In the world of high-performance computing (HPC), AI, machine learning, and deep learning, the system specs can often look similar. So when it comes to HPC, the proof is in the performance.

Using industry-standard High-Performance Linpack (HPL) testing, Dell EMC HPC Innovation Lab set out to benchmark a commodity dual-socket server against an identical counterpart—same CPUs, same memory, same architecture. The only difference? The counterpart had four NVIDIA® Tesla V100 GPUs. The lab also conducted HPCG benchmarks and tested AMBER, an application specifically for molecular dynamics simulations.

The Dell EMC PowerEdge C4140 provides unthrottled performance due to its unique interleaved GPU system design. The NVIDIA Tesla V100 GPUs and the next generation NVLink™, with the PowerEdge C4140 offers the performance of up to 62.8 TFLOPS of single-precision performance using 4x NVIDIA NVLink high-speed interconnect, and accelerates more than 50,000 applications.

AI and other HPC technologies can enable new levels of research and innovation across a wide range of industry verticals, especially those that have seen unprecedented growth in sensor data:

The goal of any HPC initiative is to turn data into valuable insights as quickly as possible. Dell EMC is at the forefront of this critical development, providing a comprehensive portfolio to support AI, machine learning, deep learning, and other HPC operations. Dell EMC assists customers in all phases of their AI journey and enables easier adoption, deployment, and management through Dell EMC Ready Bundles.

The Dell EMC PowerEdge C4140 server is optimized for the NVIDIA Tesla V100 GPU. Designed to handle the most demanding cognitive and technical computing workloads, the PowerEdge C4140 provides a powerful solution to bring AI and other HPC technologies within the reach of today’s organizations.

“Deep learning is a strategic imperative for every major technology company, permeating every aspect of work.”

– Ian Buck, NVIDIA

To learn more about the Dell EMC PowerEdge C4140 with NVIDIA Tesla V100 GPUs—and to find out what AI, machine learning, and deep learning can do for your organization—join the Dell EMC HPC community today.

Sources: