bravado

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Contents

Bravado is a python client library for Swagger 2.0 services.

More information on Swagger can be found on the Swagger website

It aims to be a complete replacement to swagger codegen.

Features include:

- Dynamically generated client - no code generation needed!
- Synchronous and Asynchronous http clients out of the box.
- Strict validations to verify that your Swagger Schema is v2.0 compatible.
- HTTP request and response validation against your Swagger Schema.
- Swagger models as Python types (no need to deal with JSON).
- REPL friendly navigation of your Swagger schema with docstrings for Resources, Operations and Models.
- Ingestion of your Swagger schema via http or a local file path.

Contents:

CHAPTER 1

Quickstart

1.1 Usage

Install the latest stable version from PyPi:

```
$ pip install --upgrade bravado
```

1.2 Your first Hello World! (or Hello Pet)

Here is a simple example to try from a REPL (like IPython):

```
from bravado.client import SwaggerClient

client = SwaggerClient.from_url("http://petstore.swagger.io/v2/swagger.json")
pet = client.pet.getPetById(petId=42).response().result
```

If you were lucky, and pet Id with 42 was present, you will get back a result. It will be a dynamically created instance of `bravado.model.Pet` with attributes `category`, etc. You can even try `pet.category.id` or `pet.tags[0]`.

Sample Response:

```
Pet(category=Category(id=0L, name=u''), status=u'', name=u'', tags=[Tag(id=0L, name=u'
↪')], photoUrls=[u''], id=2)
```

If you got a `404`, try some other petId.

1.3 Lets try a POST call

Here we will demonstrate how `bravado` hides all the `JSON` handling from the user, and makes the code more Pythonic.

```
Pet = client.get_model('Pet')
Category = client.get_model('Category')
pet = Pet(id=42, name="tommy", category=Category(id=24))
client.pet.addPet(body=pet).response().result
```

1.4 Time to get Twisted! (Asynchronous client)

`bravado` provides an out of the box asynchronous http client with an optional timeout parameter.

Your first Hello World! (or Hello Pet) above can be rewritten to use the asynchronous Fido client like so:

```
from bravado.client import SwaggerClient
from bravado.fido_client import FidoClient

client = SwaggerClient.from_url(
    'http://petstore.swagger.io/v2/swagger.json',
    FidoClient()
)

result = client.pet.getPetById(petId=42).result(timeout=4)
```

Note: `timeout` parameter here is the timeout (in seconds) the call will block waiting for the complete response. The default timeout is to wait indefinitely.

Note: To use Fido client you should install bravado with fido extra via `pip install bravado[fido]`.

1.5 This is too fancy for me! I want a simple dict response!

`bravado` has taken care of that as well. Configure the client to not use models.

```
from bravado.client import SwaggerClient
from bravado.fido_client import FidoClient

client = SwaggerClient.from_url(
    'http://petstore.swagger.io/v2/swagger.json',
    config={'use_models': False}
)

result = client.pet.getPetById(petId=42).result(timeout=4)
```

`result` will look something like:

```
{
    'category': {
        'id': 0L,
        'name': u''
    },
    'id': 2,
    'name': u'',
    'photoUrls': [u''],
    'status': u'',
    'tags': [
        {'id': 0L, 'name': u''}
    ]
}
```

CHAPTER 2

Configuration

2.1 Client Configuration

You can configure certain behaviours when creating a `SwaggerClient`.

bravado and bravado-core use the same config dict. The full documentation for bravado-core config keys is available too.

```
from bravado.client import SwaggerClient, SwaggerFormat

my_super_duper_format = SwaggerFormat(...)

config = {
    # === bravado config ===

    # What class to use for response metadata
    'response_metadata_class': 'bravado.response.BravadoResponseMetadata',

    # Do not use fallback results even if they're provided
    'disable_fallback_results': False,

    # DEPRECATED: Determines what is returned by HttpFuture.result().
    # Please use HttpFuture.response() for accessing the http response.
    'also_return_response': False,

    # === bravado-core config ====

    # Validate incoming responses
    'validate_responses': True,

    # Validate outgoing requests
    'validate_requests': True,

    # Validate the swagger spec
```

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```
    'validate_swagger_spec': True,

    # Use models (Python classes) instead of dicts for #/definitions/{models}
    'use_models': True,

    # List of user-defined formats
    'formats': [my_super_duper_format],

}

client = SwaggerClient.from_url(..., config=config)
```

Config key	Type	Description
response_metadata_class	string	The Metadata class to use; see *Custom response metadata* for details. Default: *bravado.response.BravadoResponseMetadata*
disable_fallback_results	boolean	Whether to disable returning fallback results, even if they're provided as an argument to to *HttpFuture.response()*. Default: `False`
also_return_response	boolean	Determines what is returned by the service call. Specifically, the return value of *HttpFuture.result()*. When `False`, the swagger result is returned. When `True`, the tuple `(swagger result, http response)` is returned. Has no effect on the return value of *HttpFuture.response()*. See *Getting access to the HTTP response*. Default: `False`

2.1.1 Customizing the HTTP client

bravado's default HTTP client uses the excellent requests library to make HTTP calls. If you'd like to customize its behavior, create a *bravado.requests_client.RequestsClient* instance yourself and pass it as `http_client` argument to *SwaggerClient.from_url()* or *SwaggerClient.from_spec()*.

Currently, you can customize SSL/TLS behavior through the arguments `ssl_verify` and `ssl_cert`. They're identical to the `verify` and `cert` options of the requests library; please check their documentation for usage instructions. Note that bravado honors the `REQUESTS_CA_BUNDLE` environment variable as well.

2.1.2 Using a different HTTP client

You can use other HTTP clients with bravado; the fido client ships with bravado (`bravado.fido_client.FidoClient`). Currently the fido client doesn't support customizing SSL/TLS behavior.

Another well-supported option is bravado_asyncio, which requires Python 3.5+. It supports the same ssl options as the default requests client.

2.2 Per-request Configuration

Configuration can also be applied on a per-request basis by passing in `_request_options` to the service call.

