

Google™ 

Introduction to Google Shopping APIs

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Agenda

- Google Shopping Innovations
- What are the Shopping APIs?
- Why should you use them?
- How to use the Shopping APIs
- Feedback: <http://goo.gl/h7yKf> Hashtags: #Commerce



Today's Retail Market

Purchase Offline¹

90% of sales occur offline



Research Online²

Over 43% of retail sales are influenced by online research



Product Discovery³

Q4 2010 – Smartphones outsold desktop computers



1: Source: Google Touchpoints Consumer Survey, "U.S. Retail Consumers, January 2009. Clicks to Bricks: The Impact of Online Pre-Shopping on Consumer Shopping Behavior, Yahoo! and comScore, 2007; Emarketer citing, data is from January 2009 Sterling Commerce research for which 1,017 US consumers ages 18+ were surveyed via telephone by Opinion Research Corporation from January 2-4, 2009, HHI +\$75k

2: Source: Forrester. Total Web Impact on Retail Sales.

3: <http://www.bgr.com/2011/02/08/for-first-time-ever-smartphones-oussell-pcs-in-q4-of-2010>

Google Shopping

- Everything
- Images
- Videos
- News
- Shopping**
- Discussions
- More

- Show only**
- In stock nearby New!
 - Google Checkout
 - Free shipping
 - New items

- Any category**
- Digital Cameras
- Any price**
- Up to \$200
 - \$200 – \$450
 - \$450 – \$1000
 - Over \$1000

\$ to \$

- Any brand**
- Canon
 - Nikon
 - Sony
 - Panasonic
 - Fujifilm
 - More

- Any megapixels**
- Under 10 megapixel
 - 10 – 12.1 megapixel
 - 12.1 – 14 megapixel
 - 14 – 16.2 megapixel
 - Over 16.2 megapixel
- Any optical zoom**

Digital Cameras ✕

Your location: Sunnyvale, CA - [Change](#) Sort by:

Top 10 Digital Camera Ads

Bestselling Digital Cameras Compare Digital Camera Deals!
www.shopcompare.net/Digital-Cameras

Top 10 Digital Cameras 🔍

Voted By Consumer Reviewers. Compare Reviews, Ratings & Prices.
 Gift Finder - Top Rated Vacuums - Top 10 Blu-Ray Players - Bestselling HDTVs
www.intellireview.com

Nikon D3100 Digital SLR Camera with Nikon AF-S VR DX 18-55mm lens ★★★★☆ 484 reviews \$535	Nikon D7000 Digital SLR Camera (Body Only - Black) ★★★★★ 429 reviews \$1,189	Sony a (alpha) SLT-A55V1 Digital SLR Camera with Sony DT 18-55mm lens ★★★★☆ 126 reviews \$798	Canon PowerShot SX130 IS 12.1 MP Digital Camera (Black) ★★★★★ 302 reviews \$149	Olympus E-PL1 Digital camera - mirrorless system - 12.3 Megapixel ★★★★★ 186 reviews \$399
Panasonic Lumix DMC-ZS8 14.1 MP Digital Camera (Black)	Kodak EASYSHARE Z981 14 MP Digital Camera (Black)	Fujifilm FinePix HS20EXR 16 MP Digital Camera (Black)	Sony a NEX 5K Digital camera - mirrorless system - 14.2 Megapixel	Canon EOS 60D Digital SLR Camera with Canon EF-S 18-135mm IS lens

Google Product Pages

Canon PowerShot SX130 IS 12.1 MP Digital Camera (Black) from Canon in Camcorders & Digital Cameras

Overview - [Online stores](#) - [Nearby stores](#) - [Reviews](#) - [Technical specifications](#) - [Similar items](#)



\$149 online, \$200 nearby

★★★★☆ [317 reviews](#)

#1 in [Canon Digital Cameras](#) »

Canon - 12.1 megapixel - MultiMediaCard - Standard SD - SDHC - SDXC - 12 x optical zoom - ISO 1600 - Pop-up Flash - 9.2 ounce

Smart, sleek and creative, the PowerShot SX130 IS is the perfect companion to all your good times. Now you can capture every detail of special moments in crisp, stunning 720p HD - even while using the high-powered 12x wide-angle optical zoom! You'll record in stereo sound, then play back your videos instantly on you computer. The SX130 IS is all about creativity, with fun scene modes like miniature effect for movies, and fisheye effect for artistically distorted stills. While you're having fun creating, the camera's smart flash exposure and advanced smart auto systems are ensuring that every image is the best it can be. Add the Digic 4 image... [more »](#)



[Add to Shopping List](#)

Online stores

Show only: [Google Checkout](#) [Free shipping](#) [New items](#)

Your location: Sunnyvale, CA 94086 - [Change](#)

Relevance ▾	Seller rating	Condition	Tax and shipping	Total price	Base price
Best Buy	★★★★☆ 1,318 seller ratings	New	Tax: \$13.78 + Free shipping	\$162.77	\$148.99
Office Depot	★★★★☆ 3,234 seller ratings	New	Tax: \$13.87 + Free shipping	\$163.86	\$149.99
B&H Photo-Video-Audio Show all 3	★★★★★ 38,533 seller ratings	New	No tax + Free shipping	\$199.95	\$199.95
Amazon.com Show all 5	★★★★★ 6,233 seller ratings	New			\$229.00
Sam's Club	★★★★☆ 52 seller ratings	New			\$214.37

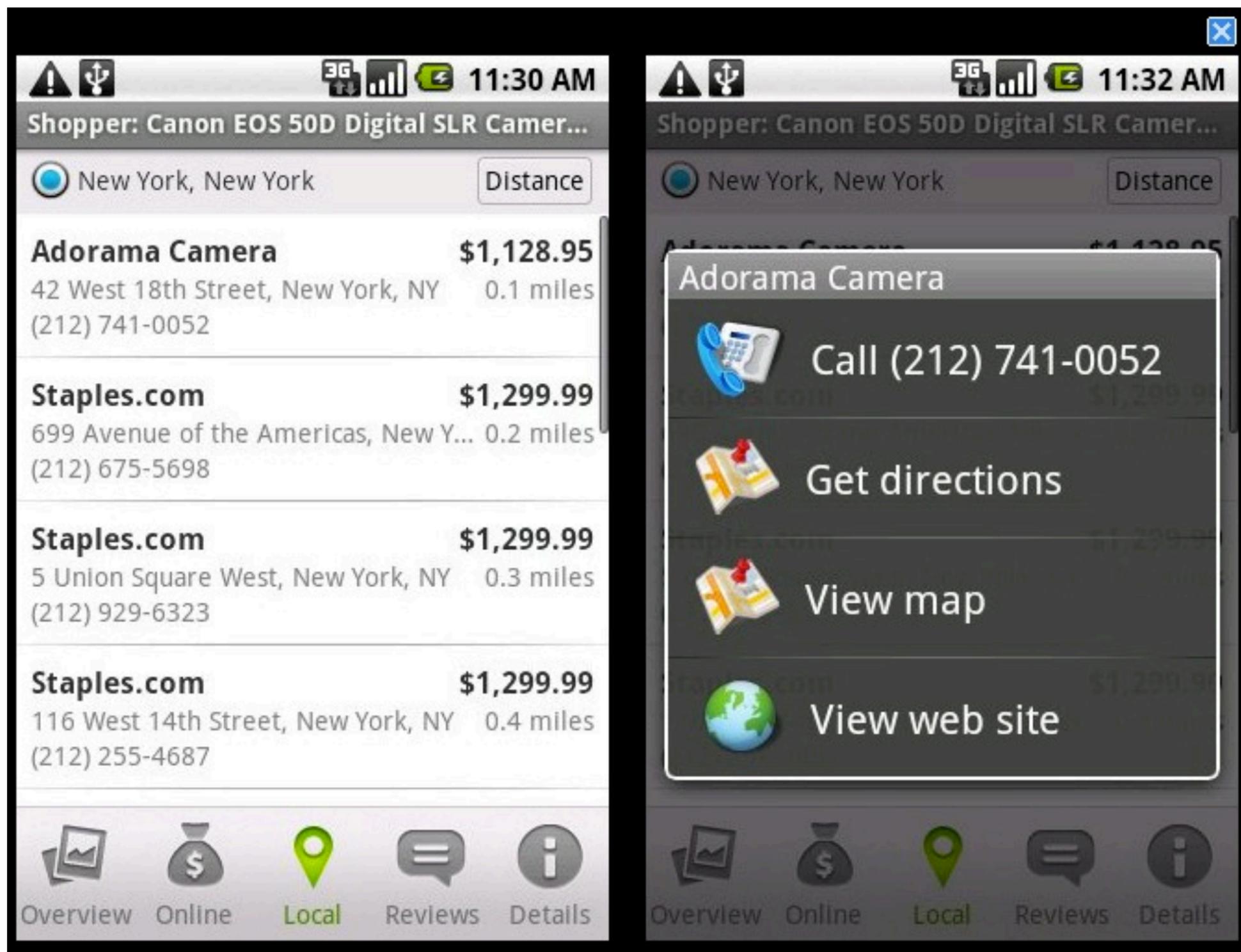
[View all 158 online stores »](#)

