Solidigm D5-P5316 QLC 30.72 TB NVMe SSD and Pliops Extreme Data Processor (XDP) combine to seamlessly deliver best-in-class performance, reliability, and scalability.

Solution Highlights
With surging growth in data volumes, rising infrastructure costs, and the need for accelerated performance, optimizing data scalability has never been more critical. High-capacity QLC SSDs from Solidigm combined with Pliops XDP deliver greater performance and data protection at a lower cost/TB.

Higher Performance and Endurance
XDP and Solidigm QLC SSDs testing show performance acceleration up to 6.6x for a 4K 70/30 workload and up to 9.3x for 4K random writes. Endurance is enhanced up to 7x for longer drive life by transforming all random writes into sequential, dramatically reducing write amplification.

Pliops Drive Failure Protection (DFP)
Pliops DFP offers full performance RAID 5/6 style reliability without the tradeoffs of traditional solutions. Other tests show throughput performance during a drive rebuild running an 8K 70/30 workload is 905MB/s. It took 450 minutes to rebuild user data at 14.7 Min/TB.

Capacity Savings
XDP shapes and optimizes data before writing to the SSD. Hardware compression engines, minimal DFP overhead, and near-full drive utilization expand usable capacity up to 6x, for greater data storage density at a lower cost.

Solution Testing
The following is a sampling of test results comparing the performance of SW RAID 0 against Pliops XDP with Drive Failure Protection. Testing was performed with a Dell PowerEdge R750 server, four Solidigm D5-P5316 SSDs, and a single Pliops XDP using a Linux® FIO benchmark tool.

Unlock and efficiently scale the value of stored data with Pliops and Solidigm

Solution Benefits
- High-capacity SSDs for higher data storage density
- Accelerated application workload performance
- Eliminate blast radius anxiety with no compromise RAID 5/6 style protection with ultra-fast rebuilds
- Extended endurance for longer drive life
- Simple deployment – no changes needed
- Single solution across a range of workloads