```
client = SwaggerClient.from_url(...)
request_options = { ... }
client.pet.getPetById(petId=42, _request_options=request_options).response().result
```

Config key	Type	Default	Description
connect_timeout	float	N/A	TCP connect timeout in seconds. This is passed along to the http_client when making a service call.
headers	dict	N/A	Dict of http headers to to send with the outgoing request.
response_callbacks	list of callables	[]	List of callables that are invoked after the incoming response has been validated and unmarshalled but before being returned to the calling client. This is useful for client decorators that would like to hook into the post-receive event. The callables are executed in the order they appear in the list. Two parameters are passed to each callable: - `incoming_response` of type `bravado_core.response.IncomingResponse` - `operation` of type `bravado_core.operation.Operation`
timeout	float	N/A	TCP idle timeout in seconds. This is passed along to the http_client when making a service call.
use_msgpack	boolean	False	If a msgpack serialization is desired for the response. This

CHAPTER 3

Making requests with bravado

When you call *SwaggerClient.from_url()* or *SwaggerClient.from_spec()*, Bravado takes a Swagger (OpenAPI) 2.0 spec and returns a *SwaggerClient* instance that you can use to make calls to the service described in the spec. You make calls by doing Python method calls in the form of `client.resource.operation(operation_params)`. Use `dir(client)` to see all available resources.

3.1 Resources and operations

Resources are generated for each tag that exists in your Swagger spec. If an operation has no tags then the left-most element of its path is taken as resource name. So in the case of an operation with the path `/pet/find`, `pet` will be the resource.

The operation name will be the (*sanitized*) operationId value from the Swagger spec. If there is no operationId, it will be generated. We highly recommend providing operation IDs for all operations. Use `dir(client.resource)` to see a list of all available operations.

The operation method expects keyword arguments that have the same (*sanitized*) names as in the Swagger spec. Use corresponding Python types for the values - if the Swagger spec says a parameter is of type `boolean`, provide it as a Python `bool`.

3.2 Futures and responses

The return value of the operation method is a *HttpFuture*. To access the response, call *HttpFuture.response()*. This call will block, i.e. it will wait until the response is received or the timeout you specified is reached.

If the request succeeded and the server returned a HTTP status code between 100 and 299, the return value of *HttpFuture.response()* will be a *BravadoResponse* instance. You may access the Swagger result of your call through `BravadoResponse.result`.

If the server sent a response with a HTTP code of 300 or higher, by default a subclass of *HTTPError* will be raised when you call *HttpFuture.response()*. The exception gives you access to the Swagger result (`HTTPError.swagger_result`) as well as the HTTP response object (`HTTPError.response`).

3.3 Response metadata

`BravadoResponse.metadata` is an instance of *BravadoResponseMetadata* that provides you with access to the HTTP response including headers and HTTP status code, request timings and whether a fallback result was used (see *Working with fallback results*).

You're able to provide your own implementation of *BravadoResponseMetadata*; see *Custom response metadata* for details.

3.4 Sanitizing names

Not all characters that the Swagger spec allows for names are valid Python identifiers. In particular, spaces and the - character can be troublesome. bravado sanitizes resource, operation and parameter names according to these rules:

- Any character that is not a letter or number is converted to an underscore (_)
- Collapse multiple consecutive underscores to one
- Remove leading and trailing underscores
- Remove leading numbers

CHAPTER 4

Advanced Usage

4.1 Validations

`bravado` validates the schema against the Swagger 2.0 Spec. Validations are also done on the requests and the responses.

Validation example:

```
pet = Pet(id="I should be integer :(", name="tommy")
client.pet.addPet(body=pet).response().result
```

will result in an error like so:

```
TypeError: id's value: 'I should be integer :(' should be in types (<type 'long'>,
↪<type 'int'>)
```

Note: If you'd like to disable validation of outgoing requests, you can set `validate_requests` to `False` in the `config` passed to `SwaggerClient.from_url(...)`.

The same holds true for incoming responses with the `validate_responses` config option.

4.2 Adding Request Headers

`bravado` allows you to pass request headers along with any request.

```
Pet = client.get_model('Pet')
Category = client.get_model('Category')
pet = Pet(id=42, name="tommy", category=Category(id=24))
swagger_client.pet.addPet(
    body=pet,
```

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```
    _request_options={"headers": {"foo": "bar"}},
).response().result
```

4.3 Docstrings

`bravado` provides docstrings to operations and models to quickly get the parameter and response types. Due to an implementation limitation, an operation's docstring looks like a class docstring instead of a function docstring. However, the most useful information about parameters and return type is present in the `Docstring` section.

Note: The `help` built-in does not work as expected for docstrings. Use the `?` method instead.

```
>> petstore.pet.getPetById?

Type:       CallableOperation
String Form:<bravado.client.CallableOperation object at 0x241b5d0>
File:       /some/dir/bravado/bravado/client.py
Definition: c.pet.getPetById(self, **op_kwargs)
Docstring:
[GET] Find pet by ID

Returns a single pet

:param petId: ID of pet to return
:type petId: integer
:returns: 200: successful operation
:rtype: object
:returns: 400: Invalid ID supplied
:returns: 404: Pet not found
Constructor Docstring::type operation: :class:`bravado_core.operation.Operation`
Call def:   c.pet.getPetById(self, **op_kwargs)
Call docstring:
Invoke the actual HTTP request and return a future that encapsulates
the HTTP response.

:rtype: :class:`bravado.http_future.HTTPFuture`
```

Docstrings for models can be retrieved as expected:

```
>> pet_model = petstore.get_model('Pet')
>> pet_model?

Type:       type
String Form:<class 'bravado_core.model.Pet'>
File:       /some/dir/bravado_core/model.py
Docstring:
Attributes:

category: Category
id: integer
name: string
photoUrls: list of string
status: string - pet status in the store
```

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```
tags: list of Tag
Constructor information:
 Definition:pet_type(self, **kwargs)
```

4.4 Default Values

`bravado` uses the default values from the spec if the value is not provided in the request.

In the Pet Store example, operation `findPetsByStatus` has a `default` of `available`. That means, `bravado` will plug that value in if no value is provided for the parameter.

```
client.pet.findPetByStatus()
```

4.5 Loading swagger.json by file path

`bravado` also accepts `swagger.json` from a file path. Like so:

```
client = SwaggerClient.from_url('file:///some/path/swagger.json')
```

Alternatively, you can also use the `load_file` helper method.

