
ESY Documentation

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CHAPTER 1

Introduction

There are many options for consuming the ESI web services. ESY aims to be an easy-to-use library with the nuts and bolts of dealing with an OpenAPI interface abstracted away.

ESY is inspired by Entity's gloriously pythonic [eveapi](#) library.

CHAPTER 2

Installation

The latest stable version of ESY is available from PyPI:

```
$ pip install esy
```


CHAPTER 3

Documentation

Documentation is available at esy.readthedocs.io.

For documentation of the various ESI routes, ESY also provides a [terse list](#) of their parameters and return types.
Further information can be explored at the main [ESI documentation site](#)

CHAPTER 4

Usage

ESY comes with two interfaces to ESI:

- An interface generated by [Bravado](#), with some added sugar for dealing with pagination.
- A semantic wrapper generated through pythonic voodoo.

The two interfaces caters different needs. The Bravado interface is an OpenAPI wrapper around the ESI that will be familiar for most developers familiar working with swagger. The semantic wrapper, on the other hand, generates classes for various entities in ESI like Character, Corporation and Alliance. Neither interface is mutual exclusive and for many use cases, it makes sense using both.

Regardless of interface, to use ESY, you must first initialize a client:

```
from esy.client import ESIClient
client = ESIClient.get_client(user_agent='my-user-agent')
```

The client can take a second or two to initialize, as the swagger specification is downloaded and parsed. To speed this up, you can download the specification locally:

```
$ curl https://esi.evetech.net/latest/swagger.json -o swagger.json
```

Then initialize the client using the local file:

```
import json
from esy.client import ESIClient

with open('swagger.json', 'r') as spec_file:
    spec = json.load(spec_file)
client = ESIClient.get_client('my-user-agent', spec=spec)
```

For production instances, keeping the spec in [Redis](#) or some other cache is highly recommended.

4.1 Pagination

For ESI routes which are paginated, ESY will return a `ESIPageGenerator` which is a generator yielding the native data type of the route.

4.2 Using the semantic wrapper

```
from esy.entities import Character, Corporation, Alliance, Entity

# You can initialize entities using their IDs
vittoros = Character(941287462)
evolution = Corporation(144749962)
ccp = Alliance(434243723)

# To speed up initialization, it's recommended to create and share an ESIClient among
# instances. If no client is
# supplied, a new one will be created for each entity instance.
from esy.client import ESIClient
client = ESIClient.get_client(user_agent='my-user-agent')

vittoros = Character(941287462, _client=client)

# You can also initialize instances just using the entity names

vittoros = Character.from_name('Vittoros', _client=client)
evolution = Corporation.from_name('Evolution', _client=client)

# or speed things up by initializing many entities at the same time

entities = Entity.from_names('Vittoros', 'Evolution', 'Northern Coalition.', _
                             _client=client)
print(entities)

{'Northern Coalition.': <esy.entities.Alliance object at 0x0000023967F10860>,
 'Vittoros': <esy.entities.Character object at 0x0000023967F10BE0>,
 'Evolution': <esy.entities.Corporation object at 0x0000023967F10B70>}
```

Any initialized entity will allow you to access the various public information. To access the private services, you need to supply an authorization token first.

```
vittoros = Character.from_name('Vittoros', _client=client, _token='hunter2')

# or you can set the token after initialization

vittoros.set_token('hunter2')
```

After this, you can access all the private services:

```
for asset_page in vittoros.get_assets():
    print(asset_page)

for contract_page in vittoros.get_contracts():
```

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```

for contract in contract_page:
    for bid in vittoros.get_contracts_contract_bids(contract_id=contract.get(
        'contract_id')):
        print(bid.get('bidder_id'), bid.get('amount'), bid.get('date_bid'))

```

Check out the entities API for a more extensive list of available services.

4.3 Using the Bravado interface

The Bravado interface is available from the ESIClient instance.

```

from esy.client import ESIClient
client = ESIClient.get_client(user_agent='my-user-agent')

# Get list of alliances
alliances = client.Alliance.get_alliances()

# Get info on a corporation
evolution = client.Corporation.get_corporations_corporation_id(corporation_
    _id=144749962)
print(evolution)

{'alliance_id': 1727758877,
 'ceo_id': 144509256,
 'creator_id': 144509256,
 'date_founded': datetime.datetime(2003, 7, 30, 8, 33, tzinfo=tzutc()),
 'description': 'Those who cannot adapt become victims of Evolution.',
 'home_station_id': 60013843,
 'member_count': 316,
 'name': 'Evolution',
 'shares': 1000,
 'tax_rate': 0.5,
 'ticker': 'EVOL',
 'url': 'http://www.eve-evol.com',
 'faction_id': None}

```

```

# Get paginated asset list
swag = client.Corporation.get_corporations_corporation_id_assets(corporation_
    _id=144749962,
                                         _token='esi token')
# swag is an ESIPageGenerator, implementing the generator interface
# Loop through it to get the asset pages
for page in swag: # Returns a list of assets
    for asset in page: # Asset dict
        print(asset.get('type_id'),
              asset.get('location_id'))
        # 22457
        # 16074150552

```

4.4 Caching

ESY does not implement caching itself, but supports using a cache through a cache proxy object. The proxy needs to implement the following interface:

```
class Cache(object):
    def get(self, key: int) -> object:
        pass

    def set(self, key: int, data: object, cached_until: datetime.datetime):
        pass

    def __contains__(self, item: object) -> bool:
        pass
```

4.5 Authentication and devel mode

ESY can handle the authentication flow for you:

```
from esy.auth import ESIAuthenticator

auth = ESIAuthenticator()
refresh_token, access_token = auth.verify_authorization_code('authorization code from',
                                                               'esi',
                                                               'your client ID',
                                                               'your secret key')

auth.verify_access_token(access_token)
{'CharacterID': 941287462,
 'CharacterName': 'Vittoros',
 'ExpiresOn': '2018-06-11T19:01:15.182864Z',
 'Scopes': '',
 'TokenType': 'Character',
 'CharacterOwnerHash': '*****'}

new_access_token = auth.get_access_token(refresh_token,
                                         'your client ID',
                                         'your secret key')

auth.revoke_token(refresh_token,
                  'your client ID',
                  'your secret key')

auth.revoke_token(access_token,
                  'your client ID',
                  'your secret key',
                  token_type='access_token')
```

To help developers getting started without having to implement the entire authentication workflow, ESY also implements an ad-hoc web server to get you refresh tokens. You can use it directly in the python prompt to do some API exploration or you can use it in your tests to produce refresh or access tokens for testing your ESI calls.

First, create a new application at <https://developers.eveonline.com/> with callback URL set to <http://localhost:8000> or whichever address and port you'll be running the devel server.

```

import esy.devel

# get_authorization_code has many parameters, but for basic usage:

auth_code = esy.devel.get_authorization_code(client_id='your client ID',
                                             callback_url='your callback URL',
                                             scopes='your space-delimited scopes')

# This will start the web server in the background (per-default listening on
# localhost:8000)
# and print the login URL on stdout. After authenticating in your browser, the web
# server
# will get redirect from the SSO with the authorization code, then return that.

# For situations where you are not able to reach the network where you are running
# ESY,
# you can also use CLI login:

auth_code = esy.devel.get_authorization_code(cli_login=True,
                                              client_id='your client ID',
                                              callback_url='your callback URL',
                                              scopes='your space-delimited scopes')

# This will prompt for username and password, then let you pick a character.
# If you are running tests, you can also supply username, password and character_id as
# keyword arguments to get_authorization_code, in addition to cli_login=True. This
# will
# automate the entire flow. Remember to revoke your tokens afterwards and for bob's
# sake;
# don't display your username and/or password!

# After getting the authorization code, you can get the tokens:

refresh_token, access_token = esy.devel.verify_authorization_code(auth_code,
                                                                  client_id='your
                                                                  client ID',
                                                                  secret_key='your
                                                                  secret key')
# Character info

char_info = esy.devel.verify_access_token(access_token)

# Get your swag
from esy.client import ESIClient
client = ESIClient.get_client(user_agent='your-user-agent')
assets = client.Assets.get_characters_character_id_assets(
    character_id=char_info.get('CharacterId'), _token=access_token)

for page in assets:
    print(page)

```

The devel mode will use parameters from environment settings, if present:

Parameter	Environment setting	Default
CLIENT_ID	ESY_CLIENT_ID	None
SECRET_KEY	ESY_SECRET_KEY	None
SCOPES	ESY_SCOPES	None
CALLBACK_URL	ESY_CALLBACK_URL	http://localhost:8000
SERVER_ADDRESS	ESY_SERVER_ADDRESS	localhost
SERVER_PORT	ESY_SERVER_PORT	8000

CHAPTER 5

Development

ESY uses the [Bravado](#) OpenAPI library to parse the ESI swagger schema and create an usable interface. The purpose of creating a custom wrapper of Bravado for ESI, is to make the interface a bit more user friendly. Pagination is handled automatically by returning generators for any route which accepts a page parameter, while non-paginated data is handled in their native data type. Tokens can be set per-call, instead of per-client, allowing for using headers and still getting data for many tokens without the need to reinitialize the client.

The authentication flow uses [requests-oauthlib](#).

5.1 Introduction

There are many options for consuming the ESI web services. ESY aims to be an easy-to-use library with the nuts and bolts of dealing with an OpenAPI interface abstracted away.

ESY is inspired by Entity's gloriously pythonic [eveapi](#) library.

5.2 Installation

The latest stable version of ESY is available from PyPI:

