National SCADA Test Bed

POSSIBLE THREATS → THREAT ANALYSIS → CYBER EFFECTS ANALYSIS → SYSTEM IMPACT ANALYSIS → CONSEQUENCE ANALYSIS → RISK ANALYSIS → U. S. NATIONAL RISK

CYBER ATTACKS
MALICIOUS CODE
ADVERSARY MODELING
ATTACK GRAPHS
CONTROL SYSTEM EFFECTS

Virtual Control System Environment

Provides a scalable virtual control systems environment for simulating cyber effects and evaluating security mitigation options

Challenge / Approach

Develop a Control Systems Simulation Environment

Model Existing and Future Control Systems Devices and Communication Protocols

Design a Scalable Architecture to allow for Hardware-in-the-Loop

Analysis

Increase Security Awareness

Understand Impacts

Reduced Testing Costs

Sandia National Laboratories

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under Contract DE-AC04-94AL85000.

NNSA National Nuclear Security Administration