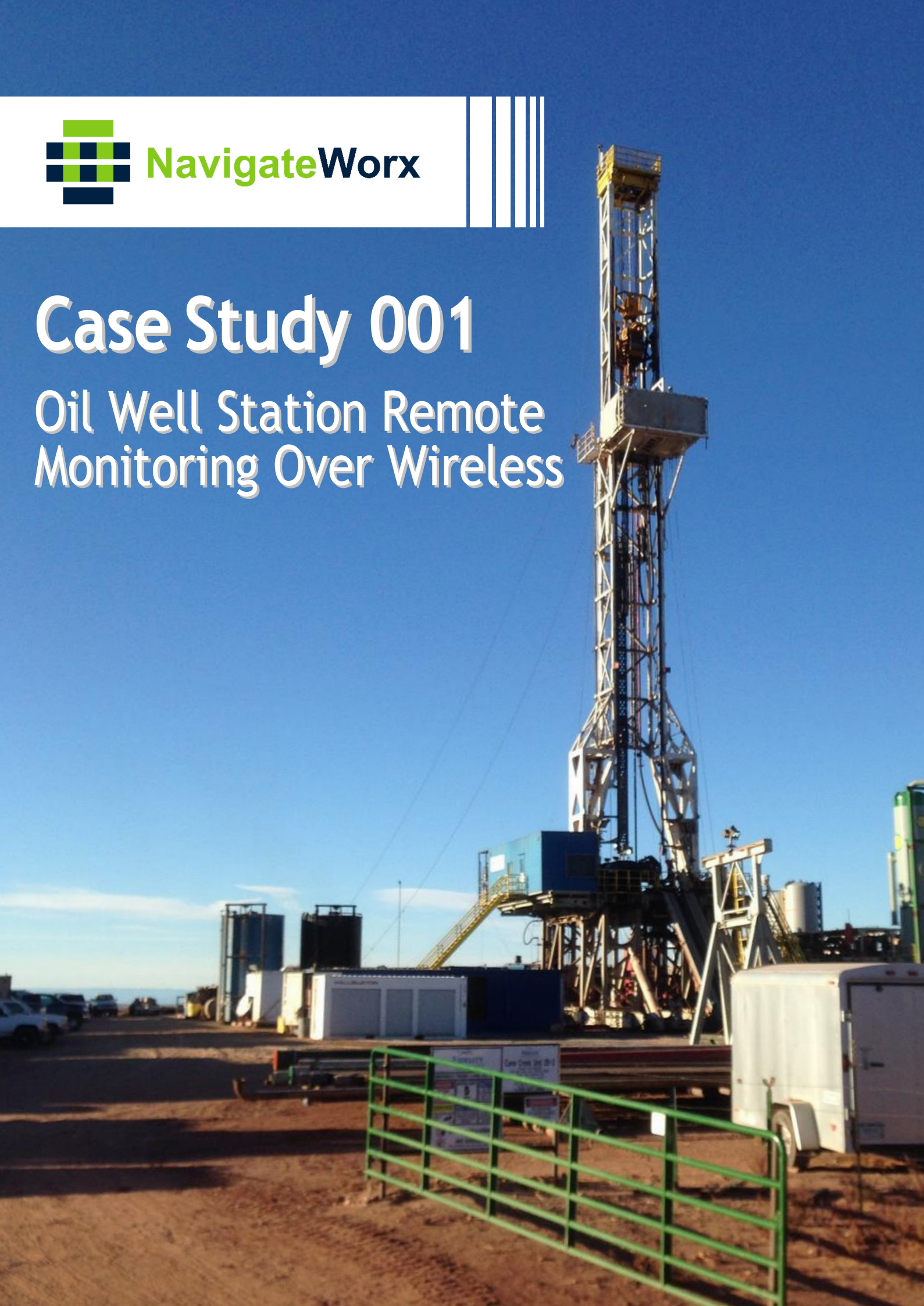




NavigateWorx

Case Study 001

Oil Well Station Remote Monitoring Over Wireless



Customer Background

Customer from the United States, which is famous and responsible for the design, implementation or retrofit of SCADA and Non-SCADA based Control and Monitoring Systems for the Oil & Gas, Electrical Generation and Transmission and Water Treatment and Transport entities.

Utilizing a wide range of manufacturers with a focus on proven yet innovative solutions, our customer designs have proven instrumental in cost reductions and increases in efficiencies in each of its installed systems.

Why Navigatowrx?

- Saving Costs

Navigatowrx help engineers monitor real-time operation of the machines, response to faults with shortened time, and plan for preventive maintenance, saving both manpower and costs significantly.

- Reliable Network Communication

The NR500 LTE VPN Routers provides reliable low latency communications between machines and the center. Multiple interfaces failover and Dual SIMs capabilities for redundancy between cabled landline and mobile operator or between different 4G mobile data carriers;

- Working In Harsh Environment

With NR500 LTE VPN Routers, now it's flexible enough with its strong and high EMC level design, it could get all equipment connected and have internet access to be online for remote visitors all the time.