```
$ pip install esy
```

5.3 Documentation

Documentation is available at [esy.readthedocs.io](#).

For documentation of the various ESI routes, ESY also provides a [terse list](#) of their parameters and return types. Further information can be explored at the main [ESI documentation site](#)

5.4 Usage

ESY comes with two interfaces to ESI:

- An interface generated by [Bravado](#), with some added sugar for dealing with pagination.
- A semantic wrapper generated through pythonic voodoo.

The two interfaces caters different needs. The Bravado interface is an OpenAPI wrapper around the ESI that will be familiar for most developers familiar working with swagger. The semantic wrapper, on the other hand, generates classes for various entities in ESI like Character, Corporation and Alliance. Neither interface is mutual exclusive and for many use cases, it makes sense using both.

Regardless of interface, to use ESY, you must first initialize a client:

```
from esy.client import ESIClient
client = ESIClient.get_client(user_agent='my-user-agent')
```

The client can take a second or two to initialize, as the swagger specification is downloaded and parsed. To speed this up, you can download the specification locally:

```
$ curl https://esi.evetech.net/latest/swagger.json -o swagger.json
```

Then initialize the client using the local file:

```
import json
from esy.client import ESIClient

with open('swagger.json', 'r') as spec_file:
    spec = json.load(spec_file)
client = ESIClient.get_client('my-user-agent', spec=spec)
```

For production instances, keeping the spec in [Redis](#) or some other cache is highly recommended.

5.4.1 Pagination

For ESI routes which are paginated, ESY will return a [ESIPageGenerator](#) which is a generator yielding the native data type of the route.

5.4.2 Using the semantic wrapper

```
from esy.entities import Character, Corporation, Alliance, Entity

# You can initialize entities using their IDs
vittoros = Character(941287462)
evolution = Corporation(144749962)
ccp = Alliance(434243723)

# To speed up initialization, it's recommended to create and share an ESIClient among
# instances. If no client is
# supplied, a new one will be created for each entity instance.
from esy.client import ESIClient
client = ESIClient.get_client(user_agent='my-user-agent')
```

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```
vittoros = Character(941287462, _client=client)

# You can also initialize instances just using the entity names

vittoros = Character.from_name('Vittoros', _client=client)
evolution = Corporation.from_name('Evolution', _client=client)

# or speed things up by initializing many entities at the same time

entities = Entity.from_names('Vittoros', 'Evolution', 'Northern Coalition.', _
                             _client=client)
print(entities)

{'Northern Coalition.': <esy.entities.Alliance object at 0x0000023967F10860>,
 'Vittoros': <esy.entities.Character object at 0x0000023967F10BE0>,
 'Evolution': <esy.entities.Corporation object at 0x0000023967F10B70>}
```

Any initialized entity will allow you to access the various public information. To access the private services, you need to supply an authorization token first.

```
vittoros = Character.from_name('Vittoros', _client=client, _token='hunter2')

# or you can set the token after initialization

vittoros.set_token('hunter2')
```

After this, you can access all the private services:

```
for asset_page in vittoros.get_assets():
    print(asset_page)

for contract_page in vittoros.get_contracts():
    for contract in contract_page:
        for bid in vittoros.get_contracts_contract_bids(contract_id=contract.get(
            'contract_id')):
            print(bid.get('bidder_id'), bid.get('amount'), bid.get('date_bid'))
```

Check out the entities API for a more extensive list of available services.

5.4.3 Using the Bravado interface

The Bravado interface is available from the ESIClient instance.

```
from esy.client import ESIClient
client = ESIClient.get_client(user_agent='my-user-agent')

# Get list of alliances
alliances = client.Alliance.get_alliances()

# Get info on a corporation
evolution = client.Corporation.get_corporations_corporation_id(corporation_
    _id=144749962)
print(evolution)
```

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```
{
'alliance_id': 1727758877,
'ceo_id': 144509256,
'creator_id': 144509256,
'date_founded': datetime.datetime(2003, 7, 30, 8, 33, tzinfo=tzutc()),
'description': 'Those who cannot adapt become victims of Evolution.',
'home_station_id': 60013843,
'member_count': 316,
'name': 'Evolution',
'shares': 1000,
'tax_rate': 0.5,
'ticker': 'EVOL',
'url': 'http://www.eve-evol.com',
'faction_id': None}
```

```
# Get paginated asset list
swag = client.Corporation.get_corporations_corporation_id_assets(corporation_
➥id=144749962,
➥                                         _token='esi token')
# swag is an ESIPageGenerator, implementing the generator interface
# Loop through it to get the asset pages
for page in swag: # Returns a list of assets
    for asset in page: # Asset dict
        print(asset.get('type_id'),
              asset.get('location_id'))
    # 22457
    # 16074150552
```

5.4.4 Caching

ESY does not implement caching itself, but supports using a cache through a cache proxy object. The proxy needs to implement the following interface:

```
class Cache(object):
    def get(self, key: int) -> object:
        pass

    def set(self, key: int, data: object, cached_until: datetime.datetime):
        pass

    def __contains__(self, item: object) -> bool:
        pass
```

5.4.5 Authentication and devel mode

ESY can handle the authentication flow for you:

```
from esy.auth import ESIAuthenticator

auth = ESIAuthenticator()
refresh_token, access_token = auth.verify_authorization_code('authorization code from_
➥esi',
➥                                         'your client ID',
➥                                         'your secret key')
```

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```

auth.verify_access_token(access_token)
{'CharacterID': 941287462,
 'CharacterName': 'Vittoros',
 'ExpiresOn': '2018-06-11T19:01:15.182864Z',
 'Scopes': '',
 'TokenType': 'Character',
 'CharacterOwnerHash': '*****'}
}

new_access_token = auth.get_access_token(refresh_token,
                                         'your client ID',
                                         'your secret key')

auth.revoke_token(refresh_token,
                  'your client ID',
                  'your secret key')

auth.revoke_token(access_token,
                  'your client ID',
                  'your secret key',
                  token_type='access_token')

```

To help developers getting started without having to implement the entire authentication workflow, ESY also implements an ad-hoc web server to get you refresh tokens. You can use it directly in the python prompt to do some API exploration or you can use it in your tests to produce refresh or access tokens for testing your ESI calls.

First, create a new application at <https://developers.eveonline.com/> with callback URL set to <http://localhost:8000> or whichever address and port you'll be running the devel server.

```

import esy.devel

# get_authorization_code has many parameters, but for basic usage:

auth_code = esy.devel.get_authorization_code(client_id='your client ID',
                                              callback_url='your callback URL',
                                              scopes='your space-delimited scopes')

# This will start the web server in the background (per-default listening on
# localhost:8000)
# and print the login URL on stdout. After authenticating in your browser, the web_
# server
# will get redirect from the SSO with the authorization code, then return that.

# For situations where you are not able to reach the network where you are running_
# ESY,
# you can also use CLI login:

auth_code = esy.devel.get_authorization_code(cli_login=True,
                                              client_id='your client ID',
                                              callback_url='your callback URL',
                                              scopes='your space-delimited scopes')

# This will prompt for username and password, then let you pick a character.
# If you are running tests, you can also supply username, password and character_id as
# keyword arguments to get_authorization_code, in addition to cli_login=True. This_
# will
# automate the entire flow. Remember to revoke your tokens afterwards and for bob's_
# sake;

```

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```
# don't display your username and/or password!

# After getting the authorization code, you can get the tokens:

refresh_token, access_token = esy.devel.verify_authorization_code(auth_code,
                                                               client_id='your_
                                                               ↵client ID',
                                                               secret_key='your_
                                                               ↵secret key')
# Character info

char_info = esy.devel.verify_access_token(access_token)

# Get your swag
from esy.client import ESIClient
client = ESIClient.get_client(user_agent='your-user-agent')
assets = client.Assets.get_characters_character_id_assets(
    character_id=char_info.get('CharacterId'), _token=access_token)

for page in assets:
    print(page)
```

The devel mode will use parameters from environment settings, if present:

Parameter	Environment setting	Default
CLIENT_ID	ESY_CLIENT_ID	None
SECRET_KEY	ESY_SECRET_KEY	None
SCOPES	ESY_SCOPES	None
CALLBACK_URL	ESY_CALLBACK_URL	http://localhost:8000
SERVER_ADDRESS	ESY_SERVER_ADDRESS	localhost
SERVER_PORT	ESY_SERVER_PORT	8000

5.5 Development

ESY uses the Bravado OpenAPI library to parse the ESI swagger schema and create an usable interface. The purpose of creating a custom wrapper of Bravado for ESI, is to make the interface a bit more user friendly. Pagination is handled automatically by returning generators for any route which accepts a page parameter, while non-paginated data is handled in their native data type. Tokens can be set per-call, instead of per-client, allowing for using headers and still getting data for many tokens without the need to reinitialize the client.

The authentication flow uses `requests-oauthlib`.

5.6 Entities API

—

5.6.1 Character

