



**UNLIMITED**  
TECHNOLOGY

# WHITE PAPER

2021

**Enterprise Security  
Program Review**

In 2012 **Unlimited Technology** conceived a cyber security approach to critical infrastructure that was formed from the need to harmonize the multiple and dissimilar security systems existing within many different companies.

*Mergers and acquisition overtime, resulting in disparate transport networks and data center consolidations that were never 100% finished seemed to be in many companies.*

**Unlimited Technology** had a goal to harmonizing cyber and physical security management, generating efficiencies and reduce our customers risk exposure while complying with the regulatory obligations regarding Critical Infrastructure Protection (NERC CIP), **Unlimited Technology** opted to invest in and develop a management platform supported by a world class team consisting of leaders in Information Technology, Program Management and Infrastructure Design Architects. The resulting “product” has successfully design built and operationalized several large-scale infrastructure installations within the United States.



One of the projects running over a three-year duration was a **~200 Million** transport network and data center design build that spanned the entire northeast of the United States. In 3 short years, **Unlimited Technology** built a fully centralized hyper convergence stretch cluster with approximately 7000 miles of fiber and multiple fully operationalized data centers that were sized to support billions in customer assets and future operations across the entire United States. Fulfillment of regulatory requirements for remotely monitoring the physical and cyber security systems within a **24/7 schedule** required suitable communications infrastructures. The legacy communications networks did not have the bandwidth or cyber security controls necessary to reliably and securely transmit all data to the central monitoring center.

Consequently, with a goal of ensuring compliance with said regulatory requirement, **Unlimited Technology** also supported the development of a DWDM/MPLS transport network and communication ecosystem that will now facilitate the consolidation of out dated data centers and tools into three new highly efficient data centers, saving management time through efficiencies and saving the customer millions of dollars.



## Project Accomplishments

- **Physical Network**

The transport network was built on a private Multiprotocol Label Switching (MPLS) network that allows other areas within the organization to leverage the secure communications infrastructure in place. Everyone wins.

- **Physical Security**

Security applications that manage access control 1000+ card readers, video monitoring 4000+ cameras, and other physical security surveillance capabilities (e.g. public address system, motion sensors, etc.)

- **Cyber Security**

- Pro-active security monitoring, management, and compliance reporting of all the cyber assets within the platform and inspection of data simply riding across the transport layer.
- User account governance, provisioning / automated revocation of accounts and Single Sign On, Multi-Factor Authentication, and Audit functions.

- **Scalability**

All business within the customers portfolio now have options to migrate their now 30-year-old designs of legacy Infrastructure to the new state-of-the-art hyper convergence platform with little to no down time of the production environment.



## The Unlimited Technology approach was separated into 6 major aspects

- ✓ Experience, Experience, Experience... UT has successfully design built several “from the ground up”, IT related Infrastructures.
- ✓ Engineering for the program consisted of cyber and physical security system designers and network engineering for high level and low-level design documentation. This included working hand and hand with a 3rd party engineering company. a
- ✓ Build a new private telecom transport fiber optic network that was redundant and reliable throughout the customers service territory with long term sizing built into the design so transport of network traffic from all locations back to a central VSOC was obtainable.
- ✓ Include Information and Communication Technology or head-end systems – hardware (firewalls, servers, switches, routers, appliances, etc.) and software (operational, cyber security and physical security migrations) used to operate and secure the network.
- ✓ Include last mile fiber construction connecting the customers many locations so that data transport to the “backbone” of the new telecom network was operationalized with ease and the speed needed to meet program schedules.
- ✓ Site migration cut-over of existing or new (site specific) security technology and controls to the new network supported by the active data centers.



The projects objectives included maintaining a “**Safety First**” environment, compliance with all regulatory standards, adherence to all federal and state laws, automation of reporting and data collection, and at the top of the list - to meet cyber security system (s) best practices within the NIST **800 – 53+** standards while providing a path to efficiency, risk reduction and long term savings.



**Unlimited Technology** accomplished all program goals on time, within budgets and in many cases ahead of schedule exceeding the customer’s expectations in support of a long-term partnership that continues to this day.