

Saudi Aramco Rowan Offshore Drilling Company



ARO Drilling is a world-class offshore drilling contractor that owns, operates, and manages a fleet of high-specification and premium jack-up rigs in Saudi Arabia. The offshore drilling market in Saudi Arabia is expected to expand, creating considerable demand for drilling services.

Customer information

ARO Drilling (Saudi Aramco Rowan Offshore Drilling Company) was founded in 2006 and is a joint venture between Saudi Aramco, the world's largest oil and gas company, and Valaris Companies, an industry-leading, global drilling contractor. The 50/50 joint venture marks a major milestone towards the development of a competitive Saudi energy sector.

Industry

Oil and Gas

www.arodrilling.com



The Aim

Aro Drilling's data and the nature of its business are extremely sensitive. That's why ARO Drilling chose to deploy a high-availability and fault-tolerant system with a 99.999 % availability and backup replication. High availability and redundancy are essential in operations that run 24 hours a day, seven days a week. Data backups must be quick and dependable, and a disaster recovery plan must be in place to restore operations in the event of a breakdown.

Challenges

The challenges ARO Drilling are facing is improving their performance and quality of service in order to ensure the continuity of its production.

While energy firms are attempting to extend the life of their mature sites to maintain steady crude oil or gas supplies, they are also driven to seek new sources of oil or gas, although these will be far more complex and expensive to extract, transport, and refine. To achieve this, they want their systems to be 100 percent reliable. Unplanned shutdowns need to be avoided, throughput needs to be increased, and industrial assets need to be protected.

It is the oil industry's objective to optimize production systems and environmental utilities at currently operational locations in order to minimise costs and remain competitive. This increases production efficiency, lowers extraction and refining costs, and thereby balances exploration expenses. With severe weather conditions in addition to limited means of communication, oil rigs (especially off-shore ones) are harsh environments. Internet connections are typically extremely limited and slow-running, hardware failures are costly and time-consuming to put right, and power supplies are unreliable, compromising real-time performance.

The existing infrastructure

Aro Drilling's mission-critical applications (virtual environment) were running on IBM System x3550 M4 Servers with no high availability or backup systems. There was neither a disaster recovery nor a high availability solution in place.

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Solution

After a careful and deep investigation of the exact situation and the customer needs, NEC's solution proved to be the best choice to fulfill all requirements.

- > NEC FT will add value to the business and maximize the return on investment, by providing a 99.999 Highest Level of Availability
- > HYDRASTOR Backup Solution

Results

After studying the solution regarding NEC FT Server and NEC's HYDRAsTOR backup solution, the following results were shown:

- > Less backup capacity needed thanks to deduplication and compression
- > Highest levels of availability and performance provided, together with ease of administration
- > Reduced ownership costs and the option for built-in high availability and replication between the rigs and the data center

Why was the NEC solution chosen?

During the qualification process, Aro Drilling found out that the NEC's entire solution is robust, cost-effective, and simple. In contrast to standard clustering approaches, Aro Drilling was positively impressed by how different the hardware architecture of NEC's fault-tolerant server was. In addition, Aro Drilling had been looking for a solution that would be easy to deploy and administer. The NEC solution proposed by its business partner Najtech was a great relief for Aro Drilling. Indeed, the alternative option offered by a competitor turned out to be much more challenging, in terms of administration, where heterogeneous solutions were proposed, as well as in terms of pricing.



Some oil and gas customers prefer to outsource their data centers to specialized service providers rather than build their own. But for ARO drilling the case was different. ARO's approach is to build their own mini data center in each rig, using NEC technology and hardware which combines high performance with stability and reliability. The solution also provides excellent scalability as well as ease of installation in the remote regions where the wells are drilled.

For further information please contact your local NEC representative or:

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