

CUSTOMER

PREISVERGLEICH

INDUSTRY

eCommerce

CHALLENGES

Increase cost-efficiency of operations

SOLUTION

Switch to AMD EPYC[™] CPU-powered AWS instances

RESULTS

Lower costs with exceptional performance

AMD TECHNOLOGY AT A GLANCE

2nd Gen AMD EPYC processors

TECHNOLOGY PARTNER



PREISVERGLEICH.de provides today's Web shoppers with comprehensive information on millions of products, helping to make their purchase decisions easier. With

PREISVERGLEICH.de's service, discerning shoppers can search and compare prices of over five million products, ranging from perfumes to insurance, nationally and internationally. Its product search in Germany alone covers more than 20 million offers in over 10,000 shops, with results displayed instantly.

Increasing reliance on Web shopping

In recent years, PREISVERGLEICH.de saw a spike in business as consumers relied more heavily on the Web to do their shopping, including price comparisons in sectors like

energy. However, pricing energy tariffs is tricky as Tim Köhler, Head of Product Management at PREISVERGLEICH.de, explains, "Our parent company has a whole

research team, because not all prices are published publicly. It's a huge service to make all those calculations and update those prices, sometimes multiple times a day, because the prices depend not just on your location, but on how many kilowatt-hours you use." Despite the complexity, PREISVERGLEICH.de performs comparisons in seconds that reflect the current cost of 13,000 electricity tariffs and 5,000 gas tariffs.

The comparison business: powered by AWS and AMD

To provide a comprehensive comparison of millions of products, PREISVERGLEICH.de calculates prices round the clock based on over 10 million searches a day and massive data imports three times daily. In addition, PREISVERGLEICH.de offers its customers over 50 million keywords to perform searches. Conducting such operations requires nonstop, reliable, computing power that PREISVERGLEICH.de gets from AMD EPYC CPU-powered Amazon Web Services (AWS) instances.

Making good deals better: PREISVERGLEICH.de's search engine

PREISVERGLEICH.de offers more than price comparisons. Köhler explains, "Based on our B-to-B relationships, we can usually bundle a package like an energy tariff where you get money back or a telecommunications tariff that includes a streaming service, something you won't find on other sites."

To assess the performance of its offers, PREISVERGLEICH.de developed a search engine

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Tim Köhler, Head of Product Management at PREISVERGLEICH.de based on Elasticsearch to analyze its own business data. Köhler says, "It is built in a way that is completely configurable." The engine performs search-and-analysis operations based on the

business and historical data PREISVERGLEICH.de selects. For example, a search can find last season's offers for which responses lagged between 10% and 19%. With this data, PREISVERGLEICH.de can tweak similar offers in active campaigns to review in real time how those changes impact campaign results. Developed totally in the cloud, PREISVERGLEICH.de's search engine runs on AWS instances powered by AMD EPYC processors.

Advantages with AWS instances powered by AMD EPYC CPUs

PREISVERGLEICH.de manages its hefty output with a lean, efficient team. Clearly, efficiency and automation are vital to the individuals who manage and develop PREISVERGLEICH.de's operations, which run on AMD EPYC CPUpowered AWS instances.



AWS plays a central role in PREISVERGLEICH.de's 100% cloud-based business, utilizing the AMD hardware and services that keep PREISVERGLEICH.de on the cutting edge of a highly competitive field. The AMD EPYC processor-powered Amazon C5a and T3a instance types provide the requisite power, flexibility, and scalability PREISVERGLEICH.de

wants. As Köhler relates, "On Black Friday, we can expect traffic to be three times more than on a usual day, so of course we need to be ready to scale up." Thanks to AMD hardware, they are. Consumer queries are processed on Black Friday as on every other day, instantly, with comprehensive comparisons displayed within seconds. "AMD EPYC processors handle the bot spikes – those sudden but necessary loads – with no reduction in performance for our core business."

Tim Köhler, Head of Product Management at PREISVERGLEICH.de

"If you have AWS, there's absolutely no reason not to use EPYC processors, because you get comparable performance for less money. It's a no-brainer. Why should you pay more?"

