

EXPLORATION AND PRODUCTION INFRASTRUCTURE (EPI) FOR OIL AND GAS

EPI is a comprehensive framework of EMC solutions that address the unique, data-intensive challenges of upstream oil and gas companies

THE BIG PICTURE

EMC's EPI helps upstream oil and gas companies

- Accelerate discovery efforts by optimizing application performance with **High-Performance Unified Storage and Upstream Application Accelerator**
- Decrease the cost of operations by eliminating data inefficiencies: use **tiering, deduplication, and compression** of project data sets and **archive** inactive E&P files for maximum efficiency
- Regain control of infrastructure by gaining insight into E&P data with **EMC File System Assessment** or Schlumberger Data Storage Profiling Service
- Ensure business resiliency and safeguard large capital investments by protecting valuable data assets with **EMC disaster recovery solutions**



**EMC IS
COMMITTED
TO YOUR
SUCCESS**

EMC's oil and gas vertical program is committed to your success through:

- Dedicated oil and gas business and technology professionals
- Deep collaboration with our oil and gas customers and technology/integration partners
- Focus on bringing industry best practices to bear
- Specialized services and consulting practices in oil and gas

BUSINESS CHALLENGE

Today, oil and gas companies in the upstream segment are utilizing more sophisticated, higher resolution seismic acquisition, processing, analysis, and modeling techniques. The combination of the growth from 2D to 3D to 4D seismic surveys, pre-stack analysis, and advanced modeling has driven a 500x increase in data.

The industry is benefiting from more powerful computational capacity, allowing larger data sets to be concurrently analyzed. But storage issues result. Joint ventures and increased M&A activity lead to not only broader collaboration on data sets, but also increased redundancy and data management complexities. Upstream operations are also constantly adding more and more specialized exploration applications and complex collection and analysis methods like real-time Seismic-while-Drilling (SWD).

These technological advances are helping companies accelerate discovery, optimize production, and minimize the risk of unsuccessful drilling efforts due to incomplete or inaccurate information. Companies, though, need an IT infrastructure aligned with their business challenges. EMC has that solution with the Exploration and Production Infrastructure (EPI) for Oil and Gas.

EXPLORATION AND PRODUCTION INFRASTRUCTURE (EPI) FOR OIL AND GAS

EPI is a comprehensive framework—validated with industry-leading interpretation and analysis applications by Schlumberger, Halliburton/Landmark and others—of EMC® solutions designed to address unique, data-intensive challenges faced by upstream oil and gas organizations and provides many benefits.

EMC'S EXPLORATION AND PRODUCTION INFRASTRUCTURE COMPONENTS

- **High-Performance Unified Storage and Upstream Application Accelerator (UAA)** offers up to six times the performance improvements over traditional file systems to decrease geoscientist query times and reduces information management by minimizing the fragmentation of data sets.
- **Backup with deduplication** and archive to eliminate data inefficiencies and reduce the cost of operations. EMC has Fully Automated Storage Tiering (FAST) within the array and PetroVault for **Archiving less active seismic data you want online**. **EMC Avamar ensures backups are easy to perform and recovery is from outages is assured.**

EPI CASE STUDY

A major Latin American oil and gas company is one of the largest in the world and is expanding their exploration and production operations. To do so, they use EMC EPI in all their exploration and production regions. EMC is almost exclusively used for their exploration and production application environment that uses High-Performance Unified Storage. The primary exploration and production applications are from Schlumberger, Halliburton, and Paradigm.

Initially, this company was trying to understand its growing file system environment. They spent almost a year trying to get an accurate inventory of their data storage systems, but ultimately turned to EMC for help. EMC delivered a File System Assessment and produced a complete inventory in only two weeks. The results of the FSA allowed this company to re-evaluate its current storage practices.

