

SEOAuto - Design Documentation

Google Ads API Basic Access Application

1. Product Overview

SEOAuto is an internal SEO management platform that helps website owners research keywords, analyze search trends, and plan content strategies. The tool integrates with the Google Ads API (Keyword Planner) to provide keyword suggestions, search volume data, and traffic forecasts for users' own websites.

2. Google Ads API Usage

SEOAuto uses the following Google Ads API features:

- `KeywordPlanIdeaService.GenerateKeywordIdeas`: Discover new keyword opportunities based on seed keywords provided by the user.
- `KeywordPlanIdeaService.GenerateKeywordHistoricalMetrics`: Retrieve historical search volume and competition data for selected keywords.
- `KeywordPlanIdeaService.GenerateKeywordForecastMetrics`: Generate traffic and cost forecasts for keyword planning.
- `CustomerService.ListAccessibleCustomers`: Allow users to select their Google Ads account during initial setup.

3. User Interaction Flow

1. The user connects their Google Ads account via OAuth 2.0.
2. The user enters seed keywords and selects a target country/language.
3. The application calls `GenerateKeywordIdeas` to fetch suggestions.
4. Results (keyword text, search volume, competition) are displayed in a table.
5. The user can request historical metrics or forecasts for selected keywords.
6. All data is used solely for the user's own SEO planning purposes.

4. OAuth 2.0 Implementation

- Users are redirected to Google's consent screen to grant access.
- The application stores refresh tokens securely and refreshes access tokens automatically before expiry.
- Users can disconnect their account at any time, which revokes stored tokens.
- Scopes requested: <https://www.googleapis.com/auth/adwords> (read-only usage).

5. Rate Limiting & Compliance

- The application respects all Google Ads API rate limits.
- API calls are made only in response to explicit user actions.
- No automated batch or bulk requests are performed.
- No data is shared with third parties.
- The tool does not create, modify, or manage any Google Ads campaigns, ad groups, or ads. It is read-only (Keyword Planner only).

6. Data Storage & Privacy

- Keyword research results are stored in the user's private project database.
- OAuth tokens are stored encrypted and scoped per project.

- Users can delete their data and revoke API access at any time.
- The application does not access or store any billing or payment information.

7. Technical Architecture

- Backend: Laravel (PHP) REST API
- Frontend: Next.js (React) web application
- API Communication: Direct HTTPS REST calls to googleads.googleapis.com/v2
- Authentication: OAuth 2.0 Authorization Code flow
- Hosting: Vercel (frontend), cloud server (backend)