

# CRAY HPC STORAGE SOLUTION FOR ENERGY



The oil and gas (O&G) industry has seen fundamental changes in the past few years — declining oil prices, shifting regional demand, and rapid adoption of alternative energy. Each of these factors affects the sector in terms of profitability and business viability.

That's pushing O&G companies to speed discovery, explore new and alternative fuel sources, and invest in efficient, cost-effective upstream and downstream technology. To compete, you need to adopt new methodologies that will improve yield and boost your operational efficiency.

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## Problem

O&G decision-makers are faced with demand to accelerate time to discovery and, at the same time, operate an efficient and cost-effective system architecture.

Today's energy companies can access a vast amount of sensor data and use it to continuously monitor a well's health and performance — in high resolution. The ability to detect early signs of trouble means you can take action to prevent potential catastrophes.

But managing massive amounts of data effectively is challenging.

It creates new requirements for data storage and management systems in terms of capacity, availability, performance and efficiency. To get the most value out of big data and keep costs down, oil and gas companies need to adopt powerful storage solutions.

## KEY BENEFITS

### ACCELERATE TIME TO DISCOVERY

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

### IMPROVE OPERATIONAL EFFICIENCY

Improve operational efficiency through the highest performance efficiency

### REDUCE TCO

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

The new generation of HPC storage helps enterprises make intelligent business decisions by giving them real-time insight.

**Solution**

Cray® ClusterStor™ storage systems are the industry's only integrated storage solution built from the device level up.

Unlike other storage systems that are put together with various third-party components and tuned by the storage vendor, ClusterStor systems are purpose-engineered, designed and manufactured by one company — Cray.

This integrated architecture results in efficient performance. With ClusterStor storage, O&G users can extract over 80 percent more raw performance out of the underlying media, driving up 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 PB.

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:** Tightly integrated, performance-optimized ClusterStor storage 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.
- **Efficient Performance:** Efficiency is key when it comes to adopting new technology. ClusterStor systems deliver optimal performance by fully utilizing their underlying building blocks, which means energy companies can 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 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.



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## 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 by occupying a smaller storage footprint
- **Accelerates** mixed I/O workloads in a hybrid storage environment with minimum management complexity
- **Supported by** Cray professional services

### CRAY CLUSTERSTOR

Learn more about ClusterStor solutions at  
[www.cray.com/products/storage/clusterstor](http://www.cray.com/products/storage/clusterstor)

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