(intel®)
Look Inside.™

A perfect team

Amulet Hotkey* chose Dell PowerEdge* servers with the Intel® Xeon® processor E5 family to bring its Zero Client* training technology to the defence sector

Challenges
- **High performance.** Amulet Hotkey needed a server capable of running multiple 3D battlefield simulations at the same time, and of streaming them to Zero Client* devices in real time.
- **Scalable customization.** Amulet Hotkey needed a way to effectively create its customized hardware builds.

Solutions
- **Dell servers.** Amulet Hotkey chose Dell PowerEdge*, with the Intel® Xeon® processor E5 family.
- **Dell relationship with Amulet.** Amulet Hotkey's relationship with Dell OEM Solutions and Dell's Configuration Services* enabled Amulet to customize the server to the customer's requirements and ship with Amulet's branding and part numbers.

Impact
- **Simultaneous simulation.** The server can support multiple simulation sessions running at the same time, streamed to Zero Client devices in the training room.
- **Future proofing.** A close relationship between Dell, Intel and Amulet Hotkey means new technologies can be delivered to customers faster.
- **Growth potential.** Amulet Hotkey has been able to build on its experience in the finance sector and enter the defence sector, creating new opportunities for growth and long-term contract wins.

AMULET HOTKEY
solutions you can bank on

"Intel was an important part of the solution because we wanted to make sure we have an established supplier that is a recognized worldwide name. Dell's close relationship with Intel means they have the latest and greatest Intel® processors available with the right architecture as early as possible."

Antony Summerfield,
Director of Defence,
Amulet Hotkey

Bringing security to training

You can walk into many classrooms today and see computers on every desk, or even every working surface. They enable us to work and study more productively. But the associated noise, energy use and power consumption can be an annoyance. In the finance and defence sectors, the devices also represent a security risk. If a machine is lost or stolen, data stored on it could compromise the organization.

Amulet Hotkey has been pioneering a new approach, which solves these problems. PC-over-IP* (PCoIP*) runs software on a server and streams its display over an encrypted Internet link to zero clients. The Amulet Hotkey zero clients are desktop devices which replace the computer. The zero clients use less energy and generate less heat and noise than conventional computing devices. Crucially, they don't store any information. If one is stolen, there's no data on it to be recovered. Because there is no operating system on the client device, it's easy to maintain and there is no risk of malware. Using the IP network means the system works over long distances.

Amulet Hotkey has more than 20,000 blade workstations powering business-critical applications in the investment banking sector. It also has a growing installed base through the defence sector covering maritime, air and land in the 28

NATO countries. The company has identified an opportunity to provide its technology to the defence industry for simulation and training applications in the 28 NATO member countries.

Battlefield simulation is a demanding application requiring high-quality graphics and a graphic-workstation-style experience. To create its training and simulation solution, Amulet Hotkey has chosen Dell PowerEdge servers with the Intel Xeon processor E5-2600 series.

Building a relationship

"Dell has a very strong data center presence and its blade technology is at the forefront of green technology, data center consolidation and high performance. These are crucial for planning secure training in a cloud based environment," said Antony Summerfield, Director of Defence at Amulet Hotkey. "Dell's globalized sales force gives us an opportunity to take advantage of sales opportunities with Dell and assist both companies in the ability to sell more blades."

He adds: "Intel was an important part of the solution because we wanted to make sure we had an established technology supplier that is a recognized worldwide name. Dell's close relationship with Intel means they have the latest and greatest Intel® processors available with the right architecture as early as possible."

Close relationship between Dell OEM Solutions and Intel delivers new technologies faster

Amulet Hotkey's Internal Defence Solutions Consultant Iain Dingsdale said: "It's becoming increasingly important for some of our customers that we are hand in glove with Intel and Dell. Some customers are planning five, 10, 12 years out and they want to know about the products that will become available to them. Increasing the power of the processor is incredibly important, while driving down the energy consumption. Dell updates its offering with new Intel processors as soon as they are available, and our clients consider it important to have those new technologies as soon as possible too."

The solution is based on the Dell PowerEdge M1000e* Blade Enclosure and Dell PowerEdge servers using E5-2400 and E5-2600 Intel Xeon CPUs.

Dell OEM Solutions and Amulet Hotkey cooperate closely on engineering. Dell's OEM team provides Amulet Hotkey with early access to new hardware and, through weekly calls with the engineering team, keeps Amulet's engineers informed of changes that might impact their solution.

The Amulet Hotkey solution has been designed to work with the Virtual Battlespace* (VBS*) software from Bohemia Interactive Simulations, which provides an immersive 3D environment for conducting training exercises and rehearsing missions. It is widely used by military forces across NATO. "We've been working with software providers to make sure we can deliver solid performance," said Summerfield. "We've carried out months of extensive testing with end users, using the latest version of the software, which enables us to have confidence the platform will be acceptable for training and simulation over the next six years." Amulet Hotkey's range of solutions can support up to eight high-end users on a single server, each running their own software instance.

Customizing the R720 server

By working with Dell OEM Solutions, Amulet Hotkey has been able to create a complete server solution. Dell's Configuration Services enable the OEM team to customize a standard Dell solution so it meets Amulet Hotkey's needs. The product ships from Dell with a custom Amulet Hotkey bezel on it, and includes the Windows* 7 operating system, VMware* and the installed application software. Dell installs the graphics cards and the PCoIP Hardware Accelerator card. used for encryption, and makes the complete solution available for ordering through Dell using a single part number.

The ability to create a solution that ships with Amulet's branding was crucial. "We have built up significant brand recognition on trading floors for our mission-critical and secure performance," said Summerfield. "We want to make sure we're taking that name across to the defence sector. It's crucial that people associate the performance with Amulet's name. Behind that name are thousands of hours of engineering."

It's hard to change a training system because when the system changes, the trainers need to be retrained. For that reason, many of Amulet's customers are attracted by the fact that Dell OEM Solutions can offer a full component build even after the core server has reached its end of life. The Amulet solution can be supported and locked down for seven years. Under a collaboration support agreement, clients can choose to work with Dell or with Amulet as the first line of support. About 95 percent of Amulet Hotkey customers subscribe to Dell ProSupport* to benefit from next-day service on mission-critical systems.

"The best thing about the Amulet, Dell and Intel technology is that it gives consistent performance. All our architecture is based around Intel processors, giving us great performance and value," said Dingsdale.

Lessons Learned

By working with Dell OEM Solutions, Amulet Hotkey has been able to draw upon Dell's engineering expertise, sales reach and close relationship with Intel. As a result, Dell is able to ship custom products for Amulet Hotkey using Amulet's branding and part number. Through its close relationship with Dell, Amulet has early access to new technologies and is able to benefit from the latest developments in processor and server technologies.
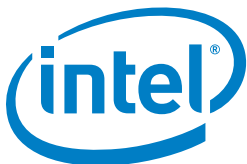
Contact
antony.summerfield@amulethotkey.com

"Working with Dell OEM Solutions is very much about going after customers where there is not an off-the-shelf product available. Amulet Hotkey and Dell OEM together build the defence training solution, test it, take it through the product life cycle and deliver a de-risked solution to the final customer," said Summerfield.

Amulet estimates that its solution saves £59,800 over eight years in hardware costs and £918.42 per year in energy costs compared to a traditional training room using tower PCs (both figures based on a 30-seat learning suite).

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