TAKING IT TO THE NEXT LEVEL

Layered Tech chose Dell servers to build a new infrastructure that would take its managed hosting and cloud services to a new level, and saw performance increase by 22 percent

As a leader in hosting services, Layered Tech is dedicated to providing the technology and infrastructure that best meet the needs of its customers. Its infrastructure must power numerous Web sites and Internet-enabled applications including e-commerce, software as a service, and content distribution.

SOLUTIONS

- **CONSOLIDATION**
- **VIRTUALIZATION**
- **POWER**

layeredtech®

CUSTOMER PROFILE

COUNTRY: United States

INDUSTRY: Technology

NUMBER OF EMPLOYEES: 140

WEB ADDRESS: *www.layeredtech.com*

CHALLENGE

When a major acquisition made Layered Tech a larger company with new goals and an opportunity to expand its customer base, the IT team had to revamp its infrastructure to match.

SOLUTION

Dell™ PowerEdge™ servers based on the Intel® Xeon® processor 5500 series enable the company to both serve its existing customers and take on larger enterprise customers, while streamlining the infrastructure and holding down costs.

BENEFITS

Get IT Faster

- Dell reduces server delivery time from 4 weeks to 1.5 weeks, enabling Layered Tech to better support its fast-growing customers

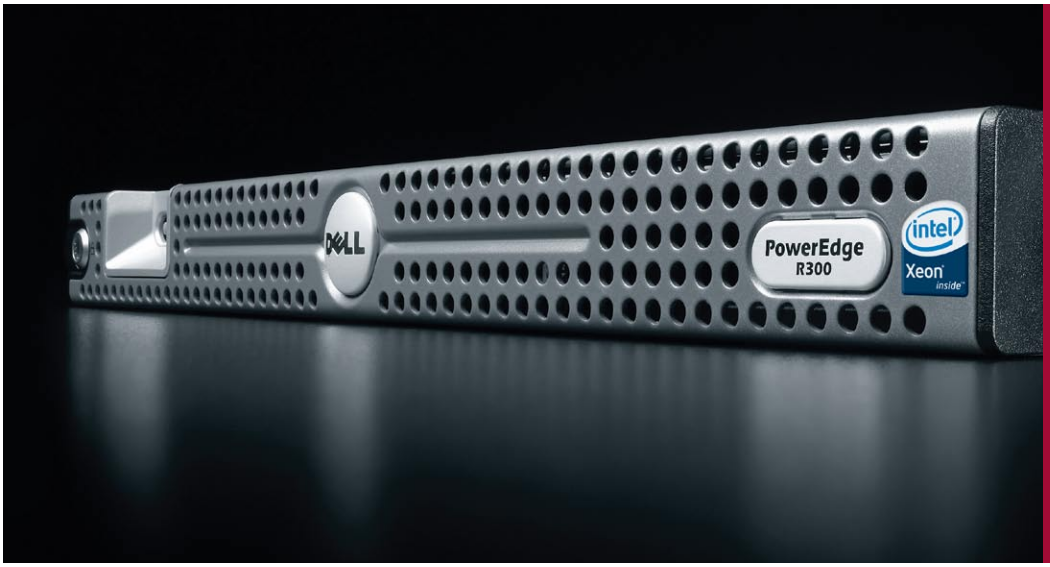
Run IT Better

- A major Layered Tech customer experiences 22 percent faster performance
- The IT team projects a 50 percent increase in virtual machines per server, helping to reduce hosting costs
- The Dell Product Configuration Calculator helps Layered Tech boost data center density by up to 25 percent to host more customers in the same space

Grow IT Smarter

- Choosing Dell helps open new market segments for Layered Tech

DELL



HOW IT WORKS

HARDWARE

- Dell™ PowerEdge™ R710, PowerEdge R610, and PowerEdge R300 servers with the Intel® Xeon® processor 5500 series

SOFTWARE

- VMware® vSphere™ 4.0

SERVICES

- Dell ProSupport

"WITH DELL, WE CAN MEET THE EXPECTATIONS OF OUR CUSTOMERS TO QUICKLY SUPPORT THEIR GROWTH, AND THEY IN TURN CAN PROVIDE GREATER AVAILABILITY OF SERVICES TO THEIR CUSTOMERS."

