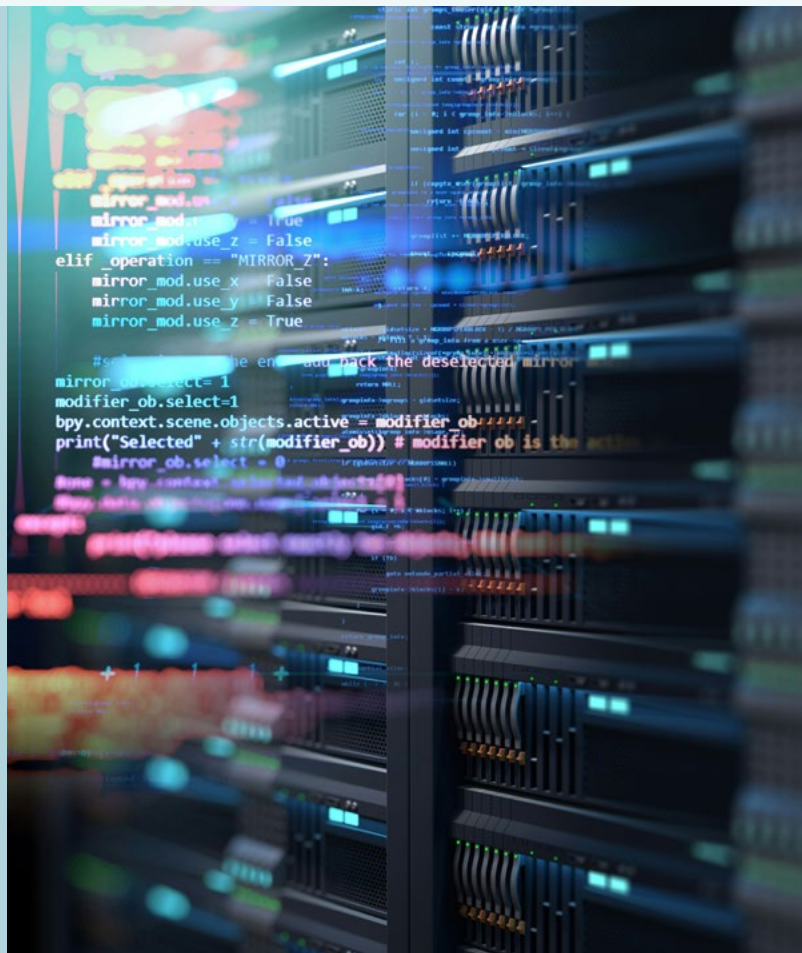


CASE STUDY

AI and HPC in the Nordics: Genesis Cloud benefits from peering in Frankfurt

About Genesis Cloud

Genesis Cloud is pioneering best-in-class GPU cloud solutions at scale for EnterpriseAI, GenAI, ML workloads & rendering since 2018. Headquartered in Europe, we're building the next-generation public cloud tailored to the needs of modern AI training and inference. Over 20,000 customers utilize our services in our modern, green data centers to enjoy high performance with minimal environmental impact. Our mission is to help AI startups grow and empower businesses to harness the full potential of their data. www.genesiscloud.com



The Genesis Cloud success story began in Munich in 2018. The company recognized the potential of artificial intelligence and pursued a visionary goal: to build a dedicated accelerated cloud infrastructure with powerful graphics processing units (GPU) in Europe, powered exclusively by green energy. Today, Genesis Cloud supports its customers with the most demanding workloads in AI and high-performance computing (HPC) enabled data centers in the Nordics and is one of the most important NVIDIA partners in Europe.

The only challenge remained the ever-growing demand for connectivity. With the new DE-CIX locations in Northern Europe, Genesis Cloud found the solution: GlobePEER Remote 10Gbit gives the cloud provider direct access from the BULK data center in Kristiansand in Norway to the peering infrastructure in Frankfurt am Main in Germany. Data exchange is significantly more secure, more reliable, and at least 50% faster.

