Performance AI infrastructure leader

Dell Technologies partner Business Systems International delivers leading-edge IT infrastructure for performance computing, networking and storage to firms around the world.

Business Systems INTERNATIONAL

IT Infrastructure | EMEA, Global

Business needs

Business Systems International (BSI) requires leading-edge high performance computing technology to support its customers' extremely demanding artificial intelligence applications.
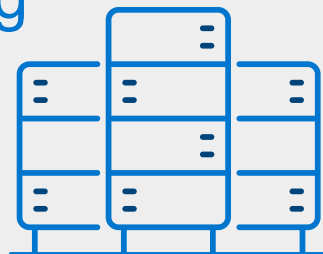
Solutions at a glance

- Dell EMC PowerEdge servers with Intel® Xeon® processors and NVIDIA® GPUs
- Dell Technologies networking and storage systems

Business results

- Delivering extreme processing power
- Providing end-to-end IT solutions
- Capitalising on low-cost renewable energy
- Providing complete deployment and maintenance services

BSI delivers HPC solutions on a

Supercomputing scale

BSI's technology expertise spans

5 decades

12

A legacy of IT leadership

Since the mid-1980s, Business Systems International (BSI) has been a market leader in the provisioning of IT infrastructure for the financial markets, specializing in infrastructure for performance computing, networking and storage. The London-based company subsequently brought these skillsets into other sectors, including retail, healthcare, research, automotive and media.

Today, BSI is a company with a true global reach, with more than 50 percent of its deployments taking place outside of the EMEA region. Popular destinations for the company include the Nordics for the low cost of power, North America, the Far East and emerging markets. With its unique expertise in responsible logistics, customs clearance and taxation, BSI is able to deliver IT solutions to customers quickly and efficiently at locations around the world.

When it comes to IT solutions, BSI's expertise is both broad and deep. The company's engineers are experts in artificial intelligence, high performance computing, GPUs, FPGAs, distributed file systems and networking, among other technologies. This breadth of expertise enables BSI to deliver and support end-to-end solutions for its corporate customers.

Enabling AI applications driven by HPC

Today, BSI's top customers include global hedge funds and other firms focused on high-frequency and algorithmic financial trading. The success of these firms hinges on artificial intelligence applications driven by lightning-fast high performance computing systems, according to Daniel Goodman, Director at Business Systems International.

"These firms are looking to discover trading ideas and trading solutions," Goodman says. "They are running simulations and using AI to test their ideas."

For example, firms might try to determine which way a particular currency is going to move. For these efforts, they will develop algorithms and use AI-driven simulations to forecast market movements, to help them make money when the market does move in a particular direction. This is just one example of what they are trying to discover using AI solutions.

To stay at the leading edge of the financial trading industry, these firms need the support of technology partners who understand artificial intelligence and other data-driven applications, along with the IT infrastructure that powers it all. This is where BSI enters the picture.

End-to-end solutions

For its customers, the BSI value proposition begins with expertise that spans from the AI-driven applications at the top of the stack to the supporting HPC infrastructure that can crunch through massive amounts of data in real time.

"Our customers need a partner who understands artificial intelligence and understands every constituent part in order to deploy a successful solution," Goodman says. "This is not the kind of market where you can simply go shopping for the cheapest price from different suppliers and then try and do it all yourself. It is a multidisciplinary area."

To deliver its highly customised solutions, BSI works very closely with its customers to understand their applications and the applicable current and emerging computing technologies.

"They know how their code works," Goodman says. "The difficulty that they have is making that code work in the most efficient possible way. That's what we do, and that is why we actually face very little or no competition in the marketplace. While other partners are good at selling on price, they don't really understand the underlying technology and how to deliver a complete, end-to-end solution in a trouble-free manner."

Typically, customer deployments start on a small scale and then grow rapidly from there, according to Goodman.

"In all the cases that we have been involved with, the customer journey has begun small and accelerated very quickly into something that is really quite massive," Goodman says. Some of these solutions are probably equivalent in path to the top 50 supercomputers in the world. They are extremely powerful overall solutions."

Capitalising on renewable power

Given the scale of the computing solutions, power consumption and costs are extremely important metrics for BSI clients — and here again, Goodman and his colleagues offer unique expertise.

DELLTechnologies

"These solutions consume an enormous amount of power," he says. "To give you an idea of scale, one of our clients uses as much power as the whole of Luxembourg."

Given the power-hungry nature of the infrastructure and applications, an end-to-end solution from BSI encompasses the right type of power sourced at the right cost. In many cases, this means that BSI deploys and operates the IT infrastructure in Nordic countries, which tend to be rich in low-cost renewable energy, including geothermal, hydroelectric and wind power.

"We implement in Iceland, Norway and Finland using 100 percent renewable energy," Goodman says. "That requires completely new sets of skillsets, because you have to know how to ship to those countries. And you have to have some knowledge and expertise in taxes because countries like Iceland are outside of the EU. You have to be able to get the equipment through customs and recover the taxes. That is an area of our expertise that is key to the clients. We take care of the shipments, and make sure that the overall process is a smooth one, from beginning to end."

Working with Dell Technologies

BSI works closely with Dell Technologies on the development and deployment of many customer solutions. In a sign of this close working relationship, BSI has been recognised as the Dell Technologies partner of the year in the UK and the Dell Technologies OEM Partner of the Year for EMEA, and is a winner of the Dell Technologies President's Circle global award.

"We work very well with Dell Technologies," Goodman says. "We are a very natural fit. Dell has some of the best and most reliable technology, and they are very quick at delivering that technology. That is key in this market. Other manufacturers might take three months to manufacture something that Dell can produce in 10 days."

BSI makes use of a wide range of products from Dell Technologies, including the accelerated-optimised, high-density Dell EMC PowerEdge C4140 server. With support for up to four GPUs and superior thermal efficiency, this 1U server is designed to meet the unique demands of cognitive computing workloads.
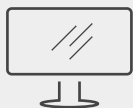
"Whereas the C4140 servers have evolved over time, essentially all of our customers have stuck with that server design," Goodman says. "They like the very small footprint, and that it is a highly efficient and powerful system available at a reasonable price point. The PowerEdge C4140 server is a key enabler of the overall AI solution."

In addition to providing IT infrastructure, Dell Technologies also assists BSI with the deployment and maintenance of solutions. In these efforts, BSI takes the lead, coordinating the work of the Dell technicians and engineers.

"We front all of the maintenance contracts, so our customers see it all through a single pane of glass," Goodman says. "We make it a lot easier for them. Different customers have different requirements, but we will do everything for them, from supplying the equipment to racking it, cabling it and maintaining it over time."

To learn more about BSI's solutions and services, visit www.bsi.uk.com.

Intel Inside®. Powerful Solution Outside.

Learn more about Dell EMC advanced computing

Unlock the value of data with artificial intelligence

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