```
from bravado.swagger_model import load_file

client = SwaggerClient.from_spec(load_file('/path/to/swagger.json'))
```

4.6 Getting access to the HTTP response

The default behavior for a service call is to return the swagger result like so:

```
pet = client.pet.getPetById(petId=42).response().result
print pet.name
```

However, there are times when it is necessary to have access to the actual HTTP response so that the HTTP headers or HTTP status code can be used. Simply save the response object (which is a *BravadoResponse*) and use its `incoming_response` attribute to access the incoming response:

```
petstore = SwaggerClient.from_url(
    'http://petstore.swagger.io/v2/swagger.json',
    config={'also_return_response': True},
)
pet_response = petstore.pet.getPetById(petId=42).response()
http_response = pet_response.incoming_response
assert isinstance(http_response, bravado_core.response.IncomingResponse)
print http_response.headers
print http_response.status_code
print pet.name
```

4.7 Working with fallback results

By default, if the server returns an error or doesn't respond in time, you have to catch and handle the resulting exception accordingly. A simpler way would be to use the support for fallback results provided by *HttpFuture.response()*.

HttpFuture.response() takes an optional argument `fallback_result` which is the fallback Swagger result to return in case of errors:

```
petstore = SwaggerClient.from_url('http://petstore.swagger.io/v2/swagger.json')
response = petstore.pet.findPetsByStatus(status=['available']).response(
    timeout=0.5,
    fallback_result=[],
)
```

This code will return an empty list in case the server doesn't respond quickly enough (or it responded quickly enough, but returned an error).

4.7.1 Handling error types differently

Sometimes, you might want to treat timeout errors differently from server errors. To do this you may pass in a callable as `fallback_result` argument. The callable takes one mandatory argument: the exception that would have been raised normally. This allows you to return different results based on the type of error (e.g. a *BravadoTimeoutError*) or, if a server response was received, on any data pertaining to that response, like the HTTP status code. Subclasses of *HTTPError* have a `response` attribute that provides access to that data.

```
def pet_status_fallback(exc):
    if isinstance(exc, BravadoTimeoutError):
        # Backend is slow, return last cached response
        return pet_status_cache

    # Some server issue, let's not show any pets
    return []

petstore = SwaggerClient.from_url(
    'http://petstore.swagger.io/v2/swagger.json',
    # The petstore result for this call is not spec compliant...
    config={'validate_responses': False},
)
response = petstore.pet.findPetsByStatus(status=['available']).response(
    timeout=0.5,
    fallback_result=pet_status_fallback,
)

if not response.metadata.is_fallback_result:
    pet_status_cache = response.result
```

4.7.2 Customizing which error types to handle

By default, the fallback result will be used either when the server doesn't send the response in time or when it returns a server error (i.e. a result with a HTTP 5XX status code). To override this behavior, specify the `exceptions_to_catch` argument to *HttpFuture.response()*.

The default is defined in `bravado.http_future.FALLBACK_EXCEPTIONS`. See *bravado.exception* for a list of possible exception types.

4.7.3 Models and fallback results

But what if you're using models (the default) and the endpoint you're calling returns one? You'll have to return one as well from your fallback_result function to stay compatible with the rest of your code:

```
petstore = SwaggerClient.from_url('http://petstore.swagger.io/v2/swagger.json')
response = petstore.pet.getPetById(petId=101).response(
    timeout=0.5,
    fallback_result=petstore.get_model('Pet')(name='No Pet found', photoUrls=[]),
)
```

Two things to note here: first, use *SwaggerClient.get_model()* to get the model class for a model name. Second, since `name` and `photoUrls` are required fields for this model, we probably should not leave them empty (if we do they'd still be accessible, but the value would be `None`). It's up to you how you decide to deal with this case.

BravadoResponseMetadata.is_fallback_result will be True if a fallback result has been returned by the call to *HttpFuture.response()*.

4.7.4 Testing fallback results

You can trigger returning fallback results for testing purposes. Just set the option `force_fallback_result` to `True` in the request configuration (see *Per-request Configuration*). In this case a *ForcedFallbackResultError* exception will be passed to your fallback result callback, so make sure you handle it properly.

4.8 Custom response metadata

Sometimes, there's additional metadata in the response that you'd like to make available easily. This case arises most often if you're using bravado to talk to internal services. Maybe you have special HTTP headers that indicate whether a circuit breaker was triggered? bravado allows you to customize the metadata and provide custom attributes and methods.

In your code, create a class that subclasses *bravado.response.BravadoResponseMetadata*. In the implementation of your properties, use *BravadoResponseMetadata.headers* to access response headers, or *BravadoResponseMetadata.incoming_response* to access any other part of the HTTP response.

If, for some reason, you need your own `__init__` method, make sure that your signature accepts any positional and keyword argument, and that you call the base method with these arguments from your own implementation. That way, your class will remain compatible with the base class even if new arguments get added to the __init__ method. Example minimal implementation:

```
class MyResponseMetadata(ResponseMetadata):
    def __init__(self, *args, **kwargs):
        super(MyResponseMetadata, self).__init__(*args, **kwargs)
```

While developing custom *BravadoResponseMetadata* classes we recommend to avoid, if possible, the usage of attributes for data that's expensive to compute. Since the object will be created for every response, implementing these fields as properties makes sure the evaluation is only done if the field is accessed.

CHAPTER 5

Testing code that uses bravado

Writing tests is crucial in making sure your code works and behaves as expected. bravado ships with two classes that will help you create robust unit tests to verify the correctness of your code. We'll be using the excellent pytest library in this example.

First of all, let's define the code we'd like to test:

```
from itertools import chain

from bravado.client import SwaggerClient

def get_available_pet_photos():
    petstore = SwaggerClient.from_url(
        'http://petstore.swagger.io/v2/swagger.json',
    )
    pets = petstore.pet.findPetsByStatus(status=['available']).response(
        timeout=0.5,
        fallback_result=lambda e: [],
    ).result

    return chain.from_iterable(pet.photoUrls for pet in pets)
```

First of all, in order to make sure your code doesn't do any network requests, you need to mock out the bravado client:

```
import mock
import pytest

from bravado.client import SwaggerClient

@pytest.fixture
def mock_client():
    mock_client = mock.Mock(name='mock SwaggerClient')
    with mock.patch.object(SwaggerClient, 'from_url', return_value=mock_client):
        yield mock_client
```

Now we can mock out that call to `findPetsByStatus` by using the *bravado.testing.response_mocks.BravadoResponseMock* class:

```
import mock

from bravado.testing.response_mocks import BravadoResponseMock

from mypackage import get_available_pet_photos

def test_get_available_pet_photos(mock_client):
    mock_pets = [
        mock.Mock(
            photoUrls=['https://example.com/image.png'],
        ),
        mock.Mock(
            photoUrls=[
                'https://example.com/image2.png',
                'https://example.com/image3.png',
            ],
        ),
    ]

    mock_client.pet.findPetsByStatus.return_value.response = BravadoResponseMock(
        result=mock_pets,
    )

    pet_photos = get_available_pet_photos()

    assert list(pet_photos) == [
        'https://example.com/image.png',
        'https://example.com/image2.png',
        'https://example.com/image3.png',
    ]
```

Note that it's your responsibility to ensure that what you set as result for *BravadoResponseMock* is sufficiently similar to what bravado would return in production. We've used a `Mock` class here; another option is to define namedtuples that correspond to your Swagger spec objects. This gives you even greater confidence in the correctness of your code since access to undefined fields will result in an error.

5.1 Testing degraded responses

Use *FallbackResultBravadoResponseMock* to test *fallback results*. It works similarly, but you don't have to pass the result to the constructor, since your fallback result callback will determine the result. Let's add another test to verify our fallback result code path works properly:

