



Case Study

Turnkey HPC: The True Cost of Time to Productivity

"The hardware purchase price is only one component of the total cost. Lost engineering hours, delayed simulations, extended project schedules, and reduced productivity can quickly dwarf the difference between competing hardware configurations."

Bob Dreis, Senior HPC Account Executive, Nor-Tech

Their Challenge

A large corporate customer needed to replace a six-year-old on-premises HPC cluster. Its engineering team had been extremely satisfied with the performance, reliability, and support of its original turnkey Nor-Tech cluster and selected Nor-Tech for the technology refresh.

Nor-Tech received the purchase order and was on schedule for a January deployment. About one month into the delivery cycle, however, corporate IT overruled engineering and canceled the order. IT required a different, more expensive computer brand and elected to handle the cluster architecture, design, and integration internally. It also replaced the industry-standard InfiniBand interconnect with RoCE Ethernet, choosing a more familiar technology over performance.

Our Solution

Nor-Tech's original approach was a fully integrated turnkey HPC cluster designed to move quickly from delivery to productive use. Ironically, Nor-Tech also resells the computer brand ultimately required by corporate IT and could have proposed a turnkey system on that platform, but was not consulted.

Bob Dreis, Nor-Tech's Senior HPC Account Executive, explained, "Nor-Tech's turnkey technology brings specialized expertise in system architecture, HPC networking, software integration, testing, and deployment together under one provider. HPC infrastructure should be evaluated on total cost, performance, productivity, and time to deployment—not just the price of the hardware."

Their Success

The contrast illustrates the business value of a turnkey approach. Nor-Tech had been on track for a January deployment. After the original order was canceled, the replacement purchase order was not issued until March, equipment did not begin arriving until May, and the replacement cluster was still offline in August. Meanwhile, the customer's engineering team continued working on technology that was now seven years old.

"In HPC, the most expensive system may not be the one with the highest purchase price," Dreis said. "Sometimes, it is the system that takes months longer to become productive." Ultimately, a turnkey HPC solution helps organizations reduce deployment delays and get engineers onto productive computing resources faster.

The story ultimately came full circle. After the new hardware arrived, the customer brought Nor-Tech back in to complete the HPC integration. The internal IT team did not have the specialized

expertise required to configure the servers as a true cluster, implement the job scheduler, and integrate the application layer. Nor-Tech's engineers were ultimately needed to turn the individual hardware components into the productive HPC environment the engineering team had required from the beginning.

The client put it best in a later email to Nor-Tech: "Just wanted you to know that I've been thinking about you lately...Every week of my IT purgatory that goes by, I more fully appreciate (and miss) the turnkey service you provided"!

About Nor-Tech

Nor-Tech built its reputation on the industry's easiest-to-deploy cluster solutions and guaranteed no wait time support. The company designed and built the HPC cluster that enabled the first detection of a gravitational wave—a discovery destined to change history. In addition to HPC clusters, Nor-Tech's custom technology includes workstations, desktops, and servers for a range of applications including CAE, CFD, and FEA. Clients include some of the most respected organizations in the world. Nor-Tech engineers average 20+ years of experience and are responsible for significant high-performance computing innovations. The company has been in business since 1998 and is headquartered in Burnsville, Minn. just outside of Minneapolis. To contact Nor-Tech call 952-808-1000 or visit www.nor-tech.com.

Contact Us for a Free Consultation

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