



## Press Release

### **KIOXIA Improves Flash Storage Lifespan and Performance in RocksDB with New Open-Source Software**

*New Database Plug-In Reduces Write Amplification in Multi-SSD RAID Configurations*

**Germany, Düsseldorf, 9 October 2025** – [KIOXIA Europe](#), today announced an expanded RocksDB plug-in that enhances SSD lifespan and performance in multi-drive RAID environments. Building on its [earlier demonstration](#) of a Flexible Data Placement (FDP)-enabled SSD running RocksDB, the company will showcase this advancement at the upcoming [Open Compute Project \(OCP\) Global Summit](#).

In a 4-drive RAID 5 setup, KIOXIA's new plug-in reduced write amplification factor (WAF) by approximately 46% and boosted throughput to 8.22x the performance of MDRAID<sup>1</sup>. In a 2-drive mirrored configuration, WAF was reduced to approximately 1/3 and achieved throughput of 1.45x compared to MDRAID<sup>1</sup>. The technology achieves these gains by consolidating data writes, so they are written sequentially – preventing data fragmentation and reducing garbage collection.

RocksDB, widely adopted for generative AI and cloud applications, is optimised for high-performance searches and efficient management of historical data.

The new plug-in will be featured with the KIOXIA XD8 Series SSD in a live demonstration at the KIOXIA booth (A51) during the 2025 OCP Global Summit. The demo will showcase performance gains and reduced WAF in a two-drive RAID 1 configuration with the RocksDB plug-in, compared to standard Linux<sup>TM</sup> RAID mirroring.



KIOXIA will release the plug-in as an open-source contribution, underscoring its commitment to advancing SSD and flash memory technologies across the industry. By sharing innovations that improve efficiency, KIOXIA continues to support the evolving needs of advanced computing infrastructures and data centers. The new plug-in is expected to be released in CQ1 2026.

“The release of our expanded RocksDB plug-in exemplifies KIOXIA’s dedication to advancing SSD and flash memory industry-wide and directly addressing performance bottlenecks,” says Axel Störmann, Vice President and Chief Technology Officer for Memory and SSD products, KIOXIA Europe GmbH. “By providing this plug-in as an open-source contribution, we are strengthening the foundation for demanding applications like generative AI and cloud services.”

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**Notes:**

1: Performance claim based on tests using the KIOXIA XD8 series in a KIOXIA lab environment. Lifespan measurement based on reduction of Write Amplification Factor (WAF). RocksDB performance improvement based on an increase in queries per second.

\*Read and write speed may vary depending on various factors such as host devices, software (drivers, OS, etc.), and read/write conditions.

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**About KIOXIA**

KIOXIA is a world leader in memory solutions, dedicated to the development, production and sale of flash memory and solid-state drives (SSDs). In April 2017, its predecessor Toshiba Memory was spun off from Toshiba Corporation, the company that invented NAND flash memory in 1987. KIOXIA is committed to uplifting the world with “memory” by offering products, services and systems that create choice for customers and memory-based value for society. KIOXIA's innovative 3D flash memory technology, BiCS FLASH™, is shaping the future of storage in high-density applications, including advanced smartphones, PCs, automotive systems, data centers and generative AI systems.

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