DataForSEO SERP API: Complete Reference with cURL & Response Examples

Executive Summary

This comprehensive guide provides **complete cURL request examples and JSON response formats for all DataForSEO SERP API endpoints**. The SERP API encompasses multiple search engines (Google, Bing, Baidu, Yandex, Yahoo, DuckDuckGo) and various result types including organic results, ads, featured snippets, knowledge graphs, local results, and more.

Reference Structure: Each endpoint section contains:

1. cURL Request - Copy-paste ready bash command
2. JSON Request Format - Parameter specifications
3. JSON Response - Complete response structure with sample data
4. Parameters - Detailed field explanations
5. Result Types - Available SERP features for each endpoint

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1. API Architecture & Authentication

Base URL

https://api.dataforseo.com/v3

Authentication Method

HTTP Basic Authentication with Base64 encoding

Setting Up Credentials

```
login="your_email@example.com"
password="your_api_token"
cred="$(printf login :{password} | base64)"
```

Usage in Headers

```
Authorization: Basic ${cred}
Content-Type: application/json
```

Get Your Credentials

1. Log into your DataForSEO account
2. Navigate to https://app.dataforseo.com/api-access
3. Copy your email and API token
4. Use in cURL requests as shown above

Available Methods

- **Live Method (Instant Results)** - Results returned immediately in response. No separate GET request needed. Higher cost per request. Best for real-time applications.
- **Regular/Standard Method (Async)** - Task submitted via POST request. Results retrieved via GET request. Lower cost per request. Best for batch processing and high volume requests.

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2. SERP API Overview

Supported Search Engines

- **Google** - Desktop and mobile results, all features
- **Bing** - Desktop results, competitive intelligence
- **Baidu** - Chinese market research
- **Yandex** - Russian market data
- **Yahoo** - Alternative search results
- **DuckDuckGo** - Privacy-focused search results

Result Types Available

Result Type	Description	Availability
Organic Results	Standard search listings	All engines
Ads (PPC)	Paid search advertisements	Google, Bing
Local Results	Map pack listings	Google
News Results	News articles	Google
Featured Snippets	Position zero content	Google
Knowledge Graph	Entity information panel	Google
Related Searches	Suggested related queries	Google
People Also Ask	Question/answer format	Google
Image Results	Image carousel	Google
Video Results	Video carousel	Google

Table 1: Available SERP Result Types

Rate Limits

- **2,000 API calls per minute** (standard limit)
- **Rate limit headers** included in every response
- Contact DataForSEO for higher limits
- Each request can contain multiple tasks

Pricing

Cost varies by:

- Search engine (Google costs more than Bing)
- Result depth (more results = higher cost)
- Method (Live vs Standard)
- Special features (HTML parsing, advanced analysis)

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3. Google Organic Results - Live Endpoint

Endpoint: POST /serp/google/organic/live/advanced

Purpose: Returns real-time Google organic search results with complete SERP features.

Rate Limit: 2,000 requests per minute

Use Case: Real-time keyword tracking, competitive analysis, SERP feature detection

cURL Request

```
login="your_email@example.com"
password="your_api_token"
cred="$(printf login :{password} | base64)"
```

```
curl --location --request POST
"https://api.dataforseo.com/v3/serp/google/organic/live/advanced"
--header "Authorization: Basic ${cred}"
--header "Content-Type: application/json"
--data-raw "[
{
"language_code": "en",
"location_code": 2840,
"keyword": "artificial intelligence",
"calculate_rectangles": true,
"depth": 10
}
]"
```

JSON Request Format

Parameter	Type	Description
keyword	string	Search query (required)
language_code	string	Language code e.g. "en" (optional)
location_code	integer	Location ID e.g. 2840 for US (optional)
depth	integer	Number of results (1-100, default 10)
calculate_rectangles	boolean	Include element positioning data
device	string	"desktop" or "mobile" (default: desktop)