```
class Character
```

from_name()

Initialize an entity from a name

Parameters

- **name** (*str*) –
- **_client** (`ESIClient`) –
- **_token** (*str*) –

Returns**from_names()**

Initialize a set of entities from a list of names

Parameters

- ***names** (*list*) –
- **_client** (`ESIClient`) –
- **_token** (*str*) –

Returns**Return type** `dict`**get_agents_research()**

Get agents research

get_assets()

Get character assets

get_attributes()

Get character attributes

get_blueprints()

Get blueprints

get_bookmarks()

List bookmarks

get_bookmarks_folders()

List bookmark folders

get_calendar()

List calendar event summaries

get_calendar_event(*event_id=None*)

Get an event

Parameters **event_id** (*int*) – *event_id***get_calendar_event_attendees(*event_id=None*)**

Get attendees

Parameters **event_id** (*int*) – *event_id***get_clones()**

Get clones

get_contacts()

Get contacts

get_contacts_labels()

Get contact labels

```
get_contracts()
    Get contracts

get_contracts_contract_bids(contract_id=None)
    Get contract bids

    Parameters contract_id(int) – contract_id

get_contracts_contract_items(contract_id=None)
    Get contract items

    Parameters contract_id(int) – contract_id

get_corporationhistory()
    Get corporation history

get_fatigue()
    Get jump fatigue

get_fittings()
    Get fittings

get_fleet()
    Get character fleet info

get_fw_stats()
    Overview of a character involved in faction warfare

get_implants()
    Get active implants

get_industry_jobs()
    List character industry jobs

get_killmails_recent()
    Get a character's recent kills and losses

get_location()
    Get character location

get_loyalty_points()
    Get loyalty points

get_mail()
    Return mail headers

get_mail_labels()
    Get mail labels and unread counts

get_mail_lists()
    Return mailing list subscriptions

get_mail_mail(mail_id=None)
    Return a mail

    Parameters mail_id(int) – mail_id

get_medals()
    Get medals

get_mining()
    Character mining ledger

get_notifications()
    Get character notifications
```

```
get_notifications_contacts()
    Get new contact notifications

get_online()
    Get character online

get_opportunities()
    Get a character's completed tasks

get_orders()
    List open orders from a character

get_orders_history()
    List historical orders by a character

get_planets()
    Get colonies

get_planets_planet(planet_id=None)
    Get colony layout

    Parameters planet_id(int) – planet_id

get_portrait()
    Get character portraits

get_roles()
    Get character corporation roles

get_search()
    Search on a string

get_ship()
    Get current ship

get_skillqueue()
    Get character's skill queue

get_skills()
    Get character skills

get_standings()
    Get standings

get_stats()
    Yearly aggregate stats

get_titles()
    Get character corporation titles

get_wallet()
    Get a character's wallet balance

get_wallet_journal()
    Get character wallet journal

get_wallet_transactions()
    Get wallet transactions

set_token()
    Sets the token used for calling ESI operations.

    Parameters token(str) – ESI authorization token

    Returns
```

5.6.2 Corporation

```
class Corporation
```

```
    from_name()
```

Initialize an entity from a name

Parameters

- `name (str)` –
- `_client (ESIClient)` –
- `_token (str)` –

Returns

```
    from_names()
```

Initialize a set of entities from a list of names

Parameters

- `*names (list)` –
- `_client (ESIClient)` –
- `_token (str)` –

Returns

Return type `dict`

```
    get_alliancehistory()
```

Get alliance history

```
    get_assets()
```

Get corporation assets

```
    get_blueprints()
```

Get corporation blueprints

```
    get_bookmarks()
```

List corporation bookmarks

```
    get_bookmarks_folders()
```

List corporation bookmark folders

```
    get_contacts()
```

Get corporation contacts

```
    get_contacts_labels()
```

Get corporation contact labels

```
    get_containers_logs()
```

Get all corporation ALSC logs

```
    get_contracts()
```

Get corporation contracts

```
    get_contracts_contract_bids(contract_id=None)
```

Get corporation contract bids

Parameters `contract_id (int)` – contract_id

```
get_contracts_contract_items (contract_id=None)
    Get corporation contract items

    Parameters contract_id (int) – contract_id

get_customs_offices ()
    List corporation customs offices

get_divisions ()
    Get corporation divisions

get_facilities ()
    Get corporation facilities

get_fw_stats ()
    Overview of a corporation involved in faction warfare

get_icons ()
    Get corporation icon

get_industry_jobs ()
    List corporation industry jobs

get_killmails_recent ()
    Get a corporation's recent kills and losses

get_medals ()
    Get corporation medals

get_medals_issued ()
    Get corporation issued medals

get_members ()
    Get corporation members

get_members_limit ()
    Get corporation member limit

get_members_titles ()
    Get corporation's members' titles

get_membertracking ()
    Track corporation members

get_orders ()
    List open orders from a corporation

get_orders_history ()
    List historical orders from a corporation

get_roles ()
    Get corporation member roles

get_roles_history ()
    Get corporation member roles history

get_shareholders ()
    Get corporation shareholders

get_standings ()
    Get corporation standings

get_starbases ()
    Get corporation starbases (POSes)
```

```
get_starbases_starbase(starbase_id=None)
    Get starbase (POS) detail

    Parameters starbase_id (int) – starbase_id

get_structures()
    Get corporation structures

get_titles()
    Get corporation titles

get_wallets()
    Returns a corporation's wallet balance

get_wallets_division_journal()
    Get corporation wallet journal

get_wallets_division_transactions()
    Get corporation wallet transactions

set_token()
    Sets the token used for calling ESI operations.

    Parameters token (str) – ESI authorization token

    Returns
```

5.6.3 Alliance

```
class Alliance
```

```
from_name()
    Initialize an entity from a name

    Parameters
        • name (str) –
        • _client (ESIClient) –
        • _token (str) –

    Returns

from_names()
    Initialize a set of entities from a list of names

    Parameters
        • *names (list) –
        • _client (ESIClient) –
        • _token (str) –

    Returns
```

Return type *dict*

```
get_contacts()
    Get alliance contacts

get_contacts_labels()
    Get alliance contact labels
```

```
get_corporations()
    List alliance's corporations

get_icons()
    Get alliance icon

set_token()
    Sets the token used for calling ESI operations.

    Parameters token (str) – ESI authorization token

    Returns
```

5.7 ESI API

5.7.1 Alliance

```
class Alliance

    get_alliances()
        List all alliances

        return List of Alliance IDs
        rtype list

    get_alliances_alliance_id(alliance_id=None)
        Get alliance information

        param int alliance_id An EVE alliance ID
        return Public data about an alliance
        rtype dict

    get_alliances_alliance_id_corporations(alliance_id=None)
        List alliance's corporations

        param int alliance_id An EVE alliance ID
        return List of corporation IDs
        rtype list

    get_alliances_alliance_id_icons(alliance_id=None)
        Get alliance icon

        param int alliance_id An EVE alliance ID
        return Icon URLs for the given alliance id and server
        rtype dict
```

5.7.2 Assets

```
class Assets

    get_characters_character_id_assets (character_id=None, _token=None)
        Get character assets
            param int character_id An EVE character ID
            param str _token ESI authorization token
            return A flat list of the users assets
            rtype ESIPageGenerator list

    get_corporations_corporation_id_assets (corporation_id=None, _token=None)
        Get corporation assets
            param int corporation_id An EVE corporation ID
            param str _token ESI authorization token
            return A list of assets
            rtype ESIPageGenerator list

    post_characters_character_id_assets_locations (character_id=None,
                                                    item_ids=None, _token=None)
        Get character asset locations
            param int character_id An EVE character ID
            param None item_ids A list of item ids
            param str _token ESI authorization token
            return List of asset locations
            rtype list

    post_characters_character_id_assets_names (character_id=None, item_ids=None, _to-
                                                ken=None)
        Get character asset names
            param int character_id An EVE character ID
            param None item_ids A list of item ids
            param str _token ESI authorization token
            return List of asset names
            rtype list

    post_corporations_corporation_id_assets_locations (corporation_id=None,
                                                       item_ids=None, _to-
                                                       ken=None)
        Get corporation asset locations
            param int corporation_id An EVE corporation ID
            param None item_ids A list of item ids
            param str _token ESI authorization token
```

```

return List of asset locations
rtype list

post_corporations_corporation_id_assets_names (corporation_id=None,
                                                item_ids=None, _token=None)
Get corporation asset names

param int corporation_id An EVE corporation ID
param None item_ids A list of item ids
param str _token ESI authorization token
return List of asset names
rtype list

```

5.7.3 Bookmarks

