

# R Systems and Dell Technologies: Enabling On-Demand HPC Resources

## VALUE PROPOSITION

With the high performance computing expertise, services and solutions from R Systems and Dell Technologies, your organization can:

- **Access technical expertise and optimized cloud computing resources on demand**
- **Choose from multiple dedicated configurations to fit your usage requirements**
- **Leverage high-end computing resources for simulation and AI/ML/DL**
- **Capitalize on the available implementation of multi-cloud and workflow orchestration tools**
- **Increase your confidence with proven solutions backed by superior technical support**

## PARTNER OVERVIEW

R Systems NA, Inc. provides high performance computing cluster resources and technical expertise to commercial and institutional research clients through the R Systems brand and the Dell HPC Cloud Services Partnership.

R Systems owns and operates bare-metal clusters and offers a variety of solutions to meet each client’s specific HPC needs. These offerings include lease time on clusters for bursting as well as for short-term and long-term projects available at highly competitive prices.

In addition to offering industry-standard solutions, R Systems provides engineering expertise to assist clients in selecting the optimal components for their HPC clusters.

## SOLUTION OVERVIEW

With the flexible service offerings from R Systems, your organization can access on-demand HPC capability — when you need it, as you need it. This on-demand approach helps your organization minimize time, maximize effectiveness and add value to your HPC results.

R Systems product offerings include dedicated and utility clusters. Both of these offerings include full white-glove service, with R Systems functioning as an extension of your in-house IT team.

### DEDICATED CLUSTERS

A dedicated offering from R Systems provides a purpose-built cluster tailored to your specifications, leveraging existing equipment when available to reduce costs. These clusters are completely bare-metal, separated entirely from other tenants, and allow full root access on request. They provide the best value for long-term, high-security or niche technical requirements.

### UTILITY CLUSTERS

Bare-metal utility clusters offer the best value for short-term or sporadic HPC needs. They offer fast, reliable and efficient access to HPC resources. R Systems maintains existing resources in a preconfigured HPC environment: shared login hosts, scheduler queues and NFS/Lustre storage. This environment is all about simplicity, allowing users to upload custom applications or use pre-installed ISV and open source applications to run jobs and gain access via standard protocols, such as SSH and VNC.

### HPC CONSULTING

Engineers from R Systems can help your organization design, implement and optimize your in-house HPC resources. In addition, the R Systems team of HPC experts can remotely manage and monitor your clusters, freeing your onsite team to interact with users and address enterprise systems support.

## CUSTOMER REFERENCE

To perform significantly finer-grained design simulations than it could run affordably in-house, Trek Bicycle contacted the R Systems team. Working in tandem with the R Systems utility clusters, Trek Bicycle was able to reduce expensive wind-tunnel time. The company also improved bicycle racing wheel designs, necessitating an additional 40 manufacturing positions to fulfill orders upon release of the first wheel design powered by R Systems.

Formula One and IndyCar also take advantage of R Systems HPC Managed Services for additional HPC capacity as well as technical expertise to assist with the most challenging computational fluid dynamics problems. This allows for a decrease in time to solution and an increase in the potential of a podium finish.

Electronic design automation clients, in turn, can leverage the resources of R Systems to perform additional design simulations before the critical tape-out deadline. The additional HPC capacity/simulation increases the success of the chip before any silicon is cut.

## CONTACT US

To learn more about how R Systems and Dell Technologies can help you gain greater performance and value from your IT systems, contact R Systems or your Dell Technologies representative, or visit [rsystemsinc.com](http://rsystemsinc.com).