Retrieving Information Efficiently

Best Practices Series

The Google Ads API Developer Series

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Use cases

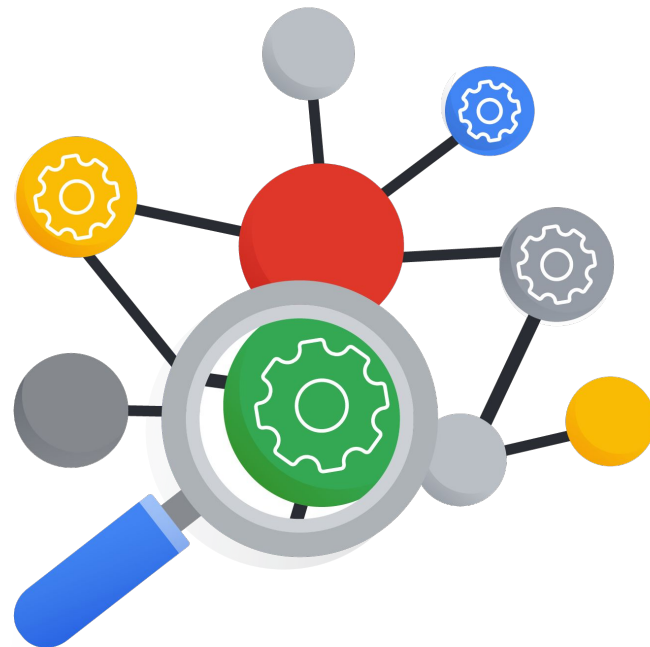- Retrieving values of properties and metrics

- Reporting

- Local sync

SearchStream vs. Search vs. Get

SearchStream

- Allows you to retrieve information for an unlimited rows with a single request.

- When to use `SearchStream`:

    - By default.

    - Especially for large downloads.

    - Except when you need `Search`...

Search

- Retrieves information one page at a time.

- **Always** set the [page size](#) to be 10,000 unless you are severely memory constrained.

- Client libraries handle pagination automatically
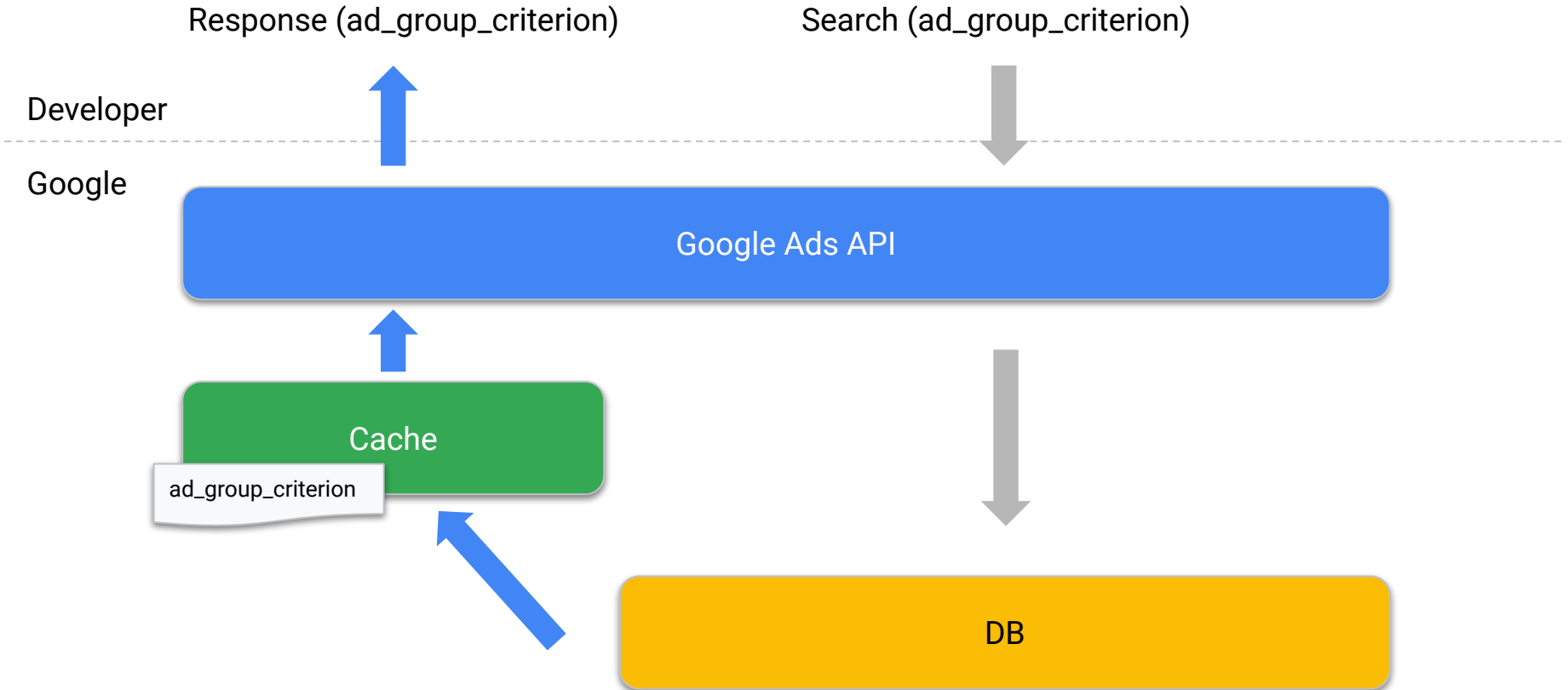
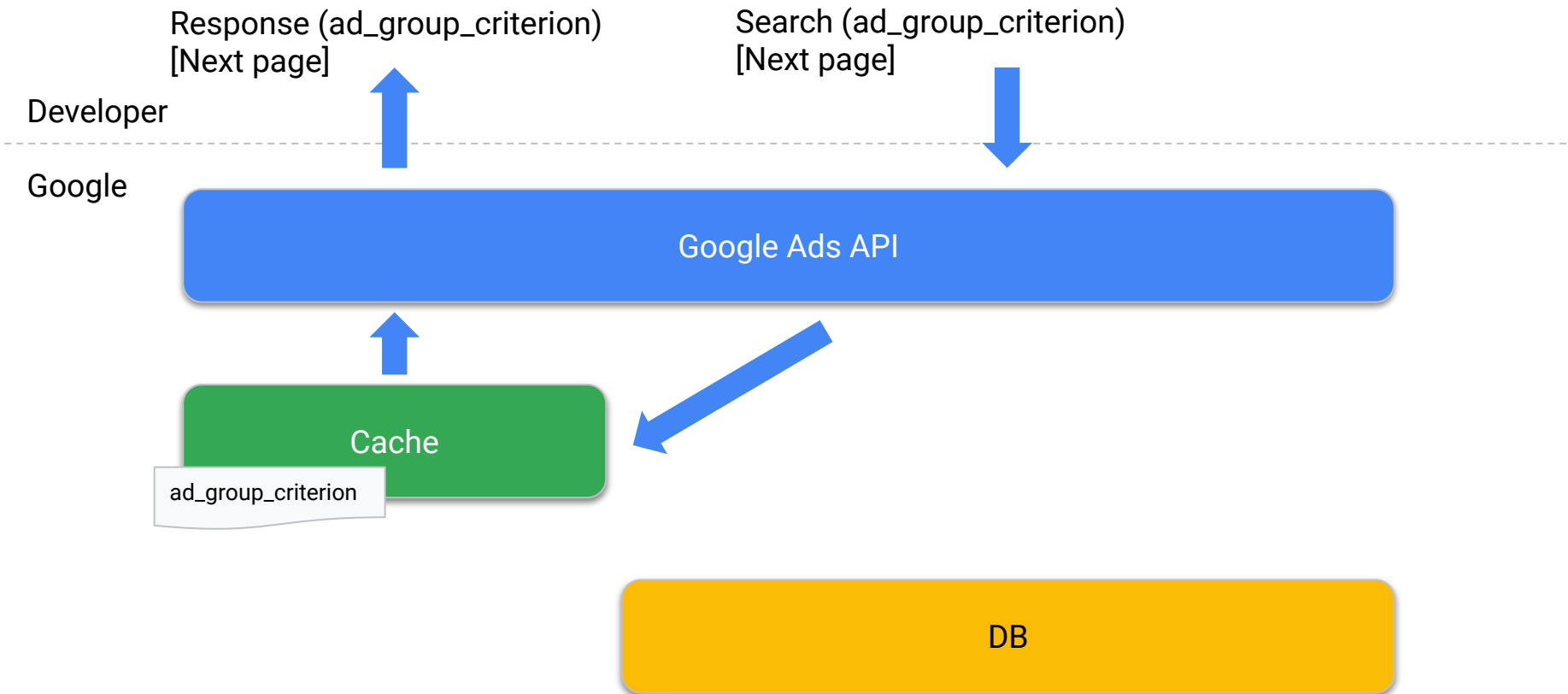- Prior pages can be retrieved