```

class Bookmarks

get_characters_character_id_bookmarks (character_id=None, _token=None)
List bookmarks

param int character_id An EVE character ID
param str _token ESI authorization token
return A list of bookmarks
rtype ESIPageGenerator list

get_characters_character_id_bookmarks_folders (character_id=None, _token=None)
List bookmark folders

param int character_id An EVE character ID
param str _token ESI authorization token
return List of bookmark folders
rtype ESIPageGenerator list

get_corporations_corporation_id_bookmarks (corporation_id=None, _token=None)
List corporation bookmarks

param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return List of corporation owned bookmarks
rtype ESIPageGenerator list

get_corporations_corporation_id_bookmarks_folders (corporation_id=None, _to-
                                                ken=None)
List corporation bookmark folders

param int corporation_id An EVE corporation ID
param str _token ESI authorization token

```

```
return List of corporation owned bookmark folders
rtype ESIPageGenerator list
```

5.7.4 Calendar

```
class Calendar
```

```
get_characters_character_id_calendar(character_id=None[, from_event=None ], _token=None)
```

List calendar event summaries

```
param int character_id An EVE character ID
param int from_event The event ID to retrieve events from
param str _token ESI authorization token
return A collection of event summaries
rtype list
```

```
get_characters_character_id_calendar_event_id(character_id=None,
                                              event_id=None, _token=None)
```

Get an event

```
param int character_id An EVE character ID
param int event_id The id of the event requested
param str _token ESI authorization token
return Full details of a specific event
rtype dict
```

```
get_characters_character_id_calendar_event_id_attendees(character_id=None,
                                                       event_id=None,
                                                       _token=None)
```

Get attendees

```
param int character_id An EVE character ID
param int event_id The id of the event requested
param str _token ESI authorization token
return List of attendees
rtype list
```

```
put_characters_character_id_calendar_event_id(character_id=None,
                                               event_id=None,    response=None,
                                               _token=None)
```

Respond to an event

```
param int character_id An EVE character ID
param int event_id The ID of the event requested
param None response The response value to set, overriding current value
param str _token ESI authorization token
```

```
    return None
```

```
    rtype None
```

5.7.5 Character

```
class Character
```

```
    get_characters_character_id(character_id=None)
```

Get character's public information

```
        param int character_id An EVE character ID
```

```
        return Public data for the given character
```

```
        rtype dict
```

```
    get_characters_character_id_agents_research(character_id=None, _token=None)
```

Get agents research

```
        param int character_id An EVE character ID
```

```
        param str _token ESI authorization token
```

```
        return A list of agents research information
```

```
        rtype list
```

```
    get_characters_character_id_blueprints(character_id=None, _token=None)
```

Get blueprints

```
        param int character_id An EVE character ID
```

```
        param str _token ESI authorization token
```

```
        return A list of blueprints
```

```
        rtype ESIPageGenerator list
```

```
    get_characters_character_id_corporationhistory(character_id=None)
```

Get corporation history

```
        param int character_id An EVE character ID
```

```
        return Corporation history for the given character
```

```
        rtype list
```

```
    get_characters_character_id_fatigue(character_id=None, _token=None)
```

Get jump fatigue

```
        param int character_id An EVE character ID
```

```
        param str _token ESI authorization token
```

```
        return Jump activation and fatigue information
```

```
        rtype dict
```

```
    get_characters_character_id_medals(character_id=None, _token=None)
```

Get medals

```
param int character_id An EVE character ID
param str _token ESI authorization token
return A list of medals
rtype list

get_characters_character_id_notifications (character_id=None, _token=None)
Get character notifications

param int character_id An EVE character ID
param str _token ESI authorization token
return Returns your recent notifications
rtype list

get_characters_character_id_notifications_contacts (character_id=None, _token=None)
Get new contact notifications

param int character_id An EVE character ID
param str _token ESI authorization token
return A list of contact notifications
rtype list

get_characters_character_id_portrait (character_id=None)
Get character portraits

param int character_id An EVE character ID
return Public data for the given character
rtype dict

get_characters_character_id_roles (character_id=None, _token=None)
Get character corporation roles

param int character_id An EVE character ID
param str _token ESI authorization token
return The character's roles in thier corporation
rtype dict

get_characters_character_id_standings (character_id=None, _token=None)
Get standings

param int character_id An EVE character ID
param str _token ESI authorization token
return A list of standings
rtype list

get_characters_character_id_stats (character_id=None, _token=None)
Yearly aggregate stats

param int character_id An EVE character ID
```

```

param str _token ESI authorization token
return Character stats
rtype list

get_characters_character_id_titles(character_id=None, _token=None)
Get character corporation titles

param int character_id An EVE character ID
param str _token ESI authorization token
return A list of titles
rtype list

post_characters_affiliation(characters=None)
Character affiliation

param None characters The character IDs to fetch affiliations for. All characters must
exist, or none will be returned
return Character corporation, alliance and faction IDs
rtype list

post_characters_character_id_cspa(character_id=None, characters=None, _to-
ken=None)
Calculate a CSPA charge cost

param int character_id An EVE character ID
param None characters The target characters to calculate the charge for
param str _token ESI authorization token
return None
rtype None

```

5.7.6 Clones

```

class Clones

get_characters_character_id_clones(character_id=None, _token=None)
Get clones

param int character_id An EVE character ID
param str _token ESI authorization token
return Clone information for the given character
rtype dict

get_characters_character_id_implants(character_id=None, _token=None)
Get active implants

param int character_id An EVE character ID
param str _token ESI authorization token

```

```
return A list of implant type ids
rtype list
```

5.7.7 Contacts

```
class Contacts
```

```
delete_characters_character_id_contacts (character_id=None, contact_ids=None, _token=None)
```

Delete contacts

```
param int character_id An EVE character ID
param list contact_ids A list of contacts to delete
param str _token ESI authorization token
return None
rtype None
```

```
get_alliances_alliance_id_contacts (alliance_id=None, _token=None)
```

Get alliance contacts

```
param int alliance_id An EVE alliance ID
param str _token ESI authorization token
return A list of contacts
rtype ESIPageGenerator list
```

```
get_alliances_alliance_id_contacts_labels (alliance_id=None, _token=None)
```

Get alliance contact labels

```
param int alliance_id An EVE alliance ID
param str _token ESI authorization token
return A list of alliance contact labels
rtype list
```

```
get_characters_character_id_contacts (character_id=None, _token=None)
```

Get contacts

```
param int character_id An EVE character ID
param str _token ESI authorization token
return A list of contacts
rtype ESIPageGenerator list
```

```
get_characters_character_id_contacts_labels (character_id=None, _token=None)
```

Get contact labels

```
param int character_id An EVE character ID
param str _token ESI authorization token
return A list of contact labels
```

```

rtype list
get_corporations_corporation_id_contacts (corporation_id=None, _token=None)
Get corporation contacts

param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return A list of contacts
rtype ESIPageGenerator list

get_corporations_corporation_id_contacts_labels (corporation_id=None, _token=None)
Get corporation contact labels

param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return A list of corporation contact labels
rtype list

post_characters_character_id_contacts (character_id=None, contact_ids=None[,
label_ids=None], standing=None[,
watched=False], _token=None)
Add contacts

param int character_id An EVE character ID
param None contact_ids A list of contacts
param list label_ids Add custom labels to the new contact
param number standing Standing for the contact
param boolean watched Whether the contact should be watched, note this is only effective on characters
param str _token ESI authorization token
return None
rtype None

put_characters_character_id_contacts (character_id=None, contact_ids=None[, label_ids=None], standing=None[, watched=False], _token=None)
Edit contacts

param int character_id An EVE character ID
param None contact_ids A list of contacts
param list label_ids Add custom labels to the contact
param number standing Standing for the contact
param boolean watched Whether the contact should be watched, note this is only effective on characters
param str _token ESI authorization token
return None

```

rtype None

5.7.8 Contracts

class Contracts

get_characters_character_id_contracts (*character_id=None, _token=None*)

Get contracts

param int character_id An EVE character ID

param str _token ESI authorization token

return A list of contracts

rtype *ESIPageGenerator* list

get_characters_character_id_contracts_contract_id_bids (*character_id=None, contract_id=None, _token=None*)

Get contract bids

param int character_id An EVE character ID

param int contract_id ID of a contract

param str _token ESI authorization token

return A list of bids

rtype list

get_characters_character_id_contracts_contract_id_items (*character_id=None, contract_id=None, _token=None*)

Get contract items

param int character_id An EVE character ID

param int contract_id ID of a contract

param str _token ESI authorization token

return A list of items in this contract

rtype list

get_contracts_public_bids_contract_id (*contract_id=None*)

Get public contract bids

param int contract_id ID of a contract

return A list of bids

rtype *ESIPageGenerator* list

get_contracts_public_items_contract_id (*contract_id=None*)

Get public contract items

param int contract_id ID of a contract

return A list of items in this contract