Online stores 1 - 5 of 158 [Next >](#)

Shopping Goes Mobile



Mobile Shopping meets Local

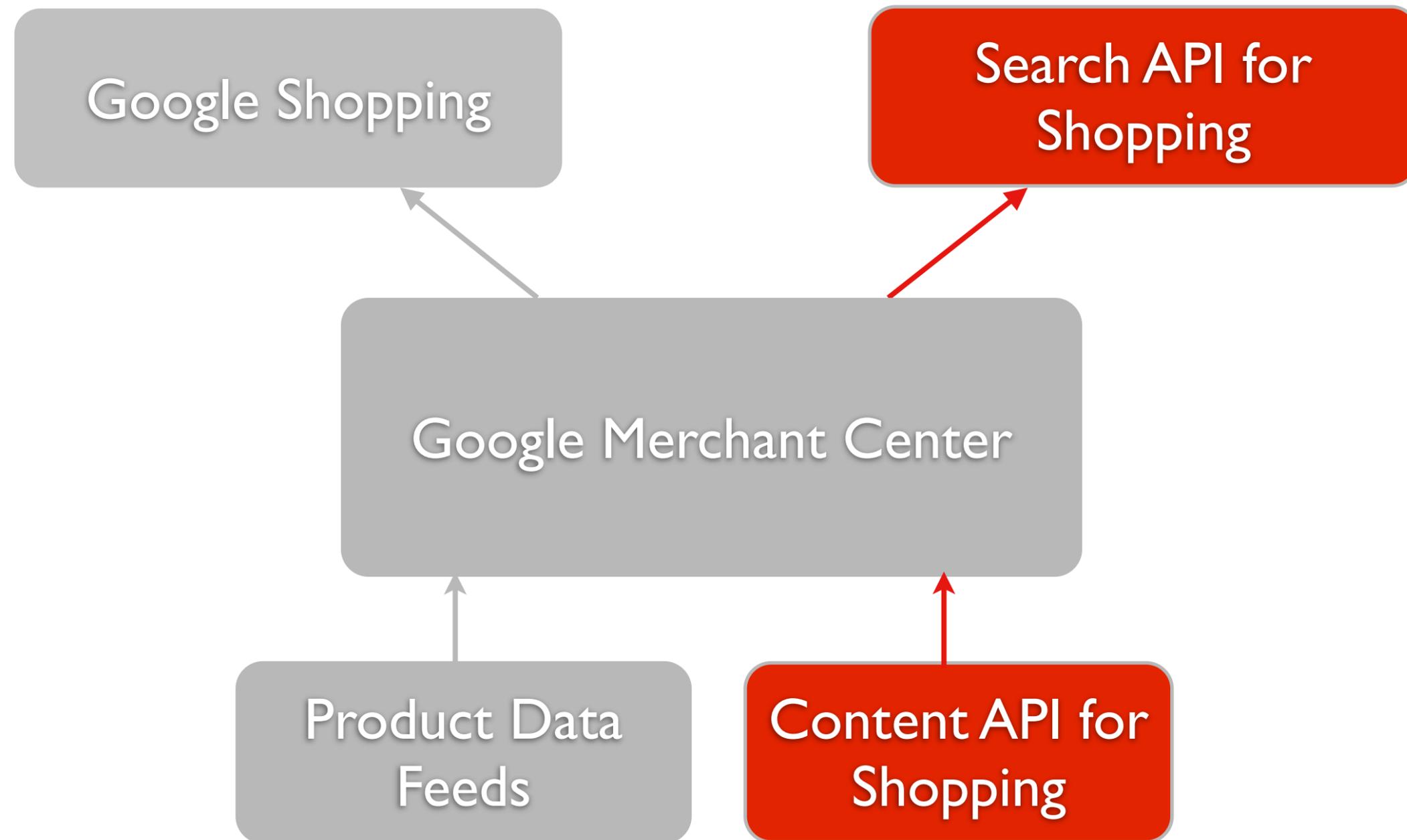




What are the Google Shopping APIs?

High-level Architecture

Google Shopping APIs



What are the Google Shopping APIs?

Two new APIs

- Google Content API for Shopping
- Google Search API for Shopping



Content API for Shopping

Who should use the Content API for Shopping?

- Anyone who sells anything online
 - Customers will find your products
- Anyone who sells anything offline
 - Customers will research your products online before buying

