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Rapid Deployment Intrusion Detection System

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Abstract

A rapidly deployable security system is one that provides intrusion detection, assessment, communications, and annunciation capabilities; is easy to install and configure; can be rapidly deployed, and is reusable. A rapidly deployable intrusion detection system (RADIDS) has many potential applications within the DOE Complex: back-up protection for failed zones in a perimeter intrusion detection and assessment system, intrusion detection and assessment capabilities in temporary locations, protection of assets during Complex reconfiguration, and protection in hazardous locations. Many DOE user-need documents have indicated an interest in a rapidly deployable intrusion detection system. The purpose of the RADIDS project is to design, develop, and implement such a system.

Background

Several "rapidly deployable" intrusion detection systems have been developed in recent years. Some of these are little more than sensors mounted on tripods, while others are comprehensive systems offering sensor-to-annunciator capabilities. Market surveys revealed that the comprehensive systems tended to focus on military applications and had extensive hardware-related logistics costs. The less capable elements were stand-alone components and did not provide a system-level product. Although several good components are available, few addressed the specific needs of the Department of Energy. Consequently, Sandia began a project to provide a system-level, rapidly deployable intrusion detection system for DOE. The intent of this project was not to develop new hardware but to integrate existing commercial components into a viable system-level product.

Design Guidelines

Several guidelines were followed in the development of the rapidly deployable intrusion detection system:

RAPIDLY DEPLOYABLE—provide a short-term, rapidly deployable system that could be installed in a few hours or a few days depending upon the application

LOW COST—reduce or eliminate the costs associated with fixed-installation cabling and guard personnel

LOW POWER—provide a system capable of using either site ac power or battery and/or solar power

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