Table 2: Google Organic Results Request Parameters

JSON Response


```
{
"version": "0.1.20240101",
"status_code": 20000,
"status_message": "Ok.",
"time": "2.3456 sec.",
"cost": 0.75,
"tasks_count": 1,
"tasks_error_count": 0,
"tasks": [
{
"id": "12345678-1234-1234-1234-123456789012",
"status_code": 20000,
"status_message": "Ok.",
"time": "2.2345 sec.",
```

"cost": 0.75,
"result_count": 1,
"path": ["v3", "serp", "google", "organic", "live", "advanced"],
"data": {
"keyword": "artificial intelligence",
"language_code": "en",
"location_code": 2840,
"depth": 10,
"device": "desktop"
},
"result": [
{
"keyword": "artificial intelligence",
"type": "organic",
"se_results_count": 1240000000,
"location_code": 2840,
"language_code": "en",
"device": "desktop",
"datetime": "2024-01-15 10:30:00 +00:00",
"search_intent": "informational",
"items": [
{
"type": "organic",
"rank": 1,
"position": 1,
"url": "https://en.wikipedia.org/wiki/Artificial_intelligence",
"title": "Artificial intelligence - Wikipedia",
"description": "Artificial intelligence (AI) is the intelligence of machines or software, as opposed to the natural intelligence of animals or humans. AI applications include advanced web search...",
"featured_snippet": false,
"rating": 0,
"rating_count": 0,
"is_image": false,
"is_video": false,
"is_news": false,
"is_featured_snippet": false,
"description_rows": null
},
{
"type": "organic",
"rank": 2,
"position": 2,
"url": "https://www.britannica.com/technology/artificial-intelligence",
"title": "artificial intelligence | Britannica",
"description": "artificial intelligence (AI), simulation of human intelligence by computer systems. These systems are designed to mimic certain operations of the human mind—learning...",
"featured_snippet": false,
"rating": 0,
"rating_count": 0,

"is_image": false,
"is_video": false,
"is_news": false
},
{
"type": "featured_snippet",
"rank": 3,
"position": 3,
"url": "https://www.ibm.com/cloud/learn/what-is-artificial-intelligence",
"title": "What is Artificial Intelligence (AI)? | IBM",
"description": "Artificial intelligence leverages computers and machines to mimic problem-solving and decision-making capabilities of the human mind.",
"featured_snippet": true,
"is_featured_snippet": true,
"description_rows": [
"AI harnesses computers to mimic human cognition",
"Applied in business intelligence and automation",
"Drives personalization and predictive analytics"
]
},
{
"type": "knowledge_graph",
"rank": 4,
"position": 4,
"url": "https://www.google.com",
"title": "Artificial Intelligence",
"knowledge_graph": {
"title": "Artificial Intelligence",
"description": "Artificial intelligence is intelligence demonstrated by machines, as opposed to natural intelligence displayed by animals including humans.",
"attributes": {
"Parent field": "Computer Science",
"Key people": "Alan Turing, John McCarthy",
"Founded": "1956",
"Subfields": "Machine Learning, Deep Learning, NLP"
},
"image_url": "https://example.com/ai-image.jpg",
"website": "https://en.wikipedia.org/wiki/Artificial_intelligence"
}
}
],
"people_also_ask": [
{
"type": "people_also_ask",
"rank": 5,
"position": 5,
"url": "https://www.example.com/paa",
"title": "People also ask",
"items": [
{
"question": "What are the 4 types of artificial intelligence?",

"snippet": "The 4 types of AI are: Reactive Machines, Limited Memory, Theory of Mind, and Self-Aware AI."
},
{
"question": "What is artificial intelligence used for?",
"snippet": "AI is used in various applications including healthcare, finance, manufacturing, and customer service."
}
]
}
]
}
]
}
]
}

Response Fields (Organic Results)

- **rank/position** - Result ranking on SERP (1-100)
- **url** - Canonical page URL
- **title** - Page title/headline
- **description** - Meta description or snippet
- **featured_snippet** - Boolean: has featured snippet
- **is_image/is_video/is_news** - Result type indicators
- **rating/rating_count** - Star rating and review count
- **search_intent** - Query intent (informational, commercial, etc.)