AI as an IT booster

Artificial Intelligence (AI) requires a lot of data and enormous computing power to process it. In the case of multimodal GenAI, this applies above all to training the models. When models are in production, inference requires continuous processing and generation capacity as well as a stable and powerful network infrastructure to ensure real-time processing of queries. Within the major European metropolitan areas, it is almost impossible to process such large volumes of data economically, as the power consumption of high-performance computing is very high.

For this reason, Genesis Cloud relies on data centers in northern Europe, which are supplied directly and cheaply with green electricity from, for example, geothermal energy, wind power, and hydropower. The company operates its own high-performance GPU infrastructure in data centers in Iceland, Norway, and Sweden and customers can choose from a diverse range of high-quality hardware solutions depending on the application.

The significant difference between many cloud providers and Genesis Cloud lies in the focus, as Dr. Stefan Schiefer, CEO of Genesis Cloud, explains: “Our cloud was developed specifically for AI. We use the most powerful infrastructure currently available and rely on 100% green data centers. Our data centers in the Nordics are the only way we can meet these exceptional requirements at affordable prices.”

Controlled connectivity

However, ensuring controlled and reliable connectivity to the cloud storage proved challenging for the cloud provider, as Robert Blechinger, Senior Network Architect at Genesis Cloud, explains: “Our customers transfer huge amounts of data to and from this cloud storage for AI training. Previously, we had to rely on transit providers, which resulted in large fluctuations in bandwidth.” The expansion of DE-CIX to Norway solved these bottlenecks for Genesis Cloud.

Since 2023, DE-CIX has been operating its interconnection ecosystem in Norway (Oslo, Kristiansand), Denmark (Copenhagen, Esbjerg) and Finland (Helsinki). Genesis Cloud was already using BULK’s data center in Kristiansand and saw the opportunity: “We very much welcome DE-CIX’s decision to operate part of their Internet Exchange in the world’s largest data center powered by green energy. We can finally peer directly at DE-CIX Frankfurt.”

Genesis Cloud opted for GlobePEER with 10 Gbit from Kristiansand to Frankfurt. The peering gives the company and its customers direct access to more than 1,000 regional and global networks.

Fast and EU-compliant AI

Direct access to other large cloud providers is particularly important for Genesis Cloud, as Robert Blechinger confirms. “Our customers generally transfer large amounts of data from the hyperscaler clouds or work with Cloudflare. Peering allows us to reach these clouds just as securely and reliably as we reach a large number of other networks.”

