THREAT INTELLIGENCE FEED INTEGRATION ARCHITECTURE

PROPRIETARY & CONFIDENTIAL

DeepShield Systems, Inc.

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1. OVERVIEW AND PURPOSE

1. This document describes the proprietary architecture and methodology for integrating external threat intelligence feeds into DeepShield Systems, Inc.'s ("DeepShield") industrial control system (ICS) security platform, specifically relating to the Deep-Layer Security Architecture(TM) and associated subsystems.

2. This document and the architecture described herein are protected as trade secrets and confidential information of DeepShield under applicable law and contractual agreements.

2. DEFINITIONS

1. "Threat Intelligence Feed" means any structured data stream containing cybersecurity threat indicators, vulnerabilities, or attack signatures relevant to industrial control systems and operational technology environments.

2. "Integration Layer" refers to DeepShield's proprietary middleware that processes, normalizes, and enriches incoming threat intelligence data.

3. "Deep-Layer Security Architecture(TM)" means DeepShield's core security platform as described in U.S. Patent No. 11,XXX,XXX and related patent applications.

3. ARCHITECTURAL COMPONENTS

1. Feed Ingestion Framework

a) Secure API endpoints for third-party feed consumption

b) Multi-format support (STIX/TAXII, MISP, proprietary formats)

c) Redundant ingestion paths with failover capability

d) Cryptographic verification of feed sources

2. Data Normalization Engine

a) Proprietary parsing algorithms for heterogeneous data formats

b) Industrial taxonomy mapping system

c) OT-specific threat classification framework

d) Temporal correlation engine

3. Enrichment Pipeline

a) Context injection from DeepShield threat database

b) Industrial protocol-specific risk scoring

c) Asset vulnerability correlation

d) Geographic and sector-specific risk amplification

4. INTEGRATION METHODOLOGY

1. Feed Qualification Process

a) Source reputation assessment

b) Data quality metrics

c) Industrial relevance scoring

d) False positive rate analysis

2. Data Processing Workflow

a) Initial triage and deduplication

b) Priority assignment based on customer environment

c) Correlation with existing threat patterns

d) Integration with detection rules engine

5. SECURITY CONTROLS

1. Data Protection

a) End-to-end encryption for all feed data

b) Secure key management system

c) Access control based on least privilege

d) Audit logging of all system interactions

2. Operational Security

a) Segregated processing environment

b) Redundant infrastructure

c) Automated failover mechanisms

d) Real-time monitoring and alerting

6. PERFORMANCE REQUIREMENTS

1. The Integration Layer shall maintain:

a) Maximum latency of 500ms for critical threat indicators

b) Processing capability of 100,000 indicators per minute

c) 99.999% availability for core functions

d) Real-time synchronization across deployment zones

7. COMPLIANCE AND STANDARDS

1. This architecture adheres to:

a) IEC 62443 Security for Industrial Automation and Control Systems

b) NIST Cybersecurity Framework

c) ISO 27001 Information Security Management

d) Maritime cybersecurity requirements (IEC 61162-460)

8. INTELLECTUAL PROPERTY PROTECTION

1. All components, methodologies, and implementations described in this document are protected by one or more of:

a) U.S. and international patents

b) Pending patent applications

c) Trade secret protection

d) Copyright registration

9. LEGAL NOTICES

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10. DOCUMENT CONTROL

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