Common scenarios to use Search / paging

- **Unstable connection**: paging allows retries of specific pages

- **Need to go backward**: store the [next_page token](#).

Simplified Google Ads API Search architecture

Response (ad_group_criterion)　　　　　Search (ad_group_criterion)

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Google Ads API

Cache

ad_group_criterion

DB

Google Ads

Simplified Google Ads API architecture

Response (ad_group_criterion)
[Next page]

Search (ad_group_criterion)
[Next page]

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* Note: page tokens currently expire after 2 hours (subject to change)

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How to use Search to go backwards

- Store the first page of the result and the `next_page_token`

    - You must always store the first page because there is no "next page" token for it

- For each page, keep track of each `next_page_token`* (assuming `page_size=10_000`):

Request Number	Rows Returned	Next Page Token
1	1 - 10,000	`token="t2"`
2	10,001 - 20,000	`token="t3"`
3	20,001 - 30,000	`token="t4"`....

Example: using Search to go backwards

- Example: you are downloading row 25,000 (page 3) but need row 15,000 (page 2)

  1. Store `next_page_token` for `"t4"`

  2. Go back: `GAS.Search(next_page_token="t2")`

  3. Resume: `GAS.Search(next_page_token="t4")`

Request Number	Rows Returned	Next Page Token
1	1 - 10,000	`token="t2"`
2	10,001 - 20,000	`token="t3"`
3	20,001 - 30,000	`token="t4"`....

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When to use Get

- **Only** for development / debugging purposes.

    - **Never in production.**

Three ways to retrieve information

	`GAS.SearchStream`	`GAS.Search`	`<service>.Get`
Primary use	Most scenarios	Special circumstances	Debugging and testing only (Limited to 1,000 operations per day)
# of rows	All sizes	Up to 10k rows per page, unlimited pages	One row, one object
# of columns	Explicit in query	Explicit in query	All columns

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Bottom line: to retrieve information,

use `SearchStream` by default.

Stay tuned for advanced sessions...

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