

Advania Data Centers

Cloud-Based HPCFLOW for Optimized High Performance Computing

Organizations across industries are increasingly adopting high-performance computing (HPC) to manage their diverse workloads. Owing to maxed out infrastructure and time restrictions associated with HPC operations, cloud-based HPC resources prove significant benefits as they offer flexible HPC that eliminates the need to manage infrastructure. This saves time for operations and engineering to such an extent that the total cost of ownership (TCO) in most cases is lower in the cloud than on-premise.

However, some organizations face challenges while deploying a new HPC cluster or adding HPC resources to their already burdened HPC cluster. A European automotive manufacturer too had issues until turning to HPCFLOW—Advania Data Centers’ HPC-as-a-Service Cloud offering. Advania Data Centers (ADC) is a high-density computing technology company that develops HPC solutions, enabling HPC teams to execute faster and manage their workloads efficiently.

With multiple R&D centers and production sites across 30 European countries, the automotive manufacturer invests almost two billion Euros in research and development. Since the sensitive nature of this research data and the trade secrets require robust security and isolation of HPC workloads, the manufacturer sought ADC’s help to encrypt the transfer, storage, and computation of data. ADC encrypted the entire lifecycle of project files for the client, thus allowing only a single user to access them and preventing even root access. The company also provided flexibility and remote access to the client along with automating the job scheduling process, leading to a fast and efficient distribution of the client’s resources. “Although a highly secured HPC cloud environment is expected to impact the performance of a system negatively, ADC’s solution was able to maintain the same level of performance, or even improve it,” remarks Eyjólfur Magnús Kristinsson, CEO of the company.

What makes such accomplishments possible is the company’s unique 360-degree approach. ADC operates one of Europe’s largest data center campuses and offers tailored solutions for colocation of data center services at different tiers. “Clients prefer Iceland for its abundant and affordable green energy coupled with the low



Eyjólfur Magnús Kristinsson,
 CEO

power usage effectiveness (PUE) level that the climate guarantees,” points Kristinsson. These factors, according to ASHRAE standards, are enormously convenient for optimal data centers. Owing to increasing demands, ADC has recently tripled the company’s data center facilities and is now planning for its first project outside of Iceland.

Adding value to these capabilities is ADC’s hybrid approach to HPC. ADC’s HPCFLOW service allows companies to run HPC clusters that can scale up or down as needed, without any CAPEX investment. ADC also offers a complete self-service portal which enables organizations to design their own HPC clusters

and scale them up or down according to their requirements. In addition, the company delivers a combination of various tiers of colocations to boost the efficiency and computational power of clients’ HPC applications at a low cost.

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“We lay great emphasis on working closely with our clients and ensure that they are happy with the solutions we provide,” elaborates Kristinsson on the company’s client-centric business approach. Not only does ADC solve its clients’ problems but also initiates dialogues and builds long-lasting relationships with them to address their future workloads. ADC’s incredible team includes HPC veterans with decades of experience in the field who act as the first-line support to clients, thus giving a major boost to the company’s business. Not many providers in the market offer such high-quality support to clients, a key factor which differentiates ADC from its competitors.

A Nordic IT company that traces its roots back to 1939, ADC now attracts clients from abroad and hosts their HPC workloads in Iceland. From merely offering HPC infrastructure solutions to delivering HPC-as-a-Service solutions for applications like ANSYS and NUMECA, the company has come a long way—and is focused on future HPC innovations. **CA**