```

rtype ESIPageGenerator list
get_contracts_public_region_id(region_id=None)
Get public contracts

param int region_id An EVE region id
return A list of contracts

rtype ESIPageGenerator list
get_corporations_corporation_id_contracts(corporation_id=None, _token=None)
Get corporation contracts

param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return A list of contracts

rtype ESIPageGenerator list
get_corporations_corporation_id_contracts_contract_id_bids(contract_id=None,
                                                               corporation_id=None,
                                                               _token=None)
Get corporation contract bids

param int contract_id ID of a contract
param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return A list of bids

rtype ESIPageGenerator list
get_corporations_corporation_id_contracts_contract_id_items(contract_id=None,
                                                               corporation_id=None,
                                                               _token=None)
Get corporation contract items

param int contract_id ID of a contract
param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return A list of items in this contract

rtype list

```

5.7.9 Corporation

```

class Corporation

get_corporations_corporation_id(corporation_id=None)
Get corporation information

param int corporation_id An EVE corporation ID

```

```
    return Public information about a corporation
    rtype dict

get_corporations_corporation_id_alliancehistory(corporation_id=None)
Get alliance history

    param int corporation_id An EVE corporation ID
    return Alliance history for the given corporation
    rtype list

get_corporations_corporation_id_blueprints(corporation_id=None, _token=None)
Get corporation blueprints

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return List of corporation blueprints
    rtype ESIPageGenerator list

get_corporations_corporation_id_containers_logs(corporation_id=None, _token=None)
Get all corporation ALSC logs

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return List of corporation ALSC logs
    rtype ESIPageGenerator list

get_corporations_corporation_id_divisions(corporation_id=None, _token=None)
Get corporation divisions

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return List of corporation division names
    rtype dict

get_corporations_corporation_id_facilities(corporation_id=None, _token=None)
Get corporation facilities

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return List of corporation facilities
    rtype list

get_corporations_corporation_id_icons(corporation_id=None)
Get corporation icon

    param int corporation_id An EVE corporation ID
    return Urls for icons for the given corporation id and server
    rtype dict
```

get_corporations_corporation_id_medals (*corporation_id=None, _token=None*)

Get corporation medals

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

return A list of medals

rtype *ESIPageGenerator* list

get_corporations_corporation_id_medals_issued (*corporation_id=None, _token=None*) *_to-*

Get corporation issued medals

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

return A list of issued medals

rtype *ESIPageGenerator* list

get_corporations_corporation_id_members (*corporation_id=None, _token=None*)

Get corporation members

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

return List of member character IDs

rtype list

get_corporations_corporation_id_members_limit (*corporation_id=None, _token=None*) *_to-*

Get corporation member limit

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

return The corporation's member limit

rtype int

get_corporations_corporation_id_members_titles (*corporation_id=None, _token=None*) *_to-*

Get corporation's members' titles

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

return A list of members and theirs titles

rtype list

get_corporations_corporation_id_membertracking (*corporation_id=None, _token=None*) *_to-*

Track corporation members

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

```
return List of member character IDs
rtype list
get_corporations_corporation_id_roles (corporation_id=None, _token=None)
Get corporation member roles

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return List of member character ID's and roles
    rtype list

get_corporations_corporation_id_roles_history (corporation_id=None, _token=None)
Get corporation member roles history

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return List of role changes
    rtype ESIPageGenerator list

get_corporations_corporation_id_shareholders (corporation_id=None, _token=None)
Get corporation shareholders

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return List of shareholders
    rtype ESIPageGenerator list

get_corporations_corporation_id_standings (corporation_id=None, _token=None)
Get corporation standings

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return A list of standings
    rtype ESIPageGenerator list

get_corporations_corporation_id_starbases (corporation_id=None, _token=None)
Get corporation starbases (POSes)

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return List of starbases (POSes)
    rtype ESIPageGenerator list

get_corporations_corporation_id_starbases_starbase_id (corporation_id=None,
                                                       starbase_id=None,
                                                       system_id=None, _token=None)

```

Get starbase (POS) detail

```
param int corporation_id An EVE corporation ID
param int starbase_id An EVE starbase (POS) ID
param int system_id The solar system this starbase (POS) is located in,
param str _token ESI authorization token
return List of starbases (POSes)
rtype dict
get_corporations_corporation_id_structures([Accept-Language=’en-us’], corporation_id=None[, language=’en-us’], _token=None)
```

Get corporation structures

```
param str Accept-Language Language to use in the response
param int corporation_id An EVE corporation ID
param str language Language to use in the response, takes precedence over Accept-Language
param str _token ESI authorization token
return List of corporation structures’ information
rtype ESIPageGenerator list
get_corporations_corporation_id_titles(corporation_id=None, _token=None)
```

Get corporation titles

```
param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return A list of titles
rtype list
```

get_corporations_npccorps()

Get npc corporations

```
return A list of npc corporation ids
rtype list
```

5.7.10 Dogma

class Dogma

get_dogma_attributes()

Get attributes

```
return A list of dogma attribute ids
rtype list
```

get_dogma_attributes_attribute_id(*attribute_id*=None)

Get attribute information

param int attribute_id A dogma attribute ID
return Information about a dogma attribute
rtype dict

get_dogma_dynamic_items_type_id_item_id(item_id=None, type_id=None)

Get dynamic item information

param int item_id item_id integer
param int type_id type_id integer
return Details about a dynamic item
rtype dict

get_dogma_effects()

Get effects

return A list of dogma effect ids
rtype list

get_dogma_effects_effect_id(effect_id=None)

Get effect information

param int effect_id A dogma effect ID
return Information about a dogma effect
rtype dict

5.7.11 Faction_Warfare

class Faction_Warfare

get_characters_character_id_fw_stats(character_id=None, _token=None)

Overview of a character involved in faction warfare

param int character_id An EVE character ID
param str _token ESI authorization token
return Faction warfare statistics for a given character
rtype dict

get_corporations_corporation_id_fw_stats(corporation_id=None, _token=None)

Overview of a corporation involved in faction warfare

param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return Faction warfare statistics for a given corporation
rtype dict

get_fw_leaderboards()

List of the top factions in faction warfare

```
return Corporation leaderboard of kills and victory points within faction warfare
rtype dict
```

```
get_fw_leaderboards_characters()
```

List of the top pilots in faction warfare

```
return Character leaderboard of kills and victory points within faction warfare
rtype dict
```

```
get_fw_leaderboards_corporations()
```

List of the top corporations in faction warfare

```
return Corporation leaderboard of kills and victory points within faction warfare
rtype dict
```

```
get_fw_stats()
```

An overview of statistics about factions involved in faction warfare

```
return Per faction breakdown of faction warfare statistics
rtype list
```

```
get_fw_systems()
```

Ownership of faction warfare systems

```
return All faction warfare solar systems
rtype list
```

```
get_fw_wars()
```

Data about which NPC factions are at war

```
return A list of NPC factions at war
rtype list
```

5.7.12 Fittings

```
class Fittings
```

```
delete_characters_character_id_fittings_fitting_id(character_id=None,
                                                    fitting_id=None, _token=None)
```

Delete fitting

```
param int character_id An EVE character ID
param int fitting_id ID for a fitting of this character
param str _token ESI authorization token
return None
rtype None
```

```
get_characters_character_id_fittings(character_id=None, _token=None)
```

Get fittings

```
param int character_id An EVE character ID
param str _token ESI authorization token
return A list of fittings
rtype list
post_characters_character_id_fittings (character_id=None, fitting=None, _token=None)
```

Create fitting

```
param int character_id An EVE character ID
param None fitting Details about the new fitting
param str _token ESI authorization token
return None
rtype None
```

5.7.13 Fleets

```
class Fleets
```

```
delete_fleets_fleet_id_members_member_id (fleet_id=None, member_id=None, _token=None)
```

Kick fleet member

```
param int fleet_id ID for a fleet
param int member_id The character ID of a member in this fleet
param str _token ESI authorization token
return None
rtype None
```

```
delete_fleets_fleet_id_squads_squad_id (fleet_id=None, squad_id=None, _token=None)
```

Delete fleet squad

```
param int fleet_id ID for a fleet
param int squad_id The squad to delete
param str _token ESI authorization token
return None
rtype None
```

```
delete_fleets_fleet_id_wings_wing_id (fleet_id=None, wing_id=None, _token=None)
```

Delete fleet wing

```
param int fleet_id ID for a fleet
param int wing_id The wing to delete
param str _token ESI authorization token
```

```

return None
rtype None

get_characters_character_id_fleet (character_id=None, _token=None)
Get character fleet info

param int character_id An EVE character ID
param str _token ESI authorization token
return Details about the character's fleet
rtype dict

get_fleets_fleet_id (fleet_id=None, _token=None)
Get fleet information

param int fleet_id ID for a fleet
param str _token ESI authorization token
return Details about a fleet
rtype dict

get_fleets_fleet_id_members ([Accept-Language='en-us'], fleet_id=None[, language='en-us'], _token=None)
Get fleet members

param str Accept-Language Language to use in the response
param int fleet_id ID for a fleet
param str language Language to use in the response, takes precedence over Accept-Language
param str _token ESI authorization token
return A list of fleet members
rtype list

get_fleets_fleet_id_wings ([Accept-Language='en-us'], fleet_id=None[, language='en-us'], _token=None)
Get fleet wings

param str Accept-Language Language to use in the response
param int fleet_id ID for a fleet
param str language Language to use in the response, takes precedence over Accept-Language
param str _token ESI authorization token
return A list of fleet wings
rtype list

post_fleets_fleet_id_members (fleet_id=None, invitation=None, _token=None)
Create fleet invitation

param int fleet_id ID for a fleet
param None invitation Details of the invitation

```