HTTP-based APIs

HTTP-based APIs

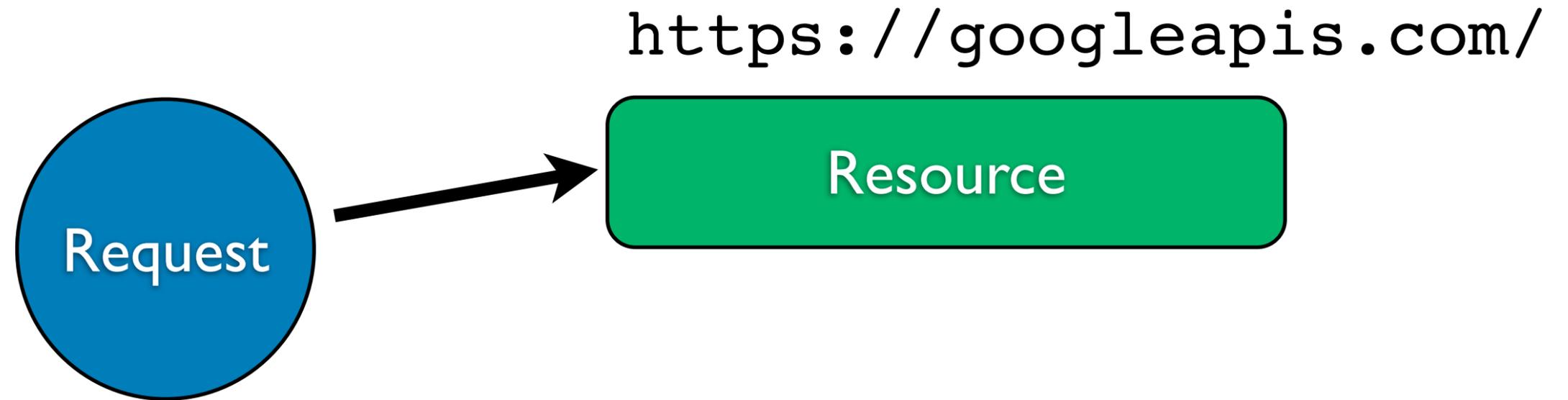
Resource

HTTP-based APIs

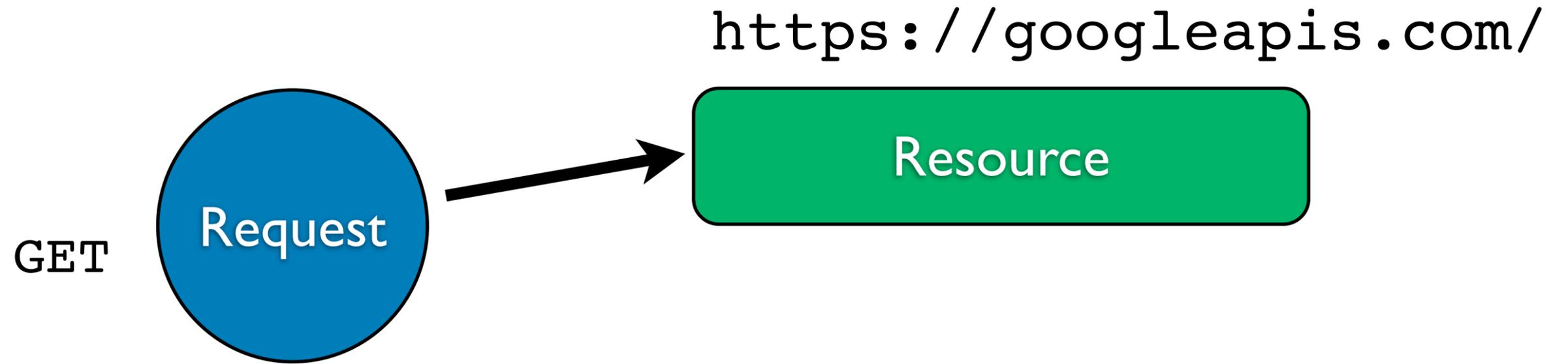
`https://googleapis.com/`

Resource

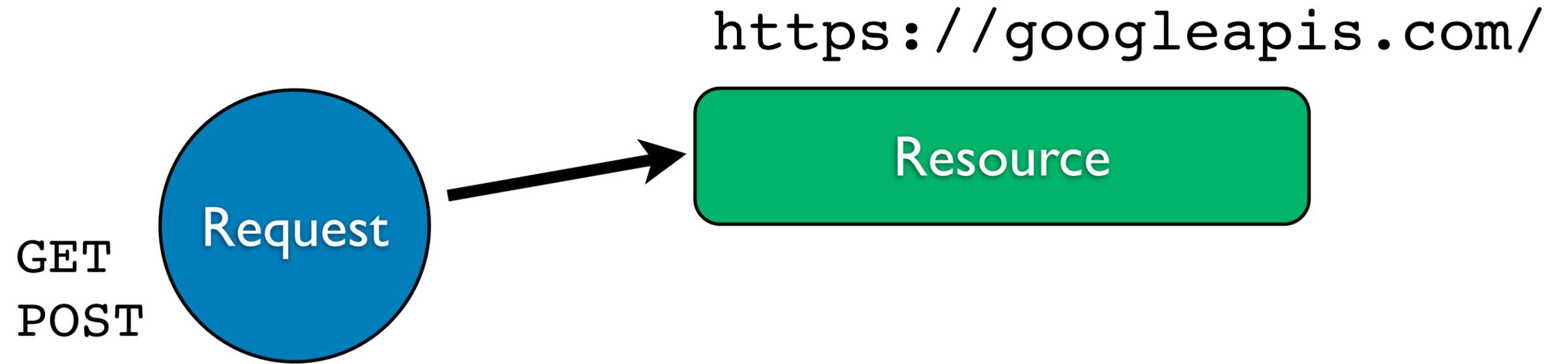
HTTP-based APIs



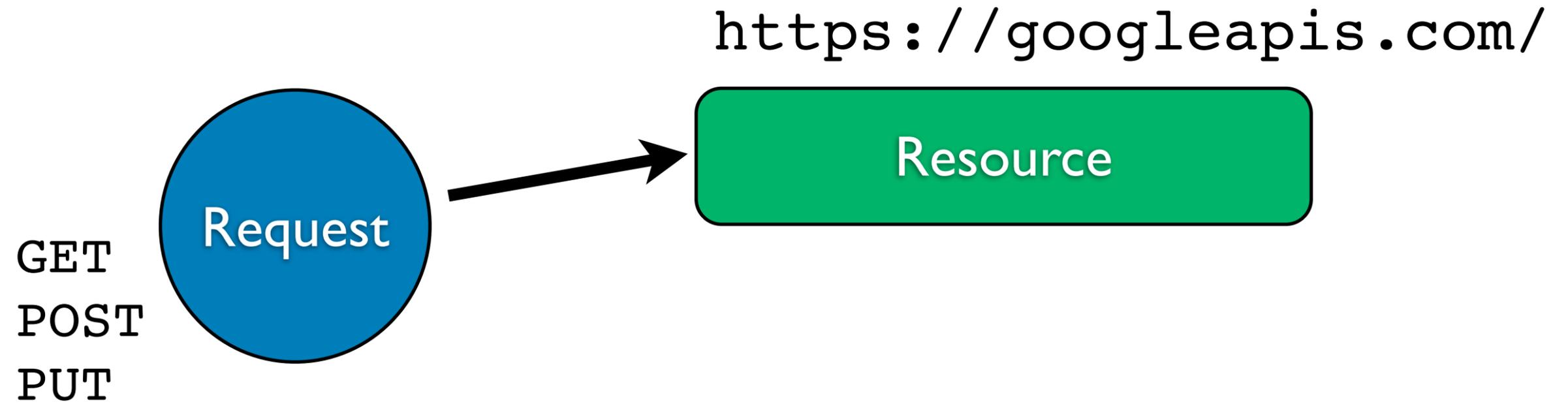
HTTP-based APIs



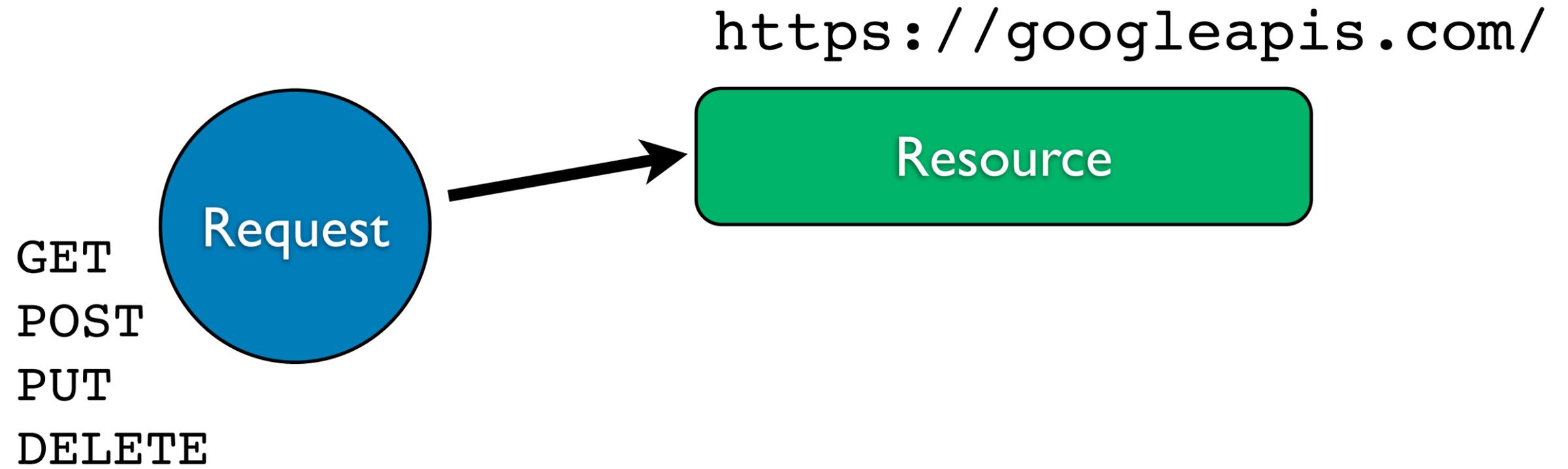
HTTP-based APIs



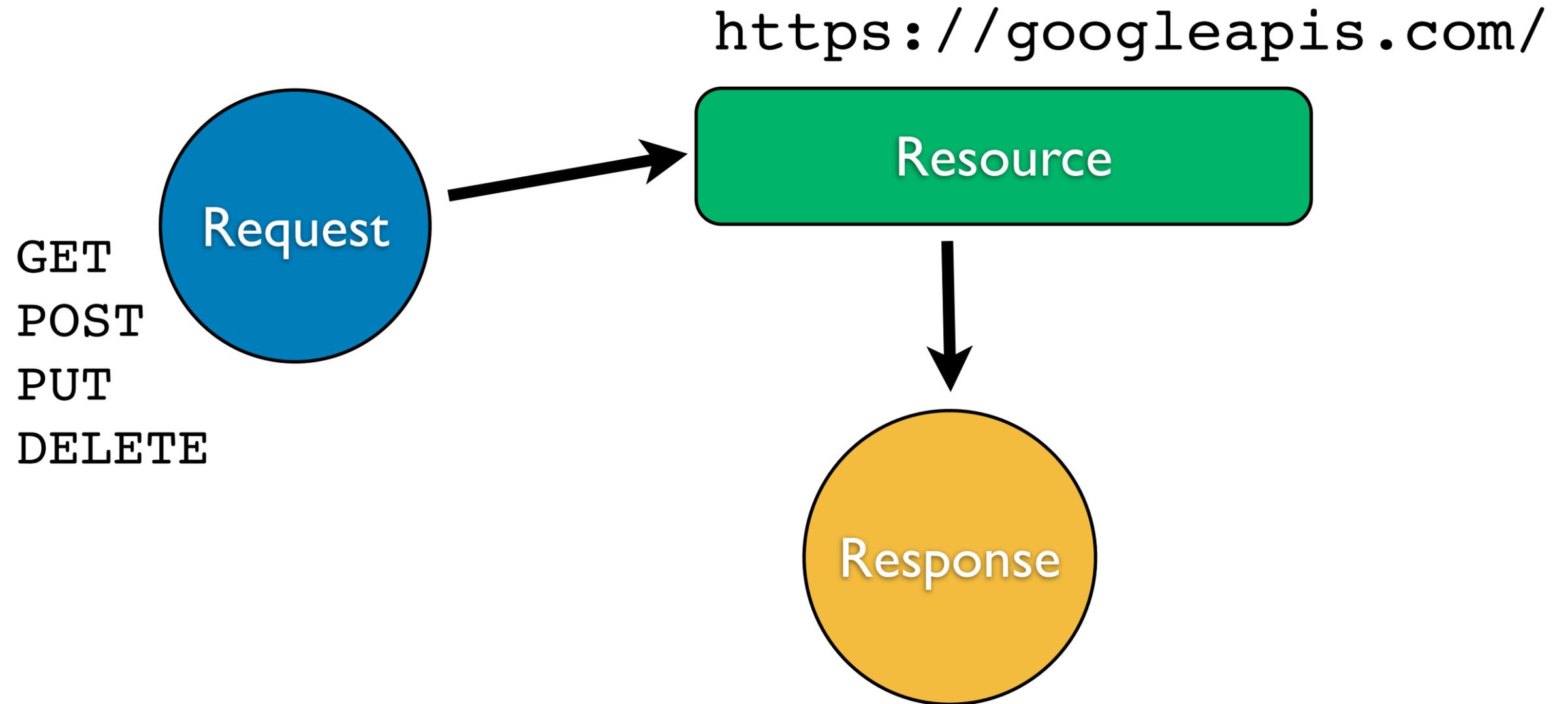
