Oil and Gas Data Archiving

Oracle's StorageTek Hardware and Interica's Data Management Software

Upstream oil and gas organizations must manage, analyze, and store more data than ever before. Data volumes continue to grow at an exponential pace due to higher resolution capture methods and new seismic survey formats. Furthermore, exploration and production ("E&P") divisions must manage and store their project data from hundreds of applications – distributed across numerous worldwide locations – for an infinite time. Traditional data management solutions don't address the complexities associated with storing and accessing E&P data. As a result, oil and gas organizations require advanced archiving capabilities. Interica's data management software and Oracle's StorageTek hardware are the perfect combination to unlock the value of E&P data for oil and gas organizations. The Oracle and Interica oil and gas archive solution integrates with your existing environments to boost efficiency and accessibility, provide long-term data integrity, and lower the TCO of data management.

Solution Overview

Oracle's storage solutions for oil and gas lead the industry in performance, scalability, availability, and total cost of ownership (TCO). When these storage systems are combined with Interica's Data Management Solutions, they deliver an enterprise class archiving solution designed to meet the needs of the most-demanding oil and gas environments.

Interica's software integrates with Oracle's hardware giving customers a robust, secure and efficient way to manage their seismic and E&P project related data. The software discovers, analyzes, and bundles data across a range of E&P software applications to ease administrative burdens and improve productivity of geoscientists. The Interica data management software solutions — with Interica's PARS as its core component— are suitable for mission-critical applications and large-scale operations, and are enhanced by Oracle's highly scalable and reliable, high-performance storage systems.

Efficiency and Integration

The Oracle and Interica solution works with a wide range of leading E&P applications, including Landmark R5000, Schlumberger Petrel and Geoframe, IHS Kingdom and Petra, and many more. The software integration provides comprehensive, full visibility into projects across diverse file systems to ease data management and enhance productivity. PARS enables an efficient archive workflow

KEY SOLUTION FEATURES

- Project Aware: Recognizes projects/data from multiple vendor applications
- Archives project data together in a single easy to access bundle
- Automatically captures metadata to facilitate easy search and retrieval
- Supports archive to disk and tape
- Supports project-aware snapshots, allowing easy point-in-time restore of projects

KEY SOLUTION BENEFITS

- Efficiency and integration
- Accessibility and high performance
- Long term preservation and data integrity
- Improved TCO

that is both scalable and transferable. The workflow scales from a few data managers in small companies or regional offices to many data managers and geoscientists in large companies or corporate headquarters. It also allows for standards that can be easily transferred to different staff in different locales.

Accessibility and High Performance

By capturing project information in one place and comprehensively describing it for future reference, Interica's solution provides rapid access to project data. With Oracle's StorageTek high performance data storage, users can quickly archive and retrieve large amounts of seismic and other project related data. The high availability design including redundant library components ensures reliable access to data that supports key E&P business objectives, such as increasing the speed to discovery and selecting future drilling locations.

Long Term Preservation and Data Integrity

Interica's solutions can archive disparate project data together in a single bundle file preserving referential integrity and protecting it from change. Furthermore, the replication feature provides disaster recovery and preserves the data by moving it to the most appropriate Oracle storage solution over time. Interica's IDS™ supports data migration to the latest media platform in order to ensure long term preservation.

Improved TCO

Interica's software helps customers optimize use of primary storage by identifying stale (unmodified) data and archiving it to more cost effective storage tiers. Deleting the source data post archive frees up valuable primary storage and reduces backup windows. By managing data across storage tiers and reducing backup windows, users can reduce overall TCO by as much as 87 percent over maintaining all data on a single tier of primary storage, according to the industry analyst The Clipper Group.

Features and Benefits of Interica Data Management Solutions

Interica solutions provide an integrated approach to the management of geological, geophysical and geotechnical data assets through their lifecycle – from seismic survey and well log data to reservoir analysis and production data. The software discovers and analyzes E&P specific data to help customers actively manage and archive their data for long term retention. Valuable exploration and production project data is easily archived and accessible because of Interica's industry specific approach to E&P data management.

Interica Project Resource Manager™

Software solution for discovering and analyzing multiple petro-technical application projects across multiple disk drives.

- Understands and discovers project data across the disk storage environment

- Collects project statistics from all files on disk (e.g. modification & access age and by whom, size, location, etc.)

- Collects project metadata from inside of the project files/databases (e.g.

ORACLE'S STORAGETEK MODULAR TAPE LIBRARIES

StorageTek modular tape libraries provide the scalability, reliability, and extreme economics required for today's exploration and production project data and seismic surveys.

CONNECT WITH US

blogs.oracle.com/oracle

facebook.com/oracle

twitter.com/oracle

oracle.com

FOR MORE INFORMATION
Contact: 1.800.ORACLE1

Hardware and Software, Engineered to Work Together

spatial extent, application version, number of 2D and 3D surveys, etc.)

