Customer Case Study

Private Overlay Networks Simplify Management for Global Renewable Energy Provider

Secure provisioning and anytime, anywhere access to vulnerable industrial assets.

Executive Summary

A large renewable energy provider needed to manage the SCADA systems at distributed remote locations from its central operations centers. Using Tempered Networks technology, a global renewable energy provider created a series of private overlay networks, which allowed the provider to simplify the management of its SCADA systems and improve efficiency by streamlining the process of granting and revoking access to those systems.

Challenges

- Maintaining a variety of hardware and management interfaces across highly distributed SCADA infrastructure
- Giving remote operations teams, with limited IT expertise, control of SCADA equipment
- Delivering granular access to certain users at specific locations

Benefits

- Overcome network management difficulties through simple 'point-and-click' segmentation
- Ability to easily and quickly add and revoke network access to staff and contractors
- Drop-in, cost-effective solution with no modifications to existing infrastructure

Background

This company is a global renewable energy provider that operates wind farms in many locations across the country. With a large number of supervisory control and data acquisition (SCADA) systems monitoring the sites in real time, the provider found itself faced with the challenge of bringing together different management interfaces in order to support the efficient—and secure—operation of its production sites.

Challenges

The energy provider operates more than 50 production sites all over the United States. Because each site has different management interfaces and hardware—all of which have specific network limitations around configuration—the provider found it difficult to sustain, support, and secure their critical infrastructure. In addition, they were faced with the problem of different pieces of equipment at different sites having overlapping IP address spaces, which made configuration, monitoring, and support even more complicated.

The operations teams also had to be able to perform diagnostics, reconfigurations, and monitoring for all the SCADA equipment in its remote sites. Moreover, the provider needed a solution that did not require skilled IT resources at the remote sites for implementation. And after building a solution to manage its distributed sites, the energy provider had to be able to grant and revoke highly constrained access to specific staff and contractors at specific sites—without time-consuming manual network configuration.

Solution

By deploying the Tempered Networks solution, they created private overlay networks that allowed technicians in its operations centers to monitor and manage the SCADA systems—and remote access to these systems—at all its remote sites.

Simplified Management

Through the creation of private overlay networks, the provider is able to securely connect to disparate SCADA hardware at its remote sites. Using Tempered Networks' IDN orchestration engine, an intuitive management interface, their technicians



in the operations centers can configure, monitor, and manage all the SCADA systems at the production plants—without time consuming reconfiguration and testing. All of the SCADA devices and vulnerable endpoints within the Tempered overlay network are protected through 'cloaking', so they cannot be viewed, queried, or detected. They effectively 'disappear' from view.

Fast Deployment and Easy Monitoring

The pre-provisioned components of the Tempered Networks solution make it easy for the provider to ship a drop-in kit to their production plants. Deployment is as simple as plugging the Tempered Networks security appliance into the network. In addition, the Tempered Networks solution allows the energy provider to install a secure connection for the closed-circuit TV systems that it operates at each site to monitor the safety and efficiency of operations.

Improved Efficiency

The Tempered Networks solution enables the renewable energy provider to boost both security and efficiency by allowing technicians in its operations centers to monitor and manage access to the critical SCADA systems in each remote site. In minutes, the operations team can grant and revoke access to staff and contractors—and can also constrain access to a single device or cluster of devices.

Summary

Through Tempered Networks technology, the provider deployed a series of private overlay networks at its remote production sites that allow the energy provider to easily manage its SCADA systems from its central operations centers. In addition, the drop-in solution boosts efficiency by giving the provider tools to establish and maintain complete control over connectivity to and from its critical SCADA infrastructure.



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