

# **CRITICAL INFRASTRUCTURE VULNERABILITY ASSESSMENT PROTOCOL**

**DeepShield Systems, Inc.**

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*Classification: CONFIDENTIAL*

## **1. PURPOSE AND SCOPE**

1. This Critical Infrastructure Vulnerability Assessment Protocol ("Protocol") establishes the mandatory procedures and methodologies for conducting vulnerability assessments of critical infrastructure systems protected by DeepShield Systems, Inc. ("DeepShield") solutions.

2. This Protocol applies to all vulnerability assessments conducted on:

- a) Industrial Control Systems (ICS)
- b) Supervisory Control and Data Acquisition (SCADA) networks
- c) Operational Technology (OT) environments
- d) Maritime and subsea infrastructure
- e) Manufacturing control systems
- f) Any other critical infrastructure systems monitored by DeepShield's platform

## **2. DEFINITIONS**

1. "Assessment Team" means the qualified DeepShield personnel authorized to conduct vulnerability assessments under this Protocol.

2. "Critical Infrastructure" means systems, networks, and assets vital to national security, economic security, or public health and safety.

3. "Deep-Layer Security Architecture" means DeepShield's proprietary security framework incorporating AI-driven threat detection and response capabilities.

4. "Vulnerability" means any weakness in an information system, system security procedures, internal controls, or implementation that could be exploited by a threat source.

### **3. ASSESSMENT METHODOLOGY**

#### **1. Pre-Assessment Requirements**

- a) Written authorization from client's Chief Information Security Officer (CISO) or equivalent
- b) Signed confidentiality agreements from all Assessment Team members
- c) Documentation of system architecture and critical components
- d) Establishment of assessment scope and objectives
- e) Risk mitigation plan for potential system disruptions

#### **2. Assessment Phases**

##### **2.1. Phase I - Network Architecture Review**

- a) Documentation review
- b) Network topology analysis
- c) Security control inventory
- d) Access control evaluation

##### **2.2. Phase II - Technical Assessment**

- a) Automated vulnerability scanning using DeepShield's proprietary tools
- b) Manual penetration testing of critical systems
- c) Industrial protocol analysis
- d) Control system configuration review

##### **2.3. Phase III - Analysis and Reporting**

- a) Vulnerability classification and prioritization
- b) Risk assessment and impact analysis
- c) Remediation recommendations
- d) Executive summary preparation

### **4. SECURITY AND CONFIDENTIALITY**

1. All assessment activities must comply with DeepShield's Information Security Policy and applicable regulatory requirements.
2. Assessment findings shall be classified as "Highly Confidential" and handled according to DeepShield's data classification guidelines.

3. Assessment reports must be encrypted using AES-256 encryption before transmission.

## **5. DOCUMENTATION AND REPORTING**

### **1. Required Documentation**

- a) Vulnerability Assessment Report
- b) Technical Findings Detail
- c) Remediation Recommendations
- d) Risk Assessment Matrix
- e) Executive Summary

### **2. Report Distribution**

2.1. Reports shall be distributed only to:

- a) Client's designated security personnel
- b) DeepShield's Chief Security Architect
- c) Other parties as specified in the engagement agreement

## **6. COMPLIANCE AND REGULATORY REQUIREMENTS**

1. All assessments must comply with:

- a) NIST Cybersecurity Framework
- b) IEC 62443 Standards
- c) Maritime cybersecurity regulations (where applicable)
- d) Industry-specific regulatory requirements

2. Documentation of compliance shall be maintained for all assessments.

## **7. QUALITY ASSURANCE**

1. All assessment reports must be reviewed and approved by:

- a) Lead Assessment Team Member
- b) DeepShield Quality Assurance Team
- c) Chief Security Architect or designee

2. Periodic audits of assessment procedures shall be conducted to ensure compliance with this Protocol.

## **8. AMENDMENTS AND UPDATES**

1. This Protocol shall be reviewed and updated annually or as required by:

- a) Changes in technology or threat landscape
- b) Regulatory requirements
- c) Client requirements
- d) DeepShield policy changes

## **9. AUTHORIZATION**

This Protocol is authorized and approved by:

Dr. Elena Rodriguez

Chief Security Architect

DeepShield Systems, Inc.

Sarah Blackwood

Chief Technology Officer

DeepShield Systems, Inc.

Date: January 15, 2024

## **10. DISCLAIMER**

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