```
param str _token ESI authorization token
return None
rtype None

post_fleets_fleet_id_wings (fleet_id=None, _token=None)
Create fleet wing
    param int fleet_id ID for a fleet
    param str _token ESI authorization token
    return None
    rtype None

post_fleets_fleet_id_wings_wing_id_squads (fleet_id=None, wing_id=None, _token=None)
Create fleet squad
    param int fleet_id ID for a fleet
    param int wing_id The wing_id to create squad in
    param str _token ESI authorization token
    return None
    rtype None

put_fleets_fleet_id (fleet_id=None, new_settings=None, _token=None)
Update fleet
    param int fleet_id ID for a fleet
    param None new_settings What to update for this fleet
    param str _token ESI authorization token
    return None
    rtype None

put_fleets_fleet_id_members_member_id (fleet_id=None, member_id=None, movement=None, _token=None)
Move fleet member
    param int fleet_id ID for a fleet
    param int member_id The character ID of a member in this fleet
    param None movement Details of the invitation
    param str _token ESI authorization token
    return None
    rtype None

put_fleets_fleet_id_squads_squad_id (fleet_id=None, naming=None, squad_id=None, _token=None)
Rename fleet squad
    param int fleet_id ID for a fleet
    param None naming New name of the squad
```

```

param int squad_id The squad to rename
param str _token ESI authorization token
return None
rtype None

put_fleets_fleet_id_wings_wing_id(fleet_id=None, naming=None, wing_id=None, _token=None)

Rename fleet wing

param int fleet_id ID for a fleet
param None naming New name of the wing
param int wing_id The wing to rename
param str _token ESI authorization token
return None
rtype None

```

5.7.14 Incursions

```
class Incursions
```

```
get_incursions()
```

List incursions

```
return A list of incursions
```

```
rtype list
```

5.7.15 Industry

```
class Industry
```

```
get_characters_character_id_industry_jobs(character_id=None[, include_completed=None ], _token=None)
```

List character industry jobs

```
param int character_id An EVE character ID
```

```
param boolean include_completed Whether to retrieve completed character industry jobs. Only includes jobs from the past 90 days
```

```
param str _token ESI authorization token
```

```
return Industry jobs placed by a character
```

```
rtype list
```

```
get_characters_character_id_mining(character_id=None, _token=None)
```

Character mining ledger

```
param int character_id An EVE character ID
```

```
param str _token ESI authorization token
```

```
    return Mining ledger of a character
    rtype ESIPageGenerator list
get_corporation_corporation_id_mining_extractions(corporation_id=None, _to-
ken=None)

Moon extraction timers

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return A list of chunk timers
    rtype ESIPageGenerator list
get_corporation_corporation_id_mining_observers(corporation_id=None, _to-
ken=None)

Corporation mining observers

    param int corporation_id An EVE corporation ID
    param str _token ESI authorization token
    return Observer list of a corporation
    rtype ESIPageGenerator list
get_corporation_corporation_id_mining_observers_observer_id(corporation_id=None,
    ob-
    server_id=None,
    _token=None)

Observed corporation mining

    param int corporation_id An EVE corporation ID
    param int observer_id A mining observer id
    param str _token ESI authorization token
    return Mining ledger of an observer
    rtype ESIPageGenerator list
get_corporations_corporation_id_industry_jobs(corporation_id=None[, in-
    clude_completed=False ], _to-
ken=None)

List corporation industry jobs

    param int corporation_id An EVE corporation ID
    param boolean include_completed Whether to retrieve completed corporation industry
        jobs. Only includes jobs from the past 90 days
    param str _token ESI authorization token
    return A list of corporation industry jobs
    rtype ESIPageGenerator list
get_industry_facilities()

List industry facilities

    return A list of facilities
```

```

rtype list
get_industry_systems()

List solar system cost indices

return A list of cost indicies

rtype list

```

5.7.16 Insurance

```

class Insurance

get_insurance_prices([Accept-Language='en-us'][, language='en-us'])

List insurance levels

param str Accept-Language Language to use in the response

param str language Language to use in the response, takes precedence over Accept-Language

return A list of insurance levels for all ship types

rtype list

```

5.7.17 Killmails

```

class Killmails

get_characters_character_id_killmails_recent(character_id=None, _token=None)

Get a character's recent kills and losses

param int character_id An EVE character ID

param str _token ESI authorization token

return A list of killmail IDs and hashes

rtype ESIPageGenerator list

get_corporations_corporation_id_killmails_recent(corporation_id=None, _token=None)

Get a corporation's recent kills and losses

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

return A list of killmail IDs and hashes

rtype ESIPageGenerator list

get_killmails_killmail_id_killmail_hash(killmail_hash=None, killmail_id=None)

Get a single killmail

param str killmail_hash The killmail hash for verification

param int killmail_id The killmail ID to be queried

```

```
    return A killmail
    rtype dict
```

5.7.18 Location

```
class Location

get_characters_character_id_location(character_id=None, _token=None)
Get character location

param int character_id An EVE character ID
param str _token ESI authorization token
return Information about the characters current location. Returns the current solar system
id, and also the current station or structure ID if applicable
rtype dict

get_characters_character_id_online(character_id=None, _token=None)
Get character online

param int character_id An EVE character ID
param str _token ESI authorization token
return Object describing the character's online status
rtype dict

get_characters_character_id_ship(character_id=None, _token=None)
Get current ship

param int character_id An EVE character ID
param str _token ESI authorization token
return Get the current ship type, name and id
rtype dict
```

5.7.19 Loyalty

```
class Loyalty

get_characters_character_id_loyalty_points(character_id=None, _token=None)
Get loyalty points

param int character_id An EVE character ID
param str _token ESI authorization token
return A list of loyalty points
rtype list

get_loyalty_stores_corporation_id_offers(corporation_id=None)
List loyalty store offers
```

```
param int corporation_id An EVE corporation ID
return A list of offers
rtype list
```

5.7.20 Mail

```
class Mail
```

```
delete_characters_character_id_mail_labels_label_id(character_id=None,
label_id=None, _token=None)
```

Delete a mail label

```
param int character_id An EVE character ID
param int label_id An EVE label id
param str _token ESI authorization token
return None
rtype None
```

```
delete_characters_character_id_mail_mail_id(character_id=None, mail_id=None,
_token=None)
```

Delete a mail

```
param int character_id An EVE character ID
param int mail_id An EVE mail ID
param str _token ESI authorization token
return None
rtype None
```

```
get_characters_character_id_mail(character_id=None[, last_mail_id=None], _token=None)[, labels=None][,
```

Return mail headers

```
param int character_id An EVE character ID
param list labels Fetch only mails that match one or more of the given labels
param int last_mail_id List only mail with an ID lower than the given ID, if present
param str _token ESI authorization token
return The requested mail
rtype list
```

```
get_characters_character_id_mail_labels(character_id=None, _token=None)
```

Get mail labels and unread counts

```
param int character_id An EVE character ID
param str _token ESI authorization token
return A list of mail labels and unread counts
```

```
rtype dict
get_characters_character_id_mail_lists(character_id=None, _token=None)
Return mailing list subscriptions
param int character_id An EVE character ID
param str _token ESI authorization token
return Mailing lists
rtype list
get_characters_character_id_mail_id(character_id=None, mail_id=None, _token=None)
Return a mail
param int character_id An EVE character ID
param int mail_id An EVE mail ID
param str _token ESI authorization token
return Contents of a mail
rtype dict
post_characters_character_id_mail(character_id=None, mail=None, _token=None)
Send a new mail
param int character_id An EVE character ID
param None mail The mail to send
param str _token ESI authorization token
return None
rtype None
post_characters_character_id_mail_labels(character_id=None, label=None, _token=None)
Create a mail label
param int character_id An EVE character ID
param None label Label to create
param str _token ESI authorization token
return None
rtype None
put_characters_character_id_mail_mail_id(character_id=None, contents=None,
                                           mail_id=None, _token=None)
Update metadata about a mail
param int character_id An EVE character ID
param None contents Data used to update the mail
param int mail_id An EVE mail ID
param str _token ESI authorization token
return None
```

rtype None

5.7.21 Market

class Market

get_characters_character_id_orders (*character_id=None, _token=None*)

List open orders from a character

param int character_id An EVE character ID

param str _token ESI authorization token

return Open market orders placed by a character

rtype list

get_characters_character_id_orders_history (*character_id=None, _token=None*)

List historical orders by a character

param int character_id An EVE character ID

param str _token ESI authorization token

return Expired and cancelled market orders placed by a character

rtype *ESIPageGenerator* list

get_corporations_corporation_id_orders (*corporation_id=None, _token=None*)

List open orders from a corporation

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

return A list of open market orders

rtype *ESIPageGenerator* list

get_corporations_corporation_id_orders_history (*corporation_id=None, _token=None*)

List historical orders from a corporation

param int corporation_id An EVE corporation ID

param str _token ESI authorization token

return Expired and cancelled market orders placed on behalf of a corporation

rtype *ESIPageGenerator* list

get_markets_groups()

Get item groups

return A list of item group ids

rtype list

get_markets_groups_market_group_id (*[Accept-Language='en-us'][, language='en-us'], market_group_id=None*)

Get item group information

