D∕∕LL Technologies

HPC & AI Innovation Lab

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

With a passion for innovation

Dell Technologies 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 Technologies an industry leader.

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

"The HPC & AI Innovation Lab gives our customers access to cutting-edge technology from Dell Technologies, Intel, AMD, NVIDIA, Bright Computing, 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 Technologies has made a substantial investment in three powerful HPC clusters housed at the Innovation Lab, and the Lab team continuously expands and improves each system.

Zenith

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

- Supports the convergence of HPC and AI with Intel Xeon® Scalable Processors, InfiniBand® networking, data center storage solutions, software and tools.
- 144x PowerEdge C6520
- 192x PowerEdge C6420 servers
- 4x PowerEdge R740 servers
- 931TB HPC BeeGFS High Capacity
- 1.9PB HPC BeeGFS High Capacity
- 174TB PowerScale Isilon F800 all-flash NAS storage

Rattler

The Rattler cluster is the result of a partnership with Dell 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 GPU-accelerated servers connected with InfiniBand® HDR100 and HDR200 networking

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Let's get started

- Get the Lab's latest performance metrics, blogs and papers at hpcatdell.com and on the Dell Technologies InfoHub.

- Take a virtual tour of the Lab.

- Watch HPC & AI Innovation Lab videos

- Tap into Dell Technologies Customer Solution Centers

- Find out about Dell Technologies HPC & AI Centers of Excellence

- Join the HPC/AI Community.

For more information, visit delltechnologies.com/innovationlab and visit delltechnologies.com/hpc

- 48x PowerEdge XE8545 servers with NVIDIA GPUs and NVLink™
- 6x PowerEdge C4140 servers with NVIDIA GPUs and NVLink
- 5x PowerEdge R750xa, 1x PowerEdge R740
- 931TB HPC BeeGFS High Capacity
- 1.9PB HPC BeeGFS High Capacity
- Bright Computing, CUDA, NGC containers, software and tools

Minerva

The Minerva system comes from a partnership with AMD®. The cluster features PowerEdge C6525 servers with AMD EPYC™ processors, InfiniBand® HDR200 networking and BeeGFS storage. Minerva highlights the latest server infrastructure designed to take advantage of the latest cores, memory bandwidth and PCIe Gen4 throughput.

- 256x PowerEdge C6525 servers with AMD® EPYC™ 2nd and 3rd Generation processors
- 12x PowerEdge R6525 servers
- NVIDIA Quantum™ HDR200 InfiniBand networking
- 931TB HPC BeeGFS High Capacity
- 1.9PB HPC BeeGFS High Capacity
- Bright Computing, software and tools

More than just world-class infrastructure

The Dell Technologies HPC & 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 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, shares best practices and publishes white papers. Don't miss the opportunity to work directly with this engineering team!

Request access today

If you'd like access, contact your local representative or authorized partner.

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