



Gaming host provider delivers winning performance

Netherlands-based infrastructure provider for global online gaming offers customers 100 per cent uptime with a reliable, customised cloud infrastructure



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Customer profile



Company	Interactive 3D (i3D.net)
Industry	Hosting
Country	The Netherlands
Employees	30
Website	www.i3d.net

Business need

To keep pace with online gamers' ever-growing appetite for fast, high-powered performance, i3D.net continuously updates its global server infrastructure.

Solution

The company expanded its datacentre with more than 2,250 custom-built Dell™ PowerEdge™ servers, boosting bandwidth and performance, while reducing energy consumption.

Benefits

- Firm achieves six-times faster product shipping
- Triple-A games stay up and running with 100 per cent availability
- Faster deployment of games thanks to early product testing and 20 per cent quicker installation
- Satisfied customers offer gamers high-speed action thanks to 50 per cent greater, six-core server performance
- Company reduces server energy use by around 5 per cent annually
- International expansion is aided by Dell's global support and delivery

Solution areas

- Cloud Computing
- Server Solutions

If you've played online multi-player games, chances are you've made use of an Interactive 3D (i3D.net) server. i3D.net is a game server provider based in Rotterdam, The Netherlands, with 16 hosting locations throughout Europe, the United States, Asia and Australia.

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On a daily basis, more than 10 million gamers play on i3D.net game servers. The company is under constant pressure to provide a scalable and high-performance global playing field – with no disruptions.

Established in 2004, i3D.net now owns and operates almost 10,000 servers. They're located in a 36,000-square-foot data centre in Rotterdam, as well as facilities in Paris, London, Tokyo and Sydney. The company's software and hosting services are used by game developers and publishers worldwide to support multiple online games – ranging from the so-called 'triple-A' games to mobile games.

Stijn Koster, Chief Executive Officer at i3D.net, says: "Our clients demand top-of-the-line performance at all times. As a company, we're also doubling in size and revenue roughly every year, so we're continuously looking to strengthen our infrastructure with the latest technology, while reducing energy consumption and physical space."

Company chooses superior support and trusted performance

i3D.net has worked closely with Dell since 2005. To coincide with the worldwide launch of another triple-A game, i3D.net was looking to expand its Rotterdam SmartDC data centre, and again approached Dell. "Dell inspires confidence through its reliability, availability and the high quality of its solutions. And, in our experience, Dell offers best-in-class service," says Koster.

i3D.net ordered more than 150 Dell™ PowerEdge™ R410 servers and 2,100 Dell PowerEdge R210 II servers. All servers were installed and deployed

by the highly skilled i3D.net data-centre team within three days. "It's fast and easy to install Dell servers using the integrated Dell Remote Access Controller 6 (iDRAC6), and once they're up and running, we know they'll stay that way," says Koster. "If we do have a question, our dedicated Dell Account Manager is just a phone call away."

Custom-built servers offer around 50 per cent greater performance

The servers have been tailored to the needs of i3D.net through the Dell Hardware Customisation service. As a result, the Dell PowerEdge R210 II servers feature Intel® Xeon® processors that run at 3.2 gigahertz for improved speed, and the PowerEdge R410 servers offer six-core performance.

Technology in practice

Services

Dell Support Services
– Dell Hardware Customisation

Hardware

Dell™ PowerEdge™ R410 servers with Intel® Xeon® processors L5640

Dell PowerEdge R210 II servers with Intel® Xeon® processors E3-1230

Dell PowerConnect™ 5548 switches

Integrated Dell Remote Access Controller 6 (iDRAC6)

Software

Windows Server® 2008 R2

Red Hat Enterprise Linux Server



“We selected Dell servers based on faster system performance, greater memory, lower energy consumption and the latest generation of Intel Xeon processors,” says Koster. “With its six-core processors, the Dell PowerEdge R410 server offers around 50 per cent more performance than industry-standard dual or quad-core servers.”

The servers run Windows Server® 2008 R2 or Red Hat Enterprise Linux Server, as well as i3D.net’s own software. i3D.net also installed 200 Dell PowerConnect™ 5548 switches, with a total bandwidth of 68 gigabit per switch for faster network performance. Combined this solution delivers hundreds of gigabit of bandwidth.

