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THE 2003 WATERS EDITORIAL AWARDS

BEST SERVER SOLUTION

EGENERA

If you haven't already investigated and deployed blade servers for your corporate data center, you are behind the curve. This newest type of server, which has been around for ages in the telecommunications industry, provides a single answer for the seemingly contradictory needs of consolidating servers and adding new processing resources to the network for grid computing at the same time. *Waters* names Egenera and its BladeFrame line the Best Server Solution. Although a number of the large server vendors have launched their own blade server lines, Egenera was one of the first vendors out of the gate with a solution that targeted the financial services industry specifically.

Following the natural trend of computing disintegration, which started with the concept of storage area networks (SANs) in the mid-'90s, Egenera extrapolated the trend and developed what it calls a Processor Area Network (PAN). By situating processors in a single environment and letting them share common chassis-based resources, PANs reduce excess computing capacity, the number of physical points of failure as well as real estates, electrical and HVAC demands while improving processor utilization and total cost of ownership. On a human level, it also finally gets rid of that rat's nest of network cabling in the server room.

Egenera's basic BladeFrame system, which can run Red Hat Enterprise and Microsoft Windows Server 2003 Enterprise Edition, consists of a chassis that houses up to 24 four-way IA-32 processor blades. The company also recently released a low-end solution, dubbed BladeFrame ES, which fits in the standard 19-inch computer rack and can hold up to six processor blades. Both systems rely on the Egenera PAN management software that replaces approximately 80 percent of legacy I/O devices, such as network interface cards, host bus adapters and network and storage switch ports, with virtualized counterparts.

The management software also monitors and optimizes the system's performance and makes it a self-healing and self-recovering computing environment. ■

Honorable Mentions: Dell, Hewlett-Packard and IBM

TOP IT PROJECT

JPMORGAN CHASE COMPUTE BACKBONE

Testing a new technology takes gumption; embracing it fully before any other investment bank on Wall Street does takes sheer guts. When JPMorgan Chase (JPMC) decided to pursue grid computing back in 2002 to calculate its loan portfolio over hundreds of networked CPUs, it helped to launch the era of grid or collaborative computing in financial services.

At a recent conference hosted by a grid user group, JPMC's internally developed grid project, christened Compute Backbone, was cited as the leading example of what financial companies can accomplish with the under-utilized computing power that lies dormant in a bank's server farm. JPMC's Compute Backbone consists of 500 to 1,000 CPUs housed in an undisclosed number of servers that can perform intensive risk calculations in hours as instead of days, says Ty Panagoplos, vice president and program director of JPMC Compute Backbone. He oversees Compute Backbone and reports to Steven Neiman, JPMC's head of high-performance computing.

While grid computing vendors like IBM, Hewlett Packard and others promote the notion that financial firms can leverage servers already in use or currently in storage, JPMC bought new Intel-based CPUs housed in Egenera servers running Linux for its Compute Backbone. JPMC says it did this in order to concentrate exclusively on Linux instead of using the firm's current Sun Microsystems Solaris-based servers. The applications on the grid had to go through a paradigm shift in the way they modularize and use computing power, explains a JPMC spokesperson. "It's not that Sun is incompatible; we just chose Linux," says Panagoplos.

After implementing the loan portfolio grid project JPMC had at least three other Compute Backbone projects scheduled for the end of this year. One project was pegged for a foreign exchange (FX) engine. Panagoplos says that the investment bank will most likely grid-enable its Web services in 2004 as well. "Today, JMPC does a lot with Web services. At a future date, we plan to incorporate Web services onto the grid," he says. ■

Honorable Mentions: Deutsche Bank's Vision Program and Barclays Capital's new trading floor