

Rabobank Achieves Tenfold Scalability with a Powerful Converged Private Cloud

CASE STUDY

Challenge: Reduce the cost of managing thousands of virtualized servers across Rabobank's IT infrastructure.

Solution: Create a private cloud architecture with a single point of control and greater automation.

Outcome: 40% boost to performance by moving from three-tier to converged infrastructure.

The Challenge: Cost-Efficient Delivery of Highly Available Banking Services

Headquartered in Utrecht, Netherlands, banking and financial services company Rabobank serves almost 8.3 million customers in 39 countries. Employing over 41,000 people worldwide, Rabobank manages assets of around EUR 590 billion and reports annual net profits of around EUR 3.0 billion.

In a world where customers expect banking services to be available online, 24/7, financial institutions must ensure that their IT infrastructure is up to the task. Rabobank is no exception: The top priority for its IT teams is to build a reliable infrastructure that safeguards business continuity. However, at the same time, Rabobank's focus on customer value means that any new IT initiative must be carefully justified.

Like most banks, Rabobank's infrastructure includes a vast range of applications and databases. Until recently, these

systems were deployed across a mixture of physical and virtual servers managed by teams from different business units.

Manager of Storage and Compute at Rabobank, Colin Chatelier, comments: "We saw an opportunity to increase availability and performance while reducing costs by rationalizing our infrastructure and eliminating silos between our teams."

The bank chose Hitachi Vantara as its partner to build a new converged private cloud architecture that would host around 2,000 virtual machines, as well as managing physical servers and virtual desktop infrastructure. Internal customers were quickly impressed by the performance of the converged platform and began moving more servers into the environment.

"Our private cloud quickly grew from 2,000 virtual machines to a total of 21,600," says Chatelier. "To handle that kind of scale, infrastructure automation became a top priority. We wanted a



Rabobank

INDUSTRY

Banking and Finance

SOLUTIONS

Edge-to-Cloud Data Infrastructure:
Agile Application Infrastructure

HARDWARE

Hitachi Unified Compute Platform (UCP) CI
UCP HC and legacy UCP 4000

Hitachi Virtual Storage Platform (VSP)
5500 and VSP G900

SOFTWARE

Hitachi Unified Compute Platform Advisor

Outcomes

- Scalable architecture enables rapid growth from 2,000 to 21,600 servers.
- Automated workflows enable on-demand server provisioning in less than eight minutes.
- Comprehensive security framework enables tracking and auditing of all logins.
- No increase in headcount: A five-person team manages the entire server estate.

Close partnership has been critical to the success of this project: We've shared ideas and experiences that have helped Hitachi Vantara build better products and helped us adapt them to our specific use cases.

– Colin Chatelier, Manager of Storage and Compute, Rabobank

better solution than a mixture of command line, Python and PowerShell scripts — and the Hitachi Vantara team were eager to help.”

The Solution: An Automated Private Cloud Approach

As Rabobank looked for a solution to its automation problem, Hitachi Vantara was working on the next generation of Hitachi Unified Compute Platform (UCP) architecture. Hitachi was also adding new features to Hitachi Unified Compute Platform Advisor (UCP Advisor), its management automation solution.

The two companies realized that by running a proof of concept (PoC) for UCP Advisor at Rabobank, they could achieve a win-win scenario. The bank would get access to a state-of-the-art automation platform with functionality tailored to its specific needs. Meanwhile, Hitachi Vantara would gain the feedback it needed to create a better product, whose features were proven to address real-world use cases, to exacting standards and at an industrial scale.

At the start of the PoC, Rabobank identified more than 70 issues with its existing approach, and the Hitachi Vantara team began working on implementing solutions in UCP Advisor. This resulted in the development of an enriched application programming interface (API) that makes it possible for Rabobank to provision any combination of storage and compute resources — on VMware or physical servers — with just a few clicks.

With security a priority, the Hitachi team added integration with Microsoft Active Directory and role-based access control (RBAC). Whenever a user logs in to configure or maintain part of the infrastructure, that login is now tracked automatically and visible in a management portal, creating a full audit trail.

In total, the Hitachi Vantara product development team was able to address all 70 of Rabobank’s issues within just two releases of UCP Advisor.

“Working closely with the product development team has been a great experience for both companies,” says Chatelier. “They made several visits to our headquarters, and we visited them Santa Clara, too, to make sure both sides really understood the features and the requirements. This is a partnership which has really paid dividends.”

On the hardware side, UCP Advisor runs as an all-in-one appliance, so there is no need for Rabobank to manage it separately. Moreover, the new solution will enable Rabobank to achieve further data center consolidation: The converged environment is currently spread across 80 physical machines, which will soon be reduced to just two. Rabobank also plans to upgrade its storage in the near future to Hitachi Virtual Storage Platform (VSP) 5500, which promises “eight nines” availability.

“The UCP architecture is highly modular, so we can plug together a set of compatible hardware and software to build the solution we need,” says Chatelier. “UCP Advisor will provide the flexible APIs we need for end-to-end automation, while the VSP 5500 promises to be the fastest SSD-powered array in existence — unlocking new levels of performance for our business users and customer-facing applications.”

The Outcome: Powerful Platform Enables Rapid, Manageable Growth

Rabobank has already seen impressive gains in performance by moving from a traditional three-tier architecture to the converged environment.

“With the first systems we migrated, we saw an immediate 40% increase in batch

processing performance,” says Chatelier. “And we’re expecting to see even bigger gains when we move to the VSP 5500.”

The converged platform’s increased performance and reliability help Rabobank meet its business goal of providing seamless 24/7 banking services to its customers. At the same time, the converged platform helps to reduce operational costs by streamlining system administration processes and providing a single point of control.

“The UCP solution’s automation capabilities help us accelerate deployments and eliminate human errors,” says Chatelier. “For example, with UCP Advisor, we can reduce the time it takes to provision a new physical server down to just seven or eight minutes. Those time-savings mean we’re able to scale without adding a single new member to our team. Even today, we have just five people managing the entire estate: That’s more than 4,000 servers per person!”

He continues: “Neither Rabobank, nor Hitachi are standing still. The power of VSP 5500 will help us further eradicate any noisy neighbor threat, whilst the rollout of the latest Intel Cascade Lake processors drives both performance and security incrementally higher. With an impressive level of consolidation already, we expect this UCP-based solution to drive efficiencies, cost savings and continuity to the next level.”

Chatelier concludes: “Close partnership has been critical to the success of this project: We’ve shared ideas and experiences that have helped Hitachi Vantara build better products and helped us adapt them to our specific use cases. We look forward to continuing this relationship in future and taking the next step with UCP Advisor.”

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