SAHAYA – Disaster Response Management System

Phase 7 & 8: Integration & Data Management

Phase 7: Integration & External Access

1. Introduction:

The SAHAYA system is architecturally prepared for future integration with external emergency services and data sources. While current implementation focuses on core functionality, the framework supports seamless expansion.

2. Integration Architecture:

- API-Based Integration: REST API endpoints ready for weather alerts and government disaster feeds
- Authentication: Named Credentials configured for secure external system access
- Real-time Communication: Platform Events framework for instant notifications

3. Planned External Integrations:

- Weather Service API: Real-time severe weather alerts and disaster warnings
- SMS/Email Gateways: Bulk emergency notifications to volunteers and affected communities
- Government Disaster Feeds: Official disaster declarations and resource allocation data
- Hospital Systems: Patient transfer coordination and medical record exchange

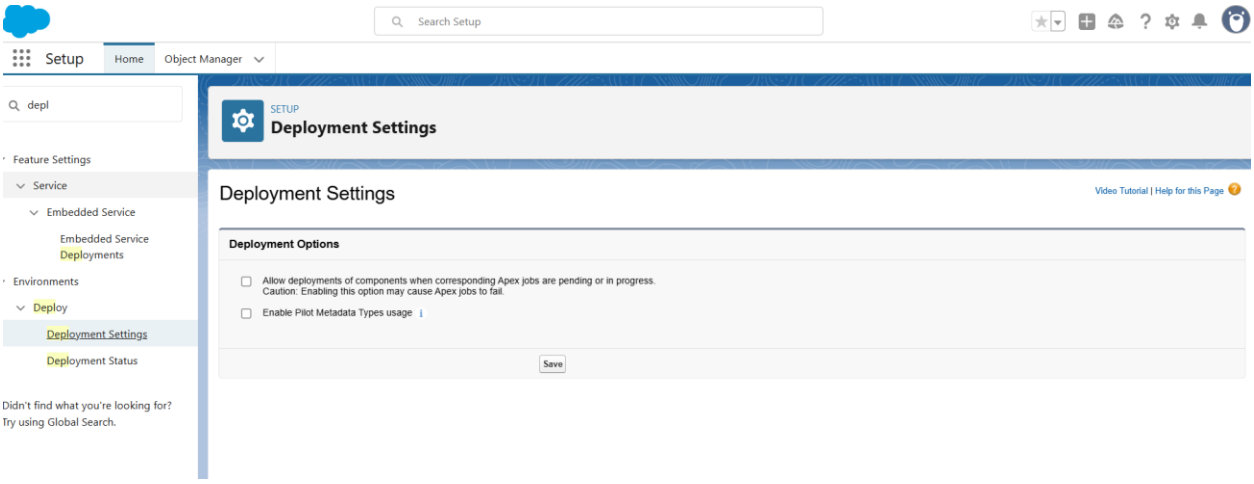
4. Technical Implementation Readiness:

- Named Credentials: Secure authentication setup for external services
- REST/SOAP Capabilities: Apex HTTP callout methods implemented
- Error Handling: Robust exception management for external system failures

Phase 8: Data Management & Deployment

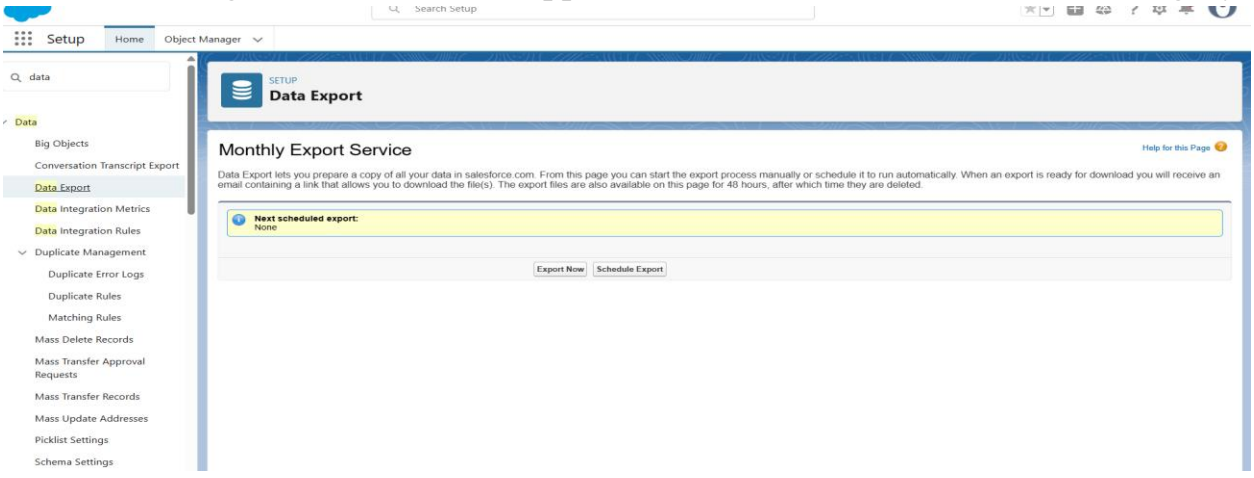
1. Deployment Strategy:

- Development Environment: Salesforce Developer Edition with full development capabilities
- Production Deployment: Change Sets for controlled component migration
- Version Control: Salesforce DX integration for source-driven development



