

CEB

Downsizing IT upsizes profits for banks



Scan for mobile reading

When you've invested heavily in your legacy IT infrastructure, migrating to a slimmer, faster IT system on the path to digital transformation isn't easy. But with data as the new key to competitive success, it's got to be done. And fast. One bank in China shares how it implemented the right technologies at the right time. So, what are the right technologies and how should they be deployed?

By Zhong Jianfeng



“As competition between banks intensified, the decentralized IT management model quickly started killing competitiveness.”

Bloated infrastructure is dead weight

Headquartered in Beijing, China Everbright Bank (CEB) is China's first state-owned joint-stock commercial bank. Previously, most of its 38 branches in major cities ran IT systems that the bank itself had deployed, resulting in multiple equipment brands, complex management, and low resource utilization due to independently deployed physical machines. Moreover, strict demands on system security required each branch to build its own separate disaster recovery (DR) system, which was costly and unreliable.

As competition between banks intensified, this type of decentralized IT management model quickly started killing competitiveness. To improve IT resource management, simplify maintenance, and maximize security by stopping branches independently developing their own IT systems, CEB identified private cloud as the way forward.

Three private clouds

After comparing mainstream cloud computing architectures, CEB decided that its private cloud should comprise three clouds – production, branch, and development and testing. Together they would unify the management and supply of all the bank's resources so that each branch could take the resource it needed from a centralized pool under a unified service system.

Plans for this infrastructure began to take shape in early September 2016. Overall deployment was divided into a two-tier resource pool, split between the head office and branches. The tier 1 resource pool for the head office took shape as a traditional converged infrastructure that included storage resources, network resources, production and transaction systems, and low-traffic office applications that connected the head office and bank branches. The tier 2 resource pool included low-traffic applications for branches, such as imaging platforms, email, and office systems.

However, given the large number of tier 2 resource pools required by different branches, a simple solution for rapid deployment and simple management was needed. CEB opted



for an infrastructure that was converged and hyper-converged at the same time. All head office and branch resources were brought under the cloud management platform for unified, centralized management and resource scheduling. CEB applied software-defined networking (SDN) to enable application-oriented and automated network delivery, and used process orchestration and resource interconnectivity to facilitate the E2E delivery of cloud services.

Downsizing completed in 80 days

On the day CEB's tech department submitted its plan, it received instructions to complete the project by the end of 2016. According to CEB's department head, "We had to avoid impacting the bank's normal business operations. But, the project involved 38 branches, so this turnaround time was extremely tight."

Deployment and migration was divided into three phases: first, a pilot in two branches; then, two phases of migrating the system to 18 branches in each phase.

To migrate head office applications to the cloud, CEB decided to gradually migrate its production system, starting with the office and IT management systems. The migration of branch applications was divided into two phases: Applications that used less backbone bandwidth and which had no special peripherals would be migrated to the head office tier 1 resource pool. All other applications would remain on branches' local tier 2 resource pools.

After 80 days, CEB completed production and testing of the branch clouds without a hitch, migrating 76 service applications and deploying more than 600 operating systems to the head office production cloud. It migrated over 900 development and testing environments and 400 virtual desktop environments to the development and testing cloud, and more than 1,000 branch application systems to the branch cloud. "By deploying Huawei's FusionCube hyper-converged infrastructure, we downsized 38 branches using the two-tier resource pool," said CEB's department head. "We also centralized branch production and transaction applications and migrated them to the head office tier 1

“CEB integrated disaster recovery bank-wide through resource integration and branch application migration, bringing significant cost savings.”

resource pool, creating an innovative two-tier infrastructure for the whole bank.”

Trimming fat, adding muscle, and saving US\$15.8 million

FusionCube’s hyper-converged infrastructure, which recently entered Gartner’s Magic Quadrant as Challenger, created a standardized and flexible cloud platform that improved CEB’s downsized IT systems across the board, boosting the efficiency of E2E resource delivery; optimizing production, office, and development and testing processes; and guaranteeing system-wide security. Resources from head office and branches now required just half an hour from application to delivery, while centralized management increased overall resource utilization from 20 percent to 60 percent and reduced infrastructure expenditure by 40 percent.

For 38 first-tier branches, scheme deployment realized total savings of around 100 million yuan (US\$15.8 million). CEB’s branch IT infrastructure was reduced in size by a staggering 86 percent, with the number of servers cut from 1,620 to 228 and cabinets from 274 to 38. In addition, the number of IT maintenance staff in branches was reduced from 110 to around 60, with freed-up

staff able to focus on non-routine work.

At the same time as IT downsizing, CEB integrated DR bank-wide through resource integration and branch application migration, bringing significant cost savings. Upgrading branch DR to network-based DR enhanced the efficiency and effectiveness and cut costs tenfold, from an estimated 3 million yuan for a traditional location-based solution to 300,000 yuan for a network-based solution.

In just 80 days, CEB evolved smoothly from Centralization 1.0 to Centralization 2.0, laying a solid foundation for the bank to move forward as a competitive digital player. The private cloud solution has unified the management and centralized the supply of its resources and centralized the operations of branch application systems. It enables IT costs to be managed bank-wide, and centralized DR for branch systems.

But, banking on success with the right solution is not confined to the financial sector. With FusionCube at the helm, any enterprise looking to upgrade its IT infrastructure can raise its game in today’s increasingly competitive digital playing field. [www.fusioncube.com](#)