

Optimizing Data Infrastructure

Best-in-Class Key Value Accelerated Storage Solutions for Database and Analytics Workloads



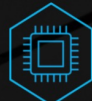
20x

Higher Throughput



100x

Latency Reduction



10x

Better CPU Utilization



6x

Higher Capacity Expansion

DapuStor & Pliops Solution



Pliops Extreme Data Processor (XDP) and DapuStor R5 series PCIe Gen4 SSDs

A single Pliops XDP and up to 128TB of DapuStor R5 series SSDs combine seamlessly to enhance data infrastructure with a new level of storage efficiency, data protection, performance, and TCO benefits.

Pliops Extreme Data Processor (XDP)

The Pliops Extreme Data Processor (XDP) is a low-profile PCIe-based Data Services card that deploys in minutes and runs in any server.

Managing the end-to-end data flow between application software and local storage, a single Pliops XDP manages up to 128TB storage per server. With its XDP-AccelKV Data Service and XDP-Rocks, a drop-in replacement for RocksDB, Pliops provides an order of magnitude higher performance and lower latency than software-only solutions.

DapuStor R5 Series NVMe Enterprise SSD

The DapuStor R5 Series is designed and built on DapuStor DP600 controller firmware with the latest 3D enterprise TLC NAND from KIOXIA. It is an ideal solution for core data storage scenarios in different fields, such as enterprise IT, logistics, Internet, finance, intelligent manufacturing, and AI.

The R5 Series capacities are from **1.92TB to 15.36TB** in a PCIe 4.0 U.2 form factor. 4KB Random Reads / Writes: up to **1.75M / 0.64M IOPS**.

Key Solution Benefits

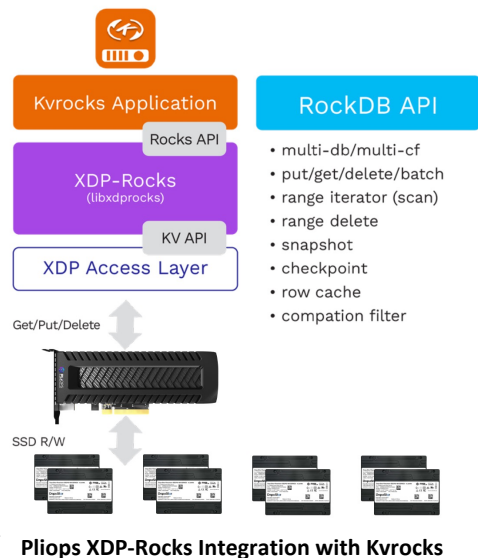
- Enhanced data infrastructure with best-in-class performance, reliability, and scalability.
- Simple to deploy and easy to use - working in any server.
- Exceptional efficiency gains with significant cost savings – for lower overall cost/TB.
- Ideal for data-intensive applications where greater performance and scalability is required.
- High-performance, power efficient storage with extremely low latency.
- Eliminates the RocksDB performance bottleneck: write and read amplification - accelerating Kvrocks and other RocksDB-enabled databases and analytic workloads.
- Eliminates the need to deploy and manage more servers to achieve performance needs.
- Supports petabyte-scale datasets with accelerated performance and reduced latency.

Replacing RocksDB with Pliops XDP-Rocks for Kvrocks Acceleration

Kvrocks is an open-source distributed key-value NoSQL database for storing and processing large datasets. It powers many business-critical applications at Baidu, Ctrip, Meitu, RGYUN, U-NEXT and BaiShan enterprises. Developed to provide an open-source alternative to Redis, Kvrocks uses RocksDB as its storage engine, which is compatible with the Redis protocol. To scale Kvrocks deployments, significant infrastructure optimization and efficiencies are needed to reduce the data footprint costs.

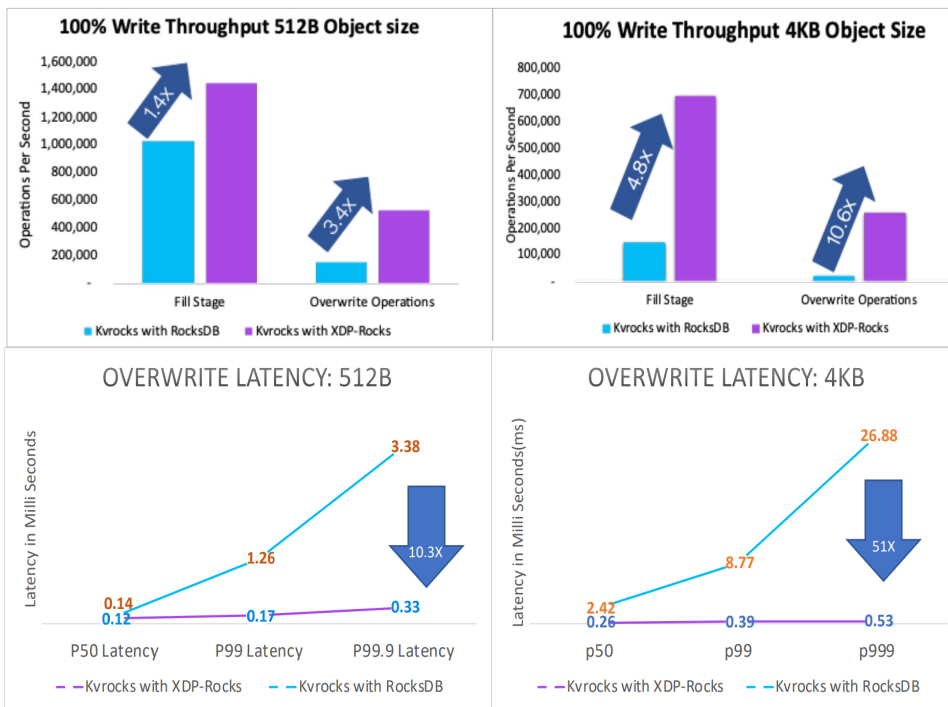
Why XDP-Rocks for Kvrocks Applications?

Pliops XDP-Rocks eliminates the inherent architecture limitations of the RocksDB. As a RocksDB replacement, it is pivotal to Kvrocks applications, delivering massive performance boost and orders of magnitude latency reduction to dramatically improve service level objectives and customer experience. These benefits are readily applicable to Redis and Memcached applications and enable enterprises to significantly reduce capital and operational expenditures. With XDP-Rocks, enterprises can efficiently address the growing demands of application scaling and data center constraints associated with petabyte-scale datasets.



Pliops XDP-Rocks Performance Benefits for Write Operations

XDP-Rocks vs RocksDB testing shows write performance throughput is significantly advantaged with XDP-Rocks, with dramatic increases during the fill stage (Data Loading) and overwrite operations. Latency is extremely important for high data ingestion rate applications requiring significant reduction of 4 9's latencies. Testing shows significant reductions with XDP-Rocks.



About Pliops

Pliops multiplies the effectiveness of organizations' infrastructure investments by exponentially increasing datacenter performance, reliability, capacity, and efficiency. Founded in 2017 and named as one of the 10 hottest semiconductor startups by CRN in 2020 and 2021. Pliops global investors include NVIDIA, Intel Capital, SoftBank, Western Digital, KDT, and Xilinx. **Learn more at www.pliops.com.**