Press Release
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Aura Aero selects Qarnot, sovereign and low-carbon french HPC Cloud provider, to accelerate decarbonized aircraft design

Aura Aero has chosen Qarnot, French provider of sovereign and low-carbon HPC (High-Performance Computing) cloud services, to support its growing computational needs. This partnership will provide Aura Aero's teams with enhanced computing power for the design, simulation, and optimization of its aircraft programs.

Based in Europe, Qarnot's infrastructure addresses critical challenges regarding data security, sovereignty, and environmental impact. By repurposing the heat generated by its servers, Qarnot reduces the carbon footprint of simulations by up to 80%.

"This partnership proves that it is possible to build cutting-edge, sovereign, and competitive technological solutions in Europe that serve both sustainability and industrial competitiveness," says Paul Benoit, President and Co-founder of Qarnot.

Enhanced computing capacity for Aura Aero programs

Aura Aero is a French aircraft manufacturer based in Toulouse. Founded in 2018, the company is developing two flagship programs: INTEGRAL, a family of two-seater aircraft for training, leisure, and aerobatics (available in internal combustion or electric versions), and ERA, a 19-seat hybrid-electric regional aircraft designed to reduce the carbon footprint of regional air travel.

Developing these aircraft requires extensive numerical simulations, particularly for aerodynamics, performance, and design validation. Leveraging Qarnot's HPC cloud will allow Aura Aero's teams to run more iterations faster, without the burden of managing physical computing infrastructure.

"Choosing Qarnot as our HPC cloud provider strengthens our computing capabilities while remaining consistent with our commitments to sovereignty and decarbonization. This partnership allows us to advance our design work more quickly with a high-performance, secure solution that has a lower environmental impact," adds Marc Germain, Chief Digital Officer at Aura Aero.

Operational support for engineers

Beyond computing power, Qarnot provides operational support to Aura Aero's teams. This assistance facilitates the management of complex CFD (Computational Fluid Dynamics) simulations, task parallelization, and resource scaling based on project needs.

"Our role is to allow engineers to focus on their core business. By providing a tailored, high-performance HPC solution, we help Aura Aero's teams fully exploit their simulations with greater efficiency and fluidity," emphasizes Clément Pellegrini, Co-founder and CTO of Qarnot.

"Designing the aerodynamics for our aircraft programs requires a massive number of numerical simulations. Thanks to Qarnot, we can more easily integrate computing power into our automated processes, multiply design iterations, and stay focused on aircraft design without being hindered by infrastructure management," explains Rémi Magnon, CFD Aerodynamics Engineer at Aura Aero.

This partnership enables Aura Aero to bolster its simulation tools, accelerate development cycles, and continue the design of more carbon-efficient aircraft.

About Aura Aero

A pioneer in decarbonized aviation, Aura Aero is committed to serving humanity by designing and manufacturing aircraft that accelerate the decarbonization of air transport. By blending aeronautical excellence with cutting-edge digital technologies, Aura Aero develops next-generation aircraft with unparalleled efficiency: INTEGRAL, a two-seater aircraft available in four versions (R for aerobatics and leisure, S for training, each also offered in an electric version), and ERA, a 19-seat hybrid-electric regional aircraft.

Founded in 2018 and based at Toulouse-Francazal Airport in France, the manufacturer employs nearly 250 people. Having secured design and production approvals, the company confirms its status as a full-fledged aircraft manufacturer. Aura Aero is supported by the Occitanie Region, BPI, and the Innovacom investment fund. A laureate of the European EIC Accelerator fund, the Innovation Fund, and the France Relance and France 2030 programs, Aura Aero sits on the executive committee of AZEA (Alliance for Zero Emission Aviation) and is one of the 16 founding companies of the European Future Mobility Taskforce. Aura Aero is one of the few companies to receive the EU STEP Seal, highlighting projects developing breakthrough technologies. It is also the first aeronautics company selected by the European Innovation Fund (via the HERMES project) to receive a grant from carbon credits (EU ETS).

https://aura-aero.com/en

About Qarnot

Qarnot offers an intuitive and high-performance HPCaaS platform designed to simplify and accelerate numerical simulations in the cloud. Tailored to support innovation in sectors such as aerospace, aeronautics, and energy, it provides instant and scalable computing power, meeting the growing needs of R&D teams without the IT complexity or high costs of traditional infrastructure.

With immediate access to hundreds of CPU and GPU cores and the ability to run multiple clusters in parallel, Qarnot enables engineers to accelerate innovation cycles and optimize workflows. The platform is accessible via web interface, SDK, API, or CLI, ensuring seamless integration with leading solvers such as Ansys Fluent, Abaqus, and OpenFOAM.

Qarnot's proprietary infrastructure is designed to drastically reduce operational costs—offering rates up to 50% lower than traditional cloud providers—while ensuring data sovereignty and security as an independent European operator.

https://qarnot.com/en

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