

Test Plan: Incident Management System

1. Introduction

The goal of this test plan is to define the strategy, resources, and scope for testing the Incident Management System. It ensures that authentication, incident lifecycle management, and API integrity meet the specified requirements while addressing recently discovered security and UI vulnerabilities.

2. Test Scope

In-Scope

- **Authentication:** Login/Logout flows, RBAC (Admin, Analyst, Responder), and session management.
- **Incident Management:** CRUD operations (Create, Read, Update, Delete) via UI and API.
- **API Integrity:** Schema validation, error handling (400/404/500), and Swagger documentation.
- **Security:** Input sanitization (preventing SQL/Code injection) and information leakage prevention.

Out-of-Scope

- Performance/Load testing (beyond basic response time checks).
- Hardware-specific mobile testing (testing is limited to browser-based emulation).

3. Test Strategy & Methodology

Testing Levels

1. **Unit Testing:** Validating individual Vue components and Node.js utility functions.
2. **Integration Testing:** Testing the communication between the API and the Database using Postman/Newman.
3. **System Testing (E2E):** Validating end-to-end user journeys (e.g., creating an incident and verifying its appearance in the dashboard).
4. **Regression Testing:** Re-running previous tests after bug fixes (specifically for the 6 reported bugs).

4. Test Scenarios

- User authentication (login/logout)
- Creating a new security incident
- Updating incident status and priority
- Adding comments to incidents
- Filtering incidents by status, priority, and source
- Searching incidents by keywords

5. Environment & Tools

- **OS:** macOS Sonoma 14.2
- **Browsers:** Chrome (v121), Safari (v17.2)
- **Backend:** Node.js
- **Frontend:** Vue.js
- **Testing Tools:** Postman (API), Playwright (E2E), Vitest (Unit).

6. Entry & Exit Criteria

Entry Criteria

- Development environment is stable and accessible at localhost:3000.
- Postman collection is updated with the latest environment variables.
- Test data (Admin/Analyst users) is seeded in the database.

Exit Criteria

- 100% of "Critical" and "High" priority test cases have passed.
- All 6 reported bugs are "Verified & Closed."
- Known issues are documented and accepted by stakeholders.

7. Deliverables

1. **Test Cases:** Description of all tests planned to be executed
2. **Test Execution Report:** Summary of pass/fail results.
3. **Updated Bug List:** Status of resolved vs. remaining issues.
4. **Automation proposal:** Documentation based on the tests planned and executed.