



## ACTIVESTOR STORAGE CLUSTER FOR PARADIGM GEODEPTH<sup>®</sup>

An organization's storage system can have a dramatic impact on Paradigm application performance. Panasas, Inc. is the leading supplier of storage systems to the High Performance Computing market and it supplies performance enhancing parallel storage solutions to many of the industry-leading oil and gas giants.

### UNPRECEDENTED PERFORMANCE

Panasas storage clusters deliver outstanding performance and scalability when running Paradigm GeoDepth<sup>®</sup> applications on the ActiveStor 3000 Storage Cluster (see chart on back). The GeoDepth application version from the EPOS3 Second Edition release was used to perform Kirchhoff Prestack Depth Migration seismic imaging. The tests demonstrate how DirectFLOW protocol dramatically improves runtimes.

1. A single ActiveStor storage shelf running DirectFLOW client software outperformed a cluster of four shelves running NFS.
2. Runtime is reduced by a factor of 2.5 when a four-shelf cluster running DirectFLOW client software is compared to the same configuration running NFS.
3. Performance scales in a near-linear fashion when additional ActiveStor storage shelves running DirectFLOW client software are added.

Faster seismic processing runtimes result in the completion of more jobs in a given period of time. This leaves a larger window of time and opportunity for imaging and interpretation, allowing for improved decision making.

### LOWER ADMINISTRATION OVERHEAD

Panasas Storage Clusters support terabyte to petabyte scaling all within a single easily-managed namespace allowing storage infrastructures to seamlessly grow with business needs. A single management console monitors and manages an entire storage cluster, automatically incorporating capacity as it is added, making administration simple and straightforward.

### FEATURES AND BENEFITS

#### Panasas DirectFLOW Protocol:

##### ■ Faster Time to Results

Dramatically reduces runtimes (2.5x faster results than comparable NFS configurations) with near linear scaling as more ActiveStor storage shelves are added.

#### Single Global Namespace:

##### ■ Reduces IT Administration

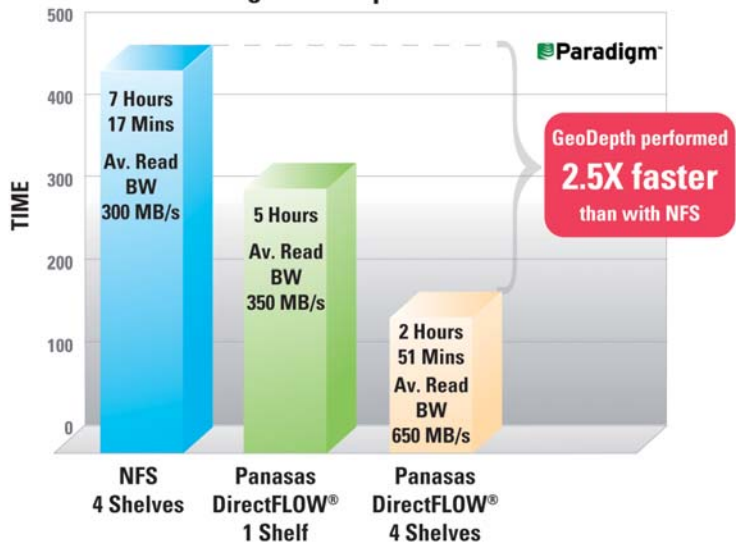
Simplifies storage management and provides seamless scalability.

#### Unified Storage Infrastructure:

##### ■ More Efficient Workflow

Eliminates silos of storage and the need to migrate data as workflow progresses from seismic processing to interpretation, reservoir characterization, well planning and drilling.

**Panasas® Parallel Storage Maximizes Paradigm GeoDepth® Performance**



**NOTE:** All tests were run with a 10 GB data set and a 32 node cluster of clients. One test used NFS and the other three used Panasas' patented DirectFLOW data access protocol.

Test results obtained from running GeoDepth Pre-Stack Migration.

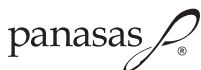
**ONE UNIFIED STORAGE INFRASTRUCTURE FOR OPTIMIZING EXPLORATION AND PRODUCTION WORKFLOW**

Traditional approaches to High Performance Computing have separate computing infrastructures for different stages of the Exploration and Production workflow. This creates unnecessary data duplication, requires large scale data migration, and significantly increases the complexity of managing the storage infrastructure. With Panasas Storage Clusters, a single cluster can serve all elements of the workflow (batch and interactive) without data duplication or migration.

**PANASAS AND PARADIGM – MAXIMIZING CUSTOMER PRODUCTIVITY AND SATISFACTION**

The Panasas ActiveStor Storage Cluster is the ideal platform for Paradigm's Rock and Fluid imaging solution. Together Panasas and Paradigm can take your seismic processing and imaging productivity to new levels of performance.

Panasas, Inc., helps companies and organizations accelerate their time to results, leading to real world breakthroughs that improve people's lives. Panasas enables customers to maximize the benefits of Linux® clusters by breaking down the storage bottleneck created by legacy network storage technologies. Through the delivery of the company's ActiveStor Storage Cluster platform, which combines industry-standard hardware with the company's ActiveScale® PanFS™ parallel file system and professional services, the company has become the established leader in object-based, parallel storage. Panasas is headquartered in Fremont, CA, with development facilities in Pittsburgh, PA.



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