```
from bravado.testing.response_mocks import FallbackResultBravadoResponseMock

from example import get_available_pet_photos

def test_get_available_pet_photos_fallback_result(mock_client):
    mock_client.pet.findPetsByStatus.return_value\
        .response = FallbackResultBravadoResponseMock()

    pet_photos = get_available_pet_photos()

    assert list(pet_photos) == []
```

Note that you can pass in a custom exception instance to *FallbackResultBravadoResponseMock* if you need to trigger specific exception handling in your fallback result callback.

5.2 Setting custom response metadata

Both *BravadoResponseMock* as well as *FallbackResultBravadoResponseMock* accept an optional `metadata` argument. Just pass in an instance of *BravadoResponseMetadata* that you'd like to be used. A default one will be provided otherwise.

CHAPTER 6

API reference

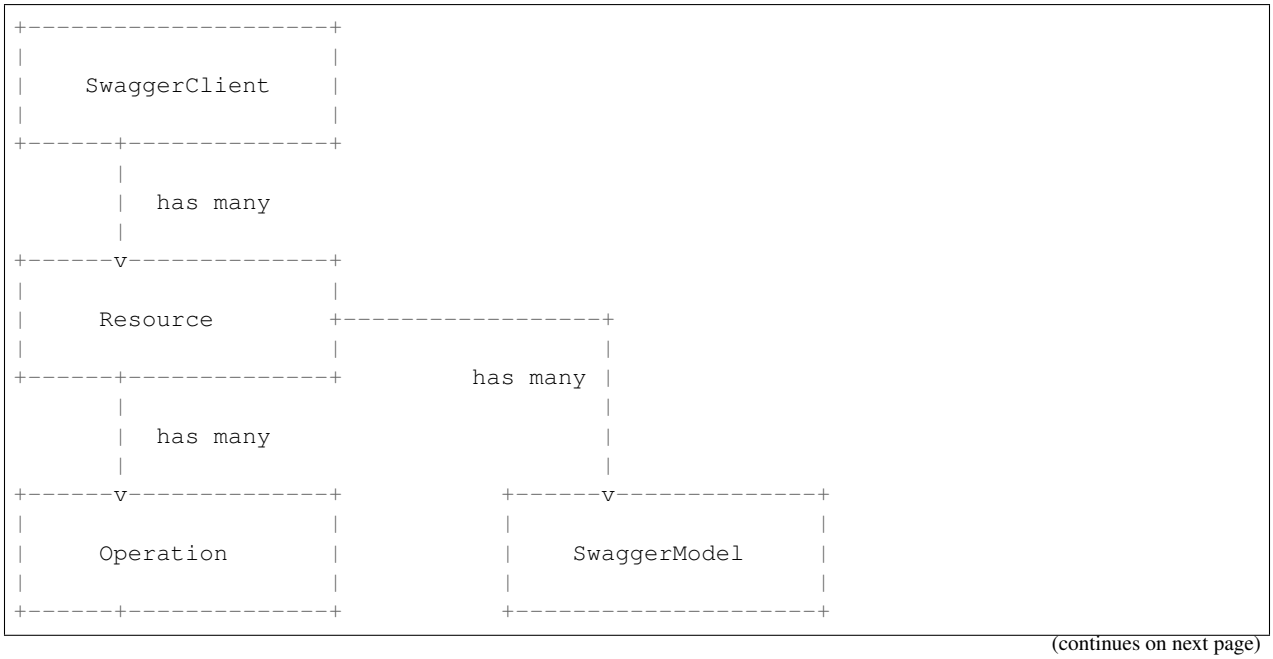
6.1 bravado Package

6.1.1 bravado Package

6.1.2 client Module

The *SwaggerClient* provides an interface for making API calls based on a swagger spec, and returns responses of python objects which build from the API response.

Structure Diagram:



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```
        |
        |  uses
        |
+-------v--------------+
|                      |
|     HttpClient       |
|                      |
+----------------------+
```

To get a client

```
client = bravado.client.SwaggerClient.from_url(swagger_spec_url)
```

class bravado.client.**CallableOperation**(*operation*, *also_return_response=False*)
Bases: object

class bravado.client.**ResourceDecorator**(*resource*, *also_return_response=False*)
Bases: object

Wraps bravado_core.resource.Resource so that accesses to contained operations can be instrumented.

class bravado.client.**SwaggerClient**(*swagger_spec*, *also_return_response=False*)
Bases: object

A client for accessing a Swagger-documented RESTful service.

classmethod from_spec(*spec_dict*, *origin_url=None*, *http_client=None*, *config=None*)
Build a *SwaggerClient* from a Swagger spec in dict form.

Parameters

- **spec_dict** – a dict with a Swagger spec in json-like form
- **origin_url** (*str*) – the url used to retrieve the spec_dict
- **config** – Configuration dict - see spec.CONFIG_DEFAULTS

Return type bravado_core.spec.Spec

classmethod from_url(*spec_url*, *http_client=None*, *request_headers=None*, *config=None*)
Build a *SwaggerClient* from a url to the Swagger specification for a RESTful API.

Parameters

- **spec_url** (*str*) – url pointing at the swagger API specification
- **http_client** (bravado.http_client.HttpClient) – an HTTP client used to perform requests
- **request_headers** (*dict*) – Headers to pass with http requests
- **config** – Config dict for bravado and bravado_core. See CONFIG_DEFAULTS in **:module:'bravado_core.spec'**. See CONFIG_DEFAULTS in **:module:'bravado.client'**.

Return type bravado_core.spec.Spec

get_model(*model_name*)

bravado.client.**construct_params**(*operation*, *request*, *op_kwargs*)
Given the parameters passed to the operation invocation, validates and marshals the parameters into the provided request dict.

Parameters **op_kwargs** – the kwargs passed to the operation invocation

Raises SwaggerMappingError on extra parameters or when a required parameter is not supplied.

bravado.client.**construct_request**(*operation*, *request_options*, ***op_kwargs*)
Construct the outgoing request dict.

Parameters

- **request_options** – _request_options passed into the operation invocation.
- **op_kwargs** – parameter name/value pairs to passed to the invocation of the operation.

Returns request in dict form

bravado.client.**inject_headers_for_remote_refs**(*request_callable*, *request_headers*)
Inject request_headers only when the request is to retrieve the remote refs in the swagger spec (vs being a request for a service call).

