# Cross-Discipline Constraint Tracking Form

Document Title: Cross-Discipline Constraint Tracking Form

Purpose:

This document lists and tracks non-software constraints (software, hardware, security, legal, and policy) affecting the SOC Analyst Platform. These items are validated by the respective engineering disciplines and ensure cross-domain compliance and traceability.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| System Requirement ID | Sub-system (SW/HW etc.) Requirement ID | Discipline | Constraint Type | Description | Owner | Verification Method | Status |
| SYS-01 | SW-01 | Software Engineering | Software Constraint | Backend shall operate on a stable web framework supporting RESTful communication and secure session handling. | Software Team | Functional Testing / Code Review | Proposed |
| SYS-02 | SW-02 | Database Engineering | Software Constraint | Database shall maintain relational integrity, concurrent access, and data consistency across user operations. | Database Team | Integration Testing / DB Audit | Proposed |
| SYS-03 | HW-01 | System Engineering | Hardware Constraint | Hosting environment must provide adequate CPU, memory, and network bandwidth for real-time dashboard updates. | Infrastructure Team | Performance Benchmark | Proposed |
| SYS-04 | SEC-01 | Cybersecurity | Security Constraint | All communication between client and server must be encrypted using HTTPS; no plaintext transmission is allowed. | Security Team | Penetration Testing / TLS Validation | Active |
| SYS-05 | SEC-02 | Cybersecurity / Legal | Data Protection Constraint | User credentials and sensitive data must be stored only in hashed or encrypted form in compliance with data-protection laws. | Security & Compliance Team | Security Audit / Compliance Review | Active |
| SYS-06 | LEG-01 | Legal / Policy | Legal Constraint | System must comply with institutional and international privacy regulations (e.g., GDPR or equivalent). | Compliance Team | Legal Audit / Documentation Review | Active |
| SYS-07 | POL-01 | Policy / Security | Access Control Constraint | Access to user data shall be limited to authenticated and authorized roles only. | Security Team | Role-Based Access Testing | Active |
| SYS-08 | HW-02 | Deployment Engineering | Compatibility Constraint | Platform must operate in standard web environments and modern browsers with ≥ 90 % compatibility. | DevOps Team | Cross-Platform Testing | Proposed |

## Notes

These constraints originate from software, hardware, legal, and security disciplines and are traceable to SRS § 2.4 (Constraints). Software validation ensures compliance through the listed verification methods.

## Traceability Reference

This form supports:  
- System Requirements Document (SRD)  
- Software Requirements Specification (SRS) – Section 2.4 Constraints  
- Quality and Compliance Documentation

## Signature & Approval

Prepared by: Software Engineering Team  
Approved by: System Engineering Lead  
Revision: 1.0  
Date: 31 October 2025