

Schlumberger



> CUSTOMER PROFILE

Schlumberger is the world's leading oilfield services company supplying technology, information solutions and integrated project management that optimize reservoir performance for customers working in the oil and gas industry. The company employs more than 64,000 people of over 140 nationalities working in more than 80 countries.

KEY BUSINESS BENEFITS TO SCHLUMBERGER

- Increases operational efficiencies through automation
- Enables greater scalability without increasing IT staffing levels
- Improves customer service by increasing overall network availability

KEY TECHNICAL BENEFITS TO SCHLUMBERGER

- Automates a majority of routine network maintenance and recovery tasks remotely
- Enforces security posture even during outages
- Integrates easily with existing in-band network management systems

CURRENT CHALLENGES

The Remote Connectivity Group within Schlumberger Information Solutions is responsible for providing secure, reliable communications for oil and gas customers with locations around the world. A core team of highly skilled network engineers manages this global communications infrastructure, providing 24/7 proactive monitoring and management of the underlying network and communications equipment.

Schlumberger's primary objective was to optimize their service offering by deploying a next generation communication management solution that could automatically detect, diagnose and resolve network-related faults and improve end-to-end communications from global teleports to customers' remote locations. Having this type of solution in place would help the IT staff provide more proactive technical support, reduce trips they would have to make to resolve service outages and enhance management of the communication infrastructure supporting the customer network. Schlumberger's management also wanted to offload and improve the routine maintenance operations being performed manually, such as provisioning and configuring devices.

In addition, Schlumberger needed a solution that would help maintain constant connectivity with these isolated locations. Communications between customers' remote sites, such as offshore oil rigs, and Schlumberger's land-based teleports is conducted via VSAT satellite communications, which are often interrupted due to rain-fade and other types of unavoidable interference. An out-of-band solution was required that could maintain constant communications and manageability even when the main communications link was down or disrupted.

With a remote management solution in place, Schlumberger expected to improve service levels and overall network availability for their customers.

Schlumberger needed a reliable remote management solution that would:

- *Minimize tech support trips and calls in response to network service disruptions*
 - *Reduce network outages due to configuration and provisioning errors*
 - *Maintain non-stop availability and management control even when the main broadband communication link was unavailable*
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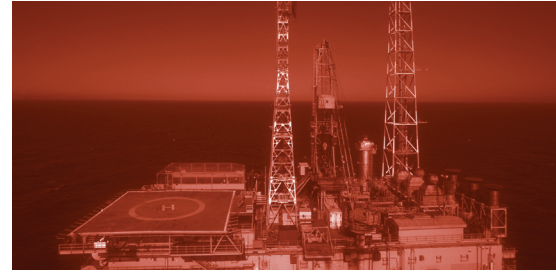
UPLOGIX SOLUTION

By deploying Uplogix' out-of-band management solutions, Schlumberger's demanding requirements were met in full. Schlumberger's executive team selected Envoy management appliances and the Envoy Management Station (EMS) from Uplogix to deliver centralized remote control of the networks under management.

Envoy serves as an on-site, virtual network assistant and is typically deployed at remote locations to improve network availability and out-of-band connectivity in a low cost manner. Schlumberger's operational staff is utilizing Envoy locally to automate network fault diagnosis and recovery, perform routine network maintenance, such as the configuration and provisioning of devices, and ensure network availability, even when the primary connection is down.

If the main broadband satellite link goes down or is disrupted, the Envoy deployed at the remote disconnected location automatically dials out to a low earth orbit (LEO) satellite via an integrated external modem to re-establish an alternate, out-of-band network connection. This unique capability helps to ensure constant connectivity and secure management even during an outage.

The EMS is used by Schlumberger's operational staff to centrally manage all satellite and terrestrial network equipment from a single screen via the web-based portal. The EMS is integrated with Schlumberger's MyVSAT engine providing aggregation of all remote information and non-stop connectivity to the service portal (both in band or out-of-band). From the EMS, administrators schedule and coordinate all network maintenance and management operations being performed by Envoy. In addition, the EMS serves as the central repository and reporting interface for all data collection and audit logs provided by the remotely deployed Envoys.



As a result of this deployment, Schlumberger's staff has been able to:

- Significantly reduce tech support calls and trips to customers' remote locations
- Increased overall network service availability by reducing configuration errors
- Ensure constant connectivity with and management of remote network sites

Minimizing Tech Support Trips

If communications go "off-line" due to an outage or service disruption, the electrical or barge engineer onboard an offshore rig is conscripted to become the eyes and ears of the Schlumberger engineers back at the Network Operations Center (NOC) to troubleshoot the problem. If the problem cannot be solved due to the lack of local technical expertise, language barriers, or personnel availability on the rig, a support technician must be dispatched to solve the problem. The Mean Time to Recovery (MTTR) can therefore take many hours or even days, depending on the rig's location and availability of technical expertise.

The Envoy minimizes these costly inefficiencies by continuously monitoring, diagnosing and autonomously repairing service-related problems within minutes. If Envoy cannot fix the problem on its own, it forwards, through a secure out-of-band path, detailed performance and diagnostic data as well as recommended recovery actions to Schlumberger's NOC engineers so that they can remotely repair the problem and restore service without having to send a technician on-site.

Reducing Configuration Errors

Satellite communications are subject to frequent service disruptions caused by interference due to bad weather. To restore service, Schlumberger's operational staff often has to reconfigure and re-provision devices, such as satellite modems, antennae controllers and other communications equipment. This manual process can be both time-consuming and occasionally error-prone.

Envoy's rule-based engine automates this routine maintenance by applying best-practice procedures provided by the device manufacturer. Envoy's automated capabilities have helped provide Schlumberger staff with a secure, consistent and repeatable approach to remotely perform these routine maintenance tasks error-free with minimal manual intervention required.

Ensuring Constant Connectivity

By leveraging Uplogix' intelligent out-of-band architecture, Envoy is always able to manage Schlumberger's network even when the main satellite broadband link is down or degraded. Since the Envoy is serially connected to all devices under management, it continues to monitor and control connected devices in the case of an outage. And the Envoy will automatically establish an alternate management connection via integration with an external modem to a low earth orbit satellite in order to send important monitoring, logging and audit data back to the EMS for Schlumberger's staff to see and use.

This unique capability has helped Schlumberger staff greatly improve both the quality and availability of service they provide their customers by enabling them to more quickly and correctly triage support events and remotely resolve critical service problems. Now Envoy ensures that a secure communications path is always available between the site under management and Schlumberger's NOC, and that Schlumberger's staff has constant access and visibility with up-to-the-minute performance statistics from all networked sites under management.

"Envoy will significantly improve the efficiency and scalability of managing our remote and offshore communication infrastructure. Our investment in Uplogix' remote management solution provides us with intelligent virtual administration in locations that are challenging to staff and enables automation of traditional support and maintenance functions that are typically handled by engaging an on-site technician."

ABOUT UPLOGIX // Uplogix provides the first fully-integrated remote management solution. Our co-located management appliances automate routine administration, maintenance and recovery tasks – securely and regardless of network availability. In comparison, traditional network and systems management requires multiple tools, relies on the network, and remains labor intensive. Uplogix puts the power of your most trusted IT administrator everywhere, all the time.

Uplogix is privately held and headquartered in Austin, Texas with European offices in London. For more information, please visit www.uplogix.com.

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