Parameters

- **request_callable** – method on http_client to make a http request
- **request_headers** – headers to inject when retrieving remote refs

6.1.3 config Module

class bravado.config.**BravadoConfig**
Bases: *bravado.config.BravadoConfig*

Create new instance of BravadoConfig(also_return_response, disable_fallback_results, response_metadata_class)

static from_config_dict(*config*)

class bravado.config.**RequestConfig**(*request_options*, *also_return_response_default*)
Bases: object

additional_properties = {}

also_return_response = False

connect_timeout = None

force_fallback_result = False

headers = {}

response_callbacks = []

timeout = None

use_msgpack = False

6.1.4 requests_client Module

class bravado.requests_client.**ApiKeyAuthenticator**(*host*, *api_key*, *param_name=u'api_key'*, *param_in=u'query'*)

Bases: *bravado.requests_client.Authenticator*

?api_key authenticator.

This authenticator adds an API key via query parameter or header.

Parameters

- **host** – Host to authenticate for.
- **api_key** – API key.
- **param_name** – Query parameter specifying the API key.
- **param_in** – How to send the API key. Can be 'query' or 'header'.

apply(*request*)

Apply authentication to a request.

Parameters **request** – Request to add authentication information to.

class bravado.requests_client.**Authenticator**(*host*)

Bases: object

Authenticates requests.

Parameters **host** – Host to authenticate for.

apply(*request*)

Apply authentication to a request.

Parameters **request** – Request to add authentication information to.

matches(*url*)

Returns true if this authenticator applies to the given url.

Parameters **url** – URL to check.

Returns True if matches host, port and scheme, False otherwise.

class bravado.requests_client.**BasicAuthenticator**(*host*, *username*, *password*)

Bases: *bravado.requests_client.Authenticator*

HTTP Basic authenticator.

Parameters

- **host** – Host to authenticate for.
- **username** – Username.
- **password** – Password

apply(*request*)

Apply authentication to a request.

Parameters **request** – Request to add authentication information to.

class bravado.requests_client.**RequestsClient**(*ssl_verify=True*, *ssl_cert=None*)

Bases: bravado.http_client.HttpClient

Synchronous HTTP client implementation.

Parameters

- **ssl_verify** – Set to False to disable SSL certificate validation. Provide the path to a CA bundle if you need to use a custom one.
- **ssl_cert** – Provide a client-side certificate to use. Either a sequence of strings pointing to the certificate (1) and the private key (2), or a string pointing to the combined certificate and key.

apply_authentication(*request*)

authenticated_request(*request_params*)

request(*request_params*, *operation=None*, *request_config=None*)

Parameters

- **request_params** (*dict*) – complete request data.
- **operation** (bravado_core.operation.Operation) – operation that this http request is for. Defaults to None - in which case, we're obviously just retrieving a Swagger Spec.
- **request_config** (RequestConfig) – per-request configuration

Returns HTTP Future object

Return type

class *bravado_core.http_future.HttpFuture*

separate_params(*request_params*)

Splits the passed in dict of request_params into two buckets.

- sanitized_params are valid kwargs for constructing a requests.Request(..)
- misc_options are things like timeouts which can't be communicated to the Requests library via the requests.Request(...) constructor.

Parameters **request_params** – kitchen sink of request params. Treated as a read-only dict.

Returns tuple(sanitized_params, misc_options)

set_api_key(*host*, *api_key*, *param_name=u'api_key'*, *param_in=u'query'*)

set_basic_auth(*host*, *username*, *password*)

class bravado.requests_client.**RequestsFutureAdapter**(*session*, *request*, *misc_options*)

Bases: *bravado.http_future.FutureAdapter*

Mimics a concurrent.futures.Future for the purposes of making HTTP calls with the Requests library in a future-y sort of way.

Kicks API call for Requests client

Parameters

- **session** – session object to use for making the request
- **request** – dict containing API request parameters
- **misc_options** (*dict*) – misc options to apply when sending a HTTP request. e.g. timeout, connect_timeout, etc

build_timeout(*result_timeout*)
Build the appropriate timeout object to pass to *session.send(...)* based on connect_timeout, the timeout passed to the service call, and the timeout passed to the result call.

Parameters **result_timeout** – timeout that was passed into *future.result(..)*

Returns timeout

Return type float or tuple(connect_timeout, timeout)

connection_errors = (<class 'requests.exceptions.ConnectionError'>,)

result(*timeout=None*)
Blocking call to wait for API response

Parameters **timeout** (*float*) – timeout in seconds to wait for response. Defaults to None to wait indefinitely.

Returns raw response from the server

Return type dict

timeout_errors = (<class 'requests.exceptions.ReadTimeout'>,)

class bravado.requests_client.**RequestsResponseAdapter**(*requests_lib_response*)
Bases: bravado_core.response.IncomingResponse

Wraps a requests.models.Response object to provide a uniform interface to the response innards.

headers

json(***kwargs*)

Returns response content in a json-like form

Return type int, float, double, string, unicode, list, dict

raw_bytes

reason

status_code

text

6.1.5 fido_client Module

6.1.6 http_future Module

class bravado.http_future.**FutureAdapter**
Bases: object

Mimics a concurrent.futures.Future regardless of which client is performing the request, whether it is synchronous or actually asynchronous.

This adapter must be implemented by all bravado clients such as FidoClient or RequestsClient to wrap the object returned by their 'request' method.

connection_errors = ()

result(*timeout=None*)
Must implement a result method which blocks on result retrieval.

Parameters **timeout** – maximum time to wait on result retrieval. Defaults to None which means blocking undefinitely.

timeout_errors = ()

class bravado.http_future.**HttpFuture**(*future*, *response_adapter*, *operation=None*, *request_config=None*)

Bases: object

Wrapper for a *FutureAdapter* that returns an HTTP response.

Parameters

- **future** – The future object to wrap.
- **response_adapter** (type that is a subclass of bravado_core.response.IncomingResponse.) – Adapter type which exposes the innards of the HTTP response in a non-http client specific way.
- **request_config** (RequestConfig) – See *bravado.config.RequestConfig* and bravado.client.REQUEST_OPTIONS_DEFAULTS

response(*timeout=None*, *fallback_result=<object object>*, *exceptions_to_catch=(<class 'bravado.exception.BravadoTimeoutError'>*, *<class 'bravado.exception.BravadoConnectionError'>*, *<class 'bravado.exception.HTTPServerError'>)*)

Blocking call to wait for the HTTP response.