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4. Google Organic Results - Regular Endpoint

Endpoint: POST /serp/google/organic/task_post

Purpose: Submit asynchronous task for organic results retrieval.

Method: Two-step process (POST task, then GET results)

Cost: Lower than Live endpoint

cURL Request - POST Task

```
curl --location --request POST
"https://api.dataforseo.com/v3/serp/google/organic/task_post"
--header "Authorization: Basic ${cred}"
--header "Content-Type: application/json"
--data-raw "[
{
"language_code": "en",
"location_code": 2840,
"keyword": "best seo tools 2024",
"depth": 100
}
]"
```

Task Response (POST)

{
"version": "0.1.20240101",
"status_code": 20000,
"status_message": "Ok.",
"time": "0.2345 sec.",
"cost": 0,
"tasks_count": 1,
"tasks_error_count": 0,
"tasks": [
{
"id": "task_id_here",
"status_code": 20000,
"status_message": "Ok.",
"time": "0.1234 sec.",
"cost": 0,
"result_count": 0,
"path": ["v3", "serp", "google", "organic", "task_post"],
"data": {
"keyword": "best seo tools 2024",
"language_code": "en",
"location_code": 2840,
"depth": 100
}
}
]
}

cURL Request - GET Results

```
TASK_ID="task_id_here"

curl --location --request GET
"https://api.dataforseo.com/v3/serp/google/organic/task_get/${TASK_ID}"
--header "Authorization: Basic ${cred}"
```

Results Format (GET)

Results follow same format as Live endpoint, containing all organic results up to specified depth.

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5. Google Organic Results - Advanced Endpoint

Endpoint: POST /serp/google/organic/live/advanced OR /task_post

Purpose: Most comprehensive SERP data including all result types and advanced features.

Includes: Featured snippets, knowledge graphs, ads, local results, news, images, videos, people also ask.

Advanced-Specific Parameters

Parameter	Type	Description
include_serp_info	boolean	Include summary data
include_rank_changes	boolean	Show ranking changes

Table 3: Advanced Endpoint Additional Parameters

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6. Google Ads Results - Live Endpoint

Endpoint: `POST /serp/google/ads/live`

Purpose: Retrieve paid search advertisements for a keyword.

Rate Limit: 2,000 requests per minute

Use Case: PPC analysis, competitor advertising tracking, ad copy research

cURL Request

```
curl --location --request POST
"https://api.dataforseo.com/v3/serp/google/ads/live"
--header "Authorization: Basic ${cred}"
--header "Content-Type: application/json"
--data-raw "[
{
"language_code": "en",
"location_code": 2840,
"keyword": "email marketing software",
"depth": 10
}
]"
```

JSON Response (Ads)


```
{
"version": "0.1.20240101",
"status_code": 20000,
"status_message": "Ok.",
"time": "1.8765 sec.",
"cost": 0.50,
"tasks_count": 1,
"tasks": [
{
"id": "ads_task_id",
"status_code": 20000,
"status_message": "Ok.",
"time": "1.7654 sec.",
"cost": 0.50,
"result_count": 1,
```

```
"result": [
{
"keyword": "email marketing software",
"type": "ads",
"items": [
{
"rank": 1,
"position": 1,
"url": "https://www.mailchimp.com",
"title": "Email Marketing Software | Mailchimp",
"description": "Create stunning emails that drive sales. MailChimp is the #1 email marketing platform for small businesses.",
"is_sponsored": true,
"ad_aclk": "aclk_value_here",
"rating": 4.5,
"rating_count": 2340,
"extensions": {
"callout": [
"Free email marketing tools",
"Drag-and-drop editor",
"Marketing automation"
],
"sitelink": [
{
"title": "Email Marketing",
"url": "https://www.mailchimp.com/email-marketing/"
},
{
"title": "Landing Pages",
"url": "https://www.mailchimp.com/landing-pages/"
}
],
"message": [
"Start free with Mailchimp"
]
}
},
{
"rank": 2,
"position": 2,
"url": "https://www.constant-contact.com",
"title": "Email Marketing | Constant Contact",
"description": "Email marketing that drives growth. Constant Contact's easy-to-use platform helps you create professional email campaigns.",
"is_sponsored": true,
"rating": 4.3,
"rating_count": 1890,
"extensions": {
"callout": [
"GDPR compliant",
"Mobile responsive",
```

