

I/O Performance Upgrade Boosts Developer Productivity by up to 40 Percent

“ The [Kingston] Predator SSDs help us provide the cutting-edge I/O performance our developers need to deliver high-quality triple-A games on schedule. ”

Louis Porco
Director of IT,
Eidos Montreal

Business challenge

Eidos Montreal (Eidos) is a Canadian video game development company. It creates, publishes and markets, high-quality products known as triple-A games. As a result, Eidos' customers expect a highly engaging experience, complete with dazzling graphics, animations and smooth, bug-free game play.

Meeting those expectations requires high-performance technology. "Our developers' work is I/O intensive," said Louis Porco, Director of IT, Eidos Montreal. They are constantly reading or writing hundreds of gigs at a time."

That created a performance bottleneck that worried managers. The company's spinning-drive equipped HP Z420s were sufficient for a previous development cycle. However, the next game on the list required greater performance. "We feared that we wouldn't meet our quality and go-live goals if slow I/O speeds left developers idle during the day."

Managers tried to increase I/O performance by implementing a RAID utilizing spinning disk hard drives. When that measure failed to deliver the required I/O performance, they weighed two additional options.

The first option was to spend about \$170,000 to purchase new systems. The second option was to replace legacy system's slow hard drives with high-performance, PCIe-compatible, solid state drives (SSDs.) Managers chose option two.

SUMMARY

- Users achieved 28 percent average productivity gain
- Reassigned labor-hours to enhance quality of triple-A games
- Significantly increased probability of on-time project completion
- Sidestepped developer downtime by completing game engine recompilations within nightly window
- Extended service life of developer stations to defer \$170,000 in system purchases

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"Our users experienced a significant productivity increase using the Predator SSDs. They have much less downtime and complete more development iterations during the workday."

Maxime Gagnon Smith
IT Service desk Supervisor
Eidos Montreal



Technology solution

Maxime Gagnon Smith, IT Service desk Supervisor for Eidos was tasked with testing potential SSDs. "We chose the Kingston HyperX® Predator SSD from among the four we evaluated because it delivered the best value. Its PCIe interface delivers the high I/O read [up to 1400MB/s] and write [1000MB/s] speeds that our development process required. And it is competitively priced."

After the evaluation and selection, Smith's team installed the Predator SSDs in 75 developer systems. "The process minimized developer downtime because it only took five minutes," recalled Smith. "We put the card in, initialized the disk and reprogrammed tools to use it automatically. It didn't change anything in the users' workflow and by the time they sat down with their morning coffee, their computer was significantly faster."

Word of the performance gains spread to other developers. "The feedback from users has been extremely positive," stated Smith. "Developers are anxious to get the drive because they are seeing their coworkers work faster and getting more done. I wouldn't be surprised to see everyone in our company using a Predator a year from now."

Business results

The Kingston Predator SSDs delivered a number of benefits to Eidos users.

Dramatically improves developer productivity

The greater I/O throughput of the Kingston SSDs markedly improved user output. "Our developers got a 15 to 40 percent performance improvement in the time it takes to transfer their work to and from the game engine," explained Porco. "That directly translates into getting more done each day. It also allows them to spend more time on value-add activities, like improving the quality of our games."

As an example, previously it took a developer an hour to load and recompile a new character animation to the game engine. After upgrading to the Kingston Predator drive the render time was reduced to about 35 minutes. This allows developers to complete more iterations. That in turn allows them to spend more time polishing their work to improve the gamer experience—a fundamental determinant of success for games.

Promotes on-time completion of projects

Completing game projects on time is a key factor in the company's profitability. "One of the best benefits we've gotten from the Kingston SSDs is a dramatic reduction in the risk of going over schedule," said Porco. "So we start collecting revenue on time as well as avoid costly development overruns."

The PCIe-capable drives achieve this end by increasing developer productivity. Moreover, they also ensure that the company's nightly game engine compilation is completed within the available window. Each night, all the developer changes are compiled so that everyone is working on the latest release the next morning. Prior to the Predator installations, the I/O-intensive compilations threatened to overrun into the developers' workday. Now, the compilations are done well before users arrive.

Extends service life of computers to save \$170,000+

Previously, the IT team replaced workstations after each game development cycle. The performance of the Predator SSDs allowed them to upgrade existing systems instead, and save the company over \$170,000. "By going with the Predator SSDs we are getting two game cycles out of our systems," explained

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Porco. "That allowed us to defer the procurement of new systems and save our IT budget about seven percent overall."

Supports goal of providing developers cutting edge technology

Being a successful game development company means staying on top of the technological performance curve.

"Our developers are the stars of our company," said Porco. "So our goal is to give them the fastest, most reliable technology available. Because when we do that, they create successful, high-quality, triple-A games. And the Kingston Predator SSDs are helping us achieve that goal."

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

1 Interviewees stated a 15-40 % gain. $15 + 40 = 55 \div 2 =$ average of 27.5% which rounds up to 28%.

2 Based on 75 workstations times the average cost of a new workstation of \$2,500 = \$187,000 less the cost of all the SSD upgrades, to arrive at a conservative savings of around \$170,000.

Please note: Some of the listed capacity on a Flash storage device is used for formatting and other functions and thus is not available for data storage. As such, the actual available capacity for data storage is less than what is listed on the products. For more information, go to Kingston's Flash Memory Guide at kingston.com/flashguide

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