- High Security VPN

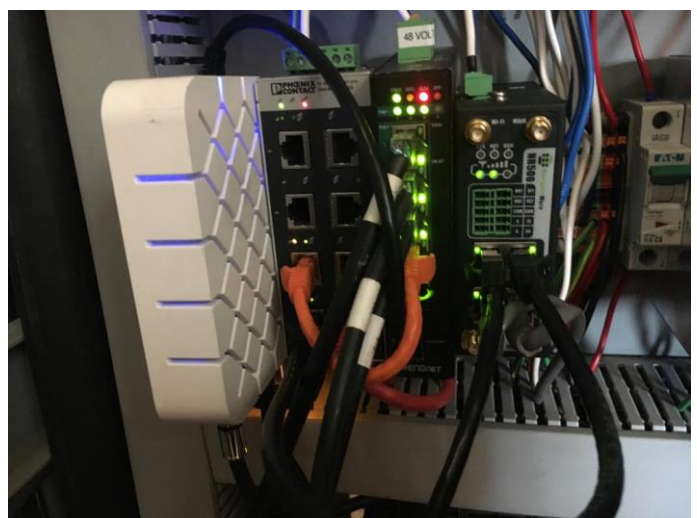
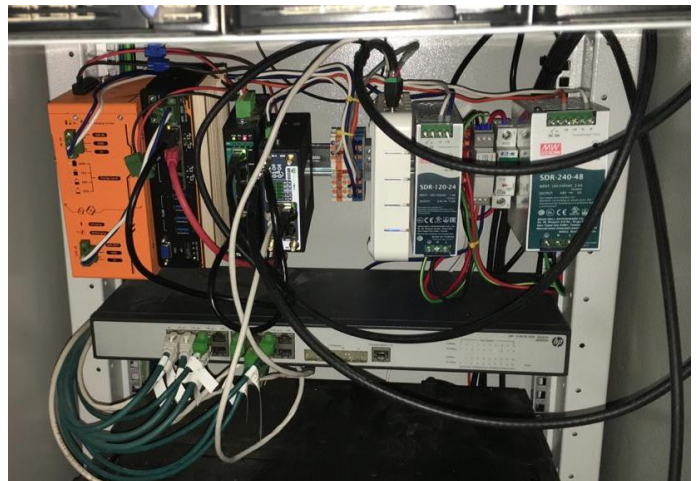
Several VPN tunneling modes available and easy to configure;

Customer Needs

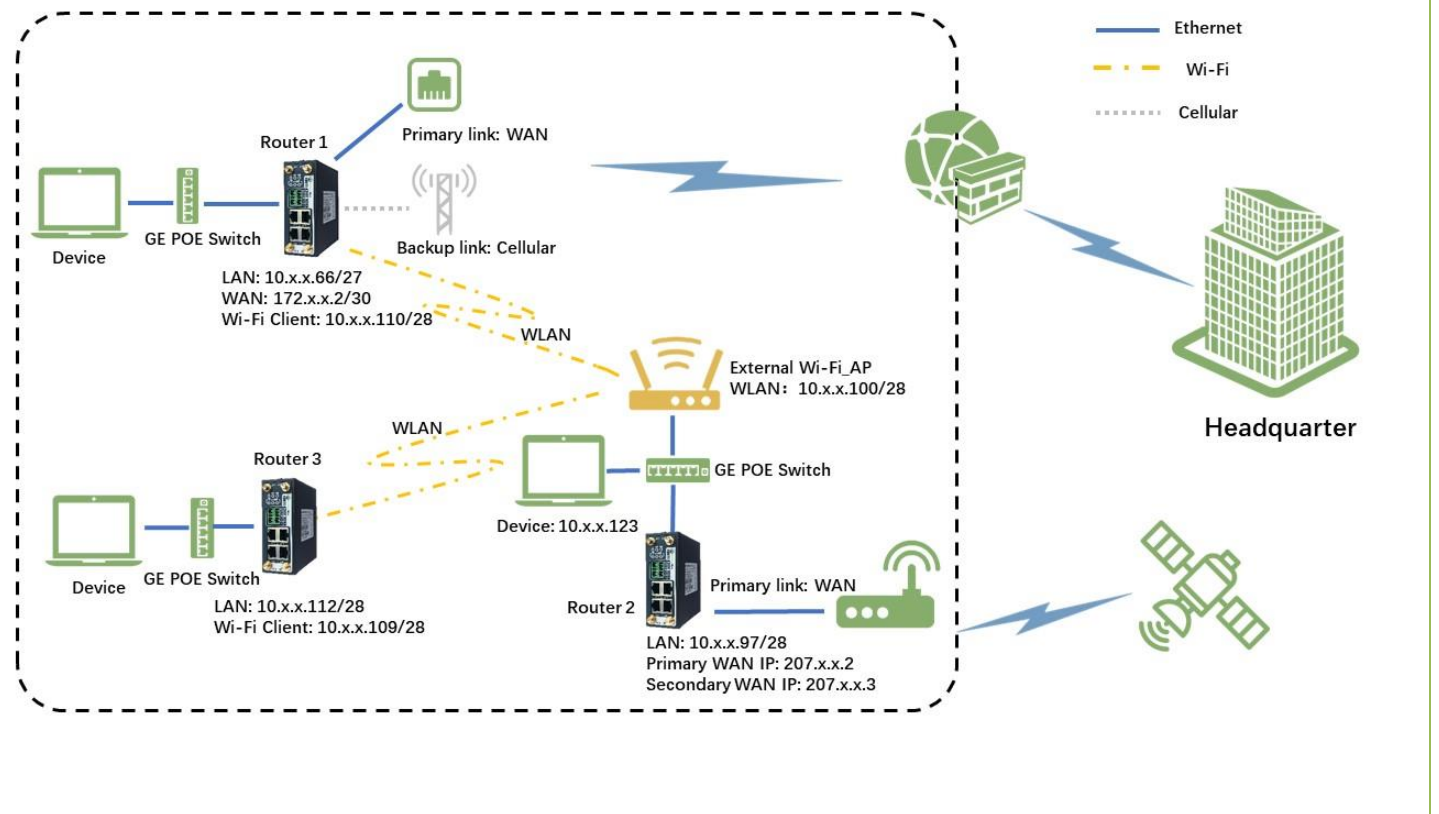
In order to offer better service for fast growth business and improve system management, the customer planned to deploy a state of the art monitoring system across with different areas.