Time to market is improved through close partnership

Dell and i3D.net have entered into a mutually beneficial partnership. i3D.net receives new Dell servers for testing months before they’re officially released – helping the company take advantage of capabilities ahead of its competitors. Dell then uses the feedback to optimise its products. “Early testing is very useful for us. By the time the devices are launched, we’re already familiar with their performance, and have our order in place, so we can offer our clients the latest performance more quickly. Thanks to this close relationship with Dell, we’re more agile and competitive,” says Koster.

International expansion supported by global capabilities

i3D.net is operating a managed infrastructure globally, and is now scaling up operations in the United States and Japan. It therefore wanted the support of an end-to-end, worldwide IT company. “We’re impressed by the seamless international communication between the Dell teams. And local support is excellent too. In Japan, for example, if Dell tells us that our new memory will be delivered at 10:15 am, it will be there at precisely that time, so we’re able to roll out new services more quickly,” says Koster.

Shipping is six times faster than other manufacturers

To ensure customer satisfaction and retention, i3D.net must meet new demands at short notice. “When a new game is released, clients give us very short lead times. We also have to be prepared for extra capacity, in case the game is a bigger success than anticipated,” says Koster. “Dell makes it possible to meet this demand, even with very big orders. It ships in five days, as opposed to the 30 days needed by other leading manufacturers – that’s six times faster.”

Servers reduce energy consumption by around 5 per cent

With almost 10,000 servers in its global datacentres, i3D.net is strongly committed to environmentally friendly technology to decrease energy consumption and physical space requirements. As the company doubles in revenue and computing capacity every year, it must avoid doubling its footprint – while also increasing performance. “Servers are the largest energy consumer in the datacentre,” says Koster. “With Dell PowerEdge servers, we can reduce power and cooling costs, and pass the savings on to the customer, making our business offering more competitive.”

Dell PowerEdge servers feature Energy Smart technologies, such as high-efficiency voltage regulators, greater venting, and the latest processor and memory technologies to target the highest performance per watt. “Dell PowerEdge server fans shut down if the server is cool enough, which lowers our energy consumption. We’ve never seen that with any other servers,” says Koster. “They’ve also been customised with the latest Intel Xeon series processor technology for greater energy efficiency. Dell is a frontrunner in green data-centre technology.” As a data-centre operator, i3D.net adjusts the power and cooling conditions to the optimal environment for Dell PowerEdge servers, making maximum energy savings.

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With the latest generation of Intel® Xeon® processors, i3D.net's Dell servers can automatically allocate power based on performance requirements, and intuitively conserve energy during low-use periods. Compared to single-core servers, i3D.net's quad-and six-core servers also enable greater server consolidation, freeing up space in the data centre.

Flexible infrastructure easily copes with peaks in demand

i3D.net's global platforms can support up to six million concurrent gamers and the number of users fluctuates depending on the time of day and year. The platform is offered on a pay-per-use basis as a highly scalable cloud service. Customers pay for the capacity they need, and i3D.net must respond quickly.

Koster explains: "Our managed infrastructure is used by many different companies, each with its own requirements. This is why we design our services to the highest standards. The Dell PowerConnect switches are able to push up traffic at wire speed, and the Dell PowerEdge servers maximise our computing resources available without limitations. Every Dell server offers automation technology and our software has been adapted to these standards." New servers add valuable capacity, performance and bandwidth enhancements that all our customers can benefit from. With reliable Dell servers that are easy to install and maintain, we can quickly expand our server base.

Servers win performance tests with three-times greater reliability

In its performance tests with other brands, i3D.net noted that Dell servers have much lower failure rates. "With Dell, we can offer customers a guaranteed 99.99 per cent uptime on server level, with a 100 per cent uptime globally. In our experience, Dell PowerEdge servers exhibit three-times lower failure rates than other servers, making them more reliable," says Koster. "Feedback from customers is very positive. Some even visit our Rotterdam facility to see how we accomplish such high levels of service and uptime."

Installation time is reduced by around 20 per cent with rapid deployment tools

To help reduce the amount of time required to install Dell servers into Dell racks, i3D.net uses Dell Rapid Rails. These mounting brackets are designed to make set-up faster than ever because no tools are required. "We use Dell Rapid Rails on every server install – enabling us to reduce installation time by about 20 per cent," says Koster. This helps the company meet customer needs for faster rollout of new games.

Uptime is maximised with 24/7 service and support

i3D.net's technical team is available round-the-clock to ensure that server performance is not disrupted. In the event of any issues, it contacts Dell for spare parts. "As a technology company, we have the expertise to maintain and replace our devices. If we need a spare part, such as CPU or memory, Dell responds instantly," says Koster.

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