

HPC and AI Innovation Lab

Dedicated to designing solutions while staying on the leading edge of new and emerging technologies

With a passion for innovation

Dell EMC is committed to enabling more organizations to use high performance computing (HPC) and artificial intelligence (AI) for more innovations and discoveries than any other system vendor in the world. This passion for innovation has helped make Dell EMC an industry leader in HPC.

We've built a nexus of collaboration in the industry at the Dell EMC HPC and AI Innovation Lab in Austin, Texas. The 13,000-square-foot data center houses thousands of servers, a TOP500 cluster, a wide range of storage and network systems.

“The HPC and AI Innovation Lab gives our customers access to cutting-edge technology from Dell EMC, Intel, Mellanox, NVIDIA, Bright Computing software, and more. Customers can bring us their workloads, and we can help them tune a solution before the technology is readily available.”

—Garima Kochhar, Distinguished Engineer

Dell EMC has made a major investment in two powerful HPC clusters housed at the Innovation Lab, and the Lab team continuously expands and improves each system.

Zenith cluster

The Zenith cluster is the result of a partnership between Dell EMC and Intel®. It serves as a benchmarking system for internal teams, as well as a showcase resource for evaluations.



- Ranks in the TOP500 list of fastest supercomputers in the world¹
- Supports the convergence of HPC and AI with Intel Xeon® Scalable Processors, Omni-Path architecture, data center storage solutions, FPGAs, adapters, software and tools.
- 422 PowerEdge C6420 servers with Intel Xeon Gold, Platinum processors
- 4 PowerEdge R740 servers with Intel Arria™ 10 FPGAs
- 160 PowerEdge C6320p servers with Intel Xeon Phi™
- 480TB Ready Solutions for HPC NFS Storage
- 2.68PB Ready Solutions for HPC Lustre Storage
- 174TB Isilon F800 all-flash NAS storage

¹ TOP500: The List, "[Dell EMC HPC Innovation Lab - Zenith](#)."



Let's get started

- Get the Lab's latest performance metrics, blogs and papers at hpcatdell.com
- Watch [HPC and AI Innovation Lab videos](#)
- Come into Dell Technologies [Customer Solution Centers](#)
- Find out about Dell EMC [HPC and AI Centers of Excellence](#)
- Join the [Dell EMC HPC Community](#).

For more information, visit dell EMC.com/innovationlab and visit dell EMC.com/hpc.

Rattler cluster

The Rattler cluster is the result of a partnership with Dell EMC, Mellanox®, Bright Computing® and NVIDIA®. It is designed to showcase extreme scalability, as well as provide application-specific benchmarking and characterizations.

- Supports AI and deep learning with NVIDIA graphics processing unit (GPU)-accelerated servers connected with Mellanox Enhanced Data Rate (EDR) InfiniBand®
- 88 PowerEdge C6420 server with Intel Xeon Gold, Platinum processors
- 32 PowerEdge C4140 server with Intel Xeon Gold processors and NVIDIA Tesla™ GPUs
- 240TB Ready Solution for HPC NFS Storage
- 1.2PB Ready Solution for HPC Lustre Storage
- Bright Computing, CUDA, NGC, software and tools

More than just world-class infrastructure

The Dell EMC HPC and AI Innovation Lab gives you access to more than just world-class infrastructure. Bringing together HPC operational excellence and expertise, it is staffed by computer scientists, engineers and Ph.D. subject matter experts who actively partner and collaborate with customers and other members of the HPC community. The team gets early access to new technologies, integrates and tunes HPC clusters, benchmarks applications, develops best practices and publishes white papers.

Take advantage of an unparalleled opportunity

Innovation Lab resources are available to customers and partners, enabling them to test applications at scale with large data sets — for application benchmarking and platform characterization for their unique HPC and AI workloads. The opportunity to develop and test configurations with an expert team prior to deployment reduces risk. And because your resulting system is tuned for optimized performance from day one, your team can get results faster for a better return on investment.

Request access today

If you'd like access, [contact](#) your local representative or authorized reseller.