"Free templates"
]
}
}
]
}
]
}
]
}

Ads Response Fields

- **is_sponsored** - Boolean indicating paid result
- **ad_aclk** - Click tracking identifier
- **extensions** - Callouts, sitelinks, messages, and other ad extensions
- **rating/rating_count** - Advertiser reputation metrics

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7. Google Local Results - Live Endpoint

Endpoint: `POST /serp/google/local/live`

Purpose: Retrieve Google Map Pack (local business listings).

Rate Limit: 2,000 requests per minute

Use Case: Local SEO tracking, competitor location analysis, map pack optimization

cURL Request

```
curl --location --request POST
"https://api.dataforseo.com/v3/serp/google/local/live"
--header "Authorization: Basic ${cred}"
--header "Content-Type: application/json"
--data-raw "[
{
"language_code": "en",
"location_code": 2840,
"keyword": "pizza near me",
"depth": 10
}
]"
```

JSON Response (Local Results)

{
"version": "0.1.20240101",
"status_code": 20000,
"status_message": "Ok.",
"time": "2.1234 sec.",
"cost": 0.60,
"tasks_count": 1,

```
"tasks": [
{
"id": "local_task_id",
"status_code": 20000,
"status_message": "Ok.",
"time": "2.0123 sec.",
"cost": 0.60,
"result_count": 1,
"result": [
{
"keyword": "pizza near me",
"type": "local",
"items": [
{
"rank": 1,
"position": 1,
"title": "Tony's Pizza Palace",
"address": "123 Main St, New York, NY 10001",
"phone": "(555) 123-4567",
"url": "https://tonypizza.com",
"rating": 4.8,
"rating_count": 456,
"review_url": "https://maps.google.com/?cid=123456",
"business_type": "Pizza Restaurant",
"hours": {
"monday": "10:00-22:00",
"tuesday": "10:00-22:00",
"wednesday": "10:00-22:00"
},
"attributes": [
"Dine-in",
"Takeout",
"Delivery",
"Vegetarian options"
]
},
{
"rank": 2,
"position": 2,
"title": "Mario's Pizzeria",
"address": "456 Broadway, New York, NY 10001",
"phone": "(555) 234-5678",
"url": "https://mariospizza.com",
"rating": 4.6,
"rating_count": 334
}
]
}
]
}
```

]
}

Local Results Fields

- **address** - Physical business location
- **phone** - Business phone number
- **hours** - Operating hours by day
- **business_type** - Category (e.g., Restaurant)
- **attributes** - Features like delivery, dine-in, takeout
- **review_url** - Link to Google Maps reviews

---

8. Google News Results - Live Endpoint

Endpoint: POST /serp/google/news/live

Purpose: Retrieve Google News results for a search query.

Rate Limit: 2,000 requests per minute

Use Case: News monitoring, press tracking, brand mentions, news SEO

cURL Request

```
curl --location --request POST
"https://api.dataforseo.com/v3/serp/google/news/live"
--header "Authorization: Basic ${cred}"
--header "Content-Type: application/json"
--data-raw "[
{
"language_code": "en",
"location_code": 2840,
"keyword": "artificial intelligence breakthrough",
"depth": 20
}
]"
```

