

Protecting Hefei's natural beauty with big data insights.

How Hefei Environmental Protection Bureau stops pollution in its tracks with high-performance Lenovo infrastructure for real-time monitoring.

Lenovo Infrastructure Solutions
for The Data-Centered

Lenovo

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Background & Vision

The capital and largest city of China's Anhui Province, Hefei is a busy industrial center with a total area of 11,445 square kilometers, surrounded by 5,618 square kilometers of rich agricultural land. The city is rich in natural resources and is near Chaohu Lake, one of the largest freshwater lakes in China, and some of the prefecture's most stunning natural beauty spots.

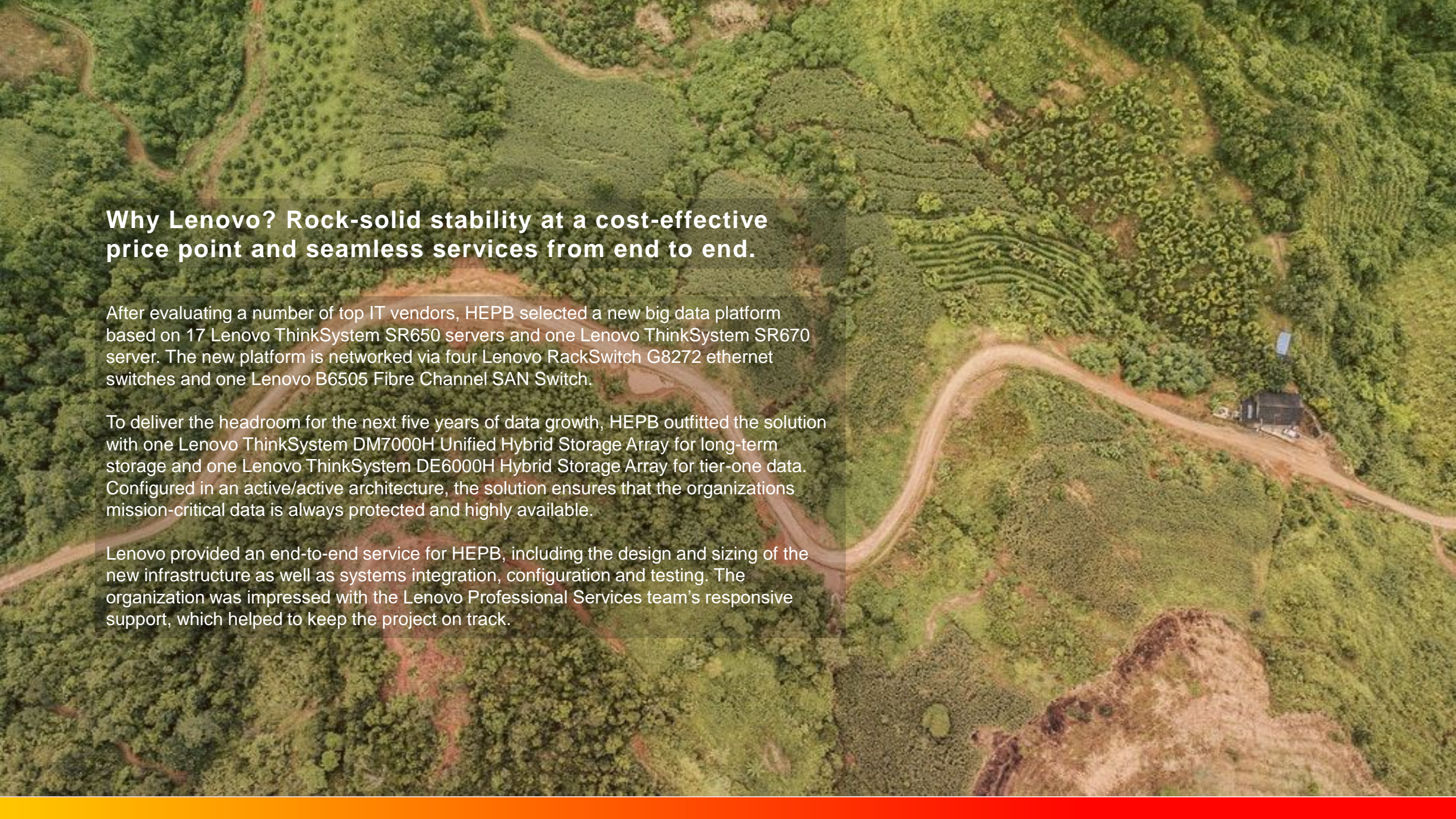
The Hefei Environmental Protection Bureau (HEPB) is an administrative department of the Hefei Municipal Government responsible for monitoring and maintaining the quality of the city's air, land, and water. The bureau includes sub-departments for environmental monitoring, research, waste management, and law enforcement.

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Challenge

Managing multiple land uses across a wide geographical area presents some tough challenges for HEPB. To help achieve these goals, HEPB depends on data. The organization uses a vast network of sensors and digital systems to support key processes, including collating, analyzing, and reporting on soil, air, and water quality. The bureau even uses a network of 4K video cameras to detect the deliberate burning of straw in rural areas.

HEPB's digital platforms generate massive amounts of data each year, and the volume and velocity of its analytics requirements are growing year-on-year. To accommodate the fast pace of data growth—and to create a foundation for innovative, public-facing services such as an early-warning system for air pollution—HEPB decided to move to a modern, scalable IT platform.

An aerial photograph of a lush green landscape. A dirt road winds through the terrain, which is covered in dense vegetation. In the lower right quadrant, there is a small, dark-colored building with a blue roof, possibly a farm or a small settlement. The overall scene is a mix of natural greenery and human-made structures.

Why Lenovo? Rock-solid stability at a cost-effective price point and seamless services from end to end.

After evaluating a number of top IT vendors, HEPB selected a new big data platform based on 17 Lenovo ThinkSystem SR650 servers and one Lenovo ThinkSystem SR670 server. The new platform is networked via four Lenovo RackSwitch G8272 ethernet switches and one Lenovo B6505 Fibre Channel SAN Switch.

To deliver the headroom for the next five years of data growth, HEPB outfitted the solution with one Lenovo ThinkSystem DM7000H Unified Hybrid Storage Array for long-term storage and one Lenovo ThinkSystem DE6000H Hybrid Storage Array for tier-one data. Configured in an active/active architecture, the solution ensures that the organizations mission-critical data is always protected and highly available.

Lenovo provided an end-to-end service for HEPB, including the design and sizing of the new infrastructure as well as systems integration, configuration and testing. The organization was impressed with the Lenovo Professional Services team's responsive support, which helped to keep the project on track.

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Results

By partnering with Lenovo, HEPB has gained an infrastructure platform that will enable effective, data-driven environmental monitoring for years to come. The bureau is already leveraging the high performance of its Lenovo servers to support innovative data visualization and machine-learning workloads—empowering employees and researchers to dig deeper into environmental data and take targeted action to protect the natural beauty of the region.

The solution is also unlocking valuable cost-efficiencies for HEPB. By consolidating its storage to a compact, easy-to-manage Lenovo footprint, the organization has dramatically reduced its IT management and maintenance costs.



“Lenovo offers us a stable, high-performance IT platform backed up by timely, responsive services—allowing us to harness our data to improve the quality of the land, water, and air for all Hefei’s citizens.”

Cui Wei

Director of Information Center,
Hefei Environmental Protection Bureau

What will you do with data center infrastructure solutions?

Discover how your organization can leverage the high performance of Lenovo data center servers and storage to support innovative data visualization and machine-learning workloads

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