

Case Study Portus Data Centers

Client: RSS Hydro

Industry: Software Developer

Requirements: High Performance Computing (HPC)



Cooperation: NVIDIA

In 2025, RSS Hydro decided to deploy an on-premises AI factory powered by NVIDIA Blackwell GPUs, enabled by an AI-ready colocation facility designed to meet regulated, high-performance requirements.



A Watertight HPC Solution

RSS Hydro AI flood risk modelling and simulation with NVIDIA and OCI

Founded in 2017, Luxembourg-based software developer RSS Hydro has a strong track-record of helping customers address the challenges posed by natural disasters, from floods to droughts and wildfires. Demand for RSS Hydro's innovative Earth Observation software-as-a-service (SaaS) solutions is growing rapidly due to the accurate, actionable insights they provide, enabling enhanced risk management and informed decision-making to protect communities and assets around the world.

However, as climate change continues to intensify the frequency and severity of extreme weather events, energy companies, regional government and local council organizations from across the globe are facing unprecedented challenges in safeguarding vital infrastructure. Flooding, in particular, poses significant risks to grid stability and reliability.

Collaboration with NVIDIA/OCI

This has led to a significant market opportunity and the forging of a successful technology partnership between RSS Hydro, NVIDIA and Oracle Cloud Infrastructure (OCI). Leveraging RSS Hydro's proven FloodSENS AI application, the aim is to further mitigate growing flood risks to energy infrastructure by using advanced AI-driven flood modelling and 3D visualization. This allows energy customers to transform their approach

to infrastructure risk management with real-time insights into potential flood scenarios and their impact on grid infrastructure.

To satisfy the significant computational and graphics rendering demands involved, FloodSENS uses NVIDIA's accelerated GPU computing platform delivered on Oracle Cloud Infrastructure (OCI). Optimized for both AI and graphics workloads, the state-of-the-art High Performance Computing (HPC) infrastructure is enabling the training and inference of FloodSENS as well as seamless connection with NVIDIA Omniverse for visualization of real-time flood simulations.

Additionally, OCI provides a broad set of deployment options for AI and machine learning applications to maintain control over data and enables adherence with local laws and regulations, as well as prevent sensitive information from being transferred to jurisdictions with potentially weaker privacy protections.

"The scalability of OCI, combined with NVIDIA GPUs and NVIDIA Omniverse, enables FloodSENS to handle the extensive simulations required for the comprehensive risk assessments that energy companies now need to enhance their climate resilience."

Guy Schumann, Founder & CEO of RSS Hydro

Move to Colocation – Portus Data Centers Luxembourg

In 2025, RSS Hydro decided to deploy an on-premises AI factory powered by NVIDIA Blackwell GPUs, enabled by an AI-ready colocation facility designed to meet regulated, high-performance requirements. A more secure location, scalable redundant power and cooling, and diverse network connectivity were among the key requirements. This was seen as necessary for supporting future business expansion and the growing NVIDIA/OCI collaboration. Professional on-site customer and engineering data center support services was a further pre-requisite.

In October that year, following a market evaluation, the company moved its HPC stack to Portus Data Centers' conveniently situated Luxembourg colocation facility.

"Portus Data Centers offered exactly what we were looking for at a price level that was in line with what we were expecting to spend. In our collaborative use case projects with NVIDIA and Oracle OCI, increasingly we are working on AI and ML training and weather forecast inference with services such as Earth-2 and 3D visualization with Omniverse - these tools now all require powerful GPUs for which Portus offers the right facility and service requirements."

Guy Schumann, Founder & CEO, RSS Hydro

Key decision criteria:

- Secure, resilient infrastructure
- Scalable space, power and cooling
- Diverse connectivity
- Expert on-site Engineering support

Portus Data Centers Luxembourg is a cutting-edge Tier IV data center strategically situated in the Cloche d'Or district of Luxembourg city. Completely underground, it is operated in strict compliance with the highest standards which allow customers to house, host or manage their critical IT infrastructure in a secure, sustainable and resilient environment.

- 2.4MW of IT-load
- Cold aisle containment provides optimum cooling of IT equipment at all times
- Certified operation according to ISO 9001, ISO 14001, ISO 27001, ISO 50001, EN 50600, EN 50173/50174, Uptime Tier IV and SDEA, with physical access control, redundant power supplies and 24/7 monitoring
- Fire and Very Early Smoke Detection Aspiration system (VESDA)
- Carrier-neutral connectivity for maximum flexibility

Business Benefits

Portus Data Centers Luxembourg is providing RSS Hydro with a secure, resilient and conveniently located data center solution with access to further space and power as and when required. These factors along with a responsive and experienced on-site team enables a reliable, flexible and future proofed colocation platform for supporting the company's growing HPC-AI requirements.

"Our newest applications require the power of our two NVIDIA RTX PRO 6000 Blackwell, and for those to run smoothly, we absolutely need the facility specifications that Portus can offer but are difficult to find elsewhere. Such computing power and facility specifications for this kind of infrastructure are even more important when it comes to securing the future of our applications, allowing them to scale and deliver correctly. This is why we needed to invest now rather than later."

Guy Schumann, Founder & CEO, RSS Hydro

"We are delighted that RSS Hydro has recognized the high quality of our AI-ready colocation data center platform by entrusting Portus Data Centers infrastructure to support their highly innovative HPC applications - we are proud to be playing our part in the scale-up and exciting future of such a dynamic business."

Falk Weinreich, CEO, Portus Data centers

Portus Data Centers: Maximum Performance, Minimal Latency

The Portus Data Centers Group offers carrier-neutral edge colocation services at locations in Hamburg, Munich and Luxembourg. This means data processing takes place close to the point of origin, with low latency, high availability and full control over data in accordance with the German and European legal framework.

All locations feature redundant power supplies, efficient cooling systems, physical access control and 24/7 monitoring. With ISO 27001 certification and additional site-specific awards the data center operator meets high standards for security, compliance and sustainability. Locally rooted yet internationally connected.

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