HTTP-based APIs



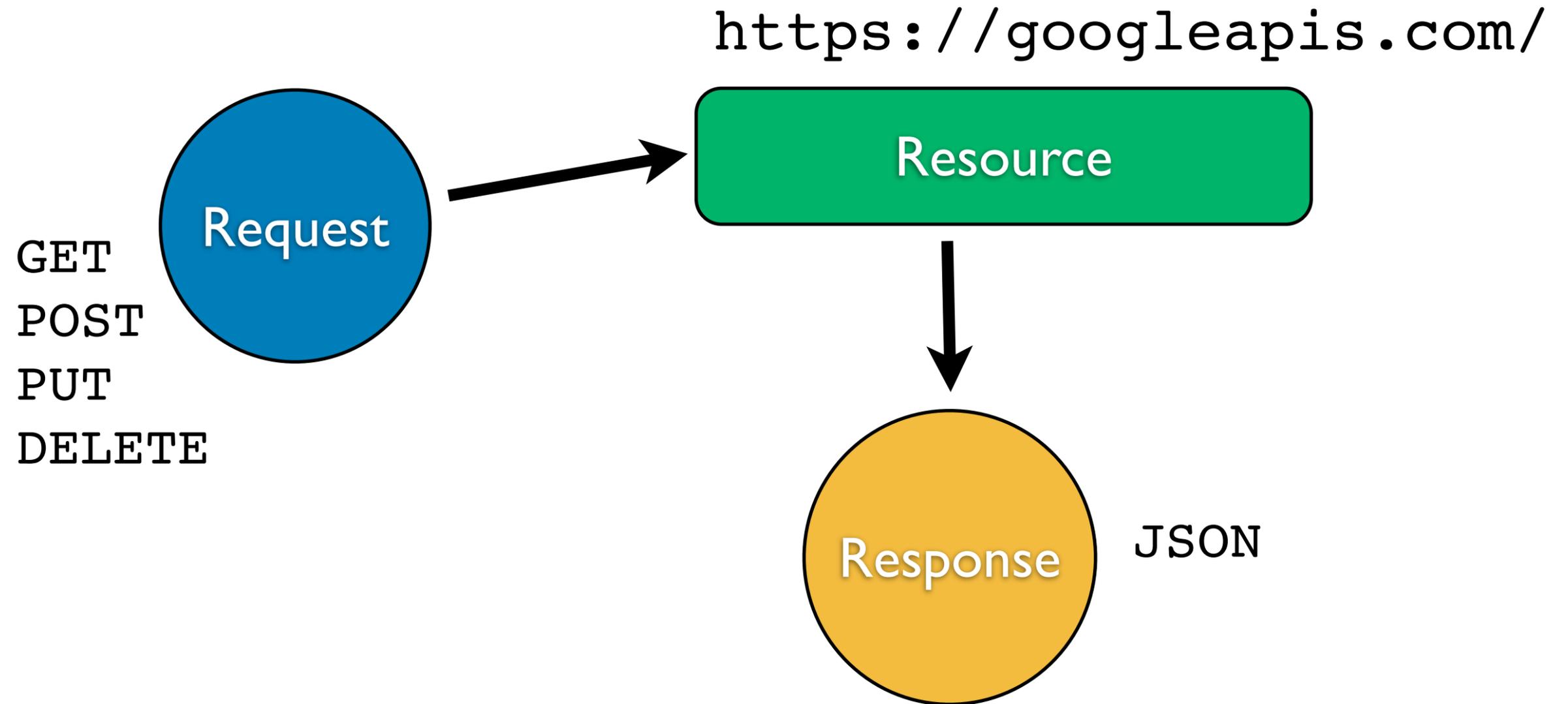
HTTP-based APIs



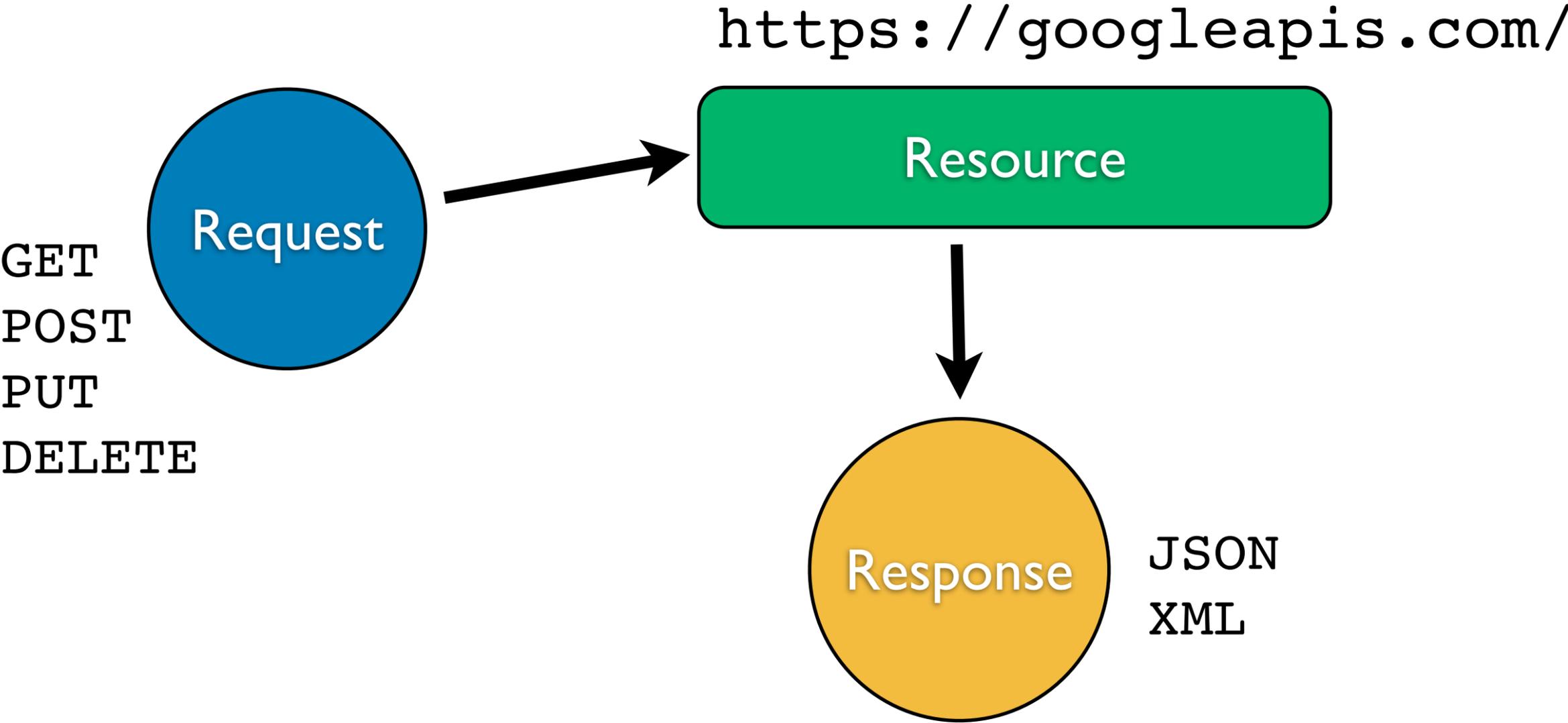
HTTP-based APIs



HTTP-based APIs



HTTP-based APIs



Product Data Format

Content API for Shopping

- XML
- Built on GData and Atom

```
<feed>
```

```
  <entry>
```

- Elements for product attributes

```
  <title>SwissChamp Army Knife</title>
```