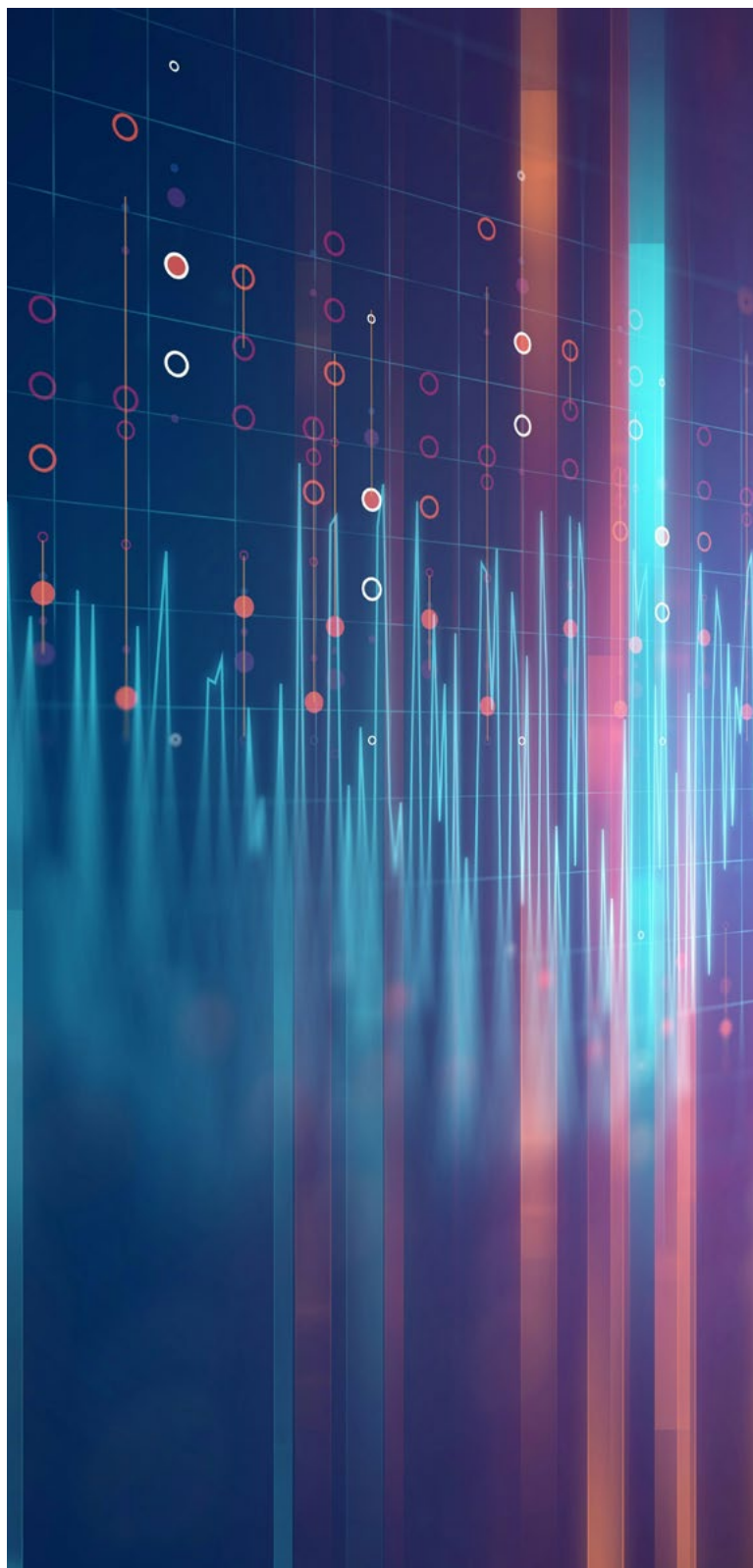
Peering has reduced latency from a sometimes unstable 40 ms to a stable 20 ms. And it remains consistently low even with a load of 6 Gbit, whereas with this usage it increased significantly when using transit providers. The DE-CIX interconnection platform can also be used to access the direct connection to the AWS cloud via DirectCLOUD if required.

Cooperation with European Internet Exchanges is an important aspect for Genesis Cloud in the set-up of their infrastructure. In contrast to many hyperscalers that also offer AI and HPC resources, Genesis Cloud guarantees that all data is processed exclusively within Europe. This is an important prerequisite, not only with regards to the General Data Protection Regulation, but also for the future use of AI systems, as regulated by the EU AI Act. The controllable peering connection makes the data transmission paths much more transparent overall.

Sustainably specialized in AI workloads

Robert Blechinger is very positive about the collaboration with DE-CIX: “The remote peering with DE-CIX Frankfurt was available to us within four weeks. We are working together to find more peers in Kristiansand itself.” In his opinion, the location in Norway is one of the best in Europe, as the advantages are significant for large HPC workloads.

This is also confirmed by Dr. Stefan Schiefer: “Genesis Cloud operates from Munich, takes German and European framework conditions into account, and still uses 100% renewable energy in efficient, green data centers. In addition, our customers now also benefit from the reliable and even faster transfer of data to and from Kristiansand. In this way, AI start-ups and companies can book AI services at the best prices and at the same time meet compliance and ESG requirements – which are particularly important in Europe – much more easily.”





About DE-CIX

As the leading Internet Exchange operator and interconnection provider, we help companies to realize new opportunities and future-proof their connectivity needs to manage growing data volumes and new applications. From easy and secure cloud connection to creating interconnection ecosystems, we make interconnection easy. Anywhere.

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