

## PETROLEUM GEO-SERVICES (PGS)

### THE CUSTOMER

Petroleum Geo-Services Corporation (PGS) is a technology-focused oilfield services company headquartered in Oslo, Norway. It is one of the world's leading seismic processing and imaging companies. With operations in more than 22 countries, PGS provides geophysical and reservoir services, including seismic data acquisition, processing and interpretation plus field evaluation. Its pioneering use of innovative technology, reservoir expertise, cutting-edge seismic services, and production operations enable PGS to provide its customers superior solutions to efficiently find, develop and produce hydrocarbons anywhere in the world.

### THE CHALLENGE

PGS focuses on providing the most cost-effective seismic processing services combined with superior algorithms that uniquely help their customers find oil quickly. The systems and storage infrastructure play a critical role in helping PGS differentiate its services because they record massive volumes of raw data in the field. PGS deploys very large Linux clusters to handle its processing.

They previously relied on storage and file system solutions that were complex to manage and did not scale to meet the requirements of their internally developed parallel seismic applications. Over time, increased workload demands created bottlenecks on the storage I/O and caused PGS to lose valuable processing time. In addition, they experienced increasing costs and complexities in managing the storage system. These factors were threatening to impact their ability to provide reliable and cost-effective services to their customers.

“The faster we can deliver results to our clients, the faster they can decide where to drill. Therefore, high throughput and fast response times are essential. In addition, our customers require us to process their data locally within their countries,” said Steve Pitman, VP, PGS Data



**Industry:** Oil and Gas

#### The Challenge:

Inadequate storage architecture impacting their customers' ability to find oil and gas reservoirs

#### Panasas Solution:

Over 1 PB of Panasas Parallel Storage Clusters in 21 PGS locations worldwide. The integrated software/hardware solution includes the Panasas ActiveScale® Operating Environment and the PanFS™ parallel file system utilizing the Panasas DirectFLOW® protocol.

#### Key Results:

Maximized ROI from computing environment with:

- Increased productivity due to dramatically faster processing times
- Reduced administration due to simple installation & management
- Increased overall system availability

Processing & Technology. “This means remote management, simple installation and easy overall storage administration are critical requirements for us to respond quickly to our customers.”

*“We looked at a variety of storage systems, but there was no compelling case to purchase any of them until we evaluated the Panasas Parallel Storage Cluster.”*

- Richard McNally  
Manager, PGS Global Computer Resources

## THE SOLUTION

After evaluating several storage products, none matched the performance or manageability of the Panasas solution. The Panasas DirectFLOW® protocol has resulted in substantial performance increases for PGS's seismic applications, and dramatically reduced cost and complexity of their storage infrastructure. The parallel DirectFLOW client software enables PGS to avoid partitioning the cluster with expensive connections to sustain the bandwidth of its seismic applications. The DirectFLOW protocol allows high-speed, parallel data transfer between PGS's Linux-based clusters and Panasas storage systems so that data can be simultaneously accessed at optimum speed.

"We looked at a variety of storage systems, but there was no compelling case to purchase any of them until we evaluated the Panasas Parallel Storage Cluster. The DirectFLOW protocol enabled us to maximize bandwidth and throughput to every compute node in the system," said Richard McNally, Manager for PGS Global Computer Resources. "While the workflow is constantly changing, we now have consistent performance and greater flexibility to run more demanding jobs."

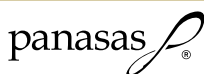
Over 1 Petabyte of Panasas Storage is deployed in 21 PGS processing centers worldwide including sites in Asia, Australia, Africa, Europe, North and South America. In addition, Panasas storage is deployed on multiple PGS-owned vessels that are searching for oil beneath the ocean floor.

## THE RESULT

PGS reduced their time to deliver results to customers and reduced the overall IT costs. "Before we installed Panasas storage, our ability to cost-effectively respond to new projects was severely limited by our storage infrastructure," said McNally. "Unlike most high-end storage products, the Panasas storage system is very easy to install, manage and upgrade. It has been extremely stable and is the only high-performance plug-and-play solution that met our diverse needs. When issues do arise, Panasas support personnel have been extremely responsive. Panasas is very flexible and easy to work with."

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