- Some elements are repeated

```
  <sc:image_link>...</sc:image_link>
```

```
  <sc:image_link>...</sc:image_link>
```

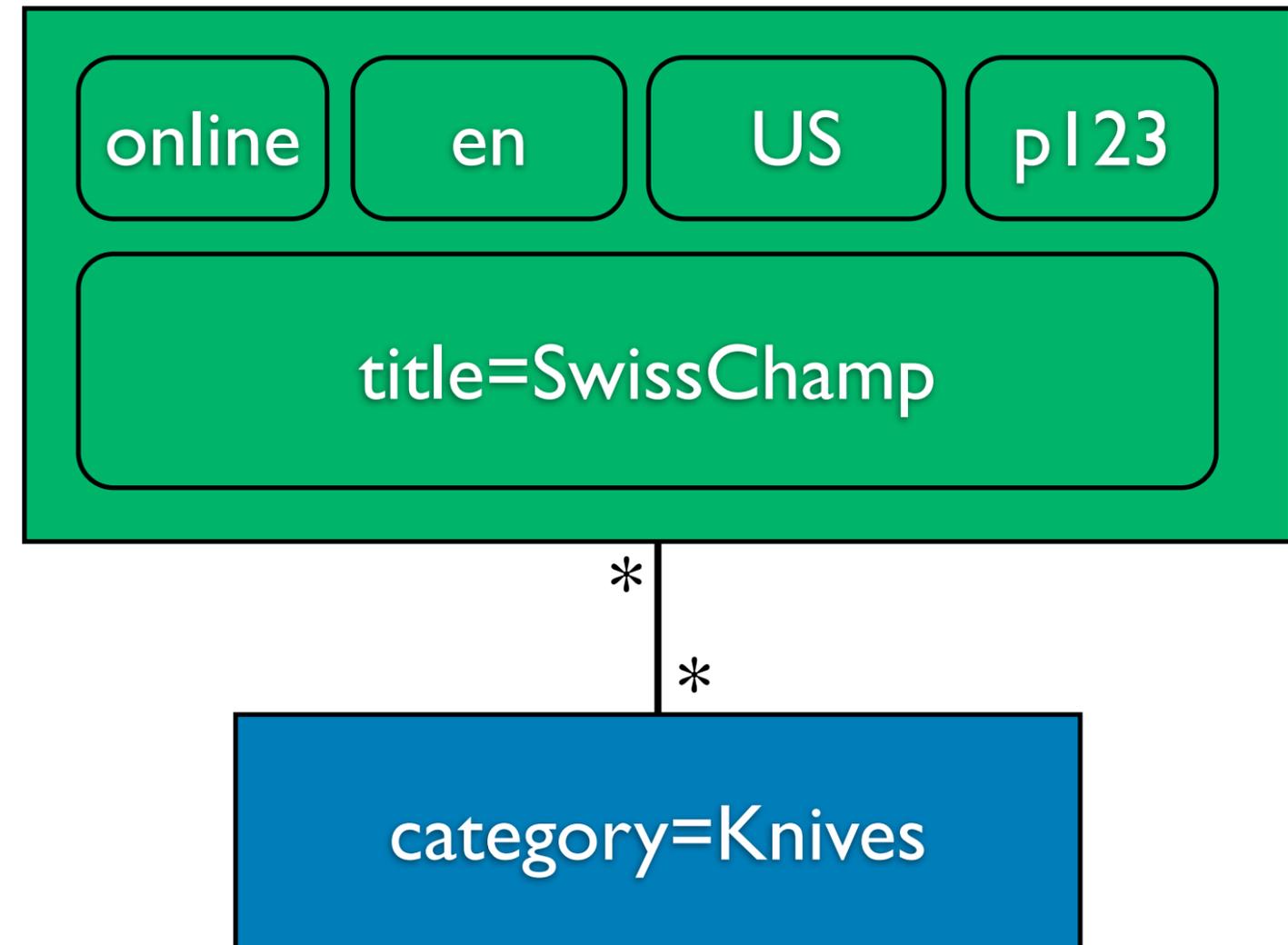
```
  </entry>
```

```
</feed>
```

Product Data Model

Content API for Shopping

- ID is unique and comprised of 4 parts:
 - channel
 - language
 - country
 - SKU
- Product Attributes
- Product Categories
 - Taxonomy



