

# Readme

SECURAA Security Documentation





## SECURAA Secure Software Development Lifecycle (SDLC) Documentation





### Overview

This directory contains comprehensive documentation of SECURAA's Secure Software Development Lifecycle (SDLC). These documents demonstrate our commitment to security-first development practices and provide transparency to our customers about how we build and maintain secure software.

### Document Suite

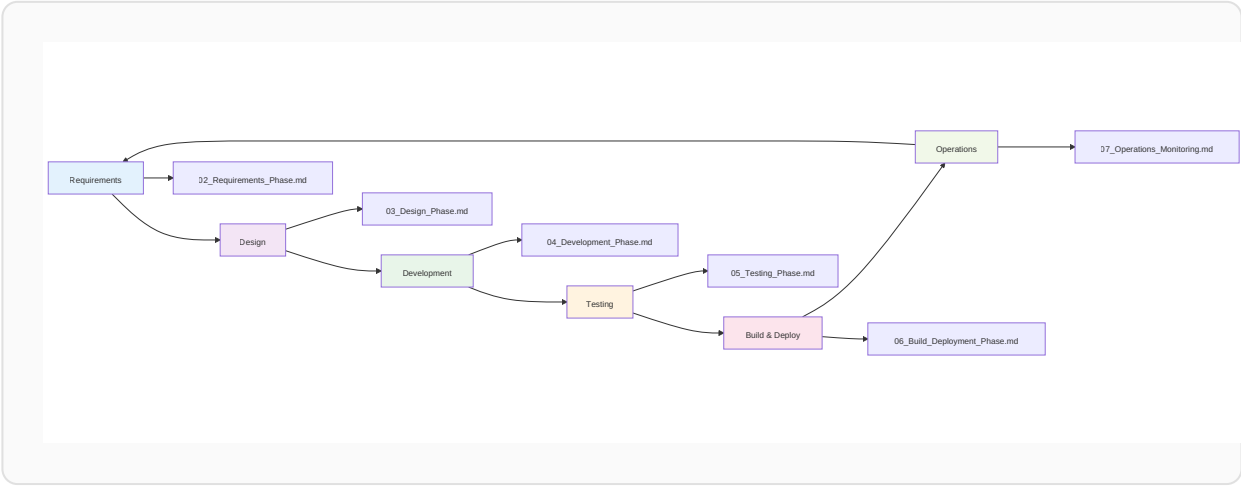
#### Core SDLC Documents

Document	Description	Status
<a href="#">01_SDLC_Overview.md</a>	Executive summary, principles, technology stack, and process overview	 Complete
<a href="#">02_Requirements_Phase.md</a>	Security requirements gathering, threat modeling, risk assessment	 Complete
<a href="#">03_Design_Phase.md</a>	Secure architecture design, security controls, infrastructure design	 Complete
<a href="#">04_Development_Phase.md</a>		 In Progress

Document	Description	Status
	Secure coding, Git workflow on AWS CodeCommit, code review	
<a href="#">05_Testing_Phase.md</a>	Security testing, SAST, DAST, penetration testing	 Planned
<a href="#">06_Build_Deployment_Phase.md</a>	AWS CodeBuild, ECR, container security, IAM, deployment	 Planned
<a href="#">07_Operations_Monitoring.md</a>	Production operations, monitoring, incident response	 Planned
<a href="#">06_CI_CD_Security_Pipeline.md</a>	Automated security in CI/CD, security gates, scan integration	 Planned

## Quick Navigation

### By Development Phase



### By Security Activity

Security Activity	Relevant Documents
Threat Modeling	<a href="#">02_Requirements_Phase.md</a>
Architecture Security	<a href="#">03_Design_Phase.md</a>

Security Activity	Relevant Documents
Secure Coding	<a href="#">04_Development_Phase.md</a>
Code Review	<a href="#">04_Development_Phase.md</a>
SAST/DAST	<a href="#">05_Testing_Phase.md</a>
Container Security	<a href="#">06_Build_Deployment_Phase.md</a>
Security Monitoring	<a href="#">07_Operations_Monitoring.md</a>
CI/CD Security	<a href="#">08_CI_CD_Security_Pipeline.md</a>

## By AWS Service

AWS Service	Relevant Documents
AWS CodeCommit	<a href="#">04_Development_Phase.md</a>
AWS CodeBuild	<a href="#">06_Build_Deployment_Phase.md</a> , <a href="#">08_CI_CD_Security_Pipeline.md</a>
Amazon ECR	<a href="#">06_Build_Deployment_Phase.md</a>
AWS IAM	<a href="#">03_Design_Phase.md</a> , <a href="#">06_Build_Deployment_Phase.md</a>
AWS Secrets Manager	<a href="#">03_Design_Phase.md</a> , <a href="#">06_Build_Deployment_Phase.md</a>
Amazon CloudWatch	<a href="#">07_Operations_Monitoring.md</a>

