Tracewell delivers mission-critical systems for smarter intelligence

Based on IBM blade server technology

Overview

The need
Tracewell Systems needed top, commercial, off-the-shelf products to serve as the foundation for the innovative platforms it develops for the military and aerospace industries.

The solution
Tracewell uses IBM blade technology as the foundation for their Rugged Blade Systems, including IBM BladeCenter® HS22 and HS23 servers with Intel® Xeon® processors and IBM System Networking switches.

The benefit
Tracewell Rugged Blade Systems with IBM blade technology significantly increase performance, reduce costs, lower maintenance and can easily incorporate the latest high-performance computing products.

Data challenges for United States Department of Defense (DOD) agencies are no small matter—they are a matter of national security. DOD agencies are responsible for collecting and analyzing a growing amount of mission-critical data from an ever-increasing number of diverse sources. They must analyze data not only in-office, but in a variety of air, land and sea deployments. And they must be prepared to collect, analyze and act on data anytime and anywhere—often instantaneously.

That's where Tracewell Systems is making a difference. The company's Advanced Form Factor Engineering Services and complete line of Rugged Blade Systems based on IBM blade server technology enable agencies to deploy high-performance computing hardware even in harsh environmental conditions. With 40 years of expertise in this area, Tracewell is the market leader, providing innovative design, engineering and manufacturing solutions to some of the nation's largest military, aerospace and commercial organizations. Tracewell's IBM-based solutions take the best commercial off-the-shelf, high-performance computing technology and package it into rugged, high-performance systems that can deliver data analytics for advanced DOD applications.

High-performance computing for extreme environments

With their long history of delivering innovative form factors, Tracewell makes it possible for DOD agencies to deliver mission-critical applications wherever they are needed most—even in environments where it was never before possible. Tracewell Rugged Blade Systems combine IBM blade server technology with intelligent Intel Xeon processors in the first and only ruggedized, military-spec version of a BladeCenter solution for forward deployment by DOD agencies. They are designed to support

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—Matt Tracewell, executive vice president, Tracewell Systems

high-performance application requirements, enabling agencies to manage data needs for key applications including radar, data intelligence, data mining and analytics, advanced systems networking, security and cloud computing.

For example, consider a large DOD agency running IBM systems with critical data analytics software in the data center. Prior to Tracewell Rugged Blade Systems, such an agency would be limited in how they could deploy that software elsewhere—aboard a ship, in an airplane or on a ground-based vehicle. That's because the systems on which the software runs are generally not capable of being deployed in harsh environments. Tracewell Rugged Blade Systems, however, make it possible to have one technology footprint in the data center and in the field. The agency can take the same hardware and software solution they use in the back office and deploy it in other places, in a solution that's designed to survive the rigors of forward deployment.

"It used to be that if you wanted to deploy these applications beyond the back office, you had to create a custom system that took years to develop, was very expensive and would lock you into a solution configuration that could never take advantage of new high-performance products coming to market," explains Matt Tracewell, executive vice president at Tracewell. "We've created a solution architecture, based on IBM blade server technology, in which the foundation remains constant, but the solution can be easily updated as new blades and new IBM technologies come to market."

Working together to engineer the right solutions over the long term

For Tracewell, IBM was the only vendor that could provide what the company needed for a successful solution.

"IBM products represent the best available in the market, the company makes a significant investment in continually delivering the very best technology, and they have a plan and roadmap for the future," says Tracewell. "IBM has delivered, is delivering, and has plans in place to continue to deliver the kind of technology our business needs far into the future."

One of the things that was clear to Tracewell from the start was how well IBM innovation could combine with Tracewell engineering. Delivering the best off-the-shelf technology and making it work in harsh or unusual environments is a feat of engineering excellence that relies both on IBM's ability to provide reliable, scalable solutions that work and Tracewell's ability to uniquely adapt those solutions.

Solution components

- IBM BladeCenter® HS22, HS23
- Intel® Xeon® processors
- IBM System Networking switches

"Our business is in the details—the engineering details," says Tracewell, "and IBM was the only company of its kind that could provide the engineering support, insight and teaming we needed for our solution and our business to work."

Tracewell engaged with a number of groups at IBM to develop its Rugged Blade Systems family of products, including intellectual property, System x, engineering and product development, and a dedicated federal team that is actively involved in working with Tracewell customers. The result was a ruggedized blade system—based on the same technology found in the IBM BladeCenter H Chassis with HS22 blade servers—that meets military specifications. Tracewell is actively working with customers, including the United States Air Force, to deploy its Rugged Blade Systems with the new IBM HS23 blades and IBM high-speed switch technology.

As new technologies from IBM come to market, Tracewell looks to incorporate those capabilities into their IBM-based products to deliver ever-greater performance to their customers.

"IBM provides market-leading high-performance computing, and Tracewell leverages that to enable customers to take advantage of it in a form factor that meets their unique needs," says Tracewell. "As technology progresses, entirely new capabilities emerge. When you are making it possible to do the impossible, new solutions just happen."

Providing unique benefits to position Tracewell for the future

Already the platform of choice for the United States Air Force, Rugged Blade Systems based on IBM blade server technology position Tracewell perfectly to meet the growing data challenges that DOD agencies face. They specifically enable agencies to:

- Reduce costs by replacing proprietary solutions that cost up to 90 percent more
- Increase performance by leveraging advances in high-performance computing
- Undertake cost-effective, rapid product upgrades by changing blades on the fly
- Introduce new solutions, such as system networking
- Meet military specifications and easily handle forward deployment

For more information

Contact your IBM representative or IBM Business Partner, or visit us at:
ibm.com/systems/bladecenter

For more information about Tracewell Systems, visit:

www.tracewellsystems.com