JSON Response (News Results)


```
{
"version": "0.1.20240101",
"status_code": 20000,
"status_message": "Ok.",
"time": "1.5678 sec.",
"cost": 0.40,
"tasks_count": 1,
"tasks": [
{
"id": "news_task_id",
"status_code": 20000,
"status_message": "Ok.",
"time": "1.4567 sec.",
```

```
"cost": 0.40,
"result_count": 1,
"result": [
{
"keyword": "artificial intelligence breakthrough",
"type": "news",
"items": [
{
"rank": 1,
"position": 1,
"title": "OpenAI Announces Breakthrough in AI Technology",
"url": "https://technews.com/openai-breakthrough",
"source": "TechNews",
"source_icon": "https://technews.com/icon.png",
"datetime": "2024-01-15 10:30:00 +00:00",
"timestamp": 1705316400,
"snippet": "In a groundbreaking announcement, OpenAI revealed significant advances in artificial intelligence capabilities...",
"image_url": "https://technews.com/image.jpg",
"amp_version": "https://technews.com/amp/"
},
{
"rank": 2,
"position": 2,
"title": "Google DeepMind Releases AI Model for Protein Folding",
"url": "https://sciencenews.com/deepmind-ai",
"source": "ScienceNews",
"datetime": "2024-01-15 09:15:00 +00:00",
"timestamp": 1705312500,
"snippet": "Google DeepMind has released a new AI model that can accurately predict protein structures...",
"image_url": "https://sciencenews.com/image.jpg"
}
]
}
]
}
]
}
```


News Results Fields

- **source** - News publication name
- **source_icon** - Publication logo URL
- **datetime/timestamp** - Publication date and time
- **snippet** - News excerpt
- **image_url** - Article thumbnail
- **amp_version** - Accelerated Mobile Page URL if available

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9. Google Knowledge Graph - Live Endpoint

Endpoint: POST /serp/google/knowledge_graph/live

Purpose: Retrieve Google Knowledge Graph entity information.

Rate Limit: 2,000 requests per minute

Use Case: Entity research, structured data optimization, brand intelligence

cURL Request

```
curl --location --request POST
"https://api.dataforseo.com/v3/serp/google/knowledge_graph/live"
--header "Authorization: Basic ${cred}"
--header "Content-Type: application/json"
--data-raw "[
{
"language_code": "en",
"location_code": 2840,
"keyword": "Albert Einstein"
}
]"
```

JSON Response (Knowledge Graph)


```
{
"version": "0.1.20240101",
"status_code": 20000,
"status_message": "Ok.",
"time": "1.2345 sec.",
"cost": 0.35,
"tasks_count": 1,
"tasks": [
{
"id": "kg_task_id",
"status_code": 20000,
"status_message": "Ok.",
"time": "1.1234 sec.",
"cost": 0.35,
"result_count": 1,
"result": [
{
"keyword": "Albert Einstein",
"type": "knowledge_graph",
"knowledge_graph": {
"title": "Albert Einstein",
"description": "Albert Einstein was a German-born theoretical physicist who developed the theory of relativity, one of the two pillars of modern physics.",
"attributes": {
"Born": "March 14, 1879, Ulm, German Empire",
"Died": "April 18, 1955, Princeton, New Jersey, USA",
```

"Nationality": "German, Italian, American",
"Field": "Physics, Philosophy",
"Notable Works": "Theory of Relativity, E=mc²",
"Awards": "Nobel Prize in Physics"
},
"image_url": "https://example.com/einstein.jpg",
"image_alt": "Albert Einstein",
"website": "https://en.wikipedia.org/wiki/Albert_Einstein",
"known_for": [
"Theory of Relativity",
"E=mc²",
"Photoelectric Effect",
"Brownian Motion"
],
"related_entities": [
{
"title": "Niels Bohr",
"url": "https://en.wikipedia.org/wiki/Niels_Bohr"
},
{
"title": "Stephen Hawking",
"url": "https://en.wikipedia.org/wiki/Stephen_Hawking"
}
]
}
}
]
}
]
}