## Document Structure

Each phase document follows a consistent structure:

1. **Document Control** - Version, date, classification
2. **Phase Overview** - Objectives, duration, key activities
3. **Process Details** - Step-by-step processes with examples
4. **Security Controls** - Specific security measures
5. **Tools & Templates** - Tools used and available templates

6. **Checklist** - Phase completion checklist

7. **Exit Criteria** - Requirements to proceed to next phase

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## SDLC Process Summary

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### Phase 1: Requirements & Planning

**Duration:** 1-2 weeks | **Document:** [02\\_Requirements\\_Phase.md](#)

- Gather security requirements
- Conduct threat modeling (STRIDE)
- Perform risk assessment
- Define security acceptance criteria

**Key Deliverables:** - Security requirements document - Threat model - Risk assessment - Security acceptance criteria

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### Phase 2: Secure Design

**Duration:** 1-3 weeks | **Document:** [03\\_Design\\_Phase.md](#)

- Design secure architecture
- Define security controls
- Design data protection
- Design API security
- Design infrastructure security

**Key Deliverables:** - Architecture diagrams - Security design document - Database security design - API security specifications - Infrastructure security design

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### Phase 3: Secure Development

**Duration:** Ongoing | **Document:** [04\\_Development\\_Phase.md](#)

- Follow secure coding standards
- Use Git workflow on AWS CodeCommit
- Implement security controls

- Conduct code reviews
- Run pre-commit security checks

**Key Deliverables:** - Secure source code - Code review approvals - Unit tests with security focus - Development documentation

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## Phase 4: Security Testing

**Duration:** 1-2 weeks | **Document:** [05\\_Testing\\_Phase.md](#)

- Static Application Security Testing (SAST)
- Dynamic Application Security Testing (DAST)
- Dependency vulnerability scanning
- Security acceptance testing
- Penetration testing

**Key Deliverables:** - SAST reports - DAST reports - Vulnerability scan results - Security test results - Penetration test report

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## Phase 5: Build & Deployment

**Duration:** Continuous | **Document:** [06\\_Build\\_Deployment\\_Phase.md](#)

- AWS CodeBuild pipeline execution
- Docker image building and scanning
- Push to Amazon ECR
- Security gate validation
- Deployment automation

**Key Deliverables:** - Secure Docker images - Build artifacts (RPM packages) - Deployment packages - Deployment documentation

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## Phase 6: Operations & Monitoring

**Duration:** Continuous | **Document:** [07\\_Operations\\_Monitoring.md](#)

- Security monitoring
- Log analysis

- Incident detection and response
- Performance monitoring
- Security patching

**Key Deliverables:** - Monitoring dashboards - Security alerts - Incident reports - Performance metrics - Patch management records

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## Technology Stack

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### Development

- **Backend:** Go 1.17+ (530+ microservices)
- **Frontend:** React 18.2, Redux
- **Scripting:** Python 3.8+, Bash
- **Database:** MongoDB 7.0, PostgreSQL

### AWS Infrastructure

- **Version Control:** AWS CodeCommit
- **CI/CD:** AWS CodeBuild
- **Container Registry:** Amazon ECR
- **Compute:** Amazon EC2
- **Security:** AWS IAM, AWS Secrets Manager, AWS KMS
- **Monitoring:** Amazon CloudWatch
- **Networking:** AWS VPC, ALB, Security Groups

### Security Tools

- **SAST:** GoSec, ESLint Security Plugin, Bandit
  - **Dependency Scanning:** Nancy, npm audit, govulncheck
  - **DAST:** OWASP ZAP
  - **Container Scanning:** Docker Scan, Trivy, AWS ECR Scanning
  - **Secrets Detection:** git-secrets, TruffleHog
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# Repository Structure

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SECURAA Platform Repositories:

```
|— build_securaa/          # Build automation, CI/CD configs
|— zona_services/         # Core microservices (530+ services)
|— securaa/               # Main application backend
|— securaa_lib/           # Shared security library
|— zona_batch/            # Background batch processing
|— integrations/          # Third-party integrations (722+)
|— zonareact/             # Frontend React application
|— securaa_db/            # Database schemas and migrations
|— securaa_pylib/         # Python utility libraries
```

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## Security Principles

### 1. Security by Design

Security is built into every phase, not added as an afterthought.

### 2. Defense in Depth

Multiple layers of security controls protect against various threats.