XML Schema

Content API for Shopping

Element	Function
<code><title></code>	Product Title
<code><content></code>	Product description
<code><link></code>	Link to product page
<code><sc:target_country></code>	Country where the product will be
<code><sc:content_language></code>	Language of the description
<code><sc:condition></code>	Condition of item: new, used, refurbished
<code><sc:price></code>	Price information
<code><sc:image_link></code>	Link to an image of the product

Tips for getting better visibility

Content API for Shopping

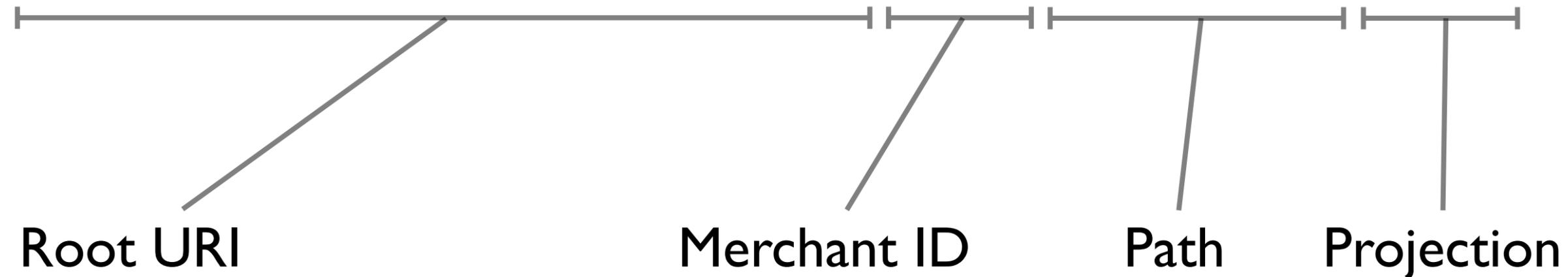
- Fill out as many fields as you can
- Make sure all products have good quality images
- Make sure images and product pages are available
- Prices should be accurate
- Use strong product identifiers
- Use product categories
- Use good titles and descriptions
- Include tax and shipping information

Products Endpoint

Content API for Shopping

- Feed URI
- Any operation which is general
- Insert, Read

`https://content.googleapis.com/content/v1/12345/items/products/generic`

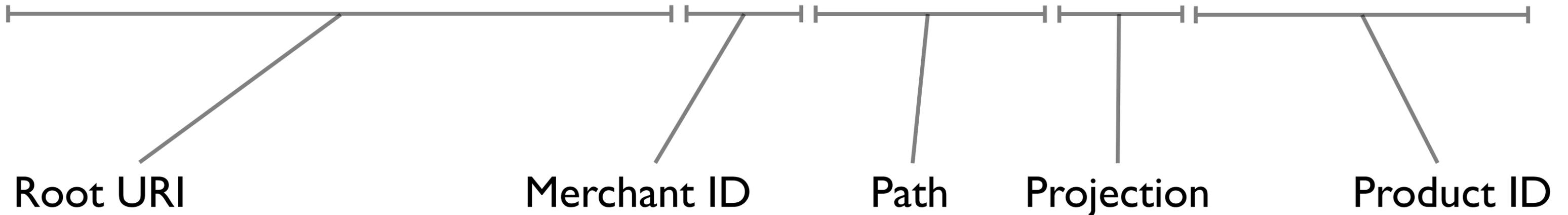


Single Product Endpoint

Content API for Shopping

- Product URI
- Specific product operations
- Update, Delete

<https://content.googleapis.com/content/v1/12345/items/products/generic/online:en:US:sku123>



Demonstration

- Interactive Content API for Shopping interactive playground:
<http://code.google.com/apis/shopping/content/demo/demo.html>

Inserting Products: Request

Content API for Shopping

```
POST https://content.googleapis.com/content/v1/7663654/items/products/schema/  
GData-Version: 1  
Authorization: AuthSub token=1/CnHQU1zFFDwrsTc6KXVjchyyNa0H3Hin_lkxxJzHF-M  
Content-Type: application/atom+xml
```

Inserting Products: Request Body

Content API for Shopping

```
<?xml version='1.0' encoding='UTF-8'?>
<entry xmlns='http://www.w3.org/2005/Atom'
  xmlns:sc='http://schemas.google.com/structuredcontent/2009'
  xmlns:scp='http://schemas.google.com/structuredcontent/2009/products'>
  <title>SwissChamp Swiss Army Knife</title>
  <content type='text'>Most complete Swiss Army Knife Available</content>
  <sc:id>SC1</sc:id>
  <scp:condition>new</scp:condition>
  <scp:price unit='USD'>66.95</scp:price>
  <scp:tax>
    <scp:tax_country>US</scp:tax_country>
    <scp:tax_region>CA</scp:tax_region>
    <scp:tax_rate>8.25</scp:tax_rate>
    <scp:tax_ship>true</scp:tax_ship>
  </scp:tax>
</entry>
```

Inserting Products: Response

Content API for Shopping

HTTP status: 201

GData-Version: 1.0

Vary: Accept, X-GData-Authorization, GData-Version

Date: Thu May 05 11:01:05 GMT+200 2011

Expires: Thu May 05 11:01:05 GMT+200 2011

Content-Type: application/atom+xml

Location: <https://content.googleapis.com/content/v1/7663654/items/products/schema/online:en:US:SKU123>

Cache-Control: private, max-age=0, must-revalidate, no-transform

Inserting Products: Response Body

Content API for Shopping

```
<?xml version='1.0' encoding='UTF-8'?>
<entry>
  <published>2011-05-05T09:09:37.000Z</published>
  <app:edited>2011-05-05T09:09:37.599Z</app:edited>
  <title>SwissChamp Swiss Army Knife</title>
  <content>Most complete Swiss Army Knife Available</content>
  <link rel='alternate' type='text/html
        href='http://swisstool.com/swisschamp.html' />
  <sc:content_language>en</sc:content_language>
  <sc:expiration_date>2011-06-04T02:09:37.000-07:00</sc:expiration_date>
  <sc:id>SC1</sc:id>
  <sc:target_country>US</sc:target_country>
  <scp:condition>new</scp:condition>
  <scp:price unit='USD'>66.95</scp:price>
</entry>
```

Updating Products: Request

Content API for Shopping

```
PUT https://content.googleapis.com/content/v1/7663654/items/products/schema/online:en:US:SC1
GData-Version: 1
Authorization: AuthSub token=1/CnHQU1zFFDwrsTc6KXVjchyyNa0H3Hin_lkxxJzHF-M
Content-Type: application/atom+xml
```

Updating Products: Request Body

Content API for Shopping

```
<?xml version='1.0' encoding='UTF-8'?>
<entry xmlns='http://www.w3.org/2005/Atom'
  xmlns:sc='http://schemas.google.com/structuredcontent/2009'
  xmlns:scp='http://schemas.google.com/structuredcontent/2009/products'>
  <title>SwissChamp Swiss Army Knife</title>
  <content type='text'>Most complete Swiss Army Knife Available</content>
  <sc:id>SC1</sc:id>
  <scp:condition>new</scp:condition>
  <scp:price unit='USD'>64.95</scp:price>
  <scp:tax>
    <scp:tax_country>US</scp:tax_country>
    <scp:tax_region>CA</scp:tax_region>
    <scp:tax_rate>8.25</scp:tax_rate>
    <scp:tax_ship>>true</scp:tax_ship>
  </scp:tax>
</entry>
```

Updating Products: Response

Content API for Shopping

HTTP status: 200

GData-Version: 1.0

Content-Type: application/atom+xml

Updating Products: Response Body

Content API for Shopping

```
<?xml version='1.0' encoding='UTF-8'?>
```

```
<entry>
```

```
  <published>2011-05-05T09:09:37.000Z</published>
```

```
  <app:edited>2011-05-05T09:09:37.599Z</app:edited>
```

```
  <title>SwissChamp Swiss Army Knife</title>
```

```
  <content>Most complete Swiss Army Knife Available</content>
```

```
  <link rel='alternate' type='text/html
```

```
    href='http://swisstool.com/swisschamp.html' />
```

```
  <sc:content_language>en</sc:content_language>
```

```
  <sc:expiration_date>2011-06-04T02:09:37.000-07:00</sc:expiration_date>
```

```
  <sc:id>SC1</sc:id>
```

```
  <sc:target_country>US</sc:target_country>
```

```
  <scp:condition>new</scp:condition>
```

```
  <scp:price unit='USD'>64.95</scp:price>
```

```
</entry>
```