```
param str Accept-Language Language to use in the response
param str language Language to use in the response, takes precedence over Accept-
Language
param int market_group_id An Eve item group ID
return Information about an item group
rtype dict

get_markets_prices()
List market prices
return A list of prices
rtype list

get_markets_region_id_history(region_id=None, type_id=None)
List historical market statistics in a region
param int region_id Return statistics in this region
param int type_id Return statistics for this type
return A list of historical market statistics
rtype list

get_markets_region_id_orders(order_type=None, region_id=None[, type_id=None])
List orders in a region
param str order_type Filter buy/sell orders, return all orders by default. If you query
without type_id, we always return both buy and sell orders
param int region_id Return orders in this region
param int type_id Return orders only for this type
return A list of orders
rtype ESIPageGenerator list

get_markets_region_id_types(region_id=None)
List type IDs relevant to a market
param int region_id Return statistics in this region
return A list of type IDs
rtype ESIPageGenerator list

get_markets_structures_structure_id(structure_id=None, _token=None)
List orders in a structure
param int structure_id Return orders in this structure
param str _token ESI authorization token
return A list of orders
rtype ESIPageGenerator list
```

5.7.22 Opportunities

```
class Opportunities

    get_characters_character_id_opportunities(character_id=None, _token=None)
        Get a character's completed tasks
            param int character_id An EVE character ID
            param str _token ESI authorization token
            return A list of opportunities task ids
            rtype list

    get_opportunities_groups()
        Get opportunities groups
            return A list of opportunities group ids
            rtype list

    get_opportunities_groups_group_id([Accept-Language='en-us'], group_id=None[, language='en-us'])
        Get opportunities group
            param str Accept-Language Language to use in the response
            param int group_id ID of an opportunities group
            param str language Language to use in the response, takes precedence over Accept-Language
            return Details of an opportunities group
            rtype dict

    get_opportunities_tasks()
        Get opportunities tasks
            return A list of opportunities task ids
            rtype list

    get_opportunities_tasks_task_id(task_id=None)
        Get opportunities task
            param int task_id ID of an opportunities task
            return Details of an opportunities task
            rtype dict
```

5.7.23 Planetary Interaction

```
class Planetary_Interaction

    get_characters_character_id_planets(character_id=None, _token=None)
        Get colonies
```

```
param int character_id An EVE character ID
param str _token ESI authorization token
return List of colonies
rtype list
get_characters_character_id_planets_planet_id(character_id=None,
                                                planet_id=None, _token=None)
Get colony layout
param int character_id An EVE character ID
param int planet_id Planet id of the target planet
param str _token ESI authorization token
return Colony layout
rtype dict
get_corporations_corporation_id_customs_offices(corporation_id=None,      _to-
                                                ken=None)
List corporation customs offices
param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return A list of customs offices and their settings
rtype ESIPageGenerator list
get_universe_schematics_schematic_id(schematic_id=None)
Get schematic information
param int schematic_id A PI schematic ID
return Public data about a schematic
rtype dict
```

5.7.24 Routes

```
class Routes

get_route_origin_destination([avoid=None][, connections=None], destination=None[, flag='shortest'], origin=None)
Get route
param list avoid avoid solar system ID(s)
param list connections connected solar system pairs
param int destination destination solar system ID
param str flag route security preference
param int origin origin solar system ID
return Solar systems in route from origin to destination
rtype list
```

5.7.25 Search

```
class Search

get_characters_character_id_search([Accept-Language='en-us'], categories=None,
                                         character_id=None[, language='en-us'],
                                         search=None[, strict=False ], _token=None)

Search on a string

param str Accept-Language Language to use in the response
param list categories Type of entities to search for
param int character_id An EVE character ID
param str language Language to use in the response, takes precedence over Accept-
                                         Language
param str search The string to search on
param boolean strict Whether the search should be a strict match
param str _token ESI authorization token
return A list of search results
rtype dict

get_search([Accept-Language='en-us'], categories=None[, language='en-us'], search=None[, strict=False ])
```

Search on a string

```
param str Accept-Language Language to use in the response
param list categories Type of entities to search for
param str language Language to use in the response, takes precedence over Accept-
                                         Language
param str search The string to search on
param boolean strict Whether the search should be a strict match
return A list of search results
rtype dict
```

5.7.26 Skills

```
class Skills

get_characters_character_id_attributes(character_id=None, _token=None)

Get character attributes

param int character_id An EVE character ID
param str _token ESI authorization token
return Attributes of a character
rtype dict
```

```
get_characters_character_id_skillqueue (character_id=None, _token=None)
```

Get character's skill queue

param int character_id An EVE character ID

param str _token ESI authorization token

return The current skill queue, sorted ascending by finishing time

rtype list

```
get_characters_character_id_skills (character_id=None, _token=None)
```

Get character skills

param int character_id An EVE character ID

param str _token ESI authorization token

return Known skills for the character

rtype dict

5.7.27 Sovereignty

```
class Sovereignty
```

```
get_sovereignty_campaigns ()
```

List sovereignty campaigns

return A list of sovereignty campaigns

rtype list

```
get_sovereignty_map ()
```

List sovereignty of systems

return A list of sovereignty information for solar systems in New Eden

rtype list

```
get_sovereignty_structures ()
```

List sovereignty structures

return A list of sovereignty structures

rtype list

5.7.28 Status

```
class Status
```

```
get_status ()
```

Retrieve the uptime and player counts

return Server status

rtype dict

5.7.29 Universe

```
class Universe

get_universe_ancestries([Accept-Language='en-us'][, language='en-us'])
Get ancestries
    param str Accept-Language Language to use in the response
    param str language Language to use in the response, takes precedence over Accept-Language
    return A list of ancestries
    rtype list

get_universe_asteroid_belts_asteroid_belt_id(asteroid_belt_id=None)
Get asteroid belt information
    param int asteroid_belt_id asteroid_belt_id integer
    return Information about an asteroid belt
    rtype dict

get_universe_bloodlines([Accept-Language='en-us'][, language='en-us'])
Get bloodlines
    param str Accept-Language Language to use in the response
    param str language Language to use in the response, takes precedence over Accept-Language
    return A list of bloodlines
    rtype list

get_universe_categories()
Get item categories
    return A list of item category ids
    rtype list

get_universe_categories_category_id([Accept-Language='en-us'], category_id=None[, language='en-us'])
Get item category information
    param str Accept-Language Language to use in the response
    param int category_id An Eve item category ID
    param str language Language to use in the response, takes precedence over Accept-Language
    return Information about an item category
    rtype dict

get_universe_constellations()
Get constellations
```

```
    return A list of constellation ids
    rtype list
get_universe_constellations_constellation_id([Accept-Language=’en-us’], constellation_id=None[, language=’en-us’])
Get constellation information

param str Accept-Language Language to use in the response
param int constellation_id constellation_id integer
param str language Language to use in the response, takes precedence over Accept-Language
return Information about a constellation
rtype dict
get_universe_factions([Accept-Language=’en-us’][, language=’en-us’])
Get factions

param str Accept-Language Language to use in the response
param str language Language to use in the response, takes precedence over Accept-Language
return A list of factions
rtype list
get_universe_graphics()
Get graphics

return A list of graphic ids
rtype list
get_universe_graphics_graphic_id(graphic_id=None)
Get graphic information

param int graphic_id graphic_id integer
return Information about a graphic
rtype dict
get_universe_groups()
Get item groups

return A list of item group ids
rtype ESIPageGenerator list
get_universe_groups_group_id([Accept-Language=’en-us’], group_id=None[, language=’en-us’])
Get item group information

param str Accept-Language Language to use in the response
param int group_id An Eve item group ID
```

```

param str language Language to use in the response, takes precedence over Accept-
Language

return Information about an item group

rtype dict

get_universe_moons_moon_id(moon_id=None)
Get moon information

param int moon_id moon_id integer

return Information about a moon

rtype dict

get_universe_planets_planet_id(planet_id=None)
Get planet information

param int planet_id planet_id integer

return Information about a planet

rtype dict

get_universe_races([Accept-Language='en-us'][, language='en-us'])
Get character races

param str Accept-Language Language to use in the response

param str language Language to use in the response, takes precedence over Accept-
Language

return A list of character races

rtype list

get_universe_regions()

