

Technology | United Arab Emirates

Democratizing access to HPC and AI

Al Hathboor Bikal.ai

To support the UAE's national strategy for innovation, AHB.ai has partnered with Lenovo to deliver high-performance computing cloud services on demand with Lenovo TruScale. The new platform empowers everyone—from startups to graduates—to use powerful HPC resources to advance their work.

Lenovo

Lenovo
TruScale



1

Customer
background

Who is Al Hathboor Bikal.ai?

Al Hathboor Bikal.ai FZC (AHB.ai) is a product development company based in Sharjah in the United Arab Emirates. The company uses artificial intelligence, data science, 5G technologies, and high-performance computing (HPC) to address industry and government challenges.

AHBI.ai specializes in technology transfer, aligning with the UAE's drive to leverage local skills to build innovative products. Headquartered at the Sharjah Research Technology and Innovation Park, AHB.ai employs around 50 people.



2 The challenge

The UAE is transitioning to a knowledge-based economy, and innovation will be a cornerstone of the country's social and economic development. The National Innovation Strategy aims to stimulate innovation in seven key sectors: renewable energy, transport, education, health, technology, water, and space. The policy's ultimate goal is to improve the health and wealth of citizens for generations to come.

Satish Vasu, Chief Customer Value Creator at AHB.ai, begins: "Traditionally, HPC has been the preserve of universities and large research institutions. We wanted to democratize access to these technologies. Our vision was to offer HPC as a service [HPCaaS], so anyone—from small startups to graduates—can take advantage of advanced capabilities to support their digital transformation projects."

2 The challenge

AHB.ai has an important role to play in the National Innovation Strategy. Founded in 2022 as a joint venture between AI Hathboor Group LLC and Bikal Technologies Limited, AHB.ai provides cutting-edge high-performance cloud computing systems to support innovation, research, and development for public and private sector organizations across all industries.

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“Our goal is to **offer HPC to anyone**. That’s why we turned to Lenovo to build one of **the most cutting-edge HPC facilities** in the Middle East, and that’s how the Sharjah Research, Technology and Innovation Park was born.”

Satish Vasu

Chief Customer Value Creator, AHB.ai

Making HPC accessible to all

AHB.ai partnered with Lenovo to build and operate a new sustainable data center at the Sharjah Research Technology and Innovation Park. The company worked closely with Lenovo consultants and technical experts to determine the optimal approach, eventually deciding to take advantage of the new Lenovo TruScale Infrastructure as a Service (IaaS) offering for HPC.

Services

Lenovo TruScale for HPC
Lenovo Power and Cooling Services
Lenovo Premier Support

Hardware

Lenovo ThinkSystem SD650-N V2
Server
Lenovo ThinkSystem DW612
Neptune DWC Enclosure
Lenovo ThinkSystem SR630 V2
Server
Lenovo Storage D3284 High
Density Expansion Enclosure

Software

IBM Spectrum Scale
Red Hat Enterprise Linux

3

The
solution

Offering supercomputing on demand

Lenovo TruScale for HPC delivers scalable supercomputing with a flexible pay-as-you-go model, combining hardware, software, and services into a single, configurable solution with a predictable regular fee.

Lenovo will provide a state-of-the-art 16-node HPC cluster with Lenovo Neptune™ direct water-cooling technology to AHB.ai, along with operational management and support. This will enable the company to offer on-demand services for end customers, as well as managed services support.

3

The
solution

Raj Sandhu, General Manager at AHB.ai, says:
“Sustainability is crucial for us and our customers, so we turned to Lenovo Power and Cooling Services to help us design, deploy, and maintain a state-of-the-art HPC cluster. Our new data center features the first liquid cooling system of its kind in the Middle East.”

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“The Lenovo team was **extremely knowledgeable**, providing us with **valuable help and advice**. They talked us through all the options and configurations until we found **the right fit** for both our technical and business requirements.”