Parameters

- **timeout** (*float*) – Number of seconds to wait for a response. Defaults to None which means wait indefinitely.
- **fallback_result** (*Optional[Union[Any, Callable[[Exception], Any]]]*) – either the swagger result or a callable that accepts an exception as argument and returns the swagger result to use in case of errors
- **exceptions_to_catch** (*List/Tuple of Exception classes.*) – Exception classes to catch and call *fallback_result* with. Has no effect if *fallback_result* is not provided. By default, *fallback_result* will be called for read timeout and server errors (HTTP 5XX).

Returns A BravadoResponse instance containing the swagger result and response metadata.

result(*timeout=None*)

DEPRECATED: please use the *response()* method instead.

Blocking call to wait for and return the unmarshalled swagger result.

Parameters **timeout** (*float*) – Number of seconds to wait for a response. Defaults to None which means wait indefinitely.

Returns Depends on the value of also_return_response sent in to the constructor.

bravado.http_future.**raise_on_expected**(*http_response*)

Raise an HTTPError if the response is non-2XX and matches a response in the swagger spec.

Parameters **http_response** – bravado_core.response.IncomingResponse

Raises HTTPError

bravado.http_future.**raise_on_unexpected**(*http_response*)

Raise an HTTPError if the response is 5XX.

Parameters **http_response** – bravado_core.response.IncomingResponse

Raises HTTPError

bravado.http_future.**reraise_errors**(*func*)

bravado.http_future.**unmarshal_response**(*incoming_response*, *operation*, *response_callbacks=None*)

So the http_client is finished with its part of processing the response. This hands the response over to bravado_core for validation and unmarshalling and then runs any response callbacks. On success, the swagger_result is available as `incoming_response.swagger_result`. :type incoming_response: `bravado_core.response.IncomingResponse` :type operation: `bravado_core.operation.Operation` :type response_callbacks: list of callable. See

bravado_core.client.REQUEST_OPTIONS_DEFAULTS.

Raises HTTPError - On 5XX status code, the HTTPError has minimal information. - On non-2XX status code with no matching response, the HTTPError

contains a detailed error message.

- **On non-2XX status code with a matching response, the HTTPError** contains the return value.

bravado.http_future.**unmarshal_response_inner**(*response*, *op*)

Unmarshal incoming http response into a value based on the response specification. :type response: `bravado_core.response.IncomingResponse` :type op: `bravado_core.operation.Operation` :returns: value where type(value) matches response_spec['schema']['type']

if it exists, None otherwise.

6.1.7 `response` Module

class bravado.response.**BravadoResponse**(*result*, *metadata*)

Bases: `object`

Bravado response object containing the swagger result as well as response metadata.

Variables

- ***result*** – Swagger result from the server
- ***metadata*** (`BravadoResponseMetadata`) – metadata for this response including HTTP response

incoming_response

class bravado.response.**BravadoResponseMetadata**(*incoming_response*, *swagger_result*, *start_time*, *request_end_time*, *handled_exception_info*, *request_config*)

Bases: `object`

HTTP response metadata.

NOTE: The *elapsed_time* attribute might be slightly lower than the actual time spent since calling the operation object, as we only start measuring once the call to *HTTPClient.request* returns. Nevertheless, it should be accurate enough for logging and debugging, i.e. determining what went on and how much time was spent waiting for the response.

Variables

- **start_time** (*float*) – monotonic timestamp at which the future was created

- **request_end_time** (*float*) – monotonic timestamp at which we received the HTTP response
- **processing_end_time** (*float*) – monotonic timestamp at which processing the response ended
- **handled_exception_info** (*tuple*) – 3-tuple of exception class, exception instance and string representation of the traceback in case an exception was caught during request processing.

Parameters

- **incoming_response** – a subclass of bravado_core.response.IncomingResponse.
- **swagger_result** – the unmarshalled result that is being returned to the user.
- **start_time** – monotonic timestamp indicating when the HTTP future was created. Depending on the internal operation of the HTTP client used, this is either before the HTTP request was initiated (default client) or right after the HTTP request was sent (e.g. bravado-asyncio / fido).
- **request_end_time** – monotonic timestamp indicating when we received the incoming response, excluding unmarshalling, validation or potential fallback result processing.
- **handled_exception_info** – sys.exc_info() data if an exception was caught and handled as part of a fallback response; note that the third element in the list is a string representation of the traceback, not a traceback object.
- **request_config** (RequestConfig) – namedtuple containing the request options that were used for making this request.

elapsed_time

headers

incoming_response

is_fallback_result

request_elapsed_time

status_code

6.1.8 exception Module

exception bravado.exception.**BravadoConnectionError**
Bases: exceptions.OSError

exception bravado.exception.**BravadoTimeoutError**
Bases: exceptions.OSError

exception bravado.exception.**ForcedFallbackResultError**
Bases: exceptions.Exception

This exception will be handled if the option to force returning a fallback result is used.

exception bravado.exception.**HTTPBadGateway**(*response*, *message=None*, *swagger_result=None*)
Bases: *bravado.exception.HTTPServerError*

HTTP/502 - Bad Gateway

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 502

exception bravado.exception.**HTTPBadRequest**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/400 - Bad Request

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 400

exception bravado.exception.**HTTPClientError**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPError*

4xx responses.

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

exception bravado.exception.**HTTPConflict**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/409 - Conflict

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 409

exception bravado.exception.**HTTPError**(*response*, *message=None*, *swagger_result=None*)

Bases: exceptions.IOError

Unified HTTPError used across all http_client implementations.

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

class bravado.exception.**HTTPErrorType**

Bases: type

A metaclass for registering HTTPError subclasses.

exception bravado.exception.**HTTPExpectationFailed**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/417 - Expectation Failed

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 417

exception bravado.exception.**HTTPFailedDependency**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/424 - Failed Dependency

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 424

exception bravado.exception.**HTTPForbidden**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/403 - Forbidden

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 403

exception bravado.exception.**HTTPFound**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPRedirection*

HTTP/302 - Found

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 302

exception bravado.exception.**HTTPGatewayTimeout**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/504 - Gateway Timeout

Parameters

- **message** – Optional string message

- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 504

exception bravado.exception.**HTTPGone**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/410 - Gone

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 410

exception bravado.exception.**HTTPHTTPVersionNotSupported**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/505 - HTTP Version Not Supported

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 505

exception bravado.exception.**HTTPInsufficientStorage**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/507 - Insufficient Storage

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 507

exception bravado.exception.**HTTPInternalServerError**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/500 - Internal Server Error

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 500

exception bravado.exception.**HTTPLengthRequired**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/411 - Length Required

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 411

exception bravado.exception.**HTTPLocked**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/423 - Locked

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 423

exception bravado.exception.**HTTPLoopDetected**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/508 - Loop Detected

