Lenovo

Developing specialized IT services for AI innovation

Cirrascale Cloud Services

To support enterprise AI innovation, Cirrascale built a brand-new GPU-as-a-service cluster for Essential AI using Lenovo ThinkSystem servers featuring AMD Instinct™ accelerators and AMD EPYC™ processors—cutting time-to-market.

Who is Cirrascale Cloud Services?

Founded in 2010, Cirrascale Cloud Services operates multiple data centers across the United States. The company specializes in multi-accelerator cloud services, empowering startups and innovators to develop and scale advanced artificial intelligence (AI) solutions. Committed to facilitating AI innovation, Cirrascale also offers customers access to a wide range of AI experts through its AI Ecosystem and provides bundled infrastructure, firmware, software, and support services tailored to customers' individual requirements.

Cirrascale

2 The challenge

New breakthroughs in AI are made almost daily, and to succeed, AI innovators must be able to bring new solutions to the market quickly and at scale. However, most startups and developers lack the in-house expertise and resources to build the necessary infrastructure for training, testing, refining, and deploying AI services.

While many large cloud services providers offer affordable GPU cloud solutions for AI training and testing, few provide the tailored support needed by small and medium-sized AI companies to adapt training resources and environments to their specific needs—and those who do often lack experience with real-world AI projects.

After spotting a gap in the market, Cirrascale Cloud Services set out to launch a dedicated AI Innovation Cloud service, complete with white-glove consulting and support for AI startups and developers. To achieve this, Cirrascale first set out to find a technology partner that could deliver powerful yet flexible IT infrastructure alongside AI expertise.

Mike LaPan, Vice President at Cirrascale Cloud Services, explains: "Essential AI, a venture-capital-funded startup, approached us for help training a new foundational model designed to automate enterprise workflows within 18 months. They knew they required access to a cluster with over 1,000 GPUs and they had set a date for going live; we made it our mission to equip them with the infrastructure and support they needed to meet this ambitious goal."

"Our mission is to **help businesses achieve more by automating manual, repetitive tasks using cutting-edge AI solutions**. We needed a minimum of 1,000 GPUs to train our AI solution and **Cirrascale was the only partner that could deliver on this scale and bring their long AI experience to the table**."

Mrinal Iyer

Head of Infrastructure, Essential AI

Innovating with powerful hardware

To help Essential AI build an enterprise-focused AI foundational model and lay the groundwork for similar projects in the future, Cirrascale teamed up with Lenovo and AMD to deploy a brand-new GPU-as-a-service cluster built using Lenovo ThinkSystem SR685a V3 servers powered by AMD EPYC™ 9004 processors and AMD Instinct™ MI300X Accelerator GPUs.

To optimize the performance of the new cluster, Lenovo Support Services worked closely with engineers at Cirrascale to correctly configure the Lenovo devices' PCIe switches, so they seamlessly integrate within the cloud service provider's infrastructure.

Hardware
Lenovo ThinkSystem SR685a V3 servers
AMD EPYC™ 9004 Processors
AMD Instinct™ Accelerator GPUs

Services
Lenovo Support Services

> **"Creating a brand-new 1,000 GPU cluster for AI acceleration is a technically challenging task, requiring diligence, expertise and determination. Lenovo and AMD brought a high level of focus and unwavering commitment to help Cirrascale empower our customers to take AI innovation to the next level."**

Dave Driggers

Chief Technology Officer, Cirrascale Cloud Services

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"This is **the first deployment of its kind that we undertook with AMD Instinct MI300X Accelerator GPUs**. AMD has **a very good history of stability** with its accelerators, which was important to us, as we did not want to have to disrupt Essential AI by making constant tweaks to the environment. With Lenovo and AMD solutions, we were able to build **a very resilient training platform that will provide longevity** for Essential AI and other innovators in the future."

Mike LaPan

Vice President, Cirrascale Cloud Services

4 The results

Cirrascale has collaborated closely with Lenovo and AMD to install, configure, test, and deploy the new GPU acceleration cluster for Essential AI. Cirrascale anticipates that the new GPU resources will enable its customer to stay on track to meet its development goals.

By utilizing Lenovo and AMD hardware bundled with white-glove services, Cirrascale provides Essential AI with a comprehensive acceleration solution that includes predictable costs and a single point of contact for support.

✓ **50% shorter time-to-market** typically achieved for new cloud services

✓ **Provides customers with powerful technology at a fixed cost**

✓ **<18 months to train and deliver new AI foundational models**

Laying the foundations for growth

Cirrascale's collaboration with Essential AI is just one example of how the company supports AI innovators and tech startups to bring powerful new technologies to market at scale. On average, Cirrascale's flexible cloud services—powered by technology partnerships with industry leaders like Lenovo and AMD—enable AI developers to bring solutions to market 50% faster compared to similar AI acceleration solutions offered by larger cloud providers.

The new collaboration with Lenovo and AMD opens the door for Cirrascale to help many more customers develop AI solutions quickly and effectively. For example, with Lenovo hardware providing rock-solid reliability and seamless scalability, Cirrascale can help its clients keep pace with the latest AI innovations while also minimizing costs and ensuring energy efficiency. Moreover, the collaboration provides Cirrascale with access to a broad variety of AI experts from Lenovo's Center of Excellence to assist with co-creating and developing new services.

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"With **robust hardware** from Lenovo powered by AMD processors and accelerators and **a close-knit support network from both technology partners**, we can equip our customers with **solutions that help them stand apart in a fiercely competitive sector**. And because we always stay ahead of the latest developments from our partners, we can provide AI training solutions that deliver far beyond initial AI training cycles."

Mike LaPan

Vice President, Cirrascale Cloud Solutions

Why Lenovo and AMD?

When selecting a technology partner to support new solutions and services, Cirrascale prioritizes flexibility and industry experience.

"We pride ourselves on offering truly tailored services to our customers, and that means we often need to adjust or amend the core hardware powering our services," explains Dave Driggers, Chief Technology Officer at Cirrascale Cloud Services. "Lenovo and AMD went above and beyond to help us do precisely this, and because both technology leaders are at the cutting edge of AI we also benefit from fast access to the latest AI-related hardware developments and releases, which means our customers benefit, too."

How can cloud service providers support AI innovation at scale?

Working with Lenovo and AMD, Cirrascale built a GPU AI acceleration cluster capable of training new foundational models in under 18 months.

Explore Lenovo ThinkSystem Solutions

AMD