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Enabling scalability and resilience for mission-critical airport systems as passenger numbers soar.

How **Xinjiang Civil Aviation Information Network Co, Ltd** used a hyperconverged solution based on Lenovo ThinkAgile VX7520 appliances, powered by VMware vSAN™, to enable scalable, reliable, and high-performance data processing that helps keep civil air travel in Xinjiang flowing smoothly.

Lenovo Infrastructure Solutions for The Data-Centered

Lenovo

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Background

An affiliate of TravelSky (one of the world's largest global distribution systems), Xinjiang Airport Group, and China Southern Airlines, Xinjiang Civil Aviation Information Network Co, Ltd is responsible for delivering the information systems that support departures at airports operated by Xinjiang Airport Group. Employing 100 people, the company generates annual revenues equivalent to approximately US$157.3 million.

Xinjiang Airport Group manages airports in Xinjiang, China, providing services including ground operations, air travel ticket distribution, and aircraft maintenance. Air travel plays a key role for the economy of Xinjiang, which spans over 620,000 square miles and is the world's eighth-largest country subdivision by area.

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Challenge

In the last decade, year-on-year air passenger volumes in China have grown rapidly. To help ensure millions of aircraft movements can take place safely and efficiently each year, it is crucial for every stakeholder in the aviation system to collaborate effectively.

Mr. Fu, IT Director at Xinjiang Civil Aviation Information Network Co, Ltd, elaborates: "From the moment that a passenger purchases a ticket for a flight from Xinjiang until their plane departs, we are responsible for delivering the information services for their journey. These data-driven systems support a wide range of functions: from seat reservations, check-in, and security checks to boarding, baggage tracking, and cargo inspections."

As air travel volumes increase, so will the need for data processing—and stakeholders such as Xinjiang Airport Group are laying the foundations for growth. In the coming years, the company plans to merge its information services functions, creating a lean, centralized organization to support all its airports in the region. To accommodate the projected increase in the volume and velocity of data, Xinjiang Civil Aviation Information Network Co, Ltd also aimed to ensure it was ready for the new challenges.

"We manage around 300 key applications on behalf of the regional air transport industry, many of which are based on Kubernetes clusters, microservices, and big data platforms such as Apache Hadoop," explains Mr. Fu. "For example, we leverage AI for automated facial and behavioral recognition inside Xinjiang airports, providing valuable data that helps local teams to enhance security."

With its existing three-tiered server platform approaching end-of-life, Xinjiang Civil Aviation Information Network Co, Ltd looked for a reliable, scalable solution that could support its long-term requirements.

"If our applications were to go offline, there would be an immediate impact on passenger services. Unplanned downtime is simply not an option, so finding a robust infrastructure solution was one of our highest priorities."

Mr. Fu
IT Director, Xinjiang Civil Aviation Information Network Co, Ltd

Why Lenovo? Outstanding reliability and seamless scalability.

After reviewing solutions from a number of leading data center solution vendors, Xinjiang Civil Aviation Information Network Co, Ltd selected a hyperconverged platform from Lenovo and VMware to support its mission-critical information systems.

The new platform comprises 12 Lenovo ThinkAgile VX7520 appliances, powered by VMware vSAN™, which host its 300 departure applications, including systems for reservations flight status information, baggage tracking, cargo inspection, and more. For big data analytics, the company chose 10 Lenovo ThinkSystem SR665 servers, with five Lenovo ThinkSystem SR670 server and Lenovo ThinkSystem SR650 server nodes for AI workloads. To deliver low-latency storage capabilities for its compute nodes and databases, the company uses a Lenovo ThinkSystem DM7100F Unified All Flash Storage Array.

"As well as delivering high levels of reliability and performance, the Lenovo and VMware solution was significantly more cost-effective than its nearest competitor," recalls Mr. Fu. "We see that the hyperconverged platform from Lenovo and VMware is very straightforward to manage and maintain. Whereas other vendors' servers were effectively a black box, the modularity of the Lenovo ThinkAgile VX solution makes it easy to swap out components as needed."

"Xinjiang is a considerable distance from Beijing, so we were looking for a vendor with the reach and responsiveness to give us solid local support services. With Lenovo and VMware, that's exactly what we get."

Mr. Fu
IT Director, Xinjiang Civil Aviation Information Network Co, Ltd

Smooth deployment.

Working with experts from Lenovo, Xinjiang Civil Aviation Information Network Co, Ltd successfully deployed the hyperconverged solution. Using Oracle Real Application Clusters, the company has striped its mission-critical Oracle Database software across multiple Lenovo ThinkSystem nodes, enabling high availability and minimizing the risk of unplanned downtime in the event of a fault in a single node.

Mr. Fu comments: "The combination of VMware-certified Lenovo ThinkAgile VX7520 appliances meant we never had to worry about compatibility issues at any stage of the deployment project. The Lenovo and VMware solution delivers excellent stability—we've had zero complaints from any of our users since the new platform went live."

"Working with Lenovo engineers to design and develop the new hyperconverged platform was a very good experience. The team was extremely professional, and carefully considered all our needs and use cases during the planning process."

Mr. Fu
IT Director, Xinjiang Civil Aviation Information Network Co, Ltd

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Results

By moving to a hyperconverged infrastructure platform from Lenovo and VMware, Xinjiang Civil Aviation Information Network Co, Ltd is preparing its organization for the future demands of the aviation industry.

"As passenger numbers increase, so will our data processing requirements—so it's very important we have an IT platform that is performant, reliable, and scalable," comments Mr. Fu. "Lenovo ThinkAgile VX7520 appliances, powered by VMware vSAN, give us outstanding levels of stability—offering peace of mind that our core applications will be online 24/7. Expanding the platform is also very straightforward—all we need to do is connect new nodes, and the extra compute and storage capacity is available almost immediately."

Looking ahead, the company plans to build on its successful collaboration with Lenovo and VMware. Mr. Fu concludes: "Lenovo ThinkAgile VX Series appliances support a new generation of VMware virtualization software, which offers excellent compatibility with leading-edge platforms like Hadoop and Kubernetes. We look forward to exploring opportunities to build on the partnership in the future."

中国航信
TravelSky

✓ **Delivers high reliability for mission-critical aviation applications**

✓ **Offers easy scalability to support growing passenger volumes**

✓ **Enables efficient processing for AI and big data workloads**

"We are confident that Lenovo and VMware solutions are the optimal foundation to support mission-critical aviation services in Xinjiang for years to come."

Mr. Fu
IT Director, Xinjiang Civil Aviation Information Network Co, Ltd

What will you do with Lenovo software-defined infrastructure solutions?

The Data-Centered air travel flowing smoothly with
Lenovo smarter infrastructure solutions, powered by VMware.

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