Nutanix Enterprise Cloud Provides Simple and Low-Cost Management, Fast Deployment, and Flexible, Horizontal Scale-Out of IT Infrastructure

Nutanix Supports GAC Fiat Chrysler Automobile Sales' Successful Trial of Hyperconverged Solutions

CHALLENGES

Headquartered in Shanghai, GAC Fiat Chrysler Automobiles Sales Co., Ltd. (GAC FCA) quickly evolved as the trailblazer in the post-joint-venture era of China's auto industry with its successful sales of Jeep vehicles, especially its Cherokee, Renegade, and Compass domestic models. One of the main drivers of GAC FCA's success story is its bold innovations in IT infrastructure and the use of new applications. As a young joint-venture, GAC FCA does not have any previous legacy of traditional IT infrastructure, giving it more freedom in how it develops IT systems. However, it still faces many challenges.

First, rigid demands for the launch of a business made it imperative to choose an innovative infrastructure. If GAC FCA had chosen traditional IT infrastructure, it would have made it difficult for the business to take off in such a short time, both from the perspective of staffing and the launch time of the infrastructure itself.

Second, in terms of cost, GAC FCA's headquarters are in an office building where space constraints would make it difficult to cost-effectively build a significant datacenter with strong disaster recovery and load capacity. With more than 400 servers, it would have been a huge effort and massive challenge to put such a large datacenter in a regular office building. In addition, with future increases in business, the system would need to handle a growing number of services and amount of data. This required an approach using long-term planning and serious deliberation on how to manage the servers in a more scientific, simplified way.

"In general, the challenge we are dealing with is how to streamline IT, given that complicated IT infrastructure inevitably increases costs and decreases business efficiency. Streamlining IT is our overriding mission, and its challenge will remain the focus of our future work," explained the Head of IT Department at GAC FCA.

SOLUTION

Against this backdrop, Nutanix Enterprise Cloud solutions came into the radar of GAC FCA's IT department. In particular, Nutanix's pioneering software-defined solution built on hyper-converged infrastructure (HCI) gave GAC FCA fresh inspiration.

After a series of robust and comprehensive appraisals and detailed analysis, GAC FCA concluded that Nutanix was the company best able to offer services in line with the carmaker's planned and expected IT infrastructure. Nutanix was engaged in the entire process, from examination and evaluation, to plan screening, to final deployment and implementation. Their involvement was an invaluable contribution to GAC FCA's new IT system.

"From my initial knowledge of Nutanix's technology features to its final deployment and use, I feel certain an enterprise cloud approach built on hyperconverged infrastructure will entirely replace traditional storage area networks in the future."

– Head of IT Department, Guangzhou Automobile Group Fiat Chrysler Automobiles Sales Co., Ltd.

All of GAC FCA's current business systems now run on Nutanix, including SAP, DMS (Dealership Management System), virtual desktop, mail system, data warehousing, and DBC (Dealership Business Center) applications. All of these large system applications, however, account for less than 50 percent of total capacity of GAC FCA's Nutanix Enterprise Cloud. This configuration also includes redundant system performance during disaster recovery. In addition, the Nutanix solutions have given GAC FCA high availability, which is greatly appreciated by its constituents. Even in the event two random nodes have been interrupted and two physical servers are out of service at the same time, business system operation will remain intact.

"We expected that 30 percent of our system capacity would remain available after the complete business deployment. Surprisingly, the actual number was more than 50 percent. Our operational and maintenance burden is much lower after using Nutanix solutions," said the Head of the IT Department.

RESULTS

Since the deployment of the Nutanix solutions, GAC FCA has reaped huge benefits, realizing not only much shorter than usual delivery times for its IT infrastructure, but also substantially improved management efficiency. The hyperconverged infrastructure-based solution greatly reduces what would otherwise be enormous costs.

First, Nutanix's unique architecture provides fast, horizontal infrastructure scalability, giving it unconstrained capacity. For example, GAC FCA initially deployed three Nutanix Enterprise Cloud nodes, but has since undertaken a smooth scaling-out and increased the complete operation. According to GAC FCA, the benefit of horizontal scalability is that engineers only need to add equipment when system resources become inadequate. Because computing and storage capacity are connected in the back-office system, it is easy to deliver new resources as needed, because the infrastructure is online.

"In an internal appraisal conducted this year, the average delivery time of basic resources in our business system was less than 30 minutes, which can't be matched by traditional servers. As a result, our management efficiency was largely improved. Even if more nodes are needed in future, Nutanix can add these smoothly and quickly, and the process is also easy for us. All we need to do is to configure the power and the Internet, and then add the new equipment which can be recognized by the Nutanix system to our resources," the Head of the IT Department explained.

Second, GAC FCA has obtained clear cost reductions in several areas, including lower costs of IT infrastructure and peripheral system construction. It also no longer needs a massive datacenter. And through Nutanix's simple and efficient system management, GAC FCA can eliminate the need for additional management software for its peripheral systems.

The data center also substantially reduces GAC FCA's electricity bills. Under the previous model of integrated servers, centralized storage, and a fiber optic SAN network, more than 10 units of cabinet space would have been required. Thanks to the Nutanix hyperconverged infrastructure, all of these elements are condensed into an all-in-one machine which occupies only half the space, resulting in considerable cuts to GAC FCA's datacenter footprint and electricity consumption.

The Nutanix Enterprise Cloud infrastructure also significantly cuts down operation and maintenance headcount expenses. According to the Head of the IT Department, when he was in charge of 200 servers at another car company, he had six operation and maintenance staff. However, he now only needs two staff to take care of 400 servers—a sharp reduction in operational headcount—enabling the IT team to work on other strategic projects for the business.

Thanks to the Nutanix solution, it costs GAC FCA only RMB 6 million per year (approx. $1M USD) to run a mixed-cloud infrastructure, which sustains 50 business systems and manages more than 400 servers. This is an extremely low expenditure for an auto company in China, laying a solid foundation for GAC FCA's digital transformation and tech innovation.

NEXT STEPS

GAC FCA's Nutanix Enterprise Cloud deployment offers inspiration to other companies in the car industry. At a time when costs are rising, competition is intensifying, and the government's push into new energy vehicles is accelerating, the conventional auto industry faces increasing challenges and pressure. However, the promotion and application of an enterprise cloud architecture offers an unprecedented opportunity for the industry to easily tackle various IT infrastructure challenges and problems. From this vantage point, Nutanix Enterprise Cloud solutions are well positioned to be the auto industry's best choice when realizing its digital transformation and boosting business efficiency.

Company

GAC Fiat Chrysler Automobiles Sales Co., Ltd. (GAC FCA) was established in July 2015. It is now the only joint venture in China's automobile industry to provide sales, marketing and after-sales services of four brands including Jeep, Fiat, Chrysler, and Dodge.

Industry

Automotive

Business Need

GAC FCA needed to build a new IT infrastructure to satisfy the demands of their business development team and for higher IT management efficiency.

Solution

Nutanix Enterprise Cloud platform

Application support for SAP, MS Exchange, SQL Server, VDI, and server virtualization environment

Benefits

› Reduced average delivery time for business systems to less than 30 minutes, improving management efficiency

› Significantly lowered IT infrastructure costs and peripheral system construction with no massive datacenter requirements

› Cut datacenter space and electricity consumption

› Sharply reduced operational and maintenance headcounts

NUTANIX
Your Enterprise Cloud Platform

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