

CRAY HPC STORAGE SOLUTION FOR ENERGY



The oil and gas (O&G) industry has been undergoing fundamental changes in recent years. While declining oil prices have taken a toll, shifting regional demands and increased adoption of alternative energy are also affecting the industry in terms of profitability and business viability. All of these movements are pushing companies to speed discovery, explore new and alternative fuel sources, and invest in efficient technology in both upstream and downstream phases by using the most cost-effective approach. To better compete, the O&G sector must adopt new technologies and methodologies to improve yield and achieve better operational efficiency.

Problem

Accelerate time to discovery through performance optimized, integrated system architecture design from device level up initiatives.

For example, by leveraging the vast amount of sensor data available from various sources, companies can now monitor a well's health and performance continuously and in better resolution, detect early signs of issues, and take action to prevent catastrophic outcome.

However, managing massive amounts of data effectively and economically is challenging. It creates new requirements for data storage and management systems in terms of capacity, availability, performance and efficiency. To extract the most value out of big data while keeping the cost down, energy companies need to adopt more powerful storage solutions.

KEY BENEFITS

ACCELERATE TIME TO DISCOVERY

Accelerate time to discovery through performance-optimized, integrated system architecture design from device level up

IMPROVE OPERATIONAL EFFICIENCY

Improve operational efficiency through highest performance efficiency

REDUCE TCO

Reduce TCO through less management burden and cost for utility and space consumption

Ultimately, the new generation of the storage systems should help enterprises make intelligent business decisions through real-time insights.

Solution

ClusterStor™ storage systems are the industry's only integrated storage solution built from the device level up. Unlike other storage systems which are put together with various third-party components and tuned by the storage vendor, ClusterStor storage systems are purpose engineered, designed and manufactured from the ground up by one company.

This integrated architecture results in optimal performance in the most efficient manner. With ClusterStor storage, O&G users can extract more than 80 percent raw performance out of the underlying media, thus driving up the overall system performance at high efficiency.

Powered by high-performance parallel file systems such as Lustre®, ClusterStor solutions promise the fastest sustained application performance in the industry – up to 1.7 TB/s with storage capacity over 80 petabytes.

ClusterStor storage systems can help O&G organizations scale and accelerate their advanced analytics workloads so they gain more comprehensive and timely insights across upstream and downstream businesses.

With ClusterStor system deployment, energy companies benefit from:

- **Faster Time to Discovery:** The tightly integrated, performance-optimized ClusterStor storage systems can accelerate analysis of extremely large datasets for many use cases including multi-dimensional seismic imaging, reservoir analysis and preventative maintenance. These solutions support both compute and data-intensive workloads including Hadoop®/MapReduce and other downstream business intelligence projects.
- **Optimal Performance Efficiency:** Efficiency is key when it comes to new technology adoption. A ClusterStor systems can deliver optimal performance by fully utilizing their underlying building blocks which means energy companies can easily meet performance requirements with a smaller hardware footprint.
- **Lower TCO:** With superior efficiency and smaller hardware deployment, ClusterStor systems reduce management complexity and power, cooling and floor space costs. Given today's tight margins, a storage solution that drives down TCO without sacrificing the performance provides a unique competitive advantage.

CRAY® CLUSTERSTOR™ AT A GLANCE

ClusterStor storage systems are built on Cray's robust enterprise-class storage designs from the device level up. Powered by industry-leading parallel file systems including Lustre®, ClusterStor storage systems help customers accelerate their most demanding data-intensive workloads at scale.





WHAT MAKES CLUSTERSTOR™ SOLUTIONS DIFFERENT

- **An award-winning**, complete product portfolio including the industry's highest performing, scale-out parallel storage systems, systems supporting mixed workloads, and performance-optimized, cost-effective archive systems
- **A truly integrated**, purpose-engineered storage solution capable of delivering optimal performance efficiency, high-level reliability, availability and serviceability
- **Removes complexities** associated with HPC environments with a smaller storage footprint
- **Accelerates** mixed I/O workloads in a hybrid storage environment with minimum management complexity
- **Supported by** Cray

CRAY® CLUSTERSTOR™

Learn more about ClusterStor solutions at
www.cray.com/products/storage/clusterstor

Cray Inc.
901 Fifth Avenue, Suite 1000
Seattle, WA 98164
Tel: 206.701.2000
Fax: 206.701.2500
WWW.CRAY.COM