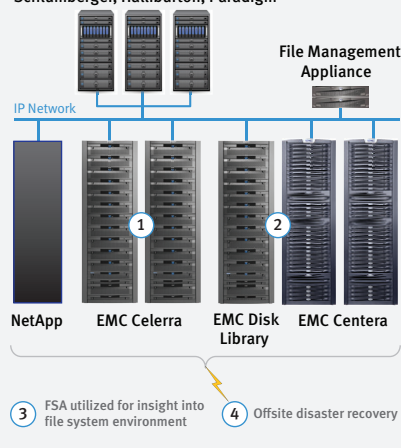
The first step was to implement a policy-based archive with FMA and Centera. Next, they re-evaluated their backup processes, implementing EMC Disk Library for efficient backup-to-disk.

Finally, they are actively discussing a disaster recovery strategy with EMC for their exploration and production data centers.

This major oil and gas company has leveraged the comprehensive EMC EPI framework for oil and gas and has broadened its use of EMC solutions throughout its many divisions, including corporate, refining, pipeline, and retail.

Case Study

Schlumberger, Halliburton, Paradigm

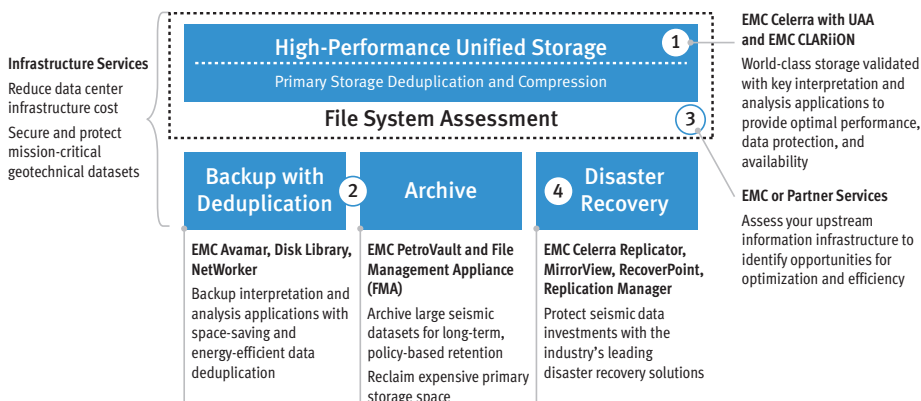


TAKE THE NEXT STEP

For more information on EMC solutions for the oil and gas industry, please visit www.EMC.com.

- **EMC File System Assessment or Schlumberger Data Storage Profiling Service** provides intelligent analysis to define data and information strategies with confidence to reduce administration costs, improve application performance, and improve backup and recovery times.
- **EMC disaster recovery solutions** protect your most valuable data assets, mitigate downtime risk, and help you improve service-level agreements (SLAs), recovery point objectives (RPO), and recovery time objectives (RTO).

EMC's Exploration and Production Infrastructure (EPI) Components



EMC HAS A FORMIDABLE INDUSTRY PRESENCE AND EXTENSIVE OIL AND GAS EXPERIENCE

EMC is a leading provider of information infrastructure to the oil and gas industry and has been a presence in the industry for over 25 years. EMC has an extensive customer base.

EMC has a network of industry-leading application partners and systems integrators to ensure inter-operability and good cooperation when supporting your environment.

EMC has strategic partnerships with Schlumberger and Halliburton/Landmark. The entire application suites from both companies are validated with EMC storage infrastructure.

EMC has multi-year partnerships for co-solution development with both partners to address key upstream industry challenges. Schlumberger recently announced two new branded offerings based on EMC technology.

- High-Performance Unified Storage for Petrel announced at the May 2010 Schlumberger Information Solutions (SIS) Global Forum in London drives data access up to six times faster than traditional NAS.
- Data Storage Profiling Service, based on EMC's File System Assessment, is enhanced to identify industry-specific file types from both Schlumberger and Halliburton, so you know exactly what you are storing. EMC or Schlumberger can advise you how to manage your storage most efficiently and cost effectively.

EMC designed the Exploration and Production Infrastructure with these key partners in mind to optimize interpretation and analysis applications environments.

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