DPU Panel - Pliops

SDC Sep 2021
Mission
To massively accelerate performance and dramatically lower infrastructure costs for relational databases, NoSQL, in-memory databases, analytics, AI/ML, 5G, IoT, and other data intensive applications.

Team
Experts in database, flash storage, and semiconductors from industry leaders including Samsung, Intel, Kioxia, Amazon, Microsoft, VMware, Dell/EMC, Western Digital, Fusion-io, HPE, Apple, Nvidia, Cisco and Lenovo

Strategic Investors

Industry Recognition
2021: CRN Top 10 Cool Tech Companies that Raised Funding in February
2021: Enterprise Storage Forum Top Computational Storage Companies
2020: Most Innovative Flash Memory Enterprise Business Application Product
2020: CRN Top 10 Hottest Semiconductor Startup
2019: Most Innovative Flash Memory Startup
Pliops Extreme Data Processor

- **Performance**: 3-15x
- **Reliability**: DFP 2x > RAID 0
- **Capacity**: Up to 6x more
- **Efficiency**: Lowest cost QLC, TLC for any workload
Yesterday’s
COMPUTE CENTRIC

CPU
Traffic Control
Applications
Storage Management

Storage

Today’s
DATA CENTRIC

CPU
Traffic Control
Applications

Pliops XDP
Storage Management

GPU
AI/ML

Multiplies:
• Performance
• Reliability
• Capacity
• Efficiency

Future’s
DATA CENTRIC

CPU
DPU
Traffic Control

Pliops XDP
Storage Management

GPU
AI/ML

Furthers:
• Isolation
• Security
• Scaling

APPS

Disaggregation w/ Accelerated Storage Server

- Scale compute and storage independently
- Agility to respond to change and failures
- Easy to deploy in existing data centers
- Share storage across many applications
- Lower total cost of ownership
Delivering New Level of Infrastructure Efficiency

KV Storage Server powered by DPU

- 1 DPU
- 2 Pliops XDP
- 64TB SSD
- 512GB DRAM

2S x86 RocksDB

Million KV Ops/Sec

0.28

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DPU + Pliops XDP
Solution Landscape for Accelerated Storage Server

- **In-Mem Cache**: redis, Memcached
- **In-Mem DB**: Aerospike, SAP, Redis
- **Real-Time Analytics**: Spark, MySQL
- **Transactional DB**: PostgreSQL, Oracle, SQL Server, MySQL
- **Big Data**: Amazon S3, Hadoop
- **Flash File Systems**: Ceph

**Dataset Size**
- Small
- Medium
- Large

**Performance**
- High
- Medium
- Low