

Blade servers mean business.

Once reserved for specific tasks, blade servers are now being widely deployed by companies looking to save costs and space today, while making room to scale tomorrow.

By Cara Garretson

Blade servers have emerged as a way for companies to quickly build dynamic computing environments that fit their needs today, and grow with business. Offering high levels of flexibility, scalability and efficiency, blade servers are now being used for mission-critical applications; they are viewed as a platform for virtualization and as a bridge to cloud computing. But as the advantages become widely known, buyers are wondering which features are most important, which vendors can be relied on and how to best integrate and manage blade servers within their IT architectures.

According to market researcher IDC, blade servers were the only segment of the overall server market to experience growth in 2009. Companies are choosing blade servers over their rack-mounted counterparts to pack more computing power into less space (which lowers electricity and cooling costs) and reduce the number of servers to manage. Companies can scale blade servers quickly and easily by adding more blades, slicing deployment times from hours to minutes when more power, or upgrades to existing systems, is needed.

Also, blades and traditional servers can coexist in the same rack, so customers can preserve their existing IT investments. The integrated networking capabilities of many blade servers help save on networking expenses, such as cabling and switch ports, while offering the ability to scale in the future by adding blades to a chassis that's already been configured and networked.

Built for the future.

Blade servers were originally perceived as suited for a few tasks, such as high-density front-end Web servers. Today, they are used in a range of environments, says Mike Roberts, senior product planning manager with Dell. "Blades then didn't have a lot of capacity like rack-mounted servers; they didn't have the memory capacity, I/O expandability or processor choices," he says. "But that's changed over the last four years; blades now have the same I/O capacity, expandability, processors ...so they've really opened up the pool of application targets."

Companies today are looking to blade servers to drive business, according to market researcher IDC, which surveyed 200 IT directors of U.S. organizations that range in size and industry. More than half the respondents to the March 2010 survey say they are using blade servers for strategic initiatives, as opposed to simple, tactical ones, including projects that increase the speed and flexibility of IT systems to support business.



Blade servers are also being used in virtualized environments: "Blade systems and virtualization are closely associated technologies; in fact, the survey reveals that virtualization adoption climbs in parallel with blade adoption within the customer's environment," writes Jed Scaramella, senior research analyst with IDC, in the study's introduction. "Layering virtualization on top of blade platforms places customers on the path to converge systems, one that will enable IT to create virtual resource pools versus the disparate silos that exist today. IDC believes this will eventually evolve into private clouds within the enterprise datacenter."

Purchasing priorities.

As more vendors crowd the market, customers must prioritize which blade server benefits are most strategic to the company, and choose their products and their vendors accordingly. "Is energy efficiency a key deciding factor? How important is rack density? What do they need from a switching environment? What management capabilities are most critical? Does the vendor's I/O capability meet their needs?" asks Roberts. Customers should explore the energy-saving options that different blade server vendors offer — blade chassis that can shut down power supplies when power isn't needed and ramp fans up and down, for example, will deliver more efficiency.

Then there's the issue of vendor lock-in. Since customers can deploy only as many blades in a chassis as are needed today and save the rest of the space for future growth, they must make sure the priorities of their blade server vendor match their own.

"Blade chassis are inherently proprietary; you can only put blades from one vendor into that vendor's chassis," says Roberts. "However, they must seamlessly integrate into a broad range of external networking, management, power and storage environments. Some vendors will try to lock customers into their management solutions and proprietary I/O solutions, which adds significant cost and complexity."

Consider management.

"How blade servers are managed is an increasingly important consideration, particularly when it comes to integrating blades into a company's overall datacenter management strategy," says Jim Burton, vice president and senior analyst for entry servers and blades at Ideas International. "Although basic management and deployment capabilities are typically built into the chassis management controller, blade server buyers still need to consider the bigger picture. Can these servers be easily integrated and managed within the existing IT environment?"

"In the past few years, blade server vendors have been putting a huge amount of effort into their management tools, adding capabilities like advanced power and virtualization management," Burton adds. "Since the blade server hardware itself is becoming almost a commodity, buyers should focus on the management software to determine if the blade server they're looking to buy can be efficiently administered with their existing management tools."

Cara Garretson is a freelance business and technology writer based in Washington, D.C.



Why Dell does blades right.

For companies looking to easily manage blade servers along with the rest of the datacenter, Dell offers a dynamic solution that allows them to make the most of their computing resources. In July, the company announced its intention to acquire Scalent, a developer of software for dynamically managing datacenter infrastructures.

Dell plans to integrate Scalent technology into its Advanced Infrastructure Manager (AIM) solution, allowing a single administrator to dynamically allocate computers, network devices and storage systems for both physical and virtual application workloads so that resources can be deployed and repurposed without requiring system changes. AIM's open architecture works with blade and rack-mounted servers, as well as third-party products, to provide a central management interface, offering efficiency and value for customers while easing management tasks across the environment.

"The Scalent acquisition is really critical for Dell, in that it gives us the capability to provide a single point where you can manage the entire workload — it's storage connectivity, LAN connectivity and server configuration all in one place," says Mike Roberts, senior product planning manager with Dell. "You can now very quickly and easily move physical and/or virtual workloads around, across multiple types of hardware, to make your datacenter much more agile."

More Information @ ▶

dell.com/blades