

Driving golf forward with iron-clad digital tools

PING sporting goods takes its game to a higher level with digital technologies from Altair, Dell Technologies and Intel.



Customer profile

PING

Sporting Goods | United States



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Eric Morales
Senior Engineer at PING

Business needs

PING needs leading-edge software tools and high performance computing systems to drive innovations across its product line.

Business results

- Boosting product line innovation with HPC
- Slashing design cycle times
- Decreasing variability in product performance
- Improving product quality without delaying time to market

Solutions at a glance

- [Altair HyperWorks® Unlimited™ appliance](#)
- [Dell EMC PowerEdge servers with Intel® Xeon® Scalable processors](#)

A long-running legacy of innovation

For PING, innovation is everything. The genesis for the company came in 1959 when its founder, Karsten Solheim, set his sights on designing a better putter that would improve his golf game. That putter made a “pinging” sound when striking a golf ball, which gave rise to the name of the company that would become a household name for golfers around the world.

PING credits its continued success to more than 60 years of dedication to innovation through science and technology. Its Turbulator Technology, for example, was inspired by design features on airplanes and semitrucks. This technology helps golf pros and amateurs swing faster and hit the ball farther. The company’s Dragonfly technology, meanwhile, is based on the science of biomimicry. It helps distribute weight in other areas of the driver, allowing the heads to increase forgiveness and help compensate when players hit the ball off-center.

Today, this legacy of innovation continues as PING continually drives groundbreaking advances across its product line. But now there’s a twist to the approach. Unlike the original PING putter and its first prototype, today’s product advances are often driven through innovation with data, computer-aided engineering tools and high performance computing systems — along with close collaboration with leading technology providers.

Teamed for success

With Altair, Dell Technologies and Intel, PING gains the resources it needs to apply high performance computing systems and applications to its design strategy. This collaboration has helped PING slash design cycle times, decrease variability in product performance and improve quality — all without delaying time to market.

Key products in play here include Altair® Unlimited™, a fully managed, turnkey HPC appliance based on Dell EMC PowerEdge servers with Intel® Xeon® Scalable processors. Altair Unlimited delivers unlimited use of a wide range of Altair HyperWorks® solver software for simulating mechanics, fluids, electromagnetics and more — including modeling, visualization and optimization capabilities.

This all adds up to a compelling value proposition for Eric Morales, a senior engineer at PING, and his engineering colleagues.

“With the help of the Altair Unlimited appliance built on Dell EMC PowerEdge servers and powered by Intel® Xeon® Scalable processors, PING has been able to streamline its

entire product development pipeline,” Morales says. “We can now run different types of simulations and multiple analysis programs at the same time. The time saved frees our designers, developers and engineers to innovate.”

Cashing in on Intel Xeon Gold processors

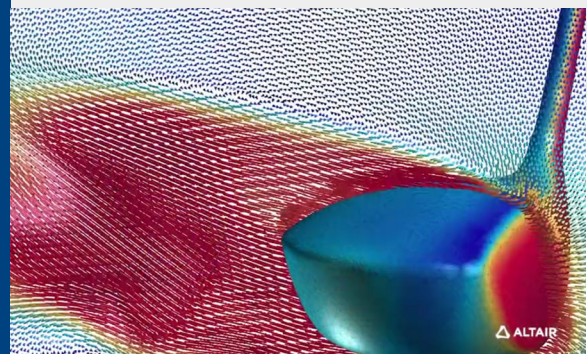
A long-time user of Intel-based systems, PING leverages Intel® Xeon® Gold processors in the Altair Unlimited appliance built on Dell EMC PowerEdge servers. These processors offer high clock speeds and large memory capacities to deliver excellent performance for PING’s computational fluid dynamics, impact, material analysis and acoustic analysis workloads.



“Using HPC with finite element analysis and computational fluid dynamics allows us to optimize everything as much as possible, but at the end of the day, it saves us a lot of time. And that allows us to put more of our time and energy back into thinking up new, creative, innovative designs.”

Eric Morales

Senior Engineer at PING



In all, simulation results are 4.5 times faster for a single job, according to an Intel case study. The appliance also includes a head node, powered by Intel® Xeon® Silver processors, that orchestrates resources, controls storage and runs visualization tools to deliver power and performance.

Even better, Intel technologies deliver tremendous value to the Altair applications and solutions that PING uses by providing consistent performance and strong integration through unique instruction sets, including Intel® Advanced Vector Extensions 512 (Intel® AVX-512), and tools such as Intel® oneAPI Math Kernel Library (oneMKL) and Intel® MPI Library, which are distributed as part of the Intel® oneAPI toolkits.

Together, these technologies help PING deliver on its business goals and tackle the challenges associated with remote work by reducing design risk and fostering creativity, while also improving efficiency and quality.

Looking ahead

As they look to the future, Morales and his engineering colleagues look forward to driving continual advances in the PING product line through collaboration with Altair, Dell Technologies and Intel, and through the ongoing advance of digital technologies.

Collaboration with Altair, Dell Technologies and Intel has helped PING slash design cycle times, decrease variability in product performance and improve quality — without delaying time to market.

They are optimistic that as technology evolves, so too will the innovation of PING's products. Ongoing advances in machine learning, for instance, will allow PING's design and engineering team to ask more intelligent questions, optimize their designs in less time and further increase the speed of innovation.

"Solutions from Intel, Altair and Dell help us confidently build out and deploy systems that will not only achieve great performance but will also perform well for years to come," Morales said. "When you see a product that says 'Intel Inside,' you know a lot of hard work and advanced technologies have gone into making it. We want our customers to feel the same way about us."



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