Terrance Bush, chief operating officer, Layered Tech

The company has been a pioneer in on-demand grid and cloud computing as well, enabling customers to maximize savings on operating costs and capital expenses. When Layered Tech acquired a major dedicated hosting provider, however, it suddenly became a much larger company with new customers, new goals, and new infrastructure requirements.

AN ACQUISITION BRINGS A NEW BUSINESS REALITY

It was clear to the IT team that the infrastructure had to be reinvented to match the new reality and to meet the management team's objectives for growth. "We realized our goals had shifted since the acquisition," says Terrance Bush, chief operating officer at Layered Tech. "While continuing to serve our existing customers, we had an opportunity with our combined data centers to work with larger enterprise customers as well. That called for a range of servers for different-sized customers, and powerful, cost-effective technology we could take into new markets."

The IT team had to be sure not to forget about existing customers, many of them fast-growing, even while adjusting to serve new businesses. "Many of our existing customers were rapidly growing Web sites and hosting companies requiring quick delivery of new equipment to meet their capacity demands," says Bush. "Others ran large SQL databases requiring high performance and access to plenty of memory."

Another change was the growth in cloud computing customers. Servers had to meet stringent power and cooling requirements so that Layered Tech could host more of these customers in the available data center space. "To offer cost-effective virtualized computing and cloud services, we need to run a high number of virtual machines on each physical server and maximize the number of servers per rack," says Bush. "The more cool-running and energy-efficient the servers, the more density we can achieve, and the more attractive we can make our service offerings."

CHOOSING A SINGLE VENDOR FOR THE COMBINED COMPANY

Layered Tech also decided to select a single server vendor. The acquisition created a combined, global operation with eight data centers, but the two previously separate organizations had different server suppliers. The acquired company had long used Dell as its server provider, and Layered Tech had used another major server brand. "Managing hardware from both vendors would only increase our operating costs," says Bush. "If we standardized on one vendor, our training needs would be reduced, our IT staff would be more productive, and we could be more efficient at bringing new systems online quickly for our customers."

PUTTING BOTH VENDORS' SERVERS TO THE TEST

Anticipating a difficult decision, the IT team drew up a list of requirements for comparing the two brands, ranging from performance and memory to energy efficiency and speed of delivery.

Both server vendors recommended equipment to meet the company's requirements, and provided test units for Layered Tech to evaluate.

To ensure customers would be happy with the new infrastructure, the IT team invited several of its major customers to help test the equipment on their workloads at Layered Tech facilities. "We immediately found an overwhelming response

"WE IMMEDIATELY FOUND AN OVERWHELMING RESPONSE FROM OUR CUSTOMERS IN FAVOR OF THE DELL SERVERS BASED ON ALL OF THE SELECTION CRITERIA."

Neal Marple, vice president of operations, Layered Tech

from our customers in favor of the Dell servers based on all of the selection criteria," says Neal Marple, vice president of operations at Layered Tech. "When we looked at the overall power, cooling, performance, and speed of delivery, it was clear Dell was the direction to go. Using the Intel Xeon processor 5500 series was another element in Dell's favor. Our customers were aware it had received excellent industry reviews."

LAYERED TECH STANDARDIZES ON DELL POWEREDGE SERVERS

Based on the evaluation, Layered Tech decided to standardize on Dell servers. The variety of sizes offered by Dell—including the Dell PowerEdge R300, PowerEdge R610, and PowerEdge R710 servers—means that Layered Tech can tailor a dedicated server precisely to a customer's needs. "The PowerEdge R300 is our baseline server, which we offer with a single quad-core processor, a couple of gigabytes of RAM, and a single Serial ATA (SATA) drive," says Marple. "We offer the R610 to our customers that need additional processors and RAM. For customers that need added drive capacity, we recommend the PowerEdge R710 with 2.5-inch drives."

Layered Tech also standardized on the PowerEdge R610 server for most of its virtualized products, including grid installations and large VMware deployments. "The PowerEdge R610 packs a lot of processing capability in a 1U chassis and the power efficiency is excellent, making it great for high-density, virtualized environments," says Marple. "The PowerEdge R610 can also support an enterprise-grade SAN and is available with high-performance solid-state drives, so it's attractive to our enterprise customers."