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 508

exception bravado.exception.**HTTPMethodNotAllowed**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/405 - Method Not Allowed

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 405

exception bravado.exception.**HTTPMisdirectedRequest**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/421 - Misdirected Request

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 421

exception bravado.exception.**HTTPMovedPermanently**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPRedirection*

HTTP/301 - Moved Permanently

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 301

exception bravado.exception.**HTTPMultipleChoices**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPRedirection*

HTTP/300 - Multiple Choices

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 300

exception bravado.exception.**HTTPNetworkAuthenticationRequired**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/511 - Network Authentication Required

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 511

exception bravado.exception.**HTTPNotAcceptable**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/406 - Not Acceptable

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 406

exception bravado.exception.**HTTPNotExtended**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/510 - Not Extended

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 510

exception bravado.exception.**HTTPNotFound**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/404 - Not Found

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 404

exception bravado.exception.**HTTPNotImplemented**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/501 - Not Implemented

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 501

exception bravado.exception.**HTTPNotModified**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPRedirection*

HTTP/304 - Not Modified

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 304

exception bravado.exception.**HTTPPayloadTooLarge**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/413 - Payload Too Large

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 413

exception bravado.exception.**HTTPPaymentRequired**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/402 - Payment Required

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 402

exception bravado.exception.**HTTPPermanentRedirect**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPRedirection*

HTTP/308 - Permanent Redirect

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 308

exception bravado.exception.**HTTPPreconditionFailed**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/412 - Precondition Failed

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 412

exception bravado.exception.**HTTPPreconditionRequired**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/428 - Precondition Required

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 428

exception bravado.exception.**HTTPProxyAuthenticationRequired**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/407 - Proxy Authentication Required

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 407

exception bravado.exception.**HTTPRangeNotSatisfiable**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/416 - Range Not Satisfiable

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 416

exception bravado.exception.**HTTPRedirection**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPError*

3xx responses.

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

exception bravado.exception.**HTTPRequestHeaderFieldsTooLarge**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/431 - Request Header Fields Too Large

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 431

exception bravado.exception.**HTTPRequestTimeout**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/408 - Request Timeout

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 408

exception bravado.exception.**HTTPSeeOther**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPRedirection*

HTTP/303 - See Other

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 303

exception bravado.exception.**HTTPServerError**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPError*

5xx responses.

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

exception bravado.exception.**HTTPServiceUnavailable**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/503 - Service Unavailable

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 503

exception bravado.exception.**HTTPTemporaryRedirect**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPRedirection*

HTTP/307 - Temporary Redirect

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 307

exception bravado.exception.**HTTPTooManyRequests**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/429 - Too Many Requests

Parameters

- **message** – Optional string message

- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 429

exception bravado.exception.**HTTPURITooLong**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/414 - URI Too Long

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 414

exception bravado.exception.**HTTPUnauthorized**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/401 - Unauthorized

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 401

exception bravado.exception.**HTTPUnavailableForLegalReasons**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/451 - Unavailable For Legal Reasons

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 451

exception bravado.exception.**HTTPUnprocessableEntity**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/422 - Unprocessable Entity

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 422

exception bravado.exception.**HTTPUnsupportedMediaType**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/415 - Unsupported Media Type

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 415

exception bravado.exception.**HTTPUpgradeRequired**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPClientError*

HTTP/426 - Upgrade Required

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 426

exception bravado.exception.**HTTPUseProxy**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPRedirection*

HTTP/305 - Use Proxy

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 305

exception bravado.exception.**HTTPVariantAlsoNegotiates**(*response*, *message=None*, *swagger_result=None*)

Bases: *bravado.exception.HTTPServerError*

HTTP/506 - Variant Also Negotiates

Parameters

- **message** – Optional string message
- **swagger_result** – If the response for this HTTPError is documented in the swagger spec, then this should be the result value of the response.

status_code = 506

bravado.exception.**make_http_exception**(*response*, *message=None*, *swagger_result=None*)

Return an HTTP exception class based on the response. If a specific class doesn't exist for a particular HTTP status code, a more general *HTTPError* class will be returned. :type response: bravado_core.response.IncomingResponse :param message: Optional string message :param swagger_result: If the response for this HTTPError is

documented in the swagger spec, then this should be the result value of the response.

Returns An HTTP exception class that can be raised

6.1.9 `testing` Module

class bravado.testing.response_mocks.**BravadoResponseMock**(*result*, *metadata=None*)
Bases: object

Class that behaves like the *HttpFuture.response()* method as well as a *BravadoResponse*. Please check the documentation for further information.

metadata

result

class bravado.testing.response_mocks.**FallbackResultBravadoResponseMock**(*exception=BravadoTimeoutE*
meta-
data=None)
Bases: object

Class that behaves like the *HttpFuture.response()* method as well as a *BravadoResponse*. It will always call the `fallback_result` callback that's passed to the `response()` method. Please check the documentation for further information.

metadata

result

class bravado.testing.response_mocks.**IncomingResponseMock**(*status_code*, ***kwargs*)
Bases: bravado_core.response.IncomingResponse

CHAPTER 7

Changelog

7.1 10.2.2 (2019-01-03)

- Fix issue with default (requests) HTTP client if HTTP_PROXY environment variable is set - Issue #401, PR #402. Thanks Lourens Veen for the initial report!

7.2 10.2.1 (2018-11-16)

- Reraise network errors when unmarshalling - PR #397

7.3 10.2.0 (2018-10-19)

- Support customizing or disabling SSL/TLS validation for the default HTTP client - Issues #278, #311, PR #392
- Use the fallback result in case of connection errors as well - PR #381

7.4 10.1.0 (2018-06-26)

- Add support for non-callable fallback results, stabilize the response API - PR #376
- Add unified connection error handling support, introduce *bravado.exception.BravadoConnectionError* - PR #377
- Support per-request API key header overwriting - PR #374. Thanks Yuliya Bagriy for your contribution!
- Extract integration testing tools to `bravado.testing.integration_test` module - PR #378

7.5 10.0.1 (2018-06-20)

- Add helper classes (in *bravado.testing.response_mocks*) for unit testing code using bravado - PR #375

7.6 10.0.0 (2018-06-15)

- Re-add ability to force returning fallback results - PR #372. Per-request configuration is now handled by the new *bravado.config.RequestConfig* class. This change requires an updated version of bravado-asyncio in case you're using that HTTP client.

7.7 9.3.2 (2018-06-15)

- Revert ability to force returning fallback results which was introduced in 9.3.1, since it contains backwards-incompatible changes that break third-party HTTP clients like bravado-asyncio.