Deleting Products: Request & Response

Content API for Shopping

DELETE

<https://content.googleapis.com/content/v1/7663654/items/products/schema/online:en:US:SC1>

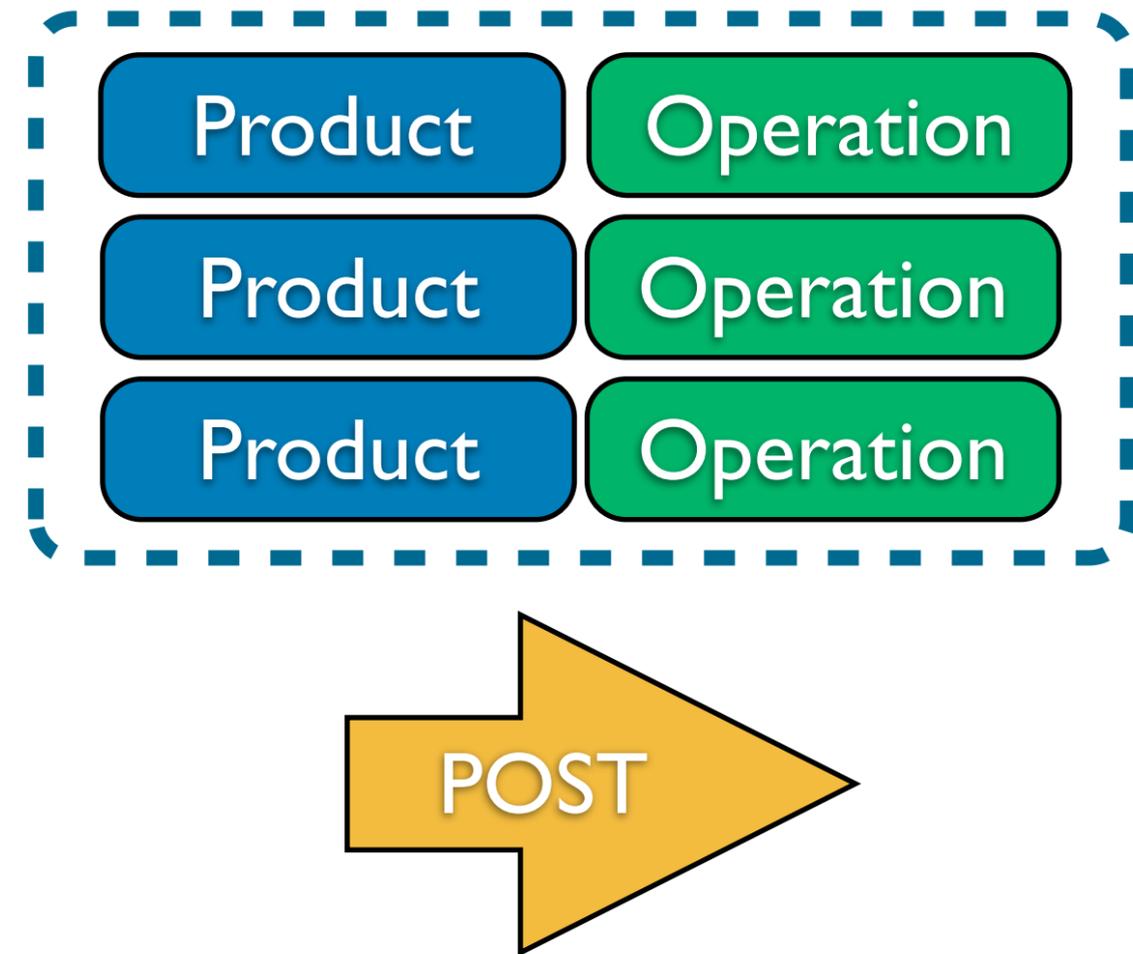
HTTP status: 200

GData-Version: 1.0

Batch processing

Content API for Shopping

- Multiple operations in a single request
- Up to 1MB in each request
- A few hundred operations
- Response for each batched operation
- Errors are reported individually
- Save on number of requests



Batch: Request

Content API for Shopping

```
POST https://content.googleapis.com/content/v1/1234567/items/products/schema/batch
```

```
GData-Version: 1
```

```
Authorization: AuthSub token=1/8IHB8XtRSH18oTIqPhRVs44ikZmFFf0P-GlaIgGfpxk
```

```
Content-Type: application/atom+xml
```

Batch: Request Body

Content API for Shopping

```
<?xml version='1.0' encoding='UTF-8'?>
<feed xmlns='http://www.w3.org/2005/Atom'
      xmlns:batch='http://schemas.google.com/gdata/batch'>
  <entry>
    <batch:operation type='INSERT' />
    <title>Wool sweater</title>
    <content type='text'>Comfortable and soft. Red and blue stripes.</content>
    <sc:id>SKU123</sc:id>
    <link rel='alternate' type='text/html'
          href='http://www.example.com/sku123' />
    <scp:condition>new</scp:condition>
    <scp:price unit='USD'>25</scp:price>
  </entry>
</feed>
```

Batch: Response

Content API for Shopping

HTTP status: 200

GData-Version: 1.0

Content-Type: text/plain;charset=UTF-8

Batch: Response Body

Content API for Shopping

```
<?xml version='1.0' encoding='UTF-8'?>
<feed xmlns='http://www.w3.org/2005/Atom'>
  <updated>2011-05-05T13:01:38.073Z</updated>
  <title>Batch Feed</title>
  <entry xmlns:batch='http://schemas.google.com/gdata/batch'
        xmlns:sc='http://schemas.google.com/structuredcontent/2009/products'>
    <batch:operation type='insert' />
    <batch:status code='201' reason='Created' />
    <app:edited>2011-05-05T13:01:37.817Z</app:edited>
    <title>Wool sweater</title>
    <content>Comfortable and soft. Red and blue stripes.</content>
    <sc:content_language>en</sc:content_language>
    <sc:id>SKU123</sc:id>
    <sc:target_country>US</sc:target_country>
    <scp:condition>new</scp:condition>
    <scp:price unit='USD'>25.0</scp:price>
  </entry>
</feed>
```

Real Time Updates

Content API for Shopping

- Fast updates typically take 5 minutes
- Updates are fast-tracked if they contain only:
 - Price change
 - Quantity change