DELL REDUCES SERVER DELIVERY TIME FROM 4 WEEKS TO 1.5 WEEKS

Both the Layered Tech team and customers were impressed with the short delivery times for the Dell servers. "With the other server vendor, the turnaround time was three to four weeks from the moment an order was placed to the moment when it was actually online and available to our customers," says Bush. "Dell takes just 7 to 10 business days, or about a week and a half. With Dell, we can meet the expectations of our customers to quickly support their growth, and they in turn can provide greater availability of services to their customers."

LAYERED TECH CUSTOMER SEES 22 PERCENT FASTER PERFORMANCE

One of the first Layered Tech customers to begin using the new Dell servers was a large social networking site that had previously used the other brand of servers exclusively. "They ran their workloads on the Dell PowerEdge R610 servers as part of our evaluation testing, and saw a performance increase of up to 22 percent versus the other brand of dual-processor, quad-core servers," says Marple. "They immediately asked us how soon they could make the move to the Dell equipment."

IT TEAM PROJECTS 50 PERCENT INCREASE IN VIRTUAL MACHINES PER SERVER

The Layered Tech team is testing Dell PowerEdge R710 and PowerEdge R610 servers in its current VMware environment, and is able to place up to twice as many virtual machines on each physical server compared to its previous quad-core, dual-processor machines. "We're running an average of ten virtual machines on each of our older servers, and we anticipate we'll regularly get anywhere from 15 to 20 virtual machines on the new ones," says Bush. "The Dell PowerEdge R710 and PowerEdge R610 servers have the performance and memory to support more customers and expand the services we can provide on each physical server. Dell, Intel, and VMware have worked together to create a platform that's really optimized for virtualization."

DELL PRODUCT CONFIGURATION CALCULATOR HELPS BOOST DENSITY BY UP TO 25 PERCENT

Technicians at Layered Tech are using information and tools from Dell to fit more processing capacity into the available data center space. "We're moving to 208 V power, which helps servers run more efficiently," says Bush. "The Dell Product Configuration Calculator and information that Dell provides are a big help in planning out our rack density and avoiding hot spots."

The Layered Tech team projects it will be able to boost density by up to 25 percent based on the power efficiency of the Dell server product line. "We're staying within our power and cooling envelope in racks where we have deployed upward of 20 Dell servers with the Intel Xeon processor 5500 series," says Marple. "Our estimates are that we can increase data center capacity by 15 to 25 percent with the Dell PowerEdge servers, which will help us operate more efficiently and keep our costs down."

CHOOSING DELL HELPS OPEN NEW MARKET SEGMENTS FOR LAYERED TECH

The Layered Tech team believes its new Dell PowerEdge servers with the Intel Xeon processor 5500 series help provide growth opportunities for the company. "An enterprise IT executive is looking for credibility, and partnering with Dell enhances our reputation with prospective customers," says Tom Eagle, marketing director at Layered Tech. "They have peace of mind knowing that we're dealing with the best in the business and that we're keeping up with what Dell is doing in terms of its product evolution."

COMPELLING COST/PERFORMANCE FOR LAYERED TECH SERVICES

The cost/performance and energy efficiency of the Dell servers are also key factors. "An enterprise customer must obtain the best cost/performance ratio possible for its dedicated infrastructure,"

"WITH THE ENERGY EFFICIENCY OF THE DELL SERVERS AND INTEL PROCESSORS, WE'RE GETTING MORE COMPUTING OUT OF EACH SERVER RACK. THAT ENABLES US TO PRESENT A COST/PERFORMANCE STORY THAT'S VERY COMPELLING TO THE NEW MARKETS WE'RE ENTERING."

Tom Eagle, marketing director, Layered Tech

says Eagle. "With the energy efficiency of the Dell servers and Intel processors, we're getting more computing out of each server rack. That enables us to present a cost/performance story that's very compelling to the new markets we're entering."

Layered Tech credits Dell with making the choice of servers easy. "When we acquired a company that used a different server brand, we suddenly had two suppliers and a whole new set of opportunities," says Bush. "We had to decide which server infrastructure could take us to the next level and meet new customer requirements. We asked both vendors to show us what they had to offer, and invited some of our biggest customers to help us choose. It turned out not to be a difficult decision—the choice was definitely Dell."

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