

## INDEPENDENT SYSTEM OPERATOR

### CUSTOMER PROFILE

A regional independent system operator (ISO) is the organization entrusted to keep electric power flowing to the millions of consumers and businesses in the region that need it. The regional ISO manages the scheduling of power on the electric grid that can consist of many megawatts of generation capacity and thousands of miles of transmission lines.

**“We’re responsible for keeping the lights on in the region. We can’t afford the risk of not being able to completely control who has access to our IT infrastructure.”**



### CURRENT CHALLENGES

This regional ISO is challenged to meet new industry standards for cyber security while trying to reduce the cost and complexity of managing their network infrastructure.

The National Energy Reliability Council (NERC) recently introduced new Cyber Security Standards for power companies to protect critical cyber assets of our nation’s power grid. Implementing these standards is mandatory, but especially challenging due to the increased levels of coordination required amongst companies sharing the grid, and the high number of network touch points affected.

#### For network infrastructure, the new NERC standards call for:

- ▶ New levels of remote access security to minimize the threat of cyber security attacks
- ▶ Tracking and auditing all actions taken and changes made to the IT infrastructure
- ▶ Ensuring secure network connections between each ISO and its end customers—in this case more than 70 energy and utility companies nationwide

### Meeting NERC’s Cyber Security Standards

Before Uplogix, the ISO’s system administrators were unable to ensure consistent and comprehensive network security for all of its varied users, which include not only internal employees, but also those of an outsourced service provider, and the employees of the market participants—a network of over 70 energy and utility companies located across the United States.

The network was being accessed through both in-band and out-of-band connections, and administrators lacked a centralized and comprehensive view over who was accessing the network and what changes were being made. A solution was needed that could control user access and permissions, enforce management security standards, and centralize auditing and reporting for compliance purposes.

### Reducing the Cost and Complexity of Network Support

In addition to the network security requirements, the ISO’s management also wanted to reduce both their internal and external network support costs. The ISO outsourced the monitoring and management of most of their IT infrastructure to a third party service provider. Although the service provided met expectations, the costs of ongoing network maintenance and support still ran high because manual intervention was usually required to accurately diagnose and fix problems. Management wanted to automate many of these manual, error-prone operations to achieve both cost savings and a higher level of reliability and control.

## UPLOGIX SOLUTION

The ISO's management selected the Uplogix Automated Remote Management (ARM) platform to meet their stringent network security and automation challenges. The ISO has deployed Uplogix appliances across their network, including over 70 sites interconnected via the WAN at its Market Participants' locations. Almost immediately the network administration team realized the value of having standardized and centralized control over end-user access to the network.

Uplogix proved ideal for this ISO's distributed WAN and LAN environments as it monitors, measures and reports on all infrastructure changes made to the network, even when network connectivity is disrupted. In addition, granular authorization schemes and comprehensive activity logging help to ensure compliance with the emerging Cyber Security Standards. By automating manual, error-prone network maintenance and support processes, Uplogix has helped reduce the ISO's dependence on its outsourcer to provide these services, which has led to significant cost savings. Immediate benefits delivered by the Uplogix solution include:

### Meeting Security and Compliance Standards

Deploying Uplogix appliances across the ISO's network has elevated the level of security of their environment and provided out-of-the-box compliance for the Cyber Security Standards requirements. Uplogix ensures that the four basic tenets of the Cyber Security Standards are met including:

- 1) Minimizing risk of security breaches
- 2) Handling and reporting all incidents
- 3) Securing the network's perimeter
- 4) Controlling user access

The ISO now has the technology in place to compliment their stated security policies and meet the new NERC industry standards.

### Automated Diagnosis and Recovery

The ISO is using the intelligence of the Uplogix Remote Management Operating System (RMOS) inside Uplogix appliances to automate a number of network management procedures across their distributed WAN, including managing the networking equipment deployed in the various Market Participants' locations to ensure network connectivity and communication to and from their customers. By utilizing the Uplogix appliances' built-in automated procedures around diagnosis, recovery and configuration management, the ISO provides better service at a lower cost to maintain and support the network. Additionally, the ISO has brought Uplogix into their datacenter for LAN-based applications to replicate the automation capabilities that have been successful across the WAN environment.

**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](http://www.uplogix.com).



## KEY TECHNICAL BENEFITS TO THE ISO

- ▶ Increased network management security
- ▶ Standardized, complete auditing and reporting
- ▶ Centralized view and control over LAN and WAN

“We need to be able to secure access and control at all points throughout our network, including the Market Participants' locations, to ensure the protection and reliability of the power grid. Uplogix has provided that level of security out-of-the-box with its Automated Remote Management solution.”