 implemented the integration with auth service, event handling, and caching implementation with the following features:

1. **Auth Service Integration**:
   * Token validation
   * Token invalidation
   * User status checks
   * Error handling and logging
   * Axios interceptors for response handling
2. **Event Handling System**:
   * Message queue service with RabbitMQ
   * Automatic reconnection
   * Event handlers for all user/role/permission events
   * Event subscriber with error handling
   * Cache invalidation on events
3. **Caching Implementation**:
   * Redis-based caching service
   * Entity-specific cache instances
   * Cache decorators for method caching
   * Batch operations (mget/mset)
   * Cache warming functionality
   * Cache invalidation strategies
   * Cache key management
   * TTL configurations
   * Health checks

Key features:

1. **Auth Integration**:
   * Secure token validation
   * Error handling
   * Status synchronization
   * Automatic retries
2. **Event System**:
   * Reliable message delivery
   * Error recovery
   * Event-driven cache invalidation
   * Transaction support
   * Dead letter queues
3. **Caching**:
   * Multi-level caching
   * Automatic cache invalidation
   * Cache warming
   * Performance optimization
   * Memory management
   * Consistent hashing