

Future Work

This document outlines planned enhancements and improvements for the SecureMed HIPAA Training Platform.

Authentication & Access Control

Multi-Factor Authentication (MFA)

- Implement time-based one-time passwords (TOTP)
- SMS/email verification codes
- Hardware token support (YubiKey, etc.)
- Biometric authentication options

Enterprise Single Sign-On (SSO)

- Okta integration for identity management
- Azure Active Directory (Azure AD) integration
- SAML 2.0 support
- OAuth 2.0 / OpenID Connect implementation

Infrastructure & Security

Database Migration

- Migrate from SQLite to PostgreSQL
- Implement connection pooling
- Database replication for high availability
- Automated backup and recovery procedures

Transport Security

- HTTPS/TLS deployment across all endpoints
- Certificate management and rotation
- Enforce TLS 1.3 minimum
- HTTP Strict Transport Security (HSTS) headers

Key Management

- AWS Key Management Service (KMS) integration
- Hardware Security Module (HSM) support
- Automated key rotation policies

- Centralized secrets management (AWS Secrets Manager, HashiCorp Vault)

Monitoring & Detection

SIEM Integration

- Splunk connector for log aggregation
- ELK Stack (Elasticsearch, Logstash, Kibana) integration
- Real-time security event correlation
- Automated alert rules and playbooks

Endpoint Detection & Response (EDR)

- CrowdStrike Falcon integration
- SentinelOne integration
- Automated threat detection and response
- Behavioral analysis and anomaly detection

Compliance & Reporting

- Automated compliance report generation
- Audit trail export functionality
- Role-based access control (RBAC) enhancements
- Data retention policy automation
- GDPR compliance features

Performance & Scalability

- Horizontal scaling with load balancers
- Redis caching layer
- CDN integration for static assets
- Database query optimization
- Microservices architecture consideration

User Experience

- Mobile application (iOS/Android)
 - Progressive Web App (PWA) support
 - Accessibility improvements (WCAG 2.1 AA compliance)
 - Multi-language support
 - Dark mode UI option
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This document is maintained by the SecureMed development team and updated quarterly.