

Sustainable simulation for high-impact industries

High Performance Computing (HPC) that helps designers in the automotive, aerospace, defence, energy and film industries meet their aesthetic, engineering and environmental goals

Design smarter. Accelerate performance. Operate cleaner.

Computation Fluid Dynamic (CFD) and Finite Element Analysis (FEA) simulations drives innovation across aerospace, energy, mobility, and media—powering simulation, optimisation, and creative workflows.

Energy (nuclear, wind farms)

- Turbine aerodynamics and terrain optimisation
- Reactor flow, thermal cycling, containment stress
- Predictive maintenance and digital twins

Automotive (OEMs, F1, motorsport)

- Aerodynamics, crash and thermal simulations
- Battery cooling, EV drivetrains, airflow modelling
- Race strategy and fatigue analysis

Aerospace (aircraft, rockets, satellites)

- Nozzle flow, thermal cycling, re-entry stress
- Multiphysics for components and control systems
- AI-driven design and launch cadence optimisation

Film (VFX & post-production)

- Accelerated rendering for traditional films, CGI and animations
- Fluid, smoke, and destruction simulation
- AI-enabled workflows

But traditional data centres powering these workloads are costly, carbon-heavy, and cooling-intensive. Qarnot offers a smarter model: decentralised HPC embedded in buildings that need heat.

Discover HPC built for high-impact industries—without the environmental drag.

Qarnot: Cloud computing with a conscience

96% waste heat reuse to warm buildings

No air conditioning. No energy-intensive cooling.

Up to 80% less CO₂ than typical data centers

Certified carbon reports for ESG and CSRD audits.

50% lower compute costs over hyperscalers

No hidden storage, cooling, or transfer fees.

Real-time monitoring tools

Track simulation progress, flag errors early, and avoid wasted GPU time.

Optimised for simulation & rendering

Supports ANSYS, STAR-CCM+, OpenFOAM, YALES2, Blender, Houdini, and other tools used in:

- CFD, FEA, and multiphysics simulation
- Thermal, structural, and aerodynamic modelling
- VFX rendering, fluid simulation, particle dynamics
- Predictive maintenance and digital twins

Sovereign infrastructure

Protect sensitive data and IP (Intellectual Property) with sovereign cloud architecture and secure encryption.

Book your demo now!

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