# Get HPC On Demand

Extend your capabilities with on-demand access to HPC resources and technical expertise

## HPC MADE EASY

Every day, more organizations want to leverage the power of high-performance computing (HPC) to fuel innovation. However, many do not have the resources to buy, build and tune HPC clusters, then manage them in-house.

Dell Technologies can help you get the resources you need to compete, with scalable, flexible HPC On Demand, delivered with white-glove managed services.

The opportunity to pay per use for HPC resources makes advanced computing more accessible.

## KEY HPC ON DEMAND USE CASES

HPC On Demand brings a wealth of capabilities to better enable HPC within organizations, including:

- Environments hosting multiple applications where each application may require its own unique, optimized infrastructure.
- On-demand access via bursting, where jobs can be seamlessly dispatched from on-premises to cloud without requiring end users to specify locality for compute.
- Applications with complex security or compliance requirements.
- The elimination of "shadow IT", enabling researchers and staff to focus on their data and applications, not the underlying infrastructure.

### Flex with demand.

Use HPC On Demand to handle:

- Burst capacity
- Single projects
- Proofs of concept
- Test/dev environments
- Full production workloads

## CUSTOMER SUCCESSES

- Mercury Marine® bursts into HPC capabilities for computer-aided engineering and design (CAE/CAD) of boat engines. Using HPC On Demand, Mercury Marine was able to cut the time required for their in-house hydronamic simulations from 48 hours to only 2 hours.[1]
- IndyCar® relies on HPC On Demand for advanced computational fluid dynamics (CFD) simulations that help make IndyCar Racing safer and more entertaining.[2]
- Spire Global® requires leading-edge HPC systems that can process large amounts of data at lightning-fast speed. But as a startup, their budget was limited. The company uses fully managed HPC On Demand from Dell Technologies, enabling them to focus on helping customers without the complexities of designing, managing, and maintaining HPC infrastructure and staff.[3]

## HPC OPTIMIZED SYSTEMS

To help you take advantage of HPC On Demand, solutions are available based on engineering validated HPC designs, certified by Intel® for the Intel Select Solution for Simulation and Modeling . These offerings are based on the experience and learnings from more than 50,000 jobs, helping to ensure the best result relative to bare metal. Options include a wide range of CPUs, GPUs, memory and storage options, all running on VMware® Cloud Smart Infrastructure software, all running in a 100% sustainable data center, powered on renewable energy. This array of capabilities enables a customer to harness the flexibility and scalability of a cloud environment, matching the underlying architecture to the exact needs of their specific workload. Together these different options and configurations give you the power, portability and management simplicity you need to make HPC possible.

Whether you're looking to expand your existing capabilities or get started with your first project, HPC On Demand from Dell Technologies helps you get the resources you need at a price point and commitment level that makes sense for your project.

## Focus on the project instead of the infrastructure

White-glove managed services for HPC remove guesswork, complexity and risks. These services are provided by R Systems®, a Dell Technologies HPC Solutions Partner.

### Access HPC On Demand

Tap into HPC optimized systems designed by experts leveraging Dell EMC servers, storage, and networking with the ability to customize configurations for your workloads.

- Access HPC technical expertise at your fingertips with a single point of contact. On-site experts can help you build, manage and tune the systems for your workloads — no need to hire HPC staff.

- Easily accommodate spikes in job requests by bursting to HPC in the cloud. Rescale Hybrid Integration easily enables bursting of current on-premises workloads, as well as aiding in the migration from on-premises to cloud, all accomplished seamlessly to the end user.

- Access to an HPC and AI optimized marketplace with over 800 deployment-ready applications.

- Multi Cloud connectivity Option enables connection to existing hyperscaler cloud instances.

- Administrative control for access customization across applications, groups and even users.

- Access to advanced security capabilities like SSO, MFA and more, along with optional security and compliance modules for CSA, FedRAMP, HIPAA, ITAR, SOC 2 Type 2 and other frameworks.

### Speed time to results

- Save the time and resources required to build and tune HPC systems.

- Get fast, consistent performance at scale with well-integrated HPC systems that are optimized for your workloads.

- Extend your staff with HPC services when and where you need them.

- Automation dashboard to speed deployment and management, including a recommendation engine that can optimize on time, cost or other variables.

### Pay as you go, simplified

- Pay only for the resources you use with the ability to set quotas by department, application or individual, virtually eliminating the surprise end of the month bills of cloud providers.

- Enjoy transparent, simplified billing based on CPU hours that can be reported at the organization, application, department or user level through the reporting dashboard.

- Avoid lock-in with no ingress or egress fees.

- Customized, transparent and modular pricing.

With HPC On Demand from Dell Technologies, you can focus on using HPC — not deploying, tuning, managing or scaling clusters.

**Contact your sales representative today to get started.**

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1   Source: https://www.delltechnologies.com/asset/en-us/products/ready-solutions/customer-stories-case-studies/dell-mercury-marine-case-study.pdf
2   Source: https://rsystemsinc.com/2019/06/r-systems-leads-hpc-in-motorsports-racecar-engineering-article/
3   Source: https://www.prnewswire.com/news-releases/spire-global-uses-high-performance-computing-from-r-systems-to-predict-global-weather-301126947.html
4   For more information: https://www.intel.com/content/www/us/en/products/docs/select-solutions/where-to-buy.html

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