

# CapRock proves more does not equal better with new WAN optimization service

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**The offshore industry is reliant on satellite communications to maintain critical connectivity between remote drilling sites and offices back onshore. As more companies look to further incorporate onshore applications like corporate email, databases, Internet access and enterprise resource planning (ERP) systems into offshore operations, the latency and connection congestion often associated with remote satellite connectivity become even larger issues. These limitations can make it challenging for remote personnel to collaborate effectively with onshore offices. Turnkey providers like CapRock Communications are finding new ways to optimize wide area network (WAN) traffic both at the remote site and at the onshore site to significantly improve the overall productivity and performance onboard offshore vessels and rigs.**

A WAN is any kind of broad area computer network. For the offshore industry, it often refers to the company's entire corporate network infrastructure including all remote sites (offshore and onshore) as well as the company headquarters. Essentially, the WAN enables remote users all across the world to communicate with each other and with corporate headquarters. CapRock's fully-managed WAN optimization service, powered by Riverbed Technology®, improves overall network connectivity by providing easier, more effective application and network usage. The service is tailored to each company's unique network infrastructure and remote site arrangement and is maintained by network infrastructure engineers that specialize in satellite-connected networks. WAN optimization can maximize available bandwidth and ensure the company is getting the greatest value and use out of its satellite connectivity.

At the first sign of application latency, many companies immediately begin looking to increase bandwidth. Many times this won't actually alleviate any of the problems. The problems lie within how and what data is being transmitted. For instance, many corporate applications will often send redundant and uncompressed information through the network. On a traditional LAN these redundancies go unnoticed; however, when transmitted through a satellite signal these issues can sometimes become

exaggerated. By leveraging CapRock's WAN optimization service, companies can optimize their global network traffic to lessen the impact of latency, improve utilization and, potentially, eliminate the need to increase bandwidth, storage or servers. And by integrating it as part of a fully-managed solution – complete with custom network design, equipment, installation and 24/7 support – companies can spend more time on their core business. Not to mention, the added simplicity of working with one provider.

One of the critical elements to ensuring optimal WAN conditions is making sure optimization takes place at the corporate site as well as the offshore site. By installing the hardware at both locations, CapRock's network infrastructure specialists can enable transmission compression and decompression on both ends of the network. This means that any file or packet sent over the network, in either direction, can be compressed before it moves through the WAN, thereby decreasing the amount of time and bandwidth needed to transmit the file. In addition, the installations provide true server consolidation because they allow remote users to connect directly to onshore servers to access information and applications virtually rather than downloading the needed information and re-syncing changes during periods of low-usage. Not only does this mean that corporate and remote users no longer have to wait for the files to be re-synced to have access to the most up-to-date version, but it also eliminates many of the database reconciliation errors that are becoming the plague of offshore data gathering.

CapRock's WAN optimization service also improves offshore application usage and network conditions by optimizing how data is actually transmitted across the network. Un-optimized networks will often re-send an entire file back and forth several times even though only a few small parts of it were actually changed. This is especially problematic in more "chatty" protocols that will send the same information back and forth across the WAN several times for a single operation. The hardware installed by CapRock specialists can check the file to determine what changes were actually made and communicate only those changes

to the network destination to minimize network traffic, expedite delivery and maximize bandwidth availability. In addition, by optimizing the WAN, companies can assess individual protocol activity and actually constrain "chatty" protocol activity to the LAN (or onsite network) where bandwidth availability is usually much greater and the latency much lower. By doing this, CapRock is able to reduce overall network congestion.

So what applications are offshore companies using that actually benefit from CapRock's WAN optimization service? Most likely, if it's online or on the network, companies will see significant improvements. Speed improvements will vary from application to application; however, users have been reporting pretty dramatic improvements for a variety of applications. For example, users uploading and downloading files across a Windows network have been achieving increased speeds of up to 200 times what they were previously experiencing. Speed improvements for sending and receiving e-mail through a Microsoft Exchange server typically fall around 25 times faster. And with some of the more sophisticated applications now required to maintain day-to-day business, optimizing the WAN is the only solution to operating them at remote sites. Because CapRock's WAN optimization service is scalable to support a variety of users, locations and application requirements, businesses can temporarily ramp-up prioritization for certain applications or locations at a moment's notice to allow for even greater speed improvements.

As companies look at the productivity and efficiency of their offshore operations and personnel, they must also look at the network infrastructure powering it all. Without access to critical corporate applications or capabilities, remote employees are literally left stranded hundreds of miles offshore. While more bandwidth can help in some situations, it often falls short in accelerating applications and doesn't solve the challenge of optimizing utilization. With network enhancement services like CapRock's WAN optimization, companies are moving past the "more=better" philosophy and finding new ways to take full advantage of their existing remote connectivity. ■