7.8 9.3.1 (2018-06-14)

- Add ability to force returning fallback results - PR #372

7.9 9.3.0 (2018-06-05)

- Introduce the HTTPFuture.response API as well as support for returning a fallback result. - PR #365, #366, #367, #368

  NOTE: Most of this API is not documented yet and is considered experimental; we're working on stabilizing it and providing developer documentation.

7.10 9.2.2 (2017-12-19)

- Fix msgpack import issue - PR #341. Thanks Jesse Myers for your contribution!

7.11 9.2.1 (2017-12-07)

- The timeout exception for the requests client should inherit from `requests.exceptions.ReadTimeout` instead of `requests.exceptions.Timeout` - PR #337

7.12 9.2.0 (2017-11-10)

- Support msgpack as wire format for response data - PR #323, 328, 330, 331

- Allow client to access resources for tags which are not valid Python identifier names, by adding the `SwaggerClient.get_resource` method. For example, `client.get_resource('My Pets').list_pets()` - PR #320. Thanks Craig Blaszczyk for your contribution!
- Unify timeout exception classes. You can now simply catch `bravado.exception.BravadoTimeoutError` (or `builtins.TimeoutError` if you're using Python 3.3+) - PR #321

7.13 9.1.1 (2017-10-10)

- Allow users to pass the tcp_nodelay request parameter to FidoClient requests - PR #319

7.14 9.1.0 (2017-08-02)

- Make sure HTTP header names and values are unicode strings when using the fido HTTP client. NOTE: this is a potentially backwards incompatible change if you're using the fido HTTP client and are working with response headers. It's also highly advised to not upgrade to bravado-core 4.8.0+ if you're using fido unless you're also upgrading to a bravado version that contains this change.

7.15 9.0.7 (2017-07-05)

- Require fido version 4.2.1 so we stay compatible to code catching crochet.TimeoutError

7.16 9.0.6 (2017-06-28)

- Don't mangle headers with bytestring values on Python 3

7.17 9.0.5 (2017-06-23)

- Make sure headers passed in for fetching specs are converted to str as well

7.18 9.0.4 (2017-06-22)

- Fix regression when passing swagger parameters of type header in `_request_options` introduced by PR #288

7.19 9.0.3 (2017-06-21)

- When using the fido HTTP client and passing a timeout to `result()`, make sure we throw a fido HTTPTimeoutError instead of a crochet TimeoutError when hitting the timeout.

7.20 9.0.2 (2017-06-12)

- `_requests_options` headers are casted to `string` to support newer version of `requests` library.

7.21 9.0.1 (2017-06-09)

- Convert http method to str while constructing the request to fix an issue with file uploads when using requests library versions before 2.8.

7.22 9.0.0 (2017-06-06)

- Add API key authentication via header to RequestsClient.
- Fido client is now an optional dependency. **NOTE**: if you intend to use bravado with the fido client you need to install bravado with fido extras (`pip install bravado[fido]`)

7.23 8.4.0 (2016-09-27)

- Remove support for Python 2.6, fixing a build failure.
- Switch from Python 3.4 to Python 3.5 for tests.

7.24 8.3.0 (2016-06-03)

- Bravado using Fido 3.2.0 python 3 ready

7.25 8.2.0 (2016-04-29)

- Bravado compliant to Fido 3.0.0
- Dropped use of concurrent futures in favor of crochet EventualResult
- Workaround for bypassing a unicode bug in python *requests* < 2.8.1

7.26 8.1.2 (2016-04-18)

- Don't unnecessarily constrain the version of twisted when not using python 2.6

7.27 8.1.1 (2016-04-13)

- Removed logic to build multipart forms. Using python 'requests' instead to build the entire http request.

7.28 8.1.0 (2016-04-04)

- Support for YAML Swagger specs - PR #198
- Remove pytest-mock dependency from requirements-dev.txt. No longer used and it was breaking the build.
- Requires bravado-core >= 4.2.2
- Fix unit test for default values getting sent in the request

7.29 8.0.1 (2015-12-02)

- Require twisted < 15.5.0 since Python 2.6 support was dropped

7.30 8.0.0 (2015-11-25)

- Support for recursive $refs
- Support for remote $refs e.g. Swagger 2.0 specs that span multiple json files
- Requires bravado-core 4.0.0 which is not backwards compatible (See its CHANGELOG)
- Transitively requires swagger-spec-validator 2.0.2 which is not backwards compatible (See its CHANGELOG)

7.31 7.0.0 (2015-10-23)

- Support per-request response_callbacks to enable `SwaggerClient` decorators to instrument an `IncomingResponse` post-receive. This is a non-backwards compatible change iff you have implemented a custom `HttpClient`. Consult the changes in signature to `HttpClient.request()` and `HttpFuture`'s constructor.
- Config option `also_return_response` is supported on a per-request basis.

7.32 6.1.1 (2015-10-19)

- Fix `IncomingResponse` subclasses to provide access to the http headers.
- Requires bravado-core >= 3.1.0

7.33 6.1.0 (2015-10-19)

- Clients can now access the HTTP response from a service call to access things like headers and status code. See Advanced Usage

7.34 6.0.0 (2015-10-12)

- User-defined formats are no longer global. The registration mechanism has changed and is now done via configuration. See Configuration

7.35 5.0.0 (2015-08-27)

- Update ResourceDecorator to return an operation as a CallableOperation instead of a function wrapper (for the docstring). This allows further decoration of the ResourceDecorator.

7.36 4.0.0 (2015-08-10)

- Consistent bravado.exception.HTTPError now thrown from both Fido and Requests http clients.
- HTTPError refactored to contain an optional detailed message and Swagger response result.

7.37 3.0.0 (2015-08-03)

- Support passing in connect_timeout and timeout via _request_options to the Fido and Requests clients
- Timeout in HTTPFuture now defaults to None (wait indefinitely) instead of 5s. You should make sure any calls to http_future.result(..) without a timeout are updated accordingly.

7.38 2.1.0 (2015-07-20)

- Add warning for deprecated operations

7.39 2.0.0 (2015-07-13)

- Assume responsibility for http invocation (used to be in bravado-core)

7.40 1.1.0 (2015-07-06)

- Made bravado compatible with Py34

7.41 1.0.0 (2015-06-26)

- Fixed petstore demo link
- Pick up bug fixes from bravado-core 1.1.0

7.42 1.0.0-rc2 (2015-06-01)

- Renamed ResponseLike to IncomingResponse to match bravado-core

7.43 1.0.0-rc1 (2015-05-13)

- Initial version - large refactoring/rewrite of swagger-py 0.7.5 to support Swagger 2.0

CHAPTER 8

Indices and tables

- genindex
- modindex

Python Module Index

b

Index

I

J

M

R

S

T

U