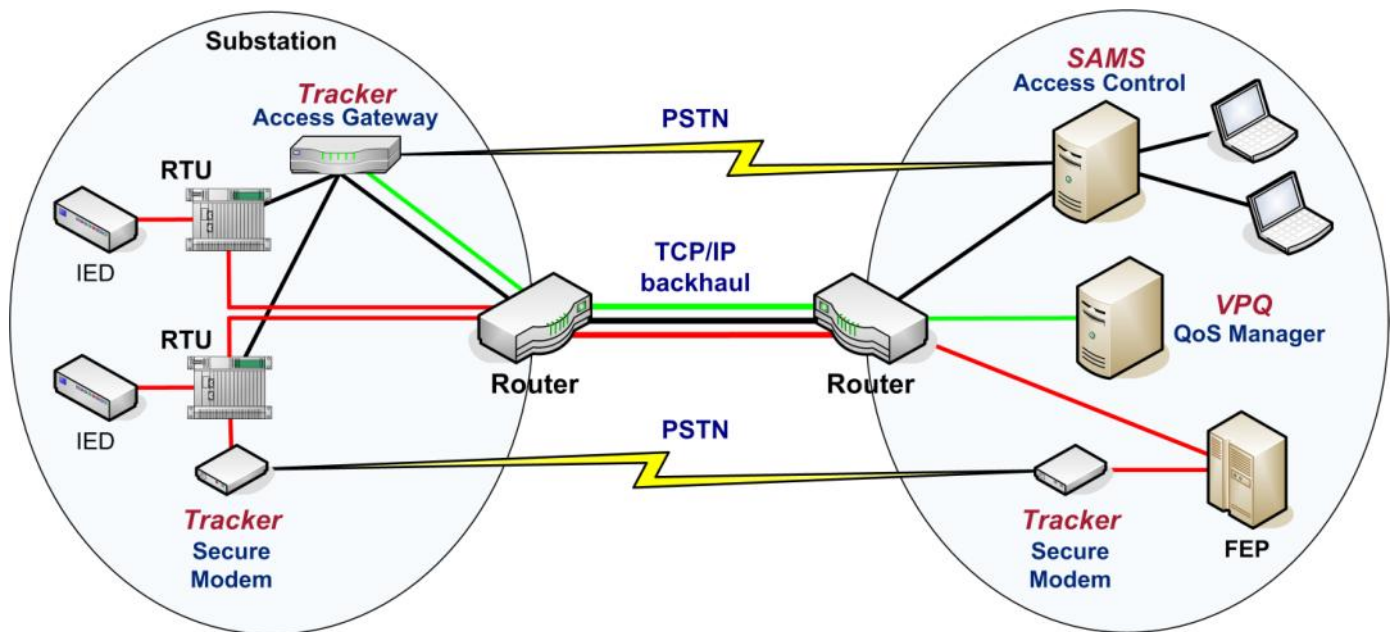


SMART GRID SECURING CYBER ASSETS

THE CHALLENGES OF SECURE SMART GRID NETWORKS

TCP/IP technology has extended into every aspect of data, voice, and control networks. The benefits of standards-based solutions being integrated into the legacy networks of utilities far outweigh the expense of the engineering and maintenance efforts. They start with the ease of evolving scalable and secure solutions as the needs of a Smart Grid utility grow, and extend onward to reduced costs and increased productivity right from the start of deployment. **Data Track Technology has solutions that utilities are using today for complying with NERC CIP and NIST cyber security requirements.**



Secure maintenance access, event notification, and network QoS for SCADA, AMI, VoIP, and other substation TCP/IP traffic

DATA TRACK'S NERC CIP / NIST COMPLIANCE OFFER

Secure Remote Access	Secure SCADA Event Notification	Manage Network QoS
<i>SAMS</i> server application centralizing authentication, authorization, access	<i>Tracker</i> "outbound-only" secure modem at RTU in substation	Assess service level agreement (SLA) and regulatory compliance
<i>Tracker</i> gateway with "serial server", routing, firewall, and VPN	<i>Tracker</i> "inbound-only" secure modem at FEP in operations center	Monitor LAN and WAN QoS performance and utilization
Out-of-band connection made with two-factor authentication using AES	Out-of-band connection made with two-factor authentication using AES	Manage TCP/IP router and LAN switch QoS configuration
Automate maintenance password management	Information Assurance Accreditation from US Defense Information System Network (DISN)	Continuously model and analyze QoS domain
Generate audit logs and analysis reports		Browser-based dashboard

MAPPING DATA TRACK'S SOLUTION TO NERC CIP STANDARDS

Since 1979, Data Track Technology has been developing secure communications management solutions for service providers and enterprises, including utilities. The following table summarizes where Data Track's Secure Access solution lines up with NERC CIP requirements regarding Smart Grid infrastructure cyber security. For more details, see our web site for a series of white papers on securing administrative access, and managing TCP/IP Quality of Service.

NERC Requirement	Data Track Solution Feature
CIP-005 Electronic Security Perimeter	
R2. Electronic Access Controls	
R2.1 – Deny access by default	Access to all features and ports within the Tracker denied as default.
R2.2 – Enable only necessary ports	Tracker administrator enables serial, Ethernet, and TCP/IP ports needed.
R2.3 – Secure dial-up access	Secured by: restricted answering, two factor authentication, firewall, VPN, login, etc.
R2.4 – Strong technical controls	Tracker employs secure lock and key model out-of-band using AES technology.
R2.6 – Appropriate use banner	Tracker administrator creates and maintains an “appropriate use” banner as required.
R3. Monitoring Electronic Access	
R3.1 – Dial-up access monitoring	Tracker access control is monitored, logged, and alerted as configured by administrator.
R3.2 – Unauthorized access attempts	Unauthorized and failed access attempts are automatically detected, logged, and alerted.
CIP-007 Systems Security Management	
R2. Ports and Services	
R2.1 – Enable only necessary ports	Tracker administrator enables serial, Ethernet, and TCP/IP ports needed.
R2.2 – Disable unnecessary ports	Tracker administrator disables unneeded serial, Ethernet, and TCP/IP ports.
R5. Account Management	
R5.1 – Limit permissions	Multi-level user profiles within SAMS, and Tracker user profiles limit permissions.
R5.1.2 – Access audit trail	Audit facilities within SAMS and Tracker give multiple levels of audit logging.
R5.2 – Manage scope of system accounts	SAMS allows for centralized management of system accounts, including on Tracker.
R5.2.3 – Auditing system accounts	SAMS has automated auditing facilities on per SAMS and per Tracker user bases.
R6. Security Status Monitoring	
R6.2 – Security status alerting	Unauthorized activity is detected, logged, and alerted as configured by administrator.
R6.3 – Security status logging	Access logs within SAMS and Tracker are maintained and forwarded automatically.

Data Track Technology is an ISO 9001:2000 quality certified company