Knowledge Graph Fields

- **description** - Entity description
- **attributes** - Key-value entity information (born, died, field, etc.)
- **image_url** - Entity image
- **website** - Primary source website
- **known_for** - Notable achievements or products
- **related_entities** - Related entities with links

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10. Featured Snippets & Rich Results

Featured Snippet Detection

Featured snippets appear in the response data with the `is_featured_snippet` flag set to true:

{
"type": "featured_snippet",
"rank": 1,
"position": 1,
"url": "https://example.com/article",

"title": "Article Title",
"is_featured_snippet": true,
"description": "Main snippet text from the page...",
"description_rows": [
"Row 1 of table/list content",
"Row 2 of table/list content",
"Row 3 of table/list content"
]
}

Rich Results Types

- **Table Snippets** - Tabular featured snippets with rows and columns
- **List Snippets** - Numbered or bulleted featured snippets
- **Paragraph Snippets** - Text excerpt featured snippets
- **Video Snippets** - Video carousel results
- **Image Snippets** - Image carousel results

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11. Location & Language Codes

Common Location Codes

Location	Code
United States	2840
United Kingdom	2826
Canada	2124
Australia	2036
France	2250
Germany	2276
India	2356
Japan	2392
Brazil	2076
Mexico	2484

Table 4: Common Location Codes

Common Language Codes

Language	Code
English	en
Spanish	es
French	fr
German	de
Chinese	zh
Japanese	ja
Portuguese	pt
Russian	ru
Hindi	hi
Arabic	ar

Table 5: Common Language Codes

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12. HTML Results Endpoint

Endpoint: POST /serp/google/organic/live/html OR /task_post/html

Purpose: Retrieve raw HTML of search results page instead of parsed JSON.

Use Case: Custom parsing, complete page analysis, historical HTML comparison

cURL Request

```
curl --location --request POST
"https://api.dataforseo.com/v3/serp/google/organic/live/html"
--header "Authorization: Basic ${cred}"
--header "Content-Type: application/json"
--data-raw "[
{
"language_code": "en",
"location_code": 2840,
"keyword": "machine learning tutorial",
"depth": 10
}
]"
```

HTML Response Format

Returns raw HTML page content of Google search results, stored for 7 days. Can be parsed with your own tools or saved for archival purposes.

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13. Bing Search Results - Live Endpoint

Endpoint: `POST /serp/bing/organic/live`

Purpose: Retrieve Bing search results for competitive analysis.

Rate Limit: 2,000 requests per minute

cURL Request

```
curl --location --request POST
"https://api.dataforseo.com/v3/serp/bing/organic/live"
--header "Authorization: Basic ${cred}"
--header "Content-Type: application/json"
--data-raw "[
{
"language_code": "en",
"location_code": 2840,
"keyword": "web development trends",
"depth": 10
}
]"
```

---

14. Error Handling & Status Codes

HTTP Status Codes

Code	Meaning	Solution
20000	Success	Request processed successfully
20001	Task in progress	Wait and retry later
40001	Bad request	Validate request parameters
40003	Not found	Task ID doesn't exist
40005	Access denied	Check API credentials
40006	Rate limit exceeded	Reduce concurrent requests
40007	Insufficient funds	Top up account balance
40403	Forbidden keyword	Keyword restricted by policy
50001	Server error	Retry after 60 seconds

Table 6: HTTP Status Codes and Solutions

Example Error Response

{
"version": "0.1.20240101",
"status_code": 40001,
"status_message": "Bad request",
"time": "0.0123 sec.",
"cost": 0,
"tasks_count": 1,
"tasks_error_count": 1,
"tasks": [
{
"id": "error_task_id",
"status_code": 40001,
"status_message": "Invalid keyword parameter",
"time": "0.0023 sec.",
"cost": 0,
"result_count": 0,
"data": {
"keyword": ""
},
"result": []
}
]
}

