Managed Hosting Provider Gains Competitive Advantage with Kingston Memory and Enterprise-Class SSDs

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INTERACTIVE 3D

" It is both their products and services that set Kingston apart from other memory vendors. They have become a trusted partner by advising us on how to get every bit of performance out of our servers. We just don't see that level of engagement with other companies. "

Stijn Koster
CEO,
i3D.net

Business challenge

i3D.net began in 2004 when CEO Stijn Koster put together his first server for gaming customers. Since then, he's built a managed hosting provider company with over 8,000 servers at 16 datacenters across Europe, Australia, Japan, South Africa and the United States. A broad range of 30,000 customers make use of i3D.net's online infrastructure services and managed hosting solutions.

Those clients include brand-name game companies that leverage high-performance servers. All told, the company's servers allow 1,000,000 gamers to play their favorite titles daily. Additionally, i3D.net's enterprise customers use hosted servers to run applications with high-availability and high-capacity requirements.

SUMMARY

Gained competitive advantage by offering flexible server configurations.

- Optimized servers (memory & SSDs) for performance, capacity and IOPS.

- Doubled number of instances gaming servers can run.

- Significantly increased number of virtual systems corporate servers can run.

More easily meet 99.99 percent Service Level Agreement (SLA) specification to retain and gain customers.

- Slashed DRAM failures by 50 percent since standardizing on Kingston memory modules.

- Durable, enterprise-class SSDs deliver 30,000 program/erase cycles — up to 10 times those of competing solutions.

Kingston
TECHNOLOGY

"Offering our clients servers adapted to their needs is a fundamental reason we've experienced double-digit growth. The Kingston memory, SSDs and consultation services have been an essential part of that success."

Stijn Koster
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That puts company engineers under pressure to field ever-more powerful solutions. "We consistently see higher server specifications year over year," says Stijn Koster, CEO for i3D.net in Rotterdam, Netherlands. "So our customers continuously drive us to boost the performance, capacity and reliability of our servers."

Motivated by the desire to save money, the company's enterprise customers require i3D.net to increase the number of virtual server instances that each server can host—all without sacrificing performance. "We needed to raise our server utilization rates because many of them were already near 100 percent," recalls Koster. "We considered it an essential goal to help us increase our market share."

For gaming customers, performance translates into servers that minimize lag times. That's particularly important for twitch-game (first-person shooter) titles that rely upon prompt screen refreshes to deliver a satisfactory, multi-player game user experience. "Our gaming customers have zero tolerance for slow performance," says Koster. "If our servers don't deliver responsive game play, they'll go somewhere else."

With the release of new games and gaming platforms like Xbox® and PlayStation®, the company's engineers have to continuously raise the bar on server capabilities. "The new gaming platforms utilize a lot of cloud infrastructure," explains Koster. "So the servers running the game clients need storage for the platform and game, plus enough memory to run them well. To meet these requirements we had to double our servers' memory."

Technology Solution

"Before we purchase a large batch of memory or SSDs we run extensive benchmark and compatibility tests," says Koster. "We've had a really good experience with Kingston® products over the years. That, plus our test results, motivated us to select them as our memory and SSD partner."

Maximizing server memory performance for gaming customers

i3D.net specialists worked with KingstonConsult experts to identify the maximum memory speed supported by legacy server processors. They also reviewed chipset specs to understand the processor memory support rules. Then, they recommended the best Kingston memory modules and configurations to meet performance goals. To extend the service life of existing servers, specialists recommended the use of high-density modules that left memory slots available for future memory expansions.

"My engineers told me that the installation experience was plug-and-play—and that's how it should be in today's marketplace," stated Koster. "They also liked that the compatibility of the memory with our processors was easy to check with Kingston's Configurator."

Maximizing server memory capacity for enterprise customers

To support corporate virtualization requirements, it was necessary to upgrade servers to the maximum memory capacity they could support. To meet this need, Kingston specialists recommended the largest capacity memory modules the company provides.

"Working with Kingston allows us to customize our server configurations as needed to meet our customers' requirements," says Koster. "That way we're able to offer a tailored solution portfolio versus a one-size-fits all. And that's been very attractive to our customers."

Maximizing server IOPS

"Our emphasis on markedly increasing IOPS was really driven by our customers' demand for it," explains Koster. "Kingston engineers showed us how to achieve that end using SSDs. When you replace the millisecond read-write times of HDDs with the microsecond times of SSDs, that adds up to a lot of IOPS per server."

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Business results

Kingston memory modules, SSDs and consultation services helped i3D.net realize a number of business, financial and technical benefits.

Significant server performance enhancements deliver competitive advantage

The new online gaming platforms can accommodate 60–100 players per instance running on i3D.net servers. "Previously, these loads stressed out our servers," recalls Koster. "But since we upgraded them with Kingston memory and SSDs we've been able to double the gaming instances from 32 to 64, with some servers able to hand up to 100. And we've done that while limiting lag to deliver an enjoyable user experience."

Additionally, the Kingston enterprise-class SSDs helped solve the company's server IO latency bottleneck. "The limiting factor was our HDDs, not our processors," states Koster. "By eliminating that log jam, we've been able to help corporate customers lower their costs by placing more virtual systems on each server."

Certainly the server performance enhancements yielded significant technical benefits. But for Koster, the real prize was that "Our server infrastructure has been a fundamental part of the organic growth of our company. It has given us a competitive edge against other infrastructure providers like Amazon and Microsoft. By offering customers tailored server solutions we've experienced double-digit growth."

Enterprise-class reliability supports Service Level Agreements

Another key element to i3D.net's success is its SLA guarantee of 99.99 percent availability. To ensure this standard, i3D.net technicians log and analyze device failure incidents.

"The Kingston solutions have definitely made it easier for us to meet our SLAs," says Koster. "The MTBF [mean time between failures] of their modules is incredible. Since we started using them, we've reduced DRAM failures by 50 percent. And because we use Kingston as our default brand, we don't have to de-bug memory from different brands so we're saving 10 percent in staff labor hours as well."

These results stem from Kingston's rigorous testing, and quality assurance procedures. Consequently, Kingston backs its memory products with a lifetime warranty while the Enterprise SSD product line is backed by a three-year warranty. And with program/erase cycles of 30,000, the durability of the E-series SSDs is typically 10 times what client SSDs offer.

KingstonCare and consultation services deliver added value

Kingston offers a suite of free services collectively titled KingstonCare. These include hassle-free RMA (return merchandise authorization) plus RMA product cross-shipping and on-site device spares. Together, the services are designed to reduce customer downtime and promote the meeting of SLAs.

"Between KingstonCare and the reliability of their solutions, we simply don't have RMA stress here," explains Koster. "That's a huge benefit when you consider that we have 8,000 servers to administer."

Koster also praises the performance of Kingston technicians. "They've been advising us on how to gain the maximum performance from specific server configurations. That's an added value to us that sets them apart. It's pretty unique and we don't see that level of engagement from other vendors."

To find out how SSDs from Kingston Technology can help your organization, visit **kingston.com**