Tim Köhler, Head of Product Management at PREISVERGLEICH.de

With AWS as its cloud provider, PREISVERGLEICH.de can focus on developing business applications based on standardized tech specs to ensure consistent operations worldwide. AWS also supports PREISVERGLEICH.de's legal requirements for data privacy protection. To comply with GDPR, PREISVERGLEICH.de's customer data must be stored in Germany. With AMD EPYC processors available in Frankfurt, AWS enables PREISVERGLEICH.de to meet this requirement.

Handling the bot challenge

PREISVERGLEICH.de's most interesting challenge is handling bots from major search engines. Although each of PREISVERGLEICH.de's keywords may be used by customers only once or twice a year, global search engines must keep track of all 50 million of them. As Köhler describes, "If those search engines change how they measure landing page quality, they can immediately say, 'Okay, let's recrawl all keywords in the next two days,' and we see a gigantic spike of traffic on our page." In such cases, those bots can represent 50% of PREISVERGLEICH.de's Web traffic. "Yet AMD EPYC CPUs handle the bot spikes – those sudden but necessary loads – with no reduction in performance for our core business," Köhler pointed out.

A smooth switch to AMC EPYC processors

PREISVERGLEICH.de learned that a switch to AMD CPU-powered EC2 Virtual Machines (C5a, T3a) while staying on AWS would reduce cost

of operations with comparable performance. A successful trial run with a single instance on PREISVERGLEICH.de's staging system by implementation partner Skaylink proved successful. Skaylink then moved the remaining instances on the staging system to EC2 instances powered by AMD EPYC processors. It then built new instances, attached them to the production system, then reattached the old instances, avoiding downtime.

When asked if there was any difficulty with the switch, Köhler paused. "None," he answered. After some thought, he added, "The big difference? Costs went down." For the PREISVERGLEICH.de team, that single difference made all the difference. As Köhler pointed out, "Cutting costs while maintaining comparable performance helps us leverage our business efficiency, and one of our most important targets as a company is cost-efficiency. With AMD EPYC processors, we are operating more cost-efficiently than ever. This gives us the performance we want at lower cost. That means we can use the savings to scale up web site performance, and that helps us improve the user experience."

In addition to reducing costs, PREISVERGLEICH.de believes its updated strategy has assisted it in its goal to increase energy efficiency and address its carbon footprint, another benefit to the company. From the perspective of one who knows, Köhler's take is clear: "If you have AWS, there's absolutely no reason not to use EPYC processors, because you get comparable performance for less money. It's a no-brainer. Why would you pay more?"

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About PREISVERGLEICH.de

PREISVERGLEICH.de is an independent German comparison portal for product, energy, telecommunications, and insurance services. It helps customers gain an overview of today's tariffs with 100% transparency in product and tariff pricing. Since its founding in 1998, PREISVERGLEICH.de has greatly expanded its consumer portal. PREISVERGLEICH.de is now one of the widest-reaching price comparison sites with its own tariff comparison calculators in Germany. It has been part of GET Sol 1 GmbH since 2017. For more information visit <u>PREISVERGLEICH.de</u>.

About Skaylink

Skaylink, a new European cloud and digital transformation provider, was founded by four experienced cloud pioneers who joined forces to provide customers with tailormade solutions that deliver measurable added value for their businesses. Along with its global team of well over 550 cloud enthusiasts, Skaylink offers its own set of unique frameworks, methods and software-supported tools, to ensure customers a fast and secure path to the cloud and comprehensive support at every stage of their cloud journey. For more information visit <u>skaylink.com</u>.

About AMD

For more than 50 years AMD has driven innovation in high-performance computing, graphics, and visualization technologies. Billions of people, leading Fortune 500 businesses, and cutting-edge scientific research institutions around the world rely on AMD technology daily to improve how they live, work and play. AMD employees are focused on building leadership high-performance and adaptive products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ: AMD) <u>website</u>, <u>blog</u>, <u>LinkedIn</u>, and <u>Twitter</u> pages.

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