### 3. Least Privilege

Minimum necessary permissions for users and services.

### 4. Continuous Security

Ongoing security assessment and improvement.

### 5. Shift Left Security

Security testing as early as possible in development.

### 6. Automation First

Automated security checks ensure consistency.

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# Compliance Alignment

Our SDLC supports compliance with:

Framework	Key Controls	Documentation
SOC 2 Type II	CC6.1, CC6.6, CC6.7, CC7.2, CC8.1	All SDLC phases
ISO 27001:2022	A.8.1, A.8.3, A.14.2, A.14.2.5, A.18.1.3	All SDLC phases
GDPR	Data protection by design, security of processing	Requirements, Design phases
OWASP Top 10	A01-A10 coverage	Testing, Development phases

# Key Metrics & KPIs

## Security Metrics

Metric	Target	Tracking
Critical Vulnerabilities	0	Continuous
High Vulnerabilities	< 5	Weekly
Mean Time to Remediation (Critical)	< 24 hours	Per incident
Security Test Coverage	> 80%	Monthly
Failed Security Scans	< 5%	Per build

## Development Metrics

Metric	Target	Tracking
Build Success Rate	> 95%	Daily
Code Review Completion Time	< 48 hours	Per PR



Metric	Target	Tracking
Deployment Frequency	Multiple per week	Weekly
Change Failure Rate	< 10%	Monthly

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## Related Documentation

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### Additional Security Documents

- [SECURAA\\_SECURE\\_CODING\\_POLICY.md](#) - Comprehensive secure coding standards
- [SECURAA\\_CODE\\_ANALYSIS\\_REPORT.md](#) - Security code analysis findings
- [SECURAA\\_INFORMATION\\_SECURITY\\_POLICIES\\_AND\\_PROCEDURES.md](#) - Information security policies
- [SECURAA\\_INFORMATION\\_SECURITY\\_RISK\\_ASSESSMENT\\_PROCESS.md](#) - Risk assessment framework
- [SECURAA\\_CUSTOMER\\_SECURITY\\_DOCUMENTATION.md](#) - Customer-facing security overview

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## How to Use This Documentation

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### For Developers

1. Review [04\\_Development\\_Phase.md](#) for secure coding practices
2. Follow Git workflow on AWS CodeCommit
3. Use provided code review checklists
4. Run security scans before committing

### For Security Team

1. Use [02\\_Requirements\\_Phase.md](#) for threat modeling
2. Conduct design reviews using [03\\_Design\\_Phase.md](#)
3. Define security test cases from [05\\_Testing\\_Phase.md](#)
4. Monitor using [07\\_Operations\\_Monitoring.md](#)

## For DevOps Team

1. Configure CI/CD using [08\\_CI\\_CD\\_Security\\_Pipeline.md](#)
2. Manage deployments with [06\\_Build\\_Deployment\\_Phase.md](#)
3. Set up monitoring from [07\\_Operations\\_Monitoring.md](#)

## For Product Managers

1. Start with [01\\_SDLC\\_Overview.md](#) for process overview
2. Define security requirements using [02\\_Requirements\\_Phase.md](#)
3. Review security acceptance criteria before release

## For Customers

1. Read [01\\_SDLC\\_Overview.md](#) for our security commitment
2. Review compliance alignment for your requirements
3. Understand our security testing approach

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# Document Maintenance

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## Version Control

- All documents are version controlled in Git
- Major updates require security team review
- Quarterly review cycle

## Update Process

1. Propose changes via pull request
2. Security team review
3. Engineering leadership approval
4. Merge and publish

## Feedback

We welcome feedback on these documents: - **Email:** [sdlc-feedback@securaa.com](mailto:sdlc-feedback@securaa.com) - **Slack:** [#security-sdlc](#) - **JIRA:** Create ticket in SECURITY project

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## Document History

Version	Date	Author	Changes
1.0	October 2024	Security Team	Initial SDLC documentation
2.0	November 13, 2025	Security & Engineering	Comprehensive update with AWS infrastructure, multi-document structure

## Contact Information

**Document Owners:** - **Security Team:** security@securaa.com - **Engineering Team:** engineering@securaa.com - **DevOps Team:** devops@securaa.com

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## Next Steps

1. **Start Here:** [01\\_SDLC\\_Overview.md](#)
2. **Learn Process:** Follow documents 02-08 in sequence
3. **Apply Knowledge:** Use checklists and templates in your projects
4. **Continuous Improvement:** Provide feedback and suggestions

*Last Updated: November 13, 2025*

*Document Suite Version: 2.0*

*Maintained by: SECURAA Security & Engineering Teams*