

**WHO:**

Wargaming.net

**CHALLENGES:**

Storage system performance insufficient to enable continuous integration and deployment (CI/CD)

**IT ENVIROMENT:**

100 percent VMware virtualized, 500 VMs, HP clusters, Windows, CentOS Linux, EMC SAN

**SOLUTION:**

Installed 20TB Kaminario K2 system

**BENEFITS:**

- Cost effective performance (9 mo. ROI)
- Code build times reduced by 52%
- Productivity improved with savings of ± 11 weeks/year

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# Accelerated Application Development

Predictable performance and functionality speed video games to market

## Executive Summary

At work on an important game development project, the Wargaming team needed to accelerate their process by reducing iteration times in the development cycle. The objective was to improve overall efficiency that was currently hampered by disk-limited deployment services. From content creators to engineering, to QA performance issues had a critical productivity impact on every team at the studio. After extensive evaluation, the implementation of Kaminario K2 all-flash storage system reduced data transfer speeds by as much as 81-96% and increased productivity, saving staff time of 9.8 to 11.6 man-weeks per year.

## Company Overview

Wargaming.net is an award-winning online game developer and publisher. They are a leader in the free-to-play massively multiplayer online (MMO) market across PC, console, and mobile. With more than 15 titles to their credit, Wargaming employs over 4,000 professionals globally, using continuous integration (CI) and continuous deployment (CD) methodologies. As a rapidly growing game developer, Wargaming requires the highest levels of performance across their entire IT and application development infrastructure.

“Simply put, Kaminario K2 all-flash-based storage solution performed admirably. It's simple to manage, and significantly reduced the iteration time of our application development cycle, and improved the efficiency of several disk-limited build and deployment services that are critical to our studio.”

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Kevin Folks, IT manager, Wargaming Seattle

## The Challenge

Development and QA teams were spending valuable time waiting for data transfers and updates. The majority of workloads in their virtual environment were bottlenecked by storage. With the existing spinning disk, new builds were piling up and clogging the system. During periods of high activity, increased wait times for new builds could extend the queue to several hours or longer. Given the extreme number of reads and writes involved in the process, disk throughput has a critical role in determining the speed to execute a clean build - and the amount of unproductive time staff spent waiting.

The team believed a new all-flash storage system had the potential for significant efficiency impacts. Their objective was to introduce continuous integration (CI) and continuous deployment (CD) processes that would speed new game development and improve staff productivity. The CI/CD system running on flash storage and a cluster of VMs could eliminate log-jams and keep up with performance demands where "one commit equals one build". This development process greatly simplifies and accelerates several important tasks, such as clearly identifying which change broke a build, or which commit introduced a bug.



## Examining Options

The team identified seven separate requirements of a new flash storage system that would impact their high-value development project. The factors spanned a range of business and technical considerations including cost, ease of management, product features, and, above all, performance.

They developed a series of real-world measurements tied directly to in-production virtual machines that would run for one month prior and one month after test system installations. They knew that only with testing against real-world data would they determine their best option among the NetApp, EMC XtremIO, Pure and Kaminario systems chosen for on-site proof-of-concept testing.

**“Kaminario K2 system performed admirably, meeting or exceeding all of our requirements. The system was simple to manage, came with features that worked as advertised, and was extremely cost competitive with other flash-based storage products we tested. Its impact on our disk-limited VMs was both immediate and noteworthy, enabling some processes to see improvements more than 80 percent.”**

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**Kevin Folks**, IT manager, Wargaming Seattle

The Wargaming evaluation was divided into two segments. One, a business analysis that examined qualitative measurements such as cost competitiveness, customer support, and management overhead. The other, a series of engineering tests covering quantitative measurements for data deduplication efficiency, storage throughput, and critical process impacts. These would determine how the project development cycle, code build times, resource pack generation times, and loose file transfer times could be accelerated.

### IMMEDIATE BENEFITS

- Studio-wide savings of 9.8 to 11.6 man-weeks per year
- Deduplication space savings reduced a daily average of 6.9 TB down to 2.9 TB
- Resource Pack Generation Build Time-per-GB reduced 43%
- Loose file transfer times reduced from 81% to 96%
- Code Build Times reduced by 52%, providing savings of almost an hour per code build
- ROI expected at nine months

### The Solution

Each of the competitive systems worked sufficiently. However, Kaminario met or exceeded every competitor in performance, features and ease-of-use while surpassing them all in cost and quality of customer service.

**"Kaminario promised a no-hassle experience with their K2, and they delivered. The K2 requires no active maintenance on a day-to-day basis and comes with practically zero administrative overhead."**

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Todd Poole, Build Master, Wargaming Seattle

According to Poole, "the simple K2 management interface provides seamless vSphere integration with no additional administrative overhead and is trivially easy to use. The Kaminario customer service is outstanding, and their product is extremely cost competitive."

### What's Next?

The Wargaming team has seen great benefits in time savings, productivity and expense reduction from their Kaminario system. Now they plan to share their detailed report and results with colleagues in other design locations across the company, helping them to achieve similar results.



### Contact

Contact a business development representative to answer any questions you may have.



### Schedule a Demo

Schedule a demo with an engineer and learn if Kaminario's solution works for you.



### Request a Quote

Request a quote for your application from our business development team.

## About Kaminario

Kaminario, the leading all-flash storage company, is redefining the future of modern data centers. Its unique solution enables organizations to succeed in today's on-demand world and prepares them to seamlessly handle tomorrow's innovations. Only Kaminario K2 delivers the agility, scalability, performance and economics a data center requires to deal with today's cloud-first, dynamic world and provide real-time data access -- anywhere, anytime. Hundreds of customers rely on the Kaminario K2 all-flash array to power their mission critical applications and safeguard their digital ecosystem. Headquartered in Needham, MA, Kaminario works with an extensive network of resellers and distributors, globally.

For more information, visit [www.kaminario.com](http://www.kaminario.com)

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