

Documenting Hypermedia APIs

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HAPI adoption

“It’s not REST if it’s not HATEOS.”

“Show me the hypermedia.”

...

But we teach developers to code to URLs
(Swagger, I/O Docs, APlary, etc)



Swagger Sample App

This is a sample server Petstore server. You can find out more about Swagger at <http://swagger.wordnik.com> or on irc.freenode.net, #swagger. For this sample, you can use the api key "special-key" to test the authorization filters

[Terms of service](#)

[Contact the developer](#)

[Apache 2.0](#)

user : Operations about user

[Show/Hide](#)[List Operations](#)[Expand Operations](#)[Raw](#)

GET	/user/{username}	Get user by user name
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GET	/user/login	Logs user into the system
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GET	/user/logout	Logs out current logged in user session
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pet : Operations about pets

[Show/Hide](#)[List Operations](#)[Expand Operations](#)[Raw](#)

GET	/pet/{petId}	Find pet by ID
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GET	/pet/findByStatus	Finds Pets by status
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GET	/pet/findByTags	Finds Pets by tags
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[BASE URL: <http://petstore.swagger.wordnik.com/api/api-docs> , API VERSION: 1.0.0]

Tells developers to code to URLs

Explorer

/

Request Headers

FOXYCART-API-VERSION: 1
 Authorization: Bearer 61a7197472c9f9e4481f2d2f6a7d0352

State

```
{
  "message": "Welcome to the FoxyCart API! Our hope is to be as self-documenting and RESTful as possible. Please let us know if you have any questions by posting in our forum http://forum.foycart.com or emailing us at helpdesk@foycart.com. As a last resort, you could read the documentation at http://wiki.foycart.com. Your first action should be to create an OAuth Client, then a user, followed by a store."
}
```

Links

rel	title	name / index	docs	GET	NON-GET
self	Your API starting point.				
.../rels/property_helpers	Various helpers used for determining valid property values.				
.../rels	Custom Link Relationships supported by this API.				
.../rels/user	Your API home page.				
.../rels/store	The current store for your authentication token				

Inspector

```
{
  "_links": {
    "self": {
      "href": "https://api-sandbox.foycart.com/",
      "title": "Your API starting point."
    },
    "https://api.foycart.com/rels/property_helpers": {
      "href": "https://api-sandbox.foycart.com/property_helpers",
      "title": "Various helpers used for determining valid property values."
    },
    "https://api.foycart.com/rels": {
      "href": "https://api-sandbox.foycart.com/rels",
      "title": "Custom Link Relationships supported by this API."
    },
    "https://api.foycart.com/rels/user": {
      "href": "https://api-sandbox.foycart.com/users/2",
      "title": "Your API home page."
    },
    "https://api.foycart.com/rels/store": {
      "href": "https://api-sandbox.foycart.com/stores/8",
      "title": "The current store for your authentication token"
    },
    "https://api.foycart.com/rels/stores": {
      "href": "https://api-sandbox.foycart.com/users/2/stores",
      "title": "Your stores"
    },
    "https://api.foycart.com/rels/token": {
      "href": "https://api-sandbox.foycart.com/token",
      "title": "The OAuth endpoint for obtaining a new access_token using an existing refresh_token. Post www-form-urlencoded data as follows: grant_type=refresh_token&refresh_token={refresh_token}&client_id={client_id}&client_secret={client_secret}",
      "type": "application/json"
    }
  },
  "message": "Welcome to the FoxyCart API! Our hope is to be as self-documenting and RESTful as possible. Please let us know if you have any questions by posting in our forum http://forum.foycart.com or emailing us at helpdesk@foycart.com."
}
```

Tools can promote link relationships! (HAL Browser)

Browser address bar: <https://api-sandbox.foycart.com/hal-browser/>

Navigation tabs: Foxy Cart Development, Social, Games, Chillout Radio - Dig, Twelve South, IKEA | TV & media se, Kevin Powell's Model, PhraseExpress v8 - I, Other Bookmarks

Page navigation: FoxyCart Hypermedia API, Go To Root URI, Documentation, **Link Relationships**, About The HAL Browser

The diagram is a mind map starting from a root node (a circle with a slash). It branches into several main categories, each represented by a blue circle with a label. From the root, the branches are:

- property_helpers**: self, rels, create_client, client, create_user, user, store, stores, token
- users**: self, attributes, store_versions, users, user_accesses, customers, carts, transactions, subscriptions, subscription_settings, item_categories, taxes, payment_method_sets, coupons, template_sets, cart_templates, cart_include_templates, checkout_templates, receipt_templates, email_templates, error_entries, downloadables
- transactions**: self, first, prev, next, last
- subscriptions**: self, store, receipt, customer, subscription, items, payments, applied_taxes, custom_fields, discounts, shipments, billing_addresses
- .. { example entry } ..**: self, first, prev, next, last, item_category, downloadable_purchase, shipment, item_options

Documentation to help us think in relationships...

Coding to link relations

<https://api.foxycart.com>

more coders thinking in hypermedia = more HAPI coders

more HAPI coders building for hypermedia = more hypermedia tools and clients

api.foxcart.com

 **foxcart!**

