**CASE STUDY**

# IntelliFlash™ Hits the Mark for Leupold and Stevens



## Challenges

- Overcoming performance limitations of existing legacy storage
- Finding a storage solution to support its business-critical Oracle® applications
- Implementing a storage solution that supports NFS to avoid rip and replace of current infrastructure

## Solution

IntelliFlash array

## Results

- Exceeded throughput and performance needs of Oracle application suite
- Enabled Business Intelligent operations
- Deduplication and compression reduced "data dumps"

Committed to building the best products for the shooting sports, general and wildlife observation, and the military and law enforcement communities, Leupold & Stevens Inc. has designed, machined and assembled precision optical instruments and accessories for more than 100 years. The family-owned company has built its success on its commitment to its customers' absolute satisfaction.

From its headquarters in Beaverton, Oregon, Leupold takes pride in providing high-quality, durable binoculars and scopes for customers, earning a reputation as America's Optics Authority. The company needed a similarly high-quality and durable storage solution that could support its virtualized infrastructure and Oracle suite of applications.

A legacy shop for nearly a decade, Leupold found that operations were beginning to slow significantly. The company evaluated a new flash-based array from the same legacy vendor and conducted a database performance test and load test to see if the array could handle its Oracle, Exchange, SQL Server, and VMware® virtualized workloads. The results were disappointing. Leupold saw lower-than-expected 6,500 IOPS that wound up pausing all business-critical operations.

"If our storage array slows down, then our business slows down as a result," said Josh De Jong, Systems Architect at Leupold. "We're driven by the speed that our Oracle applications demand, and if our current array couldn't handle it, then sticking with them didn't make sense. It was worth the conversation to see what else was out there to get the performance that we needed."

## The Challenge: Finding a Storage Solution to Support the Performance Needs of its Oracle Applications

De Jong began looking at other vendors to see what might meet the company's performance requirements. While he was interested in an all-flash system, it was necessary to find something that could support NFS rather than ditching its investment in the company's current infrastructure. He decided against a tiering solution, eliminating several solutions. Other vendors had protocol challenges; and some "didn't make sense to us" because of its mixed environment support rather than being able to handle an all-virtual one.

Hearing about Western Digital's IntelliFlash from a local VAR, De Jong began researching the company and its products. He realized that IntelliFlash had the capabilities to do flash the "right way" and that its implementation would not require a rip and replacement of its existing infrastructure, so De Jong brought in Tegile [now Western Digital] to do proof-of-concept testing with one of its IntelliFlash flash arrays.

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Josh De Jong, Systems Architect at Leupold and Stevens

Re-running the stress test found its legacy vendor topping out at 6,500 IOPS and 1.5MB of throughput, the IntelliFlash hybrid flash array performed at 107,000 IOPS and 4MB of throughput with no issues. Impressed by its better performance, lower price and deduplication capabilities that enabled a 65 percent data reduction of its Oracle environment, De Jong chose to implement IntelliFlash into its production environment.

## The Solution: IntelliFlash Arrays Serve as a "Good Fit" for Existing NFS Infrastructure While Providing IOPS Required of Business-Critical Environment

Western Digital's portfolio of IntelliFlash arrays are designed to accelerate a wide variety of enterprise applications – from smaller workloads to mission-critical deployments. They deliver a comprehensive set of data management capabilities while seamlessly supporting different storage media (hard disks, dense flash, high-performance flash) under a single storage operating environment. Users can dial up or down the amount of flash storage needed to meet the specific performance needs of their applications.

Each array is powered by IntelliFlash operating environment, which seamlessly accommodates different storage media and provides advanced data management services for data protection, data reduction and disaster recovery. With IntelliFlash, enterprises can deploy all-flash or a mixture of flash and hard disk in a single storage system.

IntelliFlash arrays deliver dramatic improvements in the utilization, footprint and cost of the storage infrastructure. These arrays enable the consolidation, virtualization and acceleration of enterprise applications with unmatched economics. Integration, and certifications from leading enterprise applications to ensure performance and compatibility.

## The Results: 59% Data Reduction, Faster Speeds, and No More Awkward Small Talk

In addition to getting the throughput performance, the company needed to support its Oracle application suite. Leupold has been able to better leverage the Business Intelligence (BI) features of its Oracle environment because of IntelliFlash's inline deduplication and compression functionality. "Data dumps" on Leupold's previous storage solution would take up to 17 hours, causing any useful information gained "unusable" until the next business day. With IntelliFlash arrays, BI operations have been reduced to four hours. And with deduplication and compression "always on," De Jong "never has to worry about it."

Leupold will be adding an extra storage shelf on the IntelliFlash array at its Beaverton headquarters, as well as installing a second unit at its Denver facility for disaster recovery purposes. The second array will be optimized with additional capacity but less flash to deliver the ideal balance of performance and cost.

"We're not a huge company despite having a pretty well-known product and being an industry leader," said De Jong. "And we want to be treated like we're important even if we're not spending millions of dollars on storage every year. Everyone we've talked to at Tegile [now Western Digital] is quick to respond and are always available. They have always impressed us and has never let us down."

**Western Digital.**