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# KeyBank Accelerates Application Delivery with Cisco HyperFlex and Google Cloud's Anthos

## KeyBank · Industry: Financial services · Size: 18,540 employees · Location: Cleveland, Ohio

Headquartered in Cleveland, Ohio, KeyCorp is one of the nation's largest bank-based financial services companies. Key provides deposit, lending, cash management, and investment services to individuals and businesses in 15 states under the name KeyBank National Association through a network of over 1100 branches and more than 1500 ATMs. Key also provides a broad range of sophisticated corporate and investment banking products, such as merger and acquisition advice, public and private debt and equity, syndications, and derivatives to middle market companies in selected industries throughout the United States under the KeyBanc Capital Markets trade name.

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## Challenges

- Improve the customer experience with new services
- Transition to DevOps practices and container-based applications
- Integrate container orchestration platform with on-premise infrastructure

## Solutions

- Cisco® HyperFlex™ system
- Google Cloud's Anthos

## Results

- Decreased infrastructure management overhead by nearly 70 percent
- Reduced systems provisioning timelines from months to days
- Transformed IT roles and responsibilities to prioritize applications and data

## For more information

- Cisco HyperFlex with Google Cloud's Anthos

**KeyBank** 🔑

## Challenge: Improve the customer experience via application modernization

Like many financial institutions over the past decade, KeyBank had reached an inflection point. Its legacy applications were too static, too cumbersome, and too onerous to update. And it was becoming increasingly difficult to maintain pace in a highly competitive, consumer-centric marketplace.

"I saw a poll a few years ago that compared the customer experiences of different banks, and it was eye-opening," says Gabe Jaynes, DevOps architect at KeyBank. "It was clear we needed to rewrite and modernize our applications and accelerate our development and delivery processes."

Jaynes formed a DevOps team and started refactoring KeyBank's internet banking application, making it container-based and cloud native. And he knew the team would need a powerful, flexible hardware platform that could support and enable their agile development practices.

"Traditional designs are too manually intensive, and the cost of storage and Fibre Channel had become too expensive," Jaynes notes. "We wanted a software-defined, hyperconverged infrastructure."

KeyBank chose the combination of Cisco HyperFlex and Google Cloud's Anthos. The platform has supercharged the bank's DevOps processes, simplifying systems provisioning and management through automation and integrating seamlessly with container- and cloud-based systems.

"Cisco HyperFlex is the lowest overhead, highest performing, easiest to manage platform we could find," says Jaynes. "It's best-in-class hardware with outstanding orchestration on top."

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> **Gabe Jaynes**
> DevOps Architect, KeyBank

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## Going hybrid cloud

KeyBank is using Cisco HyperFlex clusters with Anthos as an important component of its DevOps practice. Built on open source technologies—including Kubernetes and Istio—Anthos enables consistency between on-premises and cloud environments. It includes Google Cloud Platform (GCP) with Google Kubernetes Engine (GKE) in the cloud and GKE On-Prem in the data center.

"Cisco HyperFlex and Anthos are fully integrated, right down to the storage driver," says Jaynes. "And it only takes one person to install and manage it. In fact, I did it myself. After the network team ran some cable, I plugged it in and everything was ready to go. The interface is so easy."

Spinning up new test and development environments—including servers, network, and storage—is now much faster, he adds. What used to take more than a month will eventually be reduced to a day or less.

"The technology can do it in minutes," he says, "but there will still be human checks and balances."

KeyBank has refactored most of its customer-facing applications with containers, and is preparing to port them to the new platform.

"With our applications in cloud-native containers, we can put them anywhere," Jaynes explains. "We can comingle them with our mainframe or put workloads in the cloud so they're closer to our customers on the West Coast. We have a lot of options and flexibility."

"The more time we spend looking under the hood, the less time we have to focus on applications and data—the things that matter to our customers. We've broken down our silos, turned our specialists into full stack engineers, and are now working at the intersection of DevOps and customer experiences."

**Gabe Jaynes**
DevOps Architect, KeyBank

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## Developing full stack engineers

In addition to technological improvements, the new platform has brought about a cultural evolution within KeyBank's IT staff. Roles and responsibilities have changed, and the overall focus has shifted.

"In the past, we had to worry about everything—servers, virtual machines, operating system, containers, registry, monitoring, CI/CD pipeline—and we had one or more specialists for each of them," says Jaynes. "Cisco HyperFlex has taken most of those burdens off of our plate."

Platform management used to consume 80 percent or more of his team's time, Jaynes estimates. With Cisco HyperFlex, it's down to 25 percent or less.

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## Looking ahead

As KeyBank continues to modernize its applications and put them into production, Jaynes' team is finding new ways to leverage its Cisco HyperFlex platform. They plan to increase self-service infrastructure provisioning, application monitoring, and data analysis for the application delivery team. And they will soon branch beyond stateless applications and begin refactoring the bank's most data-intensive workloads.

"We have an opportunity to automate storage provisioning just like we've done with the servers and network," says Jaynes, noting the superior performance of Cisco HyperFlex local storage compared to a SAN. "Once we do that, we can focus on our databases and applications with persistent data requirements."

Jaynes' team may also align its Cisco HyperFlex platform with the networking team's new Cisco® Application Centric Infrastructure environment. Doing so would extend software-defined infrastructure automation and application management from development to production and across hybrid cloud environments.

"Cisco HyperFlex is our platform of choice," says Jaynes. "It has reduced our operational overhead and cost, and it gives us an incredible amount of control, speed, and agility."

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