---

15. Best Practices & Optimization

Authentication Security

- ✓ **GOOD:** Use environment variables for credentials
- ✓ **GOOD:** Rotate API tokens regularly
- ✓ **GOOD:** Use HTTPS only
- ✗ **BAD:** Hardcode credentials in scripts
- ✗ **BAD:** Commit API tokens to version control
- ✗ **BAD:** Share credentials across team members

Batch Keyword Processing

#!/bin/bash

login=$DATAFORSEO_LOGIN password =DATAFORSEO_PASSWORD
cred="$(printf $login :{password} | base64)"

Process keywords in batches of 50

for i in 0 50 100 150; do
keywords=$(sed -n "${i},$((i+49))p" keywords.txt)

curl -s "https://api.dataforseo.com/v3/serp/google/organic/live/advanced"
--header "Authorization: Basic $cred" --data-raw "[{keywords}]"

sleep 2 # Rate limit spacing
done

Cost Optimization

- **Live vs Standard** - Use Live only for real-time needs (higher cost)
- **Batch Requests** - Send multiple keywords per request to save costs
- **Selective Depth** - Only request necessary result depth (10 vs 100)
- **Cache Results** - Store and reuse SERP data when possible (30-day retention)
- **Device Selection** - Request desktop or mobile only, not both
- **Async Tasks** - Use Standard method for high volume (lower cost)

Error Handling & Retries

#!/bin/bash

max_retries=3
retry_count=0

while [$retry_count -lt $max_retries]; do response=$(curl -s "https://api.dataforseo.com/v3/serp/google/organic/live/advanced"
--header "Authorization: Basic $cred" --data-raw "$serp_json")

status_code=$(echo $response | jq '.status_code')

if ["$status_code" = "20000"]; then echo "Success!" break elif ["$status_code" = "40006"];
then
echo "Rate limited. Waiting 60 seconds..."
sleep 60
elif ["$status_code" = "20001"]; then
echo "Task in progress. Waiting 5 seconds..."
sleep 5
else
echo "Error: $status_code" retry_count=$((retry_count + 1))
sleep 5
fi
done

Rate Limit Management

```
#!/bin/bash

# Store rate limit info from response headers
RateLimit=$(curl -I -s "https://api.dataforseo.com/v3/serp/google/organic/live/advanced" \
--header "Authorization: Basic ${cred}" \
| grep "X-RateLimit")

echo "Rate Limit Info: $RateLimit"

# Extract remaining requests
Remaining=(echo "$RateLimit" | grep "X-RateLimit-Remaining" | awk '{print (echo \
"$RateLimit" | grep "X-RateLimit-Limit" | awk '{print $2}')

echo "Requests remaining: $Remaining / $Limit"
```

---

16. Advanced Features

SERP Feature Detection

The API automatically detects and returns information about special SERP features:

- **Featured Snippets** - Position zero content
- **People Also Ask (PAA)** - Question and answer format
- **Knowledge Graph** - Entity information panel
- **Image Carousel** - Image results carousel
- **Video Carousel** - Video results carousel
- **News Box** - Recent news results
- **Local Pack** - Map pack with 3 local results
- **Site Links** - Enhanced navigation links
- **Related Searches** - Suggested related queries
- **Breadcrumbs** - Website navigation breadcrumbs

Mobile vs Desktop Results

Request mobile results by setting device parameter:

```
{
"keyword": "responsive web design",
"device": "mobile",
"location_code": 2840,
"language_code": "en"
}
```

Mobile results often differ significantly from desktop, including different SERP features and ranking order.

References

- Official Documentation: https://docs.dataforseo.com/v3/serp-overview/
- API Playground: https://app.dataforseo.com/api-playground
- API Access: https://app.dataforseo.com/api-access
- Help Center: https://dataforseo.com/help-center
- Status Page: https://status.dataforseo.com
- GitHub Examples: https://github.com/dataforseo

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This comprehensive guide provides complete reference for all DataForSEO SERP API endpoints with actual cURL requests, JSON responses, and practical implementation guidance.