

Shelf Drilling



Shelf Drilling improves user experience and boosts operational efficiency across remote locations with Riverbed

Shelf Drilling was founded in 2012 with a sole focus on shallow water drilling, and the company has many of the world's leading oil companies as customers, including Chevron, ONGC, Saudi Aramco and Total. It operates 30 rigs across eight countries and has 12 onshore locations, with approximately 3,000 employees in total.

Headquartered in Dubai, the company's rigs provide reliable, fit-for-purpose and cost-effective drilling services, with each rig having between 80-150 staff on board. Shelf Drilling built its IT infrastructure from the ground up and has approximately 1,100 endpoints both on and offshore to connect.

Rigs are connected via geostationary VSAT satellites and utilize SaaS and on-prem applications running on servers that replicate back to the head office.

In Brief

Challenges

- Improve application performance in remote locations
- Optimize and accelerate apps in low bandwidth environments
- Support virtualization initiatives

Solution

- Riverbed® SaaS Accelerator
- Riverbed® SteelHead™ maximizes network and application performance

Benefits

- Safeguards business continuity and revenues
- Reduces Intranet traffic by up to 95%
- SaaS Accelerator optimizes core apps by up to 80%
- Simplifies network and performance monitoring
- Streamlines rig operations and improves user experience

Challenge: Optimizing apps in low bandwidth environments

Offshore rigs are challenging IT environments. They need to balance high availability for both employee facing and machine-to-machine apps, such as security patching and system updates, to ensure the rig systems are operational, reliable and maintain accurate data replication and reporting. The rigs operate with relatively low bandwidth between 1-2 Mbps and high latency of up to 750 milliseconds.

And it's not just drilling that relies on apps – all the usual administrative functions need to be able to share and access large files. The management of critical spare parts, staff training records, health and safety information and the handover between staff all rely on coordinating data flows from multiple systems.

“When you're operating across satellite links, performance is key.”

Mohammed Al Baqari
Network and Information Security Manager, Shelf Drilling

“The employee experience is a really important aspect of life on the rig. Not only do people need to be able to work and share information, they need reliable communications to call their families and use mobile banking during their downtime, which can be a challenge as this utilizes a lot of bandwidth,” says Ian Clydesdale, IT Director at Shelf Drilling.

The company adopted a hybrid cloud model, with virtualization software running on on-prem servers on the rigs to ensure critical access to applications and data when rigs move or when there is downtime on the satellite connection. Replication of rig data to both on-prem solutions and the cloud were a critical aspect of network design and Shelf Drilling realized it needed a solution to optimize and accelerate application performance to maximize productivity with limited bandwidth.

“Some of our key applications struggle to work effectively without optimization, such as our JD Edwards ERP platform which is responsible for generating purchase orders in the procurement process and other applications that keep our on-shore team updated on operations,” says Mohammed Al Baqari, Network and Information Security Manager at Shelf Drilling. “When you're operating across satellite links, performance is key.”

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Ian Clydesdale
IT Director, Shelf Drilling

Solution: Market-leading optimization and acceleration

After assessing several solutions on the market and examining leading industry analyst reports, the company decided to implement Riverbed® SteelHead™ for WAN Optimization and Riverbed® SaaS Accelerator to accelerate business critical applications.

"I had used Riverbed before and had a positive experience with it. After conducting some research and due diligence, it was a unanimous decision – Riverbed was the best app and network optimization solution for our requirements," explains Clydesdale.

The solution integrates with key technologies such as Shelf Drilling's VMware virtualization software, JD Edwards and Microsoft 365 to improve performance. Shelf Drilling was the first company to adopt Riverbed's SaaS Acceleration solution in the Middle East and leveraged Riverbed to achieve over a 50% compression rate on 1.2 terabytes of email data.

Performance monitoring traffic is also optimized at an average rate of 67% per month and JD Edwards ERP suite combines an 81% rate of optimization with a 95% reduction in database replication traffic.

Benefits: Improving the user experience and boosting operational efficiency

With less bandwidth being used, the company can deploy more applications that are too resource-heavy to be supported directly over VSAT links by deploying an on-prem virtual environment to support them. Riverbed also streamlines replication of data from offshore instances to the virtual cloud environment.

"Having robust, reliable and recoverable data streams is really important on a rig," comments Clydesdale. "Riverbed optimizes both our corporate and cloud application traffic, so if there is an outage, it's less likely to affect data transfer or application performance."

This is key for the company's cloud-first strategy. As Shelf Drilling migrates more applications to its Microsoft Azure cloud data centers, optimizing data replication across high latency links becomes essential to ensure applications perform effectively.

"Riverbed is an integral part of our infrastructure. When considering new technology solutions, we have to prioritize technologies that integrate directly with it," says Clydesdale.

"We're always striving for the best possible user experience, and it simply doesn't make sense to run a network of our size and complexity without Riverbed's optimization and SaaS Acceleration solutions."

As far as Shelf Drilling's users are concerned, Riverbed is invisible. They can simply enjoy highly available applications and a lower rate of latency.

"Our goal is to always provide IT services that run so seamlessly that our users don't even notice them. But the success is in enabling them to communicate, to work efficiently from any rig, and to access data and digital services whenever and wherever they need them," concludes Al Baqari. "There are a huge number of moving parts involved in operating a rig, and Riverbed makes it much easier to manage, so we can continue generating revenue and provide a first-class experience to our customers."

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