- Offers a web based map and tabular interface to allow users to make informed business decisions about their data

Interica PARS® Project Archive and Retrieval System

PARS® enables users to capture complex digital content from multiple data sources and applications in one place and comprehensively describes this information for long term knowledge retention, compliance, and reduced TCO storage management.

- Recognizes projects/data from multiple vendor applications
- Archives project data together in a single easy to access bundle
- Automatically captures metadata to facilitate easy search and retrieval
- Supports archive to Oracle disk and tape storage
- Supports project-aware snapshots (e.g. at project review), allowing easy point-in-time restore of projects

Interica IDS™ – Intelligent Data Store

Interica IDS™ solution provides powerful, centralized tape management capabilities. This highly flexible, software solution for high capacity data simplifies the complexity involved in managing networked tape storage.

- Front end disk cache allows management of multiple concurrent data streams in read/write mode providing fast data access to tape resident data
- Easily supports and manages multiple Oracle Storage-Tek Modular Tape libraries which are easy to administer, providing an excellent long term storage facility
- Offers highly automated tape library management, with magnetic tape labeling, data migration for purpose of platform independence and long term preservation, and other powerful housekeeping utilities to manage tapes
- Scalable, centralized tape management to preserve petabytes of data while reducing TCO

Solution Architecture

Interica's PARS and PRM are designed to scale so that they can be deployed in large data centers as well as small regional offices. The flexible server/node/client architecture means the software can be deployed in many different ways to address differing business needs. Figure 1 shows how the Interica software suite can be deployed within a customer's existing E&P application environment and archive to Oracle StorageTek tape libraries via Interica's IDS™.

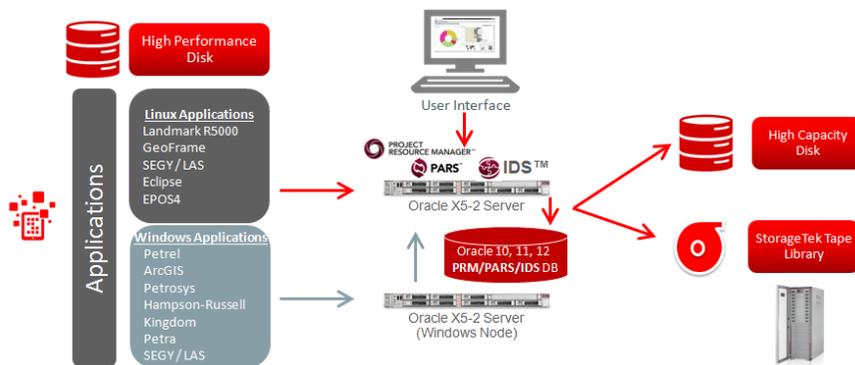**Hardware and Software, Engineered to Work Together**

ORACLE®

Figure 1. Interica Data Management Software and Oracle storage hardware architecture

The software directly integrates with the various E&P applications to provide a central interface that discovers, analyzes, and archives oil and gas data from high performance disk to capacity disk and/or Oracle StorageTek tape libraries. The combined Interica and Oracle solution optimizes performance of your E&P applications and high performance disk. Plus, you can lower your TCO by moving data from your valuable production storage to Oracle StorageTek tape and capacity disk.

Performance, Scalability, and Efficiency

Oracle storage systems are engineered for oil and gas archiving. The advanced hardware and software architecture of Oracle's StorageTek digital tape libraries delivers high performance for moving/accessing large seismic data and interpretation project files, plus offers the world's most scalable and cost-effective solutions for long-term retention of exploration and production data. Interica's software seamlessly works together with Oracle's storage systems to enable a powerful discover, analyze, and archive solution, to keep you ahead of the competition.

CAPABILITIES OF ORACLE'S STORAGE SYSTEMS

Digital Tape Libraries	Storage Capacity
StorageTek SL8500 modular tape library system	2.1 EB maximum capacity (2.5:1 compression) StorageTek T10000D or T10000C tape drives LTO6, LTO5, or LTO4 tape drives from HP or IBM
StorageTek SL3500 modular tape library system	126 PB maximum capacity (2.5:1 compression) StorageTek T10000D or T10000C tape drives LTO6, LTO5, or LTO4 tape drives from HP or IBM
StorageTek SL150 modular tape library system	1.8 PB maximum capacity (2.5:1 compression) LTO6 or LTO5 tape drives

Contact Us

For additional details on Oracle storage solutions, please visit oracle.com/goto/tape or call +1.800.ORACLE1.

For additional details on Interica's Oil and Gas data management software, please visit interica.com or call +1.832.981.6577 in the Americas or +44.1825.745100 in the UK.

Hardware and Software, Engineered to Work Together