One oil well working station require 3 site of router to connect different equipment together within local Wi-Fi network. Then route all traffic to another default export.

Customer look for industrial grade cellular router, which need to bridge the wireless connection for different side, also need to support multiple specified protocols, like secondary WAN IP for management purpose. It requires router play an importance role for this project.



Solution Application



Solution Advantage

- Router1, Router3 connect to Tower site by Wi-Fi connection, NR500 Router is able to play as Wi-Fi client role, it is connected to external AP and bridge all 3 sites equipment.
- On Router1, it is default uplink for the whole station. ETH0 as WAN as main link; Wi-Fi as secondary link for backup; Cellular as the third link for backup.
- On Router2, The secondary IP on WAN for Port Mapping access to the end device from Internet.
- All traffic from the station equipment will access Internet via Router1 and only two specified traffic to external host via the Router2 export -VSAT connection.
- Block the URL on firewall settings to avoid unnecessary network visit.
- IPsec VPN for security connection

Customer Feedback

Improved Security and reduced time of intervention as also cost reduction. NR500 router provides the best industrial networking solution for each site. It is very helpful for the management center to collect and analyze statistical data.

I was impressed by your responsiveness and as such, let's see how fat this goes.

-- SAID BY MR. RAE

Product Highlights

| | |
|------------------------|---|
| Link failover | Support Cellular, WAN, Wi-Fi as uplink and failover for each other |
| Data Ports | 4 x RJ45 + 4G Modem + Wi-Fi Client Serial port: RS232 + RS485 Digital IO: 2 x DI + 2 x DO |
| Wide Range Power input | 9 to 48 VDC |
| VPN Features | IPSec, GRE, PPTP/L2TP, OpenVPN |
| Routing | Static, RIP, OSPF, BGP |
| Port Mapping /DMZ | Support Secondary IP address available on WAN |



About Navigateworx

Guangzhou Navigateworx Technologies Co., Ltd is a dedicated IIoT / M2M Hardware Manufacturer and Solution Provider. Since its establishment on the forefront of the evolving IIoT / M2M Industry, she offers an unique combination of extremely talented Wireless and Wireline Experts to help you navigate the overwhelmingly complicated IIoT / M2M Industry.

We continue to learn and embrace the front line of advanced technology in the IIoT / M2M Space and bring practical and dependable Solutions to our customers. We have enhanced and utilized the most effective and efficient Technologies, Processes, and Procedures in the IIoT / M2M Market to continuously develop, deploy, manage our products and services to our customers.

NavigateWorx Hardware and Solutions had been widely used in different vertical markets like Energy (e.g. Wind Turbine Generator Monitoring), Retail (e.g. Vending Machines / Kiosk), Smart City (e.g. Video Surveillance), Environment (e.g. Weather Station Remote Monitoring), Transportation (e.g. Intelligent Traffic System), Industrial Automation (e.g. Package Machines Remote Monitoring) etc. With the great help of Global Distribution Network, our Routers had been shipped to more than 80 Countries and we're proud to contribute our effort into IIoT / M2M Market.

NavigateWorx would continually concentrate on IIoT / M2M Industry and bring more and more reliable, trustable Solution for our clients. That is NavigateWorx.