Satish Vasu

Chief Customer Value Creator, AI Hathboor Bikal.ai

4 The results

Through its partnership with Lenovo, AHB.ai is offering game-changing HPC services and advanced technologies such as AI to organizations across the UAE. The new service removes historical entry barriers such as high capital investment and long procurement cycles.

“Our HPCaaS offering, backed by Lenovo TruScale for HPC, will unleash innovation in the UAE,” says Satish Vasu. “We will empower organizations of all sizes to use HPC and AI to address business challenges, create new digital technologies, and further research. With HPCaaS, customers can come to us to try out models and crunch data sets with the flexibility to scale up and down until they achieve the results they’re looking for, only paying for the resources that they actually use.”

4 The results

Tackling public health challenges with AI

AHB.ai is already enabling organizations to drive pioneering research, including Gulf Medical University—one of the largest private medical universities in the Middle East. At the University, researchers are harnessing HPC resources from AHB.ai to deepen their understanding of diabetic retinopathy: damage to the retina caused by diabetes.

Dr. Vinaytosh Mishra, Director, AI & Health Analytics at Gulf Medical University, confirms: “At my lab, we are using AI to detect diabetes in patients, making early detection of diabetic retinopathy more easily accessible and affordable. AI technology has the potential to save lives in so many parts of the country, as it gives medical personnel the ability to run simple, quick tests in remote areas. Our access to the powerful HPC platform at AHB.ai is critical for the success of this program.”

4 The results

More sustainable computing with as-a-service solutions

AHB.ai is the first in the region to use Lenovo Neptune water-cooling technology, which will improve the energy-efficiency and sustainability of its HPCaaS offering—without compromising on performance. The unique thermal solution uses efficient liquid cooling to reduce cooling requirements in the data center, reducing energy consumption by up to 40% and contributing to sustainability goals.

Mohammed Al Hathboor, Management Committee Member at AHB.ai, comments: “We see this collaboration with Lenovo as a way to give the UAE a technological advantage in the innovation ecosystem, create jobs and opportunities for our youth, and develop tech for solving regional and global challenges.”

4 The results

Delivering powerful HPC resources cost-effectively

The flexibility of Lenovo TruScale ensures that AHB.ai is never short on processing power or wasting resources on excess capacity. The TruScale metering technology helps monitor power consumption, utilization, and temperature within the data center. It also helps to optimize power states, turn off unused components, and route workloads to the most efficient resources, delivering optimal performance with lower energy consumption.

“With our state-of-the-art facility, we can support critical research that’s happening all over the UAE,” says Satish Vasu. “There’s no limit to what we can accomplish with Lenovo.”



Accessible: game-changing HPC and AI services on demand



Sustainable: energy-efficient supercomputer with Lenovo Neptune



Affordable: no upfront investment required, predictable fees

Why Lenovo?

Lenovo was the clear frontrunner for AHB.ai, as Satish Vasu recalls: “Not only is Lenovo a global leader in HPC, but we also had previous positive experience of working with them prior to the joint venture as Bikal Technologies Limited.”

The launch of Lenovo TruScale for HPC sealed the deal. The IaaS model enabled AHB.ai to procure a powerful supercomputer with minimal upfront investment, while also freeing its team from having to maintain and manage the cluster.

“With Lenovo TruScale for HPC, a remote system administrator takes care of day-to-day management as well as firmware and software updates,” confirms Satish Vasu. “We also benefit from a dedicated customer success manager who helps us to achieve our goals and plan for the future. All this means that we can focus what we do best: customer onboarding and value creation.”

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“We have **huge ambitions** for AHB.ai, and this partnership with a **global leader like Lenovo** will set the path towards developing tailored infrastructure solutions that will solve both public and private organizational challenges. **We look forward to leveraging Lenovo’s experience in the technology sector** and enhancing our digital capabilities while also welcoming new AI-powered and data-enabled research and technologies.”

Raj Sandhu

General Manager, AI Hathboor Bikal.ai

How do you make HPC and AI more accessible?

AI Hathboor Bikal.ai delivers high-performance computing cloud services on demand with Lenovo TruScale.

Explore Lenovo TruScale for HPC