RESCALE FOR MANUFACTURING

High Performance Computing
Built for the Cloud

Leaders in CPG, Electronics, Heavy Industry, and Other Cutting-Edge Manufacturers Use Rescale to:

» Accelerate production timelines

» Optimize manufacturing processes

» Improve process sustainability and safety

» Perform multidisciplinary innovation

» Reduce recalls and warranty claims

"The Rescale platform has enabled Arrival to meet its rapidly growing computational needs, run higher fidelity models faster, and improve collaboration across the company."

— Nathan Baker, Head of RED-CAT, Arrival

Rescale Accelerates HPC Digital Transformation in Manufacturing to Develop Next-Gen Products

High performance computing (HPC) drives manufacturing innovation at every stage of product development. Today's industry leaders are adopting cloud HPC to build better products and develop new techniques for predictive maintenance and digital twin prototypes. Legacy on-prem HPC infrastructure lacks the flexibility and agility to meet growing computational needs. Rescale empowers engineers to accelerate R&D initiatives and deliver more competitive products.

EAT•N   **Electrolux**   **SPECIALIZED**   **SAMSUNG**   **DENSO**   **NISSAN**

Enable Advanced HPC Applications

Computational Fluid Dynamics (CFD), Finite Element Analysis (FEA), Discreet Element Method (DEM) and other solving methods for manufacturing use cases:

- Multiphysics Simulations
- Structural Analysis
- Additive Manufacturing
- Thermal Management
- Failure Analysis
- Maintenance Prediction

Drive Measurable Business Value

Bolster Competitive Advantage
"Utilizing Rescale's compute expertise gives us an advantage of tools that would normally be available to larger companies"

— Reamonn Soto, CEO, Sensatek

Accelerate Time to Market
"With this collaboration with Rescale, Hankook Tires digital transformation has grown one step further at an incredible pace. We look forward to driving the industry forward."

-Wonhyuk Lee, Sr. VP of R&D Innovation, Hankook Tire
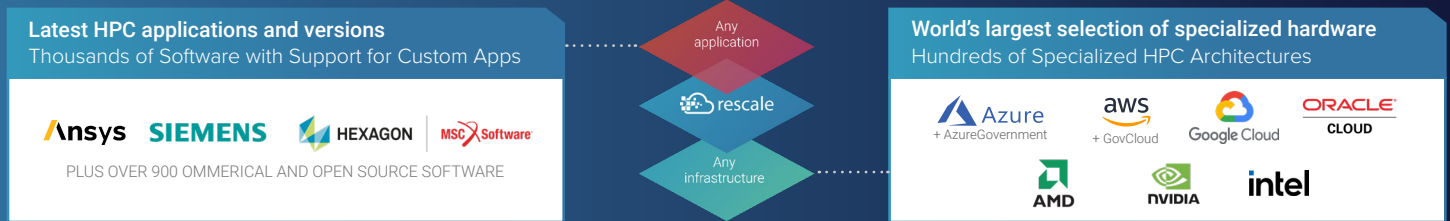
Increase Engineering Efficiency
"For aerodynamics specifically, our engineers have reached a level of performance that teams in other fields have not yet achieved."

— Federico Lluesma, Dynamics Engineer, Zeleros Hyperloop

Leading HPC software for Manufacturing, Pre-installed and Ready to Deploy Today!

Ansys   **SIEMENS**   **HEXAGON**   **MSC Software**
COMSOL   **ROCKY**   **MOLDFLOW**   **DS SIMULIA Abaqus**

Rescale gives you turnkey access to the latest technologies, on-demand...

Latest HPC applications and versions
Thousands of Software with Support for Custom Apps

Ansys   **SIEMENS**   **HEXAGON**   **MSC Software**

PLUS OVER 900 OMMERICAL AND OPEN SOURCE SOFTWARE

Any application

rescale

Any infrastructure

World's largest selection of specialized hardware
Hundreds of Specialized HPC Architectures

Azure + AzureGovernment   **aws** + GovCloud   **Google Cloud**   **ORACLE CLOUD**

AMD   **NVIDIA**   **intel**

Intuitive, time-saving user interface
Rescale automates cloud HPC complexity, making job submission as easy as a few clicks

● Engineering Tasks   ● Infrastructure Tasks

Cloud HPC with Rescale

Run jobs in minutes, accessible to anyone with a browser

Requirements
A computer with an internet browser (e.g., Chrome) allows ease of access for scientists, researchers and engineers.

Steps
1. Sign into Rescale from any browser
2. Upload software input files
3. Choose software and use auto-recommended hardware or customize
4. Submit Job and download results

VS.

Do-it-yourself Cloud HPC

Requires HPC IT experties and days or weeks of technical work to run a job

Requirements
- A computer with an internet browser (e.g., Chrome)
- An cloud provider account with IAM user with Admin privileges
- Familiarity with cloud provider infrastructure services
- Familiarity with Linux terminal commands
- Access to install files and familiarity with using software

Steps
1. Create a VPC and Subnet on your CSP account
2. Create a storage bucket on your CSP account
3. Create an IAM role for accessing your storage bucket
4. Request increase your service quota
5. Setup a budget in CSP Budget
6. Select optimal VM/Instance types
7. Create machine images and templates for workload
8. Configure cluster networking
9. Configure license servers
10. Create / configure a parallel file system for working directories
11. Launch the cluster
12. Connect to the cluster via command line or interactive session
13. Upload software input files
14. Move files from storage to the parallel file system
15. Create a scheduler job submission script
16. Submit job to the scheduler
17. Wait to see if job completes successfully
18. Copy results to storage bucket once the simulation is complete
19. Shutdown the cluster and cleanup resources
20. Download results from storage bucket

Industry Leading Security and Compliance Standards:

ISO 27001 Certified   **FedRAMP**   **AICPA SOC**   **DFARS Compliant**

Current standards met include SOC 2, ITAR, HIPAA, CSA Registered, TISAX Level 1, GDPR, CCPA and FedRamp. Rescale follows the NIST 800-53 framework.

Trek Bicycle Uses Rescale to Run Cutting-Edge Highly Coupled Optimization Analysis

Trek turned to Rescale after reaching internal capacity and facing tight project deadlines. Using Rescale, Trek Bicycle was able to to instantly expand their resources and access over 2TB SSD disk storage,, along with running a complex coupled optimization analysis using Star-CCM+ and Heeds software. Doing so, enabled Trek Bicycle to leverage existing software licenses to reduce simulation costs.

"With Rescale's platform, we can build complex Star CCM+ and HEEDS simulations and run analyses much faster than we can internally – drastically reducing our simulation process."

– Chad Manuell, Director of Engineering, Trek Bicycle

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About Rescale

Rescale is high performance computing built for the cloud to empower engineers while giving IT security and control. From supersonic jets to personalized medicine, industry leaders are bringing new product innovations to market with unprecedented speed and efficiency with Rescale, a cloud platform delivering intelligent full-stack automation and performance optimization. IT leaders use Rescale to deliver HPC-as-a-Service with a secure control plane to deliver any application, on any architecture, at any scale on their cloud of choice.