



HEALTHY IT INFRASTRUCTURE

Dell™ PowerEdge™ blade and rack servers provide the foundation of a high-density virtualized infrastructure at ALERT Life Sciences Computing—supporting simplified management, high performance, and rapid deployment.

CHALLENGE

With the IT infrastructure at ALERT Life Sciences Computing growing by more than 100 percent annually, the IT department needed to take action to avoid running out of rack space or spending increasing amounts of time on basic server management.

SOLUTION

ALERT deployed a Dell PowerEdge M1000e modular blade enclosure with PowerEdge M600 blade servers to support its internal IT infrastructure. The company connected the enclosure to a Dell/EMC CX3-10c storage area network and implemented PowerEdge R805 servers to run VMware® virtualization software.

BENEFITS

- Dell engineers installed the new PowerEdge M1000e enclosure in just over one hour.
- Virtual machines can be deployed up to 75 percent faster than non-virtualized physical servers.
- Simplified management tools help reduce reboot time from 15 minutes to less than a minute.
- Two virtualized servers do the work of 20 non-virtualized physical servers.
- Dell ProSupport for IT helps protect investments with rapid support.

Related Categories:

ALERT Life Sciences Computing, blade servers, case study, Dell PowerEdge blade servers, virtualization

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ALERT Life Sciences Computing, a medical services provider based in Portugal, has developed rapidly since its launch in 1999, with annual growth rates averaging 100 percent. “In just three years, we went from 4 to 37 servers,” says Filipe Pinto, system administrator at ALERT. When the company moved to new offices with a new data center, Pinto saw an opportunity to consolidate its servers and help streamline its server management process. “We said that this was the time to reorganize our server infrastructure so we could continue to meet the growing demands of the business without running out of rack space,” he says.

HIGH-DENSITY INFRASTRUCTURE

Pinto wanted servers that not only delivered high-density computing, the latest Intel® Xeon® processors, and high energy efficiency, but also enhanced remote manageability. During the week, manually rebooting servers in the new offices took at least 15 minutes, requiring him to descend nine floors to the data center. And on weekends, when Pinto traveled 200 miles away to his hometown, the task was thoroughly impracticable.

ALERT decided to implement virtualization technology to help overcome these challenges—providing an effective way to expand its infrastructure with limited rack space while helping simplify management and enabling rapid deployment of new applications. Pinto compared several leading IT vendors, looking specifically at their blade server technology and virtualization offerings. “Compared with the blade servers of other IT solution providers, Dell blade servers offered the best mix of high-density computing, processing power, energy efficiency, and manageability,” says Pinto.

ALERT deployed a Dell PowerEdge M1000e modular blade enclosure and 14 Intel Xeon processor-based PowerEdge M600 blade servers. “The servers arrived prebuilt along with the chassis,” says Pinto. “A couple of days later, Dell Infrastructure Consulting Services arrived and an engineer installed everything in just over an hour. We’d not experienced anything like it before.” He adds, “My time is expensive, so for Dell to install all the blades and chassis and do it so quickly is of great benefit to me and the company.”

EFFICIENT, HIGH-PERFORMANCE BLADE SERVERS

Dell PowerEdge M600 blade servers are designed to provide high levels of performance and reliability as well as low power consumption. In addition to providing up to 60 percent

greater computing density than traditional 1U servers, tests have shown that PowerEdge M600 blade servers consume up to 19 percent less power than other leading blade servers.¹ “We are very pleased with the performance of the Dell PowerEdge M600 blade servers,” he says. “They are incredibly stable and high performing.”

Pinto has also deployed several other Dell systems, including three Dell/EMC CX3-10c storage area networks and numerous PowerEdge servers. The blade servers run Microsoft® Navision, Microsoft Office SharePoint® Server, Microsoft SQL Server®, and VMware ESX software, as well as Oracle® Database 10g databases. All the blade servers are connected to a Dell/EMC CX3-10c storage array, with the entire infrastructure supporting approximately 4 TB of data.

SIMPLIFIED SERVER MANAGEMENT

According to Pinto, server management has become incredibly simple with Dell technology. For example, the Avocent iKVM (integrated keyboard, video, mouse) switch in the Dell PowerEdge M1000e modular blade enclosure enables Pinto to view, monitor, and manage the blade servers. “I have control over all my blades from a single console,” Pinto says. Other key features of the switch include local access to each blade server, integration with the Avocent On-Screen Configuration and Activity Reporting (OSCAR) graphical user interface for configuration and to work with existing Avocent KVM infrastructures, and integration with the Microsoft Active Directory® directory service.

The iKVM switch also allows access to the integrated Dell Remote Access Controller (iDRAC) on each blade server, which helps simplify remote management. “I can control and monitor each blade using a simple Web browser-based graphical user interface,” Pinto says. “I can inspect

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—Filipe Pinto
System administrator at ALERT Life Sciences Computing
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event log records, manage local users, and shut down or reboot the machine.”


Pinto says it takes less than a minute to reboot a system—a drastic reduction from the 15 minutes this task previously took. “I really notice the difference toward the end of each month when I’m writing up reports,” Pinto says. “I can get on with my work instead of being interrupted by server management tasks.” Through the company’s virtual private network, Pinto can also seamlessly complete management tasks such as rebooting servers from home without having to make a long trip back to the office.

RAPID DEPLOYMENT AND RESPONSIVE SUPPORT

The new Dell infrastructure highlights the value of VMware virtualization technology. “I wanted to introduce VMware for a long time,” says Pinto. “The alliance between Dell and VMware gave us confidence to deploy virtualization technology in our infrastructure.”

ALERT deployed two Dell PowerEdge R805 servers, which are designed for optimum virtualization performance. In addition to offering twice the memory and I/O scalability of previous 2U servers, the PowerEdge R805 combines high performance with low energy consumption. By running the VMware ESX virtualization platform, these 2 servers can do the same work as 20 non-virtualized servers while helping significantly reduce deployment

times, Pinto says. “I can set up a virtual machine in 30 minutes, when it took me up to two hours to install a physical machine in the past,” he says. “Imagine how much time that frees up to work on more strategic, higher-value tasks.”

Pinto estimates that a system failure would cost ALERT more than US\$1,000 (€676) an hour. For this reason, the company’s IT systems must be reliable and backed by responsive support services. At the heart of the Dell ProSupport for IT service used by ALERT is a 24/7 commitment from Dell Expert Centers in which IT professionals with case management skills can help Pinto troubleshoot. In addition, Next Business Day On-Site Service After Remote Diagnosis helps ensure delivery and installation of new or replacement parts. With the Dell infrastructure and Dell ProSupport for IT, Pinto believes he has the right combination of products and services to help avoid periods of expensive downtime. 



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¹“SPECjbb2005 Performance and Power Consumption on Dell, HP, and IBM Blade Servers,” by Principled Technologies, December 2007, DELL.COM/Downloads/Global/Products/Pedge/En/pe_blades_specjbb2005.pdf.