some parts of the business,” said Porat.

Ensured security across clusters with standardization

The Red Hat OpenShift environment provides consistency across clusters, which is vital for ensuring the bank’s new services meet its security and scalability requirements. Cluster images are audited once and then stored in GitHub, ready to be duplicated across clusters.

“Our security team tests and certifies one Red Hat OpenShift cluster image for our infrastructure team to then roll out many times,” said Goldfeld. “It saves our security team valuable time because it doesn’t need to test an image for each cluster we provision.”

“The architecture Red Hat meticulously crafted not only facilitates the seamless deployment of an end-to-end OpenShift Container Platform (OCP) but also ensures centralized management of these clusters, regardless of the hosted infrastructure. This groundbreaking approach is underpinned by an advanced GitOps process, providing a single source of truth,” said Almog Elfassy, Cloud Architect, Red Hat.

From a developer's perspective, he now has confidence in any environment stored in GitHub because he knows it has been audited. "We can quickly create a new test environment to test a new configuration or an upgrade and we know that it is exactly the same as the production environment," said Porat.

Allowed the bank to adopt FinOps innovations

Discount Bank can now easily take advantage of innovations from FinOps companies thanks to Red Hat OpenShift. Small companies are approaching the bank with their novel ideas and asking for a platform to run their containers.

"We can bring new FinOps applications into our banking in no time," said Goldfeld. "We can adopt their innovations in just a few days."

It is now much easier for the bank to onboard anything new: "Once you have the capacity on the cluster, you don't need to request new servers," said Porat. "You don't need to get new IP addresses, DNS, records, security, and everything else. Red Hat OpenShift reduces the friction when you provision new things."

Preparing the bank for the future

"We have brought innovation to our infrastructure by adopting Red Hat OpenShift," said Porat. "We also have GitHub and everything we need for our CI/CD pipeline. We are now onboarding more applications and modernizing existing ones, so they work more efficiently."

"Our IT strategy includes a chapter that says we are moving from virtual machines to containers and microservices in the next five to ten years," said Avrahami. "Our IT strategy also says we will move to the cloud, which will be much easier with containers rather than virtual machines. Red Hat OpenShift has an important role at Discount Bank, not just today but also for our future."

"This collaborative effort highlights Red Hat's commitment to developing innovative solutions tailored to customers' unique business objectives. Together, we aim to pave the way for the successful realization of those objectives," said Elfassy.

About Discount Bank

Discount Bank was founded in 1935 by the late Mr. Leon Recanati and is a part of the Discount Group. The bank offers comprehensive banking services to its customers in all areas of financial activity, through a network of 114 branches spread throughout Israel and through direct banking services.



About Red Hat Innovators in the Open

Innovation is the core of open source. Red Hat customers use open source technologies to change not only their own organizations, but also entire industries and markets. Red Hat Innovators in the Open proudly showcases how our customers use enterprise open source solutions to solve their toughest business challenges. Want to share your story? [Learn more.](#)



About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. [A trusted adviser to the Fortune 500](#), Red Hat provides [award-winning](#) support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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