



Computer Services

# Scaling cloud server operations across the globe

Hetzner Online

Maximizing performance density and minimizing operating costs to deliver price-efficient cloud servers with Lenovo ThinkSystem SR645 V3 servers, powered by 4th Generation AMD EPYC™ processors.

AMD  
EPYC

Lenovo

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## Who is Hetzner Online?

Hetzner Online is one of the largest data center operators in Europe, headquartered in Germany. Offering its hosting and infrastructure services to private and business customers, the company runs hundreds of thousands of servers across 32 self-sufficient data centers at three locations in Europe and two cloud locations in the US.

With around 470 employees, Hetzner focuses on highly efficient business operations to deliver innovative, reliable, and sustainable technology, expert support, and flexible customer service at a leading price-performance ratio on the market.

**HETZNER**

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## The Challenge

With customers demanding more flexibility, Hetzner looked to expand its dynamic cloud server business. Since Hetzner launched its first two cloud data centers outside of Europe in Ashburn, Virginia and Hillsboro, Oregon in the US, the company has seen a surge in demand from international markets. With rapid growth in its cloud division and overall annual growth rates of 30%, the company sought a partner that could deliver reliable infrastructure at scale, around the world.

To grow in new regions quickly, the company is initially relying on third-party data centers. This made the ability to deliver a high performance density essential for its cloud strategy.

With climate change and increasing energy costs an ongoing concern, Hetzner always takes care to optimize all systems, especially servers, for energy efficiency, for example by deploying optimized, low-maintenance air-cooled servers for its cloud offerings.

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“Cloud hosting is a highly competitive market. Building on our strengths, our goal was to leverage cost-effective and energy-efficient AMD EPYC processors for the global expansion of our x86-based cloud servers. This meant that we needed to find a partner that could support our business growth and deliver highly reliable AMD EPYC-powered servers in large numbers at short notice.”

**Sebastian Willer**

Head of Cloud Locations and Product Development, Hetzner Online



# Delivering outstanding efficiency

After benchmarking a range of options, Hetzner selected Lenovo ThinkSystem SR645 V3 servers powered by 4th Generation AMD EPYC™ processors with super-fast NVMe storage.

Andreas Fischer, Head of Marketing at Hetzner Online, says: “We’re always laser-focused on efficiency. That’s why we decided to deploy the latest Lenovo ThinkSystem SR645 V3 servers—they fit in just one rack unit, delivering the highest performance density we could find for x86 servers with outstanding cost-efficiency.”

## Hardware

Lenovo ThinkSystem SR645 V3 with 4th Generation AMD EPYC™ processors

## Software

Lenovo XClarity Controller

## Services

Lenovo Support Services

# Supporting **sustainable** data center operations

Simplicity and reliability are key for Hetzner to ensure smooth operations at scale. By choosing Lenovo ThinkSystem SR645 V3 servers, the company benefits from a simple, single-socket server with an advanced air cooling design that is easy to integrate into its data centers.

Hetzner uses the built-in API provided by Lenovo XClarity Controller to seamlessly connect the hardware management with its comprehensive data center management platform.

By running the latest Lenovo servers that use the cutting-edge AMD EPYC 9004 Series Processors featuring the innovative AMD chiplet architecture, Hetzner benefits from high energy-efficiency.

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## Results

Using the latest Lenovo ThinkSystem SR645 V3 servers with AMD EPYC processors, Hetzner successfully launched a new offering: powerful dedicated vCPU CCX Cloud Servers, giving its customers un-shared vCPU power and excellent price-performance.

By deploying Lenovo servers in Europe and North America, Hetzner now enables geo-redundant public cloud architectures with state-of-the-art and environmentally friendly infrastructure. In the US, Hetzner has expanded its data center footprint with locations on both the East Coast and West Coast, offering optimal latency across the entire country.



>6,000 Lenovo servers with AMD EPYC processors at data centers in Europe and North America



96 cores per processor deliver superior performance density



10% better energy efficiency than other x86 systems

## Leveraging energy efficiency at cloud scale

At Hetzner's scale, energy efficiency is crucial to support sustainable operations and control costs. By opting for Lenovo ThinkSystem servers powered by 4th Gen AMD EPYC processors, Hetzner achieves 10% better performance per Watt than with other systems it benchmarked.

The Lenovo servers also provide extraordinary cost efficiency when installed at third-party data center parks, where every rack unit and every manual intervention has a big impact on operating costs. Sebastian Willer, Head of Cloud Locations and Product Development at Hetzner Online, confirms: "With 96 cores per processor and rack unit, the solution by Lenovo and AMD delivers the high—and unmatched—core density on the x86 architecture that we need to offer market-leading prices to our customers."

Supporting dynamic cloud-native solutions, Hetzner customers can maximize cost savings for flexible workloads with hourly on-demand billing and automate instance management using an API and Infrastructure as Code tools such as Terraform.



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Partnering with Lenovo and AMD allows us to offer cost-efficient cloud servers with consistent and stable performance to our customers. Thanks to the dedicated vCPU offering, made possible with the high core density, customers can reliably run production-ready applications and enterprise-level processes. The highly efficient Lenovo ThinkSystem servers are central to our expansion strategy. By working with Lenovo, we're ready to quickly offer our cloud solution in more regions and markets around the world.”

**Sebastian Willer**

Head of Cloud Locations and Product Development, Hetzner Online

# Why **Lenovo**?

Lenovo prioritizes a reliable supply chain, enabling Hetzner to scale its business rapidly when demand for its cloud servers increases. “We’re very satisfied with the direct, honest, and effective communication with Lenovo,” adds Sebastian Willer. “The Lenovo team proactively provides information about firmware updates and new products, helping us to plan our next steps and optimize our data center operations.”

Hetzner also benefits from the very high product quality, reducing its operating costs. Because Lenovo tests every server extensively before it leaves the factory, Hetzner can focus on customer service without having to worry about expensive hardware maintenance at third-party data centers as it adds new cloud locations.



# How do you deliver powerful cloud servers cost-efficiently?

Hetzner deployed 6,000 Lenovo servers with AMD EPYC™ processors, delivering unmatched performance density.

[Explore Lenovo ThinkSystem Solutions](#)