2. Data Management Framework

- Initial Data Load: Data Loader templates for disaster records, medical camps, and volunteer data
- Regular Backups: Weekly export schedules for critical operational data
- Data Migration: CSV-based approach with validation rules for data integrity



3. Deployment Components Custom Objects:

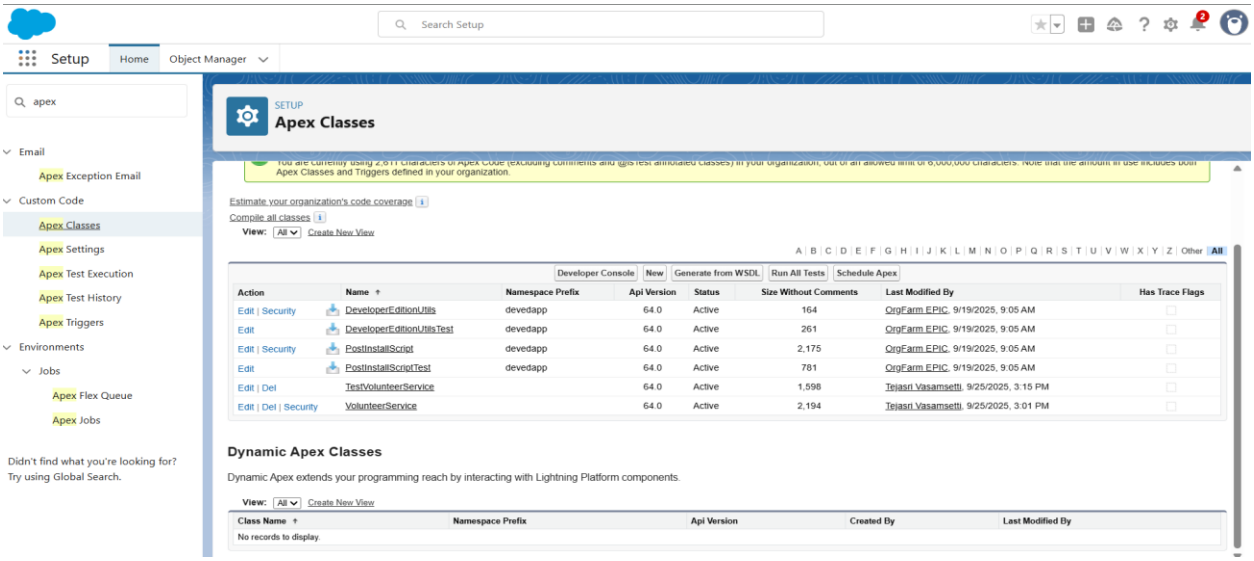
Disaster__c, Medical_Camp__c, Patient__c, Volunteer_Assignment__c, Resource__c

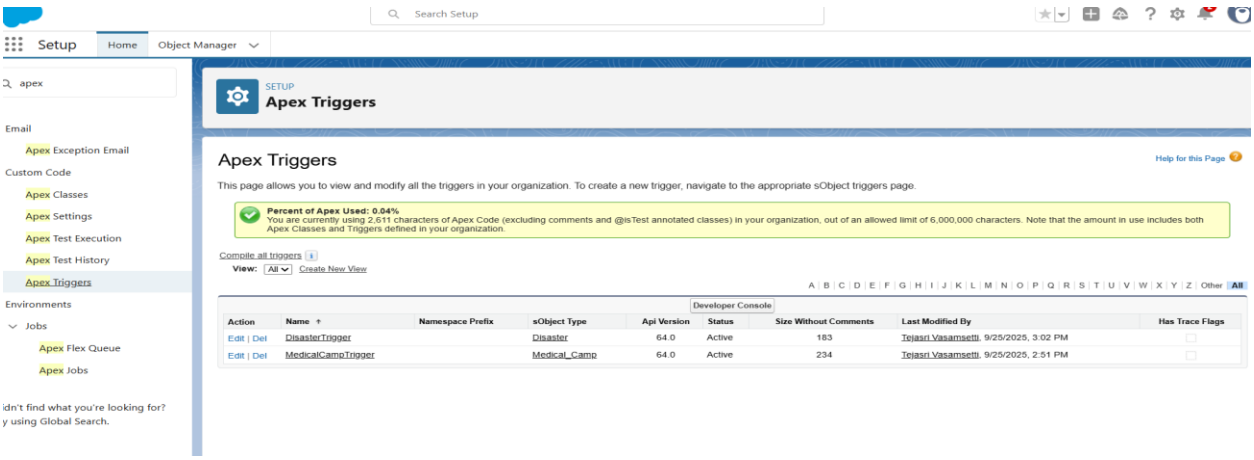
Apex Components:

- VolunteerService.cls (100% test coverage)
- MedicalCampTrigger.trigger, DisasterTrigger.trigger

Lightning Experience:

- Custom Lightning App: "Disaster Response"
- Optimized Record Pages for all core objects
- Command Center Dashboard for management





4. Backup & Recovery:

- Automated Exports: Scheduled weekly data exports

- Selective Backup: Priority on disaster records, patient data, and resource inventory
- Recovery Plan: Step-by-step data restoration procedures

5. Change Management :

- Component Packaging: Outbound change sets containing all customizations
- Dependency Management: Automated validation of component relationships
- Deployment Testing: Sandbox validation before production deployment

6. Conclusion:

Phases 7 and 8 establish SAHAYA as a production-ready system with robust data management capabilities and clear integration pathways for future expansion. The deployment framework ensures smooth transition to operational environments while maintaining data integrity and system reliability.