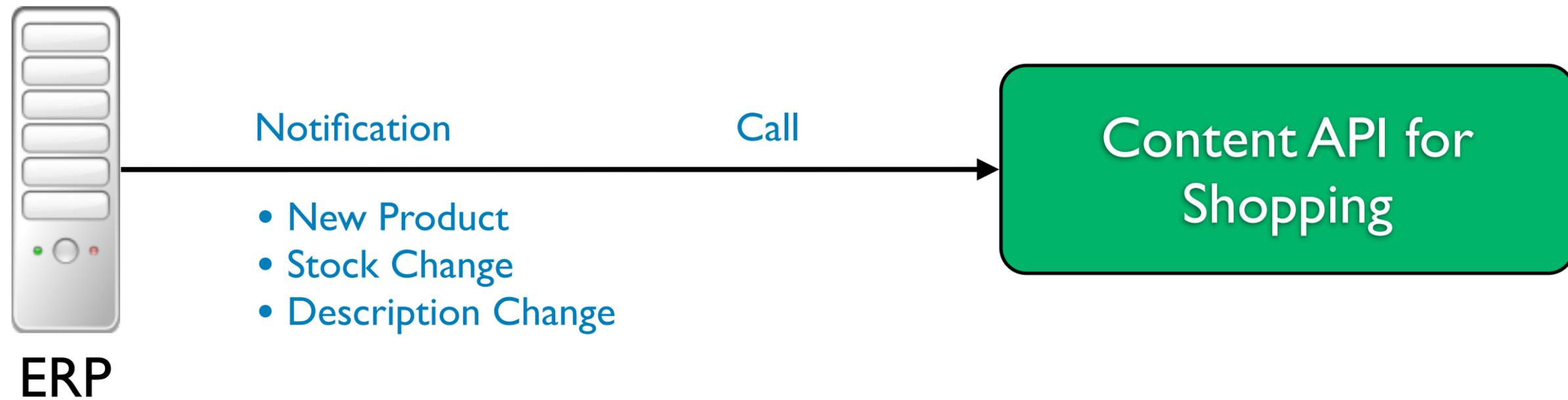
Additional Features

Content API for Shopping

- Inserts for existing items are updates
- Datafeed API
 - Programmatically manage data feeds
 - Useful for managing a third party's data
- Sub Account API
 - Aggregator accounts, marketplaces
 - Manage sub account product data

ERP Integration

Content API for Shopping



Content API for Shopping

- HTTP-based API
- Data format of Atom / GData XML
- Manage product data
- Manage data feeds
- Manage sub-accounts



Search API for Shopping

Google Commerce Search

The screenshot shows the BabyAge.com website interface. At the top, there is a navigation bar with the phone number 1-800-BABYAGE, links for 'my account', 'home', 'my cart', 'baby registry', and 'help'. Below this is a promotional banner for a 'Choose Your Ride Family Prize Package'. The main header features the BabyAge.com logo and a search bar with the text 'BabyAge.com Today's Collection'. The search bar contains the text 'stro' and has a dropdown menu with suggestions: 'strollers for baby', 'strollers with car seats', 'strollers for two', 'stroller system', and 'stroller toys'. Below the search bar, there are several product listings for strollers, including 'Baby Jogger 2011 City Select Stroller' for \$499.99, 'Baby Jogger 2011 City Mini Single Stroller' for \$239.99, and 'Baby Trend Navigator Double Jogging Stroller' for \$230.48. The website also features a left sidebar with categories like 'Car Seats', 'Baby Gear', 'Strollers', and 'Baby Bedding', along with promotional sections for 'New Arrivals', 'Coupons', and 'BabyAge Exclusives'. A 'today's special' banner is visible at the bottom of the page.

Demonstration

<http://babyage.com/>

Google Commerce Search

Speed.

- Google.com speed
- Sub-second response time



Experience.

- Intuitive user interface
- Parametric search – refine by price, category, brand, etc.
- Sorting
- Full customization of look & feel and search results

Relevance.

- Google precision
- Merchandising dashboard to tailor search to your needs
- Google powered spell checker, query stemming & synonyms

Google Platform.

- Deploy in days
- Scale easily
- Flexibility for seasonal ups and downs
- Single feed with Google Product Search
- Advanced reporting

Use Cases: Google Commerce Search & Google Affiliate Network



Google Affiliate Network (GAN)

Search API for Shopping

1. GAN Advertiser

- Merchant advertising products

2. GAN Publisher

- Content publisher
- Application publisher

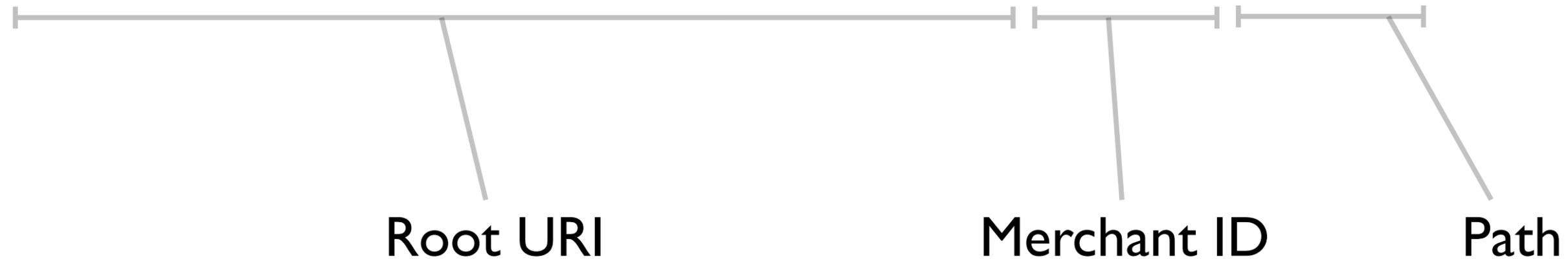
- GAN results are wrapped so that conversion rates are tracked
- Publisher receives revenue
- High quality advertisers

Search Endpoint

Search API for Shopping

- All search operations
- Search parameters by query parameter
- All operations are GET

<https://www.googleapis.com/shopping/search/v1/cx:12345/products>



Data Format

- JSON or XML
- JSON object attributes are product attributes
- Equivalent to XML format of Content API

```
{...  
  "title": "SwissChamp Swiss Army Knife",  
  "description": "...
```

JSON Schema

Search API for Shopping

Attribute	Function
title	Product Title
content	Product description
link	Link to product page
country	Country where the product will be
language	Language of the description
condition	Condition of item: new, used, refurbished
price	Price information
images	Links to images of the product

Response Example

Search API for Shopping

```
{
  "currentItemCount": 1,
  "totalItems": 513575,
  "items": [
    {
      "product": {
        "description": "The aluminum frame...",
        "brand": "Chicco",
        "gtin": "00049796603361",
        "inventories": [
          {
            "currency": "USD",
            "price": 329.99,
            "availability": "inStock",
            "channel": "online"
          }
        ]
      },
      ...
    ]
  ], ...
}
```

Free Text Search

Search API for Shopping

- q parameter

... /shopping/search/v1/cx:12345/products?q=s

... /shopping/search/v1/cx:12345/products?q=st

... /shopping/search/v1/cx:12345/products?q=str

... /shopping/search/v1/cx:12345/products?q=stro

... /shopping/search/v1/cx:12345/products?q=strol

Structured Search

Search API for Shopping

- restrictBy Parameter

- ... /cx:12345/products?restrictBy=brand:britax

- ... /cx:12345/products?restrictBy=condition:new

- rankBy Parameter

- ... /cx:12345/products?rankBy=price:ascending

Result diversification

Search API for Shopping

- crowdBy Parameter

- ... /cx:12345/products?crowdBy=author:1

- ... /cx:12345/products?crowdBy=brand:1

Additional features

Search API for Shopping

- Spelling
- Thumbnails
- Histograms
- Field filtering
- Result paging

Search API for Shopping

- HTTP-based API
- Data format of JSON or XML
- Searches the Google product index
- Used for:
 - Google Affiliate Network
 - Google Commerce Search

Most important things in business

Google Shopping APIs

Most important things in business

Google Shopping APIs

1. Make money

- Drive traffic to your site uploading products with the Content API for Shopping.

Most important things in business

Google Shopping APIs

1. Make money

- Drive traffic to your site uploading products with the Content API for Shopping.

2. Make more money

- Improve conversion rates by using Google Commerce Search.
- Monetize your site by being a GAN publisher.

Further Information

Google Shopping APIs

API documentation

<http://code.google.com/apis/shopping/content/>

<http://code.google.com/apis/shopping/search/>

Google Commerce Search

<http://www.google.com/commercesearch/>

Google Affiliate Network

<http://www.google.com/ads/affiliatenetwork/>

Forums

<https://groups.google.com/forum/#!forum/google-content-api-for-shopping>

<https://groups.google.com/forum/#!forum/google-search-api-for-shopping>

Feedback

<http://goo.gl/h7yKf> Hashtags: #Commerce