Get regions

return A list of region ids

rtype list

get_universe_regions_region_id([Accept-Language='en-us'][, language='en-us'], re-
gion_id=None)
Get region information

param str Accept-Language Language to use in the response

param str language Language to use in the response, takes precedence over Accept-
Language

param int region_id region_id integer

return Information about a region

rtype dict

get_universe_stargates_stargate_id(stargate_id=None)
Get stargate information

param int stargate_id stargate_id integer

return Information about a stargate

```

```
rtype dict
get_universe_stars_star_id(star_id=None)
Get star information

    param int star_id star_id integer
    return Information about a star

rtype dict
get_universe_stations_station_id(station_id=None)
Get station information

    param int station_id station_id integer
    return Information about a station

rtype dict
get_universe_structures()
List all public structures

    return List of public structure IDs

rtype list
get_universe_structures_structure_id(structure_id=None, _token=None)
Get structure information

    param int structure_id An Eve structure ID
    param str _token ESI authorization token
    return Data about a structure

rtype dict
get_universe_system_jumps()
Get system jumps

    return A list of systems and number of jumps

rtype list
get_universe_system_kills()
Get system kills

    return A list of systems and number of ship, pod and NPC kills

rtype list
get_universe_systems()
Get solar systems

    return A list of solar system ids

rtype list
get_universe_systems_system_id([Accept-Language='en-us'][, language='en-us'], sys-
tem_id=None)
Get solar system information

    param str Accept-Language Language to use in the response
```

```

param str language Language to use in the response, takes precedence over Accept-Language
param int system_id system_id integer
return Information about a solar system
rtype dict

get_universe_types()
Get types
return A list of type ids
rtype ESIPageGenerator list
get_universe_types_type_id([Accept-Language='en-us'][,language='en-us'],type_id=None)
Get type information
param str Accept-Language Language to use in the response
param str language Language to use in the response, takes precedence over Accept-Language
param int type_id An Eve item type ID
return Information about a type
rtype dict
post_universe_ids([Accept-Language='en-us'][,language='en-us'],names=None)
Bulk names to IDs
param str Accept-Language Language to use in the response
param str language Language to use in the response, takes precedence over Accept-Language
param None names The names to resolve
return List of id/name associations for a set of names divided by category. Any name passed in that did not have a match will be omitted
rtype dict
post_universe_names(ids=None)
Get names and categories for a set of ID's
param None ids The ids to resolve
return List of id/name associations for a set of ID's. All ID's must resolve to a name, or nothing will be returned
rtype list

```

5.7.30 User_Interface

```

class User_Interface

post_ui_autopilot_waypoint(add_to_beginning=None, clear_other_waypoints=None, destination_id=None, _token=None)

```

Set Autopilot Waypoint

```
param boolean add_to_beginning Whether this solar system should be added to the beginning of all waypoints  
param boolean clear_other_waypoints Whether clean other waypoints before adding this one  
param int destination_id The destination to travel to, can be solar system, station or structure's id  
param str _token ESI authorization token  
return None  
rtype None
```

post_ui_openwindow_contract (*contract_id=None, _token=None*)

Open Contract Window

```
param int contract_id The contract to open  
param str _token ESI authorization token  
return None  
rtype None
```

post_ui_openwindow_information (*target_id=None, _token=None*)

Open Information Window

```
param int target_id The target to open  
param str _token ESI authorization token  
return None  
rtype None
```

post_ui_openwindow_markedetails (*type_id=None, _token=None*)

Open Market Details

```
param int type_id The item type to open in market window  
param str _token ESI authorization token  
return None  
rtype None
```

post_ui_openwindow_newmail (*new_mail=None, _token=None*)

Open New Mail Window

```
param None new_mail The details of mail to create  
param str _token ESI authorization token  
return None  
rtype None
```

5.7.31 Wallet

```
class Wallet

get_characters_character_id_wallet (character_id=None, _token=None)
Get a character's wallet balance

param int character_id An EVE character ID
param str _token ESI authorization token
return Wallet balance
rtype number

get_characters_character_id_wallet_journal (character_id=None, _token=None)
Get character wallet journal

param int character_id An EVE character ID
param str _token ESI authorization token
return Journal entries
rtype ESIPageGenerator list

get_characters_character_id_wallet_transactions (character_id=None[, from_id=None], _token=None)
Get wallet transactions

param int character_id An EVE character ID
param int from_id Only show transactions happened before the one referenced by this id
param str _token ESI authorization token
return Wallet transactions
rtype list

get_corporations_corporation_id_wallets (corporation_id=None, _token=None)
Returns a corporation's wallet balance

param int corporation_id An EVE corporation ID
param str _token ESI authorization token
return List of corporation wallets
rtype list

get_corporations_corporation_id_wallets_division_journal (corporation_id=None, division=None, _token=None)
Get corporation wallet journal

param int corporation_id An EVE corporation ID
param int division Wallet key of the division to fetch journals from
param str _token ESI authorization token
return Journal entries
```

```
rtype ESIPageGenerator list
get_corporations_corporation_id_wallets_division_transactions (corporation_id=None,
                                                               division=None[],
                                                               from_id=None,
                                                               _to-
                                                               ken=None)
```

Get corporation wallet transactions

```
param int corporation_id An EVE corporation ID
param int division Wallet key of the division to fetch journals from
param int from_id Only show journal entries happened before the transaction referenced
                   by this id
param str _token ESI authorization token
return Wallet transactions
rtype list
```

5.7.32 Wars

```
class Wars
```

```
get_wars ([max_war_id=None])
```

List wars

```
param int max_war_id Only return wars with ID smaller than this
return A list of war IDs, in descending order by war_id
rtype list
```

```
get_wars_war_id (war_id=None)
```

Get war information

```
param int war_id ID for a war
return Details about a war
rtype dict
```

```
get_wars_war_id_killmails (war_id=None)
```

List kills for a war

```
param int war_id A valid war ID
return A list of killmail IDs and hashes
rtype ESIPageGenerator list
```

5.8 modules

```
class esy.client.ESICallableOperation(operation)
    Wraps bravado's CallableOpeartion to handle pagination

class esy.client.ESIClient(swagger_spec, esi_endpoint, user_agent, use_models, cache)
    Swagger client interface adapted to use with the ESI.

    static get_client(user_agent='esy//vittoros@slack', use_models=False, spec=None, endpoint='https://esi.evetech.net/latest/swagger.json', datasource='tranquility', cache=None)
        Generates a client interface for ESI.
```

Parameters

- **user_agent** (*str*) –
- **use_models** –
- **spec** –
- **endpoint** (*str*) –
- **datasource** (*str*) –
- **cache** – A class which implements the cache interface

Returns An initialized client**Return type** *ESIClient*

```
static get_swagger_spec(endpoint='https://esi.evetech.net/latest/swagger.json', source='tranquility', cache=None)
    Downloads and parses the swagger specification from the ESI endpoint.
```

Parameters

- **endpoint** (*str*) – URL to the ESI endpoint. Defaults to latest.
- **datasource** (*str*) – ESI datasource to use. Defaults to Tranquility.
- **cache** – Optional cache

Returns Swagger specification**Return type** *dict*

```
class esy.client.ESIPageGenerator(requests_future, requestsresponse_adapter, operation, response_callbacks, request_config, cache=None)
    Generator for ESI API calls.
```

```
class esy.client.ESIRequestsClient(user_agent, cache=None)
    Extends the bravado RequestsClient to handle pagination, user agent and per-request authorizations.
```

```
request(request_params, operation=None, response_callbacks=None, request_config=None, authorization_token=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
```

```
class esy.client.ESIResourceDecorator(resource, also_return_response=False)
```

Extends ResourceDecorator to wrap operations with ESICallableOperation

```
exception esy.exceptions.ESIAuthorizationError
```

```
exception esy.exceptions.ESIError
```

```
exception esy.exceptions.ESIForbidden
```

```
exception esy.exceptions.ESINotFound
```

```
class esy.auth.ESIAuthenticator(access_token_endpoint='https://login.eveonline.com/oauth/token',
                                 token_verify_endpoint='https://login.eveonline.com/oauth/verify',
                                 revoke_token_endpoint='https://login.eveonline.com/oauth/revoke')
```

Handles ESI token authentication and verification process.

```
get_access_token(refresh_token, client_id, secret, session=None, auth=None)
```

Get a new access token using a refresh token

Parameters

- **refresh_token** (*str*) – The refresh token
- **client_id** (*str*) – The ESI ClientID
- **secret** (*str*) – The ESI Secret key
- **session** (*OAuth2Session*) – Existing session for reuse
- **auth** (*HTTPBasicAuth*) – Existing authentication handler for reuse

Returns New access token

Return type *str*

```
revoke_token(token, client_id, secret, token_type='refresh_token', session=None, auth=None)
```

Revoke refresh or access tokens.

Parameters

- **token** (*str*) – The token to revoke
- **client_id** (*str*) – The ESI ClientID
- **secret** (*str*) – The ESI Secret key
- **token_type** (*str*) – Token type to request from ESI
- **session** (*OAuth2Session*) – Existing session for reuse
- **auth** (*HTTPBasicAuth*) – Existing authentication handler for reuse

Returns Token revocation status

Return type *bool*

```
verify_access_token(access_token)
```

Verifies the refresh token with the ESI and retrieves character information.

Parameters **access_token** (*str*) – ESI access token

Returns dict with CharacterID, CharacterName and CharacterOwnerHash

Return type *dict*

verify_authorization_code (*authorization_code*, *client_id*, *secret*)

Trades an authorization code for a refresh and an access tokens from ESI

Parameters

- **authorization_code** (*str*) – The authorization code returned from ESI
- **client_id** (*str*) – The ESI ClientID
- **secret** (*str*) – The ESI Secret key

Returns (refresh_token, access_token)

Return type tuple

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