GNS Systems
IT Services for Engineering

Hybrid HPC

SUPERCOMPUTING FOR ANY SCALE

Our hybrid HPC approach for your Innovations

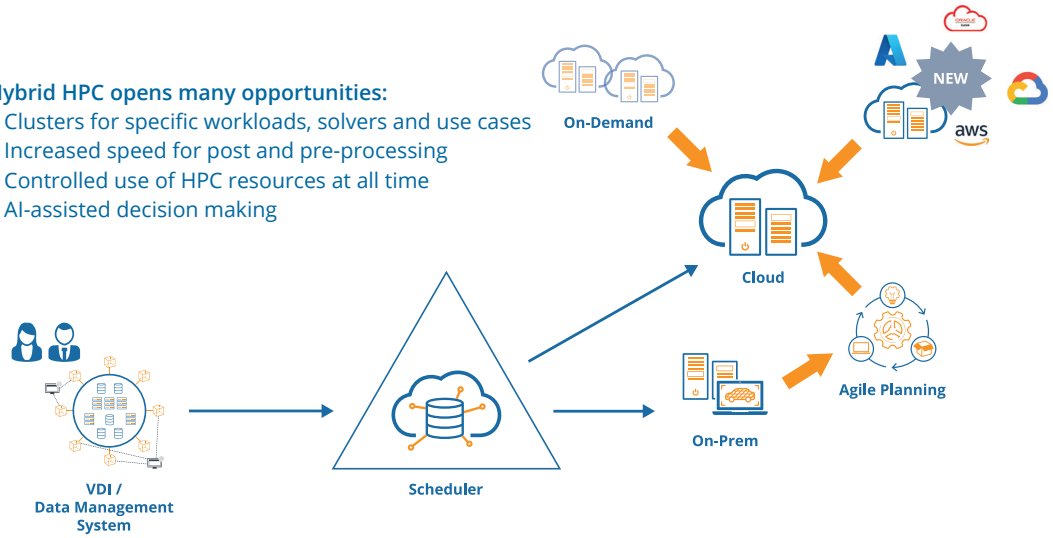
Hybrid HPC cleverly combines the benefits of on-premises hosted infrastructures with the advantages of the cloud. Our smart strategy based on efficient use of cloud-based solutions and services reduces costs, saves time and money and accelerates innovations. Hybrid HPC therefore stands for simple, dynamic and cost-optimized computing of all your HPC workloads.

Our goal: Increased productivity in demand-driven environments

Compute-intensive models and analysis techniques need powerful computing resources that are maximally scalable and can be flexibly accessed at any time. Appropriate hybrid models ensure that processes are fully optimized, run seamlessly and quickly integrated with each other.

Hybrid HPC opens many opportunities:

- Clusters for specific workloads, solvers and use cases
- Increased speed for post and pre-processing
- Controlled use of HPC resources at all time
- AI-assisted decision making



Job Engine Automation

JGen reliably maps recurring process task and executes them automatically. Even in highly complex, heterogeneous IT landscapes with non-transparent dependencies of different batch jobs, JGen guarantees coordinated processing.

BENEFITS

Excellent Tuning

We get the best out of your IT infrastructure for all compute-intensive simulations with powerful HPC cluster technologies - for maximum performance and efficiency in virtual product development.

Outstanding Agility

Easily and quickly augment on-premises HPC workloads with high-value cloud technologies - even for sophisticated CAE simulations.

Optimal resource consumption

Move workloads to where you need them: Resources from the cloud based on application needs at the lowest cost while keeping on-premise resources busy.

Always Up-to-Date

Access the latest cloud technologies faster with a hybrid model, setting the stage for data-intensive HPC workloads with artificial intelligence and deep learning.

ANY WORKLOAD, ANY TIME!

The hybrid HPC environment is optimized for the most demanding technical workloads and applications. With the fully automated environment, developers can leverage the best performance for their workloads - for any workload, anywhere, anytime, without compromising time or money. On-demand compute resources are directly available, so engineers can build, deploy and run their agile workloads parallel in the cloud or on-prem. GNS Systems' flexible infrastructure for compute-intensive workloads combines the best of cloud and on-prem, seamlessly integrating processes and simplifying workloads to drive innovation.

- Easy access to compute resources when they are needed
- Faster development lifecycles
- Higher productivity for DevOps
- Latest technology for analytics, big data and more
- HPC, Applications and Data in one place

USE CASES

We Empower Virtual Product Development Processes with HPC:

Leading Automotive Supplier

Transforming a Traditional Infrastructure into a High-quality Solution

Infrastructure as a Code leading to an intelligent world of infrastructures for engineering

- Transferring ongoing operations and processes in Microsoft Azure
- For current workloads with the Digital Twin
- Leveraging AI, Data Analytics and Big Data Management for future topics as Autonomous Driving in Azure

Innovative Start Up for Fuel Cells

Build a New Greenfield Infrastructure for R&D and Engineering

Customized Engineering Infrastructure based on Microsoft Azure and Infrastructure as a Service

- Implementation of a new development environment for validation of test benches in virtual fuel cell development
- Cloud-native HPC on Azure
- Born in the Cloud: Use the Infrastructure as Code (IaC) principle
- Fully software-defined Infrastructure: Roll out and maintain via CI/CD pipeline

Life Science Market Leader

Using Cloud Simply: All Services in One Place on Microsoft Azure

Rewriting the Solution for a Fully Automated Environment in the Cloud

- Migrate and automate a cloud project for virtual patients in clinical trials in the build, test and deployment parts
- Roll out of the individual environments via a fully automated CI/CD pipeline
- Set up a new Identity and Access Management
- Integrate a new security configuration, conform to GxP

GNS Systems GmbH
Theodor-Heuss-Straße 5a
38122 Braunschweig, Germany

Fon: +49 531 - 123 87 0
sales@gns-systems.de
www.gns-systems.de

Get more information at LinkedIn