



BLADES GIVE TRADING APPLICATION AN EDGE

CHALLENGE

Power constraints and a reliance on 1U and 2U rack servers left Tora Trading Services with a complex, inefficient infrastructure that could not scale to provide necessary resources.

SOLUTION

Working with Dell, Tora migrated its trading application to three Dell PowerEdge M1000e modular blade enclosures housing 33 PowerEdge M600 blade servers.

BENEFITS

- Power management and cooling features in Dell blade servers help reduce energy use by 30 percent.
- Dell blade servers help reduce physical installation time by up to 90 percent while greatly simplifying systems management.
- Compact, modular blade design helps save time and infrastructure costs, including reducing hardware footprint by 35 percent.

Tora Trading Services, headquartered in Japan, uses Dell™ PowerEdge™ blade servers to optimize its IT infrastructure—reducing energy use by 30 percent, space requirements by 35 percent, and setup time by up to 90 percent.

Tora Trading Services is the recognized leader in electronic trading systems and liquidity access for Asia. Its TORA Compass trading platform is used by clients across Asia, the United States, and Europe, and accounts for more than 25 percent of the electronic trading flow on the Tokyo Stock Exchange.

Such demanding work and high availability require an efficient, scalable, and robust IT infrastructure. However, the company's existing data centers could not meet these requirements because they depended on 1U and 2U servers that consumed significant power and management resources. "Because our business is growing rapidly, the challenge is to create an efficient data center by reducing power consumption and simplifying server management," says Keith S. Smith, Jr., systems engineer at Tora.

FLEXIBLE, COST-EFFECTIVE BLADE SERVERS

Tora concluded that it needed a system that would draw less power than its existing servers and could integrate advanced I/O connectivity, including multiple network interface card ports and Fibre Channel connectivity. The company also wanted a built-in, streamlined, simple management system that met its stringent redundancy requirements.

After evaluating offerings from several vendors, Tora was impressed by Dell's solution feature set and superior cost advantage. "We've been a Dell customer for a while, and chose its blade servers in part because we wanted to continue to receive the high level of technology, support, and price competitiveness the company provides," says Smith.

Tora selected Dell PowerEdge M1000e modular blade enclosures and asked Dell Infrastructure Consulting Services to help determine the best blade server configuration. As a result, the company deployed 33 PowerEdge M600 blade servers and three PowerEdge M1000e enclosures in its Hong Kong data center, and will purchase three more enclosures in the near future. The company also plans to replace existing 1U and 2U servers in the Tokyo data center with blade servers. Tora received the servers and completed the installation and Linux® OS setup in only two weeks.

"Dell was invaluable in the assessment and design phase. This is because we were taking a chance on a system that had not yet been released. Dell demonstrated

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its excellent customer service in getting us crucial unreleased information in time to make our decisions,” Smith notes. “Additionally, Dell worked closely with Tora to achieve its desired configuration at an attractive cost.”

EFFICIENT ENERGY USE

Power constraints limited the number of servers the company could fit in a rack with proper power redundancy. However, the blade servers’ enhanced design features immediately reduced energy use. “We had significant power savings when we installed the three enclosures,” Smith remarks. “For example, we tested 16 of our original 1U 1950 rack servers at 4,266 VA as opposed to 3,016 VA with one of the enclosures housing 16 blades. That’s a 30 percent power decrease.”

Smith also cites design features such as the high-flow/low-power fans, ultra-efficient power supply, and optimized airflow as useful in efficient power consumption management. “Intelligent design features on the Dell blades, like the dynamic power management tool, ensure we can operate the blades within a specified power envelope,” Smith says.

SIMPLIFIED MANAGEMENT AND DEPLOYMENT

The Dell blade servers have greatly simplified systems management. Tora can now easily manage the entire system with the built-in Chassis Management Controller, and a single console lets staff manage multiple enclosures and blades through redundant, secure access paths. In addition, real-time reporting for enclosure and blade power consumption through the Integrated Dell Remote Access Controller (iDRAC) greatly enhances the visibility and accuracy of resource utilization. “The entire blade solution is very user-friendly; it’s wonderful to have everything in one place,” Smith says.

Tora can also deploy new server resources quickly and efficiently. “Dell’s

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—Keith S. Smith Jr.
Systems engineer at Tora Trading Services
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unified Web interface saves us a tremendous amount of administration and setup time on our blade servers,” Smith remarks. “For example, with 1U and 2U servers, initial setup and pre-OS configuration can take several hours for 16 1U servers, compared to just 5 to 10 minutes with a chassis full of blades.” The unified Web interface can remotely shut down a blade in minutes, compared with over 30 minutes to arrange a remote hands service to press the power button on a standard rack server. Additionally, power readings take only 2 minutes with blade servers, which is useful for checking power circuit utilization before adding new equipment.

The flexibility of the Dell blade design also simplifies hardware access and configuration. “It only takes us 2 minutes to slide a blade into the chassis and have it ready for use. In our experience, a similar task with 1U and 2U servers would take more than 20 minutes, even with an experienced engineer on-site,” says Smith. He also notes that configuring the I/O module takes only 5 minutes on blade servers and eliminates the need for network patching to a separate Ethernet switch that is associated with 1U and 2U servers.

REDUCED SPACE AND INFRASTRUCTURE COSTS

One of the biggest benefits of using Dell blade servers is the modular design. The ability to install components such as

switches into the enclosure, for example, has saved Tora time and infrastructure costs. “We could not have done this without Dell’s FlexIO switch technology,” says Smith. “We can scale to provide more stacking functionality without having to throw out existing hardware investments.”

Tora has also benefited from the offer of greater-density blade servers compared with 1U servers. “The Dell PowerEdge M600 blade servers provide 35 percent greater density than our 1U servers. They are excellent in saving space costs,” notes Smith.

“We rely on Dell blades because they allow us to get the most out of our data center space at the best price,” Smith says. “Dell blades are the right solution for our business because the reduced power, space, and management requirements allow us to focus our resources. We are confident that our clients are benefiting from the most reliable and efficient technology available today.”

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